TRIADIMEFON (133) AND TRIADIMENOL (168)

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EXPLANATION

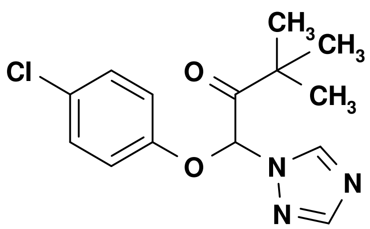
Triadimefon and triadimenol are systemic fungicides with predominant uses against rusts and powdery mildew. Triadimefon was evaluated by the JMPR in 1979, 1981, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1992, 1995 and 2004. Triadimenol was evaluated in 1989, 1992, 1995 and 2004. In 2004 an ADI of 0-0.03 mg/kg bw and an ARfD of 0.08 mg/kg bw were established. At the 37th Session of the CCPR both compounds were scheduled for residue evaluation within the Periodic Re-evaluation Program.

The Meeting received data on metabolism in animals and plants, degradation in soil, residues in succeeding crops, GAP, analytical methods and processing studies. Supervised residue trials submitted were conducted on apples, grapes, strawberries, currants, bananas, pineapples, sugar beets, cucumbers, courgettes, melons, watermelons, peppers, tomatoes, globe artichokes, barley, oats, rye, wheat and coffee.

IDENTITIES

For triadimefon and triadimenol as well as for the formulations presented in Table 1 and Table 2 pesticide specifications were established through the Joint FAO/WHO Meetings on Pesticide Specifications (JMPS) and published as FAO Specifications and Evaluations for Agricultural Pesticides compounds in 1995[21].

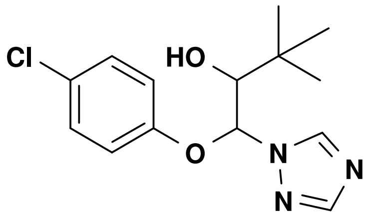
Common name:	Triadimefon
Chemical name:	
IUPAC:	1-(4-Chloro-phenoxy)-3,3-dimethyl-1-[1,2,4]-triazol-1-yl-butan-2-one
CA (index):	2-Butanone, 1-(4-chlorophenoxy)-3,3-dimethyl-1-(1H-1,2,4-triazol-1-yl)-
Manufacturer's code number:	MEB 6447
CAS number:	43121-43-3
CIPAC number:	EU index: 606-037-00-4 ELINCS: 256-103-8 CIPAC number: 352
Molecular formula:	$C_{14}H_{16}ClN_3O_2$
Structural formula:	



Molecular mass: 293.7 g/mol

[21] see http://www.fao.org/ag/AGP/AGPP/Pesticid/Default.htm

Common name:	Triadimenol
Chemical name:	
IUPAC:	1-(4-Chlorophenoxy)-3,3-dimethyl-1-[1,2,4]triazol-1-yl-butan-2-ol (unstated stereochemistry)
CA (index):	1H-1,2,4-Triazole-1-ethanol, .beta.-(4-chlorophenoxy)-.alpha.-(1,1-dimethylethyl)- (unstated stereochemistry)
Manufacturer's code number:	KWG 0519
CAS number:	55219-65-3
CIPAC number:	EU index: not allocated ELINCS: 259-537-6 CIPAC number: 398
Molecular formula:	$C_{14}H_{18}Cl\ N_3O_2$
Structural formula:	



Molecular mass: 295.8 g/mol

Table 1. Triadimefon formulations

Triadimefon Formulations		
Name	Type	Formulation Co-partner
ANTRACOL BT	WP	propineb + triadimefon (70 + 1,25)%
ANTRACOL BT WP 71.25	WP	propineb + triadimefon (70 + 1.25)%
BAYLETON	WP	None
BAYLETON 125 EC FUNGICIDE	EC	None
BAYLETON 25% WP	WP	None
BAYLETON 25 DS	WP	None
BAYLETON 25 EC	EC	None
BAYLETON 25 WP	WP	None
BAYLETON 250 CE	EC	None
BAYLETON 250 EC	EC	None
BAYLETON 25WP	WP	None
BAYLETON 5	WP	None
BAYLETON 50 WG	WG	None
BAYLETON 50% DF	WG	None
BAYLETON 50% WETTABLE POWDER FUNGICIDE	WG	None
BAYLETON AC WP 64.8	WP	cymoxanil + propineb + triadimefon (4.8 + 58 + 2)%
BAYLETON BR	WP	None
BAYLETON EC 250	EC	None
BAYLETON PM 25	WP	None
BAYLETON SPECIAL WP 5	WP	None
BAYLETON TRIPLE 12.6 GR	GR	disulfoton + fenamiphos + triadimefon (8 + 4 + 0.6)%
BAYLETON WDG	WDG	None
BAYLETON WP 215	WP	None
BAYLETON WP 25	WP	None

Triadimefon Formulations		
Name	Type	Formulation Co-partner
BAYLETON WP 5	WP	None
FOLICUR BT	EC	tebuconazole + triadimefon (125 + 100) g/L
FOLICUR BT 225 EC	EC	tebuconazole + triadimefon (125 + 100) g/L
SUMMIT S	SC	sulfur + triadimefon (768 + 30) g/L
TIDIFON GOLD 5 WP	WP	None

Table 2. Triadimenol formulations

Triadimenol Formulations		
Name	Type	Formulation Co-partner
ABILIS (was previously called COLOSO)	EC	tebuconazole + triadimenol (225 + 75) g/L
ANTRACOL COMBI X 65/2 WP	WP	propineb + triadimenol (65 + 2)%
ATRIZAN	SC	None
BARON	GR	disulfoton + triadimenol (12 + 3)%
BAYFIDAN	EC	None
BAYFIDAN WG	WG	None
BAYFIDAN ® 250 EC	EC	None
BAYFIDAN 035 POLVERE	DP	None
BAYFIDAN 050 EW	EW	None
BAYFIDAN 1 GR	GR	None
BAYFIDAN 1% GR	GR	None
BAYFIDAN 125 CE	EC	None
BAYFIDAN 25 EC	EC	None
BAYFIDAN 25 LE	EC	None
BAYFIDAN 25 OL	OL	None
BAYFIDAN 25 P.B.	WP	None
BAYFIDAN 25% EC	EC	None
BAYFIDAN 250	EC	None
BAYFIDAN 250 CE	EC	None
BAYFIDAN 250 DC		None
BAYFIDAN 250 EC	EC	None
BAYFIDAN 250 EC FUNGICIDE	EC	None
BAYFIDAN 3 G	GR	None
BAYFIDAN 3 GR	GR	None
BAYFIDAN 5 WG	WG	None
BAYFIDAN 5 WP	WP	None
BAYFIDAN 60 GR	GR	None
BAYFIDAN CE	EC	None
BAYFIDAN COMBI PB	WP	sulfur + triadimenol (50 + 2.5)%
BAYFIDAN DC 250	DC	None
BAYFIDAN DUO 1.4 GR	GR	imidacloprid + triadimenol (0.8 + 0.6)%
BAYFIDAN EC	EC	None
BAYFIDAN EC 250	EC	None
BAYFIDAN EW	EW	None
BAYFIDAN PM	WP	None
BAYFIDAN PZ		triadimenol + prochloraz (125 + 400 g/L)
BAYFIDAN special WG	WG	None
BAYFIDAN TRIPLE 12.6 GR	GR	disulfoton + fenamiphos + triadimenol (8 + 4 + 0.6)%
BAYFIDAN TRIPLE 5.4 GR	GR	fenamiphos + imidacloprid + triadimenol (4 + 0.8 + 0.6)%
BAYFIDAN WG	WG	None

Triadimenol Formulations		
Name	Type	Formulation Co-partner
BAYFIDAN WG 5	WG	None
BAYFÝDAN EC 250	EC	None
BAYLETON COMBI PB	WP	sulfur + triadimenol (50 + 2.5)%
BAYSISTON GR	GR	disulfoton + triadimenol (7.5 + 1.5)%
BAYTAN	FS	None
BAYTAN 15 DS	DS	None
BAYTAN 15 FS	FS	None
BAYTAN 150 FS	FS	None
BAYTAN 2.6 FS	FS	None
BAYTAN 25 WS	WS	None
BAYTAN 250	DS	None
BAYTAN 25DS	DC	None
BAYTAN 30	WS	None
BAYTAN 5 LIQUIDE	EW	None
BAYTAN 7.5 DS	DS	None
BAYTAN C FLOWABLE SEED DRESSING	FS	cypermethrin + triadimenol (4 + 150) g/L
BAYTAN C SEED DRESSING	DS	cypermethrin + triadimenol (0.4 + 15)%
BAYTAN F	FS	fuberidazole + triadimenol (22.5 + 187.5) g/L
BAYTAN FLOWABLE	FS	triadimenol + fuberidazole (187.5 + 22.5 g/L)
BAYTAN FOLIAR	EC	None
BAYTAN FS 15	FS	None
BAYTAN FS 150	FS	None
BAYTAN I	DS	imazalil sulphate + triadimenol (3.3 + 15)%
BAYTAN SC	FS	None
BAYTAN SECUR	FS	fuberidazole + imidacloprid + triadimenol (15 + 117 + 125) g/L
BAYTAN SEED TREATMENT FUNGICIDE	WS	None
BAYTAN T DRY SEED DRESSING	DS	triadimenol + triflumuron (15 + 0.4)%
BAYTAN T FLOWABLE SEED DRESSING	FS	triadimenol + triflumuron (150 + 4) g/L
BAYTAN UNIVERSAL	WS	fuberidazole + imazalil + triadimenol (2 + 2.5 + 15)%
BAYTAN UNIVERSAL 094 FS	FS	fuberidazole + imazalil + triadimenol (9 + 10 + 75) g/L
BAYTAN UNIVERSAL 19.5 P.S.	WS	fuberidazole + imazalil + triadimenol (2 + 2.5 + 15)%
BAYTAN UNIVERSAL 19.5 WS	WS	fuberidazole + imazalil + triadimenol (2 + 2.5 + 15)%
BAYTAN UNIVERSAL FLUESSIG	FS	fuberidazole + imazalil + triadimenol (9 + 10 + 75) g/L
BAYTAN UNIVERSAL FLÜSSIGBEIZE	FS	fuberidazole + imazalil + triadimenol (9 + 10 + 75) g/L
BAYTAN UNIVERSAL FS	FS	fuberidazole + imazalil + triadimenol (9 + 10 + 75) g/L
BAYTAN UNIVERSAL WS 19.5	WS	'fuberidazole + imazalil + triadimenol (2 + 2.5 + 15)%
CAPORAL	GR	None
CAPORAL 25 DC	DC	None
CAPORAL WP	WP	None
CEREOUS	EC	None
COLOSO 300 EC	EC	tebuconazole + triadimenol (225 + 75) g/L
EXACT	EW	None
EXACT VLOEIBAAR	EW	None
FALCON	EC	spiroxamine + tebuconazole + triadimenol (250 + 167 + 43) g/L
FALCON 46 EC	EC	spiroxamine + tebuconazole + triadimenol (250 + 167 + 43) g/L
FALCON 460 E.K.	EC	spiroxamine + tebuconazole + triadimenol (250 + 167 + 43) g/L
FALCON 460 EC	EC	spiroxamine + tebuconazole + triadimenol (250 + 167 + 43) g/L
FOLICUR PLUS 375 EC	EC	tebuconazole + triadimenol (250 + 125) g/L

Triadimenol Formulations		
Name	Type	Formulation Co-partner
GARNET	EC	tebuconazole + triadimenol (250 + 125) g/L
HORIZON	EC	tebuconazole + triadimenol (250 + 125) g/L
MANDRAKE	EC	tebuconazole + triadimenol (225 + 75) g/L
MANTA PLUS	FS	fuberidazole + imazalil + imidacloprid + triadimenol (7.2 + 8 + 70 + 60) g/L
MATADOR	EC	tebuconazole + triadimenol (225 + 75) g/L
MATADOR 300	EC	tebuconazole + triadimenol (225 + 75) g/L
MATADOR 375 EC	EC	tebuconazole + triadimenol (250 + 125) g/L
PHOTON	GR	None
PROLEAF SEED TREATMENT	FS	triadimenol + triflumuron (150 + 4) g/L
REPULSE 5.75 GR	GR	disulfoton + triadimenol (5 + 0.746)%
REPULSE GR	GR	disulfoton + triadimenol (5 + 0.746)%
ROSA PLUS	EW	None
RTU-BAYTAN -THIRAM		thiram + triadimenol (15.3+ 5.0%)
SILVACUR	EC	tebuconazole + triadimenol (250 + 125) g/L
SILVACUR 375 EC	EC	tebuconazole + triadimenol (250 + 125) g/L
SILVACUR COMBI 30 EC	EC	tebuconazole + triadimenol (225 + 75) g/L
SILVACUR COMBI 300 EC	EC	tebuconazole + triadimenol (225 + 75) g/L
SILVACUR COMBI EC 300	EC	tebuconazole + triadimenol (225 + 75) g/L
VETO F	EC	tebuconazole + triadimenol (225 + 75) g/L
ZORRO CEREAL SEED TREATMENT	FS	imidacloprid + triadimenol (180 + 56.3) g/L

PHYSICAL AND CHEMICAL PROPERTIES

A detailed chemical and physical characterisation of the active ingredient is given in Table 3.

References to test materials used:

1 Triadimefon (batch 850321 ELB 50, purity 99.6%)
2 Triadimefon (batch APF 21038550, purity 99.6%)
3 C_{14}-ring-labelled Triadimefon (purity > 99.9%)
4 C_{14}-ring-labelled Triadimefon (purity 98.15%)

Table 3. Physical chemical properties of triadimefon

Property	Results	Test Material, Method	Reference
Physical state, colour	colourless crystals greyish white granular or powder (TGAI)		visual inspection according to specification and safety data sheet
Odour	weak characteristic slight characteristic smell (TGAI)		olfactory inspection according to specification and safety data sheet

Property	Results		Test Material, Method	Reference
Melting point	78 °C and 82 °C (two cristal modifications)		Material 1 Differential Scanning Calorimetry	Krohn, 1993
Density	1.283 g/cm³ at 21.5 °C		Material 2 Beckmann air reference pycnometer (EC A.3)	Weber, 1987
Vapour pressure	2 x 10E-7 hPa at 20 °C 6 x 10E-7 hPa at 25 °C		Material 1 OECD 104 ≅ EC A.4.	Weber 1988
Volatility	Henry's law constant: H = 9 x 10E-5 [Pa x m³/mol] at 20 °C			Krohn, 1996
Solubility in water	0.064 g/L at 20 °C		Material 2 OECD 105	Krohn, 1987
Solubility in organic solvents (at 20 °C, in g/L)	Hexane	6.3 g/L at 20 °C	Material 1 OECD 105	Krohn, 1992
	Dichlormethane	> 200 g/L at 22 °C		
	Propanol	99 g/L at 20 °C		
	Toluene	> 200 g/L at 22 °C		
	Octanol	84 g/L at 20 °C		
	Acetone	> 200 g/L at 22 °C		
	Acetonitrile	> 200 g/L at 22 °C		
	PEG	> 200 g/L at 22 °C		
	Lutrol-ethanol	210 g/L at 20 °C		
	Dimethylformamide	> 200 g/L at 22 °C		
	Dimethylsulfoxide	> 200 g/L at 22 °C		
Dissociation constant	Triadimefon is a very weak base, which can only be completely protonized in non-aqueous systems in the presence of very strong acids. It is not possible to specify a pK value for water.		Material 2 OECD 112	Placke, 1987
Partition coefficient n-octanol/ water	log Pow = 3.11 at 22 °C		Material 1 OECD 107 ≅ EC A.8	Krohn, 1992a
Hydrolysis rate	Triadimefon in sterile water solutions was found to be essentially stable at all temperature and pH conditions (pH 3 – pH 9). At 28 weeks, 95 – 97% was still present as the intact parent compound at concentrations of 5 or 50 ppm		Material 4	Cain & Moore, 1991

Property	Results	Test Material, Method	Reference
Photochemical degradation	Under simulated natural sunlight in sterile aqueous solution triadimefon degraded rapidly with an experimental half-life of 7.6 h. The experimental half-life corresponds to a calculated sidereal half life of 1.4 days: Under photosensitized conditions the experimental half-life was found to be 10.9 h corresponding to a sidereal half-life of 2.0 days. There was no degradation observed in the dark control samples.	Material 3 EPA Ref.: 161-2	Krolski, 1991 Krolski & Bosnak, 1991
	Applied to a silty clay loam soil surface, triadimefon degraded very slowly when irritated under continuous spectrally simulated sunlight for 35 days. After that period, almost 80% of the applied activity was unaltered active substance compared to 85% for samples held in the dark.		Obrist, 1979 and Obrist 1979a

PHYSICAL AND CHEMICAL PROPERTIES FOR TRIADIMENOL

A detailed chemical and physical characterisation of the active ingredient is given in Table 4.
References to test materials used:

1 Triadimenol isomer A (TOX-06834, purity 96.2%)
2 Triadimenol isomer B (batch: 870615ELB05, purity 99.9%)
3 Triadimenol isomer B (diastereomer SS and RR, batch 870615ELB05, purity 99.9%)
4 Triadimenol isomer A (diastereomer SR, batch APF 11028100, purity 98.2%)
5 Triadimenol isomer A (diastereomer SR, batch APF 12107900 (KRJ 121079), purity 99.4%)
6 Triadimenol isomer B (diastereomer SS and RR, batch APF 11107900 (KRJ 111079), purity 99.6%)
7 [phenyl-UL-^{14}C] Baytan form I (isomer B, radiochemical purity 98%, specific radioactivity 5.38 x 10^6 dpm/mg)
8 [phenyl-UL-^{14}C] Baytan form II (isomer A, radiochemical purity 98%, specific radioactivity 5.97 x 10^6 dpm/mg)
9 [phenyl-UL-^{14}C] Baytan form II (isomer A, radiochemical purity 99%, specific radioactivity 19.8 mCi/mmole)
10 Triadimenol isomer A (diastereomer SR, batch KRJ 110281, purity 99.7%)
11 Triadimenol isomer B (diastereomer SS and RR, batch KRJ 120281, purity 98.1%)
12 Triadimenol (mixture of diastereomers SR and SS or RR, batch 940627ELB04, purity 98.3%)
13 [phenyl-UL-^{14}C] Baytan (mixture of isomers A and B, radiochemical purity 99%)

Table 4. Physical and chemical data of triadimenol

Property	Results	Test Material, Method	Reference
Physical state, colour	Active substance, pure: colourless crystalls Active substance as manufactured: white to grey powder		visual inspection according to specification and safety data sheet

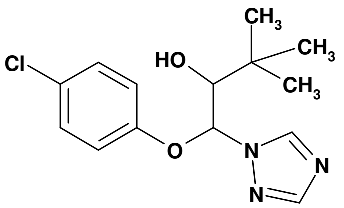
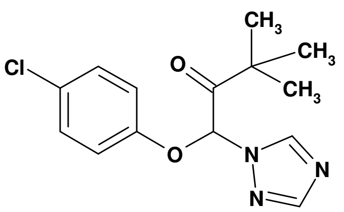
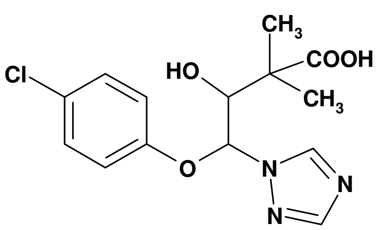
Property	Results	Test Material, Method	Reference
Odour	Active substance, pure: odourless Active substance as manufactured: like phenol		olfactory inspection according to specification and safety data sheet
Melting point	Diastereomer A (SR and RS): 135 °C Diastereomer B (SS and RR): 133 °C	Material 1, material 2, OECD 102	Smeykal, H., 2004 Smeykal, H., 2004a
Density	Diastereomer A (SR): 1.237 g/cm³ at 22 °C Diastereomer B (SS and RR): 1.299 g/cm³ at 22 °C	Material 3, material 4, OECD 109 ≅ EC A.3.	Weber, 1987a and 1987b
Vapour pressure	Diastereomer A (SR): 6 x 10-9 h Pa at 20 °C (extrapolated) 1 x 10-8 h Pa at 25 °C (extrapolated) Diastereomer B (SS and RR): 4 x 10-9 h Pa at 20 °C (extrapolated) 9 x 10-9 h Pa at 25 °C (extrapolated)	Material 3, material 4 OECD 104 ≅ EC A.4.	Weber, Krohn, 1988, rev. 1996
Volatility	Henry's law constant at 20 °C (calculated) Diastereomer A (SR): $3 \cdot 10^{-6}$ Pa $\cdot$ m^3 $\cdot$ mol^{-1} Diastereomer B (SS and RR): $4 \cdot 10^{-6}$ Pa $\cdot$ m^3 $\cdot$ mol^{-1}		Krohn, 1996a
Solubility in water	Baytan II (triadimenol isomer A): 0.049 g/L at 20 °C Baytan I (triadimenol isomer B): 0.095 g/L at 20 °C As triadimenol is a very weak base which can only be completely protonized in non-aqueous systems in the presence of very strong acids the water solubility was not determined in the acidic and alkaline pH range.	Material 7 and 8 flask method similar to OECD 105 ≅ EU A.6.	Leimkuehler, 1980
Solubility in organic solvents (at 20 °C)	n-heptane 0.45 g/L xylene 18 g/L dichloromethane > 250 g/L 2-propanol 140 g/L 1-octanol 60 g/L polyethyleneglycol 71 g/L acetone 190 g/L ethylacetate 150 g/L acetonitrile 61 g/L dimethylsulfoxide > 250 g/L	Material 12	Krohn, 1999

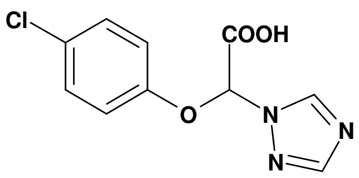
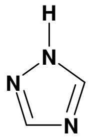
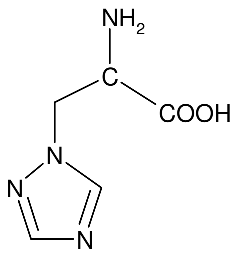
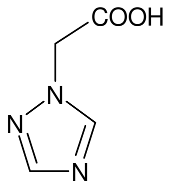
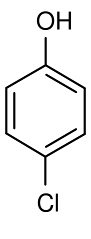
Property	Results	Test Material, Method	Reference
Dissociation constant	Triadimenol is a very weak base which can only be completely protonized in non-aqueous systems in the presence of very strong acids. It is not possible to specify dissociation constants of the active substance in water.	Material 5 and 6 OECD 112 – titration method	Placke, 1987a
Partition coefficient n-octanol/ water	triadimenol isomer A: POW = 1200 log POW = 3.08 at 25 °C triadimenol isomer B: POW = 1900 log POW = 3.28 at 25 °C As triadimenol is a very weak base which can only be completely protonized in non-aqueous systems in the presence of very strong acids the effect of pH (4 to 10) has not been investigated.	Material 10 und 11 OECD 107 ≅ EC A.8	Krohn, 1984
Hydrolysis rate	The behavior of triadimenol in sterile aqueous buffer solutions of pH 4, 7 and 9 maintained at 20 °C and 40 °C was studied at two concentrations: 5 and 50 mg/L. No degradation of triadimenol was apparent after 32 days. The accountability at 32 days was 97% or greater. Considering the hydrolytic stability determined under environmental pH and temperature conditions it is not expected that hydrolytic processes will contribute to the degradation of triadimenol in the environment.	Material 9	Nichols, Thornton, 1980
Photochemical degradation	After 12 days of irridiation in sterile aqueous buffer solution at pH 7 only 43.95 (mean) of the applied radioactivity was recovered as unchanged parent compound. No degradation of of Triadimenol was observed in the dark samples. Experiment shows good photolytic degrabability of Triadimenol in buffer solution at pH 7. Little degradation of triadimenol occurred when irradiated on the surface of a silty clay loam soil. After 7 days of continuous irradiation with simulated sunlight, the amount of radioactivity recovered as triadimenol was 85% of that applied.	Material 13 EPA Pesticide Assessment Guidelines; Commission Directives 94/37/EC and 95/36/EC	Brumhard, Sneikus, 2002 Obrist & Thornton, 1978

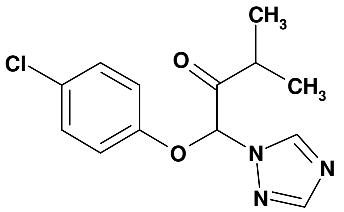
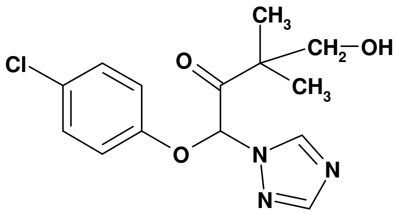
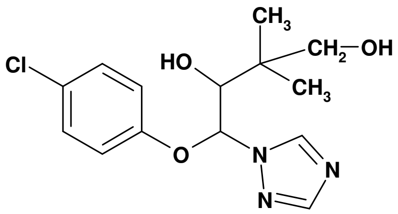
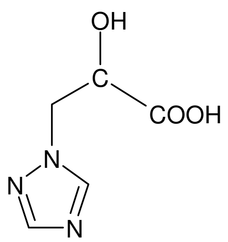
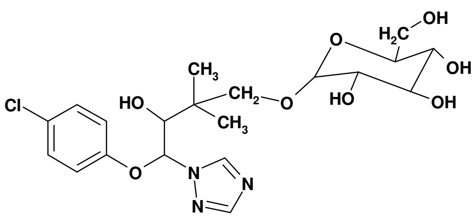
METABOLISM AND ENVIRONMENTAL FATE

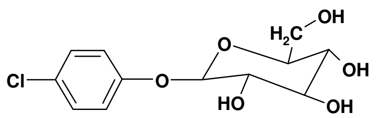
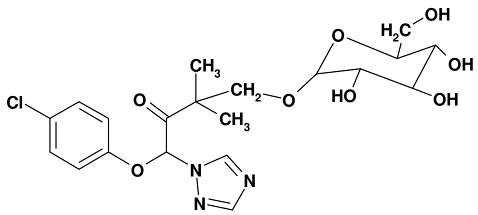
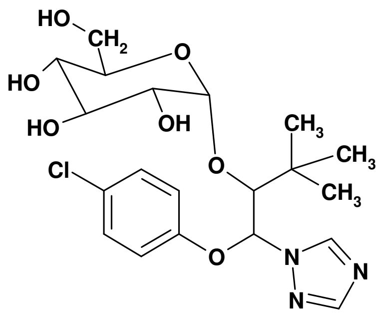
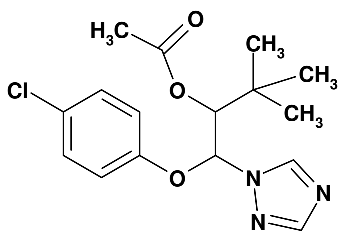
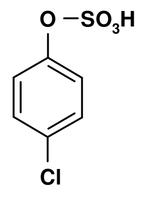
Chemical names, structures and code names of metabolites and degradation products of triadimefon and triadimenol are shown below.

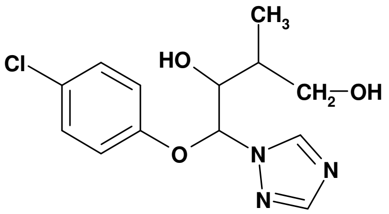
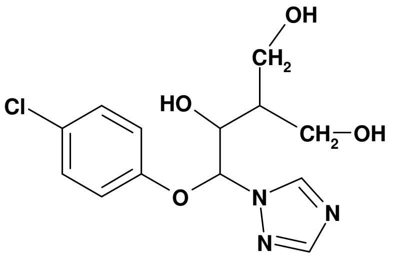
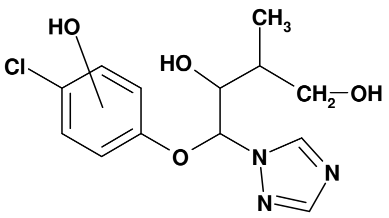
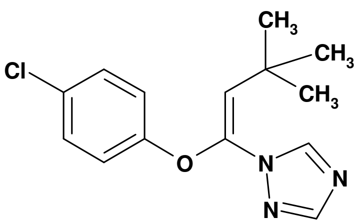
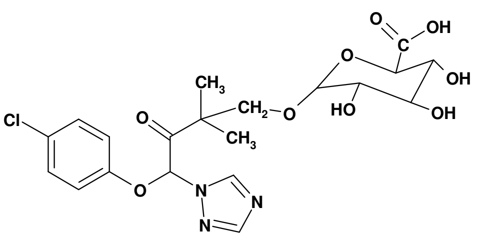
Table 5. List of Metabolites – sorted by chemical structures

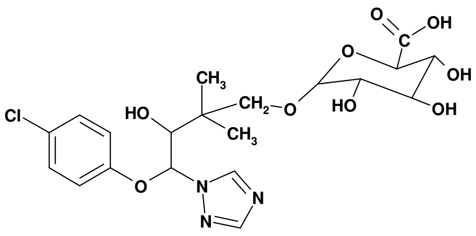
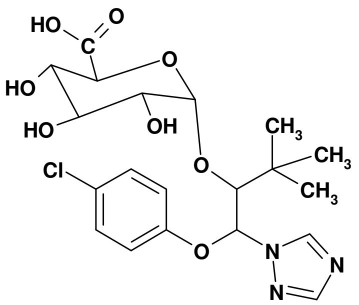
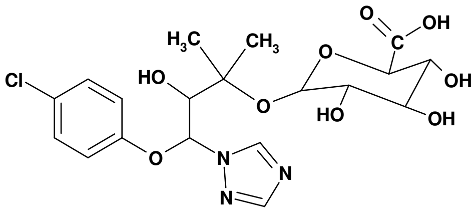
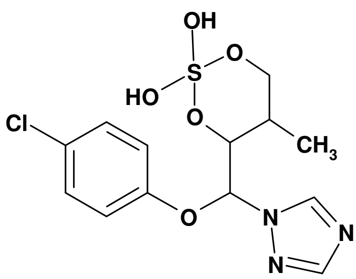
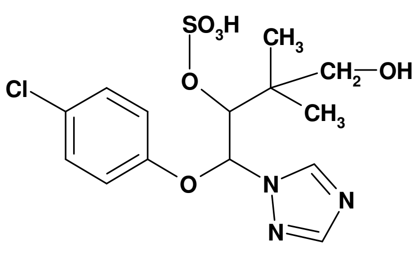
Formula Report name used in this summary	Codes used *CA index name [CAS#]* Other names / codes	Occurrence (Matrix, according to report No.)
	ai Triadimenol: *β-(4-chlorophenoxy)-α-(1,1-dimethylethyl)-1H-1,2,4-triazole-1-ethanol (CAS)* *1-(4-chlorophenoxy)-3,3-dimethyl-1-(1H-1,2,4-triazol-1-yl)-2-butanol (IUPAC)* *[CAS: 55219-65-3]* Bayfidan Baytan KWG 0519 Mu10 F10, F10b, F11 EB7, EB8 EC6, EC7 L8, L9, L12a, L12b M13b, M13c	
	M01 Triadimefon *1-(4-chlorophenoxy)-3,3-dimethyl-1-(1H-1,2,4-triazol-1-yl)-2-butanone* *(CAS) and (IUPAC)* *[CAS: 43121-43-3]* MEB 6447 Bayleton F10a M13a F13 EB9 EC8	Animals 102640 105161 105161-1 105183 105183-1 66489 Plants MR69209 PF2823 PF2904 Soil MR-538/00 MR51230 MR66794 MR99769 PF3020 Water MR103207 PF2660
	M02 KWG 1640 *γ-(4-chlorophenoxy)-β-hydroxy-α,α-dimethyl-1H-1,2,4-triazole-1-butanoic acid (CAS)* Triadimenol – acid KWG 0519 – acid XIII, XV Mu5a, Mu6 M9, M10, M21 F5a, F6, F25 EC19 L7, L27 K6d, K7	Animals 102640 105161 105161-1 105183 105183-1 MR088/02 66489 Plants PF2904 Soil MR-538/00

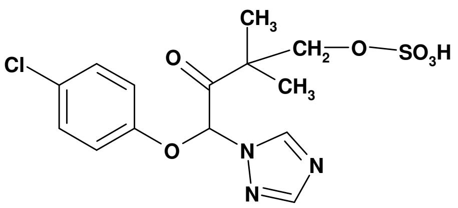
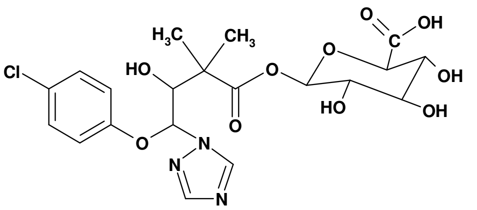
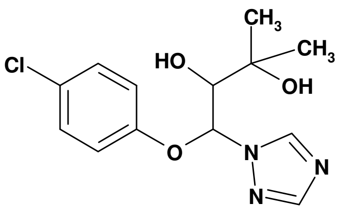
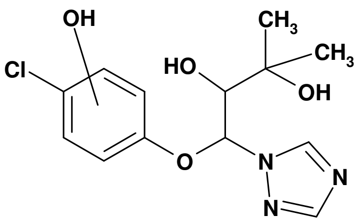
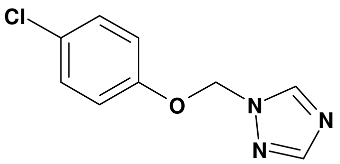
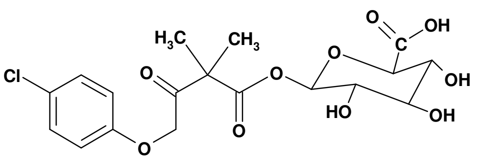
Formula Report name used in this summary	Codes used *CA index name [CAS#]* Other names / codes	Occurrence (Matrix, according to report No.)
	Triadimenol-carboxy Baytan acid	 Water PF2660
	M03 KWG 1732 Chlorophenoxytriazole acetic acid *α-(4-chlorophenoxy)-1H-1,2,4-triazole-1-acetic acid (CAS)* V CPTAA M8	Animals 105183 105183-1 102640 Soil MR-538/00
	M04 1, 2, 4-triazole *1H-1,2,4-triazole (CAS, IUPAC)*	Plants PF2904 Soil PF2904 Water potential metabolite
	M05 Triazole alanine *3-(1H-1,2,4-triazol-1-yl)-alanine (CAS)* TA	Plants PF2823 PF2904 PF3020 Soil PF3364 RCC798660
	M06 Triazole acetic acid *1H-1,2,4-triazole-1-acetic acid (CAS)* TAA	Plants PF2823 PF2904 PF3020 Soil 278336 RCC798660 PF3364
	M07 p-chlorophenol *4-chlorophenol (CAS, IUPAC)* BNF 5542A II PCP L7, L12 F9 Triadimenol-4-chlorophenol	Animals 102640 105183 105183-1 MR088/02 Plants PF2823 PF2904 PF3020 PF3238 MR-538/00

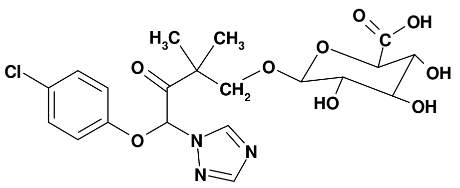
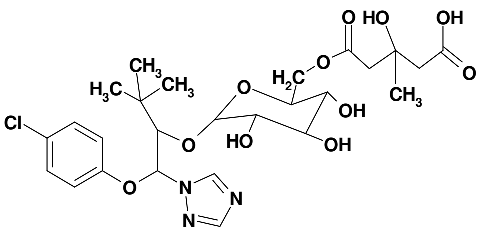
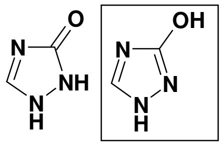
Formula Report name used in this summary	Codes used *CA index name [CAS#]* Other names / codes	Occurrence (Matrix, according to report No.)
	M08 BUE 2285 *1-(4-chlorophenoxy)-3-methyl-1- (1H-1,2,4-triazol-1-yl)-2-butanone (CAS)* Desmethyl Triadimefon	Plants PF2823 PF2904 PF3020 PF3238
	M09 KWG 1323 *1-(4-chlorophenoxy)-4-hydroxy-3,3-dimethyl-1-(1H-1,2,4-triazol-1-yl)-2-butanone (CAS)* XVII Mu8 F8 EB6 EC5 Triadimenol-MEB6447-hydroxy	Animals 102640 105161 105161-1 105183 105183-1 MR088/02 66489 Plants PF2904
	M10 KWG 1342 *β-(4-chlorophenoxy)-α-(1,1-dimethylethyl)-1H-1,2,4-triazole-1-ethanol (CAS)* XVI Mu7 F7, F29 L8, L31 K8 M10, M25 EB12 EC23 Triadimenol-hydroxy	Animals 102640 105161 105161-1 105183 105183-1 MR088/02 66489 Plants MR69209 PF2823 PF2831 PF2904 PF3020 PF3238
	M11 Triazole-lactic acid *α-hydroxy-1H-1,2,4-triazole-1-propanoic acid (CAS)* THP	Plants PF2823 PF2904 PF3020
	M12 KWG 1342 glucoside KWG 1342-β-D-glucopyranoside KWG 1342 glucopyranoside LOC 331 HYA 604	Plants MR449/02 PF2823 PF2831 PF2904 PF3020 PF3238

Formula Report name used in this summary	Codes used *CA index name [CAS#]* Other names / codes	Occurrence (Matrix, according to report No.)
	M13 4-Chlorophenyl glucoside *4-Chlorophenyl-β-D-glucopyranoside* STP 439	Plants PF2904 PF3238
	M14 KWG 1323 glucoside KWG 1323-β-D-glucopyranoside	Plants PF2904
	M15 Triadimenol hexose conjugate KWG 0519-hexose – conjugate	Plants PF2823 PF2831 PF2904 PF3020 PF3238
	M16 KWG 1093 *1H-1,2,4-triazole-1-ethanol, β-(4-chlorophenoxy)-α-(1,1-dimethylethyl)-acetate (CAS) [CAS: 64452-18-2]* Acetyl Triadimenol	Plants PF3238
	M17 p-chlorophenol sulphate *4-chlorophenyl sulfuric acid (CAS)* IV PCPS M1a Mu1 F1 L2 K1a	Animals 102640 105161 105161-1
	M18 Desmethyl KWG 1342 *4-(4-chlorophenoxy)-2-methyl-4-(1H-1,2,4-triazol-1-yl)- 1,3-butanediol (CAS)* XII DeMe - KWG 1342 L28, L29 M22, M23	Animals 102640 105183 105183-1

Formula Report name used in this summary	Codes used *CA index name [CAS#]* Other names / codes	Occurrence (Matrix, according to report No.)
	F26, F27 EB10 EC20, EC21	
	M19 Methyl hydroxylated desmethyl KWG 1342 *4-(4- chlorophenoxy)-2-(hydroxymethyl)-4-(1H-1,2,4-triazol-1-yl)- 1,3-butanediol (CAS)* I, III HO – DeMe - KWG 1342 L25, L26 M19, M20	Animals 102640 105183 105183-1
	M20 Phenyl hydroxylated desmethyl KWG 1342 *4-(4-chloro-hydroxyphenoxy) -2-methyl-4-(1H-1,2,4-triazol-1-yl)- 1,3-butanediol* VI, IX HO-DeMe - KWG 1342 DeMe - KWG 1342 Phenol L22, L23 M16, M17 EC15	Animals 102640 105183 105183-1
	M21 Triadimenol dehydrate *1-[(1E)-1-(4-chlorophenoxy)-3,3-dimethyl-1-butenyl]- 1H-1,2,4-triazole (CAS)* VIII	Animals 102640
	M22 KWG 1323 glucuronide *1-(4-chlorophenoxy)-3,3-dimethyl-1-(1H-1,2,4-triazol-1-yl)-2-oxo-butanol-4-O-glucuronic acid* XIV KWG 1323 Glu Mu5b F5b L6c K6c Triadimenol-ketohydroxyglucuronide	Animals 102640 105161 105161-1 MR088/02
	M23 KWG 1342 glucuronide *1-(4-chlorophenoxy)-3,3-dimethyl-1-(1H-1,2,4-triazol-1-yl)-2-hydroxybutane-4-O-glucuronic acid* KWG 1342 4-glucuronide Mu4, Mu5c, Mu5d F4, F5c, F5d	Animals 105161 105161-1 MR088/02

Formula Report name used in this summary	Codes used *CA index name [CAS#]* Other names / codes	Occurrence (Matrix, according to report No.)
	L5, L6a, L6b K5, K6a, K6b M5 Triadimenol-hydroxyglucuronide	
	M24 Triadimenol glucuronide *4-(4-chlorophenoxy)-2,2-dimethyl-4-(1H-1,2,4-triazol-1-yl)-3-(O-glucuronosyl)-butric acid* Triadimenol glu Mu9 L11a K10 M12	Animals 105161 105161-1 MR088/02
	M25 Desmethyl KWG 1342 glucuronide *1-(4-chlorophenoxy)-3-methyl-1-(1H-1,2,4-triazol-1-yl)-2-hydroxybutane-4-O-glucuronic acid* VII, XI DeMe-KWG 1342-gluc	Animals 102640
	M26 Desmethyl KWG 1342 cyclic sulphate *1-[(4-chlorophenoxy)(2,2-dihydro-2,2-dihydroxy-5-methyl-1,3,2-dioxathian-4-yl)methyl]- 1H-1,2,4-triazole (CAS)* X DeMe - KWG 1342 - cyc - sulfate	Animals 102640
	M28 KWG 1342 2-sulfate *4-(4-chlorophenoxy)-2,2-dimethyl-4-(1H-1,2,4-triazol-1-yl)-1,3-butanediol-3-(hydrogen sulfate) (CAS)* KWG 1342 Sulfate Mu2 F2a, F3a L3c, L17 K3 M3	Animals 105161 105161-1 105183 105183-1

Formula Report name used in this summary	Codes used *CA index name [CAS#]* Other names / codes	Occurrence (Matrix, according to report No.)
	M29 KWG 1323 sulfate *1-(4-chlorophenoxy)-3,3-dimethyl-4-(sulfooxy)-1-(1H-1,2,4-triazol-1-yl)-2-butanone (CAS)* L18	Animals 105183 105183-1
	M30 Triadimenol acid glucuronide *4-(4-chlorophenoxy)-2,2-dimethyl-4-(1H-1,2,4-triazol-1-yl)-3-(O-glucuronosyl)-butric acid* KWG 0519 Acid-Glu M3a, M3b, M4a F2b, F3b L3a, L3b, L4, L20, L21 K4 EC14 Triadimenol-carboxyglucuronide	Animals 105161 105161-1 105183 105183-1 MR088/02
	M31 Desmethyl hydroxy triadimenol *1-(4-chlorophenoxy)-3-methyl-1-(1H-1,2,4-triazol-1-yl)- 2,3-butanediol (CAS)* HO - DeMe - KWG 0519 L30 M24 F28 EB11 EC22	Animals 105183 105183-1
	M32 Phenyl hydroxylated desmethyl hydroxy triadimenol *1-(4-chloro-hydroxyphenoxy)-3-methyl-1-(1H-1,2,4-triazol-1-yl)- 2,3-butanediol* HO - DeMe - KWG 0519 phenol L24 M18 EC16	Animals 105183 105183-1
	M33 CPMT *1-[(4-chlorophenoxy)methyl]- 1H-1,2,4-triazole (CAS, IUPAC)* *4-Chlorophenoxy-1,2,4-triazole-1-yl-methane* BNF 5542B	Soil MR-538/00
	M34 Triadimenol ketocarboxy glucuronide *4-(4-chlorophenoxy)-2,2-dimethyl-3-oxo-butanoic acid glucuronide*	Animals MR088/02

Formula Report name used in this summary	Codes used *CA index name [CAS#]* Other names / codes	Occurrence (Matrix, according to report No.)
	M35 Triadimenol-ketohydroxyglucuronide *β-(4-chlorophenoxy)-α-(1,1-dimethylethyl)-1H-1,2,4-triazole-1-ethanol glucuronide* see M22	
CO_2	M36 Carbon dioxide	Soil MR-538/00 MR66794 Water MR357/99 PF2660
	M37 Triadimenol-HMG-glucoside *5-[(6-{1-[(4-chlorophenoxy)(1H-1,2,4-triazol-1-yl)methyl]-2,2-dimethyl-propoxy}-3,4,5-trihydroxytetrahydro-2H-pyran-2-yl)methoxy]-3-hydroxy-3-methyl-5-oxopentanoic acid (IUPAC)*	Plants MR449/02
 *)	M38 1,2-dihydro-1,2,4-triazolone *1,2-dihydro-1,2,4-triazolone* *) 1,2-Dihydro-1,2,4-triazolone is the tautomer of hydroxy-triazole, it is the predominant form under most conditions. The compound was designated by some authors	Soil 278336 PF3364

Triadimenol and triadimefon are related substances and follow the same pathway in all matrices investigated. Therefore, the following studies presented were used to evaluate the residue behaviour of both active substances.

Animal metabolism

The metabolism of triadimenol and triadimefon has been studied in laboratory rats in compliance with GLP to investigate possible differences in the biokinetic behaviour of both substances. In detail the rat metabolism studies were evaluated by the WHO Core Assessment Group of the 2006 JMPR. Both substances share similar metabolism in rats and can be evaluated together on basis of the following studies.

Lactating goat

(Hall, L. R.; Hartz, A. L. 1993 and 1994)

A target dose of [phenyl-UL-^{14}C]triadimefon was prepared on α-lactose contained in a gelatine capsule and was administered orally to a lactating goat (*Capra hircus*) for three consecutive days at a daily dose rate of 2.59 mg ai/kg bw. The dose was given after morning milking. Milk was collected morning and evening each day of the study. The milk samples collected after each administration were combined and radioassayed. The 24 – 46 h milk was analysed for composition of radiolabelled residues. Urine collected 0 – 24 and 24 – 50 h was radioassayed. The 0 – 24 h urine was analysed for the main metabolites. The goat was sacrificed three hours after the administration of the third dose.

Composite fat, composite muscle, liver and kidney were removed for analysis of radiolabelled residues.

The administered radioactivity was rapidly excreted, with 83% of the first dose excreted within 24 hours. Radioactive residue levels found in the tissues were 3.501 mg/kg in kidney, 1.564 mg/kg in liver, 0.296 mg/kg in composite fat and 0.068 mg/kg in composite muscle. The 0 – 24 h milk had a residue of 0.027 mg/kg, and the 24 – 46 h milk had a residue of 0.029 mg/kg (see Table 6).

Table 6. Radiolabelled residues found in organs, tissues and milk of a goat following the oral administration of three daily doses of 2.59 mg/kg b [phenyl-UL-^{14}C]triadimefon

Organ/tissue	Total residue (ppm)
Kidney	3.501
Liver	1.564
Muscle	0.068
Fat	0.296
Milk (0 - 24 h)	0.027
Milk (24 - 96 h)	0.029

The radioactivity was extracted from kidney, liver and milk using methanol, from fat using acetonitrile and methanol and from muscle using acetonitrile. Urine, tissue extracts and milk extracts were analysed by HPLC equipped with a radiodetector. The isolated HPLC-fractions were identified by HPLC co-chromatography with authentic reference compounds or were identified using GC/MS or LC/MS. The distribution of metabolites in the different tissues, in milk and urine is summarised in Tables 7 and 8.

Triadimefon was rapidly metabolised in the lactating goat. It was not identified in urine (0 – 24 h), kidney, liver and muscle and was present at low amounts in milk (1% of the TRR, < 0.001 mg/kg) and in fat (4% of the TRR, 0.013 mg/kg).

The distribution pattern of metabolites in tissues (kidney, liver, muscle and fat), milk, and urine was very similar (see Table 7). The only major difference was the larger amount of triadimenol in the liver: two diastereomer pairs of triadimenol were identified accounting for 20% of the TRR or 0.313 mg/kg. Triadimenol was not detected in kidney extracts and in urine and was present at low amounts (1 – 3% of the TRR or < 0.001 – 0.009 mg/kg) in milk, muscle and fat. The majority of the radioactive residues (57 – 82% of the TRR) in the tissues, milk and urine was identified as glucuronic acid or sulfate conjugates (M22, M23, M28 and M30) of metabolites M02, M09 and M10. Unconjugated M02 accounted for 0.039 – 0.3 mg/kg or 4 – 17% of the TRR in kidney, liver, muscle, fat and urine. Unconjugated M09, unconjugated M10, and p-chlorophenol sulfate (M17) and triadimenol glucuronide M24 were minor metabolites.

Table 7. Distribution of triadimefon and radiolabelled metabolites in goat kidney, liver, muscle, fat, and milk 96 hours after the administration of three oral daily doses of 2.59 mg/kg bw. [phenyl-UL-^{14}C]triadimefon. Values are given in percent of total radioactivity of the organ or milk and in ppm triadimefon equivalents

Compound	Kidney		Liver		Muscle		Fat		Milk (24 – 96 h)	
	% of TRR	ppm	% of TRR	ppm	% of TRR	ppm	% of TRR	ppm	% of TRR	ppm
Triadimefon (M01)	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	4	0.013	1	< 0.001
Triadimenol [a]	n.d.	n.d.	20	0.313	2	0.001	3	0.009	1	< 0.001
M02 [a]	9	0.3	4	0.067	17	0.011	14	0.039	n.d.	n.d.
M09	n.d.	n.d.	n.d.	n.d.	1	0.001	n.d.	n.d.	n.d.	n.d.
M10	1	0.049	3	0.05	6	0.004	3	0.009	3	0.001
M17	2	0.072	2	0.024	1	0.001	2	0.006	2	< 0.001

Compound	Kidney		Liver		Muscle		Fat		Milk (24 – 96 h)	
	% of TRR	ppm	% of TRR	ppm	% of TRR	ppm	% of TRR	ppm	% of TRR	ppm
M22	12	0.425	8	0.129	19	0.013	22	0.064	n.d.	n.d.
M23 [a]	43	1.503	39	0.608	31	0.022	30	0.087	6	0.002
M24	< 1	0.013	< 1	0.01	1	< 0.001	n.d.	n.d.	1	< 0.001
M28 [a]	15	0.541	1	0.019	11	0.008	9	0.029	45	0.013
M30 [a]	12	0.425	13	0.198	8	0.006	8	0.023	6	0.002
Triadimenol-conjugate.[b]	< 1	0.026	4	0.084	n.d.	n.d.	3	0.010	1	< 0.001
Unknown [c]	4	0.147	< 1	0.008	n.d.	n.d.	n.d.	n.d.	23	0.005
Total extracted	100	3.501	97	1.510	100	0.068	97	0.289	91	0.026
Solids	n.d.	n.d.	3	0.054	n.d.	n.d.	3	0.007	9	0.003
Total	100	3.501	100	1.564	100	0.068	100	0.296	100	0.029

a - Values represent the sum of the diastereomers

b- The nature of the conjugates was not identified

c - Radioactivity not identified, but characterised by HPLC

Table 8. Distribution of metabolites in urine collected 0-24 hours after the administration of the first oral dose of 2.59 mg/kg [phenyl-UL-^{14}C]triadimefon to a goat

Metabolite	% of TRR
M02 [a]	16
M22	21
M23 [a]	43
M28	10
Unknown[b]	10
Total	100

a - Values are given as sum of diastereomers

b -The unknown radioactivity comprises at least 7 compounds, which could be separated by HPLC; the most polar compound was identified as p-chlorophenol sulfate (*M17*)

Laying hens

<u>(Duah, F. K.; Smasal, T. M. 1993 and 1994)</u>

A target dose of [phenyl-UL-^{14}C]triadimefon was prepared on α-lactose contained in a gelatine capsule and was administered orally to each of ten laying hens (*Gallus domesticus*) for three consecutive days at a daily dose rate of 2.45 mg/kg bw. The doses were given at approximately 8:00 a.m. The hens were sacrificed three hours after the third dose. Eggs collected during the 24 h following the first and second doses were considered day-1 and day-2 eggs, respectively. Eggs collected after the third dose and before sacrifice were considered day-3 eggs. Each day's eggs were broken, the shells were discarded, and the contents were combined, weighed and radioassayed. The radioactivity was extracted and analysed. After sacrifice liver, composite fat, and composite muscle were collected from each bird. Similar tissues from all ten hens were combined, radioassayed and analysed for composition of radiolabelled residues.

Total radioactive residues recovered in hens after sacrifice was highest in the liver (0.731 mg/kg), 0.171 and 0.123 mg/kg in composite fat and muscle and even lower in day-1, day-2 and day-3 eggs (0.007 – 0.088 mg/kg) (see Table 9).

Table 9. Total radioactive residue levels in the eggs and tissues of laying hens following the oral administration of three daily doses of [phenyl-UL-^{14}C]triadimefon at 2.45 mg/kg bw

Organ/tissue	Total residue (ppm)
Day-1 eggs	0.007
Day-2 eggs	0.076
Day-3 eggs	0.088
Fat	0.171
Liver	0.731
Muscle	0.123

The radioactivity was extracted from liver and muscle using methanol, from fat using acetonitrile and hexane and from eggs using acetone. Identification of metabolites was achieved by HPLC co-chromatography with authentic reference compounds or by mass spectral analysis (GC-MS or LC/TSP-MS). Altogether 88 – 93% of the TRR in the different organs and tissues was identified. The quantitative distribution of triadimefon and its metabolites in liver, composite muscle, composite fat and eggs (day-2 and 3) is given in Table 10.

Triadimefon was rapidly metabolised in laying hens. It was not identified from liver and muscle and was detected in fat (0.038 mg/kg or 22% of the TRR) and in eggs (0.004 – 0.007 mg/kg or 4 – 9% of the TRR).

From liver altogether 12 metabolites were identified. Major metabolite was the carboxy metabolite M02 (18% of the TRR), which was also detected as glucuronic acid conjugate M30 (7% of the TRR), the hydroxy metabolite M10 and its sulfate conjugate M28 accounting together for 14% of the TRR and different desmethylated metabolites (M18, M19, M20, M31 and M32) accounting together for 40% of the TRR. Metabolite M29, a sulfate conjugate of the triadimefon hydroxy metabolite M09, and p-chlorophenol (M07) were present at amounts of 2% of the TRR in liver.

From composite muscle a similar but reduced metabolite pattern was identified. As in the liver, main metabolites were the carboxy metabolite M02 and the desmethylated metabolite M31, each accounting for 24% of the TRR in the composite muscle. Conjugated metabolites were not identified. Metabolite M10 formed after hydroxylation of the t-butyl methyl group was present at 4% of the TRR. Demethylation products M18, M19, M20 and M32 accounted for 8 – 12% of the TRR, each. Metabolite M03 formed by splitting off the t-butyl moiety was a minor metabolite (3% of the TRR).

Main components isolated from fat were triadimefon and triadimenol accounting for 22 and 25% of the TRR in fat, respectively. Metabolites hydroxylated or carboxylated at the t-butyl methyl group M09, M10, and M02 accounted for 3 – 8% of the TRR. The desmethyl metabolites M18 and M19 accounted for 7 and 10% of the TRR, respectively. P-chlorophenol (M07) was present at 4% of the TRR in fat.

In eggs, major metabolites were triadimenol (12 – 25% of the TRR), the t-butyl methyl hydroxylated metabolite M10 (18% of the TRR) and the desmethyl metabolites M18 (9 – 16% of the TRR) and M31 (16 – 23% of the TRR). Minor compounds were the carboxy metabolite M02 (up to 3% of the TRR), the corresponding glucuronide M30 (up to 1% of the TRR), the methyl hydroxylated metabolite of triadimefon, M09, (3 – 5% or the TRR) and the desmethyl metabolites M20 and M32 (up to 4% of the TRR).

Table 10. Distribution of triadimefon and radiolabelled metabolites in chicken liver, muscle, fat, and eggs following three daily oral applications of 2.45 mg [phenyl-UL-^{14}C]triadimefon/kg bw (Values are given in % of total radioactive residues (TRR) and in mg/kg triadimefon equivalents)

Compound	Liver		Muscle		Fat		Eggs-day 2		Eggs-day 3	
	% TRR	mg/kg [a]	% TRR	mg/kg [a]	% TRR	mg/kg [a]	% TRR	mg/kg [a]	% TRR	mg/kg [a]
Triadimefon *(M01)*	---	---	---	---	22	0.038	9	0.007	4	0.004
Triadimenol [b]	5	0.037	---	---	25	0.043	25	0.019	12	0.011
M02 [b]	18	0.132	24	0.030	8	0.014	---	---	3	0.003
M03	---	---	3	0.004	---	---	---	---	---	---
M07	2	0.015	---	---	4	0.007	---	---	---	---
M09	---	---	---	---	4	0.007	5	0.004	3	0.003
M10	9	0.066	4	0.005	3	0.005	18	0.013	18	0.016
M18 [b]	9	0.066	12	0.015	7	0.012	9	0.007	16	0.014
M19 [b]	7	0.051	9	0.011	10	0.017	---	---	---	---
M20 [b]	4	0.029	8	0.010	---	---	---	---	4(t)	0.004
M28	5	0.037	---	---	---	---	---	---	---	---
M29	2	0.015	---	---	---	---	---	---	---	---
M30 [b]	7	0.051	---	---	---	---	---	---	1(t)	0.001
M31	13	0.095	24	0.030	---	---	16	0.012	23	0.020
M32	7	0.051	9	0.011	---	---	---	---	4(t)	0.004
Total identified	88	0.643	93	0.116	83	0.142	82	0.062	88	0.077
Total characterised	10	0.073	2	0.002	10	0.017	13	0.009	5	0.004
Total analysed [c]	98	0.716	95	0.118	93	0.159	95	0.072	93	0.081
Solids	2	0.015	3	0.004	1	< 0.001	1	0.001	4	0.004
Extracts not analysed	---	---	2	0.002	6	0.010	4	0.003	3	0.003
Total	100	0.731	100	0.123	100	0.171	100	0.076	100	0.088

(t) - Tentatively identified (one chromatographic system)

a - The calculation of the mg/kg-values for the different compounds is based on the TRR values (100%) obtained by radioassay after combustion

b - Values include amounts of different diastereomers

c - Total radioactivity in extracts analysed by HPLC

Summary – animal metabolism

The biokinetic behaviour of orally applied [phenyl-UL-^{14}C]triadimefon in goats and hen was shown to be very similar. The results from these studies compared to the results of rat studies with both triadimefon and triadimenol show that metabolism of both compounds proceeds via identical pathways.

Metabolism of triadimefon proceeds mainly via two major pathways. One major pathway, the "triadimenol-pathway", starts with the reduction of the triadimefon keto group to a hydroxy group yielding triadimenol. Subsequent stepwise oxidation of the t-butyl methyl group yields the hydroxy metabolite M09 and the carboxy metabolite M02, which are subjected to conjugation with sulfate or glucuronic acid.

The second major pathway, the "triadimefon-pathway", starts with the oxidation of a t-butyl methyl group retaining the triadimefon keto group yielding the hydroxy metabolite M09. Conjugation of M09 with sulfate yields metabolite M29. Further oxidation of the hydroxy methyl group of metabolite M09 would yield a ß-keto carboxylic acid. ß-keto carboxylic acids are known to be readily decarboxylated. Decarboxylation and subsequent reduction of the keto group yields metabolite M18, desmethyl KWG 1342, or metabolite M31, desmethyl hydroxy triadimenol. M18 and M31 are subjected to hydroxylation reactions forming metabolites M19, M20, and M32.

Cleavage of the complete t-butyl group of triadimefon forming metabolite M03 or cleavage of triadimefon to p-chlorophenol (M07) was of minor importance.

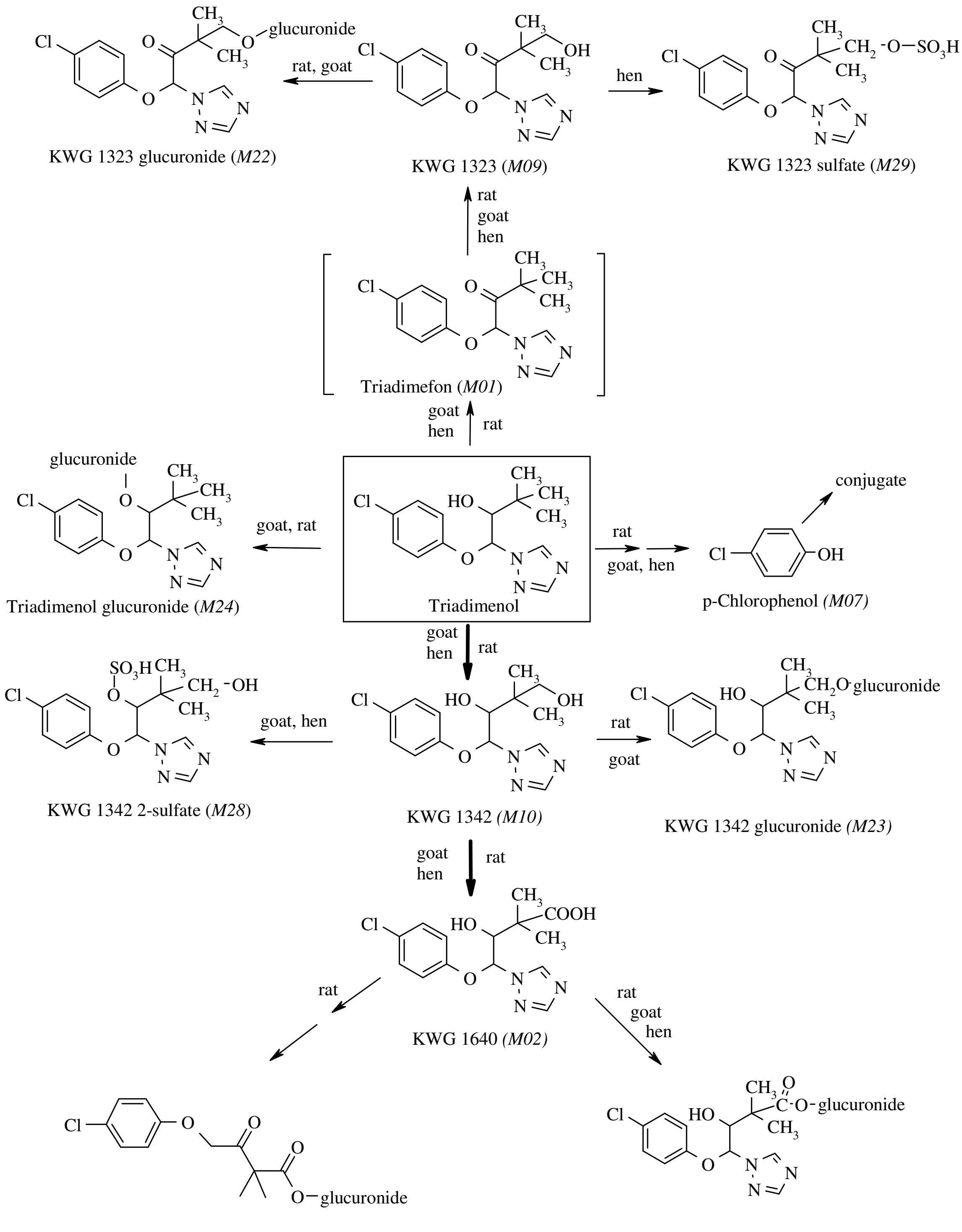


Figure 1. Proposed metabolic pathway of triadimenol in animals

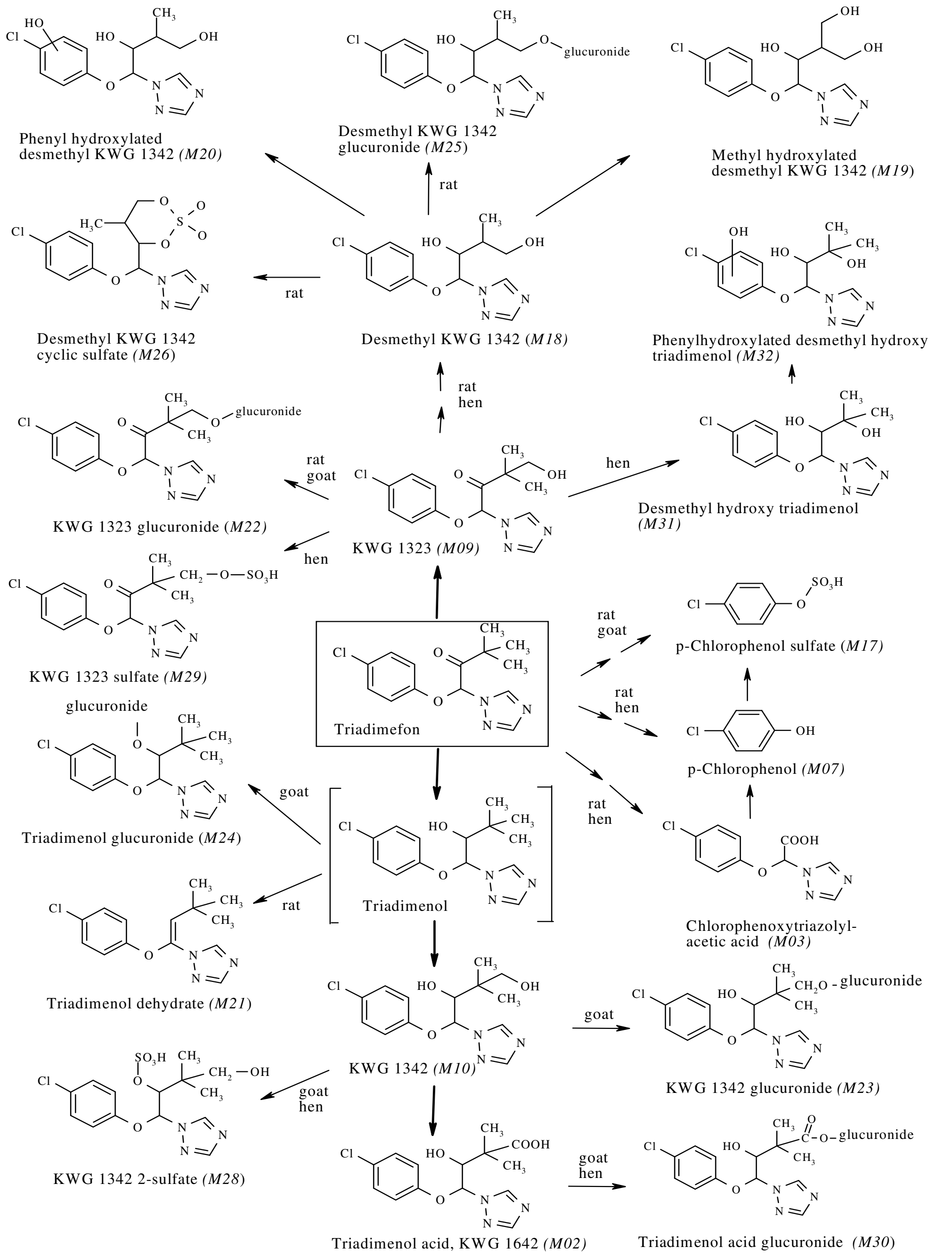


Figure 2. Proposed metabolic pathway of triadimefon in animals

Plant metabolism

The metabolism of triadimenol and triadimefon has been studied in grapes, cereals, sugar beets, tomatoes and cucumbers. In all studies the active substance was applied via spray application. For tomatoes, cucumbers and sugar beets an additional application as a seed treatment was conducted.

Grapes (triadimenol)

<u>(Vogeler, K.. 1987)</u>
The metabolism of triadimenol was investigated after foliar spray application of [phenyl-UL-^{14}C]triadimenol on grapes under practical field conditions (outdoors). Twenty bunches of grapes (variety Bacchus) with a mean weight of 80 g were treated during berry ripening with a 050 EW formulation of 5 mg radioactively labelled active ingredient in 11 mL water corresponding to a spray solution of 0.045% active ingredient. Each bunch was treated with 500 µL of the formulation,

equivalent to 212 µg of active ingredient. Two samples were taken on each of the days 0 and 17 post treatment and the remaining on day 35 (harvest). From samples collected on day 35, eight were used for the elucidation of plant metabolism.

In addition to the metabolism trial a translocation experiment was also carried out. Two leaves above and two leaves below a bunch of grapes, together with a part of the stalk, were treated while shielding the adjacent grape bunch from contamination.

For processing, the grapes were washed in dichloromethane (dipping) to remove residues from the skin and then macerated with acetone. The suspension was filtered and the residue macerated once more with dichloromethane. The suspension was filtered again and the combined filtrates separated into an organic and aqueous phase. After reducing the organic phase to dryness the remaining residues were reconstituted in ethyl acetate. The aqueous phase was evaporated and freed from water by azeotropic distillation with acetonitrile.

The solid plant residues were extracted under reflux with methanol and concentrated hydrochloric acid (99:1) for 24 h. The suspension was filtered and the filtrate evaporated to dryness. The residue was diluted in methanol. All liquid phases were radioassayed by LSC. The radioactivity of the solid residues was determined by combustion analysis followed by LSC of combustion gases.

The extracts were subjected to TLC. Radioactive zones were detected and quantified by a TLC linear analyser. Co-chromatography with reference compounds was used for identification purposes. In some cases enzymatic hydrolysis with cellulase and isolation by preparative TLC were applied.

About 90% of the radioactivity originally applied to the grapes on day 0 were recovered as total radioactive residues (TRR) on days 17 and 35 (harvest), corresponding to 2.2 mg/kg on day 17 and 1.4 mg/kg on day 35. On day 35, 61% (0.85 mg/kg) of the recovered radioactivity was identified as unchanged parent compound. Conjugates derived from triadimenol amounted to 13.3% and M10 and its glucoside (M12) made up 9.3% of the TRR (Table 11). A proposed metabolic pathway is shown in Figure .

With ongoing time, radioactivity on the grape surface decreased while the radioactivity in the different extracts increased. In the translocation experiments, 20% of the radioactivity applied to the foliage on day 0 (100%) were recovered on day 35. The untreated grapes contained only 0.2 – 0.3% of the recovered radioactivity.

Table 11. Recovery and distribution of radioactivity (triadimenol and metabolites) in grapes, 35 days after spray application with [phenyl-UL-^{14}C]triadimenol

	Compound	[% recovered]	[mg/kg]
	Triadimenol A	49.1	0.69
Identified	Triadimenol B	12.0	0.16
	Triadimenol hexose conjugate (M15)	7.1	0.19[a]
	Other triadimenol hexose conjugates (including labile conjugates)	6.2	
	KWG 1342 (M10)	1.0	0.02
Tentatively identified	KWG 1342 glucoside (M12) and other glucosides	8.3	0.13 [a]
Characterised	Labile triadimenol conjugates	1.7	0.03 [a]
Not identified	Diffuse radioactivity	1.0	
	3 unidentified conjugates	5.8	0.08 [b]
Non-extractable residue		7.8	

a - [mg/kg]-values calculated from specific activity refer to aglycons

b - triadimenol equivalents

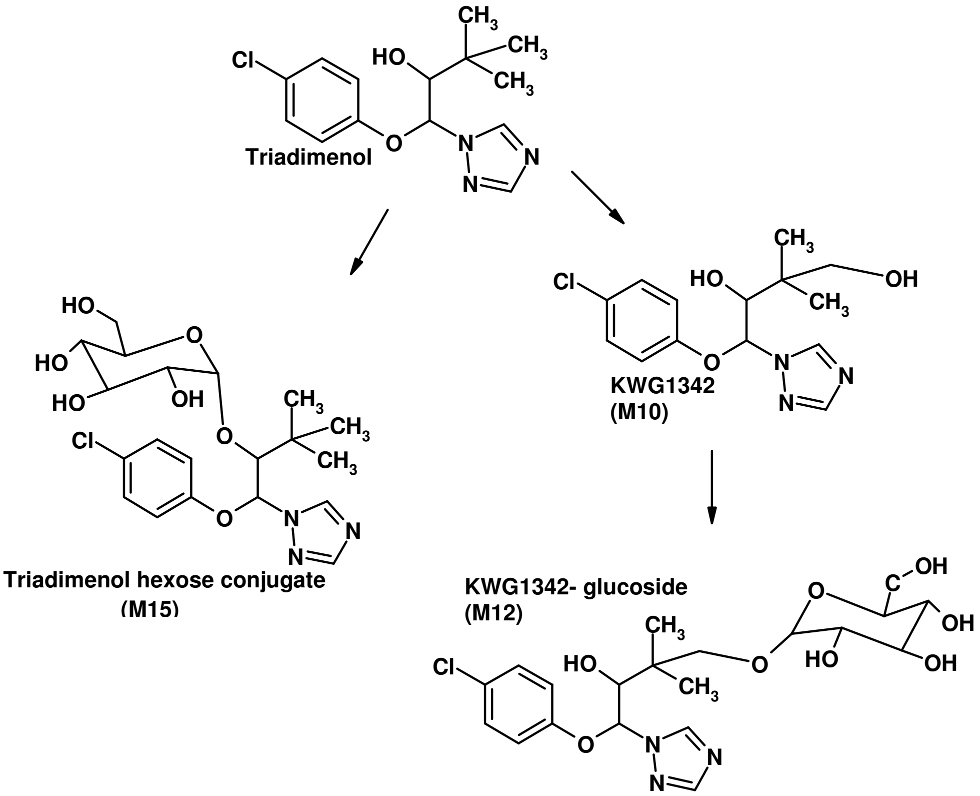


Figure 3. Proposed metabolic pathway for the metabolization of triadimenol in grapes

Grapes (triadimefon)

<u>(Fredrickson, D. R., 1981)</u>
The metabolism of triadimefon in grapes was investigated after its application to an established grape vine (variety Niagara White) located near Stanley, Kansas. The grape vine was covered by a roof made of clear polyethylene film.

[Phenyl-UL-^{14}C]-triadimefon with a specific activity of 4.0 mCi/mmol was applied as a 50WP formulation with an amount equivalent to 210 g ai/ha with a hand-pump spray bottle. Samples were taken at 0, 1, 3, 7, 14, 21, 28, 35 and 56 days (maturity). The grapes were homogenised first with acetone and then with methylene chloride. After filtration, the methylene chloride phase was drained through sodium acetate and evaporated to dryness. Subsequently the residue was reconstituted in ethyl acetate, concentrated on a silica gel column and eluted with methanol. Both, the acetone and the methanol fraction were analysed by thin layer chromatography (TLC).

The aqueous acetone phase was concentrated as an azeotrope with acetonitrile (ACN) and an aliquot was injected on a Bio-Gel F-4 column. The fractions containing ^{14}C were combined and evaporated as an azeotrope with ACN. The residue was redissolved in water and the entire sample injected on a RP-8 column. Appropriate fractions were combined and evaporated to dryness. The resulting fractions were further cleaned up by preparative TLC and the zones of radioactivity were located by autoradiography. The radioactive bands were eluted with methanol and an aliquot of each was re-examined using analytical TLC plates with the same solvent system and compared to available authentic standards for identification. Quantitation was done by LSC of the isolated bands.

The extracted grapes were hydrolysed under reflux with methanol/concentrated HCl (99:1) for 24 h. The filtrate was evaporated and the residue was dissolved in methanol for analysis by TLC. Enzyme hydrolyses were carried out on each polar metabolite isolated by the clean up procedure described above with cellulase. The resulting entire sample was analysed either by TLC or by high performance liquid Chromatography (HPLC). TLC analyses were carried out on silica gel 60 F254 using several solvent systems. Non-labelled standards were spotted over the radioactive samples and visualised after development by ultraviolet light. The radioactive bands were scraped and the scrapings assayed in a Liquid Scintillation Counter (LSC). The minimum sensitivity of the liquid scintillation counter was calculated with 0.002 mg/kg.

The radioactive residues of triadimefon disappeared rapidly within the first 7 days after application to 27.5% of that initially present. The decline in total residue was accompanied by a build-up of the major metabolite triadimenol. The amount of activity extracted into the organic fraction steadily declined to 46.6% of the total radioactive residue at 56 days while that remaining in the solids increased to 36.0%. The amount of activity in the aqueous phase gradually increased to 17.4% at 56 days (Table 12).

Initial metabolism of triadimefon involved reduction of the carbonyl group to the alcohol forming triadimenol as a pair of diastereoisomers. Subsequent metabolism of triadimenol appeared to proceed along three pathways — hydroxylation of the t-butyl group to form KWG 1342 (M10), cleavage of the ether linkage to p-chlorophenol and conjugation of KWG 1342 (M10), triadimenol and p-chlorophenol with various sugars. Three conjugates of triadimenol were formed, triadimenol-conjugate I, found in the aqueous phase accounted for only 0.6% of the total activity at 56 days. Enzyme hydrolysis of the conjugate with cellulase released triadimenol, but due to the small amount of material available it was not possible to determine which isomer was present. Triadimenol conjugates II and III accounting for 3.8% and 1.2% of the total residue, respectively, were related in that enzyme hydrolysis of conjugate II produced conjugate III. Acid hydrolysis of conjugate II or III (1.2 N HC1 for 18 h), however, yielded isomer I of triadimenol. The next degradation step was a hydroxylation of the t-butyl group of triadimenol to form the free conjugated M10. A third metabolic pathway involved cleavage of the ether linkage to form p-chlorophenol. Three conjugates of p-chlorophenol (I, II and III, released by cellulase) were formed.

All of the conjugates observed, with the exception of triadimenol conjugate III, were totally hydrolysed with cellulase (Type II). Because the routinely used cellulase was not specific enough to identify the sugar units present, ß-glucosidase, was used to attempt hydrolysis of several conjugates. Mass spectra of the acetylated products of M10 conjugates III and IV as well as a separate mass spectra of triadimenol conjugate III showed that all three were conjugated with a hexose. Following the initial extraction of the harvest interval grapes with acetone and methylene chloride, 36% of the initial activity remained in the solids. Refluxing the solids twice with HC1 in methanol for 24 h released an additional 31.0% of the total activity, leaving 5.0% non-extracted.

Of the 31.0%, 21.2% was triadimenol which was probably loosely bound to the solids rather than conjugated, as the triadimenol conjugates described earlier were refractory to these conditions. An unidentified metabolite (metabolite X) was released from the solids as a result of the acid reflux extraction.

Table 12. Recovery and distribution of radioactivity (triadimefon and metabolites) in grapes, 56 days after spray application with [phenyl-UL-^{14}C] triadimefon (Duah, F.K, 1991)

Compound	Organosoluble				water soluble		Total	
	Initial extract[a]		Reflux extract[b]					
	% TRR	mg/kg	% TRR	mg/kg	% TRR	mg/kg	% TRR	mg/kg
Triadimefon	1.1	0.06					1.1	0.06
Triadimenol (KWG 0519)	33.8	1.97	21.2	1.23	0.6	0.03	55.6	3.23
KWG 1342	0.8	0.05					0.8	0.05
p-Chlorophenol			1.5	0.09			1.5	0,09
Triadimenol-conjugate I					0.6	0.03	0.6	0.03
Triadimenol conjugate II	1.8	0.1			2.0	0.12	3.8	0.22
Triadimenol conjugate III	1.1	0.06			0.1	0.01	1.2	0.07
M10-conjugate I & II					2.0	0.12	2.0	0.12
M10-conjugate III & IV	5.9	0.34			6.8	0.4	12.7	0.74
p-Chlorophenol-conjugate I					3.8	0.22	3.8	0.22

Compound	Organosoluble				water soluble		Total	
	Initial extract[a]		Reflux extract[b]					
	% TRR	mg/kg	% TRR	mg/kg	% TRR	mg/kg	% TRR	mg/kg
p-Chlorophenol-conjugate II					0.3	0.02	0.3	0.02
p-Chlorophenol-conjugate III					0.6	0.03	0.6	0.03
Metabolite X			6.2	0.36			6.2	0.36
Diffuse activity[d]	2.1	0.12	2.1	0.12	0.6	0.03	4.8	0.27
Total extractable	46.6	2.7	31.0	1.8	17.4	1.01	95.0	5.51
Solids							5.0	0.27
Total							100.0	8.8

a - Initial extraction involved blending and filtration using acetone and methylene chloride sequentially followed by partition between organic solvent and water.

b - Reflux extraction involved reflux of the solids from initial extraction twice with 1% HCl in MeOH for 24 hours followed by filtration.

c - Water-soluble fraction derived from the initial extraction procedure.

d - Low level activity on the TLC plate, not any defined retention factor (Rf).

Cereals (seed treatment only) – Wheat

<u>(Leimkuehler, W. M.; Thornton, J. S., 1980)</u>
Phenyl-UL-^{14}C]triadimenol was applied to spring wheat seeds at a rate of 29.3 g ai/100 kg seed. The trial was conducted in a fiberglass container with holes at the bottom to allow drainage filled with gravel on the bottom (5 cm depth) and a sandy loam soil on top (25 cm depth). The treated grains were planted approximately 1.25 cm deep at a seeding rate of 56 kg/ha. Forage samples were taken on days 15 and 45 after sowing. Grain and straw was harvested 65 days after planting and also soil samples were taken (top 15 cm) for determination of radioactivity.

For processing straw was homogenised using liquid nitrogen and grains were ground by means of a mortar. Both fractions were extracted in a homogenizer and filtered. The filter cakes were re-extracted with dichloromethane. The combined extracts from each sampling material were evaporated to dryness. Residues from the grain extracts were dissolved in acetone and investigated by TLC methods, while the residues from the straw extracts were dissolved in chloroform and analysed by gas chromatography. Radioactive fractions were combined, evaporated to dryness and redissolved in acetone before analysed by TLC methods. Radioactive zones were quantified by means of a radioactivity scanner. Components visible in the chromatograms were identified by co-chromatography with reference compounds. Unextractable residues in the solids were determined by combustions analysis followed by LSC of combustion gases.

Residues of triadimenol (reported as [^{14}C]triadimenol equivalents) found in forage were 0.19 mg/kg and 0.04 mg/kg on days 15 and 45, respectively. Mature grain contained 0.015 mg/kg and the straw 0.18 mg/kg residues after harvest (day 65). The extracts of grain did not yield sufficient radioactivity to identify unequivocally any metabolite. Straw extracts contained 83% of the total [^{14}C] activity. Besides the triadimenol isomers A and B, the metabolites M10 and triadimefon (M01) could be identified. An additional extraction of the straw with methanol under reflux solubilised the remaining straw activity, which was identified as parent compound. The soil contained at harvest 0.006 mg/kg radioactivity (triadimenol equivalents). The total radioactivity recovered from straw, grain and soil amounted to 52% of the radioactivity initially applied to the seeds. Further details on the residues found in straw are given in Table 13.

Table 13. Recovery and distribution of radioactivity (triadimenol and metabolites) in wheat straw 65 days after seed treatment with [phenyl-UL-^{14}C]triadimenol

		Wheat straw	
	Compound	[% recovered]	[mg/kg] (ai equivalent)
Identified	Triadimenol A	34	0.061
	Triadimenol B	24	0.043
	KWG 1342 A (M10)	23	0.041
	KWG 1342 B (M10)	13	0.023
	Triadimefon (M01)	6	0.011
Total		100	0.179

Cereals (seed treatment only) – Barley

(Steffens, W., 1981 & Brennecke, R.; Vogeler, K., 1987)

The metabolism of triadimenol was investigated in spring barley and succeeding crops in an outdoor lysimeter study. Spring barley seed was treated separately with [triazole ring-3,5-^{14}C]triadimenol and [benzene ring-U-^{14}C]triadimenol at a rate of 50 – 58 g/100 kg seed and harvested 128 days after sowing. Four lysimeters were used in this study: Lysimeter 1 for seeds treated with [triazole ring-3,5-^{14}C]triadimenol, lysimeter 2 for seeds treated with the diastereomer A of [benzene ring-U-^{14}C]triadimenol and lysimeters 3 and 4: for seeds treated with [benzene ring-U-^{14}C]triadimenol. The ratio of the diastereomers A and B of the active substance was approximately 50:50. After harvesting the spring barley, turnips and Persian clover were sown as rotation crops (turnips on one side and clover on the other). In lysimeters 2 to 4 sugar beets were grown as rotation crops in the second year and spring wheat in the third year. In lysimeter 1 the rotation crops were grown in the reverse sequence.

For processing, straw and grain samples were macerated with a mixture of methanol/water/ammonia (65:23:12) and after filtration, extracted twice again with the same solvent mixture. After filtration, the methanol and ammonia of the combined extracts was evaporated. The remaining aqueous phase was extracted three times with a solvent mixture of dichloromethane and n-hexane. The combined organic phases were dried, filtered and evaporated to dryness. The residue was dissolved in methanol (organic phase 1), the radioactivity determined and then analysed by TLC methods. The aqueous phase was acidified and extracted three times with dichloromethane. The combined organic phases were dried, filtered and evaporated to dryness. The residue was dissolved in methanol (organic phase 2), the radioactivity determined and then analysed by TLC methods. The remaining aqueous phase (benzene-ring labelled experiment) from straw was subjected to enzymatic hydrolysis with cellulase. After extraction of the hydrolysate with dichloromethane, the organic phase was analysed by TLC and the remaining radioactivity of the water phase determined. Polar triazole metabolites were investigated by derivatisation with isobutanol and heptafluorobutyric acid anhydride after fractionating the plant extracts (lysimeter 1) on adsorbent-resin and cation-exchange columns. The organic phases of the different extraction steps after derivatisation were analysed by TLC methods. For identification of the metabolites, co-chromatography with reference compounds was used. Radioactive zones on the plates were detected by a TLC scanner and/or by autoradiography with X-ray film and quantified by means of a TLC radioactivity linear analyser. Radioactivity in liquid phases was measured by liquid scintillation counting (LSC). Radioactivity in solid samples was determined by combustion analysis in combination with LSC of the combustion gases.

The recovery in straw at harvest time amounted to 80 – 92% and in grain from 72 to 88% in the experiment with the benzene-ring labelled substance (lysimeter 2 – 4). The major part of radioactivity in these experiments was recovered from the aqueous phases (41 to 94%). In the experiment with the triazolyl labelled substance (lysimeter 1), the recovery in straw amounted to 85% and in grain to 103%. The major part of radioactivity recovered in this experiment was from the first organic phase (approximately 52% on average). The distribution of parent compound and metabolites is summarized in Table 14 and 15. Besides unchanged parent compound the following metabolites were identified and quantified (organic phase 1): M10, M08, triadimefon (M01) and p-chlorophenol (M07). Only the organic phase 2 of straw contained sufficient radioactivity for the investigation of metabolites. Besides traces of p-chlorophenol (M07) and M10, triadimenol hexose conjugate (M15) and M12 were identified.

The radioactivity contained in the aqueous extraction phase of the experiment with the triazolyl labelled parent compound remained at the start of the TLC-chromatograms, confirming the high polarity of the present compounds. The presence of 1,2,4-triazole (M04), M02 and M03 could be excluded, as they are less polar than the metabolites seen on the TLC plates. In order to identify these polar metabolites, the plant samples (lysimeter 1) were fractionated and the compounds converted into their isobutyl esters. Thus triazole acetic acid (M06), triazole hydroxy propanoic acid (M11) and triazole alanine (M05) as the main metabolite in grain could be identified as isobutyl esters. Additionally, an unknown metabolite was found in a small quantity, which was thought to be a methyl ester artefact of triazole alanine.

The radioactivity, contained in the aqueous extraction phases of the experiment with the benzene-ring labelled parent compound, was low and only the aqueous phase of straw was subjected to enzymatic hydrolysis. Besides the parent compound M10, 4-chlorophenol (M07) and the metabolite triadimenol hexose conjugate (M15) were detected.

Table 14. Distribution of radioactivity [% recovered] (triadimenol and metabolites) in spring barley, 128 days after sawing (harvest); seed treatment with [benzene ring-U-^{14}C]triadimenol (Lysimeters 2-4)

	Straw		Grain	
Compound	[%]	[mg/kg]	[%]	[mg/kg]
Triadimenol	37 – 41	0.13	12 – 30	0.06
KWG1342 (*M10*)	6 – 10	0.026	3 – 6	traces
BUE2285 (*M05*) and Triadimefon (*M01*)	<< 1 – 4	< 0.01	<< 1	-----
4-Chlorophenol (*M07*)	3 – 6	0.016	<< 1	-----
p-Chlorophenyl gycoside (*M13*)				
KWG 1342 glycoside (*M12*)	27 – 33	0.101	-----	-----
Triadimenol hexose conjugate (*M15*)				
Non-extractable residue	14 – 17	0.051	40 – 56	-----

Table 15. Distribution of radioactivity [% recovered](triadimenol and metabolites) in spring barley, 128 days after sawing (harvest); seed treatment with [triazolyl ring 3,5-^{14}C]triadimenol (Lysimeters 1)

	Straw		Grain	
Compound	[%]	[mg/kg]	[%]	[mg/kg]
Triadimenol	22	-----	-----	-----
KWG 1342 (*M10*)	5	-----	-----	-----
BUE 2285 (*M05*) and Triadimefon (*M01*)	< 1	-----	-----	-----
Triazole hydroxypropanoic acid (*M11*)	----	0.036	-----	-----
Triazole acetic acid (*M06*)	----	0.015	-----	0.029
Triazole alanine (*M05*)	----	0.024	-----	0.072
Non-extractable residue	23	-----	26	-----

Cereals (foliar spray only) – Barley

<u>(Brauner, A.; Vogeler, K., 1988)</u>
The metabolism of triadimenol was investigated after spray application onto winter barley (variety Gerbel). The study was conducted in a lysimeter filled with a humic sand soil (50 cm depth) in a vegetation area (outdoors). [Phenyl-UL-^{14}C]labelled triadimenol was applied in form of a 250 EW

formulation at the growing stage "heading to beginning of flowering". The actual application rate was 9.02 mg ai corresponding to a target rate of 250 g triadimenol/ha. One half of the plants was harvested 14 days after application (green material including ears), the other half 57 days after application (harvest).

For processing, straw, green material and grain were macerated with methanol, filtered and then macerated again with a mixture of methanol/water (7:3). Filter cakes were extracted under reflux for two hours with a mixture of methanol/water and then with a mixture of methanol/water/concentrated hydrochloric acid. The combined extracts of each sampling material were evaporated to dryness, the residues re-dissolved in methanol and passed through a silica gel column. This methanol eluate was evaporated to dryness and the residues diluted in water before being extracted three times with dichloromethane. The combined organic phases were concentrated to dryness and the residues dissolved in a mixture of methanol/chloroform (1:1) before being radioassayed and analysed by TLC and HPLC methods. The remaining aqueous phase was extracted three times with ethyl acetate, the combined organic extracts were evaporated to dryness and the residues dissolved in a mixture of methanol/chloroform (1:1) before being analysed. The extracted water phase was reduced to a small volume and also analysed. Enzymatic hydrolysis and hydrolysis with acids were also applied for the elucidation of aglycons of conjugates by TLC. The radioactivity of extracts was measured by LSC, that of solids by combustion analysis in combination with LSC of cobustion gases. Radioactive zones on TLC plates were detected and quantified by means of a linear analyser. Components detected on plates were identified by co-chromatography with reference compounds or by mass spectroscopy after isolation by micro-preparative HPLC.

The balance of radioactivity is shown in Table 16 below. Only 53.7% of the applied radioactivity (22.41 MBq) was recovered. More than 99% of the radioactivity recovered from the plants could be extracted from the green material (day 14), 96% from the straw and 86% from the grains (both on day 57). The main part of the residue was found on day 57 in mature straw and green material amounting to 4.87 mg/kg and 2.32 mg/kg, respectively.

Non-extractable radioactivity detected on day 57 in grain and straw amounted to 14.0 and 4.0%, respectively, of the recovered radioactivity. The residue recovered from the straw contained unchanged parent compound (36.3%) and its conjugates, i.e., triadimenol hexose conjugate (M15) and other conjugates based on it (22.2%). To these the acetyl derivative of the parent compound (M16; 2.8%) must be added. Additionally, M10; 6.7% and its conjugates (9.3%) were identified as a major group of constituents. At lower concentrations p-chlorophenyl glucoside (M13; 0.5%) and M08 were identified. The metabolite M02 could not be detected. The pattern of metabolites found in grain was found to be similar to that of straw. The results are summarised in Table 17.

Table 16. Balance of radioactivity (plant and soil) after spray application of winter barley with [phenyl-UL-^{14}C]triadimenol

Days after treatment	Sampling material	[% applied]	[mg/kg] (ai equivalent)
14	Green material	28.0	2.32
57	Straw	14.3	4.87
57	Grain	0.4	0.32
57	Root[a]	----	----
57	Soil	11.0	0.005
Total		53.7	7.515

a - radioactivity in roots was not investigated

Table 17. Recovery and distribution of radioactivity [% recovered](triadimenol and metabolites) in winter barley 57 days after spray application with [phenyl-UL-^{14}C]triadimenol

		Straw		Grain	
	Compound	[%]	[mg/kg]	[%]	[mg/kg]
Identified	Triadimenol A	29.5	1.44	23.5	0.08
	Triadimenol B	6.8	0.33	6.4	0.02
	KWG 1342 A (M10)	4.7	0.23	2.3	0.01
	KWG 1342 B (M10)	2.0	0.10	0.9	< 0.01
	Triadimenol hexose conjugate (M15) Other triadimenol hexose conjugates	14.6 7.6	1.08	10.5	0.03
	KWG 1342 conjugates	9.3	0.45	13.9	0.04
	KWG1093 (M16) and traces BUE2285 (M08)	2.8	0.14	2.3	0.01
	4-Chlorophenyl glucoside (M13)	0.5	0.02	1.4	< 0.01
Total identified		77.8	3.79	61.2	0.19
Non-identified	Diffuse radioactivity	6.0	0.29	9.0	0.03
	Unidentified polar components	12.2	0.59	15.8	0.05
Total non-identified		18.2	0.88	24.8	0.08
	Non-extractable residue	4.0	0.20	14.0	0.05
Total		100.0	4.87	100.0	0.32

Cereals (foliar spray only) – Wheat

(Morgan, J. G.; Lenz, M. F., 1982)
A 50% wettable powder formulation was prepared with [phenyl-UL-^{14}C] triadimefon having a specific activity of 4.53 × 104 dpm/µg. The dosing solution was diluted to 350 – 400 µg ai/mL. Winter wheat (variety Sage) was grown in a metal tub with a surface area of 1.7 m^2, summer wheat (variety Butte) in fiber glass containers with a total surface area of 0.9 m^2. Both varieties were maintained in the greenhouse and treated in December (summer wheat) and January (winter wheat) with an application rate equivalent to 560 g ai/ha. Forage samples were taken 0, 7, 14 and 28 days post-treatment, harvest samples were taken 84 days (spring wheat) and 74 days (winter wheat) after treatment.

Samples were extracted first with methanol, then with methanol/water (7/3) and thereafter with acidified (HCl) methanol/water (1/1). After adding sodium acetate and filtration the combined filtrates were evaporated to dryness, reconstituted in methanol, filtered through silica gel and again evaporated to dryness. The remaining residue was solved in water and partitioned twice with ethyl acetate. The latter fraction was again dried and reconstituted in chloroform/methanol.

Total radioactive residues in the individual crop samples and residual solids were quantified by combustion. The organosoluble residues were analysed and separated by thin layer chromatography (TLC). The radioactive bands were then visualised, scratched and quantified in a scintillation counter. The polar materials were characterised and purified with a reverse phase high pressure liquid chromatography (HPLC) using acetonitrile/water as the solvent. Water soluble residues of the spring wheat were also subjected to enzyme hydrolysis in acetate buffered (pH 5) solution treated either with cellulase or ß-glucosidase. If this failed, an acid catalysed procedure was employed. In both cases the mixture was extracted with chloroform. The organic fraction was examined by TLC. The enzymatically refractive P-5 was derivatised with acetic anhydride. Also the water soluble fraction of spring wheat straw was subjected to acid catalysed hydrolysis.

Of the total radioactive residue 78.4 to 99.1% were organosoluble, 0.4 to 11.4% water soluble. Together with the residues in the solid fractions measured by combustion this resulted in a recovery of 84.7 to 106% of the total applied. At harvest the concentration of the radioactive residues in straw was 27.3 mg ai equivalents/kg in spring and 59.5 mg ai equivalents/kg in summer wheat. The respective levels in grain were far lower with 0.07 mg ai equivalents/kg (spring wheat) and 0.08 mg ai equivalents/kg (summer wheat). However, only 40% of these residues were extractable and no further characterisation was possible. Triadimefon residue levels in the straw were 21.3 in spring and 43.4 mg ai equivalents/kg winter wheat. In forage and straw residues were primarily reduced to triadimenol and further to a number of minor, less polar metabolites and their glucoside conjugates. About 82% of the total radioactive residue in straw was identified. The major residues were unchanged triadimefon (15%) and triadimenol (47%). The minor residues consisted of M10 triadimenol acid (M02), M09, M18, p-chlorophenol, and glucoside conugates of triadimenol, M09, M10 and p-chlorophenol, each representing less than 5% of the total radioactive residue in straw (see Tables 18 and 19).

Table 18. Exhaustive analysis of [Phenyl-UL-^{14}C] triadimefon treated winter wheat

Id No.	Compound	0 DAT [%] TRR	7 DAT [%] TRR	14 DAT [%] TRR	28 DAT [%] TRR	74 DAT[a] [%] TRR
I	Triadimefon	92.5	49.6	37.0	20.3	15.2
IIA	Triadimenol	1.41	35.7	42.3	49.8	31.9
IIB	Triadimenol					14.8
III	p-chlorophenol	0.52	0.82	0.95	0.93	1.3
IVA	KWG 1342 (M10)	0.30	0.67	0.91	1.65	1.3
IVB	KWG 1342 (M10)					1.3
V	KWG 1323 (M09)	0.01	0.16	0.48	0.63	0.8
VIA	KWG 1640 (M02)	0.37	0.49	1.29	1.38	0.7
VIB	KWG 1640 (M02)					0.8
VII	BUE 2285 (M08)	0.40	0.25	0.29	0.34	0.5
P-2	p-chlorophenol glycoside					2.4
P-3A	KWG 1342 glucoside					1.0
P-3B	KWG 1342 glucoside					2.2
P4	KWG 1323 glucoside					3.0
P5	Triadimenol glucoside					4.4
	Total Identified	95.51	87.69	83.22	75.03	81.6
	Organosoluble Polar[b]	3.68	7.66	13.40	18.1	6.6
	Total organosoluble	99.1	95.3	96.6	93.1	88.2
	Water Soluble	0.4	1.8	1.7	3.5	5.2
	Silica Retain	0.3	2.2	0.2	0.6	2.3
	non-extractable	0.2	0.7	1.5	2.8	4.3
	TOTAL	100.0	100.0	100.0	100.0	100.0

DAT = days after treatment

a - Values refer only to straw

b - At harvest organosoluble polar activity was examined further

Table 19. Distribution of organosoluble residues in [Phenyl-UL-^{14}C] triadimefon treated spring wheat

Id No.	Compound	0 DAT [%] TRR	7 DAT [%] TRR	14 DAT [%] TRR	28 DAT [%] TRR	84 DAT[a] [%] TRR
I	Triadimefon	95.1	75.1	55.9	31.3	20.9
II	Triadimenol	0.73	14.8	21.6	30.6	29.7
III	p-Chlorophenol	0.38	0.75	1.02	0.9	2.04
IV	KWG 1342 (M10)	0.33	1.13	2.03	2.77	2.74
V	KWG 1323 (M09)	0.12	0.37	0.84	1.53	0.80
VI	KWG 1640 (M02)	0.23	0.44	1.03	1.45	1.51
	Total Identified	96.9	92.6	82.4	68.6	57.7
	Organosoluble Polar	0.92	3.78	10.5	15.7	19.5
	unknown	0.2	0.41	0.59	0.84	1.22
	Total organosoluble	98.0	96.8	93.5	85.1	78.4
	Water Soluble	1.1	2.1	4.1	9.5	11.4
	Silica Retain	0.7	0.6	1.2	3.1	6.0
	non-extractable	0.2	0.5	1.3	2.3	4.1
	TOTAL	100.0	100.0	100.0	100.0	99.9

DAT = days after treatment a - values refer only to straw

Chopade, H. M., 1993

In an aditional study [phenyl-UL-^{14}C] triadimefon with a specific radioactivity of 2.9 × 105 dpm/µg and a radiochemical purity of 97.6% was formulated as a 50 WP (wettable powder) formulation. In order to facilitate the identification of the residues 560 g ai/ha was applied by two foliar sprays. The first application was conducted on 45 day old wheat plants in the "boot" stage grown in a 60 cm deep, freely draining metal container with a surface of 1.7 m². The container was filled with a sandy loam and treated with plant protection products, fertiliser and water as required. The wheat was sprayed again 14 days later with the same amount of 97.87 mg ai. To avoid dislodging surface radioactivity a temporary plastic tent was erected to protect the plant containers against rain.

Forage samples were take 24 h after the first and the second application. Dried wheat heads were sampled 31 days after the second treatment and one week later the remaining wheat heads and the straw were harvested. The wheat heads were separated into grain and chaff. The chaff was then combined with the straw.

The wheat forage and straw was sonicated in methanol with 0.1% glacial acetic acid for 20 minutes to dislodge radioactivity from the surface of the wheat forage. Aliquots of the concentrated methanol rinse were subjected to HPLC analysis. The rinsed solids were homogenised in a blender containing methanol with 0.1% acetic acid. The methanol extract was also subjected to HPLC analysis, while the remaining solids were refluxed with 6 N HCl for 5 hours. Subsequently the hydrolysate was partitioned with methylene chloride. The three resulting fractions, methylene chloride soluble, aqueous soluble and non-extractable solids were radio assayed and the methylene chloride fraction in addition subjected to HPLC.

Wheat grain was first homogenised in methanol/water (1:1) and then refluxed for 4 hours. The aqueous methanol extract was subjected to HPLC. The solids were hydrolysed in 6 N HCl under reflux for 5 h. The following steps starting with methylene chloride partition were similar as above.

Enzymatic hydrolysis with ß-D-glucosidase was carried out with aliquots of the concentrated methanol rinse of the straw and the methanol/water extracts of the grain at pH 5.The hydrolysates were subjected to HPLC analysis. Radioactivity was measured quantitatively with a scintillation counter. Forage, grain and straw solids were combusted, the resulting ^{14}CO2 trapped in an alkaline solution before analysis. The radioactivity during HPLC was monitored with a lithium glass scintillation cell.

Thin-layer chromatography was conducted with pre-coated silica gel 60 F254, 0.25 mm thickness, plates using methylene chloride/methanol (20:1) as the solvent. The developed plates were scanned either with a radio-TLC-analyser or non-radioactive standards were visualised under short wavelength ultraviolet light.

Aliquots of the diluted dosing solutions, the concentrated aqueous and organic extracts, the methanolic rinse and the aqueous methanolic extracts of forage, straw and grain were subjected to HPLC analysis. A Whatman Partisil 10, ODS-3 semi preparative column was used with two solvents, 0.1% aqueous acetic acid (A) and methanol (B). The effluent was collected, reduced to dryness and thereafter re-dissolved in methanol. This solution was either analysed by gas liquid chromatography / electron impact-mass spectrometry (GC/EI-MS) or thermospray liquid chromatography / mass spectrometry (TSP LC/MS).

Total radioactive residues in/on forage samples taken 24 hours after the first (#1) and the second (#2) treatment amounted to 8.973 and 15.211 mg ai equivalents/kg, respectively. At harvest, total radioactive residues in straw and grain were 45.047 and 0.539 mg ai equivalents/kg, respectively.

After the first application 5 different radioactive residues were observed in forage, 74% triadimefon, 12% triadimenol, 9% p-chlorophenol glucoside, 3% of a polar, unknown metabolite and less than 1% of p-chlorophenol. Therefore, only 0.27 mg ai equivalents/kg was not identified in forage. In total nine different radioactive residues were found in forage after the second treatment. Triadimefon (31%) and triadimenol (35%) were the major residues. Others were p-chlorophenol glucoside (15%), triadimenol glucoside (6%), p-chlorophenol glucosyl acetate (3%), KWG 1342 glucoside (M12) (1%), p-chlorophenol (1%), and two relatively polar unknowns (1 and 4%). The latter two unidentified metabolites represented 0.15 and 0.61 mg ai equivalents/kg.

In wheat straw 5% of the total radioactive residue remained bound with the solids. Of the various metabolites, triadimenol (37%), p-chlorophenol glucoside (12%) and triadimenol glucosyl acetate (11%) were the most prominent. Unknown residues represented less than 6% of the total radioactive residue observed.

In wheat grain 86% of the radioactivity was extractable. The extract consisted of at least 7 different metabolites. The two major metabolites were p-chlorophenoxytriazolylacetic acid (35%) and KWG 1342 glucoside (M12) (21%). The triadimefon level was 1%. One minor residue (3%), slightly more polar than M12 was not identified. All results are summarised in Tables 20, 21 and 22.

Table 20. Characterisation/Identification of the total extractable radioactive residue in forage after one (#1) and two (#2) foliar treatments

Id No.	Compound	MeOH rinse [%]	MeOH extract [%]	CH_2Cl_2 extract [%]	Total [%]	[mg ai equivalent./kg]
	Forage #1					
2	p-Chlorophenol glucoside	2	1	-	3	0.27
4	Unknown III	2	1	-	3	.027
7	p-Chlorophenol glucoside	4	2	-	6	0.54
8	p-Chlorophenol	0	0	< 1	< 1	< 0.09
19	Triadimefon	70	4	-	74	6.64
20	Triadimenol	10	2	-	12	1.08
	Organic extract	88	10	< 1	98	8.82
	Aqueous extract				1	0.09
	non-extractable				< 1	0.06
	TOTAL				100	8.97
	Forage #2					
2	p-Chlorophenol glucoside	2	1	0	3	0.46
4	Unknown III	3	1	0	4	0.61
5	Unknown IV	1	0	0	1	0.15
6	p-Chlorophenol glucosyl acetate	2	0	0	2	0.30
7	p-Chlorophenol glucoside	9	3	0	12	1.83
8	p-Chlorophenol	0	0	1	1	0.15
12	KWG 1342 glucoside (M12)	0	1	0	1	0.15
16	Triadimenol glucoside	5	1	0	6	0.91
19	Triadimefon	26	5	0	31	4.72
20	Triadimenol	31	4	0	35	5.32
	Organic extract	79	16	1	96	14.52
	Aqueous extract				1	0.21
	non-extractable				2	0.48
	TOTAL				100	15.21

Table 21. Characterisation/Identification of the total extractable radioactive residue in wheat straw

Id No.	Compound	MeOH rinse [%]	MeOH extract [%]	$MeOH/H_2O$ reflux [%]	CH_2Cl_2 extract [%]	Total [%]	[mg ai equivalent./kg]
1	Unknown I	0	0	< 1	-	< 1	< 0.45
2	p-Chlorophenol glucoside	2	1	< 1	-	3	1.35
3	Unknown II	0	0	< 1	-	< 1	< 0.45
4	Unknown III	1	1	1	-	3	1.35

Id No.	Compound	MeOH rinse [%]	MeOH extract [%]	MeOH/H_2O reflux [%]	CH_2Cl_2 extract [%]	Total [%]	[mg ai equivalent./kg]
5	Unknown IV	< 1	< 1	< 1	-	1	0.45
6	p-Chlorophenol glucosyl acetate	2	1	1	-	4	1.80
7	p-Chlorophenol glucoside	4	2	3	-	9	4.05
8	p-Chlorophenol	< 1	0	< 1	4	5	2.25
11	KWG 1342 glucoside (M12)	2	1	1	-	4	4.05
12	KWG 1342 glucoside (M12)	1	1	0	-	2	0.90
13	KWG 1342 (M10)	1	< 1	1	-	2	0.90
14	KWG 1342 glucoside (M12)	1	< 1	1	-	3	1.35
15	KWG1342 glucosyl acetate	1	1	< 1	-	3	1.35
16	Triadimenol glucoside	1	1	1	-	3	1.35
17	Triadimenol glucoside	1	< 1	1	-	2	0.90
18	Triadimenol glucosyl acetate	5	3	3	-	11	4.96
19	Triadimefon	1	< 1	0	-	1	< 0.45
20	Triadimenol	26	7	4	-	37	16.67
	Organic extract	49	22	19	4	94	42.15
	Aqueous extract					1	0.24
	non-extractable					5	2.66
	TOTAL					100	45.05

Table 22. Characterisation/Identification of the total extractable radioactive residue in grain

Id No.	Compound	MeOH/H_2O reflux [%]	CH_2Cl_2 extract [%]	Total [%]	[mg ai equivalent./kg]
8	p-Chlorophenol	0	5	5	0.027
9	p-Chlorophenoxy-triazolyl-acetic acid	35	0	35	0.189
10	Unknown V	3	0	3	0.016
11	KWG 1342 glucoside (M12)	19	0	19	0.102
12	KWG 1342 glucoside (M12)	2	0	2	0.011
16	Triadimenol glucoside	6	0	6	0.032
19	Triadimefon	1	0	1	0.005
20	Triadimenol	6	0	6	0.032
	Organic extract	72	5	77	0.41
	Aqueous extract			9	0.05
	non-extractable			14	0.075
	TOTAL				0.54

Cereals (combination seed treatment and foliar spray) – Wheat

(Brennecke, R.; Vogeler, K.; Karl, W., 1986)

In each of three subsequent years 150 seeds of winter wheat were grown in outdoor lysimeters. The lysimeters with a surface area of 0.36 m² and a height of 60 cm were filled with 5 cm of gravel, 20 cm of loam soil and a top 30 cm layer of a sandy loam soil. The seeds were planted in 5 rows of 30 seeds in each. For each labelling position of the test substance a separate lysimeter was used. During the vegetation period the plants had partly to be protected from heavy rainfall and to be irrigated during dry periods.

One hundred and fifty seeds were treated with 3.5 mg of [phenyl-UL-^{14}C] triadimenol or [triazole-3,5-^{14}C] triadimenol, respectively in 40 µL of blank formulation. The amount was oriented at a target use rate of 37.5 g/100 kg of seed plus an extra amount of 30% to compensate for losses occurring in a small scale trial. For the spay application 10 mg of the labelled test substances respectively were dissolved in 40 µL of blank formulation EC 250 and 21.6 mL of water were added. The amounts were oriented at a target rate of 250 g of triadimefon per hectare plus 10% to compensate for losses suspended in 600 L of water. The spray fluids were applied by means of a chromatographic sprayer. The actual amounts applied and the dates of application are shown in Table 23.

Table 23. Amounts of triadimenol and triadimenol applied during the three test years

	Phenyl-label			Triazole-label		
	1st year	2nd year	3rd year	1st year	2nd year	3rd year
Seed treatment (triadimenol)	78-10-25	79-10-31	80-10-22	79-10-31	80-10-22	81-10-27
Amount applied [mg]	1.90	2.82	2.88	3.09	3.43	2.85
Amount applied [MBq]	4.70	6.99	7.14	3.52	3.92	3.26
Spray treatment (triadimefon)	79-05-23	80-05-21	81-05-18	80-05-22	81-05-15	82-05-25
Amount applied [mg]	10.27	8.09	7.33	8.03	10.01	9.13
Amount applied [MBq]	25.46	20.05	18.17	9.18	11.51	10.43
Total applied [mg]	12.17	10.91	10.21	11.12	13.44	11.98
Total applied [MBq]	30.16	27.04	25.31	12.7	15.43	13.69

The plants were harvested at the hard grain stage and divided into into grains, glumes, straw and roots. For the collection of representative soil samples the 0 – 10 cm layer was completely removed from both lysimeters after harvest. The soil was mixed and an aliqout sample was taken. Subsequent samples were removed from the 10 cm and the 20 – 30 cm layers using a drilling rod. The holes were filled up with fresh soil and the 0 – 10 cm layer was returned to the lysimeter. Leachates and rain water run-off were collected for determination of radioactivity.

Prior to extraction the straw and roots were cut into pieces. Grains and glumes were directly extracted. Plant material mixed with water and concentrated ammonia solution and later with added methanol was macerated in a blender. The macerate was filtered and the filter cake was extracted again twice with water-ammonia-methanol. The filtrates were combined and concentrated to the remainder of water. This was partitioned three times with dichloromethane-hexane mixtures. The organic layers were combined, dried and concentrated to dryness. The residue was dissolved in methanol (= "organic phase 1"). The aqueous phase from the partitioning step was mixed with hydrochloric acid and partitioned three with dichloromethane. The combined organic phases were dried and concentrated to dryness. The residue was dissolved in methanol (= "organic phase 2"). The remaining aqueous phase concentrated and filled up to a defined volume.

The "organic phase 1" was investigated by TLC using two solvent systems. The "organic phases 2" of the experiment with triazole-labelling were chromatographed by TLC on silica gel 60F254 plates in different solvent systems before and after derivatization. Co-chromatographed reference substances were localized by observation under UV-light. Some fractions were analysed by RP-HPLC using a radioactivity flow-through detector.

The metabolites contained in certain fractions isolated by chromatography were derivatized by esterification with isobutanol, by acylation with heptafluorobutyric acid anhydride (HFBA) or by acylation with isobutyl chloroformate followed by esterifiacation with diazomethane. Fractions of straw were subjected to enzymatic hydrolysis with cellulase and and ß-glucosidase as well as to acidic hydrolysis with hydrochloric acid before they were analysed by TLC.

Structure elucidation was performed by TLC co-chroamtography with reference substances, by mass spectrometry using chemical ionization (DCI mode) and by GC-MS. Radioactivity measurements in liquid phases were performed by LSC. Radioactivity in solid phases was determined by combustion analysis in combination with LSC of combustion gases. Radioactivity on TLC plates was measured by means of a linear radioactivity scanner and/or by autoradiography.

The amounts of radioactivity determined in plants, soil and leachate for the individual test years is summarised in Table 24. At the time of harvest 63 – 79% of the applied radioactivity were recovered in the case of the phenyl label and 70 – 81% were recovered in the case of the triazole label. The results from the first test year show that the majority of the applied radioactivity was retained in the soil and 6 – 16% were present in the plants.

Table 24. Distribution of radioactivity between soil and plants in a three years trial with triadimenol and triadimefon

	Phenyl-label			Triazole-label		
	1st year	2nd year	3rd year	1st year	2nd year	3rd year
	Radioactivity in MBq					
Radioactivity applied [MBq] *)	30.16	27.04	25.31	12.7	15.43	13.69
Total (applied + from previous year)	30.16	40.63	46.77	12.7	23.20	27.97
	Radioactivity in% of total recovered radioactivity					
Total (applied+from previous year)	100	100	100	100	100	100
Radioactivity recovered from soil	46	53	71	62	62	65
Radioactivity in plants	15	9	7	12	6	16
Radioactivity in leachate	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.2
Radioactivity in rain water	2	1	1	2	2	< 1
Total recovered	63	63	79	76	70	81

The distribution of radioactivity in the plant parts is summarised in Table 25 for both labellings for the three test years. The radioactivity was mainly present in the straw; it amounted to an average of 94% (phenyl-label) and 82% (triazole label), respectively. While only up to 0.2% was detected in the case of the phenyl label, it amounted to 12% (7 – 18%) on average of the radioactivity present in the entire plant.

Table 25. Distribution of radioactivity within winter wheat in a three years trial with triadimenol and triadimefon

	Phenyl-label			Triazole-label		
	1st year	2nd year	3rd year	1st year	2nd year	3rd year
	Radioactivity in% of total radioactivity in wheat					
Grains	< 0.1	0.2	0.4	9.8	18.0	7.0
Glumes	----[a]	0.3	0.8	1.7	2.8	0.4
Straw	97.5[a]	92.8	92.6	80.2	73.6	91.0
Roots	2.5	6.7	6.2	8.3	5.6	1.6

a - Straw and glumes were not separated

The pattern of residues found in straw in the course of the three test years is summarised in Table 26. In the case of the other plant parts it was not possible to detect all these metabolites due to the low residue level. The majority of the radioactivity in the straw accounts for triadimenol in the free form (32 – 50%) and as a hexose-conjugate (11 – 16%). The only prominent compound in the group of remaining metabolites present in considerable lower amounts is KWG 1342-glucoside (M12) at an average of approximately 10%. This metabolite is an exception insofar as its percentage of the total radioactivity increased in the third test year. The percentage of the other metabolites was relatively constant.

Table 26. Distribution of the residues determined in straw in a three years trial with triadimenol and triadimefon

	Phenyl-label			Triazole-label		
	1st year	2nd year	3rd year	1st year	2nd year	3rd year
	Radioactivity in% recovered from the straw (=100%)					
Triadimenol A	31	34	23	25	23	29
Triadimenol B	19	15	9	16	11	13
Triadimenol-hexose-conjugate	12	14	11	14	16	11
Triadimefon	2	2	1	1	1	2
p-Chlorophenol	7	4	3			
p-Chlorophenyl-glucoside	2	3	3			
BUE 2285	1	[a]	*)	1	[a]	1
KWG 1323 (M09)	[a]	1	3	[a]	2	[a]
KWG 1323-glucoside (M14)	6	5	9	8	6	5
KWG 1342 (M10)	4	3	3	3	4	1
KWG 1342-glucoside (M12)	3	6	19	8	10	16
Triazole alanine				2	1	3
Triazole hydroxy propanoic acid				[b]	4	6
Triazole acetic acid				[b]	5	2
Other radioactivity	1	1	1	1	1	3
Unextractable	14	13	16	13	17	9

a - Could not be evaluated

b - Sum of triazole hydroxy propanoic acid and triazole acetic acid 9%

The pattern of radioactivity in the grains is totally different from that of the straw. Table 27 shows that considerably higher contents of radioactivity in the grains treated with triazole-labelled test substances are attributable to the the main metabolites triazole alanine (54%) and triazole acetic acid (32%).

Table 27. Distribution of the residues in grains of wheat in a three years trial with triadimenol and triadimefon

	Distribution [%]	Concentration in ai equivalents [mg/kg]	Concentration in metabolite equivalents [mg/kg]		
	from - to	from - to	1st year	2nd year	3rd year
Triazole alanine	53 -54	0.45 - 1.06	0.24	0.42	0.56
Triazole hydroxy propanoic acid	< 1 - 1	0.24 - 0.72	0.10	0.22	0.31
Triazole acetic acid	27 - 35	< 0.01- 0.02	<< 0.01	< 0.01	< 0.01
Soluble in organic solvents	2 - 7	0.02 - 0.14			
Unextractable	4 - 12	0.03 - 0.24			

Sugar beets (foliar application)

(Haas, M.; Kloeppner, U., 2003)

Sugar beet plants (species *Beta vulgaris* var. *altissima*) were grown in standardised planting containers. The containers had a surface area of 1 m² and were filled with a sandy loam soil which allowed a final seed density of nine plants per squaremeter after thinning. [Phenyl-UL-^{14}C] triadimenol (specific radioactivity 3.66 MBq/mg, radiochemical purity > 98%, ratio of diastereomers approximately 80:20) was formulated as an EC 250 formulation. The plants were treated at BBCH growth stage 39 (crop cover complete) and at growth stage 49 (i.e., 28 days before harvest). The amount of ai applied was oriented at a target rate of 250 g ai per hectare. Just before each application formulated test substance corresponding to 14 mg ai (about 50 MBq) was diluted with 35 mL of water. The solution was sprayed by means of a computer controlled track sprayer using a flat fan nozzle. The actually applied rates considering losses were 13.8 (50.4 MBq) and 13.7 mg (50.1 Mbq).

Harvest and processing of forage samples was performed with one plant to establish extraction procedures and analytical methods. The remaining plants were harvested at maturity. The roots were separated from leaves and the soil particles were removed. The total amount of roots and leaves was determined. The plant material was cut into small pieces and stored in a freezer at -20 °C.

Aliqouts of randomly collected pieces of roots (450 g) and of leaves (400 g) were homogenised by grinding in liquid nitrogen using an Ultra-Turrax. Aliqouts of roots and leaves were extracted three times with acetonitrile-water (80+20; v+v). After each step the extract was separated from the solid by centrifugation. The extracts were combined and aliqouts were concentrated by evaporation. The concentrate was filtered and further investigated by chromatographic methods. Aliqouts were radioassayed by LSC. In the case of leaves an aliqout of the remaining solid was exhaustively extracted with acetonitrile - water (1+1; v+v) in a microwave. After filtration the microwave extract was concentrated. The solids were air dried and radio-assayed by combustion analysis combined with LSC of combustion gases. Besides mass spectroscopic (by ESI or LC-MS-MS) and 1H-NMR (300 MHz) structure elucidation, metabolites in extracts or in isolated form were assigned by HPLC co-chromatography with reference substances and by comparison of retention times in different extracts.

The residues expressed as mg/kg of parent compound or as percentage of total radioactive residues (TRRs) of the components found in forage leaves and roots as well as in roots and leaves of mature sugar beets are summarised in Table 28. The total radioactive residues in mature roots and leaves amounted to 0.03 mg/kg and 4.78 mg/kg, respectively. The corresponding residues for the forage root and leaves amounted to 0.01 mg/kg and 1.92 mg/kg, respectively. For both sampling dates the majority of the residues were detected in the leaves. In all extracts triadimenol was the main component besides M12 as a major metabolite. Identified metabolites in leaves and roots accounted for more than 90% of the TRR in the case of mature plants and for 85.1% in the case of forage leaves. The forage root was not further investigated due to the low level of radioactivity.

Table 28. Residues in plant material expressed as mg/kg of parent compound and % TRR

	Root forage		Leaf forage		Roots (at maturity)		Leaves (at maturity)	
	% TRR	mg/kg	% TRR	mg/kg	% TRR	mg/kg	% TRR	mg/kg
Triadimenol [a]	90.4	0.01	26.0	0.5	64.0	0.02	73.1	3.49
KWG 1342-glucoside (M12) [b]			52.7	1.01	5.3	< 0.01	13.1	0.63
KWG 1342 (M10)			2.8	0.05	17.7	0.01	2.6	0.12
Triadimenol-HMG-glucoside (M37) [a)]			3.6	0.07			2.8	0.14
Total identified			85.1	1.63	87.0	0.03	91.6	4.38
Identified by HPLC			12.5 [c]	0.24 [c]	3.7		7.5 [d]	0.29 [d]
Unextractable	9.6	< 0.01	2.4	0.05	9.3	< 0.01		0.04
Microwave extract					0.9		0.9 [e]	0.04 [e]
Total	100	0.01	100.0	1.92	100.0	0.03	100.0	4.75

a - Sum of two diastereomers A and B

b - Sum of four diastereomers

c - Sum of 13 peaks in a range of < 0.01 to 0.05 mg/kg

d - Sum of 8 regions in a range of 0.02 - 0.08 mg/kg

e - Containing 0.03 mg/kg / 0.6% TRR triadimenol

Tomatoes and cucumbers (soil and foliar application)

(Nye, D.E., 1980; Krolski, M.E., 1991a & 1993 and Puhl, R.J., 1980)
The metabolic fate of triadimefon in both tomatoes and cucumbers was studied under both laboratory and greenhouse conditions. For all experiments described below [Phenyl-UL-^{14}C] triadimefon with a specific activity of 52,930 dpm/µg was used. The radiochemical purity was > 99%. For the applications it was mixed with a formulation blank to form a 25% wettable powder.

Laboratory seedling study:

The metabolism of triadimefon in 14 day old cucumber and tomato plants was studied by treatment of plants by soil and foliar application. Hydroponically cultured and soil grown plants were treated by soil application with an equivalent of 94.5 µg triadimefon per plant. While the hydroponic plants were dosed with 103 µL triadimefon in ethanol, the individually potted soil grown plants were transplanted into polyethylene cups with a surface of 133 cm² and treated with 200 µL triadimefon diluted with 10 mL of deionised water. The roots and shoots of hydroponic plants and only the shoots of soil potted plants were collected at intervals of 24, 72, 120 and 168 hours to determine the rate of triadimefon uptake as well as the distribution and nature of metabolites. Four soil potted cucumber and tomato plants were treated with 94.5 µg (52,930 dpm/µg) by foliar application of single mature leaves. The triadimefon was applied uniformly to leaf surfaces in 80% of ethanol/water. The plants were allowed to develop for 7 days after which they were removed from the soil.

Plant tissues were homogenised by blending frozen plant samples with dry ice. Total radioactivity was determined by combustion of triplicate sub-samples in an Oxidizer. Plant tissue homogenates were extracted with 50 ml of methanol for 15 minutes under rapid stirring. The extracts were filtered and the solids rinsed four times with 20 ml of methanol. The filtrates were concentrated to approximately 50 ml and diluted with 25 ml aqueous 0.1 N HCl. The extracts were then partitioned twice against 30 ml of dichloromethane (DCM). An aliquot of the pooled DCM extracts and of the neutralized aqueous extracts were analysed by liquid scintillation counting (LSC). The remaining DCM fraction was then concentrated under vacuum and nitrogen to approximately 1 mL. Plant tissue solids were weighed and analysed by combustion.

Approximately 10000 – 25000 dpm of the DCM extract together with metabolite standards were spotted onto TLC plates. TLC plates were developed in either ethyl acetate or acetonitrile:water:ammonium hydroxide (80:18:2). After development, TLC plates were dried and exposed to x-ray film for a period of 2 – 3 weeks. Once the radiocarbon containing components were detected by autoradiography, they were scraped from TLC plates and subjected to liquid scintillation counting to determine the percent distribution of triadimefon metabolites in extracts of various plant tissues.

As shown in Table 29 radioactive residues are readily taken up by hydroponic plants via the roots up to 2.22 mg ai equivalents/kg in tomatoes and 2.87 mg ai equivalents/kg in cucumber after 7 days. In the soil grown plants levels after 7 days of exposure were just 0.15 mg ai equivalents/kg in tomato shoots and 0.13 mg ai equivalents/kg in cucumber shoots.

Organosoluble radioactive residues in shoots exceeded for both crops in all cases 90% while water soluble residues reached a maximum of 6.5%. In roots organosoluble residues declined from 93.0 to 72.5% in cucumbers and from 56.4 to 27.6% in tomatoes after 7 days. Water soluble radioactive residues rose up to 27.5% in cucumbers and remained around 20% in tomatoes. Table 30 gives TLC data for the DCM extracts of the shoots of cucumber and tomato seedlings grown hydroponically. One major metabolite of triadimefon was found, KWG-0519 (triadimenol), with both steric isomers present. There was also an increase in origin material as a function of time indicating perhaps additional more polar metabolites.

Table 29. Bioaccumulation of [Phenyl-UL-^{14}C] Triadimefon Equivalents in Hydroponic and Soil Cultured Cucumber and Tomato Plants

	[Phenyl-UL-14C] Triadimefon Equivalents [mg/kg]					
	Cucumbers			Tomatoes		
Post-Treatment Interval	Hydroponic Solution	Root	Shoots	Hydroponic Solution	Root	Shoots
1 day						
Hydroponic	0.25	1.22	0.37	0.28	1.17	0.57
Soil	not possible	not analysed	0.02	not possible	not analysed	0.03
3 days						
Hydroponic	0.22	1.92	1.55	0.15	1.07	1.42
Soil	not possible	not analysed	0.04	not possible	not analysed	0.06
5 days						
Hydroponic	0.17	1.20	1.94	0.12	1.26	1.62
Soil	not possible	not analysed	0.08	not possible	not analysed	0.08
7 days						
Hydroponic	0.13	0.60	2.22	0.10	0.80	2.87
Soil	not possible	not analysed	0.13	not possible	not analysed	0.15

Table 30. Thin-Layer Chromatography-Autoradiography of the Organic Extracts of Tomato and Cucumber Shoots from Plants Exposed to [Phenyl-UL-^{14}C] Triadimefon in the Hydroponic Solution

	Total Radioactive Residue [%]							
Days after Treatment	1 Day		2 Days		5 Days		7 Days	
	% TRR	mg/kg	% TRR	mg/kg	% TRR	mg/kg	% TRR	mg/kg
Tomato Shoots								
Total	100	0.57	100	1.42	100	1.62	100	2.87
Origin	4.4	0.025	5.1	0.07	10.5	0.17	10.8	0.31
KWG-0519 I (triadimenol)	35.7	0.2	49.0	0.7	50.3	0.81	50.1	1.44
KWG-0519 II (triadimenol)	16.8	0.096	26.1	0.37	23.7	0.38	28.6	0.82
Triadimefon	38.7	0.22	15.7	0.22	10.6	0.17	7.0	0.2
Cucumber Shoots								
Total	100	0.37	100	1.55	100	1.94	100	2.22
Origin	1.9	0.007	3.0	0.047	5.9	0.11	7.7	0.17
KWG-0519 I (triadimenol)	4.1	0.015	13.3	0.21	21.7	0.42	12.9	0.29
KWG-0519 II (triadimenol)	8.6	0.032	18.7	0.29	49.7	0.96	30.1	0.67
Triadimefon	81.1	0.3	56.7	0.88	12.9	0.25	47.3	1.05

Greenhouse study:

Tomatoes (Beefmaster UFN variety) and cucumbers (Sparton Valor variety) were planted as seedlings in commercially available nutritionally fortified potting soil. The plants were maintained in the greenhouse under a 14 hour light/10 hours dark photoperiod during the entire study. All plants received one application of [Phenyl-UL-^{14}C] triadimefon in a 5% ethanol/water solution accomplished by placing 65 of each of the tomatoes and cucumbers in a 1.0 m spray chamber at the trifoliate stage of growth. The plants were then treated with approximately 12.5 mg ai/m² (6.62 × 10 dpm) in 18.6 mL of water with an all glass TLC sprayer. Following the treatment, 10 plants were set aside and allowed to grow to maturity. For tomato and four cucumber plants were then selected following fruit set to receive two additional treatments (3.02 mg ai) at 7 day intervals. During each of these treatments, the fruit was sprayed to run-off with the remaining treatment mixture applied uniformly to the foliage.

Six tomato and cucumber seedlings were collected at 0, 1, 3, 5, 7, 14, 21, and 28 days after the initial application. Foliage and fruit were collected from several of the plants which were allowed to grow to maturity after only one treatment. The samples were collected after the fruit had ripened. Finally, fruit and foliage samples were collected from the four tomato and cucumber plants which received multiple applications at 7, 14, and 21 days following the last application.

To determine total [Phenyl-UL-^{14}C] triadimefon equivalents in the plant samples triplicate homogenised sub-samples were combusted in an Oxidizer. To determine the nature of the radiocarbon residues in the tomato and cucumber samples, aliquots were extracted twice with methanol. The samples were filtered and the process repeated a second time. The methanol filtrate was concentrated to approximately 50 ml, 10 mL of deionized water added, the pH adjusted to 1.0 with HCl and extracted two times with an equal volume of dichloromethane (DCM) and a final time with 60:40 DCM-acetonitrile. An aliquot of the DCM and aqueous phase, after neutralisation, was analysed by direct liquid scintillation counting, while the solids following extraction were subjected to combustion analysis as previously described. The DCM extracts were then concentrated to 1.0-2.0 mL for subsequent TLC analysis while the aqueous phases were placed in the refrigerator for later analysis.

An aliquot of the DCM extracts of the various tomato and cucumber tissue samples was applied to 0.25 mm silica gel TLC plates and developed in either one or two dimensions with the following mobile phases: In the single dimension, ethyl acetate or a mixture of DCM-methanol-ammonium hydroxide (70:25:1) was used. For two-dimensional TLC, a mixture of DCM and acetone (80:20) was used in the first direction while ethyl acetate was used as the mobile phase in the second direction. Following development of the TLC plates, autoradiograms were prepared and the radiocarbon containing spots were scraped and quantitated by direct LSC analysis. The DCM extracts of the various tissue samples were purified on a silica gel column. For the analysis of extracts of the seedling tomato and cucumber samples, the 14, 21, and 28 day intervals for each species were combined and chromatographed with several solvent elution profiles.

Gas chromatography and gas chromatography-mass spectrometry were used as confirmatory tools in the identification of the radiocarbon residues in the DCM extracts of the fruit and foliage.

The water soluble radiocarbon in the aqueous phase following DCM extraction of single application cucumber foliage samples (14, 21, and 28 days post treatment) and tomato foliage sample (28 day sample) contained greater than 10% of the total tissue radiocarbon. For that reason they were subjected to hydrolysis with β-glucosidase. Following incubation, the samples were adjusted to a pH of 1.0 with HCl and extracted with a 6:4 mixture of DCM-acetonitrile. The radiocarbon in both the organic and aqueous phases was then monitored by direct liquid scintillation counting. The organic extract was then concentrated, a portion applied to silica gel TLC plates, and analysed using the ethyl acetate solvent system. Following development, the plate was autoradiographed and the radiocarbon containing components were scraped and subjected to direct liquid scintillation counting.

As seen in 31 the total radioactive residues were 12.25 mg ai equivalents/kg in tomatoes and 14.84 mg ai equivalents/kg in cucumbers immediately following application of 12.5 mg ai equivalents/m². These residues declined to 1.42 and 1.53 mg ai equivalents/kg, respectively, 28 days after treatment. At harvest, the residues were 0.36 mg ai equivalents/kg in tomato foliage and 0.04 mg ai equivalents/kg in the fruit.

In cucumber, the radiocarbon residues were 0.62 mg ai equivalents/kg in the foliage and 0.10 mg ai equivalents/kg in the fruit. These results substantiate the findings of the laboratory study in which triadimefon had little potential for translocation following foliar application. The radiocarbon residues 28 days after application were only 4.3 (tomato) and 12.4 (cucumber) %TRR in the plant solids (see Tables 32, 33 and 34).

In tomatoes, triadimefon was the major radioactive residue varying from 95.2% of the total ^{14}C to 54.9% 28 days after application. Triadimenol was also a major radiocarbon residue with the sum of both steric isomers reaching plateau levels which varied from 19.5 – 22.6% of the total tissue-^{14}C 5 to 28 days following application. Another polar metabolite remaining at the origin of the TLC plates reached 7.3% of the total radiocarbon residue.

In cucumbers, the degradative pathway of triadimefon was identical, although the cucumber plant had a greater ability for the biotransformation of this experimental fungicide. Triadimefon was degraded very rapidly and had a half-life of only 5 to 7 days. At 28 days following treatment, only 8.1% of the total radiocarbon residue was triadimefon. The major degradation products were the steric isomers of triadimenol which reached a maximum of 41.4% of the total ^{14}C 7 days after treatment. At 28 days, these isomers represented 36.1% of the total radiocarbon in the plants. The polar metabolite was also produced and reached, a maximum level of 19.5% of the total ^{14}C 21 days after treatment. Although total identification was not possible it has been shown that it consisted of a glucoside conjugate of triadimenol.

Table 31. Fate of [Phenyl-UL-^{14}C] Triadimefon in Tomatoes and Cucumbers: Distribution of the Total Radioactive Residue (TRR) among the DCM-Soluble and Aqueous Fractions and the Plant Tissue Solids following 1 Application at the Seedling Stage

Interval [days after treatment]	Plant Weight [g]a	Growth Increase [%]	TRR [mg/kg]	Organo-soluble TRR [%]	Water soluble TRR [%]	TRR in Plant Solids [%]
Tomato						
0	3.51	-	12.25	98.5	1.2	0.3
1	4.10	114	12.43	98.5	1.0	0.4
3	2.54	71	13.68	98.0	1.3	0.7
5	3.87	108	7.66	96.0	3.0	1.0
7	5.90	164	5.73	93.8	4.4	1.8
14	8.36	233	3.74	90.6	6.8	2.5
21	12.17	347	2.92	86.7	9.6	3.7
28	17.42	496	1.42	83.5	12.2	4.3
70-foliage[b]	-	-	0.36	-	-	-
70-fruit[b]	-	-	0.04	-	-	-
Cucumber						
0	2.33	-	14.84	97.5	2.0	0.5
1	2.00	86	11.87	95.9	3.1	0.9
3	2.98	128	10.21	94.3	4.5	1.1
5	3.71	159	6.70	91.5	6.6	1.9
7	4.21	181	6.76	89.9	8.1	2.0
14	9.17	394	3.68	75.2	20.8	4.0
21	18.26	784	1.77	72.1	20.4	7.5
28	25.28	1085	1.53	61.3	26.3	12.4
70-foliage[b]	-	-	0.62	-	-	-
70-fruit[b]	-	-	0.10	-	-	-

a - Represents an average of 6 plants

b - Represents the harvest interval

Table 32. Nature or the Radiocarbon Residue in the DCM Extracts of Tomato and Cucumber Seedlings Following Application of [Phenyl-UL-^{14}C] Triadimefon

Interval [days after treatment]	Polar Metabolite [% TRR]	KWG0519 I (triadimenol) [% TRR]	KWG0519 II (triadimenol) [% TRR]	Triadimefon [% TRR]	Total [% TRR]
Tomato					
0	1.3	1.0	1.0	95.2	98.5
1	1.7	3.4	3.1	90.1	98.3
3	3.2	7.0	4.6	83.2	98.0
5	3.3	12.8	8.4	71.3	95.8
7	5.1	14.1	8.5	65.5	93.2
14	6.3	14.7	7.9	61.2	90.1
21	6.5	13.0	6.5	60.5	86.5
28	7.8	14.8	6.5	54.4	83.5
Cucumber					
0	1.1	0.6	1.4	94.4	97.5
1	1.7	2.9	4.6	86.7	95.9
3	2.7	11.2	15.1	65.3	94.3
5	5.2	17.9	14.6	53.6	91.3
7	8.0	22.5	18.9	40.5	89.9
14	12.9	18.5	16.8	27.0	75.2
21	19.5	20.9	20.3	11.4	72.1
28	17.1	19.4	16.7	8.1	61.3

The hydrolysis of the water soluble radioactive residue with ß-Glucosidase revealed the presence of 2 further metabolites, M09 and M10 but only in cucumber. The identity of M09 and M10 in the samples is based on TLC data.

Table 33. Effect of ß-Glucosidase on the Water Soluble Radioactive Residue from Tomato and Cucumber Foliage Samples Following a Single Application of [Phenyl-UL-^{14}C] Triadimefon at the Trifoliate Growth Stage

Crop/Interval [days after treatment]	Triadimefon [%] TRR	KWG-0519 (triadimenol) [%] TRR	KWG-1323 (M09) [%] TRR	KWG-1342 (M10) [%] TRR	Origin [%] TRR
Tomato / 28 days	3.9	1.0	n.d.	n.d.	4.7
Cucumber / 14 days	3.1	1.1	1.0	1.3	6.4
Cucumber / 21 days	2.6	2.2	1.5	1.6	7.9
Cucumber / 28 days	2.0	1.4	2.0	2.5	11.8

Multiple Application: Several of the tomato and cucumber plants received two additional applications of [Phenyl-UL-^{14}C] triadimefon following fruit set. The water soluble fraction rose to 14.6% TRR in fruit in tomato and 11.0% TRR in fruit in cucumber, while at the same time the organosoluble fraction in fruit declined by approximately 8%. In Table 34, the amount of total radioactive residues as well as the metabolic pattern in the DCM extract is given. While the total radioactive residues on both tomato and cucumber foliage are quite variable, the radioactive residues on the fruit decreased rapidly with time. These decreased to 0.14 mg/kg at the 21 day sampling interval in tomato and 0.01 mg/kg in cucumber.

The tomato foliage samples contained both isomers of triadimenol like the single application samples and the I-isomer was 4 to 5.9 more prevalent. The tomato fruit also contained both isomers of triadimenol, however, the II isomer was more prevalent by a factor of nearly two. In both the tomato fruit and foliage, triadimefon was the major radioactive residue. The polar radioactive residue was only found in the tomato foliage, not in the fruit. In the cucumber fruit and foliage samples, the metabolic pattern for triadimefon was the same as that observed in the tomato samples. In the foliage samples, triadimenol-I was more prevalent than the II isomer by a factor of 1.2 to 1.9. In the fruit, the II isomer was 4 times more prevalent than the I-isomer. In addition, the more polar component was, like in the tomato, found in the foliage but not in the fruit.

Table 34. Fate of [Phenyl-UL-^{14}C] Triadimefon in Tomatoes and Cucumbers and Nature of the Radioactive Residues in the DCM Extracts of Tomatoes and Cucumbers Following Multiple Applications

	Interval [days after treatment]	TRR [mg/kg]	Polar Metabolite[%] TRR	KWG-0519 I (triadimenol) [%] TRR	KWG-0519 II (triadimenol) [%] TRR	Triadimefon [%] TRR	Total [%] TRR
Tomato Foliage	7	10.33	3.8	15.7	2.8	66.1	88.4
	14	17.39	5.3	13.6	2.3	70.6	91.8
	21	5.54	21.6	19.5	4.8	43.7	89.6
Tomato Fruit	7	1.06	n.d.	7.3	13.6	68.9	89.8
	14	0.58	n.d.	9.3	18.3	49.1	76.7
	21	0.14	-	-	-	-	-
Cucumber Foliage	7	18.30	3.9	11.3	9.6	60.4	85.2
	14	39.18	3.8	16.4	8.6	48.0	76.8
	21	18.19	19.8	16.8	11.7	36.0	84.3
Cucumber Fruit	7	1.11	n.d.	7.6	32.4	50.2	90.2
	14	0.53	n.d.	7.9	32.0	40.4	80.3
	21	0.01	-	-	-	-	-

n.d. - None detected (less than 0.1% of the TRR

Summary - metabolism in plants

Triadimenol was applied to grapes, cereals, in one case in combination with triadimefon, and in sugar beet. The investigation of the metabolism in these crops showed that the involved biochemical transformation processes consist mainly of conjugation reactions of the parent compound and to a lesser degree in the partial oxidation of the tertiary butyl group of the parent. The oxidation product M10 from this reaction is then also conjugated. A complete degradation of the chemical structure of triadimenol and triadimefon under formation of 4-chlorophenol and 1,2,4-triazole can occur in the soil. If 1,2,4-triazole is then taken up by the plant, it is conjugated by an enzymatic reaction with serine to form triazole alanine which can be further transformed into triazole hydroxy propanoic acid and triazole acetic acid. The other non-aliphatic part of the molecule, 4-chlorophenol can be conjugated in plants to 4-chlorophenyl-glucoside.

Triadimefon was applied to grapes, cereals, in one case in combination with triadimenol, in cucumbers and in tomatoes. The investigation of the metabolism in these crops showed that the involved biochemical transformation processes consist mainly of a reduction step to form triadimenol followed by further transformation steps as described above. If triadimefon is oxidised at the tertiary butyl group either a hydroxylation to M09 which is further conjugated can occur or complete elimination of a methyl group can result in M08.

The proposed metabolic pathway of triadimenol and triadimefon in plant is shown in Figure 4.

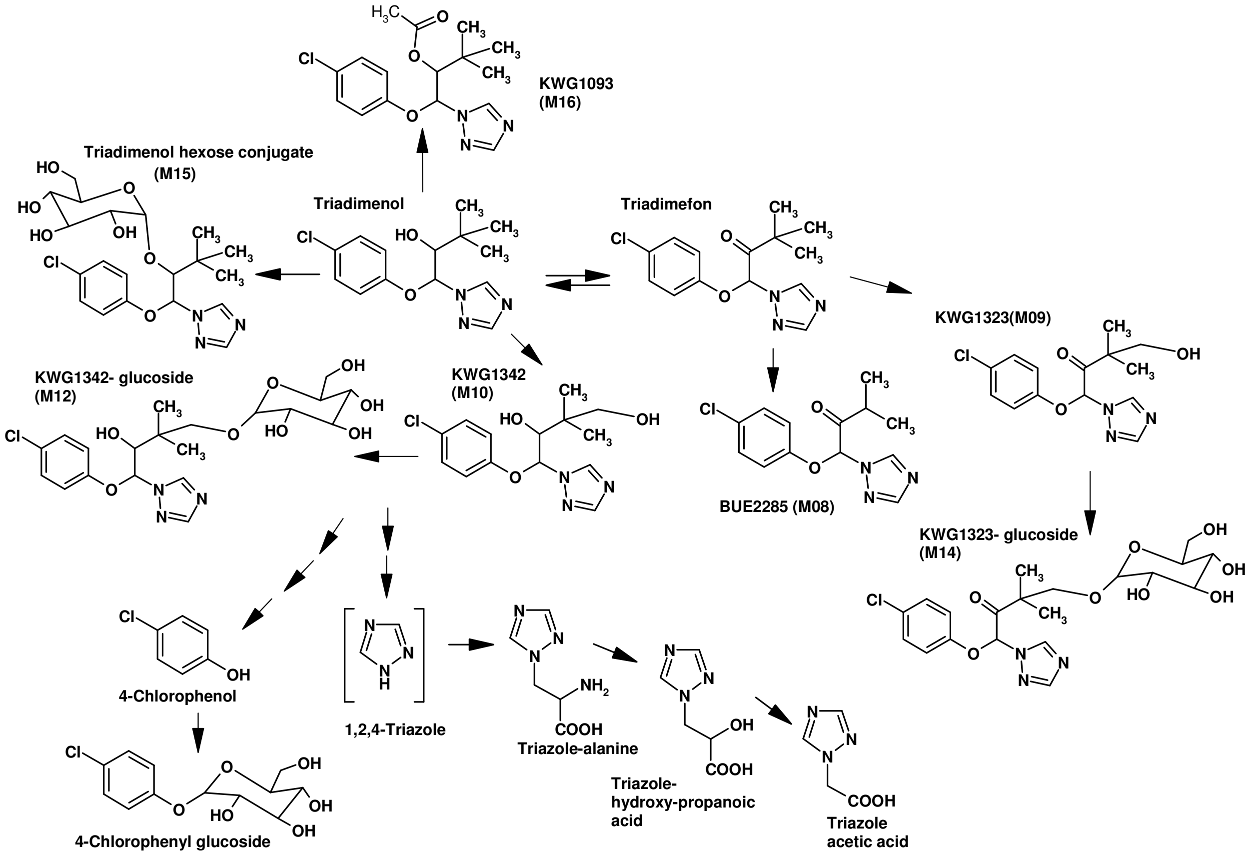


Figure 4. Proposed metabolic pathway of triadimenol and triadimefon in plants

Environmental fate in soil

Hydolysis (Triadimenol)

(Nichols, S. S.; Thornton, J. S. 1980)

The degradation behaviour of [phenyl-UL-^{14}C]triadimenol was investigated in aqueous buffer solutions with the pH-values of 4, 7 and 9, at concentrations of 5 and 50 mg ai/L. The tests have been conducted at 20 and 40 °C under exclusion of light (sterile conditions). Samples were taken on days 0, 7, 15 and 32.

Samples were analysed directly by TLC methods and the triadimenol isomers identified by co-chromatography with unlabelled reference substances of the diastereomers A and B. Radioactive zones were detected by autoradiography using a X-ray film. The radioactive zones were scraped from the plates and the radioactivity was measured by LSC.

After a test period of 32 days no degradation of triadimenol could be observed (95 – 100% recovery). The ratio of the isomers remained nearly unaltered during the test period. Based on these findings the extrapolated half-lives in the pH-range of 4 – 9 and at 20° C are > 1 year which classifies triadimenol as being stable to hydrolysis in water.

Hydrolysis (Triadimefon)

(Obrist, J. J.; Thornton, J. S., 1976)

The stability of [phenyl-UL-^{14}C]triadimefon was investigated in aqueous buffer solutions with the pH-values of 3, 6 and 9, at concentrations of 5 and 50 mg ai/L. The tests have been conducted at 25 °C, 35 °C and 45 °C in the dark (sterile conditions). Samples were taken after 0, 6 and 28 weeks of incubation from the 5 mg ai/L solutions and after 0 and 28 weeks of incubation from the 50 mg ai/L solutions.

Samples were analysed directly by TLC methods and triadimefon and hydrolysis products identified by co-chromatography with unlabelled reference substances. Radioactive zones were visualized on a radiochromatogram scanner or autoradiography using X-ray film. For quantitation the radioactive zones were scraped from the plates and the radioactivity was measured by LSC.

After a test period of 28 weeks no degradation of triadimefon could be observed (95 – 97% recovery). Based on these findings the extrapolated half-lives in the pH-range of 3 – 9 are > 1 year which classifies triadimefon as being stable to hydrolysis in water.

(Cain, K. S.; Moore, K. S., 1991)

In an additional study by Cain, K.S. the stability of [triazole-UL-^{14}C]triadimefon was investigated in aqueous buffer solutions with the pH-values of 5, 7 and 9, at 30 mg ai/L. The tests have been conducted at 25 °C in the dark (sterile conditions). Samples were taken on days 0, 3, 7, 14, 21 and 30. Radioactivity in the liquid samples was measured by LSC in duplicate. Sample aliquots were analysed by TLC and HPLC in order to quantify triadimefon and hydrolysis products.

After a test period of 30 days no degradation of triadimefon could be observed (91 – 94% recovery). Based on these findings the extrapolated half-lives in the pH-range of 5 – 9 and at 25 °C are > 1 year which classifies triadimefon as being stable to hydrolysis in water.

Hydrolysis (1,2,4-Triazole)

(Spare, W. C., 1983)

The stability of ^{14}C-1,2,4-triazole was investigated in aqueous buffer solutions with the pH-values of 5, 7 and 9 at 10 mg/L. Samples were taken at day 0, 1, 3, 6, 13 and 30 in duplicate. The first sample was immediately spotted on a pre-coated silica gel TLC plate, the second one was used for measurements of pH value and total radioactivity by LSC. TLC plates were developed in the solvent system 2-propanol+water (9+1). After development air-dried plates were placed in the dark in direct contact with X-ray film for autoradiography. Radioactive spots on the plates located via X-ray film were scraped from the plates and quantified by LSC.

Throughout the study 1,2,4-triazole accounted for 90 - 98% of the radioactivity indicating that it is stable under test conditions. The half-life in water at pH 5 – 9 is greater than 30 days.

Aerobic degradation – Triadimenol

(Brumhard, B. 2003)

For an investigation of the aerobic degradation of triadimenol in soil [phenyl-UL-^{14}C]triadimenol was used in application rates of 0.284 and 0.319 mg/kg soil. An application solution of labelled triadimenol in acetonitrile was added to sub-samples of 30 to 50 g air dried soil. The sub-samples were thoroughly mixed and added to the main portion of soil. The whole amount was mixed again and aliquots corresponding to 100 g of dry material were put into 300 mL Erlenmeyer flasks. The distributions of test substance in the soils were checked by combustion followed by LSC of trapped combustion gases. The physical-chemical characteristics of the soils used are presented in Table 35.

Table 35. Physical-chemical characteristics of the soils used

	Name of soil and classification of soil texture according to USDA			
	BBA 2.2 Loamy sand	Höfchen im Tal Silt loam	Laacher Hof Axxa Sandy loam	Laacher Hof AII Silt loam
Sand [%]	86.2	3.6	72.4	36.9
Silt [%]	7.7	80.8	22.6	51.1
Clay [%]	6.1	15.6	5.0	12.0
pH (H_2O)	6.6	6.0	6.9	7.0
Organic C [%]	2.58	2.40	1.35	0.93
Cation exchange capacity [meq/100g]	9.7	10.0	8.0	10.0
Water holding capacity [g/100g dry soil]	36.4	35.1	44.3	55.0
Biomass [mg C/kg soil] with a.s. Start/End	340/164	652/348	489/383	341/309

Soil moisture was adjusted to 40% of the water holding capacity at atmospheric pressure by addition of water. The Erlenmeyer flasks were fitted with an attachment containing a solution of soda lime for trapping carbon dioxide and a foam of polyurethane for organic volatiles. The microbial biomass was determined at the beginning and at the end after 100 days of the incubation period. It was incubated in the dark at a temperature of 20 °C. Samples were taken on day 0 (two hours after start), 3, 7, 14, 28, 49/56, 77 and 100 days. Analysis was carried out using LSC for then determination of the total radioactivity (see Table 36) and TLC for identification of metabolites formed.

Besides the parent substance only minor amount of metabolites (triadimefon: 4% of TRR, M02: 1% of TRR, M03: 3% of TRR and M07: 2.4% of TRR) could be identified.

Table 36. Summary of material balance for the four test soils given as minimum and maximum values expressed in percent of applied radioactivity

	BBA 2.2	Laacherhof AXXa	Laacherhof AII	Höfchen
Total recovery [%]	96.9 – 100.5	95.4- 100.3	88.7 – 104.5	90.6 – 103.9
Extracted radioactivity [%]	75.6 – 97.6	32.1 – 98.5	80.5 – 98.5	67.1 – 96.3
Max. volatile radioactivity [%]	16.7	41.1	3.8	14.4
Bound residues [%]	2.2 –6.7	1.5 – 22.3	2.0 – 4.5	2.8 – 9.1
Extraction efficiency on day 0 [%]	97.2 – 97.6	96.3 – 98.5	94.7 – 95.3	95.9 – 96.3

Photolysis on soil surfaces – Triadimenol

(Obrist, J. J.; Thornton, J. S., 1978)

The phototransformation of [phenyl-UL-^{14}C]triadimenol was studied on thin layers of silty loam soil in petri dishes. Approximately 3g of soil slurry was fortified with 5.5 µg triadimenol. The soil thin layers were continuously irradiated with a FS-20 sunlamp simulating the natural sunlight. The temperature of the testing system was maintained at 25 + 1 °C. Duplicate samples (dark and irradiated) were taken for analysis 0, 3, 7, 15, 21, 28 and 35 days post-treatment. Volatile radioactivity was trapped using ethylene glycol, 10% sulphuric acid and 10% sodium hydroxide in that order.

Soils were exhaustively extracted by shaking with methanol immediately after sampling. Additionally, the soil was further extracted with methanol/water (70/30) for 1 h and filtered. The radioactivity was determined in all samples and the extracts analysed by TLC and combustion-methods.

Under the experimental conditions triadimenol degraded relatively slow. After 35 days of irradiation over 68% of the activity, compared to the samples stored in the dark, were still present. Relevant metabolites could not be identified.

Photolysis on soil surfaces - Triadimefon

(Obrist, J. J., 1979)

The phototransformation of [phenyl-UL-^{14}C]triadimefon was studied on thin layers of silty loam soil in petri dishes. The dose rate corresponded to 280 g ai/ha. The soil thin layers were continuously irradiated with a FS-20 sunlamp simulating the natural sunlight with a light intensity of 0.9 – 1.1 mW/cm2. The temperature of the testing system was maintained at 25 + 1 °C. Duplicate samples (dark and irradiated) were taken for analysis 0, 7, 14, 21, 28 and 35 days post-treatment. Dark samples were taken 7 and 19 days post-treatment. Volatile radioactivity was trapped using ethylene glycol, 10%sulfuric acid and 10% sodium hydroxide in that order.

Soils were exhaustively extracted by shaking with methanol immediately after sampling. Additionally, the soil was further extracted with methanol/water (70/30) for 1 h and filtered. The radioactivity was determined in all samples and the extracts analysed by TLC and combustion-methods.

Under the experimental conditions triadimefon degraded relatively slow. After 35 days of irradiation over 85% of the activity compared to the samples stored in the dark were still present. Metabolites found were mainly 1,2,4-triazole and p-chlorophenol.

Residues in rotational crops

(Brennecke, R.; Vogeler, K.; Karl, W., 1986)
The metabolism of triadimenol and triadimefon in rotational crops was investigated in a combined study together with the residues in wheat. The test conditions are summarised in the metabolism part for seed treatment and foliar spray on wheat.

The soil was refluxed with a mixture of methanol and ammonia solution for 4 hours. The suspension was filtered. The filter cake was rinsed with the mixture and air-dried. The filtrate was concentrated to the aqueous remainder and partitioned three times with dichloromethane-hexane. The organic phases were combined and concentrated to dryness. The residue was dissolved in methanol (= “organic phase 3”). The aqueous phase was acidified to pH 1 using hydrochloric acid and partitioned three times with dichloromethane. The combined organic phases were concentrated to dryness and reconstituted in methanol (= “organic phase 4”). The remaining aqueous phase was freeze-dried and the residue was dissolved in methanol (= “aqueous phase 4”).

The distribution of radioactivity in the various soil layers is summarized in Table 37 for both labellings for the three test years. It shows that the majority of radioactivity (about 90%) was located in the upper 0 – 10 cm layer. The 10 – 20 cm layer contained up to 9% and the 20 – 30 cm layer less than 1% in the case of the phenyl label and up to 4% in the case of the triazole label. Only traces of radioactivity were detected in the leachate. The residues measured in the soil during the three test years consisted mainly of triadimenol (71 – 75% of the total radioactivity in the soil) and to a minor degree of triadimefon (2 – 14%). The metabolites M02, M03, 1,2,4-triazole, triazole alanine and triazole acetic acid occurred as minor metabolites (Table 38).

Table 37. Distribution of radioactivity in the various soil layers

	Phenyl-label			Triazole-label		
	1st year	2nd year	3rd year	1st year	2nd year	3rd year
	Radioactivity in% of total recovered radioactivity in straw					
0 – 10 cm	99	96	90	93	87	92
10 – 20 cm	< 1	3	9	6	9	6
20 – 30 cm	< 1	< 1	< 1	1	4	2

Table 38. Distribution of the residues determined in soil in a three years trial with triadimenol and triadimefon

		Phenyl-label			Triazole-label		
		1st year	2nd year	3rd year	1st year	2nd year	3rd year
		Radioactivity in% recovered from the three soil layers (=100%)					
Triadimenol A+B	0 - 10 cm	73.4	74. 6	72.8	74.4	70.7	73.4
	10 - 20 cm	< 0.1	1.8	6.4	2.5	4.0	1.6
Triadimefon	0 - 10 cm	13.9	7.7	3.7	3.7	2.6	1.8
	10 - 20 cm	< 0.1	0.2	0.2	0.3	< 0.1	< 0.1
KWG 1732 (M03)	0 - 10 cm	0.2	0.44	0.2	0.9	0.2	0.5
	10 - 20 cm	< 0.1	< 0.1	< 0.1	[a]	[a]	< 0.1
KWG 1640 (M02)	0 - 10 cm	2.0	1.0	1.8	1.9	1.8	0.9
	10 - 20 cm	0.1	< 0.1	< 0.1	[a]	[a]	< 0.1
1,2,4-Triazole	0 - 10 cm				6.5	1.8	2.7
	10 – 20 cm				1.7	2.0	1.1
Triazole alanine	0 - 10 cm				n.e.	n.e.	0.9
	10 - 20 cm				n.e.	n.e.	0.2
Triazole acetic acid	0 - 10 cm				n.e.	n.e.	0.9
	10 - 20 cm				n.e.	n.e.	0.1
Unextractable	0 - 10 cm	8.0	10.5	11.9	3.7	8.7	10.1
	10 - 20 cm	0.16	1.3	2.2	1.1	2.4	2.7

a - Could not be evaluated

n.e. - not examined

As described in the metabolism part, the study by Brennecke, R.; Vogeler, K.and Karl, W. (1986) was conducted over a total period of 3 subsequent years. The application rates of triadimenol and triadimefon are summarised in Table 23. The distribution of the total radioactivity found in wheat is presented in Table 39.

Table 39. Distribution of the residues in grains of wheat in a three years trial with triadimenol and triadimefon.

	Distribution [%]	Concentration in ai equivalents [mg/kg]	Concentration in metabolite equivalents [mg/kg]		
	from - to	from – to	1st year	2nd year	3rd year
Triazole alanine	53 -54	0.45 - 1.06	0.24	0.42	0.56
Triazole hydroxy propanoic acid	27 – 35	0.24 - 0.72	0.10	0.22	0.31
Triazole acetic acid	< 1 - 1	< 0.01- 0.02	<< 0.01	< 0.01	< 0.01
Soluble in organic solvents	2 - 7	0.02 - 0.14			
Unextractable	4 - 12	0.03 - 0.24			

(Vogeler, K.; Brennecke, R.; Linke, P., 1988)

This study followed the first investigation on wheat described above and in the metabolism section by Brennecke, R.; Vogeler, K.and Karl, W. (1986). The rotational crops were grown in field lysimeters 2 and 3 in which combined seed and foliage treatment of winter wheat with triadimenol and triadimefon had been performed during the first 3 years. In the first year of the study (4th year overall) winter barley was sown in 5 rows of 25 or 40 seeds. The winter barley was harvested at the hard grain stage and separated into grains, glumes, straw and roots. After the barley had been harvested Persian clover was sown as an intermediate crop. In autumn the clover was cut off to a height of about 3 cm and stored deep-frozen. The root bales were worked into the soil. In the second year of the study (5th year overall) 3 sugar beet seeds were sown into lysimeter 2. At harvest in autumn the plants were divided into leaves and roots. At the same time soil samples were taken.

Plant parts were coarsely reduced to small pieces and homogenized in liquid nitrogen. Aliquots of the homogenate were macerated in a mixture of aqueous ammonia and methanol. After filtering off the residue it was extracted two more times with a mixture of aqueous ammonia and methanol. The combined filtrates were concentrated to the aqueous remainder and partitioned three times with mixtures of dichloromethane and hexane. The combined organic phases were dried over sodium sulfate and evaporated to dryness. The residue was dissolved in methanol ("organic phase 1"). The remaining aqueous phase was adjusted with hydrochloric acid to pH 1 – 2 and extracted three times with dichloromethane. The combined organic phases were dried over sodium sulfate, evaporated to dryness and dissolved in methanol ("organic phase 2"). The remaining aqueous phase was concentrated and made up to a defined volume ("aqueous phase 2"). An aliquot of "aqueous phase 2" was charged onto a XAD 4 adsorber resin column conditioned with water and eluted with methanol ("methanolic fraction"). Another aliquot of the "aqueous fraction 2" was freeze dried and esterified with isobutanol. Aliquots of the "methanolic fraction" were subjected to enzymatic hydrolysis with cellulase.

The soil was refluxed with a mixture of methanol and ammonia solution for four hours. The suspension was filtered. The filter cake was rinsed with the mixture and air-dried. The filtrate was concentrated to the aqueous remainder and partitioned three times with dichloromethane-hexane. The organic phases were combined and concentrated to dryness. The residue was dissolved in methanol (= "organic phase 3"). The aqueous phase was acidified to pH 1 using hydrochloric acid and partitioned three times with dichloromethane. The combined organic phases were concentrated to dryness and reconstituted in methanol (= "organic phase 4"). The remaining aqueous phase was freeze-dried and the residue was dissolved in methanol (= "aqueous phase 4"). The highly polar derivatives of 1,2,4-triazole of the "aqueous phase 4" were esterified with isobutanol for direct analysis by TLC or for TLC analysis after acylation with heptafluoro butyric acid anhydride.

Structure elucidation was performed by TLC co-chromatography with reference substances. Radioactivity measurements in liquid phases were performed by LSC. Radioactivity in solid phases was determined by combustion analysis in combination with LSC of combustion gases. Radioactivity on TLC plates was measured by means of a linear radioactivity scanner and/or by autoradiography.

The radioactivity recovered in the rotational crops cultivated in the 4th and 5th year of the study and in soil and water is presented as a balance in Table 40.The radioactivity levels still remaining in the soil after the third year of treatment that were taken up by the plants were in the case of the phenyl label 0.7 and 0.8% in the forth and fifth year, respectively and in the case of the triazole label 3% in the forth year. The bulk of the radioactivity was localized in the soil. The levels of radioactivity measured in leachate and rainwater were small.

The radioactivity recovered in the plants and the recoveries are summarized in Table 41. In the forth year of the study the barley contained radioactive residues originating from the phenyl-labelling in the order of 0.4 mg parent compound equivalents per kg. The majority of this was localized in the straw. In the case of the triazole labelling the grain contained a higher percentage of the total radioactivity with 1.18 mg/kg found, as compared with 0.03 mg/kg with the phenyl label. The residual levels of the phenyl label in the clover were 0.025 mg/kg and thus lower than those measured for the previously cultivated barley but comparable with the levels measured in the leaves of the subsequently cultivated sugar beet (0.032 mg/kg). By contrast, very low residue levels were found in the sugar beet roots (0.004 mg/kg). In the case of the triazole labelling residue levels were lower in the clover than in the barley.

Table 40. Radioactivity balance in the plant, soil and water after three years of combined triadimenol-triadimefon application (4th and 5th year of the study)

Label and lysimeter	Year	Days after final application	Plant		Soil		Leachate		Rain water		Total	
			[µCi]	%	[µCi]	%	[µCi]	%	[µCi]	%	[µCi]	%
Phenyl (2)	4	414	6	0.7	890	100	0.2	< 1	0.5	< 1	897	101
Phenyl (2)	5	871	7	0.8	984	111	0.2	< 1	0.2	< 1	991	111
Triazole (3)	4	408	15	3	448	92	0.4	< 1	1.1	< 1	465	96
Triazole (3	5	778	--	--	406	84	1.3	< 1	3.1	< 1	410	84

Table 41. Radioactive residues in rotational crops cultivated after three years of treatment with triadimenol and triadimefon

		Phenyl-label			Triazole-label		
4th year							
		[mg/kg]	%	Recovery[a]	[mg/kg]	%	Recovery[a]
Winter barley	Grains	0.03	5	100	1.18	57	75
Winter barley	Glumes	0.37	70	93	0.65	45	81
Winter barley	Straw	0.70	19	84	0.78	7	97
Winter barley	Roots	0.33	6	17	0.03	1	34
Winter barley	Total		100			99	
5th year							
Persian clover		0.03		48	0.18		83
Sugar beet	Leaves	0.03	90		[b]		
Sugar beet	Roots	0.01	11		[b]		
Sugar beet	Total		101				

a - Recovery means the ratio of radioactivity found after processing of plant parts to the radioactivity determined by combustion

b - Not investigated

The distribution of the metabolites amongst the various parts of the plants cultivated in the forth and fifth year of the study are summarized in Table 42 for the phenyl labelling and in Table 43 for the triazole labelling. Considerable portions of the radioactivity consisted in unchanged triadimenol (0.12 mg/kg) or in triadimenol conjugate (0.04 mg/kg), M10, mainly occurring as glucose conjugate, accounted in total for 0.049 mg/kg. Residues identified in the other parts of the barley plants as well as in clover were quantitatively and qualitatively similar to those identified in the straw. Residues detected in the roots and leaves of sugar beet were not further characterized due to their low concentration level. Whereas with the phenyl labelling the ratios of the metabolites to each other in the individual parts of the barley plant and in the clover were similar, in the case of triazole labelling distinct differences were found between barley grain, barley straw and clover. The barley grain contained the greater part of the radioactivity (57%). The main metabolites were triazole alanine (M05; 0.33 mg/kg) and triazole acetic acid (M06; 0.12 mg/kg). The main metabolite in the straw was triazole-lactic acid (M11; 0.13 mg/kg) which was not detected in the grain. The other metabolites corresponded to each other with regard to concentration levels.

Table 42. Composition of the residues in various parts of the rotational crops cultivated after three years of treatment of winter wheat with [^{14}C-phenyl]-triadimenol and [^{14}C-Phenyl]-triadimefon

	Winter barley				Clover
	Grains	Straw	Glumes	Roots	
	[mg/kg fresh weight]				
Triadimenol A+B	0.008	0.12	0.14	0.026	0.008
Triadimenol-hexose-conjugate [a]	<< 0.001	0.040	0.083	[b]	0.004
Triadimefon	sum << 0.001			sum 0.002	sum < 0.001
p-Chlorophenol					
BUE2285 (M08)		0.006	0.007		
KWG1342 (M10)	< 0.001	0.006	0.007	0.003	< 0.001
KWG1342-glucoside (M12)	0.004	0.043	0.21	[b]	0.005
Other radioactivity	0.008	0.104	0.17	0.004	0.003
Unextractable	0.006	0.038	0.065	0.017	0.004

a - mg-Parent compound equivalents

b - Not investigated

Table 43. Composition of the residues in various parts of the rotational crops cultivated after three years of treatment of winter wheat with [^{14}C-triazole]-triadimenol and [^{14}C-Phenyl]-triadimefon

	Winter barley				Clover
	Grains	Straw	Glumes	Roots	
	[mg/kg fresh weight]				
Triadimenol A+B	0.004	0.140	0.100	0.027	0.046
Triadimenol-hexose-conjugatee [a]	0.006	0.028	0.011	<< 0.001	0.001
Triadimefon	<< 0.001	0.006	0.011	< 0.005	0.001
BUE2285 (M08)					
KWG1342 (M10)	< 0.002	0.017	< 0.01	< 0.005	0.007
KWG1342-glucoside (M12)	< 0.002	0.023	<< 0.001	<< 0.001	0.003
Triazole alanine	0.33	0.02	[b]	[b]	0.02
Triazole hydroxy propanoic acid	0.12	0.02	[b]	[b]	0.001
Triazole acetic acid	<< 0.001	0.13	[b]	[b]	0.001
Other radioactivity	0.105	0.029	0.646	0.016	0.017
Unextractable	0.140	0.078	0.018	0.033	0.023

a - mg-Parent compound equivalents

b - Not investigated

Field rotational crops

(Anon., 1984 – 1984g)

In 1982, four field rotational crop studies were conducted with triadimenol in summer rape (leafy crop) and turnips (root crop). Winter barley was sown at two test sites, Monheim and Burscheid, Germany, in September 1981. Afterwards, at each site the plots were divided into two subplots. One of them was treated with 2 × Bayfidan EC 250 and the other with 2 × Bayfidan WP 25. These subplots were divided again with the succeeding crops of rape and turnip sown about 14 days after the harvest of the barley.

In Monheim the application rate was 0.5 L/product/ha, corresponding to 125 g ai/ha. The last application to barley was made at the beginning of heading for both formulations. Triadimenol residues in barley grains were all below the LOQ (0.1 mg/kg). Straw from latest sampling date (day 42) yielded residues of either 0.69 mg/kg (EC) or 0.98 mg/kg (WP). Soil samples were taken 47 days after the last application to a depth of 15 cm. After 103 days, green material of rape and turnips was taken, and after 165 days, green material of rape, and leaf and body from turnips was sampled.

In Burscheid the application rate was 1.0 L/product/ha, corresponding to 250 g ai/ha. The last application to barley was made at the end of flowering/watery ripe growth stage for both formulations. Triadimenol residues in barley grain were all below the LOQ (0.1 mg/kg). Straw from latest sampling date (day 42) yielded residues of either 0.24 mg/kg (EC) or 0.12 mg/kg (WP). Soil samples were taken 49 days after the last application in horizons of 0 – 10 cm and 10 – 20 cm. After 105 days, green material from rape and turnips was sampled, and after 167 days, green material from rape, and leaf and body from turnips were collected.

Table 44 presents the residue levels found in the rotational crops of rape, turnip and in soil. Only after application with 250 g ai/ha (Burscheid) triadimenol residues were detected in the upper soil layer (0 – 10 cm); residues in the deeper layer were below the limit of quantification (0.1 mg/kg). Residues in all other samples were below the limit of quantification (0.1 mg/kg).

Table 44. Residues of triadimenol in rape and turnip after treatment of barley

Crop		Application			Residues			Reference
Country Year	Location	FL	No	g/ha (ai)	Portion analysed	PHI (days)	Triadimenol (mg/kg)	Report No.; Study No.
Turnip Germany 1982	Monheim	250 EC	2	125	soil (0 – 15 cm) green material leaf body	47 103 165 165	< 0.1 < 0.1 < 0.1 < 0.1	9939-82
Rape Germany 1982	Monheim	250 EC	2	125	soil (0 – 15 cm) green material	47 103 165	< 0.1 < 0.1 < 0.1	9940-82
Turnip Germany 1982	Monheim	25 WP	2	125	soil (0 – 15 cm) green material leaf body	47 103 165 165	< 0.1 < 0.1 < 0.1 < 0.1	9902-82
Rape Germany 1982	Monheim	25 WP	2	125	soil (0 – 15 cm) green material	47 103 165	< 0.1 < 0.1 < 0.1	9903-82
Turnip Germany 1982	Burscheid	250 EC	2	250	soil (0 – 10 cm) soil (10 – 20 cm) green material leaf body	49 49 105 167 167	0.2 < 0.1 < 0.1 < 0.1 < 0.1	9943-82
Rape Germany 1982	Burscheid	250 EC	2	250	soil (0 – 10 cm) soil (10 – 20 cm) green material	49 49 105 167	0.1 < 0.1 < 0.1 < 0.1	9944-82
Turnip Germany 1982	Burscheid	25 WP	2	250	soil (0 – 10 cm) soil (10 – 20 cm) green material leaf body	49 49 105 167 167	0.3 < 0.1 < 0.1 < 0.1 < 0.1	9906-82
Rape Germany 1982	Burscheid	25 WP	2	250	soil (0 – 10 cm) soil (10 – 20 cm) green material	49 49 105 167	0.3 < 0.1 < 0.1 < 0.1	9907-82

Summary

In the field rotational crop studies no measurable transfer into consumable parts of succeeding crops could be identified. Radioactive labelled studies on the metabolism in rotational crops showed a minor degradation of the active substances with triadimenol isomers still being the residue of concern. The main metabolites were triazole alanine (M05) and triazole acetic acid (M06). The main metabolite in the straw was triazole-lactic acid (M11) which was not detected in the grains.

RESIDUE ANALYSIS

Analytical methods

Enforcement method – Plant matrices (Triadimefon)

Method No. 00086 (Specht, W.; Thier, H. P., 1989)
A method is described for the determination of residues of more than 220 lipid and water soluble plant protectants, including Triadimefon and Triadimenol. Plant and soil samples are extracted with acetone. Water is added to obtain a 2:1 (v/v) ratio of acetone:water, taking the water content of the sample into account. Sodium chloride is added to this solution or to the filtered extract, followed by partitioning with dichloromethane. The residue is cleaned up by gel chromatography on Bio-Beads S-X3 polystyrene gel. The organic phase is evaporated and eluted with cyclohexane/ethyl acetate. Additional clean-up is done using a mini silica gel column. The residue of triadimefon and triadimenol is analysed on a gas chromatograph using an alkali-flame ionisation detector (GC-FID(N)). A mass selective detector (MS) is used for confirmatory purposes.

The LOQ for a number of plant matrices was 0.03 mg/kg for Triadimefon and 0.06 mg/kg for Triadimenol. Recoveries for method validation were done for cereals (grain and green material) at 0.06 mg/kg (Triadimefon) or 0.12 mg/kg (Triadimenol), and for grape (grapes, must and wine) and pineapple matrices at 0.5 mg/kg (Triadimefon) or 1.0 mg/kg (Triadimenol).

The LOQ for Triadimenol was 0.06 mg/kg for a number of plant materials. Recoveries for method validation were done for cereals (grain and green material) at 0.12 mg/kg, and for grapes, must and wine at 1.0 mg/kg.

Method No. 00086 extended (Weeren, R.D.; Pelz, S. (Authors of the German version) Weeren, R.D.; Linkerhaegner, M.; Pelz, S.; Walker, B. (Authors of the English version), 1999)

This method is an extended version of the multi-residue method DFG S19 and reflects method S19 in its original (Method No. 00086) as well as in its modified version (Method 00086 modified extraction). Dichloromethane is substituted with the less toxic cyclohexane and ethyl acetate. The individual stages of the method (extraction and partitioning, gel permeation chromatography, mini silica gel column chromatography, and gas chromatographic determination) are presented in modular form. Triadimenol is detected by gas chromatography using a nitrogen/phosphorus detector (GC-NPD) or a mass spectrometric detector (GC-MS). Confirmatory measurement is done using either a capillary column of different polarity and/or a different detector.

The LOQ for Triadimefon and Triadimenol (according to the lowest level of fortification) was 0.05 mg/kg for samples with a high water content (> 70% water), and 0.19 mg/kg for samples with a low water content (< 70% water). Recoveries were done at 0.05 to 0.1 mg/kg for samples with a high water content, with average recovery values between 86 and 110% (n=22) for Triadimefon, and between 84 and 108% (n=22) for Triadimenol. Recoveries were done at 0.19 mg/kg for samples with a low water content, with average recovery values between 97 and 106% (n=10) for Triadimefon, and between 95 and 104% (n=10) for Triadimenol.

Table 45. Validation data for analytical method 00086 and method 00086 extended

Reference	Matrix	Analyte	Fortification level (mg/kg)	Recovery rate (%) mean	range	RSD (%)	n
Specht, Thier, 1989 Method 00086	Cereal (grain)	Triadimefon	0.06	> 70	--	--	--
		Triadimenol	0.12	> 70	--	--	--
	Cereal (green material)	Triadimefon	0.06	> 70	--	--	--
		Triadimenol	0.12	> 70	--	--	--

Reference	Matrix	Analyte	Fortification level (mg/kg)	Recovery rate (%) mean range	RSD (%)	n
	Grapes	Triadimefon	0.5	> 70 --	--	--
		Triadimenol	1.0	> 70 --	--	--
	Grape (must)	Triadimefon	0.5	> 70 --	--	--
		Triadimenol	1.0	> 70 --	--	--
	Grape (wine)	Triadimefon	0.5	> 70 --	--	--
		Triadimenol	1.0	> 70 --	--	--
	Pineapple	Triadimefon	0.5	> 70 --	--	--
		Triadimenol	1.0	> 70 --	--	--
Weeren, Linkerhaegner, Pelz, Walker, 1999	Crop (high water content)	Triadimefon	0.05-0.1 0.1	86 -- 110 --	25 --	20 2
Method 00086 extended		Triadimenol	0.05-0.1 0.1	84 -- 108 --	24 --	20 2
	Crop (low water content)	Triadimefon	0.19 0.19	97 -- 106 --	8 --	8 2
		Triadimenol	0.19 0.19	95 -- 104 --	7 --	8 2

<u>Method No.: 00086/M049 (Weber, H., 2003)</u>
This modification of method 00086 extended revision validated DFG Method S19 (extended revision) for the determination of triadimefon in the representative plant matrices orange (fruit), grape (berry), onion (bulb), barley (grain), hop (dried cones) and olive (fruit).

Triadimefon was extracted and followed by clean-up. Analysis was by capillary gas chromatography with mass spectrometric detection. MS detection was done at a mass charge ratio of m/z=208. Two further fragment ions with an m/z ratio > 180 were determined, demonstrating the high specificity of the method. Quantitation was done using external standards and single-point calibration.

The LOQ was 0.05 mg/kg Triadimefon in all matrices, except olive (fruit) with an LOQ of 5.0 mg/kg. The limit of detection (LOD) was 20% of the LOQ. Control specimens were analysed in duplicate with blank values below the LOD. Fortification experiments were done for five replicate samples of all matrices at the LOQ and at 10× LOQ level. Individual recoveries at the LOQ were between 73 and 105% (means 81 – 102%, RSDs 2.8 – 10.9%, n=5) for all matrices, except olive (fruit) (recoveries 58 – 91%, mean 67%, RSD 21%, n=5). Individual recoveries at 10× LOQ level were between 64 – 116% (means 73 – 109%, RSDs 6.3 – 11.5%, n=4 – 5) for all matrices. Mean recoveries per sample matrix across both fortification levels were between 69 and 101% (RSDs 6.7 – 18% n=9 – 10).

Table 46. Validation data for analytical method 00086/M049

Reference	Matrix	Analyte	Fortification level (mg/kg)	Recovery rate (%) mean range	RSD (%)	n
Weber, 2003 Method 00086/M049	Orange (fruit)	Triadimefon	0.05 0.5	102 98-105 93 86-99	2.8 6.3	5 5
	Grape (berry)	Triadimefon	0.05 0.5	94 87-104 98 88-122	6.5 7.0	5 4
	Onion (bulb)	Triadimefon	0.05 0.5	99 88-109 103 87-112	7.9 9.6	5 5
	Barley (grain)	Triadimefon	0.05 0.5	89 73-98 102 98-141	10.9 7.6	5 4
	Hop (dried cones)	Triadimefon	5.0 50	81 71-90 109 96-116	9.3 7.9	5 5
	Olive (fruit)	Triadimefon	0.05 0.5	67 57-91 73 41-84	21 11.5	5 4

Method No.: 00086/M050 (Weber, H., 2003a)
This modification of method 00086 extended revision was done to validate DFG Method S19 (extended revision) for the determination of Triadimenol in grape (berry) and barley (grain).

Triadimenol was extracted followed by clean-up. Analysis was by capillary gas chromatography with mass spectrometric detection. MS detection was done at a mass charge ratio of m/z=168. Two further fragment ions with a m/z ratio > 100 were determined, demonstrating the high specificity of the method. Quantitation was done using external standards and single-point calibration.

The LOQ was 0.05 mg/kg for Triadimenol in grape (berry) and barley (grain). The limit of detection (LOD) was 0.01 mg/kg. Blank values were below the LOD. Fortification experiments were done at the LOQ and at 10 × LOQ. Fortified samples were analysed in quintuple. Recovery values for grape (berry) and barley (grain) ranged from 82 to 108%, with mean values between 88 and 103% (RSDs 4.2 to 8.1%, n=5). The RSD across all fortification levels were 5.2% for grape (berry) (mean 102%, n=10), and 8.2% for barley (grain) (mean 92%, n=10).

Table 47. Validation data for analytical method 00086/M050

Reference	Matrix	Analyte	Fortification level (mg/kg)	Recovery rate (%) mean range	RSD (%)	n
Weber, 2003 Method 00086/M050	Barley (grain)		0.05 0.5	96 85-105 88 82-94	8.1 5.9	5 5
	Grape (berry)		0.05 0.5	103 98-108 100 92-106	4.2 6.3	5 5

Method Report No.: P 619 G (Class, T., 2003)
Enforcement method 00086/M049, which is based on DFG method S19 (extended revision), was independently validated for the determination of Triadimefon in grape (fruit), barley (grain), onion and hops (dried cones).

Triadimefon was extracted, followed by clean-up and detection by GC-MS. MS detection was done at a mass charge ratio of m/z=208. Three further fragment ions with an m/z ratio of 180, 181 and 210, respectively, were determined. Quantitation was done against external calibration standards.

The LOQ for Triadimefon was 0.05 mg/kg in all sample matrices. Interference in blank control samples analysed in duplicate was less than 20% of the LOQ. Five replicate samples of all plant materials were fortified at the LOQ and at 10× LOQ, each. Single recovery values for grape (berry) and barley (grain) ranged from 79 to 101%, with average values of 83 to 96% (RSDs 5%, n=5). The RSDs across all fortification levels were 5% for grape (berry) (mean 94%, n=10), and 9% for barley (grain) (mean 89%, n=9).

Table 48. Independent validation data for analytical method 00086/M049

Reference	Matrix	Analyte	Fortification level (mg/kg)	Recovery rate (%) mean range	RSD (%)	n
Class, 2003 Report P619G	White table grape (berry)	Triadimefon	0.05 0.5	94 88-101 93 87-99	5 5	5 5
	Onion (bulb)	Triadimefon	0.05 0.5	87 84-93 91 85-99	4 5	5 5
	Barley (grain)	Triadimefon	0.05 0.5	96 87-101 83 79-84	6 2	5 5
	Hop (dried cones)	Triadimefon	5.0 50	104 98-120 90 86-98	9 6	5 5

Method Report No.: P 621 G (Class, T., 2003a)
Enforcement method 00086/M050, which is based on DFG method S19 (extended revision), was independently validated for the determination of Triadimenol in grape (fruit) and barley (grain).

Triadimenol was extracted, followed by clean-up and detection by GC-MS. MS detection was done at a mass charge ratio of m/z=112. Two further fragment ions with a m/z ratio of 128 and 168, respectively, were determined. Quantitation was done against external calibration standards.

The LOQ was 0.05 mg/kg for Triadimenol in grape (berry) and barley (grain). Interference in blank control samples analysed in duplicate was less than 20% of the LOQ. Five replicate samples of all plant materials were fortified at the LOQ and at 10× LOQ, each. Single recovery values for grape (berry) and barley (grain) ranged from 74 to 95%, with average values of 80 to 87% (RSDs 6 to 10%). The RSDs across all fortification levels were 7% for grape (berry) (mean 84%, n=10), and 8% for barley (grain) (mean 84%, n=10).

Table 49. Independent validation data for analytical method 00086/M050

Reference	Matrix	Analyte	Fortification level (mg/kg)	Recovery rate (%) mean range	RSD (%)	n
Class, 2003 Report P/G 621 G	Barley (grain)	Triadimenol	0.05 0.5	87 81-93 82 76-95	6.0 10	5 5
	Grape (berry)	Triadimenol	0.05 0.5	80 74-91 87 83-91	8.0 4.0	5 5

Enforcement method – Animal matrices

<u>Method No.: 00086/M051 (Weber, H., 2002)</u>
The applicability of the DFG Method S 19 (Method 00086 extended revision) for the determination of the residues of Triadimefon in milk, meat, egg and fat was tested. Extractions of the pesticide from the matrices were performed followed by clean-up procedure using GPC. All specimens were analysed by capillary gas chromatography with mass spectrometric detection (MSD, module D 4). Control specimens were analysed in duplicate and fortified specimens were analysed in quintuple for each fortification level. Fortification experiments were performed at the limits of quantitation and ten times that level. For triadimefon in milk, meat, and egg, the LOQ was 0.01 mg/kg, and in fat the estimated LOQ was 0.05 mg/kg.

Table 50. Validation data for analytical method 00086/M051

Reference	Matrix	Analyte	Fortification level (mg/kg)	Recovery rate (%) mean range	RSD (%)	n
Weber, H, 2002 Method 00086/M051	Milk	Triadimefon	0.01 0.1	110 105-116 107 99-120	4.9 7.8	5 5
	Meat	Triadimefon	0.01 0.1	94 75-110 88 73-103	16 13	4 5
	Egg	Triadimefon	0.01 0.1	95 88-101 92 85-98	6.4 5.4	4 5
	Fat	Triadimefon	0.01 0.1	95 81-106 90 80-103	9.5 9.4	5 5

<u>Method Report No. P 620 G (Class, T. 2003b)</u>
The independent validation of the enforcement method 00086/M051 for Triadimefon is based on the DFG S19 (extended revision) method, intended for the determination of residues in animal material. The extraction was followed by clean-up ausing GPC and detection by GC/MS.

The LOQ is 0.01 mg/kg. Whole milk and bovine meat were fortified at the LOQ and at 10× LOQ. For the matrices examined and for each fortification level, the average recoveries (n=5) were in the range of 74 – 90% and the relative deviations (RSD) were < 8%. Interfering signals in blank control specimens were < 20% of the LOQ.

Table 51. Validation data for analytical method report No. P 620 G

Reference	Matrix	Analyte	Fortification level (mg/kg)	Recovery rate (%) mean range	RSD (%)	n
Class, T., 2003 Method P 620 G	Milk	Triadimefon	0.01 0.1	90 85-95 79 75-85	5 6	5 5
	Meat	Triadimefon	0.01 0.1	75 70-81 74 67-81	6 8	5 5

Supplement E028, E029, E030, E031 and E032 to method 00086 (Specht, W., 1990-1990d)

These supplements provide validation data for the analysis of Triadimenol in cow fat, meat, liver, kidney and milk using DFG method S19. Clean-up is done by gel permeation chromatography, followed by chromatography on a mini silica gel column. The analyte is detected using GC-FID(N).

The LOQ for Triadimenol in cow fat was 0.1 mg/kg. Two recoveries each were done at the LOQ and 10× LOQ. Single recovery values ranged from 68 to 84%, with mean values of 70 and 79%. No Triadimenol was detected in the control sample.

The LOQ for Triadimenol in cow meat was 0.01 mg/kg. Two recoveries each were done at the LOQ and 10× LOQ. Single recovery values ranged from 91 to 119%, with mean values of 97 and 116%. No Triadimenol was detected in the control sample.

The LOQ for Triadimenol in cow liver was 0.01 mg/kg. Two recoveries each were done at the LOQ and 10× LOQ. Single recovery values ranged from 75 to 101%, with mean values of 80 and 100%. No Triadimenol was detected in the control sample.

The LOQ for Triadimenol in cow kidney was 0.01 mg/kg. Two recoveries each were done at the LOQ and 10× LOQ. Single recovery values ranged from 72 to 84%, with mean values of 74 and 84%. No Triadimenol was detected in the control sample.

The LOQ for Triadimenol in milk was 0.01 mg/kg. Two recoveries each were done at the LOQ and 10× LOQ. Single recovery values ranged from 104 to 111%, with a mean value of 108%. No Triadimenol was detected in the control sample.

Table 52. Supplemental validation data for analytical method 00086 extended

Reference	Matrix	Analyte	Fortification level (mg/kg)	Recovery rate (%) mean range	RSD (%)	n
Specht, 1990 Method 00086/E028	Cow (fat)	Triadimenol	0.1 1.0	79 74-84 70 68-72	-- --	2 2
Specht, 1990 Method 00086/E029	Cow (meat)	Triadimenol	0.01 0.1	116 113-119 97 91-103	-- --	2 2
Specht, 1990 Method 00086/E030	Cow (liver)	Triadimenol	0.01 0.1	100 99-101 80 75-86	-- --	2 2
Specht, 1990 Method 00086/E031	Cow (kidney)	Triadimenol	0.01 0.1	84 84-84 74 72-77	-- --	2 2
Specht, 1990 Method 00086/E032	Cow (milk)	Triadimenol	0.01 0.1	108 108-108 108 104-111	-- --	2 2

Method No. 00086/M052 (Weber, H. 2002a)

This modification of method 00086 extended revision was done to validate DFG Method S19 (extended revision) for the determination of Triadimenol in a number of animal matrices, including milk, meat, egg and fat.

Triadimenol was extracted followed by clean-up using GPC. Analysis was by capillary gas chromatography with mass spectrometric detection (GC-MS). MS detection was done at a mass charge ratio of m/z=168. Two further fragment ions with a m/z ratio > 100 were determined to demonstrate specificity. Quantitation was done using single-point calibration with external standards.

The LOQ was 0.01 mg/kg for Triadimenol in milk, meat and egg, and 0.05 mg/kg in fat. The limit of detection (LOD) was 0.002 mg/kg (milk, meat, egg) or 0.01 mg/kg (fat). Control specimens were analysed in duplicate. Blank values were below the LOD. Fortification experiments were done at the LOQ and at 10× LOQ. Fortified samples were analysed in quintuple. Recovery values ranged from 71 to 114%, with mean values between 82 and 103% (RSDs 1.9 to 16%). The RSDs across all fortification levels were 8.1% for milk (mean 100, n=10), 11% for meat (mean 84%, n=10), 9.3% for egg (mean 83%, n=10) and 10% for fat (mean 84%, n=10).

Table 53. Validation data for analytical method 00086/M052

Reference	Matrix	Analyte	Fortification level (mg/kg)	Recovery rate (%) mean	range	RSD (%)	n
Weber, 2002 Method 00086/M052	Milk	Triadimenol	0.01	103	92-114	9.0	5
			0.1	96	91-105	5.5	5
	Meat	Triadimenol	0.01	82	70-101	16	5
			0.1	86	83-87	1.9	5
	Egg	Triadimenol	0.01	84	73-89	7.7	5
			0.1	82	74-96	12	5
	Fat	Triadimenol	0.05	84	74-95	9.6	5
			0.5	84	71-95	12	5

Method Report No. P/B 622 G (Class, T. 2003c)

Enforcement method 00086/M052, which is based on DFG method S19 (extended revision), was independently validated for the determination of Triadimenol in milk and meat.

Triadimenol was extracted followed by clean-up by GPC and detection by GC-MS. MS detection was done at a mass charge ratio of m/z=112. Two further fragment ions with a m/z ratio of 128 and 168, respectively, were determined. Quantitation was done against external calibration standards.

The LOQ was 0.01 mg/kg for Triadimenol, both in milk and meat. Interference in blank control samples analysed in duplicate was less than 20% of the LOQ. Five replicate samples of the animal matrices were fortified at the LOQ and at 10× LOQ, each. Single recovery values for milk and meat ranged from 62 to 105%, with average values of 69 to 97% (RSDs 5 to 7%). The RSDs across all fortification levels were 6% for milk (mean 91%, n=10) and 19% for meat (mean 83%, n=10).

Table 54. Independent validation data for analytical method 00086/M052

Reference	Matrix	Analyte	Fortification level (mg/kg)	Recovery rate (%) mean	range	RSD (%)	n
Class, 2003 Report P/G 622 G	Milk	Triadimenol	0.01	94	88-103	7.0	5
			0.1	89	85-96	5.0	5
	Meat	Triadimenol	0.01	97	89-105	6.0	5
			0.1	69	62-74	7.0	5

Specialised methods- triadimefon and triadimenol

For both analytes various specialised methods are available. In all methods described the matrix is first extracted with acetone/water or methanol/water. In the following these extracts are cleaned-up mainly by gel permeation techniques or GPC usage. The quantification of the analytes was conduced by gas chromatography in connection with FID-, NPD- or MS-detectors. Depending on the matrix LOQs of 0.02 mg/kg up to 0.2 mg/kg were achieved. In general the validation data supported a LOQ of 0.05 mg/kg for most matrices. A summary of the specialised methods and the corresponding fortification levels and recovery rates is presented in Table 55.

Table 55. Validation data for analytical methods for the determination of residues of triadimefon and triadimenol in food of plant and animal origin

Reference	Matrix	Analyte	Fortification level (mg/kg)	Recovery rate (%) mean	Recovery rate (%) range	RSD (%)	n
Brennecke, 1984 Method 00002	Grapes	Triadimefon	0.02 0.4	95 87	95-95 86-88	-- --	2 2
		Triadimenol	0.05 1.0	108 96	107-110 92-100	-- --	2 2
	Grape (must)	Triadimefon	0.02	90	86-93	--	2
		Triadimenol	0.05	85	85-86	--	2
	Grape (wine)	Triadimefon	0.02 0.4	106 92	102-109 87-94	-- --	3 3
		Triadimenol	0.05 1.0	96 98	92-103 87-103	-- --	3 3
	Apple (pulp)	Triadimefon	0.02 0.4	88 96	84-91 92-99	-- --	2 2
		Triadimenol	0.05 1.0	97 86	94-99 85-86	-- --	2 2
	Apple (juice)	Triadimefon	0.02	85	84-87	--	2
		Triadimenol	0.05	99	99-100	--	2
	Apple (mash)	Triadimefon	0.02	80	80-81	--	2
		Triadimenol	0.05	93	92-93	--	2
	Banana (pulp)	Triadimefon	0.02 0.4	89 94	87-91 85-103	-- --	2 2
		Triadimenol	0.05 1.0	92 99	91-93 89-108	-- --	2 2
	Banana (peel)	Triadimefon	0.02 0.4	97 84	95-99 82-85	-- --	2 2
		Triadimenol	0.05 1.0	92 94	92-92 92-96	-- --	2 2
	Sugar beet (leaf)	Triadimefon	0.02 0.4	80 86	80-80 85-86	-- --	2 2
		Triadimenol	0.05 1.0	92 97	90-93 96-98	-- --	2 2
	Sugar beet (edible root)	Triadimefon	0.02 0.4	90 95	88-91 89-100	-- --	2 2
		Triadimenol	0.05 1.0	85 100	82-87 94-105	-- --	2 2
	Melon	Triadimefon	0.02 0.4	92 91	88-97 90-92	-- --	2 2
		Triadimenol	0.05 1.0	98 98	93-102 97-98	-- --	2 2

Reference	Matrix	Analyte	Fortification level (mg/kg)	Recovery rate (%) mean	range	RSD (%)	n
	Barley (green matter)	Triadimefon	0.04 0.2 1.0 2.0	100 92 82 87	90-105 87-97 78-87 86-87	-- -- -- --	4 2 2 2
		Triadimenol	0.08 0.4 2.0 4.0	98 88 92 89	90-104 87-89 88-96 87-91	-- -- -- --	4 2 2 2
	Barley (straw)	Triadimefon	0.04 0.4 1.0 2.0	95 96 87 88	89-99 90-102 85-89 88-88	-- -- -- --	4 2 2 2
		Triadimenol	0.08 0.8 2.0 4.0	98 91 94 94	92-104 87-95 94-94 93-95	-- -- -- --	4 2 2 2
	Barley (grain)	Triadimefon	0.04 0.4 1.0	88 93 80	84-91 92-93 77-83	-- -- --	4 2 2
		Triadimenol	0.08 0.8 2.0	92 95 87	90-93 95-95 85-89	-- -- --	4 2 2
	Rye (green matter)	Triadimefon	0.04 0.4 1.0	86 86 88	75-98 83-89 86-90	-- -- --	4 2 2
		Triadimenol	0.08 0.8 2.0	92 93 98	81-97 91-96 94-102	-- -- --	4 2 2
	Rye (straw)	Triadimefon	0.04 1.0	95 79	90-103 78-79	-- --	4 2
		Triadimenol	0.08 2.0	96 82	91-101 78-86	-- --	4 2
	Rye (grain)	Triadimefon	0.04 1.0	91 94	82-103 92-96	-- --	4 2
		Triadimenol	0.08 2.0	97 96	92-106 94-98	-- --	4 2
	Wheat (green matter)	Triadimefon	0.04 0.4 1.0	98 88 84	90-110 85-91 80-87	-- -- --	4 2 2
		Triadimenol	0.08 0.8 2.0	89 95 92	83-98 90-99 83-101	-- -- --	4 2 4
	Wheat (straw)	Triadimefon	0.04 0.4	95 101	84-104 96-105	-- --	3 2
		Triadimenol	0.08 0.8	103 107	93-109 103-112	-- --	3 2
	Wheat (grain)	Triadimefon	0.04 0.4	92 89	90-94 89-78	-- --	2 2
		Triadimenol	0.08 0.8	96 99	93-99 98-99	-- --	2 2

Reference	Matrix	Analyte	Fortification level (mg/kg)	Recovery rate (%) mean	range	RSD (%)	n
Specht, Tillkes, 1980 Method 00029	Barley (grain)	Triadimefon	0.05-3.0	--	92-98	--	--
		Triadimenol	0.05-3.0	--	94-100	--	--
	Barley (green material)	Triadimefon	0.02-3.0	--	89-101	--	--
		Triadimenol	0.02-3.0	--	92-99	--	--
	Barley (straw)	Triadimefon	0.05-3.0	--	88-94	--	--
		Triadimenol	0.05-3.0	--	94-102	--	--
	Wheat (grain)	Triadimefon	0.05-3.0	--	95-102	--	--
		Triadimenol	0.05-3.0	--	91-104	--	--
	Wheat (green material)	Triadimefon	0.02-3.0	--	88-95	--	--
		Triadimenol	0.02-3.0	--	82-98	--	--
	Wheat (straw)	Triadimefon	0.05-3.0	--	86-93	--	--
		Triadimenol	0.05-3.0	--	89-102	--	--
	Oat (grain)	Triadimefon	0.05-3.0	--	93-101	--	--
		Triadimenol	0.05-3.0	--	82-96	--	--
	Oat (green material)	Triadimefon	0.02-3.0	--	91-95	--	--
		Triadimenol	0.02-3.0	--	86-103	--	--
	Oat (straw)	Triadimefon	0.05-3.0	--	89-95	--	--
		Triadimenol	0.05-3.0	--	84-99	--	--
	Rye (grain)	Triadimenol	0.05-3.0	--	92-98	--	--
	Rye (green material)	Triadimenol	0.02-3.0	--	89-100	--	--
	Rye (straw)	Triadimenol	0.05-3.0	--	86-95	--	--
	Grapes	Triadimefon	0.02-3.0	--	92-98	--	--
		Triadimenol	0.02-3.0	--	90-96	--	--
	Grape (must)	Triadimefon	0.02-3.0	--	90-98	--	--
		Triadimenol	0.02-3.0	--	87-93	--	--
	Grape (wine)	Triadimefon	0.02-3.0	--	88-97	--	--
		Triadimenol	0.02-3.0	--	84-95	--	--
	Apple	Triadimefon	0.02-3.0	--	91-97	--	--
		Triadimenol	0.02-3.0	--	92-101	--	--
	Pineapple (peel)	Triadimefon	0.02-3.0	--	94-107	--	--
		Triadimenol	0.02-3.0	--	92-97	--	--
	Pineapple (fruit)	Triadimefon	0.02-3.0	--	96-99	--	--
		Triadimenol	0.02-3.0	--	92-101	--	
	Banana (peel)	Triadimefon	0.02-3.0	--	90-96	--	--
		Triadimenol	0.02-3.0	--	83-94	--	--
	Banana (fruit)	Triadimefon	0.02-3.0	--	89-98	--	--
		Triadimenol	0.02-3.0	--	85-96	--	
	Sugar beet (leaf)	Triadimefon	0.02-3.0	--	90-98	--	--
		Triadimenol	0.02-3.0	--	93-102	--	--

Reference	Matrix	Analyte	Fortification level (mg/kg)	Recovery rate (%) mean	Recovery rate (%) range	RSD (%)	n
	Sugar beet (edible root)	Triadimefon	0.02-3.0	--	93-97	--	--
		Triadimenol	0.02-3.0	--	89-97	--	
Brennecke, 1982 Method 00029/M003	Grapes	Triadimefon	0.02	91	91-91	--	2
		Triadimenol	0.05	98	98-99	--	2
Grupe, 1983 Method 00029/M003/E037	Barley (grain)	Triadimefon	0.05	95	95-95	--	2
		Triadimenol	0.1	86	82-90	--	2
	Barley (ear)	Triadimefon	0.05 0.5 5.0	100 101 105	94-106 100-101 96-113	-- -- --	2 2 2
		Triadimenol	0.1 1.0 10.0	94 95-103 80-95	86-10299 88	-- -- --	2 2 2
	Barley (green material)	Triadimefon	0.05 0.5 5.0	97 99 83-89	96-98 98-10086	-- -- --	2 2 2
		Triadimenol	0.1 1.0 10.0	98 82 82	97-98 82-82 82-82	-- -- --	2 2 2
	Barley (straw)	Triadimefon	0.05 0.5	95 92	92-97 89-94	-- --	2 2
		Triadimenol	0.1 1.0	96 95	94-97 94-96	-- --	2 2
	Rye (grain)	Triadimefon	0.05	95	94-96	--	2
		Triadimenol	0.1	97	91-102	--	2
	Rye (ear)	Triadimefon	0.05 0.5 5.0	96 91 91	94-98 90-92 89-92	-- -- --	2 2 2
		Triadimenol	0.1 1.0 10.0	95 103 96	90-99 101-105 95-96	-- -- --	2 2 2
	Rye (green material)	Triadimefon	0.05 0.5 5.0	80 83 93	80-80 82-84 90-95	-- -- --	2 2 2
		Triadimenol	0.1 1.0 10.0	92 82 103	89-95 80-83 102-103	-- -- --	2 2 2
	Rye (straw)	Triadimefon	0.05 0.5	95 80	90-100 79-80	-- --	2 2
		Triadimenol	0.1 1.0	81 80	76-86 79-81	-- --	2 2
	Oat (grain)	Triadimefon	0.05	98	96-99	--	2
		Triadimenol	0.1	93	92-94	--	2
	Oat (ear)	Triadimefon	0.05 0.5 5.0	106 94 96	102-110 92-95 93-100	-- -- --	2 2 3
		Triadimenol	0.1 1.0 10.0	106 88 88	101-110 83-92 86-90	-- -- --	2 2 2

Reference	Matrix	Analyte	Fortification level (mg/kg)	Recovery rate (%) mean	range	RSD (%)	n
	Oat (green material)	Triadimefon	0.05 0.5 5.0	98 100 96	94-102 99-100 93-98	-- -- --	2 2 2
		Triadimenol	0.1 1.0 10.0	99 85 80	93-104 82-88 78-82	-- -- --	2 2 2
	Oat (straw)	Triadimefon	0.05 0.5	98 85	88-108 83-87	-- --	2 2
		Triadimenol	0.1 1.0	91 89	78-104 85-92	-- --	2 2
Becker, G.; Schug, P., 1992 Method 00082	Grapes	Triadimefon	0.2	> 70	--	--	--
Obrist, J. J.; Leimkuehler, W. M.; Coffman, M. W., 1983 Method 00254	Barley (grain)	Triadimefon	0.05 0.1	-- 92	132 68-116	-- --	1 2
		Triadimenol	0.05 0.1	-- 92	88 80-103	-- --	1 2
		KWG 1342	0.05 0.1	-- 83	102 76-89	-- --	1 2
	Barley (green material)	Triadimefon	0.05 0.5 1.0	-- 76 --	66 74-77 71	-- -- --	1 2 1
		Triadimenol	0.05 0.5 1.0	-- 86 --	88 77-94 95	-- -- --	1 2 1
		KWG 1342	0.05 0.5 1.0	80 88 83	70-90 78-97 77-88	-- -- --	2 2 2
	Barley (straw)	Triadimefon	0.5	108	96-120	--	2
		Triadimenol	0.05 0.5	-- 104	76 100-108	-- --	1 2
		KWG 1342	0.05 0.5	-- 76	70 73-78	-- --	1 2
	Wheat (grain)	Triadimefon	0.05 0.5	-- 102	102 99-105	-- --	1 2
		Triadimenol	0.05 0.1	-- 99	120 88-109	-- --	1 2
		KWG 1342	0.05 0.1	-- 82	84 72-92	-- --	1 2
	Wheat (grain) [(a)]	Triadimefon	0.05 0.1	101 97	82-120 95-100	-- --	2 2
		Triadimenol	0.05 0.1	92 92	78-106 88-95	-- --	2 2
		KWG 1342	0.05 0.1	118 112	112-124 111-112	-- --	2 2
		KWG 1323	0.05 0.1	103 99	102-104 94-104	-- --	2 2
	Wheat (green material)	Triadimefon	0.05 0.5 1.0	-- 100 89	58 91-109 96-92	-- -- --	1 2 2

Reference	Matrix	Analyte	Fortification level (mg/kg)	Recovery rate (%) mean	range	RSD (%)	n
		Triadimenol	0.05 0.5 1.0	-- 92 89	80 87-97 75-103	-- -- --	1 2 2
		KWG 1342	0.05 0.5 1.0	-- 83 88	72 82-84 87-88	-- -- --	1 2 2
	Wheat (green material) [a]	Triadimefon	0.05 0.1	113 107	112-114 96-118	-- --	2 2
		Triadimenol	0.05 0.1	112 117	110-114 112-121	-- --	2 2
		KWG 1342	0.05 0.1	96 98	94-98 92-104	-- --	2 2
		KWG 1323	0.05 0.1	94 83	90-98 74-91	-- --	2 2
	Wheat (straw)	Triadimefon	0.5	--	94	--	1
		Triadimenol	0.5	--	91	--	1
		KWG 1342	0.5	85	75-94	--	2
	Wheat (straw) [a]	Triadimefon	0.5	94	91-98	--	2
		Triadimenol	0.1	108	105-130	--	2
		KWG 1342	0.1	105	95-114	--	2
		KWG 1323	0.1	75	73-77	--	2
Williams, B. B.; Conrath, B. A., 1991 Modification of method 00254	Wheat (forage)	Triadimefon	0.5 [a] 1.0	96 103	90-100 96-112	5.4 5.3	3 8
		Triadimenol	0.5 [a] 1.0	104 110	99-112 91-130	6.5 16.5	3 4
		KWG 1342	0.5 [a]	84	70-99	17.2	3
		KWG 1323	0.5 [a]	93	77-107	16.2	3
	Wheat (grain)	Triadimefon	0.5 [a] 1.0	97 103	92-105 97-111	7.5 5.4	3 8
		Triadimenol	0.5 [a] 1.0	102 104	87-124 98-110	19.3 4.7	3 4
		KWG 1342	0.5 [a]	69	61-75	10.5	3
		KWG 1323	0.5 [a]	91	71-109	21	3
	Grapes	Triadimefon	0.5 [a] 1.0	93 94	87-99 88-101	6.5 4.4	3 8
		Triadimenol	0.5 1.0	101 106	97-108 90-128	6.0 15.2	3 4
		KWG 1342	0.5 [a]	79	73-82	6.3	3
		KWG 1323	0.5	84	69-110	27	3

(a) Fortification with a mixture of 0.5 mg/kg triadimefon, triadimenol, KWG 1342 and KWG 1323, each.

Reference	Matrix	Analyte	Fortification level (mg/kg)	Recovery rate (%) mean	Recovery rate (%) range	RSD (%)	n
Williams, B.B., 1991 Method 00254/E007 Mobay No. 100122	Grape (bunch of grapes)	Triadimefon	0.01	110	100-120	--	2
			0.02	--	135	--	1
			0.05	--	100	--	1
		Triadimenol	0.01	110	110-110	--	2
			0.02	--	155	--	1
			0.05	--	110	--	1
		KWG 1342	0.01	100	70-130	--	2
			0.02	--	80	--	1
			0.05	--	98	--	1
		KWG 1323	0.01	100	80-120	--	2
			0.02	--	90	--	1
			0.05	--	126	--	1
Williams, B. B., 1991a Method No. 00254/E005	Grapes		0.01	87	60-110	29	3
			0.02	108	105-110	--	2
			0.05	--	102	--	1
Pither, K.M., 1991 Modification of method 00254	Pineapple (whole fruit)	Triadimefon	0.1	--	84	--	1
			20.0	--	84	--	1
		Triadimenol	0.1	--	99	--	1
		KWG 1342	0.1	--	80	--	1
		KWG 1323	0.1	--	84	--	1
	Pineapple (pulp)	Triadimefon	0.01	95	90-100	--	2
			0.02	--	95	--	1
			0.05	--	90	--	1
			0.1	--	85	--	1
		Triadimenol	0.01	100	100-100	--	2
			0.02	--	105	--	1
			0.05	--	104	--	1
			0.1	--	97	--	1
		KWG 1342	0.01	75	70-80	--	2
			0.02	--	70	--	1
			0.05	--	64	--	1
			0.1	--	113	--	1
		KWG 1323	0.01	70	70-70	--	2
			0.02	--	75	--	1
			0.05	--	72	--	1
			0.1	--	131	--	1
	Pineapple (peel)	Triadimefon	0.01	85	80-90	--	2
			0.02	--	85	--	1
			0.05	--	88	--	1
		Triadimenol	0.01	85	80-90	--	2
			0.02	--	95	--	1
			0.05	--	98	--	1
		KWG 1342	0.01	110	100-120	--	2
			0.02	--	135	--	1
			0.05	--	126	--	1
		KWG 1323	0.01	125	90-140	--	2
			0.02	--	110	--	1
			0.05	--	114	--	1

Reference	Matrix	Analyte	Fortification level (mg/kg)	Recovery rate (%) mean	range	RSD (%)	n
	Pineapple (bran)	Triadimefon	6.0 24.0	-- --	82 75	-- --	1 1
		Triadimenol	0.14 0.54	-- --	79 96	-- --	1 1
		KWG 1342	0.01 0.02	-- --	80 40	-- --	1 1
		KWG 1323	0.01 0.02	-- --	120 80	-- --	1 1
	Pineapple (waste pulp)	Triadimefon	6.0 24.0	-- --	82 74	-- --	1 1
		Triadimenol	0.14 0.54	-- --	119 104	-- --	1 1
		KWG 1342	0.01 0.02	-- --	70 80	-- --	1 1
		KWG 1323	0.01 0.02	-- --	70 90	-- --	1 1
	Pineapple (juice)	Triadimefon	6.0 24.0	-- --	96 121	-- --	1 1
		Triadimenol	0.14 0.54	-- --	111 114	-- --	1 1
		KWG 1342	0.01 0.02	-- --	60 115	-- --	1 1
		KWG 1323	0.01 0.02	-- --	70 90	-- --	1 1
	Pineapple (syrup)	Triadimefon	6.0 24.0	-- --	110 88	-- --	1 1
		Triadimenol	0.14 0.54	-- --	110 97	-- --	1 1
		KWG 1342	0.01 0.02	-- --	80 80	-- --	1 1
		KWG 1323	0.01 0.02	-- --	70 80	-- --	1 1
Pither, K. M.,1988 Method No. 00254/E002	Banana (pulp)		0.01 0.02 0.05 0.1	91 104 95 83	77-104 85-125 94-100 72-91	13 20 5.4 9.8	3 3 3 3
	Banana (peel)		0.01 0.02 0.05 0.1	111 89 77 93	108-113 76-102 66-85 74-119	2.6 12 10 23	3 3 3 3
Burger, R. N., 1992	Grape (RAC)	Triadimefon	0.05 0.1	-- --	96 109	-- --	1 1
		Triadimenol	0.05 0.1	-- --	100 110	-- --	1 1
		KWG 1342	0.05 0.1	-- --	70 79	-- --	1 1
		KWG 1323	0.05 0.1	-- --	100 88	-- --	1 1

Reference	Matrix	Analyte	Fortification level (mg/kg)	Recovery rate (%) mean	range	RSD (%)	n
	Grape (sun-dried raisin)	Triadimefon	0.05 0.1	-- --	106 103	-- --	1 1
		Triadimenol	0.05 0.1	-- --	140 120	-- --	1 1
		KWG 1342	0.05 0.1	-- --	86 87	-- --	1 1
		KWG 1323	0.05 0.1	-- --	124 114	-- --	1 1
	Grape (dry pomace)	Triadimefon	0.05 0.1	-- --	92 79	-- --	1 1
		Triadimenol	0.05 0.1	-- --	96 90	-- --	1 1
		KWG 1342	0.05 0.1	-- --	74 65	-- --	1 1
		KWG 1323	0.05 0.1	-- --	104 96	-- --	1 1
	Grape (sun-dried raisin waste)	Triadimefon	0.05 0.1	-- --	76 84	-- --	1 1
		Triadimenol	0.05 0.1	-- --	78 96	-- --	1 1
		KWG 1342	0.05 0.1	-- --	72 65	-- --	1 1
		KWG 1323	0.05 0.1	-- --	84 81	-- --	1 1
	Grape (juice)	Triadimefon	0.05 0.1	-- --	114 97	-- --	1 1
		Triadimenol	0.05 0.1	-- --	128 109	-- --	1 1
		KWG 1342	0.05 0.1	-- --	112 95	-- --	1 1
		KWG 1323	0.05 0.1	-- --	98 120	-- --	1 1
Williams, B.B., 1992; Williams, B. B., Chickering, C. D., 1993; and Lenz, C.A., 1996 Modification of method 00254	Wheat (bran)	Triadimefon	0.3 [(a)] 1.0	-- 75	47 73-76	-- --	1 2
		Triadimenol	0.3 [(a)] 1.0	-- 62	70 61-63	-- --	1 2
		KWG 1342	0.3 [(a)] 1.0	-- 105	90 100-109	-- --	1 2
		KWG 1323	0.3 1.0	-- 89	145 87-91	-- --	1 2
	Wheat (wheat flour)	Triadimefon	0.3 1.0	-- 76	70 73-78	-- --	1 2
		Triadimenol	0.3 1.0	-- 89	80 87-91	-- --	1 2
		KWG 1342	0.3 1.0	-- 96	83 92-100	-- --	1 2
		KWG 1323	0.3 1.0	-- 92	87 92-92	-- --	1 2

Reference	Matrix	Analyte	Fortification level (mg/kg)	Recovery rate (%) mean	range	RSD (%)	n
	Wheat (grain dust)	Triadimefon	0.3	--	101	--	1
			1.0	75	74-76	--	2
		Triadimenol	0.3	--	80	--	1
			1.0	76	76-76	--	2
		KWG 1342	0.3	--	76	--	1
			1.0	96	93-98	--	2
		KWG 1323	0.3	--	54	--	1
			1.0	77	74-80	--	2
	Wheat (straw)	Triadimefon	0.3	--	95	--	1
			1.0	82	81-83	--	2
		Triadimenol	0.3	--	102	--	1
			1.0	85	83-86	--	2
		KWG 1342	0.3	--	86	--	1
			1.0	70	61-78	--	2
		KWG 1323	0.3	--	71	--	1
			1.0	77	76-77	--	2
	Grape (raisin)	Triadimefon	0.3	--	86	--	1
			1.0	83	81-85	--	2
		Triadimenol	0.3	--	86	--	1
			1.0	87	86-87	--	2
		KWG 1342	0.3	--	97	--	1
			1.0	93	80-105	--	2
		KWG 1323	0.3	--	89	--	1
			1.0	85	77-93	--	2
	Grape (dry pomace)	Triadimefon	0.3	--	91	--	1
			1.0	86	83-89	--	2
		Triadimenol	0.3	--	96	--	1
			1.0	89	85-92	--	2
		KWG 1342	0.3	--	80	--	1
			1.0	75	75-75	--	2
		KWG 1323	0.3	--	85	--	1
			1.0	78	75-80	--	2
	Grape (wet pomace)	Triadimefon	0.3	--	90	--	1
			1.0	93	90-95	--	2
		Triadimenol	0.3	--	94	--	1
			1.0	100	99-100	--	2
		KWG 1342	0.3	--	96	--	1
			1.0	94	86-101	--	2
		KWG 1323	0.3	--	109	--	1
			1.0	112	107-117	--	2
	Grape (juice)	Triadimefon	0.3	--	96	--	1
			1.0	101	100-101	--	2
		Triadimenol	0.3	--	101	--	1
			1.0	105	104-106	--	2
		KWG 1342	0.3	--	95	--	1
			1.0	97	97-97	--	2
		KWG 1323	0.3	--	81	--	1
			1.0	85	82-87	--	2

Reference	Matrix	Analyte	Fortification level (mg/kg)	Recovery rate (%) mean	range	RSD (%)	n
	Pineapple (peeled fruit)	Triadimefon	0.3 1.0	-- 99	103 98-99	-- --	1 2
		Triadimenol	0.3 1.0	-- 103	105 102-103	-- --	1 2
		KWG 1342	0.3 1.0	-- 102	110 100-103	-- --	1 2
		KWG 1323	0.3 1.0	-- 98	107 97-98	-- --	1 2
	Apple (fruit)	Triadimenol	0.3 1.0	-- 86	94 85-86	-- --	1 2
	Asparagus	Triadimenol	0.3 1.0	-- 100	102 100-100	-- --	1 2
	Coffee (bean) [(b)]	Triadimenol	0.3 1.0	-- 78	85 77-78	-- --	1 2
	Coffee (bean) [(c)]	Triadimenol	0.3 1.0	78 78	78-78 71-85	-- --	2 2
	Cucumber (fruit)	Triadimenol	0.3 1.0	-- 98	94 95-100	-- --	1 2
	Sugar beet (top)	Triadimenol	0.3 1.0	-- 102	105 102-102	-- --	1 2
	Sugar beet (root)	Triadimenol	0.3 1.0	-- 99	97 95-102	-- --	1 2
	Sugar beet (molasses)	Triadimenol	0.3 1.0	-- 98	109 97-98	-- --	1 2
Burger, R. N., Williams, B. B., 1996 Modification of method 00254	Pineapple (pulp)	Triadimefon	0.01 0.02 0.05	95 -- --	90-100 95 90	-- -- --	2 1 1
		Triadimenol	0.01 0.02 0.05	100 -- --	100-100 105 104	-- -- --	2 1 1
		KWG 1342	0.01 0.02 0.05	75 -- --	70-80 70 64	-- -- --	2 1 1
		KWG 1323	0.01 0.02 0.05	70 -- --	70-70 75 72	-- -- --	2 1 1
	Pineapple (peel)	Triadimefon	0.01 0.02 0.05	85 -- --	80-90 85 88	-- -- --	2 1 1
		Triadimenol	0.01 0.02 0.05	85 -- --	80-900 95 98	-- -- --	2 1 1
		KWG 1342	0.01 0.02 0.05	110 -- --	100-120 135 126	-- -- --	2 1 1
		KWG 1323	0.01 0.02 0.05	115 -- --	90-140 110 114	-- -- --	2 1 1

Reference	Matrix	Analyte	Fortification level (mg/kg)	Recovery rate (%) mean	range	RSD (%)	n
Burger, R. N., 1994 Modification of method 00254	Grape (RAC)	Triadimefon	0.05 0.10	-- --	96 109	-- --	1 1
		Triadimenol	0.05 0.10	-- --	100 110	-- --	1 1
		KWG 1342	0.05 0.10	-- --	70 79	-- --	1 1
		KWG 1323	0.05 0.10	-- --	100 88	-- --	1 1
	Grape (sun-dried raisin)	Triadimefon	0.05 0.10	-- --	106 103	-- --	1 1
		Triadimenol	0.05 0.10	-- --	140 120	-- --	1 1
		KWG 1342	0.05 0.10	--86 --87		-- --	1 1
		KWG 1323	0.05 0.10	-- --	124 114	-- --	1 1
	Grape (sun-dried raisin waste)	Triadimefon	0.05 0.10	-- --	76 114	-- --	1 1
		Triadimenol	0.05 0.10	-- --	78 96	-- --	1 1
		KWG 1342	0.05 0.10	-- --	72 65	-- --	1 1
		KWG 1323	0.05 0.10	-- --	84 81	-- --	1 1
	Grape (dry pomace)	Triadimefon	0.05 0.10	-- --	92 79	-- --	1 1
		Triadimenol	0.05 0.10	-- --	96 90	-- --	1 1
		KWG 1342	0.05 0.10	-- --	74 65	-- --	1 1
		KWG 1323	0.05 0.10	-- --	104 96	-- --	1 1
	Grape (juice)	Triadimefon	0.05 0.10	-- --	114 97	-- --	1 1
		Triadimenol	0.05 0.10	-- --	128 109	-- --	1 1
		KWG 1342	0.05 0.10	-- --	112 95	-- --	1 1
		KWG 1323	0.05 0.10		98 120	-- --	1 1
Specht, W., 1976 Method F 60	Spring barley (grain)	Triadimefon	0.05-2.0	--	93-97	--	--
		Triadimenol	0.05-2.0	--	91-94	--	--
	Spring barley (green material)	Triadimefon	0.02-2.0	--	98-100	--	--
		Triadimenol	0.02-2.0	--	95-98	--	--
	Spring barley (straw)	Triadimefon	0.05-2.0	--	94-98	--	--
		Triadimenol	0.05-2.0	--	90-94	--	--

Reference	Matrix	Analyte	Fortification level (mg/kg)	Recovery rate (%) mean	range	RSD (%)	n
	Spring wheat (grain)	Triadimefon	0.05-2.0	--	94-95	--	--
		Triadimenol	0.05-2.0	--	95-98	--	--
	Spring wheat (green material)	Triadimefon	0.02-2.0	--	93-97	--	--
		Triadimenol	0.02-2.0	--	89-94	--	--
	Spring wheat (straw)	Triadimefon	0.05-2.0	--	87-88	--	--
		Triadimenol	0.05-2.0	--	80-84	--	--
	Winter wheat (grain)	Triadimefon	0.05-2.0	--	93-96	--	--
		Triadimenol	0.05-2.0	--	94-99	--	--
	Winter wheat (green material)	Triadimefon	0.02-2.0	--	95-100	--	--
		Triadimenol	0.02-2.0	--	91-93	--	--
	Winter wheat (straw)	Triadimefon	0.05-2.0	--	97-101	--	--
		Triadimenol	0.05-2.0	--	95-99	--	--
	Oat (grain)	Triadimefon	0.05-2.0	--	92-96	--	--
		Triadimenol	0.05-2.0	--	90-94	--	--
	Oat (green material)	Triadimefon	0.02-2.0	--	87-92	--	--
		Triadimenol	0.02-2.0	--	88-92	--	--
	Oat (straw)	Triadimefon	0.05-2.0	--	87-89	--	--
		Triadimenol	0.05-2.0	--	85-90	--	--
Thornton, J. S., 1977 Method F 107	Apple (whole)	Triadimefon	0.05 0.1	-- --	99 94	-- --	1 1
	Apple (peel)	Triadimefon	0.05 0.1	-- 78	78 72, 83	-- --	1 2
	Apple (pulp)	Triadimefon	0.05 0.1	87 86	86, 88 80-90	-- --	2 3
	Apple (juice)	Triadimefon	0.05 0.1	94 99	94, 94 96, 102	-- --	2 2
	Wet pomace	Triadimefon	0.05 0.1	-- --	72 77	-- --	1 1
	Dry pomace	Triadimefon	0.05 0.1	76 81	74, 78 79, 82	-- --	2 2
Anon, 1977 Meth. in Report JAP-528-77	Tomato	Triadimefon	0.2	--	95	--	1
		Triadimenol	0.1	--	98	--	1
Anon, 1977a Meth. in Report JAP-574-77	Tomato	Triadimefon	0.1 0.2	-- --	95 98	-- --	1 1
		Triadimenol	0.2 0.4	-- --	85 98	-- --	1 1
Moellhoff, E.,1995 Method No. 00002/E004	Artichoke	Triadimenol	0.1	--	80	--	1
Ohs, P., 1988 Method No. 00002/M006	Coffee	Triadimenol	0.05	--	76	--	1
		Triadimenol	0.5	--	78	--	1

Reference	Matrix	Analyte	Fortification level (mg/kg)	Recovery rate (%) mean	range	RSD (%)	n
Maasfeld, W.,1987 Method No. 00007/E006	Oats (green material)	Triadimenol	0.5 5.0	-- --	100 98	-- --	1 1
	Oats (straw)	Triadimenol	0.5	--	102	--	1
	Rye (green material)	Triadimenol	0.05 5.0	-- --	107 98	-- --	1 1
	Rye (straw)	Triadimenol	0.5	--	106	--	1
Maasfeld, W.,1987a Method No. 00007/E007	Oats (straw)	Triadimenol	2.0	--	96	--	1
Maasfeld, W.,1987b Method No. 00007/E008	Oats (grain)	Triadimenol	0.05	--	104	--	1
	Rye (grain)	Triadimenol	0.05	--	100	--	1
Maasfeld, W., 1987c Method No. 00007/E009	Wheat (grain)	Triadimenol	0.05	96	91-100	--	2
	Wheat (straw)	Triadimenol	0.5 2.0	84 --	83-84 90	-- --	2 1
Ohs, P.,1987 Method No. 00007/E010	Barley (green material)	Triadimenol	0.05 0.5 5.0	-- -- --	106 90 76	-- -- --	1 1 1
	Barley (grain)	Triadimenol	0.5 2.0	-- --	95 95	-- --	1 1
	Barley (straw)	Triadimenol	0.05 0.5 2.0	-- -- --	123 87 74	-- -- --	1 1 1
Ohs, P.,1987a Method No. 00007/E011	Wheat (green material)	Triadimenol	0.05 0.5	-- --	99 97	-- --	1 1
	Wheat (grain)	Triadimenol	0.5	--	99	--	1
	Wheat (straw)	Triadimenol	0.05 0.5	-- --	102 117	-- --	1 1
Weber, E.,1989 Method No. 00007/M007/E005	Barley, spring (green material)	Triadimenol	0.05	--	88	--	1
	Barley, spring (straw)	Triadimenol	0.05	--	98	--	1
	Barley, spring (ear)	Triadimenol	0.05	--	111	--	1
Ohs, P., (1989) Method No. 00021/M001	Banana (fruit)	Triadimenol	0.01 0.05	-- --	99 82	-- --	1 1
	Banana (peel)	Triadimenol	0.01 0.05	-- --	101 98	-- --	1 1
Ohs, P.,1989a Method No. 00021/M001/E004	Grape	Triadimenol	0.02 1.0	-- --	122 81	-- --	1 1
Specht, Tillkes, 1980 Method 00029	Barley (grain)	Triadimenol	0.05-3.0	--	94-100	--	--
	Barley (green material)	Triadimenol	0.02-3.0	--	92-99	--	--
	Barley (straw)	Triadimenol	0.05-3.0	--	94-102	--	--
	Wheat (grain)	Triadimenol	0.05-3.0	--	91-104	--	--
	Wheat (green material)	Triadimenol	0.02-3.0	--	82-98	--	--
	Wheat (straw)	Triadimenol	0.05-3.0	--	89-102	--	--

Reference	Matrix	Analyte	Fortification level (mg/kg)	Recovery rate (%) mean	range	RSD (%)	n
	Oat (grain)	Triadimenol	0.05-3.0	--	82-96	--	--
	Oat (green material)	Triadimenol	0.02-3.0	--	86-103	--	--
	Oat (straw)	Triadimenol	0.05-3.0	--	84-99	--	--
	Rye (grain)	Triadimenol	0.05-3.0	--	92-98	--	--
	Rye (green material)	Triadimenol	0.02-3.0	--	89-100	--	--
	Rye (straw)	Triadimenol	0.05-3.0	--	86-95	--	--
	Grapes	Triadimenol	0.02-3.0	--	90-96	--	--
	Grape (must)	Triadimenol	0.02-3.0	--	87-93	--	--
	Grape (wine)	Triadimenol	0.02-3.0	--	84-95	--	--
Specht W., 1985 Method No. 00029/E026	Zucchini	Triadimenol	0.06	--	99	--	1
	Red currant	Triadimenol	0.06 0.6	-- --	109 89	-- --	1 1
Specht, W., 1988 Method No. 00029/E040	Banana (fruit)	Triadimenol	0.02	--	113	--	1
	Banana (peel)	Triadimenol	0.02	--	115	--	1
Specht, W. ,1986 Method No. 00029/E041	Apple (juice)	Triadimenol	0.05 0.5	-- --	97 93	-- --	1 1
	Apple (puree)	Triadimenol	0.05 0.5	-- --	96 98	-- --	1 1
Specht, 1988a Method 00029/E042	Wheat (grain)	Triadimenol	0.0609 0.612	-- --	82 87	-- --	1 1
	Wheat (green material)	Triadimenol	0.0609 0.612	-- --	90 100	-- --	1 1
	Wheat (straw)	Triadimenol	0.0634 0.634	-- --	103 91	-- --	1 1
Brennecke, R., 1983 Method No. 00029/M003/E038	Wheat (grain)	Triadimenol	0.1	89	88-90	--	2
	Wheat (straw)	Triadimenol	0.1 1.0	115 88	112-118 86-90	-- --	2 2
Brennecke, 1983a Method 00029/M003/E039	Rape (green material)	Triadimenol	0.1	86	82-93	--	2
	Turnip (plant)	Triadimenol	0.1	85	81-88	--	2
	Turnip (leaf)	Triadimenol	0.1	94	94-94	--	2
	Turnip (body)	Triadimenol	0.1	93	83-102	--	2
Brennecke, 1981 Method 00029/M009	Wheat (grain)	Triadimenol	0.08 0.48	111 99	105-117 99-100	-- --	2 2
	Wheat (green material)	Triadimenol	0.08	100	95-105	--	2
	Wheat (ear)	Triadimenol	0.08	94	92-95	--	2
	Wheat (straw)	Triadimenol	0.08 0.48	103 91	102-104 88-93	-- --	2 2

Reference	Matrix	Analyte	Fortification level (mg/kg)	Recovery rate (%) mean	range	RSD (%)	n
Brennecke, 1983b Method 00029/M019	Barley (grain)	Triadimenol	0.08 0.8	91 95	90-92 95-95	-- --	2 2
	Barley (green material)	Triadimenol	0.08 0.4 4.0	99 88 89	98-100 87-89 87-91	-- -- --	2 2 2
	Barley (straw)	Triadimenol	0.08 0.8 4.0	104 91 94	103-104 87-95 93-95	-- -- --	2 2 2
	Wheat (grain)	Triadimenol	0.08	96	93-99	--	2
	Wheat (green material)	Triadimenol	0.08	95	92-98	--	2
	Wheat (straw)	Triadimenol	0.08	100	93-106	--	2
	Rye (grain)	Triadimenol	0.08	95	95-95	--	2
	Rye (green material)	Triadimenol	0.08	95	94-97	--	2
	Rye (straw)	Triadimenol	0.08	94	91-97	--	2
Brennecke, 1983c Method 00029/M020	Grapes	Triadimenol	0.05 1.0	108 96	107-110 92-100	-- --	2 2
	Grape (must)	Triadimenol	0.05	86	85-86	--	2
	Grape (wine)	Triadimenol	0.05 1.0	96 98	92-103 87-103	6.1 9.2	3 3
Shields, R.,1987 Method No. 00029/M023	Wheat (grain)	Triadimenol	0.1	--	101	--	1
	Wheat (straw)	Triadimenol	0.1	--	102	--	1
	Wheat (foliage)	Triadimenol	0.1	--	85	--	1
	Barley (grain)	Triadimenol	0.1	--	82	--	1
	Barley (straw)	Triadimenol	0.1	--	61	--	1
	Barley (foliage)	Triadimenol	0.1	--	106	--	1
Specht, W.,1990e Method No. 00086/E025	Coffee (bean)	Triadimenol	0.05	80	74-86	--	2
		Triadimenol					
Allmendinger, H., 1990 Method No.. 00134	Wheat (forage)	Triadimenol	0.05 0.5 5.0	96 97 96	90-102 95-99 95-96	-- -- --	2 2 2
	Wheat (grain)	Triadimenol	0.05 0.5	91 92	89-93 91-93	-- --	2 2
	Wheat (straw)	Triadimenol	0.05 0.5 5.0	94 104 100	93-95 102-106 97-103	-- -- --	2 2 2
	Barley (forage)	Triadimenol	0.05 0.5 5.0	97 91 98	90-103 90-91 97-98	-- -- --	2 2 2
	Barley (grain)	Triadimenol	0.05 0.5	81 84	80-81 78-89	-- --	2 2
	Barley (straw)	Triadimenol	0.05 0.5 5.0	101 96 101	97-104 93-99 99-102	-- -- --	2 2 2

Reference	Matrix	Analyte	Fortification level (mg/kg)	Recovery rate (%) mean	range	RSD (%)	n
Allmendinger, 1991 Method 00181	Barley (grain)	Triadimenol	0.05 0.5	86 86	85-87 84-87	-- --	2 2
	Barley (green material)	Triadimenol	0.05 0.5 5.0	77 83 92	76-77 82-84 91-93	-- -- --	2 2 2
	Barley (straw)	Triadimenol	0.05 0.5	87 85	84-89 83-86	-- --	2 2
	Wheat (grain)	Triadimenol	0.05 0.5	97 101	93-101 99-102	-- --	2 2
	Wheat (green material)	Triadimenol	0.05 0.5 5.0	96 97 97	94-98 95-98 97-97	-- -- --	2 2 2
	Wheat (straw)	Triadimenol	0.05 0.5	112 97	109-114 96-97	-- --	2 2
	Oat (grain)	Triadimenol	0.05 0.5	83 85	81-85 84-86	-- --	2 2
	Oat (green material)	Triadimenol	0.05 0.5 5.0	89 84 84	87-91 81-97 84-84	-- -- --	2 2 2
	Oat (straw)	Triadimenol	0.05 0.5	100 99	95-105 98-99	-- --	2 2
	Rye (grain)	Triadimenol	0.05 0.5	102 93	100-104 90-95	-- --	2 2
	Rye (green material)	Triadimenol	0.05 0.5 5.0	92 90 95	90-93 87-92 93-96	-- -- --	2 2 2
	Rye (straw)	Triadimenol	0.05 0.5	96 89	91-100 85-92	-- --	2 2
Brennecke, R., 1991 Method No. 00181/E004	Grape (fruit)	Triadimenol	0.02	101	99-103	--	2
	Grape (raisin)	Triadimenol	0.05	89	83-96	--	2
Brennecke, R.,1992 Method No. 00181/E008	Wheat, winter (green material)	Triadimenol	0.05	88	86-90	--	2
	Wheat, winter (ear)	Triadimenol	0.05	92	90-94	--	2
	Wheat, winter (grain)	Triadimenol	0.05	104	101-106	--	2
	Wheat, winter (straw)	Triadimenol	0.05	120	117-122	--	2
Bachmann, J.,1994 Method No. 00181/E018	Pepper (fruit)	Triadimenol	0.05 0.5 5.0	104 91 95	91-104 90-92 93-96	12 1.1 1.8	3 3 3
Bachmann, J., 1994a Method No. 00181/E020	Tomato (fruit)	Triadimenol	0.05	94	84-103	10	4
Bachmann, 1994b Method 00181/E021	Grape (fruit)	Triadimenol	0.02 0.2 2.0	94 92 89	92-96 90-93 87-90	-- -- --	2 2 2
	Grape (must)	Triadimenol	0.02 0.2	93 91	92-94 91-91	-- --	2 2

Reference	Matrix	Analyte	Fortification level (mg/kg)	Recovery rate (%) mean	range	RSD (%)	n
	Grape (wine)	Triadimenol	0.02 0.2	91 93	90-91 93-93	-- --	2 2
Nüsslein, F., 1996 Method No. 00181/E022	Cucumber	Triadimenol	0.05 0.5 5.0	109 104 95	108-109 101-106 93-97	-- -- --	2 2 2
	Grape (raisin)	Triadimenol	0.05 0.5 5.0	94 95 95	90-98 92-97 92-97	-- -- --	2 2 2
Allmendinger, H., 1990 Method 00181/M001	Rape (seed)	Triadimenol	0.05 0.5	99 102	98-99 101-102	-- --	2 2
	Rape (pod)	Triadimenol	0.05 0.5	94 95	93-95 94-96	-- --	2 2
	Barley (grain)	Triadimenol	0.05	73	66-78	6.0	6
	Barley (green material)	Triadimenol	0.05 0.5	87 75	83-90 72-77	-- --	2 2
	Barley (straw)	Triadimenol	0.05 0.5	92 82	85-99 79-85	-- 3.6	2 4
	Wheat (grain)	Triadimenol	0.05 0.5	91	87-98 90	4.4 --	5 1
	Wheat (green material)	Triadimenol	0.05 0.5	90 89	89-90 84-93	-- --	2 2
	Wheat (straw)	Triadimenol	0.05 0.5	106 88	101-110 82-93	-- 6.1	2 4
Bachmann, J., 1994c Method No. 00181/M001/E019	Artichoke (head)	Triadimenol	0.05	108	105-113	3.7	5
Brennecke, R., 1991a Method No. 00181/M003	Artichoke (head)	Triadimenol	0.05	88	84-92	--	2
Anon., 1982 Method No. 00254/M019	Oats (grain)	Triadimenol	0.05	--	84	--	1
	Oats (straw)	Triadimenol	0.1	--	75	--	1
Anon., 1982a Method No. 00254/M020	Rye (grain)	Triadimenol	0.05	78	72-84	--	2
	Rye (straw)	Triadimenol	0.1	80	70-89	--	2
Anon., 1982b Method No. 00254/M021	Rye (forage)	Triadimenol	0.05 0.5	-- 79	72 70-87	-- --	1 2
Anon., 1982c Method No. 00254/M022	Rye (grain)	Triadimenol	0.05	84	80-88	--	2
	Rye (straw)	Triadimenol	0.1	82	68-96	--	2
Anon., 1982d Method No. 00254/M023	Barley (forage)	Triadimenol	0.05 0.1 0.5	-- -- --	100 76 106	-- -- --	1 1 1
Anon., 1982e Method No. 00254/M024	Wheat (grain)	Triadimenol	0.05	81	70-92	--	2
	Wheat (straw)	Triadimenol	0.1	91	80-102	--	2

Reference	Matrix	Analyte	Fortification level (mg/kg)	Recovery rate (%) mean	range	RSD (%)	n
Anon., 1982f Method No. 00254/M025	Wheat (forage)	Triadimenol	0.05 0.1 0.5	-- -- --	90 97 87	-- -- --	1 1 1
Anon., 1983 Method No. 00254/M028	Grapes	Triadimenol	0.05	118	114-122	--	2
Anon., 1984h Method No. 00254/M037	Wheat (forage)	Triadimenol	0.05	--	98	--	1
	Wheat (grain)	Triadimenol	0.05	75	68-82	--	2
	Wheat (straw)	Triadimenol	0.05	94	88-100	5.9	4
Anon, 1984i Method 00254/M055	Grape (whole fruit)	Triadimenol	0.05 [(a)]	85	82-88	3.6	3
	Grape (juice)	Triadimenol	0.05 [(a)]	--	106	--	1
	Grape (wine)	Triadimenol	0.05 [(a)]	--	108	--	1
	Grape (raisins, oven-dried)	Triadimenol	0.05 [(a)]	--	90	--	1
	Grape (raisins, sun-dried)	Triadimenol	0.05 [(a)]	--	66	--	1
	Grape (pomace, wet)	Triadimenol	0.05 [(a)]	--	96	--	1
	Grape (pomace, dry)	Triadimenol	0.05 [(a)]	--	80	--	1
	Grape (raisin waste, oven-dried)	Triadimenol	0.05 [(a)]	--	82	--	1
	Grape (raisin waste, sun-dried)	Triadimenol	0.05 [(a)]	--	76	--	1
	Grape (syrup, oven-dried)	Triadimenol	0.05 [(a)]	--	80	--	1
	[a] metabolite KWG 1342						
Anon, 1984j Method 00254/M059	Grape (whole fruit)	Triadimenol	0.05 [(a)]	86	78-100	14.1	3
	Grape (juice)	Triadimenol	0.05 [(a)]	--	76	--	1
	Grape (wine)	Triadimenol	0.05 [(a)]	--	102	--	1
	Grape (raisins, oven-dried)	Triadimenol	0.05 [(a)]	--	78	--	1
	Grape (raisins, sun-dried)	Triadimenol	0.05 [(a)]	--	86	--	1
	Grape (pomace, wet)	Triadimenol	0.05 [(a)]	--	82	--	1
	Grape (pomace, dry)	Triadimenol	0.05 [(a)]	--	128	--	1
	[a] Triadimenol parent compound						
Allmendinger, H., 1997 Method 00462	Barley (grain)	Triadimenol	0.05 0.5 5.0	87 94 83	84-94 93-95 82-85	5.6 1.1 1.8	3 3 3
	Grape (berry)	Triadimenol	0.05 0.5 5.0	94 98 96	90-97 98-99 95-97	4 0.6 1	3 3 3
	Grape (must)	Triadimenol	0.05 0.5	99 97	92-107 96-99	7.6 1.6	3 3

Reference	Matrix	Analyte	Fortification level (mg/kg)	Recovery rate (%) mean	range	RSD (%)	n
	Grape (wine)	Triadimenol	0.05 0.5	97 91	96-99 83-102	1.6 10.8	3 3
	Apple (fruit)	Triadimenol	0.05 0.5 5.0	89 94 91	89-89 93-95 88-93	0 1.2 2.9	3 3 3
	Cucumber	Triadimenol	0.05 0.5	92 95	90-93 93-98	1.7 2.6	3 3
	Melon (peel)	Triadimenol	0.05 0.5	88 94	87-88 91-96	0.7 2.8	3 3
	Melon (pulp)	Triadimenol	0.05 0.5	102 97	97-110 96-99	7.1 1.6	3 3
Allmendinger, H., 1998 Method 00462/M002	Barley (grain)	Triadimenol	0.05 0.5	96 94	93-98 93-94	-- --	2 2
	Barley (green material)	Triadimenol	0.05 0.5 5.0	114 94 94	114-114 93-95 92-95	-- -- --	2 2 2
	Barley (straw)	Triadimenol	0.05 0.5 5.0	85 90 87	83-86 89-90 84-89	-- -- --	2 2 2
	Wheat (grain)	Triadimenol	0.05 0.5	112 94	109-115 88-99	-- --	2 2
	Wheat (green material)	Triadimenol	0.05 0.5 5.0	114 97 96	112-115 95-98 95-96	-- -- --	2 2 2
	Wheat (straw)	Triadimenol	0.05 0.5 5.0	94 86 82	87-100 83-89 80-84	-- -- --	2 2 2
	Oat (grain)	Triadimenol	0.05 0.5	100 89	99-100 86-91	-- --	2 2
	Oat (green material)	Triadimenol	0.05 0.5 5.0	104 95 93	103-105 94-95 93-93	-- -- --	2 2 2
	Oat (straw)	Triadimenol	0.05 0.5 5.0	91 79 85	89-92 73-84 84-85	-- -- --	2 2 2
Allmendinger, H.; Heinemann, O.,1998 Method No. 00462/M002/E002	Cucumber	Triadimenol	0.05 0.5 5.0	99 100 98	97-101 95-106 96-100	-- 4.3 --	2 6 2
	Melon (peel)	Triadimenol	0.05 0.5 5.0	106 100 98	102-110 98-100 96-100	-- 1.0 --	2 4 2
	Melon (pulp)	Triadimenol	0.05 0.5	97 102	91-101 101-102	4.3 --	3 2
	Melon (fruit)	Triadimenol	0.05	--	99	--	1
	Pepper	Triadimenol	0.05 0.5 5.0	101 100 100	98-106 97-102 99-101	3.1 -- --	4 2 2
	Tomato	Triadimenol	0.05 0.5 5.0	89 85 91	68-106 72-95 89-92	17 11 --	6 6 2

Reference	Matrix	Analyte	Fortification level (mg/kg)	Recovery rate (%) mean	range	RSD (%)	n
Nuesslein, F.,2001 Method No. 00462/M005	Strawberry	Triadimenol	0.05 0.5	88 99	84-93 95-103	3.8 2.9	5 5
Nuesslein, F.,2002 Method No. 00462/M005/E009	Cucumber	Triadimenol	0.05 0.5	109 105	101-120 103-107	6.9 1.4	5 5
	Melon (fruit)	Triadimenol	0.05 0.5 5.0	101 102 98	100-103 101-102 97-100	1.5 0.6 1.6	3 3 3
	Melon (peel)	Triadimenol	0.05 0.5 5.0	100 101 101	96-103 100-104 97-105	3.5 2.3 4.0	3 3 3
	Artichoke	Triadimenol	0.05 0.5 5.0	93 94 103	90-95 90-97 99-105	3.1 4.0 3.4	3 3 3
	Pepper	Triadimenol	0.05 0.5 5.0	101 101 101	100-102 100-102 97-103	1.0 1.0 3.2	3 3 3
Nuesslein, F.,2003 Method No. 00462/M005/E011	Currant	Triadimenol	0.05 0.5	100 97	91-107 93-99	7.6 2.9	5 5
Freitag, T.; Nuesslein, F.,2004 Method No. 00462/M005/E013	Tomato (fruit)	Triadimenol	0.05 0.5 5.0	100 95 93	97-103 94-95 92-94	3.1 0.6 1.1	3 3 3
Anon., 1978; Method No. 674	Cucumber	Triadimenol	0.02 0.04 0.2 0.4	-- -- -- --	95 97 94 86	-- -- -- --	1 1 1 1
Specht, 1977 Method F 60	Spring barley (grain)	Triadimenol	0.05-2.0	--	91-94	--	--
	Spring barley (green material)	Triadimenol	0.02-2.0	--	95-98	--	--
	Spring barley (straw)	Triadimenol	0.05-2.0	--	90-94	--	--
	Spring wheat (grain)	Triadimenol	0.05-2.0	--	95-98	--	--
	Spring wheat (green material)	Triadimenol	0.02-2.0	--	89-94	--	--
	Spring wheat (straw)	Triadimenol	0.05-2.0	--	80-84	--	--
	Winter wheat (grain)	Triadimenol	0.05-2.0	--	94-99	--	--
	Winter wheat (green material)	Triadimenol	0.02-2.0	--	91-93	--	--
	Winter wheat (straw)	Triadimenol	0.05-2.0	--	95-99	--	--
	Oat (grain)	Triadimenol	0.05-2.0	--	90-94	--	--
	Oat (green material)	Triadimenol	0.02-2.0	--	88-92	--	--
	Oat (straw)	Triadimenol	0.05-2.0	--	85-90	--	--

Reference	Matrix	Analyte	Fortification level (mg/kg)	Recovery rate (%) mean	range	RSD (%)	n
Kruplak, J. F.; Bache, B.; Breault, G. O.; Wargo Jr., J. P., 1980 Method F 144	Cattle (milk)	Triadimenol + triadimefon	0.005 [(a)] 0.01 [(a)]	82 84	80-84 80-88	--	2
	[a] fortification with a mixture of Triadimefon and Triadimenol (1:1)						
Kruplak, J. F.; Weissenburger, B.; Bache, B.; Breault, G. O.; Wargo Jr., J. P., 1980 Method F 145	Cattle (liver)	Triadimenol + triadimefon	0.05 [(a)] 0.1 [(a)]	84 86	82-85 84-87	--	2
	Cattle (kidney)	Triadimenol + triadimefon	0.05 [(a)] 0.1 [(a)]	87 87	86-87 84-90	--	2
	Cattle (muscle)	Triadimenol + triadimefon	0.05 [(a)] 0.1 [(a)]	69 80	64-73 78-81	--	2
	Cattle (fat)	Triadimenol + triadimefon	0.05 [(a)] 0.1 [(a)]	81 93	76-85 93-93	--	2
	[a] fortification with a mixture of Triadimefon and Triadimenol (1:1)						
Kruplak, J. F.; Bache, B.; Breault, G. O.; Wargo Jr, J. P., 1980a Method F 149	Chicken (liver)	Triadimenol + triadimefon	0.05 [(a)] 0.1 [(a)]	87 98	80-96 96-99	-- --	2 2
	Chicken (skin)	Triadimenol + triadimefon	0.05 [(a)] 0.1 [(a)]	81 86	78-84 80-91	-- --	2 2
	Chicken (muscle)	Triadimenol + triadimefon	0.05 [(a)] 0.1 [(a)]	96 103	86-106 100-105	-- --	2 2
	Chicken (fat)	Triadimenol + triadimefon	0.05 [(a)] 0.1 [(a)]	69 88	66-72 88-88	-- --	2 2
	Chicken (gizzard)	Triadimenol + triadimefon	0.05 [(a)] 0.1 [(a)]	77 83	72-82 81-84	-- --	2 2
	Chicken (egg)	Triadimenol + triadimefon	0.005 [(a)] 0.01 [(a)]	96 98	86-106 92-104	-- --	2 2
	[a] fortification with a mixture of Triadimefon and Triadimenol (1:1)						
Kruplak, J. S.; Weissenburger, B., 1981 Method F 161	Cattle (milk)	Total residue, determined as 4-chlorophenyl	0.005 0.01	-- --	112 95	-- --	1 1
	Cattle (liver)	Total residue, determined as 4-chlorophenyl	0.05 0.1	-- --	82 88	-- --	1 1
	Cattle (kidney)	Total residue, determined as 4-chlorophenyl	0.05 0.1	-- --	98 103	-- --	1 1
	Cattle (muscle)	Total residue, determined as 4-chlorophenyl	0.05 0.1	-- --	94 85	-- --	1 1
	Cattle (fat)	Total residue, determined as 4-chlorophenyl	0.05 0.1	-- --	104 100	-- --	1 1
Kruplak, J. F.; Weissenburger, B., 1981a Method F 166	Chicken (liver)	Total residue, determined as	0.05 0.1	-- --	106 106	-- --	1 1
	Chicken (skin)	Total residue, determined as	0.05 0.1	-- --	96 104	-- --	1 1
	Chicken (muscle)	Total residue, determined as	0.05 0.1	-- --	94 106	-- --	1 1

Reference	Matrix	Analyte	Fortification level (mg/kg)	Recovery rate (%) mean	range	RSD (%)	n
	Chicken (fat)	Total residue, determined as 4-chlorophenyl	0.05 0.1	-- --	88 91	-- --	1 1
	Chicken (gizzard)	Total residue, determined as 4-chlorophenyl	0.05 0.1	-- --	106 102	-- --	1 1
	Chicken (egg)	Total residue, determined as 4-chlorophenyl	0.005 0.01	-- --	98 92	-- --	1 1

Stability of residues in stored analytical samples

Storage stability of triadimefon and triadimenol was examined in different water-containing crop commodities (apples, cucumbers, grapes, pineapples and tomatoes), and in wheat seed + straw, coffee and sugar beets, representing starch-containing matrices, up to a period of 24 months.

For animal matrices only triadimefon was analysed in eggs and poultry meat, goat fat, liver and milk. The test periods were 12 months for milk up to 29 months for goat liver.

Summaries of the storage stability studies and their results are presented in Tables 56, 57 and 58.

Table 56. Storage stability of Triadimefon in plant matrices

Crop matrix	mg/kg (% remaining) Nominal storage time (months) 0	1	3	6	9	12	18	24
Williams, B. B.; Conrath, B. A, 1990, nominal fortification with 1 mg/kg								
Wheat, forage, whole [w]	1.01				(92)	(89)	(83)	(95)
Wheat, forage, prep [p]	1.01				(92)	(91)	(104)	(109)
Wheat, grain, whole	1.02				(92)	(93)	(98)	(135)
Wheat, grain, prep	1.02				(93)	(101)	(93)	(116)
Grapes, whole	0.94				(95)	(111)	(97)	(101)
Grapes, prep	0.94				(96)	(87)	(94)	(102)
Tomatoes, whole	1.03				(88)	(90)	(99)	(59) (88)
Tomatoes, prep	1.03				(94)	(88)	(100)	(99)
Williams, B. B. 1992; Williams, B. B.; Chickering, C. D., 1993 and Lenz, C. A., 1996, nominal fortification with 1 mg/kg								
Apple	0.76		(117)	(124)		(119)	(130)	(127)
Cucumber	0.95		(85)	(100)		(97)	(103)	(98)
Pineapple	1.00		(87)	(95)		(82)	(99)	(98)
Grape, juice	0.99		(99)	(93)		(97)	(107)	(89)
Grape, pomace wet	0.92		(99)	(104)		a	a	a
Grape, pomace dry	0.88		(94)	(91)		a	a	a
Grape, raisin	0.84		(103)	(107)		(91)	(107)	(90)
Sugar beet, root	0.94	(99)	(109)	(100)		(98)	(98)	(97)
Sugar beet, tops	0.94	(88)	(91)	(93)		(85)	(100)	(95)
Sugar beet, molasses	0.97	(97)	(63)	(99)		(102)	(102)	(98)
Asparagus	0.94	(93)	(83)	(84)		(85)	(76)	(86)
Wheat, straw	0.86	(99)	(98)	(92)		(68)	(68)	(84)
Wheat, bran	0.62	(82)	(122)	(106)		(107)	(101)	(75)
Wheat, flour	0.74	(93)	(126)	(95)		(104)	(78)	(92)
Wheat, grain dust	0.84	(86)	(84)	(92)		(102)	(86)	(70)
Coffee beans	0.68	(94)	(48)	(106)		a	a	

a - Samples were not analysed

w - Whole refers to intact agricultural commodity

p - Prep refers to the homogenised commodity comparable to labarotary samples

Table 57. Storage stability of Triadimenol in plant matrices

	mg/kg (% remaining) Nominal storage time (months)							
Crop matrix	0	1	3	6	9	12	18	24
Williams, B. B.; Conrath, B. A, 1990, nominal fortification with 1 mg/kg								
Wheat, forage, whole	1.08				(80)	(88)	(65)	(103)
Wheat, forage, prep	1.08				(91)	(106)	(108)	(96)
Wheat, grain, whole	1.03				(101)	(101)	(99)	(87)
Wheat, grain, prep	1.03				(97)	(109)	(100)	(82)
Grapes, whole	1.02				(50)	(56)	(83)	(96)
Grapes, prep	1.02				(97)	(82)	(125)	(92)
Tomatoes, whole	1.02				(85)	(81)	(95)	(105)
Tomatoes, prep	1.04				(86)	(90)	(96)	(94)
Williams, B. B. 1992; Williams, B. B.; Chickering, C. D., 1993 and Lenz, C. A., 1996; nominal fortification with 1 mg/kg								
Apple	0.88		(107)	(109)		(110)	(100)	(106)
Cucumber	0.96		(88)	(105)		(99)	(88)	(94)
Pineapple	1.03		(91)	(92)		(92)	(83)	(93)
Grape, juice	1.04		(95)	(93)		(94)	(92)	(81)
Grape, pomace wet	0.98		(94)	(101)		[a]	[a]	[a]
Grape, pomace dry	0.91		(95)	(94)		[a]	[a]	[a]
Grape, raisin	0.86		(108)	(115)		(113)	(107)	(104)
Sugar beet, root	0.98	(99)	(103)	(109)		(83)	(84)	(92)
Sugar beet, tops	1.03	(93)	(94)	(93)		(72)	(80)	(80)
Sugar beet, molasses	1.01	(95)	(73)	(105)		(78)	(84)	(87)
Asparagus	1.01	(90)	(86)	(93)		(73)	(66)	(73)
Wheat, straw	0.90	(100)	(102)	(98)		(88)	(56)	(74)
Wheat, bran	0.78	(76)	(110)	(104)		(82)	(75)	(64)
Wheat, flour	0.86	(88)	(117)	(96)		(80)	(62)	(75)
Wheat, grain dust	0.77	(86)	(84)	(105)		(80)	(88)	(71)
Coffee beans	0.80	(90)	(73)	(107)		(101)	[a]	[a]

a - Samples were not analysed

Table 58. Storage stability of Triadimefon in animal matrices (Duah, F. K., 1994)

Matrix	mg/kg in total Triadimefon residues Initial extract	Final extract (%)		Storage time (days)
Eggs	0.057	0.062	(98)	452
Fat	0.257	0.302	(97)	783
Liver	1.510	1.436	(91)	873
Milk	0.025	0.026	(93)	432
Muscle	0.085	0.084	(95)	447

In an additional study by Lenz, C.A., 1996 the freezer storage stability of triadimenol and its metabolites KWG 1342 and KWG 1732 was investigated in green coffee over a maximum storage period of 22 months (see Table 59).

Table 59. Freezer Storage Stability of Triadimenol, KWG 1342 and KWG 1732 in Green Coffee Beans (Lenz, C.A., 1996)

Analyte	Frozen Storage Period (Months)	Average recovery (%)
Triadimenol	0	
	3	99
	6	97
	22	85
KWG 1342	0	
	3	98
	6	96
	22	83
KWG 1732	0	
	3	90
	6	100
	22	94

USE PATTERNS

Triadimenol and triadimefon are registered globally on a wide variety of crops. The information available to the Meeting on registered uses relevant to the supervised field data is summarised in Table 60. It is based on the labels or translation of labels provided by the manufacturer.

Additional uses have been submitted by the Queensland Government Department of Primary Industries and Fisheries, Australia.

Table 60. Registered uses of triadimefon and triadimenol

Crop	Country	F/G	Formulation ai%	Application rate			PHI (days)	Method	Active Substance
				kg ai/ha	kg ai/hL	No.			
Apple	Argentina	F	25 WP	0.05	0.0025	ea 15-20d	14	spray	TDF
Apple	Austria	F	50 EW		0.00125	4-5	21	spray	TDM
Apple	Belarus	F	25 WP	0.1	0.0066	6	30	spray	TDF
Apple	Belgium	F	50 EW	0.0375		ns	7	spray	TDM
Apple	Brazil	F	25 WP	0.05	0.005	4	10	spray	TDF
Apple	Bulgaria	F	50 EC		0.0038	ns	30	spray	TDM
Apple	Croatia	F	5 WP	0.05	0.0025	4	21	spray	TDF
Apple	Cyprus	F	25 EC		0.0025	3	14	spray	TDM
Apple	Greece	F	50 EW		0.0025	4	15	spray	TDM
Apple	Greece	F	25 EC		0.0025	4	15	spray	TDM
Apple	Greece	F	5 WG		0.0025	4	15	spray	TDM
Apple	Indonesia	F	25 EC		0.05	ea 7d	15	spray	TDM
Apple	Italy	F	5 WG		0.004	ns	14	spray	TDM
Apple	Italy	F	2.5 WP		0.004	ns	14	spray	TDM
Apple	Italy	F	50 EW		0.004	ns	14	spray	TDM
Apple	Japan	F	5 WP		0.005	5	30	spray	TDF
Apple	Korea	F	5 WP		0.005	5	15	spray	TDM
Apple	Morocco	F	25 EC		0.005	ns	15	spray	TDM
Apple	Netherlands	F	50 EW	0.0375		5	7	spray	TDM
Apple	Peru	F	25 EC		0.005	ns	14	spray	TDM
Apple	Peru	F	25 DC		0.0125	ns	14	spray	TDM
Apple	Peru	F	7.5 EC		0.0125	ns	14	spray	TDM
Apple	S.Africa	F	5 WP	0.03-0.07		ns	28	spray	TDF
Apple	Spain	F	5 WP		0.0125	ns	15	spray	TDM
Apple	Spain	F	25 EC		0.0125	4	15	spray	TDM
Apple	Turkey	F	5 WP		0.0025	3	14	spray	TDF
Apple	United States	F	50 DF	0.28	0.015	ns	45	spray	TDF
Artichoke	Cyprus	F	25 EC		0.01	1	5	spray	TDM
Artichoke	Greece	F	5 EW		0.01	1	15	spray	TDM
Artichoke	Greece	F	25 EC		0.01	1	15	spray	TDM
Artichoke	Greece	F	5 WG		0.01	1	15	spray	TDM
Artichoke	Peru	F	25 DC		0.0063	ns	ns	spray	TDM
Artichoke	Spain	F	5 WP		0.0125	ns	7	spray	TDM
Asparagus	Peru	F	30 EC	0.056		ns	30	spray	TDM
Banana	Brazil	F	6 GR		0.6-0.9 (0.75 g / production unit)	ns	14	spread/incorporate	TDM
Banana	Brazil	F	25 EC	0.1		ea 30d	14	spray	TDM
Banana	Colombia	F	7.5 EC	0.03		ns	0	spray	TDM
Banana	Dominican Republic	F	7.5 EC	0.03		ns	0	spray	TDM
Banana	El Salvador	F	7.5 EC	0.03		ns	0	spray	TDM
Banana	Equador	F	7.5 EC	0.03		8	0	spray	TDM
Banana	Guatemala	F	1 GR	0.75-1		ea 90-100d	21	spread	TDM

Crop	Country	F/G	Formulation ai%	Application rate			PHI (days)	Method	Active Substance
				kg ai/ha	kg ai/hL	No.			
Banana	Guatemala	F	7.5 EC	0.03		ns	0	spray	TDM
Banana	Honduras	F	7.5 EC	0.03		ns	0	spray	TDM
Banana	Nicaragua	F	1 GR	0.75-1		ea 90-100d	21	spread	TDM
Banana	Nicaragua	F	7.5 EC	0.03		ns	0	spray	TDM
Banana	Panama	F	7.5 EC	0.03		ns	0	spray	TDM
Banana, cooking	Cuba	F	3 GR	0.75-1 g/plant		ea 4 mo	7	spread	TDM
Banana, cooking	Cuba	F	25 EC	0.135		ns	7	spray	TDM
Barley	Argentina	F	25 WP	0.125		ns	35	spray	TDF
Barley	Australia	F	12.5 EC	0.125		ns	28	spray	TDF
Barley	Australia	F	15 DS	0.0225 kg/100 kg seed		1	na	seed tr'tment, dry	TDM
Barley	Australia	F	15 FS	0.0225 kg/100 kg seed		1	na	seed tr'tment, liquid	TDM
Barley	Australia	F	15 FS	0.0225 kg/100 kg seed		1	na	seed treatment, liquid	TDM
Barley	Austria	F	7.5 FS	0.038 kg/ 100 kg seed		1	na	seed treatment, general	TDM
Barley	Belarus	F	25 WP	0.125	0.0625	1	20	spray	TDF
Barley	Brazil	F	25 WP	0.125	0.0625	2	35	spray	TDF
Barley	Brazil	F	15 FS	0.03-0.04 kg/100 kg seeds		1	na	seed tr'tment, liquid	TDM
Barley	Brazil	F	15 DS	0.03-0.04 kg/100 kg seeds		1	na	seed treatment, dry	TDM
Barley	Brazil	F	25 EC	0.188		1-2	30	spray	TDM
Barley	Bulgaria	F	25 EC	0.125		1	30	spray	TDM
Barley	Canada	F	31.7 WS	0.032 kg/100 kg seeds		1	na	seed tr'tment, liquid	TDM
Barley	Chile	F	25 WP	0.0625-0.125		ns	15	spray	TDF
Barley	Chile	F	15 FS	0.03 kg/100 kg seeds		1	na	seed tr'tment, liquid	TDM
Barley	Chile	F	EC	0.0625		ns	35	spray	TDM
Barley	Colombia	F	25 EC	0.125		3	21	spray	TDF
Barley	Colombia	F	25 WP	0.125		3	21	spray	TDF
Barley	Colombia	F	15 DS	0.03 kg/100 kg seeds		1	na	seed tr'tment	TDM
Barley	Croatia	F	10 EC	0.1		2	42	spray	TDF
Barley	Cyprus	F	25 EC	0.125		1	35	spray	TDM
Barley	Ecuador	F	25 EC	0.1-0.125		ns	21	spray	TDF
Barley	Estonia	F	7.5 FS	0.03 kg/100 kg seeds		1	na	seed tr'tment, liquid	TDM
Barley	Estonia	F	4.3 EC	0.026-0.034		2	20	spray	TDM
Barley	Finland	G	15 DS	0.03 kg/100 kg seeds		1	na	seed treatment	TDM
Barley	France	F	7.5 EC	0.075		2	28	spray	TDM
Barley	Georgia	F	25 WP	0.125	0.166	1	20	spray	TDF
Barley	Germany	G	7.5 FS	0.0375 kg/100 kg seeds		1	na	seed tr'tment	TDM
Barley	Greece	F	50 EW		0.0125	1	30	spray	TDM
Barley	Greece	F	25 EC		0.0125	1	30	spray	TDM
Barley	Greece	F	5 WG		0.0125	1	30	spray	TDM
Barley	Ireland	F	18.7 FS	0.0375 g/100 kg seeds		1	na	seed tr'tment	TDM
Barley	Italy	F	2.5 WP	0.15		ns	30	spray	TDM
Barley	Italy	F	5 WG	0.125		ns	30	spray	TDM
Barley	Italy	F	25 WP	0.15		ns	30	spray	TDM
Barley	Italy	F	50 EW	0.125		ns	30	spray	TDM
Barley	Japan	F	25 WP		0.00125	3	21	spray	TDF
Barley	Kazakhstan	F	25 WP	0.125	0.041	1	20	spray	TDF

Crop	Country	F/G	Formulation ai%	Application rate			PHI (days)	Method	Active Substance
				kg ai/ha	kg ai/hL	No.			
Barley	Latvia	G	7.5 FS	0.03 kg/100 kg seeds		1	na	seed treatment, liquid	TDM
Barley	Latvia	F	EC	0.026		2	35	spray	TDM
Barley	Lithuania	G	7.5 FS	0.03 kg/100 kg seeds		1	na	seed treatment	TDM
Barley	Lithuania	F	EC	0.026		2	30	spray	TDM
Barley	Macedonia	F	25 WP	0.185-0.25		ns	35	spray	TDF
Barley	Mexico	F	25 WP	0.125-0.25		2	21	spray	TDF
Barley	Mexico	F	15 FS	0.038 kg/100 kg seeds		1	ns	seed treatment, liquid	TDM
Barley	N.Zealand	F	12.5 SC	0.125		ns	28	spray	TDF
Barley	N.Zealand	F	50 WP	0.125		ns	28	spray	TDF
Barley	N.Zealand	F	50 WG	0.125		ns	28	spray	TDF
Barley	N.Zealand	F	5.6 FS	0.022 kg/100 kg seeds		1	ns	seed treatment	TDM
Barley	N.Zealand	F	15 DS	0.022 kg/100 kg seeds		1	ns	seed treatment	TDM
Barley	N.Zealand	F	15 FS	0.022 kg/100 kg seeds		1	ns	seed treatment	TDM
Barley	Peru	F	25 EC	0.125		ns	21	spray	TDF
Barley	Peru	F	25 WP	0.125		ns	ns	spray	TDF
Barley	Peru	F	25 EC		0.125	ns	21	spray	TDM
Barley	Peru	F	25 DC		0.125	ns	21	spray	TDM
Barley	Poland	F	7.5 FS	0.03 kg/100 kg seeds		1	na	seed treatment, liquid	TDM
Barley	Poland	F	15 WS	0.03 kg/100 kg seeds		1	na	seed treatment, liquid	TDM
Barley	Poland	F	25 EC	0.125		ns	35	spray	TDM
Barley	Poland	F	25 EC	0.125		ns	35	spray	TDM
Barley	Russia	F	25 WP	0.125	0.041	1	20	spray	TDF
Barley	S. Africa	F	5 WP	0.125	0.025	1	40	spray	TDF
Barley	S. Africa	F	25 EC	0.125		2	40	spray	TDF
Barley	Serbia	F	25 WP	0.125-0.25		2	35	spray	TDF
Barley	Spain	F	5 WP	0.125		ns	3	spray	TDM
Barley	Spain	F	25 EC	0.125		ns	15	spray	TDM
Barley	Turkey	F	25 EC	0.125		1	28	spray	TDF
Barley	Turkey	F	25 WP	0.125		1	28	spray	TDF
Barley	Ukraine	F	15 WS	0.034 kg/100 kg seeds		1	ns	seed treatment	TDM
Barley	Ukraine	F	25 WP	0.125	0.42	1	30	spray	TDF
Barley	Ukraine	F	25 WP	0.125	0.42	2	30	spray	TDF
Barley	United Kingdom	F	18.75 FS	0.0375 kg/100 kg seeds		1	na	seed treatment,	TDM
Barley	United Kingdom	F	12.5 EC	0.125		2	GS	spray	TDM
Barley	United Kingdom	F	25 EC	0.125		2	GS	spray	TDM
Barley	United Kingdom	F	12.5 EC	0.125		2	GS	spray	TDM
Barley	United Kingdom	F	15 FS	0.125		1	na	seed treatment	TDM
Barley	United Kingdom	F	25 EC	0.125		3	GS	spray	TDM
Barley	Zimbabwe	F	15 DS	0.0225 kg/100 kg seed		1	na	seed treatment, slurry	TDM
Barley	Zimbabwe	F	150 FS	0.0225 kg/100 kg seed		1	na	seed treatment, slurry	TDM
Beans	Peru	F	25 EC		0.0063	ns	15	spray	TDM
Beans, fresh	Japan	F	5 WP		0.005	2	1	spray	TDF
Brassica vegetables	Australia	F	25 EC	0.1		ns	7	spray	TDM

Crop	Country	F/G	Formulation ai%	Application rate			PHI (days)	Method	Active Substance
				kg ai/ha	kg ai/hL	No.			
Brassica vegetables	N.Zealand	ns	25 EC	0.05-0.1		ns	7	spray	TDM
Broccoli	N.Zealand	ns	25 EC	0.05-0.1		ns	7	spray	TDM
Brussels sprouts	N.Zealand	ns	25 EC	0.05-0.1		ns	7	spray	TDM
Cabbages	N.Zealand	ns	25 EC	0.05-0.1		ns	7	spray	TDM
Cacao	Indonesia	F	25 EC	1.25 g/plant		2	15	drenching	TDM
Cauliflowers	N.Zealand	ns	25 EC	0.05-0.1		ns	7	spray	TDM
Cereals	N.Zealand	F	5.6 FS	0.022 kg/100 kg seeds		1	ns	seed treatment	TDM
Chilies	Algeria	F	5 WP		0.0075	ns	14	spray	TDM
Chilies	India	F	25 WP	0.0375		ns	15	spray	TDF
Coffee	Brazil	F	6 GR	0.6-1.2		1	30	spreading, incorporation	TDM
Coffee	Brazil	F	25 EC	0.25		2	30	spray	TDM
Coffee	Brazil	F	12.5 EC	0.25		ns	30	spray	TDM
Coffee	Brazil	F	25 WP	0.25 (spray) + 1-1.3 (soil application)		ns	30	spray	TDM
Coffee	Brazil	F	3 GR	0.75-1.95		1	90	spreading, incorporation	TDM
Coffee	Brazil	F	1.5 GR	0.45-1.05		1	90	spreading, incorporation	TDM
Coffee	Brazil	F	25 WP	0.25	0.05	ns	60	spray	TDF
Coffee	Costa Rica	F	25 DC	0.175		ns	15	spray	TDM
Coffee	Costa Rica	F	50 WG	0.25	0.125	ns	30	spray	TDF
Coffee	Costa Rica	F	7.5 EC	0.0375-0.0525		3	21	spray	TDM
Coffee	Cuba	F	25 EC	0.125-0.25		ns	10	spray	TDM
Coffee	Cuba	F	1 GR	0.75-1 g/plant		1	10	spreading	TDM
Coffee	Dominican Republic	F	25 DC	0.175		ns	15	spray	TDM
Coffee	Dominican Republic	F	7.5 EC	0.0375-0.0525		3	21	spray	TDM
Coffee	El Salvador	F	0.6 GR	0.15 g/plant		1-2	60	spreading, incorporation	TDM
Coffee	El Salvador	F	25 DC	0.175		ns	15	spray	TDM
Coffee	El Salvador	F	7.5 EC	0.038-0.053		3	21	spray	TDM
Coffee	Guatemala	F	1 GR	0.75-1.25		1	21	spreading	TDM
Coffee	Guatemala	F	0.6 GR	0.15 g/plant		1-2	60	spreading, incorporation	TDM
Coffee	Guatemala	F	25 DC	0.175		ns	15	spray	TDM
Coffee	Guatemala	F	7.5 EC	0.038-0.053		3	21	spray	TDM
Coffee	Honduras	F	0.6 GR	0.15 g/plant		1-2	60	spreading, incorporation	TDM
Coffee	Honduras	F	25 DC	0.175		ns	15	spray	TDM
Coffee	Honduras	F	75 EC	0.0375-0.0525		3	21	spray	TDM
Coffee	India	F	25 WP	0.02	0.002	ns	25	spray	TDF
Coffee	Indonesia	F	25 EC		0.05	ns	15	spray	TDM
Coffee	Mozambique	F	25 EC	0.0125		2	ns	spray	TDM
Coffee	Nicaragua	F	1 GR	0.75-1.25		1	21	spreading	TDM
Coffee	Nicaragua	F	0.6 GR	0.15 g/plant		1-2	60	spreading, incorporation	TDM
Coffee	Nicaragua	F	25 DC	0.175		ns	15	spray	TDM
Coffee	Nicaragua	F	7.5 EC	0.038-0.053		3	21	spray	TDM
Coffee	Panama	F	7.5 EC	0.0375-0.0525		3	21	spray	TDM
Coffee	S. Africa	F	25 DC	0.125	0.0125	2	ns	spray	TDM
Coffee	S.Africa	F	5 WP		0.0125	ns	ns	spray	TDF
Coffee	Vietnam	F	25 EC	0.125	0.031	1-2	14	spray	TDM
Corn	Belarus	F	25 WP	0.125	0.031	1	20	spray	TDF
Cotton	Brazil	F	15 SC	0.03 kg/100 kg seeds		1	ns	seed treatment, liquid	TDM

Crop	Country	F/G	Formulation ai%	Application rate			PHI (days)	Method	Active Substance
				kg ai/ha	kg ai/hL	No.			
Courgette	Cyprus	F	25 EC		0.01	3	5	spray	TDM
Courgette	Greece	F/G	50 EW		0.005	3	15	spray	TDM
Courgette	Greece	F/G	25 EC		0.005	3	15	spray	TDM
Courgette	Greece	F/G	5 WG		0.005	3	15	spray	TDM
Courgette	Italy	F/G	5 WG		0.005	ns	7	spray	TDM
Courgette	Italy	F/G	2.5WP		0.005	ns	7	spray	TDM
Courgette	Italy	F/G	50 EW		0.005	ns	7	spray	TDM
Courgette	Mexico	F	25 WP	0.087-0.125	0.068	ns	0	spray	TDF
Courgette	Spain	F/G	25 EC		0.0125	ns	3	spray	TDM
Cranberry	Belarus	F	25 WP	0.15	0.0375	1	48	spray	TDF
Cucumber	Argentina	F	25 WP	0.05	0.0125	ea 14d	7	spray	TDF
Cucumber	Australia	F	25 EC	0.1	0.01	na	1	spray	TDM
Cucumber	Austria	F	50 EW	0.05	0.0025	10	3	spray	TDM
Cucumber	Belarus	G	25 WP	0.15	0.0375	2	5	spray	TDF
Cucumber	Belarus	F	25 WP	0.05	0.0125	4	20	spray	TDF
Cucumber	Bulgaria	F	25 EC		0.005	ns	7	spray	TDM
Cucumber	Croatia	F	5 WP	0.15		4	7	spray	TDF
Cucumber	Cyprus	F/G	25 EC	0.15	0.01	3	5	spray	TDM
Cucumber	Greece	F/G	50 EW	0.1	0.005	3	15	spray	TDM
Cucumber	Greece	F/G	25 EC	0.1	0.005	3	15	spray	TDM
Cucumber	Greece	F/G	5 WG	0.1	0.005	3	15	spray	TDM
Cucumber	Italy	F/G	5 WG		0.005	ns	14	spray	TDM
Cucumber	Italy	F/G	25 WP		0.005	ns	14	spray	TDM
Cucumber	Italy	F/G	2.5 WP		0.005	ns	14	spray	TDM
Cucumber	Italy	F/G	50 EW		0.005	ns	14	spray	TDM
Cucumber	Japan	F	5 WP		0.0025	4	1	spray	TDF
Cucumber	Korea	F/G	5 WP		0.005	ns	4	spray	TDM
Cucumber	Macedonia	F	25 WP	0.075-0.15		ns	7	spray	TDF
Cucumber	Mexico	F	25 WP	0.087-0.125	0.068	ns	0	spray	TDF
Cucumber	N. Zealand	ns	12.5 SC		0.005	4	1	spray	TDF
Cucumber	Peru	F	25 EC		0.0125	ns	15	spray	TDF
Cucumber	Peru	F	25 WP		0.0063	ns	35	spray	TDF
Cucumber	Peru	ns	25 DC		0.0125	ns	15	spray	TDM
Cucumber	Russia	F/G	25 WP	0.015-0.15	0.025	4	5	spray	TDF
Cucumber	Spain	F/G	25 EC		0.0125	4	3	spray	TDM
Cucumber	Taiwan	F	5 WP	0.025-0.035		ns	6	spray	TDF
Cucumber	Ukraine	G	25 WP	0.05-0.15	0.0025	2	5	spray	TDF
Cucumber	Ukraine	F	25 WP	0.15-0.3	0.005	4	20	spray	TDF
Cucumber spec.	Georgia	F	25 WP	0.015-0.03	0.04	4	20	spray	TDF
Cucumber spec.	Georgia	G	25 WP	0.05-0.15	0.2	2	5	spray	TDF
Cucumber spec.	Kazakhstan	F/G	25 WP	0.03-0.15	0.025	4	20	spray	TDF
Cucumber spec.	Kazakhstan	F/G	25 WP	0.03-0.15	0.025	2	5	spray	TDF
Cucurbits	Chile	F/G	25 WP	0.075-0.125		ns	3	spray	TDF
Cucurbits	N. Zealand	F	50 WG		0.005	2	1	spray	TDF
Cucurbits	N. Zealand	ns	25 EC	0.1	0.01	ns	1	spray	TDM
Cucurbits	Turkey	F	5 WP		0.00375	5	3	spray	TDF
Curcubits	Australia	F	25 EC	0.1	0.01	ns	1	spray	TDM
Curcubits	Austria	F	50 EW		0.0025	ns	3	spray	TDM
Currant, black	Belarus	F	25 WP	0.1	0.022	2	30	spray	TDF
Currant, black	Netherlands	F/G	50 EW		0.0075	ns	14	spray	TDM
Eggplant	Japan	F	5 WP		0.0025	4	1	spray	TDF
Fig	Belarus	F	25 WP	0.05	0.005	2	10	spray	TDF
Garlic	Brazil	F	25 WP	0.0625	0.0125	as req.	15	spray	TDF
Garlic	Brazil	F	25 CE		0.03	ns	15	spray	TDM
Garlic	Japan	F	5 WP		0.0125	3	14	spray	TDF

Crop	Country	F/G	Formulation ai%	Application rate			PHI (days)	Method	Active Substance
				kg ai/ha	kg ai/hL	No.			
Grape	Algeria	F	5 WP	0.025	0.005	ns	14	spray	TDM
Grape	Algeria	F	25 EC		0.005	ns	15	spray	TDM
Grape	Argentina	F	25 WP		0.005	ns	35	spray	TDF
Grape	Australia	F	25 EC		0.0025	3	7	spray	TDM
Grape	Austria	F	50 EW	0.05	0.005	as req.	28	spray	TDM
Grape	Belarus	F	25 WP	0.075	0.0075	6	30	spray	TDF
Grape	Brazil	F	25 WP	0.5	0.05	ns	15	spray	TDF
Grape	Bulgaria	F	25 EC		0.0025	ns	30	spray	TDM
Grape	Chile	F	25 WP		0.005	ea 7/21d	7	spray	TDF
Grape	Chile	F	25 EC		0.005	ea 7/21d	7	spray	TDF
Grape	Croatia	F	5 WP	0.05	0.0025	4	35	spray	TDF
Grape	Croatia	F	1.25 WP	0.0375-0.05	0.0025	4	35-42	spray	TDF
Grape	Cyprus	F	25 EC		0.005	2	14	spray	TDM
Grape	Dominican Republic	F	25 EC	0.35	0.11	ns	15	spray	TDF
Grape	El Salvador	F	25 EC	0.35	0.11	ns	15	spray	TDF
Grape	France	F	5 EW	0.0375		4	15	spray	TDM
Grape	France	F	5 EW	0.075		4	15	spray	TDM
Grape	Georgia	F	25 WP	0.0375-0.075	0.0375	3	30	spray	TDF
Grape	Georgia	F	4.3 EC	0.013		4	30	spray	TDM
Grape	Greece	F	50 EW		0.005	2	35	spray	TDM
Grape	Greece	F	25 EC		0.005	2	35	spray	TDM
Grape	Greece	F	5 WG		0.005	2	35	spray	TDM
Grape	Guatemala	F	25 EC	0.35	0.11	ns	15	spray	TDF
Grape	India	F	25 WP		0.0025	3	25	spray	TDF
Grape	Indonesia	F	25 EC		0.0125	ns	15	spray	TDM
Grape	Italy	F	50 EW		0.005	3	14	spray	TDM
Grape	Italy	F	25 WP		0.005	3	14	spray	TDM
Grape	Italy	F	5 WG		0.005	3	14	spray	TDM
Grape	Italy	F	2.5 WP		0.005	3	14	spray	TDM
Grape	Kazakhstan	F	25 WP	0.0375-0.075	0.0075	6	30	spray	TDF
Grape	Macedonia	F	25 WP		0.0025	6	35	spray	TDF
Grape	Mexico	F	25 WP	0.125-0.187	0.019	1	14	spray	TDF
Grape	Moldova	F	4.3 EC	0.013		4	30	spray	TDM
Grape	Morocco	F	25 EC		0.0038	ns	15	spray	TDM
Grape	N. Zealand	F	50 WDG		0.005	4	28	spray	TDF
Grape	N.Zealand	F	25 EC	0.025	0.0025	ns	7	spray	TDM
Grape	Panama	F	25 EC	0.35	0.11	ns	15	spray	TDF
Grape	Peru	F	25 EC		0.0125	ns	15	spray	TDF
Grape	Peru	F	25 WP		0.0063	ns	35	spray	TDF
Grape	Peru	F	25 EC		0.005	ns	15	spray	TDM
Grape	Peru	F	25 DC		0.0125	ns	15	spray	TDM
Grape	Peru	F	7.5 EC		0.0125	ns	21	spray	TDM
Grape	Russia	F	25 WP	0.0375-0.075	0.005	6	30	spray	TDF
Grape	S. Africa	F	5 WP	0.0175-0.095	0.0063	ns	7	spray	TDF
Grape	S. Africa	F	25 DC	0.0188-0.123	0.0075	ns	14	spray	TDM
Grape	S.Africa	F	12.5 EC		0.0038	ns	14	spray	TDM
Grape	Serbia	F	25 WP		0.005	2	35	spray	TDF
Grape	Spain	F	25 EC		0.0125	5	15	spray	TDM
Grape	Spain	F	5 WP		0.0125	ns	15	spray	TDM
Grape	Taiwan	F	5 WP		0.0025	3	6	spray	TDF
Grape	Taiwan	F	5 WP	0.05		3	3	spray	TDM
Grape	Turkey	F	5 WP		0.005	3	21	spray	TDF
Grape	Turkey	F	50 EW		0.005	2	21	spray	TDM
Grape	Ukraine	F	25 WP	0.0375-0.075	0.025	3	30	spray	TDF
Grape	Ukraine	F	4.3 EC	0.013	0.0021	2	30	spray	TDM
Grape	United States	F	50 DF	0.07-0.21		ns	14	spray	TDF

Crop	Country	F/G	Formulation ai%	Application rate			PHI (days)	Method	Active Substance
				kg ai/ha	kg ai/hL	No.			
Grape	Vietnam	F	25 EC	0.075	0.0188	2	14	spray	TDM
Hops	Croatia	F	12.5 WP		0.0025	4	ns	spray	TDF
Hops	Spain	F	25 EC		0.0125	ns	30	spray	TDM
Leek	Belgium	F	5 EW	0.25		3	21	spray	TDM
Leek	Japan	F	5 WP		0.0125	3	14	spray	TDF
Lupins	S. Africa	F	25 EC	0.125		ns	28	spray	TDF
Mango	Chile	F	25 WP		0.00625	ns	15	spray	TDF
Mango	Ecuador	F	25 EC	0.125		ns	50	spray	TDF
Mango	India	F	25 WP	0.01-0.025	0.0025	ns	40	spray	TDF
Mango	Mozambique	F	25 EC	0.005		3	ns	spray	TDM
Mango	Pakistan	F	25 EC		0.01	ns	7	spray, high-vol.	TDM
Mango	Peru	F	25 WP		0.0063	ns	15	spray	TDF
Mango	Peru	F	25 EC		0.0063	ns	15	spray	TDF
Mango	Peru	F	25 EC		0.01	ns	6	spray	TDM
Mango	S. Africa	F	5 WP		0.005	ns	28	spray	TDF
Mango	S. Africa	F	25 EC		0.005	4	ns	spray	TDM
Mango	Taiwan	F	5 WP		0.005	4	6	spray	TDF
Mango	Thailand	F	25 WP		0.01	ns	15	spray	TDF
Melon	Argentina	F	25 WP	0.05	0.0125	ea 14d	7	spray	TDF
Melon	Brazil	F	25 WP	0.06	0.0125	ns	30	spray	TDF
Melon	Chile	F	12.5 EC	0.0375-0.0625		ns	35	spray	TDM
Melon	Chile	F	12.5 EC	0.0375-0.0625		ns	35	spray	TDM
Melon	Costa Rica	F	50 WG	0.25	0.125	1	ns	spray	TDF
Melon	Costa Rica	F	25 WP		0.0375	ns	30	spray, 25d after planting	TDF
Melon	Cyprus	F/G	25 EC		0.01	3	5	spray	TDM
Melon	Cyprus	F/G	25 EC		0.01	3	5	spray	TDM
Melon	Dominican Republic	F	25 EC	0.35	0.11	ns	15	spray	TDF
Melon	Dominican Republic	F	25 WP		0.0375	ns	30	spray 25d after planting	TDF
Melon	Ecuador	F	25 EC	0.125-0.15		ns	14	spray	TDF
Melon	El Salvador	F	25 EC	0.35	0.11	ns	15	spray	TDF
Melon	Georgia	F	25 WP	0.075-0.1	0.2	3	20	spray	TDF
Melon	Guatemala	F	25 EC	0.35	0.11	ns	15	spray	TDF
Melon	Guatemala	F	50 WG	0.25		1	ns	spray	TDF
Melon	Honduras	F	50 WG	0.25	ns	1	ns	spray	TDF
Melon	Honduras	F	25 WP		0.0375	ns	30	spray 25d after planting	TDF
Melon	Italy	F/G	5 WG		0.005	ns	14	spray	TDM
Melon	Italy	F/G	25 WP		0.005	ns	14	spray	TDM
Melon	Italy	F	2.5WP		0.005	ns	14	spray	TDM
Melon	Italy	F/G	50 EW		0.005	ns	14	spray	TDM
Melon	Kazakhstan	F	25 WP	0.075-0.1	0.019	3	20	spray	TDF
Melon	Mexico	F	25 WP	0.087-0.125	0.068	ns	0	spray	TDF
Melon	Morocco	F/G	25 EC		0.0075	3	3	spray	TDM
Melon	N. Zealand	ns	12.5 SC		0.005	4	1	spray	TDF
Melon	Pakistan	F	25 EC		0.01	ns	7	spray, high-vol.	TDM
Melon	Panama	F	25 EC	0.35	0.11	ns	15	spray	TDF
Melon	Peru	F	25 EC		0.0125	ns	15	spray	TDF
Melon	Peru	F	25 WP		0.0063	ns	35	spray	TDF
Melon	Peru	ns	25 DC		0.0125	ns	15	spray	TDM
Melon	Russia	F	25 WP	0.075-0.1	0.025	3	20	spray	TDF
Melon	Spain	F/G	25 EC		0.0125	4	3	spray	TDM
Melon	Spain	F/G	25 EC		0.0125	4	3	spray	TDM
Melon	Taiwan	F	5 WP	0.025		4	6	spray	TDM
Melon	Ukraine	F	25 WP	0.05	0.005	2	20	spray	TDF
Melon, hybrids	Bulgaria	F	25 EC		0.005	ns	7	spray	TDM

Crop	Country	F/G	Formulation ai%	Application rate			PHI (days)	Method	Active Substance
				kg ai/ha	kg ai/hL	No.			
Melon, netted (musk)	Japan	F	5 WP		0.0025	4	1	spray	TDF
Mulberry	Japan	F	5 WP		0.0025	6	9	spray	TDF
Mung bean	Philippines	F	25 WP		0.023	ns	0	spray	TDF
Oats	Argentina	F	25 WP	0.125		ns	35	spray	TDF
Oats	Australia	F	15 DS	0.015 kg/100 kg seed		1	na	seed treatment, dry	TDM
Oats	Australia	F	15 DS	0.015 kg/100 kg seed		1	na	seed treatment, general	TDM
Oats	Australia	F	15 FS	0.015 kg/100 kg seed		1	na	seed treatment, liquid	TDM
Oats	Australia	F	15 FS	0.015 kg/100 kg seed		1	na	seed treatment, liquid	TDM
Oats	Belarus	F	25 WP	0.175	0.0625	1	30	spray	TDF
Oats	Brazil	F	15 FS	0.041 kg/100 kg seeds		1	na	seed treatment, liquid	TDM
Oats	Brazil	F	25 DS	0.04 kg/100 kg seeds		1	na	seed treatment, dry	TDM
Oats	Chile	F	15 FS	0.03 kg/100 kg seeds		1	na	seed treatment, liquid	TDM
Oats	Chile	F	12.5 EC	0.0625		ns	35	spray	TDM
Oats	Ecuador	F	25 EC	0.1-0.125		ns	21	spray	TDF
Oats	Estonia	F	4.3 EC	0.026-0.034		2	20	spray	TDM
Oats	Finland	G	15 DS	0.03 kg/100 kg seeds		1	na	seed treatment	TDM
Oats	Finland	G	15 DS	0.045 kg/100 kg seeds		1	na	seed treatment	TDM
Oats	Ireland	F	18.75 FS	0.0375 g/100 kg seeds		1	na	seed treatment	TDM
Oats	Kazakhstan	F	25 WP	0.125-0.175	0.041	1	30	spray	TDF
Oats	Macedonia	F	25 WP	0.125-0.25		ns	35	spray	TDF
Oats	N. Zealand	F	5.6 FS	0.022 kg/100 kg seeds		1	ns	seed treatment	TDM
Oats	N. Zealand	F	15 DS	0.022 kg/100 kg seeds		1	ns	seed treatment	TDM
Oats	N. Zealand	F	15 FS	0.022 kg/100 kg seeds		1	ns	seed treatment	TDM
Oats	Poland	F	7.5 FS	0.03 kg/100 kg seeds		1	na	seed treatment, liquid	TDM
Oats	Poland	F	15 WS	0.03 kg/100 kg seeds		1	na	seed treatment, liquid	TDM
Oats	Russia	F	25 WP	0.125-0.175	0.041	1	30	spray	TDF
Oats	S. Africa	F	25 EC	0.125		2	28	spray	TDF
Oats	United Kingdom	F	12.5 EC	0.125		2	GS	spray	TDM
Oats	United Kingdom	F	12.5 FS	0.125		1	na	seed treatment	TDM
Oats	United Kingdom	F	25 EC	0.125		2	GS	spray	TDM
Oats	United Kingdom	F	12.5 EC	0.125		2	GS	spray	TDM
Oats	United Kingdom	F	18.75 FS	0.0375 kg/100 kg seeds		1	na	seed treatment	TDM
Oats	United Kingdom	F	18.75 FS	0.0375 kg/100 kg seeds		1	na	seed treatment	TDM
Oil palm	Indonesia	F	25 EC	0.0075 g/plant		ns	ns	drenching	TDM
Okra	Brazil	F	25 WP	0.06	0.0125	ns	30	spray	TDF
Onion	Columbia	F	30 EC	0.0525		3	21	spray	TDM
Papaws	Australia	F	25 EC		0.005	ns	7	spray	TDM
Papaya	N. Zealand	F	25 EC	0.05	0.005	ns	7	spray	TDM
Pea	India	F	25 WP	0.025		ns	25	spray	TDF

Crop	Country	F/G	Formulation ai%	Application rate			PHI (days)	Method	Active Substance
				kg ai/ha	kg ai/hL	No.			
Pea	Japan	F	5 WP		0.0025	4	1	spray	TDF
Pea	N. Zealand	F	12.5 SC	0.06		ns	14	spray	TDF
Pea	Peru	F	25 EC		0.0063	ns	15	spray	TDM
Pea	S. Africa	F	25 DC	0.03	0.078	ns	3	spray	TDM
Pea	Taiwan	F	5 WP	0.03		3	3	spray	TDM
Peach	Argentina	F	25 WP	ns	0.0125	ea 15d	21	spray	TDF
Peach	Peru	F	25 EC		0.0125	ns	15	spray	TDM
Peach	Turkey	F	5 WP		0.0025	3	14	spray	TDF
Pear	Argentina	F	25 WP	0.05	0.0025	ea 15-20d	14	spray	TDF
Pear	Japan	F	5 WP		0.005	5	30	spray	TDF
Pear	Korea	F	5 WP		0.005	ns	7	spray	TDM
Pear	Peru	F	25 DC		0.0125	ns	ns	spray	TDM
Pear	Spain	F	5 WP		0.0125	ns	15	spray	TDM
Pear	Spain	F	25 EC		0.0125	4	15	spray	TDM
Pear	United States	F	50 DF	0.28	0.015	ns	45	spray	TDF
Peppers	Algeria	F/G	5 WP		0.0075	ns	14	spray	TDM
Peppers	Cyprus	F	25 EC		0.01	3	5	spray	TDM
Peppers	Greece	F/G	50 EW		0.01	3	15	spray	TDM
Peppers	Greece	F/G	25 EC		0.01	3	15	spray	TDM
Peppers	Greece	F/G	5 WG		0.01	3	15	spray	TDM
Peppers	Italy	F/G	5 WG		0.005	ns	14	spray	TDM
Peppers	Italy	F/G	25 WP		0.005	ns	14	spray	TDM
Peppers	Italy	F/G	2.5 WP		0.005	ns	14	spray	TDM
Peppers	Italy	F/G	50 EW		0.005	ns	14	spray	TDM
Peppers	Japan	F	5 WP		0.005	4	1	spray	TDF
Peppers	Spain	F/G	5 WP		0.0125	ns	3	spray	TDM
Peppers	Spain	F/G	25 EC		0.0125	ns	3	spray	TDM
Persimmon	Japan	F	5 WP		0.005	3	30	spray	TDF
Persimmon	Japan	F	25 WP		0.01	3	30	spray	TDF
Pineapple	Brazil	F	25 WP	na	0.0075	1	na	dip	TDF
Pineapple	Costa Rica	F	50 WG		0.05	1	na	dip	TDF
Pineapple	Costa Rica	F	50 WG		0.008	1	na	pre-plant dip	TDF
Pineapple	Costa Rica	F	0.6 GR	0.012 g/plant	na	1	180	spread	TDF
Pineapple	Dominican Republic	F	25 WP		0.05	1	na	dip	TDF
Pineapple	Dominican Republic	F	25 WP		0.008	1	na	pre-plant dip	TDF
Pineapple	Ecuador	F	25 EC		0.2%	1	0	dip	TDF
Pineapple	Guatemala	F	50 WG		0.05	1	na	dip	TDF
Pineapple	Guatemala	F	53 WG		0.008	1	na	pre-plant dip	TDF
Pineapple	Guatemala	F	0.6 GR	0.012 g/plant		1	180	spread	TDF
Pineapple	Honduras	F	51 WG		0.05	1	na	dip	TDF
Pineapple	Honduras	F	54 WG		0.008	1	na	pre-plant dip	TDF
Pineapple	Honduras	F	25 WP		0.05	1	na	dip	TDF
Pineapple	Honduras	F	25 WP		0.008	1	na	pre-plant dip	TDF
Pineapple	Honduras	F	0.6 GR	0.012 g/plant		1	180	spread	TDF
Pineapple	Ivory Coast	F	25 EC		0.01	1	na	dip	TDF
Pineapple	Mexico	F	25 WP	0.125	0.075	1	50	spray	TDF
Pineapple	Philippines	F	25 WP		0.025	1	0	dip	TDF
Pineapple	S. Africa	F	25 DS		0.025	1	0	dip	TDF
Pineapple	United States	F	50 DF	0.01-0.034		1	na	dip	TDF
Pineapple	United States	F	50 DF	0.01-0.034		1	0	pre-plant dip	TDF
Plum	Belarus	F	25 WP	0.05	0.0033	2	10	spray	TDF
Pome fruit	Algeria	F	25 EC		0.005	ns	7	spray	TDM
Potato	Peru	F	25 DC		0.0063	ns	ns	spray	TDM
Pumpkin	Brazil	F	25 EC		0.01	ns	15	spray	TDM
Pumpkin	Japan	F	5 WP		0.0025	4	1	spray	TDF

Crop	Country	F/G	Formulation ai%	Application rate			PHI (days)	Method	Active Substance
				kg ai/ha	kg ai/hL	No.			
Pumpkin	Mexico	F	25 WP	0.087-0.125	0.068	ns	0	spray	TDF
Pumpkin	N. Zealand	ns	12.5 SC		0.005	4	1	spray	TDF
Pumpkin	Peru	F	25 DC		0.0125	ns	15	spray	TDM
Pumpkin	Peru	F	25 EC		0.0125	ns	15	spray	TDM
Rambutan	Thailand	F	25 WP		0.0125	ns	15	spray	TDF
Rambutan	Vietnam	F	25 EC	0.188	0.047	ns	14	spray	TDM
Raspberry	Belarus	F	25 WP	0.05	0.0125	2	30	spray	TDF
Raspberry	United States (California only)	F	50 DF	0.14		7	1	spray	TDF
Rice	Columbia	F	30 EC	0.075		ns	21	spray	TDM
Rice	Peru	F	30 EC	0.038		ns	ns	spray	TDM
Rye	Argentina	F	25 WP	0.125		ns	35	spray	TDF
Rye	Belarus	F	25 WP	0.125	0.0625	1	20	spray	TDF
Rye	Chile	F	15 WS	0.03 kg/100 kg seeds		1	na	seed treatment, liquid	TDM
Rye	Chile	F	12.5 EC	0.0625		ns	35	spray	TDM
Rye	Croatia	F	10 EC	0.1		2	42	spray	TDF
Rye	Estonia	F	7.5 FS	0.03 kg/100 kg seeds		1	na	seed treatment, liquid	TDM
Rye	Estonia	F	4.3 EC	0.026-0.034		2	20	spray	TDM
Rye	Ireland	F	18.75 FS	0.0375 g/100 kg seeds		1	na	seed treatment	TDM
Rye	Kazakhstan	F	25 WP	0.125	0.041	1	20	spray	TDF
Rye	Latvia	F	7.5 FS	0.03 kg/100 kg seeds		1	na	seed treatment, liquid	TDM
Rye	Latvia	F	EC	0.026		2	35	spray	TDM
Rye	Lithuania	F	7.5 FS	0.03 kg/100 kg seeds		1	na	seed treatment	TDM
Rye	Lithuania	F	EC	0.026		2	30	spray	TDM
Rye	Macedonia	F	25 WP	0.125-0.25		ns	35	spray	TDF
Rye	Poland	F	7.5 FS	0.03 kg/100 kg seeds		1	na	seed treatment, liquid	TDM
Rye	Poland	F	15 WS	0.03 kg/100 kg seeds		1	na	seed treatment, liquid	TDM
Rye	Poland	F	25 EC	0.125		ns	35	spray	TDM
Rye	Russia	F	25 WP	0.125	0.041	1	20	spray	TDF
Rye	Ukraine	F	15 WS	0.034 kg/100 kg seeds		1	ns	seed treatment	TDM
Rye	United Kingdom	F	18.75 FS	0.0375 kg/100 kg seeds		1	na	seed treatment	TDM
Rye	United Kingdom	F	25 EC	0.125		2	GS	spray	TDM
Rye	United Kingdom	F	12.5 EC	0.125		2	GS	spray	TDM
Rye	United Kingdom	F	12.5 EC	0.125		2	GS	spray	TDM
Soybean	India	F	25 WP		0.025	ns	25	spray	TDF
Soybean	Indonesia	F	25 EC		0.025	ns	15	spray	TDM
Soybean	Philippines	F	25 WP		0.047	ns	0	spray	TDF
Soybean	S. Africa	F	25 DC	0.156	0.39	ns	32	spray	TDM
Soybean	Thailand	F	25 WP		0.015	2	15	spray	TDF
Squash	Greece	F/G	50 EW		0.005	3	15	spray	TDM
Squash	Greece	F/G	25 EC		0.005	3	15	spray	TDM
Squash	Greece	F/G	5 WG		0.005	3	15	spray	TDM
Strawberry	Belarus	F	25 WP	0.06	0.015	2	30	spray	TDF
Strawberry	Georgia	F	25 WP	0.06	0.12	2	ns	spray	TDF
Strawberry	Peru	ns	25 DC		0.0125	ns	ns	spray	TDM
Strawberry	Russia	F	25 WP	0.06	0.02	2	ns (at flowering)	spray	TDF

Crop	Country	F/G	Formulation ai%	Application rate			PHI (days)	Method	Active Substance
				kg ai/ha	kg ai/hL	No.			
Strawberry	Spain	G	25 EC		0.0125	ns	3	spray	TDM
Strawberry	Spain	F/G	5 WP		0.0125	ns	3	spray	TDM
Sugar cane	Australia	F	25 EC		0.005	ns	ns	dip	TDM
Sugar cane	Brazil	F	25 WP		0.025	1	na	immersing before planting	TDF
Sugar cane	Brazil	F	25 CE		0.025	ns	ns	dip	TDM
Sugar cane	Japan	F	25 WP		0.05	2	75	spray	TDF
Sugar cane	N. Zealand	F	12.5 SC		0.0125	1	ns	dipping	TDF
Sugar cane	N. Zealand	F	25 EC		0.005	ns	ns	dipping	TDM
Sugar cane	Thailand	F	25 WP		0.05	1	15	dip	TDF
Sugarbeet	Belarus	F	25 WP	0.15	0.075	3	20	spray	TDF
Sugarbeet	Moldova	F	4.3 EC	0.026		2	30	spray	TDM
Sugarbeet	Spain	F	25 EC	0.125		2	35	spray	TDM
Sugarbeet	Ukraine	F	4.3 EC	0.026	0.0065	2	20	spray	TDM
Sugarbeet	United Kingdom	F	25 EC	0.125		2	14	spray	TDM
Tea	Japan	F	25 WP		0.0075	1	14	spray	TDF
Tomato	Algeria	F/G	5 WP		0.0075	ns	14	spray	TDM
Tomato	Argentina	F	25 WP	0.05	0.0125	ea 14d	7	spray	TDF
Tomato	Belarus	G	25 WP	0.5	0.062	2	10	spray	TDF
Tomato	Chile	F/G	12.5 EC	0.009-0.0125		ns	35	spray	TDM
Tomato	Cyprus	F/G	25 EC		0.01	3	5	spray	TDM
Tomato	Dominican Republic	F	7.5 EC	0.038		ns	21	spray	TDM
Tomato	El Salvador	F	7.5 EC	0.038		ns	21	spray	TDM
Tomato	Georgia	G	25 WP	0.25-1	2	2	10	spray	TDF
Tomato	Greece	F/G	50 EW		0.01	3	15	spray	TDM
Tomato	Greece	F/G	25 EC		0.01	3	15	spray	TDM
Tomato	Greece	F/G	5 WG		0.01	3	15	spray	TDM
Tomato	Guatemala	F	7.5 EC	0.038		ns	21	spray	TDM
Tomato	Honduras	F	7.5 EC	0.038		ns	21	spray	TDM
Tomato	Italy	F/G	5 WG		0.005	ns	14	spray	TDM
Tomato	Italy	F/G	25 WP		0.005	ns	14	spray	TDM
Tomato	Italy	F/G	2.5 WP		0.005	ns	14	spray	TDM
Tomato	Italy	F/G	50 EW		0.005	ns	14	spray	TDM
Tomato	Kazakhstan	G	25 WP	0.25-1	0.125	2	10	spray	TDF
Tomato	Morocco	F/G	25 EC		0.0125	3	3	spray	TDM
Tomato	Nicaragua	F	7.5 EC	0.038		ns	21	spray	TDM
Tomato	Panama	F	7.5 EC	0.038		ns	21	spray	TDM
Tomato	Peru	ns	25 DC		0.0063	ns	ns	spray	TDM
Tomato	Russia	G	25 WP	0.25-1	0.17	2	10	spray	TDF
Tomato	Spain	F/G	5 WP		0.0125	ns	3	spray	TDM
Tomato	Spain	F/G	25 EC		0.0125	4	3	spray	TDM
Tomato	Ukraine	G	25 WP	0.25-1	0.0025	2	10	spray	TDF
Vegetables	Algeria	F	25 EC		0.01	ns	3	spray	TDM
Vegetables	Chile	F	25 WP	0.125		ns	15	spray	TDF
Watermelon	Costa Rica	F	50 WG	0.25	0.125	ns	ns	spray, 25d after planting	TDF
Watermelon	Dominican Republic	F	25 EC	0.35	0.11	ns	15	spray	TDF
Watermelon	Dominican Republic	F	7.5 EC	0.038		ns	21	spray	TDM
Watermelon	El Salvador	F	25 EC	0.35	0.11	ns	15	spray	TDF
Watermelon	El Salvador	F	7.5 EC	0.038		ns	21	spray	TDM
Watermelon	Greece	F/G	50 EW		0.005	3	15	spray	TDM
Watermelon	Greece	F/G	25 EC		0.005	3	15	spray	TDM
Watermelon	Greece	F/G	5 WG		0.005	3	15	spray	TDM
Watermelon	Guatemala	F	50 WG	0.25	0.125	ns	ns	spray, 25d after planting	TDF
Watermelon	Guatemala	F	25 EC	0.35	0.11	ns	15	spray	TDF
Watermelon	Guatemala	F	7.5 EC	0.038		ns	21	spray	TDM

Crop	Country	F/G	Formulation ai%	Application rate			PHI (days)	Method	Active Substance
				kg ai/ha	kg ai/hL	No.			
Watermelon	Honduras	F	50 WG	0.25	ns	ns	ns	spray	TDF
Watermelon	Honduras	F	7.5 EC	0.038		ns	21	spray	TDM
Watermelon	Japan	F	5 WP		0.0025	4	1	spray	TDF
Watermelon	Nicaragua	F	7.5 EC	0.038		ns	21	spray	TDM
Watermelon	Panama	F	25 EC	0.35	0.11	ns	15	spray	TDF
Watermelon	Panama	F	7.5 EC	0.038		ns	21	spray	TDM
Watermelon	Peru	ns	25 DC		0.0125	ns	15	spray	TDM
Watermelon	Peru	F	25 WP		0.0063	ns	35	spray	TDF
Watermelon	Peru	F	25 EC		0.0125	ns	15	spray	TDF
Watermelon	Taiwan	F	5 WP	0.025		3	3	spray	TDF
Welsh onion	Japan	F	5 WP		0.0125	3	14	spray	TDF
Welsh onion	Korea	F	5 WP		0.005	ns	15	spray	TDM
Wheat	Argentina	F	25 WP	0.125		2	35	spray	TDF
Wheat	Australia	F	12.5 EC	0.125		ns	28	spray	TDF
Wheat	Australia	F	15 DS	0.0225 kg/100 kg seed		1	na	seed treatment, dry	TDM
Wheat	Australia	F	15 FS	0.0225 kg/100 kg seed		1	na	seed treatment, liquid	TDM
Wheat	Australia	F	15 FS	0.0225 kg/100 kg seed		1	na	seed treatment, liquid	TDM
Wheat	Belarus	F	25 WP	0.125	0.0625	2	20	spray	TDF
Wheat	Brazil	F	25 WP	0.125	0.031	2	42	spray	TDF
Wheat	Brazil	F	15 FS	0.04 kg/100 kg seeds		1	na	seed treatment, liquid	TDM
Wheat	Brazil	F	25 DS	0.04 kg/100 kg seeds		1	na	seed treatment, dry	TDM
Wheat	Brazil	F	12.5 EC	0.125		2	45	spray	TDM
Wheat	Brazil	F	25 EC	0.875 kg powdering+0.125 kg spray		ns	45	spray	TDM
Wheat	Brazil	F	25 WP	0.25		ns	45	spray	TDM
Wheat	Bulgaria	F	25 EC	0.125		1	30	spray	TDM
Wheat	Canada	F	30 WS	0.016 kg/100 kg seeds		1	na	seed treatment, liquid	TDM
Wheat	Canada	F	30 WS	0.032 kg/100 kg seeds		1	na	seed treatment, liquid	TDM
Wheat	Chile	F	25 WP	0.0625-0.125		ns	15	spray	TDF
Wheat	Chile	F	15 FS	0.03 kg/100 kg seeds		1	na	seed treatment, liquid	TDM
Wheat	Chile	F	12.5 EC	0.0625		ns	35	spray	TDM
Wheat	China	F	25 WP	0.124		2	20	spray	TDF
Wheat	China	F	25 WP	0.105		2	20	spray	TDF
Wheat	Croatia	F	10 EC	0.1		2	42	spray	TDF
Wheat	Cyprus	F	25 EC	0.125		1	35	spray	TDM
Wheat	Ecuador	F	25 EC	0.1-0.125		ns	21	spray	TDF
Wheat	Estonia	F	7.5 WS	0.03 kg/100 kg seeds		1	na	seed treatment, liquid	TDM
Wheat	Estonia	F	4.3 EC	0.026-0.034		2	20	spray	TDM
Wheat	Finland	G	15 DS	0.03 kg/100 kg seeds		1	na	seed treatment	TDM
Wheat	France	F	7.5 EC	0.075		2	28	spray	TDM
Wheat	Georgia	F	25 WP	0.25	0.33	2	20	spray	TDF
Wheat	Georgia	F	4.3 EC	0.026		2	25	spray	TDM
Wheat	Greece	F	50 EW		0.0125	1	30	spray	TDM
Wheat	Greece	F	25 EC		0.0125	1	30	spray	TDM
Wheat	Greece	F	5 WG		0.0125	1	30	spray	TDM
Wheat	India	F	25 WP			ns	25	spray	TDF
Wheat	Ireland	F	18.75 FS	0.0375 g/100 kg seeds		1	na	seed treatment	TDM
Wheat	Italy	F	5 WG	0.125		ns	30	spray	TDM
Wheat	Italy	F	25 WP	0.15		ns	30	spray	TDM

Crop	Country	F/G	Formulation ai%	Application rate			PHI (days)	Method	Active Substance
				kg ai/ha	kg ai/hL	No.			
Wheat	Italy	F	50 EW	0.125		ns	30	spray	TDM
Wheat	Italy	F	2.5 WP	0.15		ns	30	spray	TDM
Wheat	Japan	F	25 WP		0.00125	3	21	spray	TDF
Wheat	Kazakhstan	F	25 WP	0.25	0.083	2	20	spray	TDF
Wheat	Kazakhstan	F	25 WP	0.25	0.05	1	20	spray	TDF
Wheat	Latvia	G	7.5 WS	0.03 kg/100 kg seeds		1	na	seed treatment, liquid	TDM
Wheat	Latvia	F	EC	0.026		2	35	spray	TDM
Wheat	Lithuania	G	7.5 WS	0.03 kg/100 kg seeds		1	na	seed treatment	TDM
Wheat	Lithuania	F	EC	0.026		2	30	spray	TDM
Wheat	Macedonia	F	25 WP	0.125-0.25		ns	35	spray	TDF
Wheat	Mexico	F	25 WP	0.125-0.25		2	21	spray	TDF
Wheat	Mexico	F	25 DC	0.25		2	21	spray	TDM
Wheat	Moldova	F	4.3 EC	0.026		2	30	spray	TDM
Wheat	Morocco	F	25 EC	0.125		ns	15	spray	TDM
Wheat	N. Zealand	F	12.5 SC	0.125		ns	28	spray	TDF
Wheat	N. Zealand	F	50 WP	0.125		ns	28	spray	TDF
Wheat	N. Zealand	F	50 WG	0.125		ns	28	spray	TDF
Wheat	N. Zealand	F	5.6 FS	0.022 kg/100 kg seeds		1	ns	seed treatment	TDM
Wheat	N. Zealand	F	15 DS	0.022 kg/100 kg seeds		1	ns	seed treatment	TDM
Wheat	N. Zealand	F	15 FS	0.022 kg/100 kg seeds		1	ns	seed treatment	TDM
Wheat	Peru	F	25 DC		0.125	ns	ns	spray	TDM
Wheat	Poland	F	7.5 WS	0.03 kg/100 kg seeds		1	na	seed treatment, liquid	TDM
Wheat	Poland	F	15 WS	0.03 kg/100 kg seeds		1	na	seed treatment	TDM
Wheat	Poland	F	25 EC	0.125		ns	35	spray	TDM
Wheat	Russia	F	25 WP	0.125-0.25	0.041	2	20	spray	TDF
Wheat	S. Africa	F	25 EC	0.125		2	14	spray	TDF
Wheat	Serbia	F	25 WP	0.125-0.25		2	35	spray	TDF
Wheat	Spain	F	5 WP	0.125		ns	3	spray	TDM
Wheat	Spain	F	25 EC	0.125		2	15	spray	TDM
Wheat	Thailand	F	25 WP		0.05	ns	15	spray	TDF
Wheat	Turkey	F	25 EC	0.125		1	28	spray	TDF
Wheat	Ukraine	F	25 WP	0.25	0.31	2	20	spray	TDF
Wheat	Ukraine	F	4.3 EC	0.026	0.006	2	20	spray	TDM
Wheat	Ukraine	F	15 WS	0.034 kg/100 kg seeds		1	ns	seed treatment	TDM
Wheat	United Kingdom	F	25 WP	0.125		2	20	spray	TDF
Wheat	United Kingdom	F	18.75 FS	0.0375 kg/100 kg seeds		1	na	seed treatment	TDM
Wheat	United Kingdom	F	FS	0.0375 kg/100 kg seeds		1	na	seed treatment	TDM
Wheat	United Kingdom	F	25 EC	0.125		2	GS	spray	TDM
Wheat	United Kingdom	F	12.5 EC	0.125		2	GS	spray	TDM
Wheat	United Kingdom	F	12.5 EC	0.125		2	GS	spray	TDM
Wheat	Zimbabwe	F	15 DS	0.0225 kg/100 kg seed		1	na	seed treatment, slurry	TDM

Crop	Country	F/G	Formulation ai%	Application rate			PHI (days)	Method	Active Substance
				kg ai/ha	kg ai/hL	No.			
Wheat	Zimbabwe	F	15 FS	0.0225 kg/100 kg seed		1	na	seed treatment, slurry	TDM

ns - not stated on label
na - not applicable
as req. - as required
TDM – Triadimenol
GS - application according to growth stage
ea - applications each time interval necessary
TDF - Triadimefon

RESIDUES RESULTING FROM SUPERVISED TRIALS

The Meeting received information on triadimefon and triadimenol supervised trials on the following crops (Table 61).

Trials were well documented with laboratory and field reports. The former included method validation including procedural recoveries with spiking at residue levels similar to those occuring in samples from the supervised trials. Dates of analysis or duration of sample storage were also provided. Although trials included control plots, no control data are recorded in the Tables as no residues in control samples exceeded the LOQ. Residues are unadjusted for recoveries.

When residues were not detected they are shown as below the LOQ (e.g., < 0.01 mg/kg). Residues, application rates and spray concentrations have generally been rounded to two significant figures or, for residues near the LOQ, to one significant figure. Residues from the trials conducted according to maximum GAP have been used for the estimation of maximum residue levels. These results are double underlined.

Metabolism studies indicate a shift from triadimefon as main residue to triadimenol as primary metabolite. After 14 to 28 days (except for tomato) more triadimenol than triadimefon was identified in all matrices. Based on this assumption the LOQs for both analytes are handled in following manner:

PHI 0 to 28 days or tomatoes with all PHIs: LOQs for triadimefon and triadimenol are added. If the LOQ for triadimenol is higher, the LOQ for triadimefon is assumed for both analytes.

PHI > 28 days: LOQ of triadimenol is assumed for the sum of both analytes.

If only one of both analytes was reported below the LOQ, the residue levels are always added assuming a residue at the level of the LOQ.

Periods of freezer storage between sampling and analysis were recorded for all trials and were covered by the periods of the freezer storage stability studies.

Table 61. Overview of supervised residue trials

Commodity	Application	Countries	Table no.
Apples	Foliar	France, Germany, Israel, Italy, New Zealand, Spain, South Africa, United Kingdom	Table 62 (TDM)
Grapes	Foliar	Australia, Chile, France, Germany, Greece, Italy, South Africa, Spain, Turkey, United States	Table 63 (TDF) Rable 64 (TDM)
Strawberries	Foliar, glasshouse	Belgium, Italy, Netherlands, Spain	Table 65 (TDM)
Currants	Foliar	Germany, Netherlands, United Kingdom	Table 66 (TDM)

Commodity	Application	Countries	Table no.
Bananas	Foliar	Cameroon, Costa Rica, Honduras, Ivory Coast, Martinique, Puerto Rico, South Africa, USA	Table 67 (TDM)
Bananas	Spreading	Cameroon, Costa Rica, Ecuador, Ivory Coast	Table 68 (TDM)
Pineapples	Post harvest dipping	Ivory Coast, USA	Table 69 (TDF)
Sugar beets, tubers	Foliar	Germany, United Kingdom	Table 70 (TDM)
Cucumbers	Foliar, field	Australia, Israel, USA	Table 71 (TDF) Table 72 (TDM)
Cucumbers	Foliar, glasshouse	Belgium, France, Greece, Italy, Japan, Spain	Table 73 (TDF) Table 74 (TDM)
Courgettes	Foliar	Italy	Table 75 (TDM)
Melon	Foliar, field	France, Greece, Mexico, Spain, USA	Table 76 (TDF) Table 77 (TDM)
Melon	Foliar, glasshouse	Italy	Table 78 (TDM)
Watermelon	Foliar, field	Italy	Table 79 (TDM)
Watermelon	Foliar, glasshouse	Italy, Spain	Table 80 (TDM)
Peppers	Foliar, field	Australia	Table 81 (TDF)
Peppers	Foliar, glasshouse	Germany, Spain	Table 82 (TDM)
Tomatoes	Foliar, field	Australia, France, Greece, Italy, Spain	Table 83 (TDF) Table 84 (TDM)
Tomatoes	Foliar, glasshouse	Belgium, Germany, Greece, Italy, Japan, Spain	Table 85 (TDF) Table 86 (TDM)
Artichoke (globe)	Foliar, field	Italy, Spain	Table 87 (TDM)
Barley, grain	Foliar	France, Germany, Italy, Spain, United Kingdom	Table 88 (TDF) Table 89 (TDM)
Barley, grain	Seed treatment	Australia, Canada, France, Germany, United Kingdom, USA	Table 90 (TDM)
Oats, grain	Foliar	Brazil, Germany	Table 91 (TDF) Table 92 (TDM)
Oats, grain	Seed treatment	Canada, Germany, USA	Table 93 (TDM)
Rye, grain	Foliar	Germany	Table 94 (TDF) Table 95 (TDM)
Rye, grain	Seed treatment	Canada, Germany, USA	Table 96 (TDM)
Wheat, grain	Foliar	Australia, Canada, France, Germany, Hungary, Italy, New Zealand, Spain	Table 97 (TDF) Table 98 (TDM)
Wheat, grain	Seed treatment	Australia, Brazil, Canada, Germany, USA	Table 99 (TDM)
Coffee	Foliar treatment	Brazil, Guatemala	Table 100 (TDM)
Coffee	Spreading	Brazil, El Salvador, Guatemala, Mexico, South Africa	Table 101 (TDM)
Sugar beets, leaves	Foliar	Germany, United Kingdom	Table 102 (TDM)
Barley, forage	Foliar	France, Germany, Italy, Spain, United Kingdom	Table 103 (TDF) Table 104 (TDM)
Barley, forage	Seed treatment	Australia, Canada, France, Germany, United Kingdom, USA	Table 105 (TDM)
Oats, forage	Foliar	Brazil, Germany	Table 106 (TDF) Table 107 (TDM)
Oats, forage	Seed treatment	Canada, Germany, USA	Table 108 (TDM)
Rye, forage	Foliar	Germany	Table 109 (TDF) Table 110 (TDM)
Rye, forage	Seed treatment	Canada, Germany, USA	Table 111 (TDM)
Wheat, forage	Foliar	Australia, Canada, France, Germany, Hungary, Italy, New Zealand, Spain	Table 112 (TDF) Table 113 (TDM)

Commodity	Application	Countries	Table no.
Wheat, forage	Seed treatment	Australia, Brazil, Canada, Germany, USA	Table 114 (TDM)
Barley, straw	Foliar	France, Germany, Italy, Spain, United Kingdom	Table 115 (TDF) Table 116 (TDM)
Barley, straw	Seed treatment	Australia, Canada, France, Germany, United Kingdom, USA	Table 117 (TDM)
Oats, straw	Foliar	Brazil, Germany	Table 118 (TDF) Table 119 (TDM)
Oats, straw	Seed treatment	Canada, Germany, USA	Table 120 (TDM)
Rye, straw	Foliar	Germany	Table 121 (TDF) Table 122 (TDM)
Rye, straw	Seed treatment	Canada, Germany, USA	Table 123 (TDM)
Wheat, straw	Foliar	Australia, Canada, France, Germany, Hungary, Italy, New Zealand, Spain	Table 124 (TDF) Table 125 (TDM)
Wheat, straw	Seed treatment	Australia, Brazil, Canada, Germany, USA	Table 126 (TDM)

Pome fruits

Table 62. Foliar application of triadimenol on apples

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
France Pernes les Fontaines 1996 (Golden Delicious)	5 WG	0.06	0.005	4	Fruit Triadimenol:	0 14	0.09 <u>0.07</u>	Allmendinger, H., 1998a RA-2023/96
France Denis-en-Val 1996 (Reine des reinettes)	5 WG	0.06	0.005	4	Fruit Triadimenol:	0 14	0.1 <u>0.06</u>	Allmendinger, H., 1998b RA-2024/96
Germany Burscheid, Versuchsgut Höfchen 1996 (Elstar)	5 WG	0.06	0.005	4	Fruit Triadimenol:	0[a] 0 7 11 13 21	0.07 0.16 0.13 0.13 <u>0.11</u> 0.11	Allmendinger, H., 1998b RA-2024/96
Germany Monheim, Versuchsgut Laacherhof 1996 (Golden Delicious)	5 WG	0.06	0.005	4	Fruit Triadimenol:	0 14	0.17 <u>0.09</u>	Allmendinger, H., 1998b RA-2024/96
Italy Poggio Renatico, Emilia Romagna 1996 (Red Chief)	5 WG	0.058 - 0.062	0.005	4	Fruit Triadimenol:	0 14	< 0.05 < 0.<u>05</u>	Allmendinger, H., 1998a RA-2023/96
Italy Dugliolo 1996 (Granny Smith)	5 WG	0.059 - 0.062	0.005	4	Fruit Triadimenol:	0 14	0.07 < 0.<u>05</u>	Allmendinger, H., 1998a RA-2023/96
Spain St. Pere Pescador	5 WG	0.06	0.005	4	Fruit Triadimenol:	0 14	0.07 <u>0.05</u>	Allmendinger, H., 1998a

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
1996 (Suprema)								RA-2023/96
United Kingdom Thurston, Bury St. Edmunds, EFDS 1996 (Golden Delicious)	5 WG	0.06	0.005	4	Fruit Triadimenol:	 0 [a] 0 7 10 14 21	 0.08 0.14 0.13 0.13 0.14 0.1	Allmendinger, H., 1998b RA-2024/96
France Canals, Tarn et Garonne 1995 (Granny smith)	5 WG	0.044 – 0.075	0.005	4	Fruit Triadimenol:	 0 [a] 0 7 10 14 21	 0.08 0.1 < 0.05 < 0.05 < 0.05 < 0.05	Nuesslein, F., 1997 RA-2028/95
France Saint Loubes, Gironde 1995 (Golden)	5 WG	0.05 – 0.082	0.005	4	Fruit Triadimenol:	 0 [a] 0 7 10 14 21	 0.05 0.11 0.06 0.07 0.06 < 0.05	Nuesslein, F., 1997 RA-2028/95
Italy Steinmannhof 1995 (Morgenduft)	5 WG	0.05 – 0.075	0.005	4	Fruit Triadimenol:	 0 [a] 0 7 10 14 21	 0.13 0.21 0.24 0.12 0.18 0.17	Nuesslein, F., 1997 RA-2028/95
Italy Lagnasco 1995 (Golden Delicious)	5 WG	0.06	0.005	4	Fruit Triadimenol:	 0 [a] 0 7 10 14 21	 < 0.05 0.1 0.07 0.1 0.1 0.06	Nuesslein, F., 1997 RA-2028/95
Germany Burscheid, Versuchsgut Höfchen 1986 (James Grieve)	5 WG	0.038	0.0025	10	Fruit Triadimenol:	 0 7 14 21	 0.13 0.07 0.06 0.05	Anon., 1986 9484-86
Germany Monheim, Versuchsgut Laacherhof 1986 (Golden Delicious)	5 WG	0.038	0.0025	10	Fruit Triadimenol:	 0 7 14 21	 0.08 0.05 < 0.05 < 0.05	Anon., 1986a 9485-86
Germany Heidesheim 1986 (Jamba)	5 WG	0.038	0.013	10	Fruit Triadimenol:	 0 7 14 21	 0.05 < 0.05 < 0.05 < 0.05	Anon., 1986b 9486-86
Germany Heidesheim 1986 (Jamba)	50 EW	0.038	0.013	10	Fruit Triadimenol:	 0 7 14 21	 0.06 0.05 < 0.05 < 0.05	Anon., 1986c 9488-86
Germany Burscheid, Versuchsgut	50 EW	0.038	0.0025	10	Fruit Triadimenol:	 0 3	 0.08 0.08	Anon., 1985 9434-85

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Höfchen 1985 (James Grieve)						7 14 21	0.07 0.08 0.06	
Germany Monheim, Versuchsgut Laacherhof 1985 (Golden Delicious)	50 EW	0.038	0.0025	10	Fruit Triadimenol:	 0 3 7 14 21	 0.08 0.11 0.08 0.08 0.08	Anon., 1985a 9435-85
Germany Heidesheim (1985) Jamba	50 EW	0.038	0.013	10	Fruit Triadimenol:	 0 3 7 14 21	 0.1 0.08 0.06 < 0.05 < 0.05	Anon., 1986d 9436-85
Germany Heidesheim 1985 (Gloster)	50 EW	0.038	0.013	10	Fruit Triadimenol:	 0 3 7 14 21	 0.1 0.06 0.05 0.09 < 0.05	Anon., 1986e 9437-85
Germany Burscheid, Versuchsgut Höfchen 1984 (James Grieve)	50 EW	0.038	0.0025	10	Fruit Triadimenol:	 0 3 7 14 21	 0.06 0.05 0.07 0.06 0.05	Anon., 1985b 9417-84
Germany Monheim, Versuchsgut Laacherhof 1984 (Jonathan)	50 EW	0.038	0.0025	10	Fruit Triadimenol:	 0 3 7 14 21	 0.07 0.05 0.03 0.04 0.06	Anon., 1985c 9418-84
Germany Mainz 1984 (James Grieve)	50 EW	0.038	0.013	10	Fruit Triadimenol:	 0 3 7 14 21	 0.16 0.16 0.11 0.07 < 0.05	Anon., 1985d 9419-84
Germany Dannenfels 1984 (Golden Delicious)	50 EW	0.038	0.013	10	Fruit Triadimenol:	 0 3 7 14 21	 0.15 0.08 0.08 0.1 0.07	Anon., 1985e 9420-84
Israel Ayelet Hashachar 1985 (Golden Delicious)	250 EC	0.05	0.005	1	Fruit Triadimenol:	 1 8 18 32	 0.42 0.16 < 0.1 < 0.1	Adato, I.; Weissblatt, S., 1988 1030-85-C1
Israel Ayelet Hashachar 1985 (Golden Delicious)	250 EC	0.05	0.005	1	Fruit Triadimenol:	 1 8 18 32	 0.44 0.4 < 0.1 < 0.1	Adato, I.; Weissblatt, S., 1988 1030-85C2 Replicate to 1030-85-C1
Israel Ayelet Hashachar 1985 (Golden	250 EC	0.05	0.005	1	Fruit Triadimenol:	 1 8 18 32	 0.19 0.2 < 0.1 < 0.1	Adato, I.; Weissblatt, S., 1988 1030-85-C3

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Delicious)								Replicate to 1030-85-C1
Israel Ayelet Hashachar 1985 (Golden Delicious)	250 EC	0.05	0.005	1	Fruit Triadimenol:	 1 8 18 32	 0.4 0.24 < 0.1 < 0.1	Adato, I.; Weissblatt, S., 1988 1030-85-C4 Replicate to 1030-85-C1
Israel Ayelet Hashachar 1985 (Golden Delicious)	250 EC	0.1	0.01	1	Fruit Triadimenol:	 1 8 18 32	 0.37 0.22 < 0.1 < 0.1	Adato, I.; Weissblatt, S., 1988 1030-85-C5
Israel Ayelet Hashachar 1985 (Golden Delicious)	250 EC	0.1	0.01	1	Fruit Triadimenol:	 1 8 18 32	 0.32 0.23 0.5 < 0.1	Adato, I.; Weissblatt, S., 1988 1030-85-C6 Replicate to 1030-85-C5
Israel Ayelet Hashachar 1985 (Golden Delicious)	250 EC	0.1	0.01	1	Fruit Triadimenol:	 1 8 18 32	 0.46 0.42 0.25 < 0.1	Adato, I.; Weissblatt, S., 1988 1030-85-C7 Replicate to 1030-85-C5
Israel Ayelet Hashachar 1985 (Golden Delicious)	250 EC	0.1	0.01	1	Fruit Triadimenol:	 1 8 18 32	 0.72 0.28 0.26 < 0.1	Adato, I.; Weissblatt, S., 1988 1030-85-C8 Replicate to 1030-85-C5
New Zealand Stoke Nelson 1986 (Cox's Orange Pippin)	5 WG	0.05	0.0025	11	Fruit Triadimenol:	 0 3 5 7 10 14 21	 0.26 0.22 0.14 0.05 0.08 0.08 0.07	Anon., 1989 05/04/87
New Zealand Evenden Road, Hastings 1986 (Royal Gala)	5 WG	0.05	0.002	9	Fruit Triadimenol:	 1 4 10 14 21 29	 0.24 0.19 0.1 0.14 0.05 < 0.05	Anon. 1987 IG/6/86
South Africa Boskloof, Villiersdorp, Western Cape 1987 (Starking)	5 WP	0.044	0.0013	7	Fruit Triadimenol:	 0 7 14 21 28 35 42	 0.07 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05	Anon., 1989a 311/88435/E445
South Africa Boskloof, Villiersdorp, Western Cape 1987	5 WP	0.088	0.0025	7	Fruit Triadimenol:	 0 7 14 21	 0.13 0.1 0.05 0.05	Anon., 1989a 311/88435/E445

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
(Starking)						28 35 42	< 0.05 < 0.05 < 0.05	
South Africa Boskloof, Villiersdorp, Western Cape 1987 (Golden Delicious)	5 WP	0.044	0.0013	7	Fruit Triadimenol:	0 7 14 21 28 35 42	0.07 0.07 0.04 < 0.05 < 0.05 < 0.05 < 0.05	Anon., 1989b 311/88545/F115
South Africa Boskloof, Villiersdorp, Western Cape 1987 (Golden Delicious)	5 WP	0.088	0.0025	7	Fruit Triadimenol:	0 7 14 21 28 35 42	0.13 0.11 0.08 0.05 0.05 < 0.05 < 0.05	Anon., 1989b 311/88545/F115
South Africa Clever, Elgin 1983 (Golden Delicious)	5 WP	0.063	0.0025	7	Fruit Triadimenol:	0 8 16 23 30 37 45	0.25 0.13 0.05 < 0.05 < 0.05 0.09 < 0.05	Anon., 1984bf 311/88540/A17
South Africa Clever, Elgin 1983 (Golden Delicious)	5 WP	0.038	0.0015	7	Fruit Triadimenol:	0 8 16 23 30 37 45	0.13 0.14 0.05 < 0.05 < 0.05 < 0.05 < 0.05	Anon., 1984bf 311/88540/A17
South Africa Clever, Elgin 1983 (Granny Smith)	50 EW	0.063	0.0025	7	Fruit Triadimenol:	0 8 16 23 30 37 45	0.29 0.16 0.14 0.07 0.09 0.12 0.09	Anon., 1984bf 311/88540/A17
South Africa Clever, Elgin 1983 (Granny Smith)	50 EW	0.038	0.0015	7	Fruit Triadimenol:	0 8 16 23 30 37 45	0.21 0.12 0.12 0.05 < 0.05 < 0.05 < 0.05	Anon., 1984bf 311/88540/A17
United Kingdom Bury St Edmunds, Suffolk 1984 (Grenadier)	50 WP	0.17	0.0025	7	Fruit Triadimenol:	14	<u>0.08</u>	Bagnall, B. H., 1985 TCR 267

a - Sampling before last application

Berries and other small fruits

Table 63. Foliar application of triadimefon on grapes

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Chile Region Metropolitana, Chile 1998 (Red Seedless)	250 EC	0.11	0.0063	1	Bunch of grapes Triadimefon: Triadimenol: Total (calc. as TDF):	 0 22 49 64 0 22 49 64 0 22 49 64	 0.35 0.08 < 0.03 < 0.03 0.32 0.16 < 0.03 < 0.03 0.67 0.24 < 0.03 < 0.03	Anon., 1998 CHL-F-C5-014-97-T2
Chile Region Metropolitana, Chile 1998 (Red Seedless)	250 EC	0.11	0.0063	1	Bunch of grapes Triadimefon: Triadimenol: Total (calc. as TDF):	 0 22 49 64 0 22 49 64 0 22 49 64	 0.34 < 0.03 < 0.03 < 0.03 0.24 0.12 0.04 < 0.03 0.58 0.15 0.07 < 0.03	Anon., 1998a CHL-F-C5-014-97-T3
Germany Albig 1983 (Faber)	5 WP	0.025 – 0.05	0.0075	7	Berries Triadimefon: Triadimenol: Total (calc. as TDF):	 0 21 28 35 42 0 21 28 35 42 0 21 28 35 42	 0.12 0.03 0.05 0.02 < 0.02 0.29 0.15 0.23 0.13 0.09 0.41 0.18 <u>0.28</u> 0.25 0.11	Anon., 1984k 9024-83
Germany Albig 1983 (Silvaner)	5 WP	0.025 – 0.05	0.0075	8	Berries Triadimefon: Triadimenol:	 0 21 28 35 42 0 21 28 35 42	 0.08 < 0.02 < 0.02 < 0.02 < 0.02 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05	Anon., 1984l 9028-83

Location Year (variety)	Form	Application kg ai/ha	kg ai/hL	No	Analysis Sample	PHI	Residues	Reference, Report No.
					Total (calc. as TDF):	0 21 28 35 42	0.13 < 0.04 < 0.04 < 0.05 < 0.05	
Germany Albig 1983 (Silvaner)	5 WP	0.025 – 0.05	0.0075	8	Berries Triadimefon: Triadimenol: Total (calc. as TDF):	 0 21 28 35 42 0 21 28 35 42 0 21 28 35 42	 0.14 0.04 < 0.02 < 0.02 < 0.02 0.06 0.08 < 0.05 < 0.05 < 0.05 0.2 0.12 < 0.04 < 0.05 < 0.05	Anon., 1984m 9038-83
Germany Wiesloch 1983 (Müller-Thurgau)	5 WP	0.049	0.0075	7	Bunch of grapes Triadimefon: Triadimenol: Total (calc. as TDF):	 35 42 35 42 35 42	 < 0.02 < 0.02 0.07 0.06 0.09 0.08	Anon., 1984n 9032-83
Germany Mettenheim 1983 (Riesling)	5 WP	0.03 – 0.045	0.0025	8	Bunch of grapes Triadimefon: Triadimenol: Total (calc. as TDF):	 35 55 35 55 35 55	 < 0.02 < 0.02 < 0.05 < 0.05 < 0.05 < 0.05	Anon., 1984o 9033-83
Germany Nussdorf 1983 (Faber)	5 WP	0.045	0.0075	7	Bunch of grapes Triadimefon: Triadimenol: Total (calc. as TDF):	 37 56 37 56 37 56	 < 0.02 < 0.02 0.13 0.19 0.15 0.21	Anon., 1984p 9034-83
Germany Wiesloch 1983 (Müller-Thurgau)	5 WP	0.049	0.0075	7	Bunch of grapes Triadimefon: Triadimenol: Total (calc. as TDF):	 35 42 35 42 35 42	 < 0.02 < 0.02 0.05 < 0.05 0.07 < 0.05	Anon., 1984q 9094-83

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Germany Mettenheim 1983 (Riesling)	5 WP	0.03 – 0.045	0.0025	8	Bunch of grapes Triadimefon:	35	< 0.02	Anon., 1984r 9095-83
						55	< 0.02	
					Triadimenol:	35	< 0.05	
						55	< 0.05	
					Total (calc. as TDF):	35	< 0.05	
						55	< 0.05	
Germany Nussdorf 1983 (Faber)	5 WP	0.045	0.0075	7	Bunch of grapes Triadimefon:	37	< 0.02	Anon., 1984s 9096-83
						56	< 0.02	
					Triadimenol:	37	0.13	
						56	0.08	
					Total (calc. as TDF):	37	0.15	
						56	0.1	
Germany Albig 1981 (Silvaner)	5 WP	0.13	0.0063	3	Bunch of grapes Triadimefon:	0	1.2	Anon., 1982g 9014-81
						14	0.49	
						28	0.19	
						35	0.08	
						42	0.02	
					Triadimenol:	0	0.39	
						14	0.45	
						28	0.24	
						35	0.13	
						42	0.07	
					Total (calc. as TDF):	0	1.6	
						14	0.94	
						28	0.43	
						35	0.21	
						42	0.1	
Germany Albig 1981 (Silvaner)	5 WP	0.025 – 0.05	0.0075	8	Bunch of grapes Triadimefon:	0	0.1	Anon., 1982h 9015-81
						14	0.03	
						28	< 0.02	
						35	0.02	
						42	< 0.02	
					Triadimenol:	0	0.06	
						14	0.04	
						28	< 0.05	
						35	< 0.05	
						42	< 0.05	
					Total (calc. as TDF):	0	0.16	
						14	0.07	
						28	< 0.04	
						35	0.07	
						42	< 0.05	
Germany Dienheim 1981 (Faber)	5 WP	0.025 – 0.05	0.0075	8	Bunch of grapes Triadimefon:	0	0.38	Anon., 1983a 9016-81
						14	0.13	
						28	0.08	
						35	0.05	
						42	0.04	
					Triadimenol:	0	2.3	
						14	1.6	
						28	1.6	

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
						35	1.2	
						42	1.3	
					Total (calc. as TDF):	0	2.7	
						14	1.7	
						28	1.7	
						35	1.3	
						42	1.4	
Germany Albig	5 WP	0.025 – 0.05	0.0025	8	Bunch of grapes			Anon., 1982i
					Triadimefon:	0	0.1	
1981 (Silvaner)						14	0.1	9000-81
						28	0.03	
						35	0.03	
						42	0.03	
					Triadimenol:	0	0.06	
						14	0.14	
						28	0.05	
						35	0.06	
						42	0.06	
					Total (calc. as TDF):	0	0.16	
						14	0.24	
						28	0.08	
						35	0.09	
						42	0.09	
Germany Dienheim	5 WP	0.025 – 0.05	0.0025	8	Bunch of grapes			Anon., 1983b
					Triadimefon:	0	0.35	
1981 (Faber)						14	0.1	9001-81
						28	0.09	
						35	0.08	
						42	0.07	
					Triadimenol:	0	2.9	
						14	2.7	
						28	2.8	
						35	3.1	
						42	2.9	
					Total (calc. as TDF):	0	3.3	
						14	2.8	
						28	2.9	
						35	3.2	
						42	3.0	
Germany Albig	5 WP	0.13	0.0063	3	Bunch of grapes			Anon., 1980
					Triadimefon:	0	0.57	
1980 (Silvaner-Rebe)						14	0.15	9000/80
						28	0.04	
						35	0.04	
						42	< 0.02	
					Triadimenol:	0	0.59	
						14	0.49	
						28	0.17	
						35	0.13	
						42	< 0.05	
					Total (calc. as TDF):	0	1.1	
						14	0.64	
						28	0.21	
						35	0.17	
						42	< 0.05	

Location Year (variety)	Form	Application kg ai/ha	Application kg ai/hL	Application No	Analysis Sample	Analysis PHI	Analysis Residues	Reference, Report No.
Germany Wies-Oppenheim	5 WP	0.13	0.0063	3	Bunch of grapes			Anon., 1981
					Triadimefon:	0	0.53	
						14	0.1	9001-80
1980						28	0.03	
(Ortega)						35	0.02	
					Triadimenol:	0	2	
						14	1.4	
						28	0.66	
						35	0.49	
					Total (calc. as TDF):	0	2.5	
						14	1.5	
						28	0.69	
						35	0.51	
Germany Dirmstein/Pfalz	5 WP	0.13	0.0063	3	Bunch of grapes			Anon., 1980a
					Triadimefon:	0	0.53	
1980						14	0.05	9002/80
(Riesling)						28	0.05	
						35	0.02	
						42	0.03	
					Triadimenol:	0	0.31	
						14	0.35	
						28	0.28	
						35	0.18	
						42	0.16	
					Total (calc. as TDF):	0	0.84	
						14	0.4	
						28	0.33	
						35	0.2	
						42	0.19	
Germany Dienheim	5 WG	0.025 – 0.05	0.0025	8	Bunch of grapes			Anon., 1980b
					Triadimefon:	0	0.08	
1979						14	< 0.02	9027/79
(Faber-Rebe)						28	< 0.02	
						35	< 0.02	
						42	< 0.02	
					Triadimenol:	0	0.38	
						14	0.22	
						28	0.23	
						35	0.2	
						42	0.14	
					Total (calc. as TDF):	0	0.46	
						14	0.24	
						28	0.25	
						35	0.22	
						42	0.16	
South Africa Nietvoorbij, Stellenbosch	250 EC	0.094	0.0063	6	Bunch of grapes			Anon., 1986f
					Triadimefon:	0	0.14	
						3	0.1	311/88948/C196
1985						7	0.05	
(Chenin Blanc)						10	< 0.05	
						14	< 0.05	
						21	0.06	
						28	< 0.05	
						35	< 0.05	
					Triadimenol:	0	0.08	
						3	0.07	
						7	< 0.05	

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
						10	< 0.05	
						14	< 0.05	
						21	< 0.05	
						28	< 0.05	
						35	< 0.05	
					Total (calc. as TDF):	0	0.22	
						3	0.17	
						7	0.1	
						10	< 0.1	
						14	< 0.1	
						21	0.11	
						28	< 0.1	
						35	< 0.05	
South Africa Paarl, Vergelegen 1985 (Barlinka)	250 EC	0.094	0.0063	6	Bunch of grapes Triadimefon:	0	< 0.05	Anon., 1986f 311/88948/C196
						3	< 0.05	
						7	< 0.05	
						10	< 0.05	
						14	< 0.05	
						21	< 0.05	
						28	< 0.05	
						35	< 0.05	
					Triadimenol:	0	0.2	
						3	0.31	
						7	0.31	
						10	0.29	
						14	0.28	
						21	0.19	
						28	0.15	
						35	0.21	
					Total (calc. as TDF):	0	0.25	
						3	0.36	
						7	0.36	
						10	0.34	
						14	0.33	
						21	0.24	
						28	0.2	
						35	0.26	
South Africa Paarl 1984 (Balinka)	250 EC	0.094	0.0063	1	Bunch of grapes Triadimefon:	0	0.41	Anon., 1984t 311/88563/A43
						1	0.07	
						3	< 0.05	
						5	< 0.05	
						7	< 0.05	
						10	< 0.05	
						14	< 0.05	
					Triadimenol:	0	0.27	
						1	0.29	
						3	0.26	
						5	0.22	
						7	0.2	
						10	0.29	
						14	0.32	
					Total (calc. as TDF):	0	0.68	
						1	0.36	
						3	0.31	
						5	0.27	
						7	0.25	
						10	0.34	

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
						14	0.37	
South Africa Paarl 1984 (Waltham Cross)	250 EC	0.094	0.0063	6	Bunch of grapes Triadimefon: Triadimenol: Total (calc. as TDF):	 0 1 3 5 7 10 14 21 0 1 3 5 7 10 14 21 0 1 3 5 7 10 14 21	 0.12 0.08 0.06 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 0.38 0.33 0.31 0.22 0.22 0.19 0.12 < 0.05 0.5 0.41 0.37 0.27 0.27 0.24 0.17 < 0.05	Anon., 1986g 311/88737/B141
USA Wilsonville, Oregon 1989 (Grenache)	50 WP	0.21	0.022	4	Bunch of grapes Triadimefon: Triadimenol: Total (calc. as TDF): KWG 0519 hydroxy: KWG 1323:	 0 14 0 14 0 14 0 14 0 14	 0.17 0.1 0.2 0.17 0.37 0.27 0.04 < 0.01 0.04 0.01	Williams, B. B., 1991b 100122
USA Sunnyside, Washington 1989 (Muscat)	50 WP	0.21	0.022	4	Bunch of grapes Triadimefon: Triadimenol: Total (calc. as TDF): KWG 0519 hydroxy:	 0 7 14 21 0 7 14 21 0 7 14 21 0 7 14 21	 1.3 0.17 0.29 0.38 0.3 0.15 0.3 0.4 1.6 0.32 0.59 0.78 < 0.01 0.01 < 0.01 0.01	Williams, B. B., 1991b 100122

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
					KWG 1323:	0 7 14 21	0.01 0.01 < 0.01 0.01	
USA Davis, California 1989 (Thompson Seedless)	50 WP	0.21	0.045	4	Bunch of grapes Triadimefon: Triadimenol: Total (calc. as TDF): KWG 0519 hydroxy: KWG 1323:	 0 14 21 28 0 14 21 28 0 14 21 28 0 14 21 28 0 14 21 28	 0.51 0.07 0.03 0.02 0.04 0.01 < 0.01 0.02 0.55 0.08 0.04 0.04 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 0.01 < 0.01	Williams, B. B., 1991b 100122
USA Kingsburg, California 1989 (Thompson Seedless)	50 WP	0.21	0.0075	4	Bunch of grapes Triadimefon: Triadimenol: Total (calc. as TDF): KWG 0519 hydroxy: KWG 1323:	 0 14 21 28 0 14 21 28 0 14 21 28 0 14 21 28 0 14 21 28	 0.11 0.02 0.02 0.02 0.05 < 0.01 < 0.01 0.01 0.16 0.03 0.03 0.03 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01	Williams, B. B., 1991b 100122
USA Calistoga, California 1989 (Zinfandel)	50 WP	0.21	0.014	4	Bunch of grapes Triadimefon: Triadimenol:	 0 14 21 28 0 14 21 28	 0.22 0.12 0.17 0.05 0.33 0.45 0.61 0.24	Williams, B. B., 1991b 100122

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
					Total (calc. as TDF):	0 14 21 28	0.55 0.57 0.78 0.29	
					KWG 0519 hydroxy:	0 14 21 28	< 0.01 0.01 < 0.01 0.01	
					KWG 1323:	0 14 21 28	0.02 < 0.01 < 0.01 < 0.01	
USA Phelps, New York 1989 (Catawba)	50 WP	0.21	0.022	4	Bunch of grapes Triadimefon:	 0 14 21 28	 0.77 0.21 0.15 0.11	Williams, B. B., 1991b 100122
					Triadimenol:	0 14 21 28	0.3 0.38 0.39 0.3	
					Total (calc. as TDF):	0 14 21 28	1.1 0.59 0.54 0.41	
					KWG 0519 hydroxy:	0 14 21 28	0.02 0.02 0.01 < 0.01	
					KWG 1323:	0 14 21 28	0.03 0.03 0.01 0.01	
USA Fennville, Michigan 1989 (Concord)	50 WP	0.21	0.011	4	Bunch of grapes Triadimefon:	 0 14 21 28	 0.15 0.02 0.02 0.02	Williams, B. B., 1991b 100122
					Triadimenol:	0 14 21 28	0.16 0.13 0.11 0.13	
					Total (calc. as TDF):	0 14 21 28	0.31 0.15 0.13 0.15	
					KWG 0519 hydroxy:	0 14 21 28	< 0.01 < 0.01 < 0.01 < 0.01	
					KWG 1323:	0 14 21 28	0.01 < 0.01 0.01 0.01	

TDF – triadimefon

Table 64. Foliar application of triadimenol on grapes

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Australia Irymple 1992 (Sultana)	250 EC	0.038	0.0025	1	Bunch of grapes Triadimenol:	 0 1 3 7 14 22 35	 1.6 1.5 1.2 0.6 0.2 0.13 0.04	MacGregor, A., 1997 MJG 038/97
Australia Irymple 1993 (Sultana)	250 EC	0.038	0.0025	1	Bunch of grapes Triadimenol:	 0 1 3 7 14 21 28	. 0.22 0.18 0.12 0.05 0.04 < 0.03 < 0.03	MacGregor, A., 1997 MJG 038/97
Australia Nuriootpa, S.A. 1992 (Cabernet Sauvignon LC 10)	250 EC	0.025	0.0042	6	Bunch of grapes Triadimenol:	 0 1 3 5 7 14 21 28	 0.03 < 0.03 0.04 0.04 0.03 < 0.03 < 0.03 < 0.03	MacGregor, A., 1997 MJG 038/97
Australia Nuriootpa, S.A. 1992 (Cabernet Sauvignon LC 10)	250 EC	0.05	0.0083	6	Bunch of grapes Triadimenol:	 28	 0.03	MacGregor, A., 1997 MJG 038/97
Australia Pewsey Vale, Angaston, S.A. 1982 (Crouchen)	250 EC	0.03	0.0025	5	Bunch of grapes Triadimenol:	 1 5 9 15 22	 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05	Anon., 1983c 13/83
Australia Pewsey Vale, Angaston, S.A. 1982 (Crouchen)	250 EC	0.075	0.0063	5	Bunch of grapes Triadimenol:	 1 5 9 15 22	 0.07 < 0.05 < 0.05 < 0.05 < 0.05	Anon., 1983c 13/83
France St. Andiol 1996 (Muscat de Hambourg)	250 EC	0.038 – 0.063	0.038 – 0.063	4	Bunch of grapes Triadimenol: Berries Triadimenol:	 0 [a] 0 7 14 21 7	 0.02 0.09 0.04 0.04 0.02 0.03	Heinemann, O.; Allmendinger, H., 1998 RA-2025/96
France Laudun 1995 (Clairette)	250 EC	0.038 – 0.063	0.038 – 0.063	4	Bunch of grapes Triadimenol: Berries Triadimenol:	 0 [a] 0 7 14 21 28 7	 < 0.02 0.05 0.03 0.02 < 0.02 0.1 0.03	Nuesslein, F., 1996a RA-2023/95

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
France Vinon 1995 (Pinot Noir)	250 EC	0.019	0.019	3	Bunch of grapes Triadimenol:	0 [a] 0 3 7 10 14	0.02 0.04 0.04 0.04 0.03 0.03	Allmendinger, H., 1997a RA-2090/95
France Brinay 1994 (Sauvignon)	250 EC	0.019	0.019	3	Bunch of grapes Triadimenol:	0 14	0.13 0.09	Allmendinger, H., 1997a RA-2090/95
France Sorgues 1993 (Clairette)	300 EC	0.019	0.023	3	Bunch of grapes Triadimenol:	0 [a] 0 7 14 21	< 0.02 0.03 0.02 < 0.02 < 0.02	Bachmann, J., 1994d RA-2084/93
France Sorgues 1993 (Cinsault)	300 EC	0.014 – 0.015	0.023	3	Bunch of grapes Triadimenol:	0 [a] 0 7 14 25	< 0.02 < 0.02 < 0.02 < 0.02 < 0.02	Bachmann, J., 1994d RA-2084/93
France Pezenas 1988 (Servant)	97.15 DP	0.038		3	Bunch of grapes Triadimenol:	12	< 0.02	Anon., 1989c 0440-88
France Montagnac 1988 (Terret)	97.15 DP	0.038		1	Bunch of grapes Triadimenol:	14	< 0.02	Anon., 1989c 0439-88
Germany Maikammer 1993 (Spätburgunder)	5 WG	0.015 – 0.045	0.0075	8	Bunch of grapes Triadimenol:	-1 0 14 21 28 35	0.06 0.13 0.07 0.07 0.07 0.06	Bachmann, J., 1995 Ra-2015/93
Germany Albig 1993 (Faber)	5 WG	0.02 – 0.045	0.0075	8	Bunch of grapes Triadimenol:	-1 0 14 21 28 35	0.07 0.12 0.1 0.09 0.05 0.05	Bachmann, J., 1995 Ra-2015/93
Germany Albig 1993 (Faber)	5 WG	0.018 – 0.045	0.0025	8	Bunch of grapes Triadimenol:	-1 0 14 21 28 35	0.06 0.1 0.08 0.07 0.06 0.05	Bachmann, J., 1995 Ra-2015/93
Germany Maikammer 1993 (Spätburgunder)	5 WG	0.038 – 0.1	0.019	3	Bunch of grapes Triadimenol:	-1 0 14 28 42 56 63	0.05 0.17 0.06 0.05 0.04 0.04 0.04	Bachmann, J., 1995 Ra-2015/93

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Germany Albig 1993 (Faber)	5 WG	0.047 – 0.1	0.019	3	Bunch of grapes Triadimenol:	0 [a] 0 14 28 42 56	0.04 0.19 0.09 0.07 0.06 0.05	Bachmann, J., 1995 Ra-2015/93
Germany Albig 1993 (Faber)	5 WG	0.044 – 0.1	0.0063	3	Bunch of grapes Triadimenol:	0 [a] 0 14 28 42 56	0.02 0.09 0.07 0.06 0.04 0.04	Bachmann, J., 1995 Ra-2015/93
Germany 1986 (Müller-Thurgau)	5 WG	0.02 – 0.045	0.0025	8	Bunch of grapes Triadimenol:	0 14 28 35 42	0.21 0.08 < 0.05 < 0.05 < 0.05	Anon., 1987a 9480-86
Germany St. Martin 1986 (Spätburgunder)	5 WG	0.02 – 0.045	0.0025	8	Bunch of grapes Triadimenol:	0 14 28 35 42	0.23 0.08 < 0.05 < 0.05 < 0.05	Anon., 1987b 9481-86
Germany Albig 1986 (Müller-Thurgau)	5 WG	0.02 – 0.045	0.0075	8	Bunch of grapes Triadimenol:	0 14 28 35 42	< 0.05 < 0.05 < 0.05 < 0.05 < 0.05	Anon., 1987c 9482-96
Germany Albig 1986 (Portugieser)	5 WG	0.02 – 0.045	0.0075	8	Bunch of grapes Triadimenol:	0 14 28 35 42	0.1 < 0.05 < 0.05 < 0.05 < 0.05	Anon., 1987d 9483-86
Germany Maikammer 1986 (Müller-Thurgau)	50 EW	0.02 – 0.045	0.0025	8	Bunch of grapes Triadimenol:	0 14 28 35 42	0.28 0.12 < 0.05 < 0.05 < 0.05	Anon., 1987e 9487-86
Germany Albig 1985 (Huxel-Rebe)	50 EW	0.038	0.0025	8	Bunch of grapes Triadimenol:	0 14 28 35 42	0.15 0.09 0.09 0.06 < 0.05	Anon., 1986h 9430-85
Germany St. Martin 1985 (Spätburgunder)	50 EW	0.015 – 0.038	0.0025	8	Bunch of grapes Triadimenol:	0 14 28 35 42	0.25 0.1 0.15 0.07 0.06	Anon., 1986i 9431-85
Germany Löf 1985 (Müller-Thurgau)	50 EW	0.038	0.01	8	Bunch of grapes Triadimenol:	0 14 28 35 42	0.7 0.17 0.11 0.08 0.05	Anon., 1986j 9432-85
Germany St. Martin	50 EW	0.015 – 0.038	0.01	8	Bunch of grapes Triadimenol:	0 14	0.24 0.16	Anon., 1986k 9433-85

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
1985 (Spätburgunder)						28 35 42	0.09 0.12 0.11	
Germany Kirrweiler/Pfalz 1984 (Müller-Thurgau)	50 EW	0.02 – 0.038	0.0025	8	Bunch of grapes Triadimenol:	 0 14 28 35 42	 0.02 0.03 0.07 0.07 0.07	Anon., 1985f 9413-84
Germany St. Martin 1984 (Spätburgunder)	50 EW	0.02 – 0.038	0.0025	8	Bunch of grapes Triadimenol:	 0 14 28 35 42	 0.3 0.1 0.1 0.09 0.09	Anon., 1985g 9414-84
Germany Dienheim 1984 (Faber)	50 EW	0.013 – 0.045	0.0025 – 0.0075	8	Bunch of grapes Triadimenol:	 0 14 28 35 42	 0.5 0.7 0.2 0.2 0.2	Anon., 1985h 9415-84
Germany Albig 1984 (Portugieser)	50 EW	0.013 – 0.045	0.0025 – 0.0075	8	Bunch of grapes Triadimenol:	 0 14 28 35 42	 0.3 0.1 0.05 0.07 0.05	Anon., 1985i 9416-84
Greece Ano Diminio - Korinthias 1995 (Sultanina)	250 EC	0.038 – 0.063	0.0048 – 0.0078	4	Bunch of grapes Triadimenol: Berries Triadimenol:	 0 3 7 14 7	 0.15 0.17 0.19 0.11 0.06	Nuesslein, F., 1996a RA-2023/95
Italy Capriata d'Orba 1996 (Barbera)	250 EC	0.038 – 0.063	0.0038 – 0.0063	4	Bunch of grapes Triadimenol: Berries Triadimenol:	 0 7 14 21 7	 0.06 0.05 0.05 0.04 0.04	Heinemann, O.; Allmendinger, H., 1998 RA-2025/96
Italy Borgo Piave 1995 (Trebbiano Toscana)	250 EC	0.038 – 0.063	0.0038 – 0.0063	4	Bunch of grapes Triadimenol: Berries Triadimenol:	 0 [a] 0 3 7 14 7	 0.04 0.18 0.11 0.10 0.06 0.07	Nuesslein, F., 1996a RA-2023/95
Israel Givat Ada 1985 (Carignan)	250 EC	0.05	0.0025	2	Bunch of grapes Triadimenol:	 1 5 11	 0.26 0.2 < 0.1	Adato, I.; Weissblatt, S., 1988 1030-85-B1
Israel Givat Ada 1985 (Carignan)	250 EC	0.05	0.0025	2	Bunch of grapes Triadimenol:	 1 5 11	 0.58 0.4 0.2	Adato, I.; Weissblatt, S., 1988 1030-85-B02 Replicate to 1030-85-B01
Israel Givat Ada	250 EC	0.05	0.0025	2	Bunch of grapes Triadimenol:	 1 5	 0.29 0.33	Adato, I.; Weissblatt, S., 1988

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
1985 (Carignan)						11	0.13	1030-85-B03 Replicate to 1030-85-B01
Israel Givat Ada 1985 (Carignan)	250 EC	0.05	0.0025	2	Bunch of grapes Triadimenol:	1 5 11	0.5 0.3 0.11	Adato, I.; Weissblatt, S., 1988 1030-85-B04 Replicate to 1030-85-B01
Israel Givat Ada 1985 (Carignan)	250 EC	0.05	0.0025	2	Bunch of grapes Triadimenol:	1 5 11	1.4 0.54 0.13	Adato, I.; Weissblatt, S., 1988 1030-85-B05 Replicate to 1030-85-B01
Israel Givat Ada 1985 (Carignan)	250 EC	0.1	0.005	2	Bunch of grapes Triadimenol:	1 5 11	0.85 0.25 0.5	Adato, I.; Weissblatt, S., 1988 1030-85-B06
Israel Givat Ada 1985 (Carignan)	250 EC	0.1	0.005	2	Bunch of grapes Triadimenol:	1 5 11	0.16 0.5 <u>0.6</u>	Adato, I.; Weissblatt, S., 1988 1030-85-B07 Replicate to 1030-85-B06
Israel Givat Ada 1985 (Carignan)	250 EC	0.1	0.005	2	Bunch of grapes Triadimenol:	1 5 11	0.3 0.37 0.28	Adato, I.; Weissblatt, S., 1988 1030-85-B08 Replicate to 1030-85-B06
Israel Givat Ada 1985 (Carignan)	250 EC	0.1	0.005	2	Bunch of grapes Triadimenol:	1 5 11	0.54 0.39 0.2	Adato, I.; Weissblatt, S., 1988 1030-85-B09 Replicate to 1030-85-B06
Israel Givat Ada 1985 (Carignan)	250 EC	0.1	0.005	2	Bunch of grapes Triadimenol:	1 5 11	0.56 0.19 0.1	Adato, I.; Weissblatt, S., 1988 1030-85-B10 Replicate to 1030-85-B06
Italy Ripa Teatina, Abruzzo 1996 (Alfonse de la Valle)	300 EC	0.03	0.003	3	Berries Triadimenol:	0 14	0.14 0.04	Allmendinger, H., 1997b RA-2090/96
Italy Mazzarrone (CT), Sicily 1996	300 EC	0.03	0.003	3	Berries Triadimenol:	0 [a] 0 3 7	0.02 0.08 0.05 0.03	Allmendinger, H., 1997b RA-2090/96

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
(Italia)						10 14	0.03 0.03	
Italy Veneto, Italy 1996 (Cabernet)	300 EC	0.03	0.003	3	Bunch of grapes Triadimenol:	 0 14	 0.03 < 0.02	Allmendinger, H., 1997b RA-2090/96
Italy Emilia Romagna, Italy 1996 (Trebbiano)	300 EC	0.03	0.003	3	Bunch of grapes Triadimenol:	 0 [a] 0 3 7 10 14	 0.03 0.08 0.04 0.03 0.03 0.02	Allmendinger, H., 1997b RA-2090/96
Italy Veneto, Villanova 1996 (Verduzzo Trevigiano)	300 EC	0.03	0.003	3	Bunch of grapes Triadimenol:	 0 14	 0.07 < 0.02	Allmendinger, H., 1997b RA-2090/96
Italy Emilia Romagna 1996 (Sangiovese)	300 EC	0.03	0.003	3	Bunch of grapes Triadimenol:	 0 [a] 0 3 7 10 14	 < 0.02 0.08 0.03 0.02 0.02 < 0.02	Allmendinger, H., 1997b RA-2090/96
Italy Ripa Teatina Chieti 1995 (Pergolone)	300 EC	0.03	0.003	3	Berries Triadimenol:	 0 [a] 0 3 7 10 14	 0.03 0.09 0.06 0.04 0.03 0.02	Allmendinger, H., 1995 RA-2091/95
Italy S. Cosma di Monselice 1995 (Cabernet)	300 EC	0.03	0.003	3	Bunch of grapes Triadimenol:	 0 14	 0.1 0.02	Allmendinger, H., 1995 RA-2091/95
Morocco Benslimane 1986 (Muscat italia)	5 WP	0.025 – 0.05	0.005	7	Bunch of grapes Triadimenol:	 30	 0.05	Anon., 1987f 9440-86
New Zealand Hope, Nelson 1988 (Beaujolais)	5 WG	0.025	0.0025	2	Bunch of grapes Triadimenol:	 3 7 10 14 21 28	 0.26 0.18 0.1 0.07 < 0.05 < 0.05	Anon., 1988 CF/25/87
New Zealand Hope, Nelson 1988 (Rhine Riesling)	5 WG	0.025	0.0025	2	Bunch of grapes Triadimenol:	 3 7 10 14 21 28	 0.24 0.16 0.11 0.06 0.06 < 0.05	Anon., 1988a NF/26/87

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
New Zealand Renwick, Marlborough 1986 (Palamino)	5 WG	0.05	0.005	5	Bunch of grapes Triadimenol:	0 3 5 7 10 14 21	1.6 1.2 1.3 1.0 0.96 1.1 1.1	Anon., 1987g NF/05/87
South Africa Talana, Stellenbosch 1990 (Cabernet Sauvignon)	375 EC	0.075	0.015	7	Bunch of grapes Triadimenol:	0 7 14 21 28 35	1.5 0.99 1.2 0.76 0.79 0.6	Anon., 1991 311/88086/H187
South Africa Talana, Stellenbosch 1990 (Cabernet Sauvignon)	375 EC	0.05	0.01	10	Bunch of grapes Triadimenol:	0 7 14 21 28 35	1.2 0.96 0.81 0.79 0.76 0.81	Anon., 1991 311/88086/H187
South Africa Talana, Stellenbosch 1990 (Cabernet Sauvignon)	375 EC	0.038	0.0075	7	Bunch of grapes Triadimenol:	0 7 14 21 28 35	0.53 0.57 0.58 0.36 0.25 0.32	Anon., 1991 311/88086/H187
South Africa Talana, Stellenbosch 1990 (Cabernet Sauvignon)	375 EC	0.025	0.005	10	Bunch of grapes Triadimenol:	0 7 14 21 28 35	0.84 0.57 0.51 0.37 0.35 0.32	Anon., 1991 311/88086/H187
South Africa Talana, Stellenbosch 1990 (Clairette Blanche)	375 EC	0.038	0.0075	7	Bunch of grapes Triadimenol:	0 7 14 21 28	0.4 0.44 0.32 0.26 0.21	Anon., 1991a 311/88086/H188
South Africa Talana, Stellenbosch 1990 (Clairette Blanche)	375 EC	0.025	0.005	10	Bunch of grapes Triadimenol:	0 7 14 21 28	0.48 0.49 0.39 0.31 0.3	Anon., 1991a 311/88086/H188
South Africa Roelanda, Agter Paarl 1989 (Chenin Blanc)	375 EC	0.025	0.0025	7	Bunch of grapes Triadimenol:	0 3 7 10 14 21 28	0.34 0.18 0.17 0.14 0.21 0.1 0.11	Anon., 1990 311/88866/G299
South Africa Roelanda, Agter Paarl 1989 (Chenin Blanc)	375 EC	0.05	0.005	7	Bunch of grapes Triadimenol:	0 3 7 10 14	0.54 0.53 0.29 0.32 0.38	Anon., 1990 311/88866/G299

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
						21 28	0.22 0.24	
South Africa Roelanda, Agter Paarl 1989 (Waltham Cross)	375 EC	0.025	0.0025	7	Bunch of grapes Triadimenol:	 0 3 7 10 14 21 28	 0.34 0.16 0.15 0.15 < 0.05 < 0.05 < 0.05	Anon., 1990a 311/88870/G303
South Africa Roelanda, Agter Paarl 1989 (Waltham Cross)	375 EC	0.05	0.005	7	Bunch of grapes Triadimenol:	 0 3 7 10 14 21 28	 0.4 0.4 0.26 0.38 0.46 0.16 0.12	Anon., 1990a 311/88870/G303
South Africa Die Baken, Wellington Africa, West 1989 (Sultanina)	375 EC	0.05	0.005	8	Bunch of grapes Triadimenol:	 0 10 14	 0.32 0.07 0.09	Anon., 1991b 311/88872/G305
South Africa Die Baken, Wellington Africa, West 1989 (Sultanina)	375 EC	0.05	0.005	8	Bunch of grapes Triadimenol:	 0 10 14	 0.64 0.27 0.18	Anon., 1991b 311/88872/G305
South Africa Die Baken, Wellington 1988 (Waltham Cross)	250 EC	0.05	0.005	8	Bunch of grapes Triadimenol:	 14	 < 0.02	Anon., 1990b 311/88670/F358
South Africa Die Baken, Wellington 1988 (Waltham Cross)	250 EC	0.05	0.01	8	Bunch of grapes Triadimenol:	 0 3 7 14	 0.09 0.1 0.08 0.05	Anon., 1990b 311/88670/F358
South Africa Stellenbosch 1987 (Cabernet Sauvignon)	250 EC	0.11	0.0075	6	Bunch of grapes Triadimenol:	 0 3 5 7 10 14 21	 1.8 1.6 1.2 1.1 0.8 0.8 0.1	Anon., 1989d 311/88430/E440
South Africa Roelanda Paarl 1987 (Waltham Cross)	250 EC	0.11	0.0075	4	Bunch of grapes Triadimenol:	0 3 5 7 10 14 21	1.0 1.3 1.3 0.8 0.5 0.3 0.3	Anon., 1989e 311/88431/E441

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
South Africa Stellenbosch 1987 (Chenin Blanc)	250 EC	0.11	0.0075	4	Bunch of grapes Triadimenol:	 0 3 7 10 14 21	 2.8 2.2 1.9 1.5 1.4 < 0.1	Anon., 1989f 311/88558/F128
South Africa Vergelegen, Paarl 1984 (Barlinka)	250 EC	0.063	0.0063	6	Bunch of grapes Triadimenol:	 0 1 3 5 7 10 14 21	 1.3 0.93 0.85 0.35 1.0 0.95 0.24 0.46	Anon., 1985j 311/88741/B145
South Africa Vergelegen, Paarl 1984 (Barlinka)	250 EC	0.13	0.013	6	Bunch of grapes Triadimenol:	 0 1 3 5 7 10 14 21	 1.1 1.1 0.78 0.64 2.0 1.4 1.9 1.7	Anon., 1985j 311/88741/B145
South Africa Tweespruit, Paarl 1984 (Waltham Cross)	250 EC	0.063	0.0063	6	Bunch of grapes Triadimenol:	 0 1 3 5 7 10 14 21	 0.8 0.73 0.28 0.22 0.3 0.21 0.17 0.1	Anon., 1985j 311/88741/B145
South Africa Tweespruit, Paarl 1984 (Waltham Cross)	250 EC	0.13	0.013	6	Bunch of grapes Triadimenol:	 0 1 3 5 7 10 14 21	 1.4 0.92 < 0.05 0.89 0.81 0.61 0.54 0.26	Anon., 1985j 311/88741/B145
Spain Lavern 1996 (Carinena)	250 EC	0.038 – 0.063	0.0063 – 0.011	4	Bunch of grapes Triadimenol:	 0 7 14 21	 0.04 0.03 0.02 0.02	Heinemann, O.; Allmendinger, H., 1998 RA-2025/96
Spain E-41808 Villanueva 1996 Garrido fino	250 EC	0.038 – 0.063	0.0063 – 0.011	4	Bunch of grapes Triadimenol: Berries Triadimenol:	0 [a] 0 7 14 21	< 0.02 0.09 < 0.02 < 0.02 < 0.02	Heinemann, O.; Allmendinger, H., 1998 RA-2025/96
Spain Umbrete, Sevilla 1995 (Garrido fino)	250 EC	0.038 – 0.063	0.0063 – 0.011	4	Bunch of grapes Triadimenol: Berries Triadimenol:	0 [a] 0 7 14 21 28 7	0.04 0.16 0.03 < 0.02 < 0.02 < 0.02 0.02	Nuesslein, F., 1996a RA-2023/93

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Spain Sant Marcal 1993 (Xarelo)	250 EC	0.038 – 0.05	0.0083 – 0.019	3	Bunch of grapes Triadimenol:	 0 [a] 0 13 21 27 34	 < 0.02 0.10 0.07 0.04 0.02 0.03	Nuesslein, F., 1996b RA-2016/93
Spain Les Gunyoles 1993 (Macabeo)	250 EC	0.038 – 0.063	0.011 – 0.019	3	Bunch of grapes Triadimenol:	 0 [a] 0 14 21 28 34	 0.02 0.12 0.04 0.04 0.04 0.04	Nuesslein, F., 1996b RA-2016/93
Turkey Manisa, Salihli, Taytan 1988 (Sultana Seedless)	50 EW	0.05	0.005	4	Fruit Triadimenol:	 0 14 21 56	 0.12 0.04 < 0.02 < 0.02	Anon., 1989g 0100-88
Turkey Manisa 1990 (Sultanine)	50 EW	0.05	0.005	4	Fruit Triadimenol:	 0 27	 0.22 0.03	Anon., 1992b 0603-90
Turkey Manisa 1990 (Sultanine)	50 EW	0.05	0.005	4	Fruit Triadimenol:	 0 20	 0.2 0.03	Anon., 1992c 0604-90
Turkey Manisa 1990 (Sultanine)	50 EW	0.05	0.005	4	Fruit Triadimenol:	 0 27	 0.22 0.03	Anon., 1992d 0606-90
Turkey Izmir 1990 (Sultanine)	50 EW	0.05	0.005	4	Fruit Triadimenol:	 0 27	 0.04 < 0.02	Anon., 1992e 0607-90
Turkey Izmir 1990 (Sultanine)	50 EW	0.05	0.005	4	Fruit Triadimenol:	 0 20	 0.07 < 0.02	Anon., 1992f 0608-90
Turkey Izmir 1990 (Sultanine)	50 EW	0.05	0.005	4	Fruit Triadimenol:	 0 13	 0.39 0.08	Anon., 1992g 0609-9
USA Wilsonville, Oregon 1989 Gamay Beaujolais	25 WG	0.053	0.0056	10	Bunch of grapes Triadimenol:	 0 7	 0.62 0.63	Williams, B. B., Woodard, D. L., 1991 100123

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
USA Wilsonville, Oregon 1989 Gamay Beaujolais	25 WG	0.053	0.0056	10	Bunch of grapes Triadimenol:	14 21	0.54 0.55	Williams, B. B., Woodard, D. L., 1991 100123
USA Sunnyside, Washington 1989 Muscat	25 WG	0.053	0.0056	10	Bunch of grapes Triadimenol:	0 7 14 21	0.49 0.32 0.17 0.24	Williams, B. B., Woodard, D. L., 1991 100123
USA Davis, California 1989 Thompson Seedless	25 WG	0.053	0.011	10	Bunch of grapes Triadimenol:	0 7 14 21	0.29 0.13 0.11 0.09	Williams, B. B., Woodard, D. L., 1991 100123
USA Kingsburg, California 1989 Thompson Seedless	25 WG	0.053	0.0019	10	Bunch of grapes Triadimenol:	0 7 14 21	0.12 0.1 0.14 0.07	Williams, B. B., Woodard, D. L., 1991 100123
USA Phelps, New York 1989 Catawba	25 WG	0.053	0.0056	10	Bunch of grapes Triadimenol:	0 7 14 21	0.47 0.39 0.55 0.41	Williams, B. B., Woodard, D. L., 1991 100123
USA Fennville, Michigan 1989 Concord	25 WG	0.053	0.0028	10	Bunch of grapes Triadimenol:	0 7 14 21	0.29 0.19 0.12 0.12	Williams, B. B., Woodard, D. L., 1991 100123
USA Lakemont, New York 1983 Concord	25 WG	0.14	0.0075	4	Bunch of grapes Triadimenol:	0 7 14	0.64 0.44 0.37	Anon., 1984u 84493
USA Fennville, Michigan 1983 Concord	25 WG	0.14	0.075	4	Bunch of grapes Triadimenol:	0 7 14	0.71 0.28 0.19	Anon., 1984v 84498
USA Lakemont, New York 1983 Condord	25 WG	0.14	0.062	4	Bunch of grapes Triadimenol:	0 7 14	0.33 0.43 0.31	Anon., 1984w 84499
USA Aurora, Oregon 1983 White Riesling	25 WG	0.14	0.0075	4	Bunch of grapes Triadimenol:	0 7 14	0.24 0.14 0.05	Anon., 1984x 84494
USA Davis, California 1983 Thompson Seedless	25 WG	0.14	0.0075	4	Bunch of grapes Triadimenol:	0 7 14	0.08 0.06 0.02	Anon., 1984y 84495
USA Biola, California 1983 Thompson Seedless	25 WG	0.14	0.075	4	Bunch of grapes Triadimenol:	0 7 14	0.25 0.12 0.11	Anon., 1984z 84496

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
USA Soledad, California 1983 Pinot Noir	25 WG	0.14	0.075	4	Bunch of grapes Triadimenol:	 0 7 14	 0.11 0.23 0.09	Anon., 1984aa 84497
USA Santa Maria, California 1983 White Riesling	25 WG	0.14	0.015	4	Bunch of grapes Triadimenol:	 0 7 14	 1.2 0.2 0.3	Anon., 1984ab 84501

a - sampling before last application

Table 65. Foliar application in glasshouse of triadimenol on strawberries

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Belgium Ittre 2001 (Lambada)	250 EC	0.13	0.013	2	Fruit Triadimenol	 0 3	 0.12 0.09	Nuesslein, F.; Elke, K., 2002 RA-2007/01
Belgium Riemst 2000 (Elsanta)	250 EC	0.13	0.013	2	Fruit Triadimenol	 0 3	 0.29 0.27	Nuesslein, F., 2001a RA-2145/00
Belgium Riemst 2000 (Elsanta)	250 EC	0.1 – 0.11	0.01	2	Fruit Triadimenol	 0 3	 0.22 0.26	Nuesslein, F., 2001b RA-2416/00
Italy Montalbano (Policoro) 2001 (Thetis)	250 EC	0.13	0.013	2	Fruit Triadimenol	 0 3	 0.18 0.13	Nuesslein, F.; Elke, K., 2002 RA-2007/01
Netherlands Wognum 2001 (Elsanta)	250 EC	0.13	0.013	2	Fruit Triadimenol	 0 [a] 0 1 3 7	 < 0.05 0.07 0.05 0.08 0.05	Nuesslein, F.; Elke, K., 2002 RA-2007/01
Netherlands Wouwse Plantage 2000 (Elsanta)	250 EC	0.13	0.013	2	Fruit Triadimenol	 0 [a] 0 3 7	 0.16 0.28 0.31 0.27	Nuesslein, F., 2001a RA-2145/00
Netherlands Wouwse Plantage 2000 (Elsanta)	50 EW	0.1	0.01	2	Fruit Triadimenol	 0 [a] 0 3 7	 0.1 0.33 0.26 0.29	Nuesslein, F., 2001b RA-2416/00
Spain St. Pol de Mar 2001 (Camarrosa)	250 EC	0.13	0.013	2	Fruit Triadimenol	0 [a] 0 1 3 7	0.08 0.62 0.53 0.41 0.31	Nuesslein, F.; Elke, K., 2002 RA-2007/01

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Spain St. Pol de Mar 2000 (Irvine)	250 EC	0.13	0.013	2	Fruit Triadimenol	 0 3	 0.33 0.3	Nuesslein, F., 2001a RA-2145/00
Spain St. Pol de Mar 2000 (Irvine)	250 EC	0.13	0.013	2	Fruit Triadimenol	 0 [a] 0 1 3 7	 0.13 0.27 0.25 0.24 0.14	Nuesslein, F., 2001a RA-2145/00

a - Sampling before last application

Table 66. Foliar application of triadimenol on currants

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Germany Burscheid (Versuchsgut Höfchen) 2002 (Titania)	50 EW	0.075	0.0075	4	Fruit Triadimenol	 0 [a] 0 7 9 14 21	 0.25 0.4 0.27 0.24 0.13 0.19	Nuesslein, F.; Fischer, S., 2003 RA-2013/02
Germany Monheim (Versuchsgut Laacherhof) 2002 (Titania)	50 EW	0.075	0.0075	4	Fruit Triadimenol	 0 [a] 0 7 11 14 21	 0.39 0.59 0.35 0.3 0.19 0.15	Nuesslein, F.; Fischer, S., 2003 RA-2013/02
Germany Burscheid, Höfchen 1984 (Jonkheer van Tets)	50 EW	0.075	0.0075	4	Fruit Triadimenol	 0 7 14 21	 0.33 0.1 0.06 0.05	Anon., 1985k 9433-84
Germany Monheim, Laacherhof 1984 (Jonkheer van Tets)	50 EW	0.075	0.0038	4	Fruit Triadimenol	 0 7 10 14 21	 0.47 0.1 0.11 0.06 0.07	Anon., 1985l 9434-84
Netherlands Noordbroek 2003 (Ben Alder)	50 EW	0.075	0.0075	4	Fruit Triadimenol	 0 14	 0.41 0.23	Nuesslein, F., 2004 RA-2005/03
Netherlands Noordbroek 2002 (Ben Alder, black variety)	50 EW	0.075	0.0075	4	Fruit Triadimenol	 0 14	 0.46 0.25	Nuesslein, F.; Fischer, S., 2003 RA-2013/02
Netherlands Noordbroek 2002 (Ben Alder, black variety)	50 EW	0.075	0.0075	4	Fruit Triadimenol	 0 [a] 0 7 10 14	 0.13 0.48 0.34 0.25 0.23	Nuesslein, F.; Fischer, S., 2003 RA-2013/02

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
						21	0.2	
United Kingdom Thurston, Bury St. Edmunds (EFSC) 2002 (Ben Tirran, black variety)	50 EW	0.075	0.0075	4	Fruit Triadimenol	 0 14	 0.46 0.39	Nuesslein, F.; Fischer, S., 2003 RA-2013/02
United Kingdom Colchester Earls Colne Lamberts Farm 2002 (Golbuka, black variety)	50 EW	0.075	0.0075	4	Fruit Triadimenol	 0 14	 0.64 0.49	Nuesslein, F.; Fischer, S., 2003 RA-2013/02

a - Sampling before last application

Tropical and sub-tropical fruits – inedible peel

Table 67. Foliar application of triadimenol on bananas

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Cameroon Nyombe, IRFA 1986 Banana, unbagged (Cavendish americani)	100 OL	0.1	0.5	4	Banana, whole fruit (calc.) Triadimenol Banana, pulp Triadimenol Banana, peel Triadimenol	 2 15 15 2 15	 0.14 0.14 0.14 0.3 0.14	Anon., 1987h 9455-86
Costa Rica Indiana Tres 1986 Banana, unbagged (Gran Naine)	250 EC	0.1	0.12	19	Banana, whole fruit (calc.) Triadimenol Banana, pulp Triadimenol Banana, peel Triadimenol	 0 5 10 14 19 0 5 10 14 19 0 5 10 14 19	 < 0.04 < 0.04 < 0.04 < 0.04 < 0.04 < 0.04 < 0.04 < 0.04 < 0.04 < 0.04 < 0.04 < 0.04 < 0.04 < 0.04 < 0.04	Anon., 1987i 9441-87

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Costa Rica Indiana Tres 1986 Banana, unbagged (Gran Naine)	250 EC	0.1	0.12	19	Banana, whole fruit (calc.) Triadimenol Banana, pulp Triadimenol Banana, peel Triadimenol	 0 5 10 14 19 0 5 10 14 19 0 5 10 14 19	 < 0.04 < 0.04 < 0.04 < 0.04 < 0.04 < 0.04 < 0.04 < 0.04 < 0.04 < 0.04 < 0.04 < 0.04 < 0.04 < 0.04 < 0.04	Anon., 1987i 9441-87 (REPLICATE)
Costa Rica Siquirres 1984 Banana, bagged (Cavendish)	250 EC	0.13	0.08	13	Banana, whole fruit (calc.) Triadimenol Banana, pulp Triadimenol Banana, peel Triadimenol	 13 13 13	 < 0.02 < 0.02 < 0.02	Delk, J. L.; Bailey, S. R.; Calovich C. A., 1987 94802
Costa Rica Siquirres 1984 Banana, unbagged (Cavendish)	250 EC	0.13	0.08	13	Banana, whole fruit (calc.) Triadimenol Banana, pulp Triadimenol Banana, peel Triadimenol	 13 13 13	 < 0.02 < 0.02 < 0.02	Delk, J. L.; Bailey, S. R.; Calovich C. A., 1987 94802
Honduras La Lima, Cortes 1984 Banana, bagged (Grand Naine)	250 EC	0.13	0.026	12	Banana, whole fruit (calc.) Triadimenol Banana, pulp Triadimenol Banana, peel Triadimenol	 4 4 4	 < 0.02 < 0.02 < 0.02	Delk, J. L.; Bailey, S. R.; Calovich C. A., 1987 94802
Honduras La Lima, Cortes 1984 Banana, bagged (Grand Naine)	250 EC	0.13	0.026	12	Banana, whole fruit (calc.) Triadimenol Banana, pulp Triadimenol Banana, peel Triadimenol	 4 4 4	 < 0.02 < 0.02 < 0.02	Delk, J. L.; Bailey, S. R.; Calovich C. A., 1987 94802 (REPLICATE)
Ivory Coast Plantage Agbeby, Ivory Coast 1987 (Poyo)	250 OL	0.1 – 0.18	0.71	4	Banana, whole fruit (calc.) Triadimenol Banana, pulp Triadimenol	 0 16 33 0 16 33	 0.01 < 0.01 < 0.01 0.01 < 0.01 < 0.01	Anon., 1988b 0036-88

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
					Banana, peel Triadimenol	 0 16 33	 0.02 0.01 < 0.01	
Ivory Coast Banacomoe, Ivory Coast 1986 Banana, unbagged (Poyo)	100 OL	0.1	0.1	2	Banana, whole fruit (calc.) Triadimenol Banana, pulp Triadimenol Banana, peel Triadimenol	 2 15 29 2 15 29 2 15 29	 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 0.07 < 0.05 < 0.05	Anon., 1986l 9456-86
Martinique St. Joseph, Martinique 1988 Banana, bagged (Grande Naine)	100 OL	0.1	0.5	1	Banana, whole fruit (calc.) Triadimenol Banana, pulp Triadimenol Banana, peel Triadimenol	 14 14 14	 < 0.01 < 0.01 0.03	Anon., 1988c 9451-87
Martinique St. Joseph, Martinique 1988 Banana, bagged (Grande Naine)	250 OL	0.1	0.5	1	Banana, whole fruit (calc.) Triadimenol Banana, pulp Triadimenol Banana, peel Triadimenol	 31 31 31	 < 0.01 < 0.01 0.02	Anon., 1988d 9452-87
Martinique Fort de France 1983 (Grande Naine)	25 WP	0.1	0.67	6	Banana, pulp Triadimenol Banana, peel Triadimenol	 2 15 30 2 15 30	 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05	Anon., 1984ac 9410-84
Puerto Rico Adjuntas, Puerto Rico 1988 (Gran Nain)	25 WP	0.13	0.15	10	Banana, whole fruit (calc.) Triadimenol Banana, pulp Triadimenol KWG 0519 hydroxy Banana, peel (washed) Triadimenol KWG 0519 hydroxy	 7 14 7 14 7 14 7 14 7 14	 0.1 0.11 0.11 0.14 < 0.01 < 0.01 0.05 0.04 0.02 < 0.01	Williams, B. B., 1990 100106

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Puerto Rico Adjuntas, Puerto Rico 1988 (Grand Nain)	25 WG	0.13	0.15	10	Banana, whole fruit (calc.) Triadimenol Banana, pulp Triadimenol KWG 0519 hydroxy Banana, peel (washed) Triadimenol KWG 0519 hydroxy	 7 14 7 14 7 14 7 14 7 14	 0.12 0.03 0.11 0.01 < 0.01 0.01 0.12 0.05 0.03 0.01	Williams, B. B., 1990 100106 (REPLICATE)
Puerto Rico Puerto Rico, Gurabo 1987 (Grand Nain)	25 WG	0.13	0.15	10	Banana, whole fruit (calc.) Triadimenol Banana, pulp Triadimenol KWG 0519 hydroxy Banana, peel (washed) Triadimenol KWG 0519 hydroxy	 14 14 14 14 14	 <u>0.08</u> <u>0.07</u> < 0.01 0.09 < 0.01	Williams, B. B., 1990 100106
Puerto Rico Puerto Rico, Gurabo 1987 (Grand Nain)	25 WG	0.13	0.15	10	Banana, whole fruit (calc.) Triadimenol Banana, pulp Triadimenol KWG 0519 hydroxy Banana, peel (washed) Triadimenol KWG 0519 hydroxy	 14 14 14 14 14	 0.06 0.05 < 0.05 0.07 < 0.01	Williams, B. B., 1990 100106 (REPLICATE)
South Africa Louws Creek 1989 (Cavendish)	250 EC	0.11	0.02	1	Banana, whole fruit (calc.) Triadimenol Banana, pulp Triadimenol	0 7 14 28 42 74 0 7 14 28 42 74	1.4 0.7 <u>0.8</u> 0.4 0.3 0.09 0.06 0.2 <u>0.3</u> 0.2 0.2 0.08	Anon., 1989h 311/88592/F221

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
					Banana, peel Triadimenol	0 7 14 28 42 74	1.8 0.9 1.1 0.5 0.4 0.1	
USA Waimanolo, HI 1987 (Giant Cavendish)	25 WG	0.13	0.15	10	Banana, whole fruit (calc.) Triadimenol Banana, pulp Triadimenol KWG 0519 hydroxy Banana, peel (washed) Triadimenol KWG 0519 hydroxy	 7 14 7 14 7 14 7 14 7 14	 0.04 0.18 0.04 0.18 < 0.01 < 0.01 0.04 0.18 < 0.01 0.01	Williams, B. B., 1990 100106
USA Waimanolo, HI 1987 (Giant Cavendish)	25 WG	0.13	0.15	10	Banana, whole fruit (calc.) Triadimenol Banana, pulp Triadimenol KWG 0519 hydroxy Banana, peel (washed) Triadimenol KWG 0519 hydroxy	 7 14 7 14 7 14 7 14 7 14	 0.12 0.13 0.09 0.02 < 0.01 < 0.01 0.15 0.13 0.02 < 0.02	Williams, B. B., 1990 100106 (REPLICATE)
USA Keauu, HI 1987 (Cavendish)	25 WG	0.13	0.15	10	Banana, whole fruit (calc.) Triadimenol Banana, pulp Triadimenol KWG 0519 hydroxy Banana, peel (washed) Triadimenol KWG 0519 hydroxy	 7 14 7 14 7 14 7 14 7 14	 0.1 0.02 0.09 0.02 < 0.01 < 0.01 0.1 0.2 0.01 < 0.01	Williams, B. B., 1990 100106
USA Keauu, HI 1987 (Cavendish)	25 WG	0.13	0.15	10	Banana, whole fruit (calc.) Triadimenol Banana, pulp Triadimenol	 7 14 7 14	 0.06 0.03 < 0.01 0.03	Williams, B. B., 1990 100106 (REPLICATE)

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
					KWG 0519 hydroxy	7 14	< 0.01 < 0.01	
					Banana, peel (washed) Triadimenol	7 14	0.16 0.04	
					KWG 0519 hydroxy	7 14	0.02 < 0.01	
USA Keauu, HI 1986 (Cavendish Dwarf)	25 WG	0.13	0.06	18	Banana, whole fruit (calc.) Triadimenol	7 14	< 0.01 < 0.01	Williams, B. B., 1990 100106
					Banana, pulp Triadimenol	7 14	< 0.01 < 0.01	
					KWG 0519 hydroxy	7 14	< 0.01 < 0.01	
					Banana, peel (washed) Triadimenol	7 14	< 0.01 < 0.01	
					KWG 0519 hydroxy	7 14	< 0.01 < 0.01	
USA Keaau, HI 1986 (Cavendish Dwarf)	25 WG	0.13	0.06	18	Banana, whole fruit (calc.) Triadimenol	7 14	< 0.01 < 0.01	Williams, B. B., 1990 100106 (REPLICATE)
					Banana, pulp Triadimenol	7 14	< 0.01 < 0.01	
					KWG 0519 hydroxy	7 14	< 0.01 < 0.01	
					Banana, peel (washed) Triadimenol	7 14	< 0.01 < 0.01	
					KWG 0519 hydroxy	7 14	< 0.01 < 0.01	

Table 68. Spread application of triadimenol on bananas

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		g ai/plant	kg ai/hL	No	Sample	PHI	Residues	
Cameroon Nyombe, Cameroon 1989 (Grande Naine)	5 GR	0.75		1	Banana, pulp Triadimenol	15	< 0.01	Anon., 1989i 9476-87
					Banana, peel Triadimenol	15	< 0.01	
Cameroon Nyombe 1989 (Plantain French sp)	5 WG	0.75		1	Banana, pulp Triadimenol	15	< 0.01	Anon., 1991c 0589-88
					Banana, peel Triadimenol	15	< 0.01	

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		g ai/plant	kg ai/hL	No	Sample	PHI	Residues	
Costa Rica Limon 1987 (Gran Enano)	3 GR	0.75		1	Banana, whole fruit (calc.) Triadimenol	0 14 28 43 61 92	0.06 0.01 < 0.01 0.01 0.03 0.04	Pither, K. M., 1988a 95684
					Banana, pulp Triadimenol	0 14 28 43 61 92	0.01 < 0.01 < 0.01 < 0.01 < 0.01 0.02	
					KWG 0519 hydroxy	0 14 28 43 61 92	0.03 < 0.02 < 0.02 0.02 < 0.02 < 0.02	
					KWG 1323	0 14 28 43 61 92	< 0.01 < 0.01 < 0.01 < 0.01 < 0.01 0.01	
					Banana, peel (washed) Triadimenol	0 14 28 43 61 92	0.03 0.01 < 0.01 < 0.01 < 0.01 0.03	
					KWG 0519 hydroxy	0 14 28 43 61 92	0.05 0.02 < 0.02 < 0.02 0.08 0.02	
					KWG 1323	0 14 28 43 61 92	< 0.01 < 0.01 < 0.01 0.01 < 0.01 0.02	
Ecuador Esmeraldas, Esmeraldas 1987 (Cavendish)	1 GR	1.0		1	Banana, whole fruit (calc.) Triadimenol	14 30	< 0.01 < 0.01	Pither, K. M., 1988a 95684
					Banana, pulp Triadimenol	14 30	< 0.01 < 0.01	
					KWG 0519 hydroxy	14 30	< 0.02 < 0.02	
					KWG 1323	14 30	< 0.01 < 0.01	

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		g ai/plant	kg ai/hL	No	Sample	PHI	Residues	
					Banana, peel (washed)			
					Triadimenol	14	< 0.02	
						30	< 0.02	
					KWG 0519 hydroxy	14	< 0.03	
						30	< 0.03	
					KWG 1323	14	< 0.01	
						30	< 0.01	
Ecuador Quevedo, Los Rios 1987 (Cavendish)	1 GR	1		1	Banana, whole fruit (calc.)			Pither, K. M., 1988a 95684
					Triadimenol	12	0.01	
						28	< 0.01	
					Banana, pulp			
					Triadimenol	12	< 0.01	
						28	< 0.01	
					KWG 0519 hydroxy	12	< 0.02	
						28	< 0.02	
					KWG 1323	12	< 0.01	
						28	< 0.01	
					Banana, peel (washed)			
					Triadimenol	12	0.03	
						28	< 0.02	
					KWG 0519 hydroxy	12	< 0.03	
						28	< 0.03	
					KWG 1323	12	< 0.01	
						28	< 0.01	
Ivory Coast Azaguie 1986 (Poyo)	5 WG	0.75		1	Banana, whole fruit (calc.)			Anon., 1986m 9472-86
					Triadimenol	18	< 0.05	
						30	< 0.05	
						70	< 0.05	
					Banana, pulp			
					Triadimenol	18	< 0.05	
						30	< 0.05	
						70	< 0.05	
						92	< 0.05	
					Banana, peel			
					Triadimenol	18	< 0.05	
						30	< 0.05	
						70	< 0.05	
						92	0.05	
Costa Rica Indiana Tres, Siquirres 1986 (Cavendish)	3 GR	1.2		1	Banana, pulp			Anon., 1989j 9407-87
					Triadimenol	0	< 0.01	
						14	< 0.01	
						29	0.04	
						59	0.02	
						88	0.02	
					Banana, peel			
					Triadimenol	0	0.02	
						14	0.04	
						29	0.11	
						59	0.14	
						88	0.02	

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		g ai/plant	kg ai/hL	No	Sample	PHI	Residues	
Ecuador Esmeraldas 1987 (Cavendish Valery)	1 GR	1.2		1	Banana, whole fruit (calc.) Triadimenol Banana, pulp Triadimenol Banana, peel Triadimenol	 14 30 63 91 14 30 63 91 14 30 63 91	 < 0.04 < 0.04 < 0.04 < 0.04 < 0.04 < 0.04 < 0.04 < 0.04 < 0.04 < 0.04 < 0.04 < 0.04	Anon., 1988e 9402-87
Ecuador Quevedo 1987 (Cavendish Valery)	1 GR	1.2		1	Banana, whole fruit (calc.) Triadimenol Banana, pulp Triadimenol Banana, peel Triadimenol	 14 30 63 91 14 30 63 91 14 30 63 91	 < 0.04 < 0.04 < 0.04 < 0.04 < 0.04 < 0.04 < 0.04 < 0.04 < 0.04 < 0.04 < 0.04 < 0.04	Anon., 1988f 9403-87

Table 69. Post harvest dipping with triadimefon on pineapples

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Ivory Coast Abobo 1981 (Cayenne Lisse)	250 EC		0.01	1	Pineapple, whole fruit (calc.) Triadimefon Triadimenol Total residue, calc. as TDF Pineapple, pulp Triadimefon Triadimenol Total residue, calc. as TDF Pineapple, peel Triadimefon Triadimenol Total residue, calc. as TDF	 0 0 0 0 0 0 0 0 0	 0.26 0.2 0.46 0.07 < 0.03 0.1 1.2 1.2 2.4	Anon., 1982j 9003-81
Ivory Coast 1981 (Cayenne Lisse)	250 EC		0.01	1	Pineapple, whole fruit (calc.) Triadimefon Triadimenol Total residue, calc. as TDF Pineapple, pulp	 0 0 0	 0.04 < 0.06 0.1	Anon., 1982k 9004-81

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
					Triadimefon Triadimenol Total residue, calc. as TDF Pineapple, peel Triadimefon Triadimenol Total residue, calc. as TDF	0 0 0 0 0 0	< 0.03 < 0.03 < 0.06 0.33 0.53 0.86	
Ivory Coast Anguededou 1978 (Cayenne Lisse)	250 EC		0.01	1	Pineapple, whole fruit (calc.) Triadimefon Triadimenol Total residue, calc. as TDF Pineapple, pulp Triadimefon Triadimenol Total residue, calc. as TDF Pineapple, peel Triadimefon Triadimenol Total residue, calc. as TDF	 0 0 0 0 0 0 0 0 0	 0.23 0.33 0.56 < 0.03 < 0.06 < 0.06 1.1 1.6 2.7	Anon., 1977b 9017/78
Ivory Coast Anguededou 1978 (Cayenne Lisse)	250 EC		0.075	1	Pineapple, whole fruit (calc.) Triadimefon Triadimenol Total residue, calc. as TDF Pineapple, pulp Triadimefon Triadimenol Total residue, calc. as TDF Pineapple, peel Triadimefon Triadimenol Total residue, calc. as TDF	 0 0 0 0 0 0 0 0 0	 1.4 0.55 1.95 0.11 < 0.06 0.17 6.4 2.6 9.0	Anon., 1978a 9022/78
USA Kunia, Hawaii 1990	50 WG		0.05	1	Pineapple, whole fruit (calc.) Total residue, calc. as TDF Pineapple, pulp Triadimefon Triadimenol Total residue, calc. as TDF KWG 0519 hydroxy KWG 1323 Pineapple, peel Triadimefon Triadimenol Total residue,	 0 0 0 0 0 0 0 0 0	 1.1 0.01 0.06 0.07 < 0.01 < 0.01 4.5 0.3 4.8	Burger, R. N.; Williams, B. B., 1992 102649-1

Location Year (variety)	Form	Application kg ai/ha	kg ai/hL	No	Analysis Sample	PHI	Residues	Reference, Report No.
					calc. as TDF			
					KWG 0519	0	< 0.01	
					hydroxy KWG 1323	0	< 0.01	
USA Kunia, Hawaii 1990	50 WG		0.05	1	Pineapple, whole fruit (calc.) Total residue, calc. as TDF	0	1.6	Burger, R. N.; Williams, B. B., 1992 102649-1
					Pineapple, pulp			
					Triadimefon	0	0.1	
					Triadimenol	0	< 0.01	
					Total residue, calc. as TDF	0	0.11	
					KWG 0519	0	< 0.01	
					hydroxy KWG 1323	0	< 0.01	
					Pineapple, peel			
					Triadimefon	0	5.6	
					Triadimenol	0	0.31	
					Total residue, calc. as TDF	0	5.9	
					KWG 0519	0	< 0.01	
					hydroxy KWG 1323	0	< 0.01	
USA Kunia, Hawaii 1990	50 WG		0.05	1	Pineapple, whole fruit (calc.) Total residue, calc. as TDF	0	1.4	Burger, R. N.; Williams, B. B., 1992 102649-1
					Pineapple, pulp			
					Triadimefon	0	0.13	
					Triadimenol	0	< 0.01	
					Total residue, calc. as TDF	0	0.14	
					KWG 0519	0	< 0.01	
					hydroxy KWG 1323	0	< 0.01	
					Pineapple, peel			
					Triadimefon	0	5.5	
					Triadimenol	0	0.31	
					Total residue, calc. as TDF	0	5.8	
					KWG 0519	0	< 0.01	
					hydroxy KWG 1323	0	< 0.01	
USA Kunia, Hawaii 1990	50 WG		0.05	1	Pineapple, whole fruit (calc.) Total residue, calc. as TDF	0	1.8	Burger, R. N.; Williams, B. B., 1992 102649-1
					Pineapple, pulp			
					Triadimefon	0	0.14	
					Triadimenol	0	< 0.01	
					Total residue, calc. as TDF	0	0.15	
					KWG 0519	0	< 0.01	
					hydroxy KWG 1323	0	< 0.01	
					Pineapple, peel			
					Triadimefon	0	7.0	

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
					Triadimenol Total residue, calc. as TDF KWG 0519 hydroxy KWG 1323	0 0 0 0	0.4 7.4 < 0.01 < 0.01	
USA Kunia, Hawaii 1990	50 WG		0.05	1	Pineapple, whole fruit (calc.) Total residue, calc. as TDF Pineapple, pulp Triadimefon Triadimenol Total residue, calc. as TDF KWG 0519 hydroxy KWG 1323 Pineapple, peel Triadimefon Triadimenol Total residue, calc. as TDF KWG 0519 hydroxy KWG 1323	 0 0 0 0 0 0 0 0 0 0 0	 1.6 0.15 < 0.01 0.16 < 0.01 < 0.01 6.3 0.24 6.5 < 0.01 < 0.01	Burger, R. N.; Williams, B. B., 1992 102649-1
USA Wahiawa Town, Hawaii 1990	50 WG		0.05	1	Pineapple, whole fruit (calc.) Total residue, calc. as TDF Pineapple, pulp Triadimefon Triadimenol Total residue, calc. as TDF KWG 0519 hydroxy KWG 1323 Pineapple, peel Triadimefon Triadimenol Total residue, calc. as TDF KWG 0519 hydroxy KWG 1323	 0 0 0 0 0 0 0 0 0 0 0	 0.82 0.1 < 0.01 0.11 < 0.01 < 0.01 7.6 0.49 8.1 < 0.01 < 0.01	Burger, R. N.; Williams, B. B., 1992 102649-1
USA Wahiawa Town, Hawaii 1990	50 WG		0.05	1	Pineapple, whole fruit (calc.) Total residue, calc. as TDF Pineapple, pulp Triadimefon Triadimenol Total residue, calc. as TDF KWG 0519 hydroxy KWG 1323	 0 0 0 0 0 0	 0.97 0.12 < 0.01 0.13 < 0.01 < 0.01	Burger, R. N.; Williams, B. B., 1992 102649-1

Location Year (variety)	Form	Application kg ai/ha	kg ai/hL	No	Analysis Sample	PHI	Residues	Reference, Report No.
					Pineapple, peel			
					Triadimefon	0	6.8	
					Triadimenol	0	0.36	
					Total residue, calc. as TDF	0	7.2	
					KWG 0519 hydroxy	0	< 0.01	
					KWG 1323	0	< 0.01	
USA Wahiawa Town, Hawaii 1990	50 WG		0.05	1	Pineapple, whole fruit (calc.)			Burger, R. N.; Williams, B. B., 1992 102649-1
					Total residue, calc. as TDF	0	0.85	
					Pineapple, pulp			
					Triadimefon	0	0.07	
					Triadimenol	0	< 0.01	
					Total residue, calc. as TDF	0	0.13	
					KWG 0519 hydroxy	0	< 0.01	
					KWG 1323	0	< 0.01	
					Pineapple, peel			
					Triadimefon	0	6.3	
					Triadimenol	0	0.35	
					Total residue, calc. as TDF	0	7.0	
					KWG 0519 hydroxy	0	< 0.01	
					KWG 1323	0	< 0.01	
USA Wahiawa Town, Hawaii 1990	50 WG		0.05	1	Pineapple, whole fruit (calc.)			Burger, R. N.; Williams, B. B., 1992 102649-1
					Total residue, calc. as TDF	0	1.5	
					Pineapple, pulp			
					Triadimefon	0	0.09	
					Triadimenol	0	< 0.01	
					Total residue, calc. as TDF	0	0.1	
					KWG 0519 hydroxy	0	< 0.01	
					KWG 1323	0	< 0.01	
					Pineapple, peel			
					Triadimefon	0	5.45	
					Triadimenol	0	0.37	
					Total residue, calc. as TDF	0	5.8	
					KWG 0519 hydroxy	0	< 0.01	
					KWG 1323	0	< 0.01	
USA Wahiawa Town, Hawaii 1990	50 WG		0.05	1	Pineapple, whole fruit (calc.)			Burger, R. N.; Williams, B. B., 1992 102649-1
					Total residue, calc. as TDF	0	1.1	
					Pineapple, pulp			
					Triadimefon	0	0.06	
					Triadimenol	0	< 0.01	
					Total residue, calc. as TDF	0	0.07	
					KWG 0519 hydroxy	0	< 0.01	

Location Year (variety)	Form	Application kg ai/ha	kg ai/hL	No	Analysis Sample	PHI	Residues	Reference, Report No.
					KWG 1323	0	< 0.01	
					Pineapple, peel Triadimefon Triadimenol Total residue, calc. as TDF KWG 0519 hydroxy KWG 1323	 0 0 0 0 0	 5.6 0.34 5.9 < 0.01 < 0.01	
USA Walnut Creek, California 1979	50 WP		0.05	1	Pineapple, whole fruit (calc.) Triadimefon	0 1 3 7 11	1.6, 1.3, 1.7 (1.5) 1.7, 1.5, 2.2 (1.8) 1.8, 1.6, 0.76 (1.4) 1.9, 2.3, 1.7 (2.0) 1.2, 1.2, 1.5 (1.3)	Anon., 1979 68011
					Triadimenol	0 1 3 7 11	0.14, 0.54, 0.37 (0.35) 0.29, 0.17, 0.16 (0.21) 0.14, 0.14, 0.07 (0.12) 0.3, 0.25, 0.23 (0.26) 0.24, 0.37, 0.37 (0.33)	
					Total residue, calc. as TDF	0 1 3 7 11	1.7, 1.8, 2.0 (1.8) 1.9, 1.7, 2.3 (2.0) 1.9, 1.7, 0.83 (1.5) 2.2, 2.5, 2.0 (2.2) 1.5, 1.6, 1.9 (1.7)	
					Pineapple, pulp Triadimefon	0 1 3 7 11	0.11, 0.07, 0.06 (0.08) 0.02, 0.06, 0.03 (0.04) 0.04, 0.04, 0.02 (0.03) 0.02, 0.02, < 0.01 (0.02) < 0.01(3) (< 0.01)	
					Triadimenol	0 1 3 7		

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
					Total residue, calc. as TDF Pineapple, peel Triadimefon Triadimenol Total residue, calc. as TDF	11 0 1 3 7 11 0 1 3 7 11 0 1 3 7 11 0 1 3 7 11	< 0.01(3) (< 0.01) < 0.01(3) (< 0.01) < 0.01(3) (< 0.01) < 0.01(3) (< 0.01) < 0.01(3) (< 0.01) 0.12, 0.08, 0.07 (<u>0.09</u>) 0.03, 0.07, 0.04 (0.05) 0.05, 0.05, 0.03 (0.04) 0.03, 0.03, < 0.02 (0.03) < 0.02(3) (< 0.02) 3.4, 2.9, 3.6 (3.3) 4.1, 3.3, 5.1 (4.2) 4.0, 3.7, 1.9 (3.2) 5.2, 4.5, 4.5 (4.7) 3.3, 3.3, 3.9 (3.5) 0.3, 1.3, 0.82 (0.81) 0.73, 0.39, 0.38 (0.5) 0.31, 0.33, 0.18 (0.27) 0.82, 0.5, 0.58 (0.63) 0.63, 0.99, 0.96 (0.86) 3.7, 4.2, 4.5 (4.1) 4.9, 3.7, 5.5 (4.7) 4.3, 4.0, 2.1 (3.5) 6.1, 5.0, 5.1 (5.4) 3.9, 4.3, 4.9 (4.4)	

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
USA Walnut Creek, California 1979	50 WP		0.05	1	Pineapple, whole fruit (calc.) Total residue, calc. as TDF Pineapple, pulp Total residue, calc. as TDF Pineapple, peel combined with core Total residue, calc. as TDF	 0 3 11 0 3 11 0 3 11	 1.4, 1.5 (1.5) 2.4, 2.5 (2.5) 0.97, 1.3 (1.2) 0.03, 0.03 (0.03) 0.1, 0.09 (0.1) 0.05, 0.04 (0.05) 3.7, 3.5 (3.6) 5.7, 5.2 (5.5) 2.1, 2.7 (2.4)	Anon., 1979 68011
USA Walnut Creek, California 1979	50 WP		0.05	12	Pineapple, whole fruit (calc.) Total residue, calc. as TDF Pineapple, pulp Total residue, calc. as TDF Pineapple, peel combined with core Total residue, calc. as TDF	 0 3 11 0 3 11 0 3 11	 1.8, 1.9 (1.9) 1.9, 2.0 (2.0) 0.5, 1.3 (0.95) 0.03, 0.04 (0.04) 0.15, 0.12 (0.14) 0.07, 0.02 (0.05) 4.3, 4.8 (4.6) 4.0, 4.3 (4.2) 1.1, 3.3 (2.2)	Anon., 1979 68011

Root and tuber vegetables

Table 70. Foliar application of triadimenol on sugar beets

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Germany Burscheid, Versuchsgut Höfchen 1985 (Geem 65)	250 EC	0.13	0.031	2	Sugar beet, root Triadimenol Sugar beet, leaf	 0 14 21 28 35	 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05	Anon., 1986n 9410-85

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
					Triadimenol	0 14 21 28 35	0.96 0.1 0.06 < 0.05 < 0.05	
Germany Monheim, Versuchsgut Laacherhof 1985 (Geem 65)	250 EC	0.13	0.031	2	Sugar beet, root Triadimenol Sugar beet, leaf Triadimenol	 0 14 21 28 35 0 14 21 28 35	 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 1.6 0.1 0.07 < 0.05 < 0.05	Anon., 1986o 9411-85
Germany Klein-Niedesheim 1985 (Kawevera)	250 EC	0.13	0.031	2	Sugar beet, root Triadimenol Sugar beet, leaf Triadimenol	 0 14 21 28 35 0 14 21 28 35	 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 2.0 0.14 0.06 0.06 < 0.05	Anon., 1986p 9412-85
Germany Bälau 1985 (Majo)	250 EC	0.13	0.031	2	Sugar beet, root Triadimenol Sugar beet, leaf Triadimenol	 0 14 21 28 35 0 14 21 28 35	 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 1.7 0.08 0.08 < 0.05 < 0.05	Anon., 1986q 9413-85
Germany Burscheid, Versuchsgut Höfchen 1984 (Geem 65)	250 EC	0.13	0.031	2	Sugar beet, root Triadimenol Sugar beet, leaf Triadimenol	 0 14 21 28 35 63 0 14 21 28 35 63	 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 2.7 0.42 0.12 < 0.05 < 0.05 < 0.05	Anon., 1985m 9406-84
Germany Monheim, Versuchsgut Laacherhof 1984 (Geem 65)	250 EC	0.13	0.031	2	Sugar beet, root Triadimenol Sugar beet, leaf Triadimenol	 0 14 21 28 35 58 0	 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 2.9	Anon., 1985n 9407-84

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
						14 21 28 35 58	0.19 0.11 0.09 < 0.05 < 0.05	
Germany Albig 1984 (Primahill)	250 EC	0.13	0.031	2	Sugar beet, root Triadimenol Sugar beet, leaf Triadimenol	 0 14 21 28 35 0 14 21 28 35	 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 1.2 0.18 0.09 < 0.05 < 0.05	Anon., 1985o 9408-84
Germany Bälau 1984 (Ka-We-Duka)	250 EC	0.13	0.031	2	Sugar beet, root Triadimenol	 0 14 21 28 35	 0.05 < 0.05 < 0.05 < 0.05 < 0.05	Anon., 1985p 9409-84
					Sugar beet, leaf Triadimenol	0 14 21 28 35	1.0 0.19 0.12 0.05 < 0.05	
United Kingdom Thurston, Bury St. Edmunds, Suffolk 1984 (Monoire)	250 EC	0.13	0.031	2	Sugar beet, root Triadimenol Sugar beet, leaf Triadimenol	 13 13	 < 0.05 0.14	Bagnall, B. H., 1985a TCR266

Fruiting vegetables, Cucurbits

Table 71. Foliar application of triadimefon on cucumbers

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Australia Bowen, QLD. 1979 (Large White Apple)	5 WP	0.05	0.005	4	Fruit Triadimefon Triadimenol Total residue, calc. as TDF	 1 4 7 14 1 4 7 14 1 4 7 14	 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.2 < 0.2 < 0.2 < 0.2	Anon., 1979a 9-79

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
USA La Feria 1992 (Napoleon)	50 WG	0.13 – 0.15	0.09 – 0.095	4	Fruit Triadimefon	0 7 14	0.01 < 0.01 < 0.01	Grace, T. J., 1996 107371
					Triadimenol	0 7 14	< 0.01 < 0.01 < 0.01	
					Total residue, calc. as TDF	0 7 14	0.02 < 0.02 < 0.02	
					KWG 0519 hydroxy	0 7 14	< 0.01 < 0.01 < 0.01	
					KWG 1323	0 7 14	< 0.01 < 0.01 < 0.01	
USA Tifton 1992 (Marketer)	50 WG	0.14	0.085 – 0.094	4	Fruit Triadimefon	0 7 14	0.04 < 0.01 < 0.01	Grace, T. J., 1996 107371
					Triadimenol	0 7 14	< 0.01 < 0.01 < 0.01	
					Total residue, calc. as TDF	0 7 14	0.05 < 0.02 < 0.02	
					KWG 0519 hydroxy	0 7 14	< 0.01 < 0.01 < 0.01	
					KWG 1323	0 7 14	< 0.01 < 0.01 < 0.01	
USA Painter 1982 (Pacer)	50 WP	0.14	0.03	4	Fruit Triadimefon	0 1 3	0.02 0.01 0.01	Anon., 1983d 81186
					Triadimenol	0 1 3	< 0.01 < 0.01 < 0.01	
					Total residue, calc. as TDF	0 1 3	0.03 0.02 0.02	
USA Ropesville 1982 (Black Spine)	50 WP	0.14	0.15	4	Fruit Triadimefon	0 1 3	0.07 0.03 0.01	Anon., 1983e 81187
					Triadimenol	0 1 3	< 0.01 < 0.01 < 0.01	
					Total residue, calc. as TDF	0 1 3	0.08 0.04 0.02	

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
USA Santa Maria 1982 (Hybrid Pioneer)	50 WP	0.14	0.025	4	Fruit Triadimefon	0 1 3	0.03 0.01 0.01	Anon., 1983f 81188
					Triadimenol	0 1 3	< 0.01 0.02 0.01	
					Total residue, calc. as TDF	0 1 3	0.04 0.03 0.02	
USA Santa Maria 1982 (Hybrid Sentry)	50 WP	0.14	0.025	4	Fruit Triadimefon	0 1 3	0.13 0.12 0.09	Anon., 1983g 81189
					Triadimenol	0 1 3	0.03 0.03 0.04	
					Total residue, calc. as TDF	0 1 3	0.16 0.15 0.13	
USA Sanford 1982 (Galaxy)	50 WP	0.14	0.03	4	Fruit Triadimefon	0 1 3	< 0.01 < 0.01 < 0.01	Anon., 1983h 81190
					Triadimenol	0 1 3	< 0.01 < 0.01 < 0.01	
					Total residue, calc. as TDF	0 1 3	< 0.02 < 0.02 < 0.02	
USA Clayton 1982 (Long Green)	50 WP	0.14	0.065	4	Fruit Triadimefon	0 5	0.02 0.02	Anon., 1983i 81191
					Triadimenol	0 5	< 0.01 0.02	
					Total residue, calc. as TDF	0 5	0.03 0.04	
USA Sodus USA Sodus 1982 (Raider)	50 WP	0.14	0.015	3	Fruit Triadimefon	0 1 3	< 0.01 0.01 < 0.01	Anon., 1983j 81192
					Triadimenol	0 1 3	< 0.01 < 0.01 < 0.01	
					Total residue, calc. as TDF	0 1 3	< 0.02 0.02 < 0.02	
USA Urbana 1982 (Marketmore)	50 WP	0.14	0.075	4	Fruit Triadimefon	0 1 3	0.1 0.09 0.07	Anon., 1983k 81193
					Triadimenol	0 1	0.01 0.01	

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
						3	0.02	
					Total residue, calc. as TDF	0 1 3	0.11 0.1 0.09	
USA Howe 1982 (Marketmore)	50 WP	0.14	0.03	4	Fruit Triadimefon	0 1 4	0.02 0.02 0.02	Anon., 1983l 81194
					Triadimenol	0 1 4	< 0.01 < 0.01 < 0.01	
					Total residue, calc. as TDF	0 1 4	0.03 0.03 0.03	
USA Adams Gardens 1982 (Tex Long)	50 WP	0.14	0.023	4	Fruit Triadimefon	0 1 3	0.04 0.02 0.01	Anon., 1983m 81195
					Triadimenol	0 1 3	0.04 0.04 0.05	
					Total residue, calc. as TDF	0 1 3	0.08 0.06 0.06	
USA Tifton 1982 (Boston Pickling)	50 WP	0.14	0.057	4	Fruit Triadimefon	0 1 3	0.02 0.02 < 0.01	Anon., 1983n 81196
					Triadimenol	0 1 3	< 0.01 0.01 0.01	
					Total residue, calc. as TDF	0 1 3	0.03 0.03 0.02	
USA Vero Beach 1982 (Straight 8)	50 WP	0.14	0.025	4	Fruit Triadimefon	0 1 3	0.05 0.02 0.02	Anon., 1983o 81197
					Triadimenol	0 1 3	0.03 0.03 0.03	
					Total residue, calc. as TDF	0 1 3	0.08 0.05 0.05	

Table 72. Foliar application of triadimenol on cucumbers

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Australia Calavos, Bundaberg Qld 1985 (Black Prince)	250 EC	0.1	0.063	5	Fruit Triadimenol	1 3 5 7 10 14	0.1 0.03 < 0.01 < 0.01 < 0.01 < 0.01	Anon., 1986r 39/85
Israel Shfaram 1985 Dalila	250 EC	0.13	0.025	3	Fruit Triadimenol	1 3 7	0.08 0.36 < 0.1	Adato, I.; Weissblatt, S., 1988 1030-85
Israel Shfaram 1985 Dalila	250 EC	0.13	0.025	3	Fruit Triadimenol	1 3 7	0.11 0.58 < 0.1	Adato, I.; Weissblatt, S., 1988 1030-85
Israel Shfaram 1985 Dalila	250 EC	0.13	0.025	3	Fruit Triadimenol	1 3 7	0.12 1.6 < 0.1	Adato, I.; Weissblatt, S., 1988 1030-85
Israel Shfaram 1985 Dalila	250 EC	0.13	0.025	3	Fruit Triadimenol	1 3 7	0.05 1.4 < 0.1	Adato, I.; Weissblatt, S., 1988 1030-85
Israel Shfaram 1985 Dalila	250 EC	0.13	0.025	3	Fruit Triadimenol	3	4.3	Adato, I.; Weissblatt, S., 1988 1030-85

Table 73. Foliar application of triadimefon on cucumbers in glasshouse

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Japan Koibuchi 1978 (Aratahikari-fushinari jugo)	5 WP	0.038	0.0025	2	Fruit Triadimefon	1	0.01, 0.01 (0.01)	Anon., 1978b 674
						5	< 0.01, < 0.01 (< 0.01)	
						10	< 0.01, < 0.01 (< 0.01)	
					Triadimenol	1	< 0.02, < 0.02 (< 0.02)	
						5	< 0.02, < 0.02 (< 0.02)	
						10	< 0.02, < 0.02 (< 0.02)	
					Total residue, calc. as TDF	1	0.03, 0.03 (0.03)	
						5	< 0.03, < 0.03 (< 0.02)	
						10	< 0.03, < 0.03 (< 0.02)	
Japan Koibuchi 1978 (Aratahikarifushinari jugo)	5 WP	0.038	0.0025	4	Fruit Triadimefon	1	0.01, < 0.01 (0.01)	Anon., 1978b 674
						5	< 0.01, < 0.01 (< 0.01)	
						10	< 0.01, < 0.01 (< 0.01)	
					Triadimenol	1	< 0.02, < 0.02 (< 0.02)	
						5	< 0.02, < 0.02 (< 0.02)	
						10	< 0.02, < 0.02 (< 0.02)	
					Total residue, calc. as TDF	1	0.03, < 0.03 (0.03)	
						5	< 0.03, < 0.03 (< 0.02)	
						10	< 0.03, < 0.03 (< 0.02)	

Table 74. Foliar application of triadimenol on cucumbers in glasshouse

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Belgium St. Katelijne-Waver 1997 (Tyria)	67 WP	0.06	0.004	4	Fruit Triadimenol	 0 [a] 0 1 3 7 10	 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05	Walz-Tylla, B., 1998 RA-2023/97
Spain El Barranquete 1997 (Virginia)	67 WP	0.06 - 0.063	0.004	4	Fruit Triadimenol	 0 [a] 0 1 3 7 10	 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05	Walz-Tylla, B., 1998 RA-2023/97
France Châteaurenard 2002 (Beluga Greffé)	250 EC	0.19	0.013	4	Fruit Triadimenol	 0 [a] 0 1 3 7	 < 0.05 0.09 0.09 0.06 < 0.05	Nuesslein, F.; Eberhardt, R., 2003 RA-2004/02
Italy S. Croce Camerina 2002 (Pontiac)	250 EC	0.19	0.013	4	Fruit Triadimenol	 0 3	 0.14 0.10	Nuesslein, F.; Eberhardt, R., 2003 RA-2004/02
Spain Viladecans 2002 (Solverde)	250 EC	0.19 – 0.2	0.013	4	Fruit Triadimenol	 0 3	 0.12 0.06	Nuesslein, F.; Eberhardt, R., 2003 RA-2004/02
Spain Roquetas de Mar 2002 (Lusaka)	250 EC	0.19	0.013	4	Fruit Triadimenol	 0 [a] 0 1 3 7	 < 0.05 0.13 0.14 0.07 0.07	Nuesslein, F.; Eberhardt, R., 2003 RA-2004/02
France Chateaurenard 2001 (Beluga)	250 EC	0.19	0.013	4	Fruit Triadimenol	 0 3	 0.09 0.08	Nuesslein, F., 2002 RA-2056/01
Italy Vittoria 2001 (Solverde)	250 EC	0.19	0.013	4	Fruit Triadimenol	 0 3	 0.09 < 0.05	Nuesslein, F., 2002 RA-2056/01
Spain Roquetas de Mar 2001 (Marumba)	250 EC	0.19	0.013	4	Fruit Triadimenol	 0 [a] 0 1 3 7	 < 0.05 0.15 0.13 0.12 0.09	Nuesslein, F., 2002 RA-2056/01
Spain Viladecans 2001 (Solverde)	250 EC	0.19	0.013	4	Fruit Triadimenol	 0 [a] 0 1 3 7	 < 0.05 0.05 0.06 < 0.05 < 0.05	Nuesslein, F., 2002 RA-2056/01

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Greece Metohi Epanomis, Thessaloniki 1997 (Palmera)	67 WP	0.06	0.004	4	Fruit Triadimenol	 0 [a] 0 1 3 7 10	 < 0.05 0.05 0.07 < 0.05 < 0.05 < 0.05	Walz-Tylla, B., 1998 RA-2023/97
Italy Imola 1997 (Burpless hybrid)	67 WP	0.06	0.004	4	Fruit Triadimenol	 0 [a] 0 3 7 10	 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05	Walz-Tylla, B., 1998 RA-2023/97
Greece Vasilika 1996 (Venus)	67 WP	0.06	0.004	4	Fruit Triadimenol	 0 3 7	 0.06 0.07 0.06	Heinemann, O.; Walz-Tylla; B., 1998 RA-2003/96
Spain Palacios 1996 (Dasher II)	67 WP	0.06	0.004	4	Fruit Triadimenol	 0 3 7	 < 0.05 < 0.05 < 0.05	Heinemann, O.; Walz-Tylla; B., 1998 RA-2003/96
Italy Imola 1996 (Marketmore 70)	67 WP	0.06	0.004	4	Fruit Triadimenol	 0 3 7	 0.06 0.05 < 0.05	Heinemann, O.; Walz-Tylla; B., 1998 RA-2003/96
Spain Alcala 1996 (Darina)	67 WP	0.06	0.004	4	Fruit Triadimenol	 0 3 7	 < 0.05 < 0.05 < 0.05	Heinemann, O.; Walz-Tylla; B., 1998 RA-2003/96
Greece Veria 1995 (Palmera)	250 EC	0.13	0.0083	4	Fruit Triadimenol	 0 1 3 7	 0.07 0.07 < 0.05 < 0.05	Heinemann, O.; Walz-Tylla, B., 1997 RA-2031/95
Greece Vasilika 1995 (Venus)	250 EC	0.13	0.0083	4	Fruit Triadimenol	 0 1 3 7	 0.11 0.11 0.10 0.05	Heinemann, O.; Walz-Tylla, B., 1997 RA-2031/95
Spain Los Palacios 1995 (Darina)	250 EC	0.13	0.0083	4	Fruit Triadimenol	 0 1 3 7	 0.06 0.05 < 0.05 < 0.05	Heinemann, O.; Walz-Tylla, B., 1997 RA-2031/95
Spain Alcala de Guadaira 1995 (Darina)	250 EC	0.13	0.0083	4	Fruit Triadimenol	 0 1 3 7	 < 0.05 < 0.05 < 0.05 < 0.05	Heinemann, O.; Walz-Tylla, B., 1997 RA-2031/95

a - Sampling before last application

Table 75. Foliar application of triadimenol on courgettes

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Italy Latina 1984 (Zucchina lunga locale)	50 EW	0.023 – 0.038	0.0075	4	Fruit Triadimenol	 7 14	 0.05 < 0.05	Anon., 1985q B9436-84

Table 76. Foliar application of triadimefon on melon

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Mexico Hermosilla, Sonora 1979 (PMR-5)	25 WP	0.12	0.11	3	Melon, whole fruit (calc.) Triadimefon Melon, pulp Triadimefon Triadimenol Total residue, calc. as TDF Melon, peel Triadimefon Triadimenol Total residue, calc. as TDF	 0 5 15 0 5 15 0 5 15 0 5 15 0 5 15 0 5 15 0 5 15	 0.03 0.05 0.03 0.01 < 0.01 < 0.01 0.01 0.01 0.02 0.02 0.02 0.03 0.07 0.06 0.02 0.04 0.03 0.01 0.11 0.09 0.03	Anon., 1980c 68063
Mexico El Naranjo, Sinaloa 1979 (PMR-5)	25 WP	0.12	0.11	3	Melon, whole fruit (calc.) Triadimefon Melon, pulp Triadimefon Triadimenol Total residue, calc. as TDF Melon, peel Triadimefon	 0 5 15 0 5 15 0 5 15 0 5 15 0 5	 0.06 0.08 0.11 < 0.01 < 0.01 < 0.01 0.01 0.02 0.03 0.02 0.03 0.04 0.09 0.11	Anon., 1980d 68062

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
						15	0.15	
					Triadimenol	0	0.06	
						5	0.05	
						15	0.05	
					Total residue, calc. as TDF	0	0.15	
						5	0.16	
						15	0.20	
Mexico Guasave, Sinaloa 1979 (PMR-5)	25 WP	0.12	0.1	3	Melon, whole fruit (calc.) Triadimefon	0	0.13	Anon., 1980e 68061
						5	0.06	
						15	0.03	
					Melon, pulp Triadimefon	0	< 0.01	
						5	< 0.01	
						15	< 0.01	
					Triadimenol	0	< 0.01	
						5	0.02	
						15	< 0.01	
					Total residue, calc. as TDF	0	< 0.02	
						5	0.03	
						15	< 0.02	
					Melon, peel Triadimefon	0	0.41	
						5	0.09	
						15	0.07	
					Triadimenol	0	0.25	
						5	0.06	
						15	0.03	
					Total residue, calc. as TDF	0	0.66	
						5	0.15	
						15	0.1	
Mexico Guasave, Sinaloa 1979 (PMR-5)	25 WP	0.12	0.1	3	Melon, whole fruit (calc.) Triadimefon	0	0.13	Anon., 1980f 68060
						5	0.08	
						15	0.08	
					Melon, pulp Triadimefon	0	< 0.01	
						5	< 0.01	
						15	< 0.01	
					Triadimenol	0	< 0.01	
						5	0.02	
						15	0.03	
					Total residue, calc. as TDF	0	< 0.02	
						5	0.03	
						15	0.04	
					Melon, peel Triadimefon	0	0.16	
						5	0.07	
						15	0.09	
					Triadimenol	0	0.11	
						5	0.05	
						15	0.04	
					Total residue,			

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
					calc. as TDF	0 5 15	0.27 0.12 0.13	
USA La Feria 1992 (Magnum 45)	50 WG	0.14	0.09	4	Melon, fruit Triadimefon	 0 7 14	 0.09 0.02 < 0.01	Grace, T. J., 1996 107371
					Triadimenol	0 7 14	0.02 0.03 0.01	
					Total residue, calc. as TDF	0 7 14	0.11 0.05 0.03	
					KWG 0519 hydroxy	0 7 14	< 0.01 < 0.01 < 0.01	
					KWG 1323	0 7 14	< 0.01 < 0.01 < 0.01	
USA Tifton 1992 (Edisto 47)	50 WG	0.14	0.09	4	Melon, fruit Triadimefon	 0 7 14	 0.04 0.02 0.01	Grace, T. J., 1996 107371
					Triadimenol	0 7 14	< 0.01 0.01 0.01	
					Total residue, calc. as TDF	0 7 14	0.05 0.03 0.02	
					KWG 0519 hydroxy	0 7 14	< 0.01 < 0.01 < 0.01	
					KWG 1323	0 7 14	< 0.01 < 0.01 < 0.01	
USA Los Banos 1991 (Top Mark)	50 WG	0.14	0.15	4	Melon, fruit Triadimefon	 0 7 14	 < 0.01 < 0.01 < 0.01	Burger, R. N., 1992a 102628
					Triadimenol	0 7 14	< 0.01 < 0.01 < 0.01	
					Total residue, calc. as TDF	0 7 14	< 0.02 < 0.02 < 0.02	
					KWG 0519 hydroxy	0 7 14	< 0.01 < 0.01 < 0.01	
					KWG 1323	0 7 14	< 0.01 < 0.01 < 0.01	

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
USA Benoit 1991 (Hales Best 36)	50 WG	0.14	0.075	4	Melon, fruit Triadimefon Triadimenol Total residue, calc. as TDF KWG 0519 hydroxy KWG 1323	 0 7 14 0 7 14 0 7 14 0 7 14 0 7 14	 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.02 < 0.02 < 0.02 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01	Burger, R. N., 1992a 102628
USA Fresno 1991 (Mission)	50 WG	0.14	0.075	4	Melon, fruit Triadimefon Triadimenol Total residue, calc. as TDF KWG 0519 hydroxy KWG 1323	 0 7 14 0 7 14 0 7 14 0 7 14 0 7 14	 0.03 0.02 < 0.01 < 0.01 < 0.01 < 0.01 0.04 0.03 < 0.02 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01	Burger, R. N., 1992a 102628
USA Stilwell 1991 (Hearts of Gold)	50 WG	0.14	0.075	4	Melon, fruit Triadimefon Triadimenol Total residue, calc. as TDF KWG 0519 hydroxy KWG 1323	 0 7 14 0 7 14 0 7 14 0 7 14 0 7 14	 0.04 < 0.01 < 0.01 < 0.01 0.01 < 0.01 0.05 0.02 < 0.02 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01	Burger, R. N., 1992a 102628

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
USA Tifton 1991 (Edisto 47)	50 WG	0.14	0.037	4	Melon, fruit Triadimefon Triadimenol Total residue, calc. as TDF KWG 0519 hydroxy KWG 1323	 0 0 0 0 0	 0.02 < 0.01 0.03 < 0.01 < 0.01	Burger, R. N., 1992a 102628
USA Howe 1991 (Perfection)	50 WG	0.14	0.075	4	Melon, fruit Triadimefon Triadimenol Total residue, calc. as TDF KWG 0519 hydroxy KWG 1323	 0 7 14 0 7 14 0 7 14 0 7 14 0 7 14	 0.04 < 0.01 < 0.01 0.01 0.02 0.02 0.05 0.03 0.03 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01	Burger, R. N., 1992a 102628

Table 77. Foliar application of triadimenol on melons

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
France Pezenas 1983 (Charentais)	250 EC	0.075	0.006	1	Melon, Fruit Triadimenol	0 3 7	< 0.05 < 0.05 < 0.05	Anon., 1984ad 9916-83
France St. Paul d' Espis 1983 (Alpha)	5 WP	0.05	0.007	4	Melon, Fruit Triadimenol	13	< 0.05	Anon., 1984ae 9922-83
France Pezenas 1983 (Charentais)	5 WP	0.075	0.006	1	Melon, Fruit Triadimenol	0 3 7	< 0.05 < 0.05 < 0.05	Anon., 1984af 9926-83
France Le Thor 1983 (Precoce du roc)	5 WP	0.05	0.005	1	Melon, Fruit Triadimenol	0 3 7	< 0.05 < 0.05 < 0.05	Anon., 1984ag 9927-83
Greece Chalkidiki 1997 (Gall)	67 WP	0.06	0.006	4	Melon, Fruit Triadimenol	0 7	0.07 0.06	Walz-Tylla, B., 1998a RA-2040/97

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Greece Makrichori 1996 (Gold Star)	67 WP	0.065	0.0065	4	Melon, Fruit Triadimenol Melon, pulp Triadimenol Melon, peel Triadimenol	0 [a] 0 3 7 14 7 7	< 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 0.13	Heinemann, O.; Walz-Tylla, B., 1998a RA-2072/96
Greece Mavrogia Viotias 1996 (Galia)	67 WP	0.065	0.0065	4	Melon, Fruit Triadimenol Melon, pulp Triadimenol Melon, peel Triadimenol	0 [a] 0 3 7 14 7 7	< 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 0.15	Heinemann, O.; Walz-Tylla, B., 1998a RA-2072/96
Spain Rotgla 1997 (Rekel)	67 WP	0.06	0.006	4	Melon, Fruit Triadimenol	0 5	< 0.05 0.05	Walz-Tylla, B., 1998a RA-2040/97
Spain Umbrete 1996 (Reque)	67 WP	0.065	0.0065	4	Melon, Fruit Triadimenol	0 7	< 0.05 < 0.05	Heinemann, O.; Walz-Tylla, B., 1998a RA-2072/96
Spain Guillena 1996 (Rochet)	67 WP	0.065	0.0065	4	Melon, Fruit Triadimenol	0 7	< 0.05 < 0.05	Heinemann, O.; Walz-Tylla, B., 1998a RA-2072/96

a - Sampling before last application

Table 78. Foliar application of triadimenol on melons in glasshouse

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Italy Ravenna 2002 (MB 1220)	250 EC	0.13	0.013	4	Melon, Fruit Triadimenol Melon, pulp Triadimenol	0 3 3	< 0.05 < 0.05 < 0.05	Nuesslein, F.; Fischer, S., 2003 RA-2002-02
Italy Zapponeta 2002 (Pelos)	250 EC	0.13	0.013	4	Melon, Fruit Triadimenol Melon, pulp Triadimenol	0 [a] 0 1 3 7 3	< 0.05 0.06 < 0.05 < 0.05 < 0.05 < 0.05	Nuesslein, F.; Fischer, S., 2003 RA-2002-02
Italy Policoro 2001 (Galia)	250 EC	0.13	0.013	4	Melon, Fruit Triadimenol Melon, pulp Triadimenol	0 3 3	< 0.05 < 0.05 < 0.05	Nuesslein, F., 2002b RA-2057/01

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Italy Albaro 2001 (Jacura)	250 EC	0.13	0.013	4	Melon, Fruit Triadimenol Melon, pulp Triadimenol	 0 [a] 0 1 3 6 3	 0.08 0.19 0.12 0.13 0.12 < 0.05	Nuesslein, F., 2002b RA-2057/01

a - Sampling before last application

Table 79. Foliar application of triadimenol on watermelon

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Italy Dugliolo 1997 (Crimson)	67 WP	0.056 – 0.06	0.006	4	Melon, Fruit Triadimenol Melon, pulp Triadimenol Melon, peel Triadimenol	 0 [a] 0 3 7 14 7 7	 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05	Walz-Tylla, B., 1998a RA-2040/97

a - Sampling before last application

Table 80. Foliar application of triadimenol on watermelon

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Italy Vittoria 2002 (Crimson Sweet)	250 EC	0.13	0.013	4	Melon, Fruit Triadimenol Melon, pulp Triadimenol	 0 [a] 0 1 3 7 3	 < 0.05 0.1 0.05 < 0.05 < 0.05 < 0.05	Nuesslein, F.; Fischer, S., 2003 RA-2002-02
Spain Nijar 2002 (Dulce Maravilla)	250 EC	0.13	0.013	4	Melon, Fruit Triadimenol Melon, pulp Triadimenol	 0 3 3	 < 0.05 < 0.05 < 0.05	Nuesslein, F.; Fischer, S., 2003 RA-2002-02
Spain Roquetas de Mar 2001 (Dulce Maravilla)	250 EC	0.13	0.013	4	Melon, Fruit Triadimenol Melon, pulp Triadimenol	 0 3 3	 < 0.05 0.05 < 0.05	Nuesslein, F., 2002b RA-2057/01
Italy Vittora 2001 (Crimson Sweet)	250 EC	0.13	0.013	4	Melon, Fruit Triadimenol Melon, pulp Triadimenol	 0 [a] 0 1 3 7 3	 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05	Nuesslein, F., 2002b RA-2057/01

a - Sampling before last application

Fruiting vegetables – other than Cucurbits

Table 81. Foliar application of triadimefon on peppers

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Australia Qld Dept of Primary Industries (QDPI) Research Station, Bowen 1980 (Northern Bell)	5 WP	0.1	0.005	5	Fruit Triadimefon	 1 3 7 14	 < 0.05 < 0.05 < 0.05 < 0.05	Anon., 1980g 23/80a
Australia QDPI Research Station, Bowen 1980 (Northern Bell)	5 WP	0.1	0.005	5	Fruit Triadimefon	 1 3 7 14	 < 0.05 < 0.05 < 0.05 < 0.05	Anon., 1980h 23/80b

Table 82. Foliar application of Triadimenol on peppers in glasshouse

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Germany Leichlingen 2001 (Sirtaki)	250 EC	0.13	0.013	3	Fruit Triadimenol	 0 3	 0.36 0.21	Nuesslein, F., 2002c RA-2055/01
Spain La Mojonera 2001 (Prior)	250 EC	0.13	0.013	3	Fruit Triadimenol	 0 3	 0.14 0.11	Nuesslein, F., 2002c RA-2055/01
Spain Roquetas de Mar 2000 (Albador)	250 EC	0.13	0.013	3	Fruit Triadimenol	 0 [a] 0 3 7 10	 0.15 0.18 0.15 0.14 0.16	Nuesslein, F., 2001c RA-2118/00
Spain Roquetas de Mar 2000 (Tipo Lamuyo)	250 EC	0.13	0.013	3	Fruit Triadimenol	 0 3 7	 0.26 0.21 0.21	Nuesslein, F., 2001c RA-2118/00
Spain Ruescas 1995 (Aries)	250 EC	0.13	0.013	3	Fruit Triadimenol	 0 [a] 0 4 7 10	 0.16 0.40 0.23 0.13 0.21	Nuesslein, F., 1997a RA-2026/95
Spain Barranquete 1995 (California)	250 EC	0.13	0.013	3	Fruit Triadimenol	 0 [a] 0 3 7 10	 0.22 0.45 0.29 0.30 0.33	Nuesslein, F., 1997a RA-2026/95
Spain Ruescas 1995 (Camuyo)	250 EC	0.13	0.013	3	Fruit Triadimenol	 0 [a] 0 3 7	 0.19 0.38 0.33 0.24	Nuesslein, F., 1997a RA-2026/95

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
						10	0.26	
Spain San Agustin 1993 (Drago)	250 EC	0.13	0.013	3	Fruit Triadimenol	 0 [a] 0 3 5 7	 0.25 0.56 0.37 0.30 0.38	Bachmann, J., 1995a RA-2014/93

a - Sampling before last application

Table 83. Foliar application of triadimefon on tomatoes

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Australia Bowen, QLD. 1980 (loradade)	50 WP	0.5	1.3	3	Fruit Triadimefon	 7 14 21	 < 0.05 < 0.05 < 0.05	Anon., 1980i 22-80

Table 84. Foliar application of triadimenol on tomatoes

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Greece Thessaloniki, Metohi-Epanomi 1997 (Galli)	67 WP	0.06	0.004	4	Fruit Triadimenol	 0 7 14	 < 0.05 < 0.05 < 0.05	Walz-Tylla, B., 1998b RA-2038/97
Italy Poggio Renatico 1997 (Red Setter)	67 WP	0.06	0.004	4	Fruit Triadimenol	 0 7 14	 < 0.05 < 0.05 < 0.05	Walz-Tylla, B., 1998b RA-2038/97
France St. Etienne du Gres 1997 (Canero)	250 EC	0.13 0.13 0.13 0.19 0.20 0.19	0.025 0.025 0.025 0.038 0.04 0.038	6	Fruit Triadimenol	 0 [a] 0 3 7 14	 < 0.05 0.18 0.08 0.06 < 0.05	Heinemann, O., 1999 RA-2037/97
Greece Kopaida 1997 (Oval red / Boss 3155)	250 EC	0.13 0.13 0.13 0.19 0.19 0.19	0.013 0.013 0.013 0.019 0.019 0.019	6	Fruit Triadimenol	 0 [a] 0 3 7 14	 0.05 0.13 0.15 0.09 0.08	Heinemann, O., 1999 RA-2037/97
Italy Anita 1997 (Red setter)	250 EC	0.13 0.13 0.13 0.19 0.19 0.19	0.013 0.013 0.013 0.013 0.013 0.013	6	Fruit Triadimenol	 0 [a] 0 3 7 14	 < 0.05 0.21 < 0.05 < 0.05 < 0.05	Heinemann, O., 1999 RA-2037/97

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Spain Vilanova del Valles 1997 (Royesta)	250 EC	0.13 0.13 0.13 0.19 0.19 0.19	0.013 0.013 0.013 0.019 0.013 0.013	6	Fruit Triadimenol	 0 [a] 0 3 7 13	 < 0.05 0.14 0.21 0.11 0.07	Heinemann, O., 1999 RA-2037/97
Greece Petra Viotias 1996 (H-1999)	67 WP	0.06	0.004	4	Fruit Triadimenol	 0 7 14	 0.06 < 0.05 < 0.05	Heinemann, O.; Walz-Tylla, B., 1997a RA-2095/96
Greece Petra Viotias 1996 (Rio Grande/Aggata)	67 WP	0.06	0.004	4	Fruit Triadimenol	 0 7 14	 0.05 < 0.05 < 0.05	Heinemann, O.; Walz-Tylla, B., 1997a RA-2095/96

a - Sampling before last application

Table 85. Foliar application of triadimefon on tomatoes in glasshouse

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Japan 1977	25 WP	0.5	0.013	3	Fruit Triadimefon Triadimenol Total residue calc. as TDF	 1 3 7 1 3 7 1 3 7	 0.52 0.37 0.22 0.30 0.42 0.46 0.82 0.79 0.68	Anon., 1977c 528
Japan 1977	25 WP	0.5	0.013	7	Fruit Triadimefon Triadimenol Total residue calc. as TDF	 1 3 7 1 3 7 1 3 7	 0.53 0.44 0.11 0.30 0.38 0.32 0.83 0.82 0.43	Anon., 1977d 529
Japan 1977	25 WP	0.5	0.013	3	Fruit Triadimefon Triadimenol Total residue calc. as TDF	 0 1 3 7 0 1 3 7 0 1 3 7	 0.12 0.05 0.04 0.02 0.12 0.13 0.12 0.12 0.24 0.18 0.16 0.14	Anon., 1977e 530

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Japan 1977	25 WP	0.5	0.013	7	Fruit Triadimefon Triadimenol Total residue calc. as TDF	 0 1 3 7 14 0 1 3 7 14 0 1 3 7 14	 0.30 0.22 0.15 0.06 0.02 0.19 0.20 0.18 0.09 0.11 0.49 0.42 0.33 0.15 0.13	Anon., 1977f 531

Table 86. Foliar application of triadimenol on tomatoes in glasshouse

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Belgium St. Katelijne-Waver 1997 (Cabio)	67 WP	0.06	0.004	4	Fruit Triadimenol	 0 7 14	 < 0.05 < 0.05 < 0.05	Walz-Tylla, B., 1998b RA-2038/97
Germany Leichlingen 1997 (Panovi)	67 WP	0.06	0.004	4	Fruit Triadimenol	 0 7 14	 < 0.05 < 0.05 < 0.05	Walz-Tylla, B., 1998b RA-2038/97
Greece Thessaloniki, Metohi-Epanomi 1997 (Arletta)	67 WP	0.06	0.004	4	Fruit Triadimenol	 0 7 14	 0.05 < 0.05 < 0.05	Walz-Tylla, B., 1998b RA-2038/97
Spain Viladecans 1997 (Bond)	67 WP	0.06	0.004	4	Fruit Triadimenol	 0 7 14	 0.06 0.07 0.08	Walz-Tylla, B., 1998b RA-2038/97
Germany Leichlingen 2003 (Rogella)	250 EC	0.13 0.13 0.13 0.19 0.19 0.19	0.013 0.013 0.013 0.013 0.013 0.013	6	Fruit Triadimenol	 0 3	 0.18 0.11	Freitag, T., 2004 RA-2013/03
Germany Langenfeld 2003 (Rogella)	250 EC	0.13 0.13 0.13 0.19 0.19 0.19	0.013 0.013 0.013 0.013 0.013 0.013	6	Fruit Triadimenol	 0 3	 0.13 0.05	Freitag, T., 2004 RA-2013/03

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Italy Vittoria 2003 (Fuego)	250 EC	0.13 0.13 0.13 0.19 0.19 0.19	0.013 0.013 0.013 0.013 0.013 0.013	6	Fruit Triadimenol	 0 3	 0.22, 0.32 (0.27) 0.27	Freitag, T., 2004 RA-2013/03
Spain Barranquete 2003 (Caramba)	250 EC	0.13 0.13 0.13 0.19 0.19 0.19	0.022 0.022 0.022 0.013 0.013 0.013	6	Fruit Triadimenol	 0 3	 0.09, 0.14 (0.12) 0.13	Freitag, T., 2004 RA-2013/03
Greece Agia Marina 1995 (Arleta)	250 EC	0.13 0.13 0.13 0.19 0.19 0.19	0.013 0.013 0.013 0.013 0.013 0.013	6	Fruit Triadimenol	 0 3 7 10	 < 0.05, 0.05 (0.05) < 0.05 0.05 < 0.05	Nuesslein, F., 1997b RA-2025/95
Italy Sala di Cesenatico 1995 (Arletta)	250 EC	0.13 0.13 0.13 0.19 0.19 0.19	0.013 0.013 0.013 0.013 0.013 0.013	6	Fruit Triadimenol	 0 3 7 10	 0.08, 0.12 (0.1) 0.12 0.11 0.06	Nuesslein, F., 1997b RA-2025/95
Spain Morales 1995 (Brillante)	250 EC	0.13 0.13 0.13 0.19 0.19 0.19	0.013 0.013 0.013 0.013 0.013 0.013	6	Fruit Triadimenol	 0 3 7 10	 0.11, 0.36 (0.24) 0.17 0.29 0.14	Nuesslein, F., 1997b RA-2025/95
Spain La Canada 1995 (Royesta)	250 EC	0.13 0.13 0.13 0.19 0.19 0.19	0.013 0.013 0.013 0.013 0.013 0.013	6	Fruit Triadimenol	 0 3 7 10	 0.12, 0.21 (0.17) 0.25 0.17 0.22	Nuesslein, F., 1997b RA-2025/95
Spain Viladecans 1993 (Daniela)	250 EC	0.15 0.15 0.15 0.19 0.19 0.19	0.013 0.013 0.013 0.013 0.013 0.013	6	Fruit Triadimenol	 0 3 5 7	 0.08, 0.2 (0.14) 0.15 0.13 0.15	Bachmann, J., 1995a RA-2014/93

Stalk and stem vegetables

Table 87. Foliar application of triadimenol on globe artichoke

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Italy Orta Nova 2002 (Violetto di Provenza)	250 EC	0.13	0.013	3	Head Triadimenol	 0 7	 0.35 0.08	Nuesslein, F.; Fischer, S., 2003b RA-2003/02
Spain Viladecans 2002 (Tudela)	250 EC	0.13	0.013	3	Head Triadimenol	 0* 0 3 7 10	 0.05 0.41 0.18 0.15 0.08	Nuesslein, F.; Fischer, S., 2003b RA-2003/02

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Italy Trinitapoli 2001 (Violetto)	250 EC	0.13	0.013	3	Head Triadimenol	 0 7	 0.27 0.14	Nuesslein, F., 2003a RA-2054/01
Spain Viladecans 2002 (Tudela)	250 EC	0.13	0.013	3	Head Triadimenol	 0 [a] 0 4 7 11	 0.06 0.26 0.21 0.16 0.10	Nuesslein, F., 2003a RA-2054/01
Italy Palidoro 1990 (Romanesco)	5 WG	0.075	0.0075	4	Head Triadimenol	 0 7 10 14	 0.15 < 0.05 < 0.05 < 0.05	Anon., 1992h 0260-90
Italy Mola di Bari 1984 (Precoce di Mola)	50 EW	0.075	0.0075	2	Head Triadimenol	 9 16	 0.08 0.02	Anon., 1985r 9435-84
Spain Viladecans 1994 (Tudela-Orihuela)	250 EC	0.13	0.013	2	Head Triadimenol	 0 [a] 0 3 5 7	 0.08 0.45 0.32 0.24 0.17	Nuesslein, F., 1996c RA-2130/94
Spain Cabrera de Mar 1993 (Aranjvet)	250 EC	0.13	0.013	2	Head Triadimenol	 0 [a] 0 3 5 7	 < 0.05 0.33 0.18 0.13 0.07	Nuesslein, F., 1996d RA-2012/93
Spain Viladecans 1985 (Tudela)	250 EC	0.13	0.013	1	Head Triadimenol	 0 8 15	 0.44 0.37 0.55	Anon., 1986s 9418-85

a - Sampling before last application

Cereals

Table 88. Foliar application of triadimefon on barley grain

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Germany Albig 1983 (Koral)	125 EC	0.13	0.031	2	Barley, grain Triadimefon Triadimenol Total residue, calc. as TDF	35 42 35 42 35 42	< 0.05 < 0.05 < 0.1 < 0.1 < 0.1 < 0.1	Anon., 1983p 9052-83
Germany Monheim, 1982 (Carina)	25 WP	0.13	0.031	2	Barley, grain Triadimefon Triadimenol	35 42 35 42	< 0.05 < 0.05 < 0.1 < 0.1	Anon., 1982l 9035-82

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
					Total residue, calc. as TDF	35 42	< 0.1 < 0.1	
Germany Monheim 1983 (Birgit)	125 EC	0.13	0.031	2	Barley, grain Triadimefon Triadimenol Total residue, calc. as TDF	35 42 35 42 35 42	< 0.05 < 0.05 < 0.1 < 0.1 < 0.1 < 0.1	Anon., 1983q 9050-83
Germany Burscheid 1983 (Birgit)	125 EC	0.13	0.031	2	Barley, grain Triadimefon Triadimenol Total residue, calc. as TDF	28 35 42 28 35 42 28 35 42	< 0.05 < 0.05 < 0.05 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1	Anon., 1983r 9051-83
Germany Monheim 1982 (Birgit)	25 WP	0.13	0.031	2	Barley, grain Triadimefon Triadimenol Total residue, calc. as TDF	35 35 35	< 0.05 < 0.1 < 0.1	Anon., 1982m 9043-82
Germany Burscheid 1982 (Birgit)	25 WP	0.13	0.031	2	Barley, grain Triadimefon Triadimenol Total residue, calc. as TDF	35 42 35 42 35 42	< 0.05 < 0.05 < 0.1 < 0.1 < 0.1 < 0.1	Anon., 1982n 9044-82
Germany Monheim 1982 (Bollo)	25 WP	0.13	0.031	2	Barley, grain Triadimefon Triadimenol Total residue, calc. as TDF	35 42 35 42 35 42	< 0.05 < 0.05 < 0.1 < 0.1 < 0.1 < 0.1	Anon., 1982o 9029-82
Germany Burscheid 1982 (Dunja)	25 WP	0.13	0.03	2	Barley, grain Triadimefon Triadimenol Total residue, calc. as TDF	35 42 35 42 35 42	< 0.05 < 0.05 < 0.1 < 0.1 < 0.1 < 0.1	Anon., 1982p 9032-82
Germany Monheim 1982 (Carina)	25 WP	0.13	0.03	2	Barley, grain Triadimefon Triadimenol Total residue,	35 42 35 42 35	< 0.05 < 0.05 < 0.1 < 0.1 < 0.1	Anon., 1982q 9045-82

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
					calc. as TDF	42	< 0.1	

Table 89. Foliar application of triadimenol on barley grain

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Germany Burscheid 1990 (Golf)	375 EC	0.13	0.04	2	Barley, grain Triadimenol	42	< 0.05	Schmidt, B., 1992 PF 3703
Germany Worms-Heppenheim 1990 (Carina)	375 EC	0.13	0.04	2	Barley, grain Triadimenol	42	< 0.05	Schmidt, B., 1992 PF 3703
Germany Goggelgereuth 1989 (Aura)	309 EC	0.1	0.025	2	Barley, grain Triadimenol	35	0.35 [a]	Anon., 1991d 0253-89
Germany Burscheid 1988 (Aramir)	375 EC	0.13	0.03	2	Barley, grain Triadimenol	50	< 0.05	Anon., 1989k 0246-88
Germany Monheim 1988 (Aramir)	375 EC	0.13	0.03	2	Barley, grain Triadimenol	42	0.06	Anon., 1989l 0412-88
Germany Albig 1983 (Koral)	250 EC	0.13	0.03	2	Barley, grain Triadimenol	35 42	< 0.1 < 0.1	Anon., 1983w 9942-83
Germany Klein-Niedesheim 1982 (Koral)	250 EC	0.13	0.03	2	Barley, grain Triadimenol	35 42	< 0.1 < 0.1	Anon., 1982ac 9947-82
Germany Monheim 1982 (Carina)	250 EC	0.13	0.03	2	Barley, grain Triadimenol	35 42	< 0.1 < 0.1	Anon., 1982ad 9948-82
Germany Klein-Niedesheim 1982 (Koral)	25 WP	0.13	0.03	2	Barley, grain Triadimenol	35 42	< 0.1 < 0.1	Anon., 1982ae 9910-82
Germany Monheim 1982 (Carina)	25 WP	0.13	0.03	2	Barley, grain Triadimenol	35 42	< 0.1 < 0.1	Anon., 1982af 9911-82

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
United Kingdom Norton, Bury St. Edmunds, Suffolk 1983 (Triumph)	250 EC	0.13	0.04	2	Barley, grain Triadimenol	41	< 0.05	Bagnall, B. H., 1984 TCR 249
United Kingdom Thurston, Bury St. Edmunds 1982 (Golden Promise)	250 EC	0.13	0.04	2	Barley, grain Triadimenol	40	0.09	Bagnall, B. H., 1983 TCR 233
United Kingdom Newsham, N. Yorks 1982 (Mazurka)	250 EC	0.13	0.04	2	Barley, grain Triadimenol	41	< 0.05	Bagnall, B. H., 1983 TCR 233
France Saint Puy 1998 (Majestic)	250 EC	0.13	0.045	2	Barley, grain Triadimenol	49	0.09	Blass, W., 2001 RA-2000/98
France Beraut 1998 (Angora)	250 EC	0.13	0.045	2	Barley, grain Triadimenol	48	0.05	Blass, W., 2001 RA-2000/98
France St. Gervai 1996 (Angora)	250 EC	0.13	0.042	2	Barley, grain Triadimenol	53 60	< 0.05 < 0.05	Allmendinger, H., 1998c RA-2022/96
France Doussay 1996 (Angora)	250 EC	0.13	0.042	2	Barley, grain Triadimenol	60 67	< 0.05 < 0.05	Allmendinger, H., 1998c RA-2022/96
Germany Worms-Heppenheim 1988 (Igri)	401 EC	0.1	0.025	2	Barley, grain Triadimenol	35 42	< 0.05 < 0.05	Anon., 1990c 0250-88
Germany Burscheid 1986 (Tapir)	375 EC	0.13	0.31	2	Barley, grain Triadimenol	35 42	< 0.05 < 0.05	Anon., 1987o 10650-86
Germany Grönwohld 1986 (Mammut)	375 EC	0.13	0.31	2	Barley, grain Triadimenol	49	< 0.05	Anon., 1987p 10651-86
Germany Monheim 1986 (Franka)	375 EC	0.13	0.31	2	Barley, grain Triadimenol	35 57	< 0.05 < 0.05	Anon., 1987q 11001-87

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Germany Monheim 1983 (Birgit)	250 EC	0.13	0.031	2	Barley, grain Triadimenol	35 42	< 0.1 < 0.1	Anon., 1983x 9940-83
Germany Burscheid 1983 (Birgit)	250 EC	0.13	0.031	2	Barley, grain Triadimenol	28 35 42	< 0.1 < 0.1 < 0.1	Anon., 1983y 9941-83
Germany Burscheid 1982 (Dura)	250 EC	0.13	0.031	2	Barley, grain Triadimenol	35 42	< 0.1 < 0.1	Anon., 1982ag 9937-82
Germany Monheim 1982 (Bollo)	250 EC	0.13	0.031	2	Barley, grain Triadimenol	35 42	< 0.1 < 0.1	Anon., 1982ah 9938-82
Germany Burscheid 1982 (Dura)	25 WP	0.13	0.031	2	Barley, grain Triadimenol	35 42	< 0.1 < 0.1	Anon., 1982ai 9900-82
Germany 4019 Monheim, Versuchsgut Laacherhof 1982 Bollo	25 WP	0.13	0.031	2	Barley, grain Triadimenol	35 42	< 0.1 < 0.1	9901-82
Italy Ravenna 1997 (Plaisant)	250 EC	0.13	0.042	2	Barley, grain Triadimenol	49	< 0.05	Heinemann, O.; Allmendinger, H., 1998a RA-2022/97
Spain Jorba 1997 (Glenan (R1))	250 EC	0.13	0.042	2	Barley, grain Triadimenol	48	0.08	Heinemann, O.; Allmendinger, H., 1998a RA-2022/97
Italy Dugliolo 1996 (Pilastro)	250 EC	0.13	0.042	2	Barley, grain Triadimenol	36 43	< 0.05 < 0.05	Allmendinger, H., 1998c RA-2022/96
Spain E- 43420 Sta. Coloma de Queralt 1996 Garbo	250 EC	0.13	0.042	2	Barley, grain Triadimenol	39 46	< 0.05 < 0.05	Allmendinger, H., 1998c RA-2022/96
United Kingdom Thurston, Bury St Edmunds, Suffolk 1983 Igri	250 EC	0.13	0.042	2	Barley, grain Triadimenol	42	0.06	Bagnall, B. H., 1985a TCR 266

a - Supervised residue trial not used for evaluation

Table 90. Seed treatment with triadimenol on barley grain

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
			kg ai/hL	No	Sample	PHI	Residues	
Australia Waterview, Walla Walla, N.S.W. 1986 (Schooner)	150 LS	0.03 kg per 100kg seeds		1	Barley, grain Triadimenol	212	< 0.05	Anon., 1988g 5/87
Australia Waterview, Walla Walla, N.S.W. 1986 (Schooner)	25 WS	0.03 kg per 100kg seeds		1	Barley, grain Triadimenol	212	< 0.05	Anon., 1987j 4/87
Australia Dalrye, Yerong Creek 1984 (Ketch & Weeah 50 : 50 Mix)	25 WS	0.023 kg per 100kg seeds		1	Barley, grain Triadimenol	203	< 0.04	Anon., 1985s 44/84
Canada Ontario, Canada 1979 (Laurier)	150 FS	0.03 kg per 100kg seeds		1	Barley, grain Triadimenol KWG 0519 hydroxy	125 125	< 0.01 < 0.01	Anon., 1982r 80892
Canada Alberta, Canada 1979 (Bonanza)	150 FS	0.03 kg per 100kg seeds		1	Barley, grain Triadimenol KWG 0519 hydroxy	107 107	< 0.01 < 0.01	Anon., 1982s 80893
Canada Manitoba 1979 (Bonanza)	150 FS	0.03 kg per 100kg seeds		1	Barley, grain Triadimenol KWG 0519 hydroxy	131 131	< 0.01 < 0.01	Anon., 1982t 80894
France Cany-Barville 1985 (Pirol)	22 WS	0.03 kg per 100kg seeds		1	Barley, grain Triadimenol	141	< 0.1	Anon., 1985t 9480-85
France Tourne-Boisset 1985 (Pal)	22 WS	0.03 kg per 100kg seeds		1	Barley, grain Triadimenol	150	< 0.1	Anon., 1985u 9481-85
Germany Worms Heppenheim 1996 (Meltan)	145.2 FS	0.03 kg per 100kg seeds		1	Barley, grain Triadimenol	128	< 0.05	Blass, W., 1997 RA-2105/96
Germany Monheim 1996 (Meltan)	145.2 FS	0.03 kg per 100kg seeds		1	Barley, grain Triadimenol Barley, seed before sowing Triadimenol	127 0	< 0.05 270	Blass, W., 1997 RA-2105/96

Location Year (variety)	Form	Application	kg ai/hL	No	Analysis Sample	PHI	Residues	Reference, Report No.
USA Lamberton, MN 1989 (Robust)	312 SC	0.03 kg per 100kg seeds		1	Barley, grain Triadimenol KWG 0519 hydroxy	83 83	0.02 < 0.01	Williams, B. B., 1992a 100351
USA Stanley, Kansas 1979 (Will)	150 FS	0.03 kg per 100kg seeds		1	Barley, grain Triadimenol KWG 0519 hydroxy	272 272	< 0.01 < 0.01	Anon., 1982u 80885
USA Howe, Indiana 1979 (Paoli)	150 FS	0.03 kg per 100kg seeds		1	Barley, grain Triadimenol KWG 0519 hydroxy	308 306	< 0.01 < 0.01	Anon., 1982v 80886
USA Ropesville, Texas 1979 (Will)	150 FS	0.03 kg per 100kg seeds		1	Barley, grain Triadimenol KWG 0519 hydroxy	260 260	< 0.01 < 0.01	Anon., 1982w 80887
USA Stanley, Kansas 1979 (Will)	150 FS	0.047 kg per 100kg seeds		1	Barley, grain Triadimenol KWG 0519 hydroxy	272 272	< 0.01 < 0.01	Anon., 1982x 80888
USA Howe, Indiana 1979 (Paoli)	150 FS	0.047 kg per 100kg seeds		1	Barley, grain Triadimenol KWG 0519 hydroxy	308 308	< 0.01 < 0.01	Anon., 1982y 80889
USA Ropesville, Texas 1979 (Will)	150 FS	0.047 kg per 100kg seeds		1	Barley, grain Triadimenol KWG 0519 hydroxy	260 260	< 0.01 < 0.01	Anon., 1982z 80890
USA Wahpeton, North Dakota 1979 (Morex)	150 FS	0.03 kg per 100kg seeds		1	Barley, grain Triadimenol KWG 0519 hydroxy	77 77	< 0.01 < 0.01	Anon., 1982aa 80891
USA Moccasin, Montana 1979 (Piroline)	150 FS	0.03 kg per 100kg seeds		1	Barley, grain Triadimenol KWG 0519 hydroxy	91 91	< 0.01 < 0.01	Anon., 1982ab 80895
France Cany-Barville 1986 (Palz)	22 WS	0.03 kg per 100kg seeds		1	Barley, grain Triadimenol	149	< 0.1	Anon., 1987k 10511-86
Germany Burscheid 1996 (Meltan)	145.2 FS	0.03 kg per 100kg seeds		1	Barley, grain Triadimenol	139	< 0.05	Blass, W. , 1997 RA-2105/96
Germany Borstorf 1984	231 FS	0.038 kg per 100kg seeds		1	Barley, grain Triadimenol	144	< 0.1	Anon., 1984ah 9917-84

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
			kg ai/hL	No	Sample	PHI	Residues	
(Aura)								
Germany Borstorf 1984 (Aura)	323 LS	0.016 kg per 100kg seeds		1	Barley, green material Triadimenol Barley, grain Triadimenol	84 144	< 0.1 < 0.1	Anon., 1984ai 10281-84
Germany Monheim 1983 (Carina)	94 FS	0.038 kg per 100kg seeds		1	Barley, grain Triadimenol	100	< 0.1	Anon., 1984aj 9980-83
Germany Burscheid 1983 (Carina)	94 FS	0.038 kg per 100kg seeds		1	Barley, grain Triadimenol	103	< 0.1	Anon., 1984ak 9981-30
Germany Klein-Niedesheim 1983 (Koral)	30.7 DS	0.035 kg per 100kg seeds		1	Barley, grain Triadimenol	128	< 0.1	Anon., 1984al 10502-83
Germany Worms-Heppenheim 1983 (Koral)	30.7 DS	0.035 kg per 100kg seeds		1	Barley, grain Triadimenol	128	< 0.1	Anon., 1984am 10503-83
Germany Monheim 1982 (Carina)	30.7 DS	0.035 kg per 100kg seeds		1	Barley, grain Triadimenol	118	< 0.1	Anon., 1983s 10509-82
Germany Burscheid 1982 (Carina)	30.7 DS	0.035 kg per 100kg seeds		1	Barley, grain Triadimenol	131	< 0.1	Anon., 1983t 10510-82
Germany Geldern 1982 (Carina)	30.7 DS	0.035 kg per 100kg seeds		1	Barley, grain Triadimenol	127	< 0.1	Anon., 1983u 10511-82
Germany Burscheid 1984 (Carina)	231 FS	0.038 kg per 100kg seeds		1	Barley, grain Triadimenol	118	< 0.1	Anon., 1984an 9916-84
Germany Burscheid 1984 (Carina)	323 LS	0.016 kg per 100kg seeds		1	Barley, grain Triadimenol	118	< 0.1	Anon., 1984ao 10280-84
United Kingdom Worksop, Notts 1980 (Keg)	210 FS	0.028 kg per 100kg seeds		1	Barley, grain Triadimenol	168	< 0.05	Bagnall, B. H., 1981 TCR 201

Location Year (variety)	Form	Application		No	Analysis Sample	PHI	Residues	Reference, Report No.
			kg ai/hL					
United Kingdom Blisworth, Northamptonshire 1980 (Georgie)	210 FS	0.028 kg per 100kg seeds		1	Barley, grain Triadimenol	165	< 0.05	Bagnall, B. H., 1981 TCR 201
USA Northwood, ND 1989 (Robust)	312 SC	0.031 kg per 100kg seeds		1	Barley, grain Triadimenol KWG 0519 hydroxy	87 87	< 0.01 < 0.01	Williams, B. B., 1992a 100351
USA Ashton, ID 1989 (Morex)	312 SC	0.031 kg per 100kg seeds		1	Barley, grain Triadimenol KWG 0519 hydroxy	110 110	< 0.01 < 0.01	Williams, B. B., 1992a 100351
USA Ephrata, WA 1989 (Gusto)	312 SC	0.031 kg per 100kg seeds		1	Barley, grain Triadimenol KWG 0519 hydroxy	1ß8 108	< 0.01 < 0.01	Williams, B. B., 1992a 100351
France Fresne l'Archevesque 1985	150 FS	0.03 kg per 100kg seeds		1	Barley, grain Triadimenol	246	< 0.05	Anon., 1986t 9400-86
France Seltot 1985 (Plaisant)	150 FS	0.03 kg per 100kg seeds		1	Barley, grain Triadimenol	284	< 0.05	Anon., 1986u 9401-86
France Seltot 1985 (Plaisant)	165 FS	0.03 kg per 100kg seeds		1	Barley, grain Triadimenol	284	< 0.1	Anon., 1987l 10500-86
France Fultot 1985 (Vestale)	165 FS	0.03 kg per 100kg seeds		1	Barley, grain Triadimenol	228	< 0.1	Anon., 1987m 10501-86
France Fresne L'Archeveque 1985 (Vestale)	22 WS	0.03 kg per 100kg seeds		1	Barley, grain Triadimenol	246	< 0.1	Anon., 1987n 10510-86
Germany Klein-Niedesheim 1983 (Franka)	94 FS	0.038 kg per 100kg seeds		1	Barley, grain Triadimenol	237	< 0.1	Anon., 1985v 9900-84
Germany Monheim 1982 (Birgit)	30.7 DS	0.035 kg per 100kg seeds		1	Barley, grain Triadimenol	280	< 0.1	Anon., 1984ap 10500-83
Germany Burscheid	30.7 DS	0.035 kg per 100kg seeds		1	Barley, grain Triadimenol	296	< 0.1	Anon., 1984aq 10501-83

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
			kg ai/hL	No	Sample	PHI	Residues	
1982 (Birgit)								
Germany Burscheid 1981 (Bollo)	30.7 DS	0.035 kg per 100kg seeds		1	Barley, grain Triadimenol	 292	 < 0.1	Anon., 1983v 10512-82
USA Stilwell, KS 1989 (Perry)	312 SC	0.031 kg per 100kg seeds		1	Barley, grain Triadimenol KWG 0519 hydroxy	282 282	< 0.01 < 0.01	Williams, B. B., 1992a 100351
Australia Bussenschutt, Paskeville, S.A. 1983 Ketch	15 DS	0.011 kg per 100kg seeds		1	Barley, grain Triadimenol	 147	 < 0.05	Anon., 1984ar 32/83
Australia Bussenschutt, Paskeville, S.A. 1983 Ketch	15 DS	0.016 kg per 100kg seeds		1	Barley, grain Triadimenol	 147	 < 0.05	Anon., 1984ar 32/83
Australia Bussenschutt, Paskeville, S.A. 1983 Ketch	15 DS	0.032 kg per 100kg seeds		1	Barley, grain Triadimenol	 147	 < 0.05	Anon., 1984ar 32/83

Table 91. Foliar application of Triadimefon on oats grain

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Germany Monheim 1982 (Flämingskrone)	25 WP	0.13	0.031	2	Oats, grain Triadimefon Triadimenol Total residue, calc. as TDF	 28 35 42 28 35 42 28 35 42	 < 0.05 < 0.05 < 0.05 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1	Anon., 1983z 9000-82
Germany Burscheid 1982 (Flämingskrone)	25 WP	0.13	0.031	2	Oats, grain Triadimefon Triadimenol Total residue, calc. as TDF	 35 42 35 42 35 42	 < 0.05 < 0.05 < 0.1 < 0.1 < 0.1 < 0.1	Anon., 1983aa 9001-82
Germany Klein-Niedesheim 1982 (Flämingskrone)	25 WP	0.13	0.031	2	Oats, grain Triadimefon Triadimenol Total residue, calc. as TDF	 35 42 35 42 35 42	 < 0.05 < 0.05 < 0.1 < 0.1 < 0.1 < 0.1	Anon., 1983ab 9002-82

Table 92. Foliar application of triadimenol on oats grain

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Brazil Vila Sao Jose do Centro 99470, Nao-Me-Toque/RS 1991 (UPF-7)	250 EC	0.13	0.042	2	Oats, grain Triadimenol	35	0.1	Anon., 1992i 131491
Germany Monheim 1986 (Flaemingsnova)	375 EC	0.13	0.031	2	Oats, grain Triadimenol	35 42	0.10 0.11	Anon., 1987r 10656-86
Germany Worms-Heppenheim 1986 (Flaemingsnova)	375 EC	0.13	0.031	2	Oats, grain Triadimenol	35 42	0.11 0.12	Anon., 1987s 10657-86

Table 93. Seed treatment with triadimenol on oats grain

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
			kg ai/hL	No	Sample	PHI	Residues	
Canada Unionville, Ontario 1979 (Elgin)	150 FS	0.031 kg per 100kg seeds		1	Oats, grain Triadimefon Triadimenol Total residue, calc. as TDM	125 125 125	< 0.01 < 0.01 < 0.01	Anon., 1982aj 80901
Canada Calmar, Alberta 1979 (Random)	150 FS	0.031 kg per 100kg seeds		1	Oats, grain Triadimefon Triadimenol Total residue, calc. as TDM	118 118 118	< 0.01 < 0.01 < 0.01	Anon., 1982ak 80902
Canada Portage la Prairie, Manitoba 1979 (Harmon)	150 FS	0.031 kg per 100kg seeds		1	Oats, grain Triadimefon Triadimenol Total residue, calc. as TDM	131 131 131	< 0.01 < 0.01 < 0.01	Anon., 1982al 80903
Germany Borstorf 1984 (Flaemingsnova)	323 LS	0.012 kg per 100kg seeds		1	Oats, grain Triadimenol	155	< 0.1	Anon., 1984as 10285-84
Germany Burscheid 1983 (Flaemingsnova)	23.3 DS	0.012 kg per 100kg seeds		1	Oats, grain Triadimenol	113	< 0.1	Anon., 1984at 10282-83

Location Year (variety)	Form	Application	kg ai/hL	No	Analysis Sample	PHI	Residues	Reference, Report No.
Germany Monheim 1983 (Flaemingsnova)	23.3 DS	0.012 kg per 100kg seeds		1	Oats, grain Triadimenol	136	< 0.1	Anon., 1984au 10283-83
Germany Monheim 1984 (Flaemingsnova)	323 LS	0.012 kg per 100kg seeds		1	Oats, grain Triadimenol	144	< 0.1	Anon., 1984av 10284-83
Germany Burscheid 1979 (Fläaeingskrone)	210 FS	0.038 kg per 100kg seeds		1	Oats, grain Triadimenol	132	< 0.1	Anon., 1979b 9945-79
Germany 4019 Monheim, Versuchsgut Laacherhof 1979 Flämingskrone	210 FS	0.038 kg per 100kg seeds		1	Oats, grain Triadimenol	128	< 0.1	Anon., 1979c 9946-79
Germany 417 Geldern 1979 Tiger	210 FS	0.038 kg per 100kg seeds		1	Oats, grain Triadimenol	174	< 0.1	Anon., 1979d 9947-79
USA Lamberton, Minnesota 1989 (Dow)	312 SC	0.031 kg per 100kg seeds		1	Oats, grain Triadimefon Triadimenol Total residue, calc. as TDM	83 83 83	< 0.01 < 0.01 < 0.01	Williams, B. B., 1992b 100352
USA Danville, Iowa 1989 (Hazel)	312 SC	0.03 kg per 100kg seeds		1	Oats, grain Triadimefon Triadimenol Total residue, calc. as TDM	92 92 92	< 0.01 < 0.01 < 0.01	Williams, B. B., 1992b 100352
USA Canastota, New York 1989 (Astro)	312 SC	0.03 kg per 100kg seeds		1	Oats, grain Triadimefon Triadimenol Total residue, calc. as TDM	114 114 114	< 0.01 < 0.01 < 0.01	Williams, B. B., 1992b 100352
USA Hudson, Wisconsin 1989 (Noble)	312 SC	0.03 kg per 100kg seeds		1	Oats, grain Triadimefon Triadimenol Total residue, calc. as TDM	98 98 98	< 0.01 < 0.01 < 0.01	Williams, B. B., 1992b 100352
USA Howe, Indiana 1989 (Ogle)	312 SC	0.03 kg per 100kg seeds		1	Oats, grain Triadimefon Triadimenol Total residue, calc. as TDM	107 107 107	< 0.01 < 0.01 < 0.01	Williams, B. B., 1992b 100352

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
			kg ai/hL	No	Sample	PHI	Residues	
USA Stilwell, Kansas 1989 (Ogle)	312 SC	0.03 kg per 100kg seeds		1	Oats, grain Triadimefon Triadimenol Total residue, calc. as TDM	122 122 122	< 0.01 < 0.01 < 0.01	Williams, B. B., 1992b 100352
USA Stanley, Kansas 1979 (Noble)	150 FS	0.031 kg per 100kg seeds		1	Oats, grain Triadimefon Triadimenol Total residue, calc. as TDM	117 117 117	< 0.01 < 0.01 < 0.01	Anon., 1982am 80896
USA Tifton, Georgia 1979 (Coker 227)	150 FS	0.031 kg per 100kg seeds		1	Oats, grain Triadimefon Triadimenol Total residue, calc. as TDM	229 229 229	< 0.01 < 0.01 < 0.01	Anon., 1982an 80897
USA Howe, Indiana 1979 (Noble)	150 FS	0.031 kg per 100kg seeds		1	Oats, grain Triadimefon Triadimenol Total residue, calc. as TDM	101 101 101	< 0.01 < 0.01 < 0.01	Anon., 1982ao 80898
USA Shakopee, Minnesota 1979 (Chief)	150 FS	0.031 kg per 100kg seeds		1	Oats, grain Triadimefon Triadimenol Total residue, calc. as TDM	76 76 76	< 0.01 < 0.01 < 0.01	Anon., 1982ap 80899
USA Shakopee, Minnesota 1979 (Lang)	150 FS	0.031 kg per 100kg seeds		1	Oats, grain Triadimefon Triadimenol Total residue, calc. as TDM	76 76 76	< 0.01 < 0.01 < 0.01	Anon., 1982aq 80900
USA Howe, Indiana 1979 (Noble)	150 FS	0.047 kg per 100kg seeds		1	Oats, grain Triadimefon Triadimenol Total residue, calc. as TDM	101 101 101	< 0.01 < 0.01 < 0.01	Anon., 1982ar 80904
USA Shakopee, Minnesota 1979 (Chief)	150 FS	0.047 kg per 100kg seeds		1	Oats, grain Triadimefon Triadimenol Total residue, calc. as TDM	76 76 76	< 0.01 < 0.01 < 0.01	Anon., 1982as 80905

Table 94. Foliar application of triadimefon on rye grain

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Germany Monheim 1983 (Carokurz)	125 EC	0.13 0.25	0.03 0.06	2	Rye, grain Triadimefon Triadimenol Total residue, calc. as TDM	 35 42 35 42 35 42	 < 0.04 < 0.04 < 0.08 < 0.08 < 0.08 < 0.08	Anon., 1983ac 9003-83
Germany Burscheid 1983 (Halo)	125 EC	0.13	0.03	2	Rye, grain Triadimefon Triadimenol Total residue, calc. as TDM	 35 35 35	 < 0.04 0.11 0.15	Anon., 1983ad 9004-83
Germany Klein-Niedesheim 1983 (Halo)	125 EC	0.25	0.06	2	Rye, grain Triadimefon Triadimenol Total residue, calc. as TDM	 35 42 35 42 35 42	 < 0.04 < 0.04 < 0.08 < 0.08 < 0.08 < 0.08	Anon., 1983ae 9005-83
Germany Monheim 1982 (Carokurz)	25 WP	0.13	0.03	2	Rye, grain Triadimefon Triadimenol Total residue, calc. as TDM	 28 35 42 28 35 42 28 35 42	 < 0.05 < 0.05 < 0.05 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1	Anon., 1983af 9003-82
Germany Burscheid 1982 (Carokurz)	25 WP	0.13	0.03	2	Rye, grain Triadimefon Triadimenol Total residue, calc. as TDM	 42 42 42	 < 0.05 < 0.1 < 0.1	Anon., 1983ag 9004-82
Germany Klein-Niedesheim 1982 (Halo)	25 WP	0.13	0.03	2	Rye, grain Triadimefon Triadimenol Total residue, calc. as TDM	 35 42 35 42 35 42	 < 0.05 < 0.05 < 0.1 < 0.1 < 0.1 < 0.1	Anon., 1983ah 9005-82

Table 95. Foliar application of triadimenol on rye grain

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Germany Burscheid 1986 (Danko)	375 EC	0.13	0.031	2	Rye, grain Triadimefon	 35 49 56	 < 0.05 < 0.05 < 0.05	Anon., 1987t 10655-86
Germany Klein-Niedesheim 1982 (Halo)	250 EC	0.13	0.031	2	Rye, grain Triadimenol	 35 42	 < 0.1 < 0.1	Anon., 1982ba 9949-82
Germany Monheim 1982 (Carokurz)	250 EC	0.13	0.031	2	Rye, grain Triadimenol	 28 35 42	 < 0.1 < 0.1 < 0.1	Anon., 1982bb 9950-82
Germany Klein-Niedesheim 1982 (Halo)	25 WP	0.13	0.031	2	Rye, grain Triadimenol	 35 42	 < 0.1 < 0.1	Anon., 1982bc 9912-82
Germany Monheim 1982 (Carokurz)	25 WP	0.13	0.031	2	Rye, grain Triadimenol	 28 35 42	 < 0.1 < 0.1 < 0.1	Anon., 1982bd 9913-82

Table 96. Seed treatment with triadimenol on rye grain

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Canada Lethbridge, Alberta 1979 (Cougar)	150 FS	0.031 kg per 100kg seeds		1	Rye, grain Triadimefon Triadimenol Total residue, calc. as TDM	 328 328 328	 < 0.01 < 0.01 < 0.01	Anon., 1982at 80908
Germany Worms-Heppenheim 1984 (Caro-Kurz)	231 FS	0.038 kg per 100kg seeds		1	Rye, grain Triadimenol	 295	 < 0.1	Anon., 1986v 9900-85
Germany Monheim 1984 (Carokurz)	231 FS	0.038 kg per 100kg seeds		1	Rye, grain Triadimenol	 289	 < 0.1	Anon., 1986w 9901-85
Germany Burscheid 1983 (Carokurz)	94 FS	0.038 kg per 100kg seeds		1	Rye, grain Triadimenol	 314	 < 0.1	Anon., 1985w 9901-84
Germany Klein-Niedesheim	94 FS	0.038 kg per 100kg seeds		1	Rye, grain Triadimenol	 316	 < 0.1	Anon., 1985x 9902-84

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
1983 (Carokurz)								
USA Stanley, Kansas 1981 Rymin	150 FS	0.031 kg per 100kg seeds		1	Rye, grain Triadimefon Triadimenol Total residue, calc. as TDM	 147 147 147	 < 0.01 < 0.01 < 0.01	Anon., 1982au 80911
USA Shakopee, Minnesota 1980 von Lochow	150 FS	0.031 kg per 100kg seeds		1	Rye, grain Triadimefon Triadimenol Total residue, calc. as TDM	 334 334 334	 < 0.01 < 0.01 < 0.01	Anon., 1982av 80906
USA Ropesville, Texas 1980 Elbon	150 FS	0.031 kg per 100kg seeds		1	Rye, grain Triadimefon Triadimenol Total residue, calc. as TDM	 281 281 281	 < 0.01 < 0.01 < 0.01	Anon., 1982aw 80907
USA Hubbard, Oregon 1980	150 FS	0.031 kg per 100kg seeds		1	Rye, grain Triadimefon Triadimenol Total residue, calc. as TDM	 276 276 276	 < 0.01 < 0.01 < 0.01	Anon., 1982ax 80909
USA Howe, Indiana 1980 Balboa	150 FS	0.031 kg per 100kg seeds		1	Rye, grain Triadimefon Triadimenol Total residue, calc. as TDM	 270 270 270	 < 0.01 0.01 0.02	Anon., 1982ay 80910
USA Tifton, Georgia 1980 Wrens Abruzzi	150 FS	0.031 kg per 100kg seeds		1	Rye, grain Triadimefon Triadimenol Total residue, calc. as TDM	 173 173 173	 < 0.01 < 0.01 < 0.01	Anon., 1982az 80912

Table 97. Foliar application of triadimefon on wheat grain

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Germany Burscheid 1983 (Kolibri)	125 EC	0.13	0.031	2	Wheat, grain Triadimefon Triadimenol Total residue, calc. as TDM	 27 35 42 27 35 42 27 35 42	 < 0.05 < 0.05 < 0.05 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1	Anon., 1983ai 9054-83

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Germany Monheim 1982 (Kolibri)	25 WP	0.13	0.031	2	Wheat, grain Triadimefon	28 35 42	< 0.05 < 0.05 < 0.05	Anon., 1982be 9047-82
					Triadimenol	28 35 42	< 0.1 < 0.1 < 0.1	
					Total residue, calc. as TDM	28 35 42	< 0.1 < 0.1 < 0.1	
Germany Monheim 1982 (Kolibri)	25 WP	0.13	0.031	2	Wheat, grain Triadimefon	28 35 42	< 0.05 < 0.05 < 0.05	Anon., 1982bf 9037-82
					Triadimenol	28 35 42	< 0.1 < 0.1 < 0.1	
					Total residue, calc. as TDM	28 35 42	< 0.1 < 0.1 < 0.1	
Germany Monheim 1977 (Kolibri)	250 EC	0.13	0.031	2	Wheat, grain Total residue, calc. as TDM	35 42	< 0.1 < 0.1	Anon., 1977g 9022-77
Germany Monheim 1977 (Kolibri)	250 EC	0.13	0.031	2	Wheat, grain Total residue, calc. as TDM	35 42	< 0.1 < 0.1	Anon., 1977h 9023-77
Germany Groenwohld 1983 (Okapi)	125 EC	0.13	0.031	2	Wheat, grain Triadimefon	28 35	< 0.05 < 0.05	Anon,., 1983aj 9053-83
					Triadimenol	28 35	< 0.1 < 0.1	
					Total residue, calc. as TDM	28 35	< 0.1 < 0.1	
Germany Monheim 1982 (Kormoran)	25 WP	0.13	0.031	2	Wheat, grain Triadimefon	28 35 42	< 0.05 < 0.05 < 0.05	Anon., 1982bg 9046-82
					Triadimenol	28 35 42	< 0.1 < 0.1 < 0.1	
					Total residue, calc. as TDM	28 35 42	< 0.1 < 0.1 < 0.1	
Germany Monheim 1982 (Kormoran)	25 WP	0.13	0.031	2	Wheat, grain Triadimefon	28 35 42	< 0.05 < 0.05 < 0.05	Anon., 1982bh 9036-82
					Triadimenol	28 35 42	< 0.1 < 0.1 < 0.1	
					Total residue,			

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
					calc. as TDM	28 35 42	< 0.1 < 0.1 < 0.1	

Table 98. Foliar application of triadimenol on wheat grain

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Australia Qld. Agric. College, Gatton 1985 (Oxley)	250 EC	0.13	0.061	1	Wheat, grain Triadimenol	40	< 0.05	Anon., 1986x 48/85
Australia Griffith, N.S.W. 1984 (Egret)	250 EC	0.13	0.088	3	Wheat, grain Triadimenol	48	0.03	Anon., 1985z 42/84
Australia River Farm, Hawkesbury Agricultural College 1984 (Olympic)	250 EC	0.13	0.075	1	Wheat, grain Triadimenol	31	0.06	Anon., 1985aa 45/84
Canada Palmerston, Ontario 1982 (Gordon)	25 WP	0.14	0.056	1	Wheat, grain Triadimenol KWG 0519 hydroxy	27 27	< 0.01 0.01	Anon., 1983ak 82869
New Zealand Sheffield R.D., Danfield 1985 (Rangatea)	250 EC	0.13	0.042	3	Wheat, grain Triadimenol	50	0.05	Anon., 1986y CF8505
Germany Burscheid 1989 (Ralle)	309 EC	0.1	0.025	2	Wheat, grain Triadimenol	49	< 0.05	Anon., 1990d 0250-89
Germany Worms-Heppenheim 1989 (Ralle)	309 EC	0.1	0.025	2	Wheat, grain Triadimenol	35 42	< 0.05 < 0.05	Anon., 1990e 0251-89
Germany Burscheid 1988 (Star)	401 EC	0.1	0.025	2	Wheat, grain Triadimenol	54	< 0.05	Anon., 19898m 0247-88
Germany Burscheid 1988 (Star)	375 EC	0.13	0.031	2	Wheat, grain Triadimenol	54	< 0.05	Anon., 1989n 0244-88

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Germany Monheim 1988 (Star)	375 EC	0.13	0.031	2	Wheat, grain Triadimenol	49	< 0.05	Anon., 1989o 0413-88
Germany Monheim 1988 (Star)	375 EC	0.13	0.031	2	Wheat, grain Triadimenol	42	< 0.05	Anon., 1989p 0627-88
Germany Monheim 1988 (Star)	375 EC	0.13	0.031	2	Wheat, grain Triadimenol	42	< 0.05	Anon., 1989q 0635-88
Germany Klein-Niedesheim 1988 (Star)	375 EC	0.13	0.031	2	Wheat, grain Triadimenol	35 42	< 0.05 < 0.05	Anon., 1989r 0639-88
Germany Klein-Niedesheim 1988 (Star)	375 EC	0.13	0.031	2	Wheat, grain Triadimenol	35 42	< 0.05 < 0.05	Anon., 1989s 0641-88
Germany Burscheid 1988 (Star)	375 EC	0.13	0.031	2	Wheat, grain Triadimenol	54	< 0.05	Anon., 1989t 0653-88
Germany Monheim 1984 (Kolibri)	250 EC	0.13	0.031	2	Wheat, grain Triadimenol	49	< 0.05	Anon., 1984bb 9483-84
Germany Burscheid 1983 (Kolibri)	250 EC	0.13	0.031	2	Wheat, grain Triadimenol	27 35 42	< 0.05 < 0.05 < 0.05	Anon., 1983al 9944-83
Germany Albig 1982 (Schirokko)	250 EC	0.13	0.031	2	Wheat, grain Triadimenol	35 42	< 0.05 < 0.05	Anon., 1982bz 9945-82
Germany Monheim 1982 (Kolibri)	250 EC	0.13	0.031	2	Wheat, grain Triadimenol	28 35 42	< 0.05 < 0.05 < 0.05	Anon., 1982ca 9946-82
Germany Albig 1982 (Schirokko)	25 WP	0.13	0.031	2	Wheat, grain Triadimenol	35 42	< 0.05 < 0.05	Anon., 1982cb 9908-82
Germany Monheim 1982 (Kolibri)	25 WP	0.13	0.031	2	Wheat, grain Triadimenol	28 35 42	< 0.05 < 0.05 < 0.05	Anon., 1982cc 9909-82

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
France Bage la Ville 1997 (Sideral)	250 EC	0.13	0.045	2	Wheat, grain Triadimenol	49	< 0.05	Heinemann, O.; Allmendinger, H., 1998a RA-2022/97
France Lescheroux 1997 (Messager)	250 EC	0.13	0.045	2	Wheat, grain Triadimenol	49	< 0.05	Heinemann, O.; Allmendinger, H., 1998a RA-2022/97
France St. Gervais 1996 (Recital)	250 EC	0.13	0.045	2	Wheat, grain Triadimenol	42 49	< 0.05 < 0.05	Allmendinger, H., 1998c RA-2022/96
France Savigny 1996 (Recital)	250 EC	0.13	0.045	2	Wheat, grain Triadimenol	42 49	< 0.05 < 0.05	Allmendinger, H., 1998c RA-2022/96
France St. Andre de l`Eure/ABC 1987 (Festival)	250 EC	0.13	0.025	1	Wheat, grain Triadimenol	29	< 0.05	Anon., 1988i 9490-87
France St. Andre de l`Eure/ABC 1987 (Festival)	250 EC	0.13	0.025	1	Wheat, grain Triadimenol	29	< 0.05	Anon., 1988j 9491-87
France Moreac 1982 (Hardi)	25 WP	0.13	0.021	2	Wheat, grain Triadimenol	40	< 0.05	Anon., 1983am 9921-82
France Moustoir Remungol 1982 (Arminda)	25 WP	0.13	0.021	2	Wheat, grain Triadimenol	35	< 0.05	Anon., 1983an 9922-82
Germany Groenwohld 1991 (Kanzler)	300 EC	0.075	0.025	2	Wheat, grain Triadimenol	35 42	< 0.05 < 0.05	Allmendinger, H., 1998c RA-2099/91
Germany Albig 1988 (Ares)	375 EC	0.13	0.031	1	Wheat, grain Triadimenol	35 42	< 0.05 < 0.05	Anon., 1989u 0645-88
Germany Albig 1988 (Ares)	375 EC	0.13	0.031	1	Wheat, grain Triadimenol	35 42	< 0.05 < 0.05	Anon., 19889v 0647-88
Germany Monheim 1987 (Carina)	375 EC	0.13	0.031	2	Wheat, grain Triadimenol	35	< 0.05	Anon., 1987v 11004-87

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Germany Kirchlauter-Pettstadt 1987 (Rektor)	375 EC	0.13	0.031	2	Wheat, grain Triadimenol	 49	 < 0.05	Anon., 1987w 11005-87
Germany Monheim 1986 (Caribo)	375 EC	0.13	0.031	2	Wheat, grain Triadimenol	 35 42	 < 0.05 < 0.05	Anon., 1987x 10652-86
Germany Kirchlauter-Pettstadt 1986 (Rektor)	375 EC	0.13	0.031	2	Wheat, grain Triadimenol	 49	 < 0.05	Anon., 1987y 10653-86
Germany Monheim 1986 (Caribo)	375 EC	0.13	0.031	2	Wheat, grain Triadimenol	 28 37	 < 0.05 < 0.05	Anon., 1987z 10658-86
Germany Burscheid 1986 (Caribo)	375 EC	0.13	0.031	2	Wheat, grain Triadimenol	 28 35	 < 0.05 < 0.05	Anon., 1987aa 10659-86
Germany Burscheid 1984 (Caribo)	250 EC	0.13	0.031	2	Wheat, grain Triadimenol	 52	 < 0.05	Anon., 1984bc 9482-84
Hungary Kaposvár-Dénesmajor, Somogy 1998 (MV 23)	460 EC	0.044	0.02	1	Wheat, grain Triadimenol	 35	 < 0.02(3) (< 0.02)	Orosz, F., 2000 98-BAY-AA-14-05
Hungary Hajduböszörmeny, Beke 1984	250 EC	0.13	0.031	1	Wheat, grain Triadimenol	 37	 < 0.05	Anon., 1984bd UNG1/84
Italy Ravenna 1997 (Centauro)	250 EC	0.13	0.042	2	Wheat, grain Triadimenol	 44	 < 0.05	Heinemann, O.; Allmendinger, H., 1998a RA-2022/97
Italy Dugliolo 1996 (Mol)	250 EC	0.13	0.042	2	Wheat, grain Triadimenol	 30 37	 < 0.05 < 0.05	Allmendinger, H., 1998c RA-2022/96
Spain Jorba 1997 (Etecho (R1))	250 EC	0.13	0.042	2	Wheat, grain Triadimenol	 79	 < 0.05	Heinemann, O.; Allmendinger, H., 1998a RA-2022/97

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Spain Figuerola 1996 (Soisson)	250 EC	0.13 – 0.14	0.042	2	Wheat, grain Triadimenol	 39 46	 < 0.05 < 0.05	Allmendinger, H., 1998c RA-2022/96

Table 99. Seed treatment with triadimenol on wheat grain

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
			kg ai/hL	No	Sample	PHI	Residues	
Australia Walla Walla, N.S.W. 1986 (Olympic)	150 LS	0.03 kg per 100kg seeds		1	Wheat, grain Triadimenol	 212	 < 0.05	Anon., 1988h AUS-3-87
Australia Walla Walla, N.S.W. 1986 (Olympic)	25 WS	0.03 kg per 100kg seeds		1	Wheat, grain Triadimenol	 212	 < 0.05	Anon., 1987u 2/87
Australia Griffith, N.S.W. 1983 (Bindawarra)	15 DS	0.023 kg per 100kg seeds		1	Wheat, grain Triadimenol	 183	 < 0.05	Anon., 1984aq 42/83
Brazil Camponesa, Passo Fundo/RS 1991 (CEP-19)	150 FS	0.041 kg per 100kg seeds		1	Wheat, grain Triadimenol	 141	 < 0.05	Anon., 1992j 130436
Canada Unionville, Ontario 1979 (Glenlea)	150 FS	0.031 kg per 100kg seeds		1	Wheat, grain Triadimefon Triadimenol Total residue, calc. as TDM	 123 123 123	 < 0.01 < 0.01 < 0.01	Anon., 1982bi 80923
Canada Vulcan, Alberta 1979 (Neepawa)	150 FS	0.031 kg per 100kg seeds		1	Wheat, grain Triadimefon Triadimenol Total residue, calc. as TDM	 107 107 107	 < 0.01 < 0.01 < 0.01	Anon., 1982bj 80924
Canada Portage La Prairie, Manitoba 1979 (Sinton)	150 FS	0.031 kg per 100kg seeds		1	Wheat, grain Triadimefon Triadimenol Total residue, calc. as TDM	 131 131 131	 < 0.01 < 0.01 < 0.01	Anon., 1982bk 80925
Germany Groenwohld 1984 (Arkas)	231 FS	0.038 kg per 100kg seeds		1	Wheat, grain Triadimenol	 142	 < 0.05	Anon., 1984ax 9918-84

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
			kg ai/hL	No	Sample	PHI	Residues	
Germany Monheim 1984 (Kolibri)	231 FS	0.038 kg per 100kg seeds		1	Wheat, grain Triadimenol	 140 153	 < 0.05 < 0.05	Anon., 1984ay 9919-84
Germany Klein-Niedesheim 1983 (Schirokko)	94 FS	0.038 kg per 100kg seeds		1	Wheat, grain Triadimenol	 139	 < 0.05	Anon., 1984az 9982-83
Germany Worms-Heppenheim 1983 (Schirokko)	94 FS	0.038 kg per 100kg seeds		1	Wheat, grain Triadimenol	 135	 < 0.05	Anon., 1984ba 9983-83
Germany Burscheid 1979 (Kolibri)	210 FS	0.038 kg per 100kg seeds		1	Wheat, grain Triadimenol	 141	 < 0.05	Anon., 1979e 9942-79
Germany Monheim 1979 (Kolibri)	210 FS	0.038 kg per 100kg seeds		1	Wheat, grain Triadimenol	 129	 < 0.05	Anon., 1979f 9943-79
Germany Geldern3 1979 (Kolibri)	210 FS	0.038 kg per 100kg seeds		1	Wheat, grain Triadimenol	 150	 < 0.05	Anon., 1979g 9944-79
USA Lamberton, Minnesota 1989 (Marshall)	312 SC	0.031 kg per 100kg seeds		1	Wheat, grain Triadimefon Triadimenol Total residue, calc. as TDM	 83 83 83	 < 0.01 < 0.01 < 0.01	Williams, B. B., 1992c 100347
USA Northwood, North Dakota 1989 (Marshall)	312 SC	0.031 kg per 100kg seeds		1	Wheat, grain Triadimefon Triadimenol Total residue, calc. as TDM	 90 90 90	 < 0.01 < 0.01 < 0.01	Williams, B. B., 1992c 100347
USA Ashton, Idaho 1989 (Newana)	312 SC	0.031 kg per 100kg seeds		1	Wheat, grain Triadimefon Triadimenol Total residue, calc. as TDM	 127 127 127	 < 0.01 < 0.01 < 0.01	Williams, B. B., 1992c 100347
USA Ephrata, Washington 1989 (Nomad (Hard Red))	312 SC	0.031 kg per 100kg seeds		1	Wheat, grain Triadimefon Triadimenol Total residue, calc. as TDM	 108 108 108	 < 0.01 < 0.01 < 0.01	Williams, B. B., 1992c 100347

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
			kg ai/hL	No	Sample	PHI	Residues	
USA Wahpeton, North Dakota 1979 (Era)	150 FS	0.031 kg per 100kg seeds		1	Wheat, grain Triadimefon Triadimenol Total residue, calc. as TDM	84 84 84	< 0.01 < 0.01 < 0.01	Anon.,1982bl 80922
USA Moccasin, Montana 1979 (Fortuna)	150 FS	0.031 kg per 100kg seeds		1	Wheat, grain Triadimefon Triadimenol Total residue, calc. as TDM	91 91 91	< 0.01 < 0.01 < 0.01	Anon., 1982bm 80926
USA Wahpeton, North Dakota 1979 (Era)	150 FS	0.047 kg per 100kg seeds		1	Wheat, grain Triadimefon Triadimenol Total residue, calc. as TDM	84 84 84	< 0.01 < 0.01 < 0.01	Anon., 1982bn 80927
USA Moccasin, Montana 1979 (Fortuna)	150 FS	0.047 kg per 100kg seeds		1	Wheat, grain Triadimefon Triadimenol Total residue, calc. as TDM	91 91 91	< 0.01 < 0.01 < 0.01	Anon., 1982bo 80928
Canada Unionville, Ontario 1979 Frederick	150 FS	0.031 kg per 100kg seeds		1	Wheat, grain Triadimefon Triadimenol Total residue, calc. as TDM	312 312 312	< 0.01 < 0.01 < 0.01	Anon., 1982bp 80916
Canada Lethbridge, Alberta 1979 (Winalta)	150 FS	0.031 kg per 100kg seeds		1	Wheat, grain Triadimefon Triadimenol Total residue, calc. as TDM	320 320 320	< 0.01 < 0.01 < 0.01	Anon., 1982bq 80917
Germany Burscheid 1983 (Caribo)	94 FS	0.038 kg per 100kg seeds		1	Wheat, grain Triadimenol	295	< 0.05	Anon., 1985y 9903-84
USA Howe, Indiana 1989 (Caldwell)	312 SC	0.031 kg per 100kg seeds		1	Wheat, grain Triadimefon Triadimenol Total residue, calc. as TDM	296 296 296	< 0.01 < 0.01 < 0.01	Williams, B. B., 1992c 100347
USA Stilwell, Kansas 1989 (Arkan)	312 SC	0.031 kg per 100kg seeds		1	Wheat, grain Triadimefon Triadimenol Total residue, calc. as TDM	286 286 286	0.02 < 0.01 0.03	Williams, B. B., 1992c 100347

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
			kg ai/hL	No	Sample	PHI	Residues	
USA Howe, Indiana 1979 (Yorkstar)	150 FS	0.031 kg per 100kg seeds		1	Wheat, grain Triadimefon Triadimenol Total residue, calc. as TDM	 308 308 308	 < 0.01 < 0.01 < 0.01	Anon., 1982br 80913
USA Stanley, Kansas 1979 (Lancota)	150 FS	0.031 kg per 100kg seeds		1	Wheat, grain Triadimefon Triadimenol Total residue, calc. as TDM	 272 272 272	 < 0.01 < 0.01 < 0.01	Anon., 1982bs 80914
USA Ropesville, Texas 1979 (Tascosa)	150 FS	0.031 kg per 100kg seeds		1	Wheat, grain Triadimefon Triadimenol Total residue, calc. as TDM	 260 320 260 320 260 320	 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01	Anon., 1982bt 80915
USA Corvallis, Oregon 1979 (Stephens)	150 FS	0.031 kg per 100kg seeds		1	Wheat, grain Triadimefon Triadimenol Total residue, calc. as TDM	 294 294 294	 < 0.01 < 0.01 < 0.01	Anon., 1982bu 80918
USA Stanley, Kansas 1979 (Lancota)	150 FS	0.047 kg per 100kg seeds		1	Wheat, grain Triadimefon Triadimenol Total residue, calc. as TDM	 272 272 272	 < 0.01 < 0.01 < 0.01	Anon., 1982bv 80919
USA Ropesville, Texas 1979 (Tascosa)	150 FS	0.047 kg per 100kg seeds		1	Wheat, grain Triadimefon Triadimenol Total residue, calc. as TDM	 260 260 260	 < 0.01 < 0.01 < 0.01	Anon., 1982bx 80920
USA Corvallis, Oregon 1979 (Stephens)	150 FS	0.047 kg per 100kg seeds		1	Wheat, grain Triadimefon Triadimenol Total residue, calc. as TDM	 294 294 294	 < 0.01 < 0.01 < 0.01	Anon., 1982by 80921

Table 100. Foliar application of triadimenol on coffee

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Brazil Brodovski, Sao Paolo 1996 (Mundo Novo)	385 SC	0.24	0.048	2	Coffee, bean Triadimenol KWG 0519	 15 30 60 90	 0.04 0.03, 0.04 (0.04) 0.04 0.04	Russo, L., 1999 107805

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
					hydroxy	15 30 60 90	< 0.01 < 0.01, < 0.01 (< 0.01) < 0.01 < 0.01	
Brazil Carmo do Paranaiba, Minas Gerais 1996 (Yellow Catuai)	385 SC	0.25	0.05	2	Coffee, bean Triadimenol KWG 0519 hydroxy	 30 30	 0.04, 0.03 (0.04) < 0.01, < 0.01 (< 0.01)	Russo, L., 1999 107805
Brazil Sito na Sra das Gracas, Rolandia / Parana 1988 (Catuai)	250 EC	0.25	0.063	2	Coffee, bean green Triadimenol Coffee, bean dry Triadimenol	 0 7 15 30 45 60	 0.15 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05	Anon., 1989w 594/89
Brazil Faz. Taboca, Roduna SP 351, Alinopolis - SP 1988 (Mundo Novo)	250 EC	0.25	0.056	2	Coffee, bean green Triadimenol Coffee, bean dry Triadimenol	 0 7 15 31 45 60	 0.73 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05	Anon., 1989x 595/89
Brazil Faz. Novo Horizonte - Bela Vista do Paraiso, Parana 1987 (Mundo Novo)	250 EC	0.25	0.063	2	Coffee, bean green Triadimefon Triadimenol Total residue, calc. as TDM	 0 7 15 30 0 7 15 30 0 7 15 30	 < 0.05 < 0.05 < 0.05 < 0.05 0.6 < 0.05 < 0.05 < 0.1 0.65 < 0.05 < 0.05 < 0.1	Anon., 1988k 12000/87
Brazil Chacara Mato Grosso - Altinopolis 1987 (Mundo Novo)	250 EC	0.25	0.063	2	Coffee, bean green Triadimefon Triadimenol Total residue, calc. as TDM	 0 7 15 30 0 7 15 30 0 7 15	 < 0.05 < 0.05 < 0.05 < 0.05 0.1 < 0.05 < 0.05 < 0.05 0.15 < 0.05 < 0.05	Anon., 1988l 102718

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
						30	< 0.05	
Brazil Fazenda Retiro-Pardinho-SP 1983	25 WP	0.25	0.025	1	Coffee, bean Triadimenol	 15 30	 0.5 0.4	Anon., 1983ao 70132
Guatemala Coatepeque, Quezaltenango 1995 (Catuai)	385 SC	0.25	0.042	2	Coffee, bean dry Triadimenol KWG 0519 hydroxy	 16 31 45 59 75 16 31 45 59 75	 0.11 0.04, 0.08 (0.06) 0.04 0.03 0.04 < 0.01 < 0.01, < 0.01 (< 0.01) < 0.01 < 0.01 0.02	Russo, L., 1999 107805
Guatemala Samayac, Mazatenango, Suchitoto 1995 (Caturra)	385 SC	0.25	0.042	2	Coffee, bean dry Triadimenol KWG 0519 hydroxy	 31 31	 0.04, 0.09 (0.07) 0.02, 0.02 (0.02)	Russo, L., 1999 107805

Table 101. Spread application of triadimenol on coffee

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Brazil Rodovia SP 225, Municipio de Cravinhos 1992 (Mundo Novo)	9 GR	1.5		1	Coffee, bean dry Triadimenol	 90	 < 0.05	Anon., 1993b 137506
Brazil Estrada Velha, Municipio de Rolandia, Parana 1992 (Sumatra)	9 GR	1.1		1	Coffee, bean dry Triadimenol	 89	 < 0.05	Anon., 1993c 137505
Guatemala Coatepeque, Quezaltenango 1995 (Catuai)	1 GR	1.5		1	Coffee, bean dry Triadimenol KWG 0519 hydroxy	 77 91 105 121 135 77 91	 0.04 0.06, 0.03 (0.05) 0.03 0.02 0.02 < 0.01 < 0.01, < 0.01 (< 0.01)	Russo, L., 1999 107805

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
						105 121 135	< 0.01 < 0.01 < 0.01	
Guatemala Samayac, Mazatenango, Suchitoto 1995 (Caturra)	1 GR	1.3		1	Coffee, bean dry Triadimenol KWG 0519 hydroxy	 90 90	 0.01, < 0.01 (0.01) 0.02, 0.01 (0.02)	Russo, L., 1999 107805
South Africa Burgershall, Eastern Transvaal 1988 (Coffee SL 34)	1 GR	1.3		1	Coffee, bean Triadimenol	 54 68 82 94 133	 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05	Anon., 1990f 311/88590/F219
Brazil Parana 1987	1 GR	1.0		1	Coffee, bean Triadimenol	 112	 < 0.05	Anon., 1988m 9447-87
El Salvador Estate San Antonio, Santa Ana 1989 (Coffea arabiga Bourbon)	1 GR	0.15		1	Coffee, bean Triadimenol	 68	 < 0.05	Anon., 1990g 0393-89
Guatemala Flores Costa Cuca, Quetzaltenango 1988 (Catuai)	1 GR	0.15		1	Coffee, bean dry Triadimenol	 77	 < 0.05	Anon., 1989y 0703-88
Mexico Teteyahualco, Pue 1987 (Caturra)	1 GR	1.0		1	Coffee, bean Triadimenol KWG 0519 hydroxy KWG 1323	 84 84 84	 < 0.01 < 0.01 < 0.01	Anon., 1989z 12020/87
Mexico Tlacuilolapan, Pue 1987 (Caturra)	1 GR	1.0		1	Coffee, bean Triadimenol KWG 0519 hydroxy KWG 1323	 101 101 101	 0.09 < 0.01 < 0.01	Anon., 1989aa 12021/87
Mexico Laguna del Carman, Municipio de	1 GR	1.0		1	Coffee, bean Triadimenol KWG 0519	 114	 0.07	Anon., 1989ab 12022/87

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Tapachula, Chis. 1987 (coffea arabiga)					hydroxy KWG 1323	114 114	< 0.01 < 0.01	
Mexico Santa Elena, Tapachula, Chis. 1987 (Caturra)	1 GR	1.0		1	Coffee, bean Triadimenol KWG 0519 hydroxy KWG 1323	 94 94 94	 0.06 < 0.01 < 0.01	Anon., 1989ac 120223/87
Mexico Tapachula, Chis. 1987 (Caturra)	1 GR	1.0		1	Coffee, bean Triadimenol KWG 0519 hydroxy KWG 1323	 94 94 94	 0.07 < 0.01 < 0.01	Anon., 1989ad 12024/87

Table 102. Foliar application of triadimenol on sugar beet leaves

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Germany Burscheid, Versuchsgut Höfchen 1985 (Geem 65)	250 EC	0.13	0.031	2	Sugar beet, leaf Triadimenol	 0 14 21 28 35	 0.96 0.1 0.06 < 0.05 < 0.05	Anon., 1986n 9410-85
Germany Monheim, Versuchsgut Laacherhof 1985 (Geem 65)	250 EC	0.13	0.031	2	Sugar beet, leaf Triadimenol	 0 14 21 28 35	 1.6 0.1 0.07 < 0.05 < 0.05	Anon., 1986o 9411-85
Germany Klein-Niedesheim 1985 (Kawevera)	250 EC	0.13	0.031	2	Sugar beet, leaf Triadimenol	 0 14 21 28 35	 2.0 0.14 0.06 0.06 < 0.05	Anon., 1986p 9412-85
Germany Bälau 1985 (Majo)	250 EC	0.13	0.031	2	Sugar beet, leaf Triadimenol	 0 14 21 28 35	 1.7 0.08 0.08 < 0.05 < 0.05	Anon., 1986q 9413-85
Germany Burscheid, Versuchsgut Höfchen 1984 (Geem 65)	250 EC	0.13	0.031	2	Sugar beet, leaf Triadimenol	 0 14 21 28 35 63	 2.7 0.42 0.12 < 0.05 < 0.05 < 0.05	Anon., 1985m 9406-84

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Germany Monheim, Versuchsgut Laacherhof 1984 (Geem 65)	250 EC	0.13	0.031	2	Sugar beet, leaf Triadimenol	 0 14 21 28 35 58	 2.9 0.19 0.11 0.09 < 0.05 < 0.05	Anon., 1985n 9407-84
Germany Albig 1984 (Primahill)	250 EC	0.13	0.031	2	Sugar beet, leaf Triadimenol	 0 14 21 28 35	 1.2 0.18 0.09 < 0.05 < 0.05	Anon., 1985o 9408-84
Germany Bälau 1984 (Ka-We-Duka)	250 EC	0.13	0.031	2	Sugar beet, leaf Triadimenol	 0 14 21 28 35	 1.0 0.19 0.12 0.05 < 0.05	Anon., 1985p 9409-84
United Kingdom Thurston, Bury St. Edmunds, Suffolk 1984 (Monoire)	250 EC	0.13	0.031	2	Sugar beet, leaf Triadimenol	 13	 0.14	Bagnall, B. H., 1985a TCR266

Table 103. Foliar application of triadimefon on barley forage

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Germany Albig 1983 (Koral)	125 EC	0.13	0.031	2	Barley, green material Triadimefon Triadimenol Total residue, calc. as TDF	0 14 28 0 14 28 0 14 28	1.4 < 0.05 < 0.05 0.47 0.67 0.21 1.9 0.72 0.26	Anon., 1983p 9052-83
Germany Monheim, 1982 (Carina)	25 WP	0.13	0.031	2	Barley, green material Triadimefon Triadimenol Total residue, calc. as TDF	0 14 28 0 14 28 0 14 28	1.8 < 0.05 < 0.05 < 0.1 0.11 0.13 1.9 0.16 0.18	Anon., 1982l 9035-82
Germany Monheim 1983 (Birgit)	125 EC	0.13	0.031	2	Barley, green material Triadimefon Triadimenol Total residue,	0 14 28 0 14 28 0	2.1 0.1 0.05 < 0.1 0.24 0.15 2.2	Anon., 1983q 9050-83

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
					calc. as TDF	14 28	0.34 0.20	
Germany Burscheid 1983 (Birgit)	125 EC	0.13	0.031	2	Barley, green material Triadimefon Triadimenol Total residue, calc. as TDF	0 14 0 14 0 14	1.6 0.13 0.12 < 0.01 1.7 0.14	Anon., 1983r 9051-83
Germany Monheim 1982 (Birgit)	25 WP	0.13	0.031	2	Barley, green material Triadimefon Triadimenol Total residue, calc. as TDF	0 14 28 0 14 28 0 14 28	1.6 0.31 0.19 < 0.1 < 0.1 < 0.1 1.7 0.41 0.19	Anon., 1982m 9043-82
Germany Burscheid 1982 (Birgit)	25 WP	0.13	0.031	2	Barley, green material Triadimefon Triadimenol Total residue, calc. as TDF	0 14 28 0 14 28 0 14 28	1.3 < 0.05 < 0.05 < 0.1 < 0.1 < 0.1 1.4 < 0.1 < 0.1	Anon., 1982n 9044-82
Germany Monheim 1982 (Bollo)	25 WP	0.13	0.031	2	Barley, green material Triadimefon Triadimenol Total residue, calc. as TDF	0 14 28 0 14 28 0 14 28	1.4 < 0.05 < 0.05 0.25 0.16 < 0.1 1.7 0.16 < 0.1	Anon., 1982o 9029-82
Germany Burscheid 1982 (Dunja)	25 WP	0.13	0.03	2	Barley, green material Triadimefon Triadimenol Total residue, calc. as TDF	0 14 28 0 14 28 0 14 28	1.3 0.08 < 0.05 0.43 0.22 0.21 1.7 0.30 0.21	Anon., 1982p 9032-82

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Germany Monheim 1982 (Carina)	25 WP	0.13	0.03	2	Barley, green material Triadimefon Triadimenol Total residue, calc. as TDF	0 14 28 0 14 28 0 14 28	1.9 < 0.05 < 0.05 < 0.1 0.12 0.14 2.0 0.12 0.14	Anon., 1982q 9045-82

Table 104. Foliar application of triadimenol on barley forage

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Germany Burscheid 1990 (Golf)	375 EC	0.13	0.04	2	Barley, green material Triadimenol	0 14 28	5.0 0.53 0.68	Schmidt, B., 1992 PF 3703
Germany Worms-Heppenheim 1990 (Carina)	375 EC	0.13	0.04	2	Barley, green material Triadimenol	0 14 28	4.8 0.57 0.65	Schmidt, B., 1992 PF 3703
Germany Goggelgereuth 1989 (Aura)	309 EC	0.1	0.025	2	Barley, green material Triadimenol	0 7 28	2.6 1.1 [a] 0.58	Anon., 1991d 0253-89
Germany Burscheid 1988 (Aramir)	375 EC	0.13	0.03	2	Barley, green material Triadimenol	0 7 28	1.7 0.42 < 0.05	Anon., 1989k 0246-88
Germany Monheim 1988 (Aramir)	375 EC	0.13	0.03	2	Barley, green material Triadimenol	0 7 28	2.0 0.37 0.06	Anon., 1989l 0412-88
Germany Albig 1983 (Koral)	250 EC	0.13	0.03	2	Barley, green material Triadimenol	0 14 28	2.3 0.64 0.19	Anon., 1983w 9942-83
Germany Klein-Niedesheim 1982 (Koral)	250 EC	0.13	0.03	2	Barley, green material Triadimenol	0 14 28	4.4 1.5 0.92	Anon., 1982ac 9947-82
Germany Monheim 1982 (Carina)	250 EC	0.13	0.03	2	Barley, green material Triadimenol	0 14 28	1.8 0.22 0.27	Anon., 1982ad 9948-82

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Germany Klein-Niedesheim 1982 (Koral)	25 WP	0.13	0.03	2	Barley, green material Triadimenol	0 14 28	4.4 0.77 0.49	Anon., 1982ae 9910-82
Germany Monheim 1982 (Carina)	25 WP	0.13	0.03	2	Barley, green material Triadimenol	0 14 28	2.0 0.18 0.3	Anon., 1982af 9911-82
France Saint Puy 1998 (Majestic)	250 EC	0.13	0.045	2	Barley, green material Triadimenol	0	2.9	Blass, W., 2001 RA-2000/98
France Beraut 1998 (Angora)	250 EC	0.13	0.045	2	Barley, green material Triadimenol	0	3.4	Blass, W., 2001 RA-2000/98
France St. Gervai 1996 (Angora)	250 EC	0.13	0.042	2	Barley, green material Triadimenol	0	0.58, 2.9 (1.7)	Allmendinger, H., 1998c RA-2022/96
France Doussay 1996 (Angora)	250 EC	0.13	0.042	2	Barley, green material Triadimenol	0	0.35, 1.8 (1.1)	Allmendinger, H., 1998c RA-2022/96
Germany Worms-Heppenheim 1988 (Igri)	401 EC	0.1	0.025	2	Barley, green material Triadimenol	0 7 28	2.5 0.52 0.21	Anon., 1990c 0250-88
Germany Burscheid 1986 (Tapir)	375 EC	0.13	0.31	2	Barley, green material Triadimenol	0 7 21 28	1.9 0.16 0.07 0.09	Anon., 1987o 10650-86
Germany Grönwohld 1986 (Mammut)	375 EC	0.13	0.31	2	Barley, green material Triadimenol	0 7 21 28	3.6 0.54 0.13 0.12	Anon., 1987p 10651-86
Germany Monheim 1986 (Franka)	375 EC	0.13	0.31	2	Barley, green material Triadimenol	0	2.6	Anon., 1987q 11001-87
Germany Monheim 1983 (Birgit)	250 EC	0.13	0.031	2	Barley, green material Triadimenol	0 14 28	3.6 0.22 0.18	Anon., 1983x 9940-83
Germany Burscheid 1983 (Birgit)	250 EC	0.13	0.031	2	Barley, green material Triadimenol	0 14	1.6 0.25	Anon., 1983y 9941-83

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Germany Burscheid 1982 (Dura)	250 EC	0.13	0.031	2	Barley, green material Triadimenol	0 14 28	2.3 0.33 0.13	Anon., 1982ag 9937-82
Germany Monheim 1982 (Bollo)	250 EC	0.13	0.031	2	Barley, green material Triadimenol	0 14 28	1.9 0.29 0.15	Anon., 1982ah 9938-82
Germany Burscheid 1982 (Dura)	25 WP	0.13	0.031	2	Barley, green material Triadimenol	0 14 28	1.2 0.15 < 0.1	Anon., 1982ai 9900-82
Germany 4019 Monheim, Versuchsgut Laacherhof 1982 Bollo	25 WP	0.13	0.031	2	Barley, green material Triadimenol	0 14 28	1.9 0.18 0.12	9901-82
Italy Ravenna 1997 (Plaisant)	250 EC	0.13	0.042	2	Barley, green material Triadimenol	0	0.28	Heinemann, O.; Allmendinger, H., 1998a RA-2022/97
Spain Jorba 1997 (Glenan (R1))	250 EC	0.13	0.042	2	Barley, green material Triadimenol	0	4.7	Heinemann, O.; Allmendinger, H., 1998a RA-2022/97
Italy Dugliolo 1996 (Pilastro)	250 EC	0.13	0.042	2	Barley, green material Triadimenol	0 [b] 0	0.10 2.8	Allmendinger, H., 1998c RA-2022/96
Spain E- 43420 Sta. Coloma de Queralt 1996 Garbo	250 EC	0.13	0.042	2	Barley, green material Triadimenol	0 [b] 0	0.14 3.3	Allmendinger, H., 1998c RA-2022/96

a - Supervised residue trial not used for evaluation

b - Sampling before last application

Table 105. Seed treatment with triadimenol on barley forage

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
				No	Sample	PHI	Residues	
Australia Waterview, Walla Walla, N.S.W. 1986 (Schooner)	150 LS	0.03 kg per 100kg seeds		1	Barley, green material Triadimenol	75	0.1	Anon., 1988g 5/87
Australia Waterview, Walla Walla, N.S.W.	25 WS	0.03 kg per 100kg seeds		1	Barley, green material Triadimenol	75	0.06	Anon., 1987j 4/87

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
				No	Sample	PHI	Residues	
1986 (Schooner)								
Canada Ontario, Canada 1979 (Laurier)	150 FS	0.03 kg per 100kg seeds		1	Barley, green material Triadimenol KWG 0519 hydroxy	40 61 40 61	< 0.01 < 0.01 < 0.01 < 0.01	Anon., 1982r 80892
Canada Alberta, Canada 1979 (Bonanza)	150 FS	0.03 kg per 100kg seeds		1	Barley, green material Triadimenol KWG 0519 hydroxy	39 60 39 60	< 0.01 < 0.01 < 0.01 < 0.01	Anon., 1982s 80893
Canada Manitoba 1979 (Bonanza)	150 FS	0.03 kg per 100kg seeds		1	Barley, green material Triadimenol KWG 0519 hydroxy	40 60 40 60	< 0.01 < 0.01 < 0.01 < 0.01	Anon., 1982t 80894
USA Lamberton, MN 1989 (Robust)	312 SC	0.03 kg per 100kg seeds		1	Barley, green material Triadimenol KWG 0519 hydroxy	41 41	0.02 < 0.01	Williams, B. B., 1992a 100351
USA Stanley, Kansas 1979 (Will)	150 FS	0.03 kg per 100kg seeds		1	Barley, green material Triadimenol KWG 0519 hydroxy	40 61 40 61	< 0.01 < 0.01 0.21 0.2	Anon., 1982u 80885
USA Howe, Indiana 1979 (Paoli)	150 FS	0.03 kg per 100kg seeds		1	Barley, green material Triadimenol KWG 0519 hydroxy	42 65 42 65	0.05 < 0.01 1.4 0.57	Anon., 1982v 80886
USA Ropesville, Texas 1979 (Will)	150 FS	0.03 kg per 100kg seeds		1	Barley, green material Triadimenol KWG 0519 hydroxy	165 185 165 185	0.12 0.16 < 0.01 < 0.01	Anon., 1982w 80887
USA Stanley, Kansas 1979 (Will)	150 FS	0.047 kg per 100kg seeds		1	Barley, green material Triadimenol KWG 0519 hydroxy	40 61 40 61	0.27 0.15 < 0.01 0.02	Anon., 1982x 80888
USA Howe, Indiana 1979 (Paoli)	150 FS	0.047 kg per 100kg seeds		1	Barley, green material Triadimenol KWG 0519 hydroxy	42 65 42 65	1.7 1.1 0.03 0.01	Anon., 1982y 80889
USA Ropesville, Texas 1979 (Will)	150 FS	0.047 kg per 100kg seeds		1	Barley, green material Triadimenol KWG 0519 hydroxy	165 185 165 185	0.17 0.2 < 0.01 < 0.01	Anon., 1982z 80890

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
				No	Sample	PHI	Residues	
USA Wahpeton, North Dakota 1979 (Morex)	150 FS	0.03 kg per 100kg seeds		1	Barley, green material Triadimenol KWG 0519 hydroxy	40 61 40 61	0.05 < 0.01 < 0.01 < 0.01	Anon., 1982aa 80891
USA Moccasin, Montana 1979 (Piroline)	150 FS	0.03 kg per 100kg seeds		1	Barley, green material Triadimenol KWG 0519 hydroxy	38 61 38 61	0.08 < 0.01 < 0.01 < 0.01	Anon., 1982ab 80895
Germany Borstorf 1984 (Aura)	231 FS	0.038 kg per 100kg seeds		1	Barley, green material Triadimenol	84	< 0.1	Anon., 1984ah 9917-84
Germany Borstorf 1984 (Aura)	323 LS	0.016 kg per 100kg seeds		1	Barley, green material Triadimenol	84	< 0.1	Anon., 1984ai 10281-84
Germany Monheim 1983 (Carina)	94 FS	0.038 kg per 100kg seeds		1	Barley, green material Triadimenol	74	< 0.1	Anon., 1984aj 9980-83
Germany Burscheid 1983 (Carina)	94 FS	0.038 kg per 100kg seeds		1	Barley, green material Triadimenol	67	< 0.1	Anon., 1984ak 9981-30
Germany Klein-Niedesheim 1983 (Koral)	30.7 DS	0.035 kg per 100kg seeds		1	Barley, green material Triadimenol	91	< 0.1	Anon., 1984al 10502-83
Germany Worms-Heppenheim 1983 (Koral)	30.7 DS	0.035 kg per 100kg seeds		1	Barley, green material Triadimenol	90	< 0.1	Anon., 1984am 10503-83
Germany Monheim 1982 (Carina)	30.7 DS	0.035 kg per 100kg seeds		1	Barley, green material Triadimenol	56 70	< 0.1 < 0.1	Anon., 1983s 10509-82
Germany Burscheid 1982 (Carina)	30.7 DS	0.035 kg per 100kg seeds		1	Barley, green material Triadimenol	64 79	< 0.1 < 0.1	Anon., 1983t 10510-82
Germany Geldern 1982 (Carina)	30.7 DS	0.035 kg per 100kg seeds		1	Barley, green material Triadimenol	63 91	< 0.1 < 0.1	Anon., 1983u 10511-82
Germany Burscheid	231 FS	0.038 kg per 100kg seeds		1	Barley, green material Triadimenol	70	< 0.1	Anon., 1984an 9916-84

Location Year (variety)	Form	Application		No	Analysis Sample	PHI	Residues	Reference, Report No.
1984 (Carina)								
Germany Burscheid 1984 (Carina)	323 LS	0.016 kg per 100kg seeds		1	Barley, green material Triadimenol	70	< 0.1	Anon., 1984ao 10280-84
USA Northwood, ND 1989 (Robust)	312 SC	0.031 kg per 100kg seeds		1	Barley, green material Triadimenol KWG 0519 hydroxy	33 33	0.02 < 0.01	Williams, B. B., 1992a 100351
USA Ashton, ID 1989 (Morex)	312 SC	0.031 kg per 100kg seeds		1	Barley, green material Triadimenol KWG 0519 hydroxy	44 44	0.03 < 0.01	Williams, B. B., 1992a 100351
USA Ephrata, WA 1989 (Gusto)	312 SC	0.031 kg per 100kg seeds		1	Barley, green material Triadimenol KWG 0519 hydroxy	47 47	0.03 < 0.01	Williams, B. B., 1992a 100351
Germany Klein-Niedesheim 1983 (Franka)	94 FS	0.038 kg per 100kg seeds		1	Barley, green material Triadimenol	237	< 0.1	Anon., 1985v 9900-84
Germany Monheim 1982 (Birgit)	30.7 DS	0.035 kg per 100kg seeds		1	Barley, green material Triadimenol	226	< 0.1	Anon., 1984ap 10500-83
Germany Burscheid 1982 (Birgit)	30.7 DS	0.035 kg per 100kg seeds		1	Barley, green material Triadimenol	246	< 0.1	Anon., 1984aq 10501-83
Germany Burscheid 1981 (Bollo)	30.7 DS	0.035 kg per 100kg seeds		1	Barley, green material Triadimenol	236 245	< 0.1 < 0.1	Anon., 1983v 10512-82
USA Salinas, CA 1989 (UC 476)	312 SC	0.031 kg per 100kg seeds		1	Barley, green material Triadimenol KWG 0519 hydroxy	45 45	0.07 < 0.01	Williams, B. B., 1992a 100351
USA Stilwell, KS 1989 (Perry)	312 SC	0.031 kg per 100kg seeds		1	Barley, green material Triadimenol KWG 0519 hydroxy	68 68	0.03 < 0.01	Williams, B. B., 1992a 100351

Table 106. Foliar application of triadimefon on oats forage

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Germany Monheim 1982 (Flämingskrone)	25 WP	0.13	0.031	2	Oats, green material Triadimefon Triadimenol Total residue, calc. as TDF	 0 14 0 14 0 14	 1.7 < 0.05 0.17 0.14 1.9 0.19	Anon., 1983z 9000-82
Germany Burscheid 1982 (Flämingskrone)	25 WP	0.13	0.031	2	Oats, green material Triadimefon Triadimenol Total residue, calc. as TDF	 0 14 28 0 14 28 0 14 28	 0.66 < 0.05 < 0.05 < 0.1 < 0.1 < 0.1 0.76 < 0.1 < 0.1	Anon., 1983aa 9001-82
Germany Klein- Niedesheim 1982 (Flämingskrone)	25 WP	0.13	0.031	2	Oats, green material Triadimefon Triadimenol Total residue, calc. as TDF	 0 14 28 0 14 28 0 14 28	 2.1 0.06 0.05 0.23 0.26 0.31 2.33 0.32 0.36	Anon., 1983ab 9002-82

Table 107. Foliar application of triadimenol on oats forage

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Germany Monheim 1986 (Flaemingsnova)	375 EC	0.13	0.031	2	Oats, green material Triadimenol	 0 7 21 28	 2.4 1.4 0.64 0.84	Anon., 1987r 10656-86
Germany Worms- Heppenheim 1986 (Flaemingsnova)	375 EC	0.13	0.031	2	Oats, green material Triadimenol	 0 7 21 28	 2.5 1.1 0.56 0.46	Anon., 1987s 10657-86

Table 108. Seed treatment with triadimenol in oats forage

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Canada Unionville, Ontario 1979 (Elgin)	150 FS	0.031 kg per 100kg seeds		1	Oats, green material Triadimefon Triadimenol Total residue, calc. as TDM	 40 61 40 61 40 61	 < 0.01 < 0.01 0.02 < 0.01 0.03 < 0.01	Anon., 1982aj 80901
Canada Calmar, Alberta 1979 (Random)	150 FS	0.031 kg per 100kg seeds		1	Oats, green material Triadimefon Triadimenol Total residue, calc. as TDM	 40 60 40 60 40 60	 < 0.01 < 0.01 < 0.01 0.04 < 0.02 0.05	Anon., 1982ak 80902
Canada Portage la Prairie, Manitoba 1979 (Harmon)	150 FS	0.031 kg per 100kg seeds		1	Oats, green material Triadimefon Triadimenol Total residue, calc. as TDM	 40 60 40 60 40 60	 < 0.01 < 0.01 0.02 < 0.01 0.03 < 0.02	Anon., 1982al 80903
Germany Borstorf 1984 (Flaemingsnova)	323 LS	0.012 kg per 100kg seeds		1	Oats, green material Triadimenol	85	< 0.1	Anon., 1984as 10285-84
Germany Burscheid 1983 (Flaemingsnova)	23.3 DS	0.012 kg per 100kg seeds		1	Oats, green material Triadimenol	75	< 0.1	Anon., 1984at 10282-83
Germany Monheim 1983 (Flaemingsnova)	23.3 DS	0.012 kg per 100kg seeds		1	Oats, green material Triadimenol	101	< 0.1	Anon., 1984au 10283-83
Germany Monheim 1984 (Flaemingsnova)	323 LS	0.012 kg per 100kg seeds		1	Oats, green material Triadimenol	92	< 0.1	Anon., 1984av 10284-83
Germany Burscheid 1979 (Fläaeingskrone)	210 FS	0.038 kg per 100kg seeds		1	Oats, green material Triadimenol	62	< 0.1	Anon., 1979b 9945-79
Germany 4019 Monheim, Versuchsgut Laacherhof 1979 Flämingskrone	210 FS	0.038 kg per 100kg seeds		1	Oats, green material Triadimenol	59	< 0.1	Anon., 1979c 9946-79

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Germany 417 Geldern 1979 Tiger	210 FS	0.038 kg per 100kg seeds		1	Oats, green material Triadimenol	91	0.12	Anon., 1979d 9947-79
USA Lamberton, Minnesota 1989 (Dow)	312 SC	0.031 kg per 100kg seeds		1	Oats, green material Triadimefon Triadimenol Total residue, calc. as TDM	41 41 41	< 0.01 0.01 0.02	Williams, B. B., 1992b 100352
USA Danville, Iowa 1989 (Hazel)	312 SC	0.03 kg per 100kg seeds		1	Oats, green material Triadimefon Triadimenol Total residue, calc. as TDM	39 39 39	< 0.01 0.07 0.08	Williams, B. B., 1992b 100352
USA Canastota, New York 1989 (Astro)	312 SC	0.03 kg per 100kg seeds		1	Oats, green material Triadimefon Triadimenol Total residue, calc. as TDM	35 35 35	< 0.01 0.26 0.27	Williams, B. B., 1992b 100352
USA Hudson, Wisconsin 1989 (Noble)	312 SC	0.03 kg per 100kg seeds		1	Oats, green material Triadimefon Triadimenol Total residue, calc. as TDM	42 42 42	< 0.01 0.09 0.1	Williams, B. B., 1992b 100352
USA Howe, Indiana 1989 (Ogle)	312 SC	0.03 kg per 100kg seeds		1	Oats, green material Triadimefon Triadimenol Total residue, calc. as TDM	53 53 53	< 0.01 0.14 0.15	Williams, B. B., 1992b 100352
USA Stilwell, Kansas 1989 (Ogle)	312 SC	0.03 kg per 100kg seeds		1	Oats, green material Triadimefon Triadimenol Total residue, calc. as TDM	73 73 73	< 0.01 < 0.01 < 0.01	Williams, B. B., 1992b 100352
USA Stanley, Kansas 1979 (Noble)	150 FS	0.031 kg per 100kg seeds		1	Oats, green material Triadimefon Triadimenol Total residue, calc. as TDM	41 61 41 60 41 60	< 0.01 < 0.01 0.19 < 0.01 0.2 < 0.02	Anon., 1982am 80896

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
USA Tifton, Georgia 1979 (Coker 227)	150 FS	0.031 kg per 100kg seeds		1	Oats, green material Triadimefon Triadimenol Total residue, calc. as TDM	 72 72 72	 < 0.01 0.08 0.09	Anon., 1982an 80897
USA Howe, Indiana 1979 (Noble)	150 FS	0.031 kg per 100kg seeds		1	Oats, green material Triadimefon Triadimenol Total residue, calc. as TDM	 42 63 42 63 42 63	 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01	Anon., 1982ao 80898
USA Shakopee, Minnesota 1979 (Chief)	150 FS	0.031 kg per 100kg seeds		1	Oats, green material Triadimefon Triadimenol Total residue, calc. as TDM	 40 60 40 60 40 60	 < 0.01 < 0.01 0.11 0.1 0.12 0.11	Anon., 1982ap 80899
USA Shakopee, Minnesota 1979 (Lang)	150 FS	0.031 kg per 100kg seeds		1	Oats, green material Triadimefon Triadimenol Total residue, calc. as TDM	 40 60 40 60 40 60	 < 0.01 < 0.01 0.15 0.02 0.16 0.03	Anon., 1982aq 80900
USA Howe, Indiana 1979 (Noble)	150 FS	0.047 kg per 100kg seeds		1	Oats, green material Triadimefon Triadimenol Total residue, calc. as TDM	 42 63 42 63 42 63	 < 0.01 < 0.01 0.19 0.02 0.2 0.03	Anon., 1982ar 80904
USA Shakopee, Minnesota 1979 (Chief)	150 FS	0.047 kg per 100kg seeds		1	Oats, green material Triadimefon Triadimenol Total residue, calc. as TDM Triadimenol	 40 60 40 60 40 60	 < 0.01 < 0.01 0.22 0.07 0.23 0.08	Anon., 1982as 80905

Table 109. Foliar application of triadimefon on rye forage

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Germany Monheim 1983 (Carokurz)	125 EC	0.13 0.25	0.03 0.06	2	Rye, green material Triadimefon Triadimenol Total residue, calc. as TDM	 0 14 21 28 0 14 21 28 0 14 21 28	 5.7 0.26 0.18 0.18 0.24 0.54 0.62 0.77 5.9 0.8 0.8 0.95	Anon., 1983ac 9003-83
Germany Burscheid 1983 (Halo)	125 EC	0.13	0.03	2	Rye, green material Triadimefon Triadimenol Total residue, calc. as TDM	 0 14 21 28 0 14 21 28 0 14 21 28	 5.7 0.26 0.18 0.18 0.24 0.54 0.62 0.77 5.9 0.8 0.8 0.95	Anon., 1983ad 9004-83
Germany Klein-Niedesheim 1983 (Halo)	125 EC	0.25	0.06	2	Rye, green material Triadimefon Triadimenol Total residue, calc. as TDM	 0 14 28 0 14 28 0 14 28	 9.5 0.12 0.13 1.2 0.53 0.75 10 0.65 0.88	Anon., 1983ae 9005-83
Germany Monheim 1982 (Carokurz)	25 WP	0.13	0.03	2	Rye, green material Triadimefon Triadimenol Total residue, calc. as TDM	 0 14 0 14 0 14	 2.2 0.2 0.28 0.82 2.5 1.0	Anon., 1983af 9003-82
Germany Burscheid 1982 (Carokurz)	25 WP	0.13	0.03	2	Rye, green material Triadimefon	 0 14 28 35	 2.1 < 0.05 0.05 < 0.05	Anon., 1983ag 9004-82

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
					Triadimenol Total residue, calc. as TDM	0 14 28 35 0 14 28 35	0.18 0.11 < 0.1 0.12 2.3 0.16 0.15 0.17	
Germany Klein-Niedesheim 1982 (Halo)	25 WP	0.13	0.03	2	Rye, green material Triadimefon Triadimenol Total residue, calc. as TDM	 0 14 28 0 14 28 0 14 28	 2.9 0.14 0.06 2.1 1.5 1.2 5.0 1.6 1.3	Anon., 1983ah 9005-82

Table 110. Foliar application of triadimenol on rye forage

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Germany Burscheid 1986 (Danko)	375 EC	0.13	0.031	2	Rye, green material Triadimenol	 0 7 21 28	 1.7 0.25 0.2 0.23	Anon., 1987t 10655-86
Germany Klein-Niedesheim 1982 (Halo)	250 EC	0.13	0.031	2	Rye, green material Triadimenol	 0 14 28	 4.6 1.1 0.87	Anon., 1982ba 9949-82
Germany Monheim 1982 (Carokurz)	250 EC	0.13	0.031	2	Rye, green material Triadimenol	 0 14	 2.2 0.70	Anon., 1982bb 9950-82
Germany Klein-Niedesheim 1982 (Halo)	25 WP	0.13	0.031	2	Rye, green material Triadimenol	 0 14 28	 6.1 1.7 1.1	Anon., 1982bc 9912-82
Germany Monheim 1982 (Carokurz)	25 WP	0.13	0.031	2	Rye, green material Triadimenol	 0 14	 2.7 0.91	Anon., 1982bd 9913-82

Table 111. Seed treatment with triadimenol on rye forage

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Canada Lethbridge, Alberta 1979 (Cougar)	150 FS	0.031 kg per 100kg seeds		1	Rye, green material Triadimefon Triadimenol Total residue, calc. as TDM	 48 68 48 68 48 68	 < 0.01 0.06 0.31 1.1 0.32 1.1	Anon., 1982at 80908
Germany Worms-Heppenheim 1984 (Caro-Kurz)	231 FS	0.038 kg per 100kg seeds		1	Rye, green material Triadimenol	 220	 < 0.1	Anon., 1986v 9900-85
Germany Monheim 1984 (Carokurz)	231 FS	0.038 kg per 100kg seeds		1	Rye, green material Triadimenol	 218	 < 0.1	Anon., 1986w 9901-85
Germany Burscheid 1983 (Carokurz)	94 FS	0.038 kg per 100kg seeds		1	Rye, green material Triadimenol	 237	 < 0.1	Anon., 1985w 9901-84
Germany Klein-Niedesheim 1983 (Carokurz)	94 FS	0.038 kg per 100kg seeds		1	Rye, green material Triadimenol	 233	 < 0.1	Anon., 1985x 9902-84
USA Stanley, Kansas 1981 Rymin	150 FS	0.031 kg per 100kg seeds		1	Rye, green material Triadimefon Triadimenol Total residue, calc. as TDM	 39 60 39 60 39 60	 < 0.01 < 0.01 1.1 0.12 1.1 0.13	Anon., 1982au 80911
USA Shakopee, Minnesota 1980 von Lochow	150 FS	0.031 kg per 100kg seeds		1	Rye, green material Triadimefon Triadimenol Total residue, calc. as TDM	 40 60 40 60 40 60	 < 0.01 < 0.01 0.02 0.02 0.03 0.03	Anon., 1982av 80906
USA Ropesville, Texas 1980 Elbon	150 FS	0.031 kg per 100kg seeds		1	Rye, green material Triadimefon Triadimenol Total residue, calc. as TDM	 40 60 40 60 40	 < 0.01 < 0.01 0.04 < 0.01 0.05	Anon., 1982aw 80907

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
						60	< 0.02	
USA Hubbard, Oregon 1980	150 FS	0.031 kg per 100kg seeds		1	Rye, green material Triadimefon Triadimenol Total residue, calc. as TDM	 41 64 41 64 41 64	 < 0.01 < 0.01 0.25 < 0.01 0.26 < 0.02	Anon., 1982ax 80909
USA Howe, Indiana 1980 Balboa	150 FS	0.031 kg per 100kg seeds		1	Rye, green material Triadimefon Triadimenol Total residue, calc. as TDM	 163 183 163 183 163 183	 < 0.01 < 0.01 0.27 < 0.01 0.28 < 0.02	Anon., 1982ay 80910
USA Tifton, Georgia 1980 Wrens Abruzzi	150 FS	0.031 kg per 100kg seeds		1	Rye, green material Triadimefon Triadimenol Total residue, calc. as TDM	 61 61 61	 < 0.01 0.76 0.77	Anon., 1982az 80912

Table 112. Foliar application of triadimefon on wheat forage

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Germany Burscheid 1983 (Kolibri)	125 EC	0.13	0.031	2	Wheat, green material Triadimefon Triadimenol Total residue, calc. as TDM	 0 14 0 14 0 14	 2.3 0.09 0.46 0.47 2.8 0.56	Anon., 1983ai 9054-83
Germany Monheim 1982 (Kolibri)	25 WP	0.13	0.031	2	Wheat, green material Triadimefon Triadimenol Total residue, calc. as TDM	 0 14 0 14 0 14	 1.7 0.06 < 0.1 0.3 1.8 0.36	Anon., 1982be 9047-82
Germany Monheim 1982 (Kolibri)	25 WP	0.13	0.031	2	Wheat, green material Triadimefon Triadimenol Total residue, calc. as TDM	 0 14 0 14 0	 1.7 0.06 0.12 0.34 1.8	Anon., 1982bf 9037-82

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
						14	0.4	
Germany Groenwohld 1983 (Okapi)	125 EC	0.13	0.031	2	Wheat, green material Triadimefon Triadimenol Total residue, calc. as TDM	 0 14 0 14 0 14	 1.1 0.14 0.5 1.3 1.6 1.5	Anon,., 1983aj 9053-83
Germany Monheim 1982 (Kormoran)	25 WP	0.13	0.031	2	Wheat, green material Triadimefon Triadimenol Total residue, calc. as TDM	 0 14 0 14 0 14	 2.1 0.7 0.16 0.57 2.2 0.64	Anon., 1982bg 9046-82
Germany Monheim 1982 (Kormoran)	25 WP	0.13	0.031	2	Wheat, green material Triadimefon Triadimenol Total residue, calc. as TDM	 0 14 0 14 0 14	 2.5 < 0.05 0.23 0.51 2.7 0.56	Anon., 1982bh 9036-82

Table 113. Foliar application of triadimenol on wheat forage

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Germany Burscheid 1989 (Ralle)	309 EC	0.1	0.025	2	Wheat, green material Triadimenol	 0 7 28	 1.9 0.32 0.19	Anon., 1990d 0250-89
Germany Worms-Heppenheim 1989 (Ralle)	309 EC	0.1	0.025	2	Wheat, green material Triadimenol	 0 7 28	 2.6 0.19 0.20	Anon., 1990e 0251-89
Germany Burscheid 1988 (Star)	401 EC	0.1	0.025	2	Wheat, green material Triadimenol	 0 7 28	 2.4 0.5 0.09	Anon., 19898m 0247-88
Germany Burscheid 1988 (Star)	375 EC	0.13	0.031	2	Wheat, green material Triadimenol	 0 7 28	 2.9 0.35 0.06	Anon., 1989n 0244-88
Germany Monheim 1988 (Star)	375 EC	0.13	0.031	2	Wheat, green material Triadimenol	 0 7 28	 1.9 0.42 0.14	Anon., 1989o 0413-88

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Germany Monheim 1988 (Star)	375 EC	0.13	0.031	2	Wheat, green material Triadimenol	0 14 28	2.5 0.56 0.16	Anon., 1989p 0627-88
Germany Monheim 1988 (Star)	375 EC	0.13	0.031	2	Wheat, green material Triadimenol	0 14 28	3.0 0.61 0.26	Anon., 1989q 0635-88
Germany Klein-Niedesheim 1988 (Star)	375 EC	0.13	0.031	2	Wheat, green material Triadimenol	0 14 28	2.3 0.47 0.6	Anon., 1989r 0639-88
Germany Klein-Niedesheim 1988 (Star)	375 EC	0.13	0.031	2	Wheat, green material Triadimenol	0 14 28	3.9 0.70 0.44	Anon., 1989s 0641-88
Germany Burscheid 1988 (Star)	375 EC	0.13	0.031	2	Wheat, green material Triadimenol	0 14 28	2.5 0.39 0.11	Anon., 1989t 0653-88
Germany Monheim 1984 (Kolibri)	250 EC	0.13	0.031	2	Wheat, green material Triadimenol	0 14 28	2.9 1.1 0.21	Anon., 1984bb 9483-84
Germany Burscheid 1983 (Kolibri)	250 EC	0.13	0.031	2	Wheat, green material Triadimenol	0 14	2.5 0.52	Anon., 1983al 9944-83
Germany Albig 1982 (Schirokko)	250 EC	0.13	0.031	2	Wheat, green material Triadimenol	0 14 28	4.7 0.98 1.2	Anon., 1982bz 9945-82
Germany Monheim 1982 (Kolibri)	250 EC	0.13	0.031	2	Wheat, green material Triadimenol	0 14	1.4 0.8	Anon., 1982ca 9946-82
Germany Albig 1982 (Schirokko)	25 WP	0.13	0.031	2	Wheat, green material Triadimenol	0 14 28	5.7 0.87 1.4	Anon., 1982cb 9908-82
Germany Monheim 1982 (Kolibri)	25 WP	0.13	0.031	2	Wheat, green material Triadimenol	0 14	1.4 0.33	Anon., 1982cc 9909-82
France Bage la Ville 1997 (Sideral)	250 EC	0.13	0.045	2	Wheat, green material Triadimenol	0	3.7	Heinemann, O.; Allmendinger, H., 1998a RA-2022/97

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
France Lescheroux 1997 (Messager)	250 EC	0.13	0.045	2	Wheat, green material Triadimenol	 0	 2.1	Heinemann, O.; Allmendinger, H., 1998a RA-2022/97
France St. Gervais 1996 (Recital)	250 EC	0.13	0.045	2	Wheat, green material Triadimenol	 0 [a] 0	 0.3 2.2	Allmendinger, H., 1998c RA-2022/96
France Savigny 1996 (Recital)	250 EC	0.13	0.045	2	Wheat, green material Triadimenol	 0 [a] 0	 0.23 2.2	Allmendinger, H., 1998c RA-2022/96
Germany Groenwohld 1991 (Kanzler)	300 EC	0.075	0.025	2	Wheat, green material Triadimenol	 0 14 21	 1.0 0.22 0.19	Allmendinger, H., 1998c RA-2099/91
Germany Albig 1988 (Ares)	375 EC	0.13	0.031	1	Wheat, green material Triadimenol	 0 14 21	 2.2 0.61 0.42	Anon., 1989u 0645-88
Germany Albig 1988 (Ares)	375 EC	0.13	0.031	1	Wheat, green material Triadimenol	 0 14 21	 2.6 0.35 0.34	Anon., 19889v 0647-88
Germany Monheim 1987 (Carina)	375 EC	0.13	0.031	2	Wheat, green material Triadimenol	 0	 0.5	Anon., 1987v 11004-87
Germany Kirchlauter-Pettstadt 1987 (Rektor)	375 EC	0.13	0.031	2	Wheat, green material Triadimenol	 0	 1.5	Anon., 1987w 11005-87
Germany Monheim 1986 (Caribo)	375 EC	0.13	0.031	2	Wheat, green material Triadimenol	 0 7 21 28	 1.7 0.5 0.8 1.0	Anon., 1987x 10652-86
Germany Kirchlauter-Pettstadt 1986 (Rektor)	375 EC	0.13	0.031	2	Wheat, green material Triadimenol	 0 7 21 28	 1.9 1.1 0.38 0.48	Anon., 1987y 10653-86
Germany Burscheid 1984 (Caribo)	250 EC	0.13	0.031	2	Wheat, green material Triadimenol	 0 14 28	 1.1 < 0.1 < 0.1	Anon., 1984bc 9482-84

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Hungary Hajduböszörmeny, Beke 1984	250 EC	0.13	0.031	1	Wheat, green material Triadimenol	0 [a] 0 2 7 10 14 18 25	< 0.05 1.4 1.1 0.46 0.38 0.13 0.06 0.1	Anon., 1984bd UNG1/84
Italy Ravenna 1997 (Centauro)	250 EC	0.13	0.042	2	Wheat, green material Triadimenol	0	0.61	Heinemann, O.; Allmendinger, H., 1998a RA-2022/97
Italy Dugliolo 1996 (Mol)	250 EC	0.13	0.042	2	Wheat, green material Triadimenol	0 [a] 0	0.20 2.0	Allmendinger, H., 1998c RA-2022/96
Spain Jorba 1997 (Etecho (R1))	250 EC	0.13	0.042	2	Wheat, green material Triadimenol	0	0.64	Heinemann, O.; Allmendinger, H., 1998a RA-2022/97
Spain Figuerola 1996 (Soisson)	250 EC	0.13 – 0.14	0.042	2	Wheat, green material Triadimenol	0 [a] 0	0.18 2.7	Allmendinger, H., 1998c RA-2022/96

a - Sampling before last application

Table 114. Seed treatment with triadimenol on wheat forage

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Australia Walla Walla, N.S.W. 1986 (Olympic)	150 LS	0.03 kg per 100kg seeds		1	Wheat, green material Triadimenol	75	0.13	Anon., 1988h AUS-3-87
Australia Walla Walla, N.S.W. 1986 (Olympic)	25 WS	0.03 kg per 100kg seeds		1	Wheat, green material Triadimenol	75	0.13	Anon., 1987u 2/87
Germany Groenwohld 1984 (Arkas)	231 FS	0.038 kg per 100kg seeds		1	Wheat, green material Triadimenol	80	< 0.05	Anon., 1984ax 9918-84
Germany Monheim 1984 (Kolibri)	231 FS	0.038 kg per 100kg seeds		1	Wheat, green material Triadimenol	100	< 0.05	Anon., 1984ay 9919-84
Germany Klein-	94 FS	0.038 kg per 100kg		1	Wheat, green material			Anon., 1984az

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Niedesheim 1983 (Schirokko)		seeds			Triadimenol	90	< 0.05	9982-83
Germany Worms-Heppenheim 1983 (Schirokko)	94 FS	0.038 kg per 100kg seeds		1	Wheat, green material Triadimenol	 89	 < 0.05	Anon., 1984ba 9983-83
Germany Burscheid 1979 (Kolibri)	210 FS	0.038 kg per 100kg seeds		1	Wheat, green material Triadimenol	 71	 < 0.1	Anon., 1979e 9942-79
Germany Monheim 1979 (Kolibri)	210 FS	0.038 kg per 100kg seeds		1	Wheat, green material Triadimenol	 70	 < 0.05	Anon., 1979f 9943-79
Germany Geldern3 1979 (Kolibri)	210 FS	0.038 kg per 100kg seeds		1	Wheat, green material Triadimenol	 59	 0.15	Anon., 1979g 9944-79
USA Lamberton, Minnesota 1989 (Marshall)	312 SC	0.031 kg per 100kg seeds		1	Wheat, green material Triadimefon Triadimenol Total residue, calc. as TDM	 41 41 41	 < 0.01 < 0.01 < 0.01	Williams, B. B., 1992c 100347
USA Northwood, North Dakota 1989 (Marshall)	312 SC	0.031 kg per 100kg seeds		1	Wheat, green material Triadimefon Triadimenol Total residue, calc. as TDM	 33 33 33	 < 0.01 0.03 0.04	Williams, B. B., 1992c 100347
USA Ashton, Idaho 1989 (Newana)	312 SC	0.031 kg per 100kg seeds		1	Wheat, green material Triadimefon Triadimenol Total residue, calc. as TDM	 44 44 44	 < 0.01 < 0.01 < 0.01	Williams, B. B., 1992c 100347
USA Ephrata, Washington 1989 (Nomad (Hard Red))	312 SC	0.031 kg per 100kg seeds		1	Wheat, green material Triadimefon Triadimenol Total residue, calc. as TDM	 47 47 47	 < 0.01 0.03 0.04	Williams, B. B., 1992c 100347

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Canada Unionville, Ontario 1979 Frederick	150 FS	0.031 kg per 100kg seeds		1	Wheat, green material Triadimefon Triadimenol Total residue, calc. as TDM	 49 64 49 64 49 64	 0.01 < 0.01 0.3 0.15 0.31 0.16	Anon., 1982bp 80916
Canada Lethbridge, Alberta 1979 (Winalta)	150 FS	0.031 kg per 100kg seeds		1	Wheat, green material Triadimefon Triadimenol Total residue, calc. as TDM	 40 60 40 60 40 60	 0.01 0.02 0.47 0.5 0.48 0.52	Anon., 1982bq 80917
Germany Burscheid 1983 (Caribo)	94 FS	0.038 kg per 100kg seeds		1	Wheat, green material Triadimenol	 236	 < 0.05	Anon., 1985y 9903-84
USA Howe, Indiana 1989 (Caldwell)	312 SC	0.031 kg per 100kg seeds		1	Wheat, green material Triadimefon Triadimenol Total residue, calc. as TDM	 196 196 196	 < 0.01 0.03 0.04	Williams, B. B., 1992c 100347
USA Stilwell, Kansas 1989 (Arkan)	312 SC	0.031 kg per 100kg seeds		1	Wheat, green material Triadimefon Triadimenol Total residue, calc. as TDM	 68 68 68	 < 0.01 0.03 0.04	Williams, B. B., 1992c 100347
USA Howe, Indiana 1979 (Yorkstar)	150 FS	0.031 kg per 100kg seeds		1	Wheat, green material Triadimefon Triadimenol Total residue, calc. as TDM	 42 65 42 65 42 65	 0.14 0.04 1.7 0.45 1.8 0.49	Anon., 1982br 80913
USA Stanley, Kansas 1979 (Lancota)	150 FS	0.031 kg per 100kg seeds		1	Wheat, green material Triadimefon Triadimenol Total residue, calc. as TDM	 40 61 40 61 40 61	 < 0.01 < 0.01 0.36 0.13 0.37 0.14	Anon., 1982bs 80914

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
USA Ropesville, Texas 1979 (Tascosa)	150 FS	0.031 kg per 100kg seeds		1	Wheat, green material Triadimefon Triadimenol Total residue, calc. as TDM	 165 185 165 185 165 185	 < 0.01 < 0.01 < 0.01 0.08 < 0.02 0.09	Anon., 1982bt 80915
USA Corvallis, Oregon 1979 (Stephens)	150 FS	0.031 kg per 100kg seeds		1	Wheat, green material Triadimefon Triadimenol Total residue, calc. as TDM	 42 63 42 63 42 63	 0.13 0.08 1.0 0.2 1.1 0.28	Anon., 1982bu 80918
USA Stanley, Kansas 1979 (Lancota)	150 FS	0.047 kg per 100kg seeds		1	Wheat, green material Triadimefon Triadimenol Total residue, calc. as TDM	 40 61 40 61 40 61	 < 0.01 < 0.01 0.49 0.19 0.5 0.2	Anon., 1982bv 80919
USA Ropesville, Texas 1979 (Tascosa)	150 FS	0.047 kg per 100kg seeds		1	Wheat, green material Triadimefon Triadimenol Total residue, calc. as TDM	 163 185 163 185 163 185	 < 0.01 < 0.01 0.01 0.37 0.02 0.38	Anon., 1982bx 80920
USA Corvallis, Oregon 1979 (Stephens)	150 FS	0.047 kg per 100kg seeds		1	Wheat, green material Triadimefon Triadimenol Total residue, calc. as TDM	 42 63 42 63 42 63	 0.24 0.04 1.0 0.16 1.2 0.2	Anon., 1982by 80921

Table 115. Foliar application of triadimefon on barley straw

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Germany Albig 1983 (Koral)	125 EC	0.13	0.031	2	Barley, straw Triadimefon Triadimenol Total residue, calc. as TDF	35 42 35 42 35 42	< 0.05 < 0.05 0.58 0.58 0.63 0.63	Anon., 1983p 9052-83

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Germany Monheim, 1982 (Carina)	25 WP	0.13	0.031	2	Barley, straw Triadimefon Triadimenol Total residue, calc. as TDF	35 42 35 42 35 42	< 0.05 < 0.05 0.15 0.37 0.2 0.42	Anon., 1982l 9035-82
Germany Monheim 1983 (Birgit)	125 EC	0.13	0.031	2	Barley, straw Triadimefon Triadimenol Total residue, calc. as TDF	35 42 35 42 35 42	0.16 0.16 0.32 0.29 0.48 0.45	Anon., 1983q 9050-83
Germany Burscheid 1983 (Birgit)	125 EC	0.13	0.031	2	Barley, straw Triadimefon Triadimenol Total residue, calc. as TDF	28 35 42 28 35 42 28 35 42	0.13 0.27 0.10 0.19 0.43 0.25 0.32 0.70 0.35	Anon., 1983r 9051-83
Germany Monheim 1982 (Birgit)	25 WP	0.13	0.031	2	Barley, straw Triadimefon Triadimenol Total residue, calc. as TDF	35 35 35	< 0.05 < 0.1 < 0.1	Anon., 1982m 9043-82
Germany Burscheid 1982 (Birgit)	25 WP	0.13	0.031	2	Barley, straw Triadimefon Triadimenol Total residue, calc. as TDF	35 42 35 42 35 42	< 0.05 < 0.05 < 0.1 < 0.1 < 0.1 < 0.1	Anon., 1982n 9044-82
Germany Monheim 1982 (Bollo)	25 WP	0.13	0.031	2	Barley, straw Triadimefon Triadimenol Total residue, calc. as TDF	35 42 35 42 35 42	< 0.05 < 0.05 < 0.1 < 0.1 < 0.1 < 0.1	Anon., 1982o 9029-82
Germany Burscheid 1982 (Dunja)	25 WP	0.13	0.03	2	Barley, straw Triadimefon Triadimenol Total residue, calc. as TDF	35 42 35 42 35 42	< 0.05 < 0.05 < 0.1 < 0.1 < 0.1 < 0.1	Anon., 1982p 9032-82
Germany Monheim 1982 (Carina)	25 WP	0.13	0.03	2	Barley, straw Triadimefon Triadimenol	35 42 35 42	< 0.05 < 0.05 0.19 0.35	Anon., 1982q 9045-82

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
					Total residue, calc. as TDF	35 42	0.19 0.35	

Table 116. Foliar application of triadimenol on barley straw

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Germany Burscheid 1990 (Golf)	375 EC	0.13	0.04	2	Barley, straw Triadimenol	35 42	0.66 1.2	Schmidt, B., 1992 PF 3703
Germany Worms-Heppenheim 1990 (Carina)	375 EC	0.13	0.04	2	Barley, straw Triadimenol	35 42	0.55 0.55	Schmidt, B., 1992 PF 3703
Germany Goggelgereuth 1989 (Aura)	309 EC	0.1	0.025	2	Barley, straw[1] Triadimenol	35 42	0.39 0.53 [a]	Anon., 1991d 0253-89
Germany Burscheid 1988 (Aramir)	375 EC	0.13	0.03	2	Barley, straw Triadimenol	35 50	0.17 < 0.05	Anon., 1989k 0246-88
Germany Monheim 1988 (Aramir)	375 EC	0.13	0.03	2	Barley, straw Triadimenol	35 42	0.13 < 0.05	Anon., 1989l 0412-88
Germany Albig 1983 (Koral)	250 EC	0.13	0.03	2	 Barley, straw Triadimenol	 0 14 28 35 42 35 42	 2.3 0.64 0.19 < 0.1 < 0.1 0.64 0.36	Anon., 1983w 9942-83
Germany Klein-Niedesheim 1982 (Koral)	250 EC	0.13	0.03	2	Barley, straw Triadimenol	35 42	0.95 1.3	Anon., 1982ac 9947-82
Germany Monheim 1982 (Carina)	250 EC	0.13	0.03	2	Barley, straw Triadimenol	35 42	0.62 0.52	Anon., 1982ad 9948-82
Germany Klein-Niedesheim 1982 (Koral)	25 WP	0.13	0.03	2	Barley, straw Triadimenol	35 42	0.6 0.84	Anon., 1982ae 9910-82

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Germany Monheim 1982 (Carina)	25 WP	0.13	0.03	2	Barley, straw Triadimenol	35 42	0.5 0.86	Anon., 1982af 9911-82
United Kingdom Thurston, Bury St. Edmunds 1982 (Golden Promise)	250 EC	0.13	0.04	2	Barley, straw Triadimenol	40	0.81	Bagnall, B. H., 1983 TCR 233
United Kingdom Newsham, N. Yorks 1982 (Mazurka)	250 EC	0.13	0.04	2	Barley, straw Triadimenol	41	0.61, 0.35 (0.48)	Bagnall, B. H., 1983 TCR 233
France Saint Puy 1998 (Majestic)	250 EC	0.13	0.045	2	Barley, straw Triadimenol	49	0.85	Blass, W., 2001 RA-2000/98
France Beraut 1998 (Angora)	250 EC	0.13	0.045	2	Barley, straw Triadimenol	48	1.4	Blass, W., 2001 RA-2000/98
France St. Gervai 1996 (Angora)	250 EC	0.13	0.042	2	Barley, straw Triadimenol	53 60	0.24 0.15	Allmendinger, H., 1998c RA-2022/96
France Doussay 1996 (Angora)	250 EC	0.13	0.042	2	Barley, straw Triadimenol	60 67	0.35 0.45	Allmendinger, H., 1998c RA-2022/96
Germany Worms-Heppenheim 1988 (Igri)	401 EC	0.1	0.025	2	Barley, straw Triadimenol	28 35 42	0.48 0.39 0.67	Anon., 1990c 0250-88
Germany Burscheid 1986 (Tapir)	375 EC	0.13	0.31	2	Barley, straw Triadimenol	35 42	0.23 0.61	Anon., 1987o 10650-86
Germany Grönwohld 1986 (Mammut)	375 EC	0.13	0.31	2	Barley, straw Triadimenol	35 42 49	0.23 0.14 0.25	Anon., 1987p 10651-86
Germany Monheim 1986 (Franka)	375 EC	0.13	0.31	2	Barley, straw Triadimenol	57	0.31	Anon., 1987q 11001-87

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Germany Monheim 1983 (Birgit)	250 EC	0.13	0.031	2	Barley, straw Triadimenol	35 42	0.24 0.50	Anon., 1983x 9940-83
Germany Burscheid 1983 (Birgit)	250 EC	0.13	0.031	2	Barley, straw Triadimenol	28 35 42	0.21 < 0.1 < 0.1	Anon., 1983y 9941-83
Germany Burscheid 1982 (Dura)	250 EC	0.13	0.031	2	Barley, straw Triadimenol	35 42	0.1 0.1	Anon., 1982ag 9937-82
Germany Monheim 1982 (Bollo)	250 EC	0.13	0.031	2	Barley, straw Triadimenol	35 42	0.24 0.69	Anon., 1982ah 9938-82
Germany Burscheid 1982 (Dura)	25 WP	0.13	0.031	2	Barley, straw Triadimenol	35 42	< 0.1 < 0.1	Anon., 1982ai 9900-82
Germany 4019 Monheim, Versuchsgut Laacherhof 1982 Bollo	25 WP	0.13	0.031	2	Barley, straw Triadimenol	35 42	0.15 0.98	9901-82
Italy Ravenna 1997 (Plaisant)	250 EC	0.13	0.042	2	Barley, straw Triadimenol	49	0.41	Heinemann, O.; Allmendinger, H., 1998a RA-2022/97
Spain Jorba 1997 (Glenan (R1))	250 EC	0.13	0.042	2	Barley, straw Triadimenol	48	4.1	Heinemann, O.; Allmendinger, H., 1998a RA-2022/97
Italy Dugliolo 1996 (Pilastro)	250 EC	0.13	0.042	2	Barley, straw Triadimenol	36 43	0.13 0.29	Allmendinger, H., 1998c RA-2022/96
Spain E- 43420 Sta. Coloma de Queralt 1996 Garbo	250 EC	0.13	0.042	2	Barley, straw Triadimenol	39 46	0.92 0.80	Allmendinger, H., 1998c RA-2022/96
United Kingdom Thurston, Bury St Edmunds, Suffolk 1983 Igri	250 EC	0.13	0.042	2	Barley, straw Triadimenol	42	0.07	Bagnall, B. H., 1985a TCR 266

a - supervised residue trial not used for evaluation, identical value in straw and grain indicates possible contamination of the samples

Table 117. Seed treatment with triadimenol on barley straw

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
				No	Sample	PHI	Residues	
Australia Waterview, Walla Walla, N.S.W. 1986 (Schooner)	150 LS	0.03 kg per 100kg seeds		1	Barley, straw Triadimenol	212	< 0.05	Anon., 1988g 5/87
Australia Waterview, Walla Walla, N.S.W. 1986 (Schooner)	25 WS	0.03 kg per 100kg seeds		1	Barley, straw Triadimenol	212	< 0.05	Anon., 1987j 4/87
Australia Dalrye, Yerong Creek 1984 (Ketch & Weeah 50 : 50 Mix)	25 WS	0.023 kg per 100kg seeds		1	Barley, straw Triadimenol	203	< 0.04	Anon., 1985s 44/84
Canada Ontario, Canada 1979 (Laurier)	150 FS	0.03 kg per 100kg seeds		1	Barley, straw Triadimenol KWG 0519 hydroxy	125 125	< 0.01 < 0.01	Anon., 1982r 80892
Canada Alberta, Canada 1979 (Bonanza)	150 FS	0.03 kg per 100kg seeds		1	Barley, straw Triadimenol KWG 0519 hydroxy	107 107	< 0.01 < 0.01	Anon., 1982s 80893
Canada Manitoba 1979 (Bonanza)	150 FS	0.03 kg per 100kg seeds		1	Barley, straw Triadimenol KWG 0519 hydroxy	131 131	< 0.01 < 0.01	Anon., 1982t 80894
France Cany-Barville 1985 (Pirol)	22 WS	0.03 kg per 100kg seeds		1	Barley, straw Triadimenol	141	< 0.1	Anon., 1985t 9480-85
France Tourne-Boisset 1985 (Pal)	22 WS	0.03 kg per 100kg seeds		1	Barley, straw Triadimenol	150	< 0.1	Anon., 1985u 9481-85
USA Lamberton, MN 1989 (Robust)	312 SC	0.03 kg per 100kg seeds		1	Barley, straw Triadimenol KWG 0519 hydroxy	83 83	0.05 < 0.01	Williams, B. B., 1992a 100351
USA Stanley, Kansas 1979 (Will)	150 FS	0.03 kg per 100kg seeds		1	Barley, straw Triadimenol KWG 0519 hydroxy	272 272	< 0.01 < 0.01	Anon., 1982u 80885
USA Howe, Indiana 1979 (Paoli)	150 FS	0.03 kg per 100kg seeds		1	Barley, straw Triadimenol KWG 0519 hydroxy	308 308	< 0.01 < 0.01	Anon., 1982v 80886

Location Year (variety)	Form	Application		No	Analysis Sample	PHI	Residues	Reference, Report No.
USA Ropesville, Texas 1979 (Will)	150 FS	0.03 kg per 100kg seeds		1	Barley, straw Triadimenol KWG 0519 hydroxy	260 260	< 0.01 < 0.01	Anon., 1982w 80887
USA Stanley, Kansas 1979 (Will)	150 FS	0.047 kg per 100kg seeds		1	Barley, straw Triadimenol KWG 0519 hydroxy	272 272	< 0.01 < 0.01	Anon., 1982x 80888
USA Howe, Indiana 1979 (Paoli)	150 FS	0.047 kg per 100kg seeds		1	Barley, straw Triadimenol KWG 0519 hydroxy	308 308	< 0.01 < 0.01	Anon., 1982y 80889
USA Ropesville, Texas 1979 (Will)	150 FS	0.047 kg per 100kg seeds		1	Barley, straw Triadimenol KWG 0519 hydroxy	260 260	< 0.01 < 0.01	Anon., 1982z 80890
USA Wahpeton, North Dakota 1979 (Morex)	150 FS	0.03 kg per 100kg seeds		1	Barley, straw Triadimenol KWG 0519 hydroxy	77 77	< 0.01 < 0.01	Anon., 1982aa 80891
USA Moccasin, Montana 1979 (Piroline)	150 FS	0.03 kg per 100kg seeds		1	Barley, straw Triadimenol KWG 0519 hydroxy	91 91	< 0.01 < 0.01	Anon., 1982ab 80895
France Cany-Barville 1986 (Palz)	22 WS	0.03 kg per 100kg seeds		1	Barley, straw Triadimenol	149	< 0.1	Anon., 1987k 10511-86
Germany Borstorf 1984 (Aura)	231 FS	0.038 kg per 100kg seeds		1	Barley, straw Triadimenol	144	< 0.1	Anon., 1984ah 9917-84
Germany Borstorf 1984 (Aura)	323 LS	0.016 kg per 100kg seeds		1	Barley, straw Triadimenol	144	< 0.1	Anon., 1984ai 10281-84
Germany Monheim 1983 (Carina)	94 FS	0.038 kg per 100kg seeds		1	Barley, straw Triadimenol	100	< 0.1	Anon., 1984aj 9980-83
Germany Burscheid 1983 (Carina)	94 FS	0.038 kg per 100kg seeds		1	Barley, straw Triadimenol	103	< 0.1	Anon., 1984ak 9981-30

Location Year (variety)	Form	Application		No	Analysis Sample	PHI	Residues	Reference, Report No.
Germany Klein-Niedesheim 1983 (Koral)	30.7 DS	0.035 kg per 100kg seeds		1	Barley, straw Triadimenol	128	< 0.1	Anon., 1984al 10502-83
Germany Worms-Heppenheim 1983 (Koral)	30.7 DS	0.035 kg per 100kg seeds		1	Barley, straw Triadimenol	128	< 0.1	Anon., 1984am 10503-83
Germany Monheim 1982 (Carina)	30.7 DS	0.035 kg per 100kg seeds		1	Barley, straw Triadimenol	118	< 0.1	Anon., 1983s 10509-82
Germany Burscheid 1982 (Carina)	30.7 DS	0.035 kg per 100kg seeds		1	Barley, straw Triadimenol	131	< 0.1	Anon., 1983t 10510-82
Germany Geldern 1982 (Carina)	30.7 DS	0.035 kg per 100kg seeds		1	Barley, straw Triadimenol	127	< 0.1	Anon., 1983u 10511-82
Germany Burscheid 1984 (Carina)	231 FS	0.038 kg per 100kg seeds		1	Barley, straw Triadimenol	118	< 0.1	Anon., 1984an 9916-84
Germany Burscheid 1984 (Carina)	323 LS	0.016 kg per 100kg seeds		1	Barley, straw Triadimenol	118	< 0.1	Anon., 1984ao 10280-84
United Kingdom Worksop, Notts 1980 (Keg)	210 FS	0.028 kg per 100kg seeds		1	Barley, straw Triadimenol	168	< 0.05	Bagnall, B. H., 1981 TCR 201
United Kingdom Blisworth, Northamptonshire 1980 (Georgie)	210 FS	0.028 kg per 100kg seeds		1	Barley, straw Triadimenol	165	< 0.05	Bagnall, B. H., 1981 TCR 201
USA Northwood, ND 1989 (Robust)	312 SC	0.031 kg per 100kg seeds		1	Barley, straw Triadimenol KWG 0519 hydroxy	87 87	< 0.01 < 0.01	Williams, B. B., 1992a 100351
USA Ashton, ID 1989 (Morex)	312 SC	0.031 kg per 100kg seeds		1	Barley, straw Triadimenol KWG 0519 hydroxy	110 110	< 0.01 0.01	Williams, B. B., 1992a 100351
USA Ephrata, WA	312 SC	0.031 kg per 100kg seeds		1	Barley, hay Triadimenol KWG 0519	50 50	0.03 < 0.01	Williams, B. B., 1992a 100351

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
				No	Sample	PHI	Residues	
1989 (Gusto)					hydroxy Barley, straw Triadimenol KWG 0519 hydroxy	 108 108	 0.01 < 0.01	
France Fresne l'Archevesque 1985	150 FS	0.03 kg per 100kg seeds		1	Barley, straw Triadimenol	246	< 0.05	Anon., 1986t 9400-86
France Seltot 1985 (Plaisant)	150 FS	0.03 kg per 100kg seeds		1	Barley, straw Triadimenol	284	< 0.05	Anon., 1986u 9401-86
France Seltot 1985 (Plaisant)	165 FS	0.03 kg per 100kg seeds		1	Barley, straw Triadimenol	284	< 0.1	Anon., 1987l 10500-86
France Fultot 1985 (Vestale)	165 FS	0.03 kg per 100kg seeds		1	Barley, straw Triadimenol	228	< 0.1	Anon., 1987m 10501-86
France Fresne L'Archeveque 1985 (Vestale)	22 WS	0.03 kg per 100kg seeds		1	Barley, straw Triadimenol	246	< 0.1	Anon., 1987n 10510-86
Germany Klein-Niedesheim 1983 (Franka)	94 FS	0.038 kg per 100kg seeds		1	Barley, straw Triadimenol	297	< 0.1	Anon., 1985v 9900-84
Germany Monheim 1982 (Birgit)	30.7 DS	0.035 kg per 100kg seeds		1	Barley, straw Triadimenol	280	< 0.1	Anon., 1984ap 10500-83
Germany Burscheid 1982 (Birgit)	30.7 DS	0.035 kg per 100kg seeds		1	Barley, straw Triadimenol	296	< 0.1	Anon., 1984aq 10501-83
Germany Burscheid 1981 (Bollo)	30.7 DS	0.035 kg per 100kg seeds		1	Barley, straw Triadimenol	292	< 0.1	Anon., 1983v 10512-82
USA Salinas, CA 1989 (UC 476)	312 SC	0.031 kg per 100kg seeds		1	Barley, hay Triadimenol KWG 0519 hydroxy	45 45	0.12 0.01	Williams, B. B., 1992a 100351

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
				No	Sample	PHI	Residues	
USA Stilwell, KS 1989 (Perry)	312 SC	0.031 kg per 100kg seeds		1	Barley, hay Triadimenol KWG 0519 hydroxy Barley, straw Triadimenol KWG 0519 hydroxy	71 71 282 282	0.05 < 0.01 < 0.01 < 0.01	Williams, B. B., 1992a 100351
Australia Bussenschutt, Paskeville, S.A. 1983 Ketch	15 DS	0.011 kg per 100kg seeds		1	Barley, straw Triadimenol	147	< 0.1	Anon., 1984ar 32/83
Australia Bussenschutt, Paskeville, S.A. 1983 Ketch	15 DS	0.016 kg per 100kg seeds		1	Barley, straw Triadimenol	147	< 0.1	Anon., 1984ar 32/83
Australia Bussenschutt, Paskeville, S.A. 1983 Ketch	15 DS	0.032 kg per 100kg seeds		1	Barley, straw Triadimenol	147	< 0.1	Anon., 1984ar 32/83

Table 118. Foliar application of triadimefon on oats straw

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Germany Monheim 1982 (Flämingskrone)	25 WP	0.13	0.031	2	Oats, straw Triadimefon Triadimenol Total residue, calc. as TDF	28 35 42 28 35 42 28 35 42	< 0.05 < 0.05 < 0.05 0.17 < 0.1 0.13 0.22 < 0.1 0.18	Anon., 1983z 9000-82
Germany Burscheid 1982 (Flämingskrone)	25 WP	0.13	0.031	2	Oats, straw Triadimefon Triadimenol Total residue, calc. as TDF	35 42 35 42 35 42	< 0.05 < 0.05 < 0.1 < 0.1 < 0.1 < 0.1	Anon., 1983aa 9001-82
Germany Klein-Niedesheim 1982 (Flämingskrone)	25 WP	0.13	0.031	2	Oats, straw Triadimefon Triadimenol Total residue, calc. as TDF	35 42 35 42 35 42	< 0.05 < 0.05 0.29 0.58 0.34 0.63	Anon., 1983ab 9002-82

Table 119. Foliar application of triadimenol on oats straw

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Germany Monheim 1986 (Flaemingsnova)	375 EC	0.13	0.031	2	Oats, straw Triadimenol	35 42	1.8 2.1	Anon., 1987r 10656-86
Germany Worms-Heppenheim 1986 (Flaemingsnova)	375 EC	0.13	0.031	2	Oats, straw Triadimenol	35 42	0.71 1.6	Anon., 1987s 10657-86

Table 120. Seed treatment with triadimenol on oats straw

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
			kg ai/hL	No	Sample	PHI	Residues	
Canada Unionville, Ontario 1979 (Elgin)	150 FS	0.031 kg per 100kg seeds		1	Oats, straw Triadimefon Triadimenol Total residue, calc. as TDM	125 125 125	< 0.01 < 0.01 < 0.01	Anon., 1982aj 80901
Canada Calmar, Alberta 1979 (Random)	150 FS	0.031 kg per 100kg seeds		1	Oats, straw Triadimefon Triadimenol Total residue, calc. as TDM	118 118 118	< 0.01 < 0.01 < 0.01	Anon., 1982ak 80902
Canada Portage la Prairie, Manitoba 1979 (Harmon)	150 FS	0.031 kg per 100kg seeds		1	Oats, straw Triadimefon Triadimenol Total residue, calc. as TDM	131 131 131	< 0.01 < 0.01 < 0.01	Anon., 1982al 80903
Germany Borstorf 1984 (Flaemingsnova)	323 LS	0.012 kg per 100kg seeds		1	Oats, straw Triadimenol	155	< 0.1	Anon., 1984as 10285-84
Germany Burscheid 1983 (Flaemingsnova)	23.3 DS	0.012 kg per 100kg seeds		1	Oats, straw Triadimenol	113	< 0.1	Anon., 1984at 10282-83
Germany Monheim 1983 (Flaemingsnova)	23.3 DS	0.012 kg per 100kg seeds		1	Oats, straw Triadimenol	136	< 0.1	Anon., 1984au 10283-83
Germany Monheim 1984 (Flaemingsnova)	323 LS	0.012 kg per 100kg seeds		1	Oats, straw Triadimenol	144	< 0.1	Anon., 1984av 10284-83

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
			kg ai/hL	No	Sample	PHI	Residues	
Germany Burscheid 1979 (Fläaeingskrone)	210 FS	0.038 kg per 100kg seeds		1	Oats, straw Triadimenol	80 132	< 0.1 < 0.1	Anon., 1979b 9945-79
Germany 4019 Monheim, Versuchsgut Laacherhof 1979 Flämingskrone	210 FS	0.038 kg per 100kg seeds		1	Oats, straw Triadimenol	84 128	< 0.1 < 0.1	Anon., 1979c 9946-79
Germany 417 Geldern 1979 Tiger	210 FS	0.038 kg per 100kg seeds		1	Oats, straw Triadimenol	120 174	< 0.1 < 0.1	Anon., 1979d 9947-79
USA Lamberton, Minnesota 1989 (Dow)	312 SC	0.031 kg per 100kg seeds		1	Oats, hay Triadimefon Triadimenol Total residue, calc. as TDM Oats, straw Triadimefon Triadimenol Total residue, calc. as TDM	42 42 42 83 83 83	< 0.01 0.02 0.03 < 0.01 0.02 0.03	Williams, B. B., 1992b 100352
USA Danville, Iowa 1989 (Hazel)	312 SC	0.03 kg per 100kg seeds		1	Oats, hay Triadimefon Triadimenol Total residue, calc. as TDM Oats, straw Triadimefon Triadimenol Total residue, calc. as TDM	43 43 43 92 92 92	< 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01	Williams, B. B., 1992b 100352
USA Canastota, New York 1989 (Astro)	312 SC	0.03 kg per 100kg seeds		1	Oats, hay Triadimefon Triadimenol Total residue, calc. as TDM Oats, straw Triadimefon Triadimenol Total residue, calc. as TDM	37 37 37 114 114 114	0.02 0.96 0.98 < 0.01 < 0.01 < 0.01	Williams, B. B., 1992b 100352

Location Year (variety)	Form	Application		No	Analysis			Reference, Report No.
			kg ai/hL		Sample	PHI	Residues	
USA Hudson, Wisconsin 1989 (Noble)	312 SC	0.03 kg per 100kg seeds		1	Oats, hay Triadimefon Triadimenol Total residue, calc. as TDM Oats, straw Triadimefon Triadimenol Total residue, calc. as TDM	 45 45 45 98 98 98	 < 0.01 0.2 0.21 0.02 0.03 0.05	Williams, B. B., 1992b 100352
USA Howe, Indiana 1989 (Ogle)	312 SC	0.03 kg per 100kg seeds		1	Oats, hay Triadimefon Triadimenol Total residue, calc. as TDM Oats, straw Triadimefon Triadimenol Total residue, calc. as TDM	 56 56 56 107 107 107	 0.01 0.32 0.33 0.02 < 0.01 0.03	Williams, B. B., 1992b 100352
USA Stilwell, Kansas 1989 (Ogle)	312 SC	0.03 kg per 100kg seeds		1	Oats, hay Triadimefon Triadimenol Total residue, calc. as TDM Oats, straw Triadimefon Triadimenol Total residue, calc. as TDM	 78 78 78 122 122 122	 0.04 < 0.01 0.05 0.02 < 0.01 0.03	Williams, B. B., 1992b 100352
USA Stanley, Kansas 1979 (Noble)	150 FS	0.031 kg per 100kg seeds		1	Oats, straw Triadimefon Triadimenol Total residue, calc. as TDM	 117 117 117	 < 0.01 < 0.01 < 0.01	Anon., 1982am 80896
USA Tifton, Georgia 1979 (Coker 227)	150 FS	0.031 kg per 100kg seeds		1	Oats, straw Triadimefon Triadimenol Total residue, calc. as TDM	 229 229 229	 < 0.01 < 0.01 < 0.01	Anon., 1982an 80897
USA Howe, Indiana 1979 (Noble)	150 FS	0.031 kg per 100kg seeds		1	Oats, straw Triadimefon Triadimenol	 101 101	 < 0.01 < 0.01	Anon., 1982ao 80898

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
			kg ai/hL	No	Sample	PHI	Residues	
					Total residue, calc. as TDM	101	< 0.01	
USA Shakopee, Minnesota 1979 (Chief)	150 FS	0.031 kg per 100kg seeds		1	Oats, straw Triadimefon Triadimenol Total residue, calc. as TDM	76 76 76	< 0.01 < 0.01 < 0.01	Anon., 1982ap 80899
USA Shakopee, Minnesota 1979 (Lang)	150 FS	0.031 kg per 100kg seeds		1	Oats, straw Triadimefon Triadimenol Total residue, calc. as TDM	76 76 76	< 0.01 0.02 0.03	Anon., 1982aq 80900
USA Howe, Indiana 1979 (Noble)	150 FS	0.047 kg per 100kg seeds		1	Oats, straw Triadimefon Triadimenol Total residue, calc. as TDM	101 101 101	< 0.01 < 0.01 < 0.01	Anon., 1982ar 80904
USA Shakopee, Minnesota 1979 (Chief)	150 FS	0.047 kg per 100kg seeds		1	Oats, straw Triadimefon Triadimenol Total residue, calc. as TDM	76 76 76	< 0.01 0.01 0.02	Anon., 1982as 80905

Table 121. Foliar application of triadimefon on rye straw

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Germany Monheim 1983 (Carokurz)	125 EC	0.13 0.25	0.03 0.06	2	Rye, straw Triadimefon Triadimenol Total residue, calc. as TDM	35 42 35 42 35 42	0.3 0.16 1.6 1.0 1.9 1.2	Anon., 1983ac 9003-83
Germany Burscheid 1983 (Halo)	125 EC	0.13	0.03	2	Rye, straw Triadimefon Triadimenol Total residue, calc. as TDM	35 35 35	0.71 2.0 2.7	Anon., 1983ad 9004-83
Germany Klein-Niedesheim 1983 (Halo)	125 EC	0.25	0.06	2	Rye, straw Triadimefon Triadimenol Total residue, calc. as TDM	35 42 35 42 35 42	0.14 0.12 0.77 0.54 0.91 0.66	Anon., 1983ae 9005-83

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Germany Monheim 1982 (Carokurz)	25 WP	0.13	0.03	2	Rye, straw Triadimefon Triadimenol Total residue, calc. as TDM	 28 35 42 28 35 42 28 35 42	 0.12 0.24 0.18 0.84 1.1 1.3 0.96 1.3 1.5	Anon., 1983af 9003-82
Germany Burscheid 1982 (Carokurz)	25 WP	0.13	0.03	2	Rye, straw Triadimefon Triadimenol Total residue, calc. as TDM	 42 42 42	 0.06 0.17 0.23	Anon., 1983ag 9004-82
Germany Klein-Niedesheim 1982 (Halo)	25 WP	0.13	0.03	2	Rye, straw Triadimefon Triadimenol Total residue, calc. as TDM	 35 42 35 42 35 42	 0.17 0.06 1.5 0.96 1.7 1.0	Anon., 1983ah 9005-82

Table 122. Foliar application of triadimenol on rye straw

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Germany Burscheid 1986 (Danko)	375 EC	0.13	0.031	2	Rye, straw Triadimenol	 35 42 49 56	 0.3 0.36 0.34 0.34	Anon., 1987t 10655-86
Germany Klein-Niedesheim 1982 (Halo)	250 EC	0.13	0.031	2	Rye, straw Triadimefon	 35 42	 0.85 1.2	Anon., 1982ba 9949-82
Germany Monheim 1982 (Carokurz)	250 EC	0.13	0.031	2	Rye, straw Triadimefon	 28 35 42	 1.5 1.9 1.8	Anon., 1982bb 9950-82
Germany Klein-Niedesheim 1982 (Halo)	25 WP	0.13	0.031	2	Rye, straw Triadimefon	 35 42	 1.9 1.3	Anon., 1982bc 9912-82
Germany Monheim 1982 (Carokurz)	25 WP	0.13	0.031	2	Rye, straw Triadimefon	 28 35 42	 1.1 1.4 1.0	Anon., 1982bd 9913-82

Table 123. Seed treatment with triadimenol on rye straw

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Canada Lethbridge, Alberta 1979 (Cougar)	150 FS	0.031 kg per 100kg seeds		1	Rye, straw Triadimefon Triadimenol Total residue, calc. as TDM	328 328 328	< 0.01 < 0.01 < 0.01	Anon., 1982at 80908
Germany Worms-Heppenheim 1984 (Caro-Kurz)	231 FS	0.038 kg per 100kg seeds		1	Rye, straw Triadimenol	295	< 0.1	Anon., 1986v 9900-85
Germany Monheim 1984 (Carokurz)	231 FS	0.038 kg per 100kg seeds		1	Rye, straw Triadimenol	289	< 0.1	Anon., 1986w 9901-85
Germany Burscheid 1983 (Carokurz)	94 FS	0.038 kg per 100kg seeds		1	Rye, straw Triadimenol	314	< 0.1	Anon., 1985w 9901-84
Germany Klein-Niedesheim 1983 (Carokurz)	94 FS	0.038 kg per 100kg seeds		1	Rye, straw Triadimenol	316	< 0.1	Anon., 1985x 9902-84
USA Stanley, Kansas 1981 Rymin	150 FS	0.031 kg per 100kg seeds		1	Rye, straw Triadimefon Triadimenol Total residue, calc. as TDM	147 147 147	< 0.01 < 0.01 < 0.01	Anon., 1982au 80911
USA Shakopee, Minnesota 1980 von Lochow	150 FS	0.031 kg per 100kg seeds		1	Rye, straw Triadimefon Triadimenol Total residue, calc. as TDM	334 334 334	< 0.01 < 0.01 < 0.01	Anon., 1982av 80906
USA Ropesville, Texas 1980 Elbon	150 FS	0.031 kg per 100kg seeds		1	Rye, straw Triadimefon Triadimenol Total residue, calc. as TDM	281 281 281	< 0.01 < 0.01 < 0.01	Anon., 1982aw 80907
USA Hubbard, Oregon 1980	150 FS	0.031 kg per 100kg seeds		1	Rye, straw Triadimefon Triadimenol Total residue, calc. as TDM	276 276 276	< 0.01 < 0.01 < 0.01	Anon., 1982ax 80909
USA Howe, Indiana 1980 Balboa	150 FS	0.031 kg per 100kg seeds		1	Rye, straw Triadimefon Triadimenol	270 270	< 0.01 < 0.01	Anon., 1982ay 80910

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
					Total residue, calc. as TDM	270	< 0.01	
USA Tifton, Georgia 1980 Wrens Abruzzi	150 FS	0.031 kg per 100kg seeds		1	Rye, straw Triadimefon Triadimenol Total residue, calc. as TDM	173 173 173	< 0.01 < 0.01 < 0.01	Anon., 1982az 80912

Table 124. Foliar application of triadimefon on wheat straw

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Germany Burscheid 1983 (Kolibri)	125 EC	0.13	0.031	2	Wheat, straw Triadimefon Triadimenol Total residue, calc. as TDM	27 35 42 27 35 42 27 35 42	< 0.05 < 0.05 < 0.05 0.53 0.65 0.44 0.58 0.7 0.49	Anon., 1983ai 9054-83
Germany Monheim 1982 (Kolibri)	25 WP	0.13	0.031	2	Wheat, straw Triadimefon Triadimenol Total residue, calc. as TDM	28 35 42 28 35 42 28 35 42	0.05 < 0.05 < 0.05 0.48 0.45 0.46 0.53 0.5 0.51	Anon., 1982be 9047-82
Germany Monheim 1982 (Kolibri)	25 WP	0.13	0.031	2	Wheat, straw Triadimefon Triadimenol Total residue, calc. as TDM	28 35 42 28 35 42 28 35 42	< 0.05 < 0.05 < 0.05 0.48 0.47 0.35 0.53 0.47 0.35	Anon., 1982bf 9037-82
Germany Monheim 1977 (Kolibri)	250 EC	0.13	0.031	2	Wheat, straw Total residue, calc. as TDM	0 14 28 35 42	2.9 0.65 0.45 0.45 0.35	Anon., 1977g 9022-77
Germany Monheim 1977 (Kolibri)	250 EC	0.13	0.031	2	Wheat, straw Total residue, calc. as TDM	0 14 28 35 42	2.0 0.85 1.1 1.0 0.6	Anon., 1977h 9023-77

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Germany Groenwohld 1983 (Okapi)	125 EC	0.13	0.031	2	Wheat, straw Triadimefon Triadimenol Total residue, calc. as TDM	 28 35 28 35 28 35	 0.13 0.09 2.5 2.5 2.7 2.6	Anon,., 1983aj 9053-83
Germany Monheim 1982 (Kormoran)	25 WP	0.13	0.031	2	Wheat, straw Triadimefon Triadimenol Total residue, calc. as TDM	 28 35 42 28 35 42 28 35 42	 0.06 < 0.05 < 0.05 0.67 0.78 0.51 0.73 0.83 0.56	Anon., 1982bg 9046-82
Germany Monheim 1982 (Kormoran)	25 WP	0.13	0.031	2	Wheat, straw Triadimefon Triadimenol Total residue, calc. as TDM	 28 35 42 28 35 42 28 35 42	 0.08 < 0.05 < 0.05 0.82 0.74 0.62 0.9 0.79 0.67	Anon., 1982bh 9036-82

Table 125. Foliar application of triadimenol on wheat straw

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Canada Palmerston, Ontario 1982 (Gordon)	25 WP	0.14	0.056	1	Wheat, straw Triadimenol KWG 0519 hydroxy	 27 27	 0.12 0.01	Anon., 1983ak 82869
Germany Burscheid 1989 (Ralle)	309 EC	0.1	0.025	2	Wheat, straw Triadimenol	 35 49	 0.35 0.83	Anon., 1990d 0250-89
Germany Burscheid 1988 (Star)	401 EC	0.1	0.025	2	Wheat, straw Triadimenol	 35 54	 0.12 0.56	Anon., 19898m 0247-88
Germany Burscheid 1988 (Star)	375 EC	0.13	0.031	2	Wheat, straw Triadimenol	 35 54	 0.08 0.27	Anon., 1989n 0244-88

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Germany Monheim 1988 (Star)	375 EC	0.13	0.031	2	Wheat, straw Triadimenol	35 49	0.1 0.16	Anon., 1989o 0413-88
Germany Monheim 1988 (Star)	375 EC	0.13	0.031	2	Wheat, straw Triadimenol	35 42	0.42 0.53	Anon., 1989p 0627-88
Germany Monheim 1988 (Star)	375 EC	0.13	0.031	2	Wheat, straw Triadimenol	35 42	0.62 0.72	Anon., 1989q 0635-88
Germany Klein-Niedesheim 1988 (Star)	375 EC	0.13	0.031	2	Wheat, straw Triadimenol	35 42	0.33 1.4	Anon., 1989r 0639-88
Germany Klein-Niedesheim 1988 (Star)	375 EC	0.13	0.031	2	Wheat, straw Triadimenol	35 42	1.1 1.3	Anon., 1989s 0641-88
Germany Burscheid 1988 (Star)	375 EC	0.13	0.031	2	Wheat, straw Triadimenol	35 54	0.2 0.68	Anon., 1989t 0653-88
Germany Monheim 1984 (Kolibri)	250 EC	0.13	0.031	2	Wheat, straw Triadimenol	35 42 49	0.18 0.17 0.47	Anon., 1984bb 9483-84
Germany Burscheid 1983 (Kolibri)	250 EC	0.13	0.031	2	Wheat, straw Triadimenol	27 35 42	0.57 0.79 0.67	Anon., 1983al 9944-83
Germany Albig 1982 (Schirokko)	250 EC	0.13	0.031	2	Wheat, straw Triadimenol	35 42	1.0 0.9	Anon., 1982bz 9945-82
Germany Monheim 1982 (Kolibri)	250 EC	0.13	0.031	2	Wheat, straw Triadimenol	28 35 42	0.7 0.91 0.88	Anon., 1982ca 9946-82
Germany Albig 1982 (Schirokko)	25 WP	0.13	0.031	2	Wheat, straw Triadimenol	35 42	0.86 1.2	Anon., 1982cb 9908-82
Germany Monheim 1982 (Kolibri)	25 WP	0.13	0.031	2	Wheat, straw Triadimenol	28 35 42	0.53 0.53 0.59	Anon., 1982cc 9909-82
France Bage la Ville	250 EC	0.13	0.045	2	Wheat, straw Triadimenol	49	0.66	Heinemann, O.; Allmendinger, H., 1998a

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
1997 (Sideral)								RA-2022/97
France Lescheroux 1997 (Messager)	250 EC	0.13	0.045	2	Wheat, straw Triadimenol	49	0.73	Heinemann, O.; Allmendinger, H., 1998a RA-2022/97
France St. Gervais 1996 (Recital)	250 EC	0.13	0.045	2	Wheat, straw Triadimenol	42 49	0.46 0.42	Allmendinger, H., 1998c RA-2022/96
France Savigny 1996 (Recital)	250 EC	0.13	0.045	2	Wheat, straw Triadimenol	42 49	0.7 0.65	Allmendinger, H., 1998c RA-2022/96
France St. Andre de l`Eure/ABC 1987 (Festival)	250 EC	0.13	0.025	1	Wheat, straw Triadimenol	29	0.82	Anon., 1988i 9490-87
France St. Andre de l`Eure/ABC 1987 (Festival)	250 EC	0.13	0.025	1	Wheat, straw Triadimenol	29	0.75	Anon., 1988j 9491-87
France Moreac 1982 (Hardi)	25 WP	0.13	0.021	2	Wheat, straw Triadimenol	40	0.39	Anon., 1983am 9921-82
France Moustoir Remungol 1982 (Arminda)	25 WP	0.13	0.021	2	Wheat, straw Triadimenol	35	0.79	Anon., 1983an 9922-82
Germany Groenwohld 1991 (Kanzler)	300 EC	0.075	0.025	2	Wheat, straw Triadimenol	35 42	0.62 0.55	Allmendinger, H., 1998c RA-2099/91
Germany Albig 1988 (Ares)	375 EC	0.13	0.031	1	Wheat, straw Triadimenol	35 42	0.32 0.32	Anon., 1989u 0645-88
Germany Albig 1988 (Ares)	375 EC	0.13	0.031	1	Wheat, straw Triadimenol	35 42	0.25 0.27	Anon., 19889v 0647-88
Germany Monheim 1987 (Carina)	375 EC	0.13	0.031	2	Wheat, straw Triadimenol	35	0.29	Anon., 1987v 11004-87

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Germany Kirchlauter-Pettstadt 1987 (Rektor)	375 EC	0.13	0.031	2	Wheat, straw Triadimenol	49	1.0	Anon., 1987w 11005-87
Germany Monheim 1986 (Caribo)	375 EC	0.13	0.031	2	Wheat, straw Triadimenol	35 42	2.1 1.7	Anon., 1987x 10652-86
Germany Kirchlauter-Pettstadt 1986 (Rektor)	375 EC	0.13	0.031	2	Wheat, straw Triadimenol	35 42 49	0.75 0.83 0.93	Anon., 1987y 10653-86
Germany Monheim 1986 (Caribo)	375 EC	0.13	0.031	2	Wheat, straw Triadimenol	28 37	2.5 2.1	Anon., 1987z 10658-86
Germany Burscheid 1986 (Caribo)	375 EC	0.13	0.031	2	Wheat, straw Triadimenol	28 35	0.93 1.3	Anon., 1987aa 10659-86
Germany Burscheid 1984 (Caribo)	250 EC	0.13	0.031	2	Wheat, straw Triadimenol	35 42 49 52	< 0.1 < 0.1 < 0.1 0.15	Anon., 1984bc 9482-84
Hungary Kaposvár-Dénesmajor, Somogy 1998 (MV 23)	460 EC	0.044	0.02	1	Wheat, straw Triadimenol	35	0.13, 0.12, 0.12 (0.12)	Orosz, F., 2000 98-BAY-AA-14-05
Hungary Hajduböszörmeny, Beke 1984	250 EC	0.13	0.031	1	Wheat, straw Triadimenol	37	0.31	Anon., 1984bd UNG1/84
Italy Ravenna 1997 (Centauro)	250 EC	0.13	0.042	2	Wheat, straw Triadimenol	44	1.3	Heinemann, O.; Allmendinger, H., 1998a RA-2022/97
Italy Dugliolo 1996 (Mol)	250 EC	0.13	0.042	2	Wheat, straw Triadimenol	30 37	0.28 0.59	Allmendinger, H., 1998c RA-2022/96
Spain Jorba 1997 (Etecho (R1))	250 EC	0.13	0.042	2	Wheat, straw Triadimenol	79	1.0	Heinemann, O.; Allmendinger, H., 1998a RA-2022/97

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Spain Figuerola 1996 (Soisson)	250 EC	0.13 – 0.14	0.042	2	Wheat, straw Triadimenol	 39 46	 0.89 0.85	Allmendinger, H., 1998c RA-2022/96

Table 126. Seed treatment with triadimenol on wheat straw

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Australia Walla Walla, N.S.W. 1986 (Olympic)	150 LS	0.03 kg per 100kg seeds		1	Wheat, straw Triadimenol	 212	 < 0.1	Anon., 1988h AUS-3-87
Australia Walla Walla, N.S.W. 1986 (Olympic)	25 WS	0.03 kg per 100kg seeds		1	Wheat, straw Triadimenol	 212	 < 0.1	Anon., 1987u 2/87
Australia Griffith, N.S.W. 1983 (Bindawarra)	15 DS	0.023 kg per 100kg seeds		1	Wheat, straw Triadimenol	 183	 0.2	Anon., 1984aq 42/83
Canada Unionville, Ontario 1979 (Glenlea)	150 FS	0.031 kg per 100kg seeds		1	Wheat, straw Triadimefon Triadimenol Total residue, calc. as TDM	 123 123 123	 < 0.01 < 0.01 < 0.01	Anon., 1982bi 80923
Canada Vulcan, Alberta 1979 (Neepawa)	150 FS	0.031 kg per 100kg seeds		1	Wheat, straw Triadimefon Triadimenol Total residue, calc. as TDM	 107 107 107	 < 0.01 < 0.01 < 0.01	Anon., 1982bj 80924
Canada Portage La Prairie, Manitoba 1979 (Sinton)	150 FS	0.031 kg per 100kg seeds		1	Wheat, straw Triadimefon Triadimenol Total residue, calc. as TDM	 131 131 131	 < 0.01 < 0.01 < 0.01	Anon., 1982bk 80925
Germany Groenwohld 1984 (Arkas)	231 FS	0.038 kg per 100kg seeds		1	Wheat, straw Triadimenol	 142	 < 0.05	Anon., 1984ax 9918-84
Germany Monheim 1984 (Kolibri)	231 FS	0.038 kg per 100kg seeds		1	Wheat, straw Triadimenol	 140 153	 < 0.05 < 0.05	Anon., 1984ay 9919-84

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
Germany Klein-Niedesheim 1983 (Schirokko)	94 FS	0.038 kg per 100kg seeds		1	Wheat, straw Triadimenol	 139	 < 0.05	Anon., 1984az 9982-83
Germany Worms-Heppenheim 1983 (Schirokko)	94 FS	0.038 kg per 100kg seeds		1	Wheat, straw Triadimenol	 135	 < 0.05	Anon., 1984ba 9983-83
Germany Burscheid 1979 (Kolibri)	210 FS	0.038 kg per 100kg seeds		1	Wheat, straw Triadimenol	 78 141	 < 0.05 < 0.05	Anon., 1979e 9942-79
Germany Monheim 1979 (Kolibri)	210 FS	0.038 kg per 100kg seeds		1	Wheat, straw Triadimenol	 75 129	 < 0.05 < 0.05	Anon., 1979f 9943-79
Germany Geldern3 1979 (Kolibri)	210 FS	0.038 kg per 100kg seeds		1	Wheat, straw Triadimenol	 88 150	 < 0.05 < 0.05	Anon., 1979g 9944-79
USA Lamberton, Minnesota 1989 (Marshall)	312 SC	0.031 kg per 100kg seeds		1	Wheat, hay Triadimefon Triadimenol Total residue, calc. as TDM Wheat, straw Triadimefon Triadimenol Total residue, calc. as TDM	 42 42 42 83 83 83	 < 0.05 0.1 0.15 0.04 0.11 0.15	Williams, B. B., 1992c 100347
USA Northwood, North Dakota 1989 (Marshall)	312 SC	0.031 kg per 100kg seeds		1	Wheat, hay Triadimefon Triadimenol Total residue, calc. as TDM Wheat, straw Triadimefon Triadimenol Total residue, calc. as TDM	 36 36 36 90 90 90	 0.03 0.16 0.19 < 0.01 < 0.01 < 0.01	Williams, B. B., 1992c 100347
USA Ashton, Idaho 1989 (Newana)	312 SC	0.031 kg per 100kg seeds		1	Wheat, hay Triadimefon Triadimenol Total residue,	 47 47	 < 0.05 0.03	Williams, B. B., 1992c 100347

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
					calc. as TDM Wheat, straw Triadimefon Triadimenol Total residue, calc. as TDM	47 127 127 127	0.08 < 0.01 0.01 0.02	
USA Ephrata, Washington 1989 (Nomad (Hard Red))	312 SC	0.031 kg per 100kg seeds		1	Wheat, hay Triadimefon Triadimenol Total residue, calc. as TDM Wheat, straw Triadimefon Triadimenol Total residue, calc. as TDM	 50 50 50 108 108 108	 < 0.01 0.04 0.05 < 0.01 < 0.01 < 0.01	Williams, B. B., 1992c 100347
USA Wahpeton, North Dakota 1979 (Era)	150 FS	0.031 kg per 100kg seeds		1	Wheat, straw Triadimefon Triadimenol Total residue, calc. as TDM	 84 84 84	 < 0.01 0.02 0.03	Anon.,1982bl 80922
USA Moccasin, Montana 1979 (Fortuna)	150 FS	0.031 kg per 100kg seeds		1	Wheat, straw Triadimefon Triadimenol Total residue, calc. as TDM	 91 91 91	 < 0.01 < 0.01 < 0.01	Anon., 1982bm 80926
USA Wahpeton, North Dakota 1979 (Era)	150 FS	0.047 kg per 100kg seeds		1	Wheat, straw Triadimefon Triadimenol Total residue, calc. as TDM	 84 84 84	 < 0.01 0.03 0.04	Anon., 1982bn 80927
USA Moccasin, Montana 1979 (Fortuna)	150 FS	0.047 kg per 100kg seeds		1	Wheat, straw Triadimefon Triadimenol Total residue, calc. as TDM	 91 91 91	 < 0.01 < 0.01 < 0.01	Anon., 1982bo 80928
Canada Unionville, Ontario 1979 Frederick	150 FS	0.031 kg per 100kg seeds		1	Wheat, straw Triadimefon Triadimenol Total residue, calc. as TDM	 312 312 312	 < 0.01 < 0.01 < 0.01	Anon., 1982bp 80916
Canada Lethbridge, Alberta 1979	150 FS	0.031 kg per 100kg seeds		1	Wheat, straw Triadimefon Triadimenol	 320 320	 < 0.01 < 0.01	Anon., 1982bq 80917

Location Year (variety)	Form	Application kg ai/ha	kg ai/hL	No	Analysis Sample	PHI	Residues	Reference, Report No.
(Winalta)					Total residue, calc. as TDM	320	< 0.01	
Germany Burscheid 1983 (Caribo)	94 FS	0.038 kg per 100kg seeds		1	Wheat, straw Triadimenol	295	< 0.05	Anon., 1985y 9903-84
USA Howe, Indiana 1989 (Caldwell)	312 SC	0.031 kg per 100kg seeds		1	Wheat, hay Triadimefon Triadimenol Total residue, calc. as TDM Wheat, straw Triadimefon Triadimenol Total residue, calc. as TDM	203 203 203 296 296 296	< 0.01 0.06 0.07 < 0.01 0.02 0.03	Williams, B. B., 1992c 100347
USA Stilwell, Kansas 1989 (Arkan)	312 SC	0.031 kg per 100kg seeds		1	Wheat, hay Triadimefon Triadimenol Total residue, calc. as TDM Wheat, straw Triadimefon Triadimenol Total residue, calc. as TDM	71 71 71 286 286 286	< 0.01 0.06 0.07 < 0.01 < 0.01 < 0.01	Williams, B. B., 1992c 100347
USA Howe, Indiana 1979 (Yorkstar)	150 FS	0.031 kg per 100kg seeds		1	Wheat, straw Triadimefon Triadimenol Total residue, calc. as TDM	308 308 308	< 0.01 < 0.01 < 0.01	Anon., 1982br 80913
USA Stanley, Kansas 1979 (Lancota)	150 FS	0.031 kg per 100kg seeds		1	Wheat, straw Triadimefon Triadimenol Total residue, calc. as TDM	272 272 272	< 0.01 < 0.01 < 0.01	Anon., 1982bs 80914
USA Ropesville, Texas 1979 (Tascosa)	150 FS	0.031 kg per 100kg seeds		1	Wheat, straw Triadimefon Triadimenol Total residue, calc. as TDM	260 320 260 320 260 320	< 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01	Anon., 1982bt 80915

Location Year (variety)	Form	Application			Analysis			Reference, Report No.
		kg ai/ha	kg ai/hL	No	Sample	PHI	Residues	
USA Corvallis, Oregon 1979 (Stephens)	150 FS	0.031 kg per 100kg seeds		1	Wheat, straw Triadimefon Triadimenol Total residue, calc. as TDM	 294 294 294	 < 0.01 < 0.01 < 0.01	Anon., 1982bu 80918
USA Stanley, Kansas 1979 (Lancota)	150 FS	0.047 kg per 100kg seeds		1	Wheat, straw Triadimefon Triadimenol Total residue, calc. as TDM	 272 272 272	 < 0.01 < 0.01 < 0.01	Anon., 1982bv 80919
USA Ropesville, Texas 1979 (Tascosa)	150 FS	0.047 kg per 100kg seeds		1	Wheat, straw Triadimefon Triadimenol Total residue, calc. as TDM	 260 260 260	 < 0.01 < 0.01 < 0.01	Anon., 1982bx 80920
USA Corvallis, Oregon 1979 (Stephens)	150 FS	0.047 kg per 100kg seeds		1	Wheat, straw Triadimefon Triadimenol Total residue, calc. as TDM	 294 294 294	 < 0.01 < 0.01 < 0.01	Anon., 1982by 80921

FATE OF RESIDUES IN STORAGE AND PROCESSING

In processing

In hydrolysis experiments designed to simulate typical procesing operations (Babczinski, P., 2002) [phenyl-U-14C]triadimenol was incubated in aqueous buffer solutions at a concentration of 1 mg/L at 90 °C (pH 4 for 20 minutes), 100 °C (pH 5 for 60 min) and 120 °C (pH 6 for 20 min) (Table 127).

At zero-time and test termination the samples were analysed by thin-layer chromatography. The content of radioactivity was determined by liquid scintillation counting. Material balances were established at each sampling time.

Table 127. Degradation of [phenyl-U-^{14}C]triadimenol in buffered drinking water

Hydrolysis Conditions	Sampling time (min)	Recovery	Content of Triadimenol (% of applied radioactivity)
pH 4; 90 °C; 20 min.	0 20	 101.9	94.1 98.1
pH 5; 100 °C; 60 min.	0 20	 106.9	94.7 100.9
pH 6; 120 °C, 20 min.	0 20	 102.7	95.4 95.8

The results demonstrate that Triadimenol is stable to hydrolysis under conditions representative of pasteurisation (pH 4, 90 °C); baking, brewing and boiling (pH 5, 100 °C); and sterilisation (pH 6, 120 °C).

Apples

Residues in apples can occur due to foliar treatment. As a result relevant processing steps involved in juicing and saucing were investigated. In Table 128 the residues and processing factors for apples are summarised.

The preparation of washed apples, apple juice and apple sauce simulated the industrial practice at a laboratory scale (see Figure 5).

Table 128. Results from processing triadimenol treated apples

Country Year	Portion analysed	PHI (days)	Residues of Triadimenol (mg/kg)	Transfer Factor	Study No. Trial-No.
Germany	Fruit	14	0.06		Anon., 1986
1986	Fruit, washed	14	0.05	0.83	
	Sauce	14	< 0.05	< 0.83	9484-86
	Juice	14	< 0.05	< 0.83	
Germany	Fruit	14	< 0.05		Anon., 1986a
1986	Fruit, washed		0.05	1.0	
	Sauce	14	< 0.05	Not possible	9485-86
	Juice	14	< 0.05	Not possible	
Germany	Fruit	14	0.08		Anon., 1985
1985	Sauce	14	< 0.05	< 0.63	
	Juice	14	< 0.05	< 0.63	9434-85
Germany	Fruit	14	0.08		Anon., 1985a
1985	Sauce	14	< 0.05	< 0.63	
	Juice	14	< 0.05	< 0.63	9435-85
Germany	Fruit	14	< 0.05		Anon., 1986d
1985	Sauce	14	< 0.05	Not possible	
	Juice	14	< 0.05	Not possible	9436-85
Germany	Fruit	14	0.09		Anon., 1986e
1985	Sauce	14	< 0.05	< 0.56	
	Juice	14	< 0.05	< 0.56	9437-85
Germany	Fruit	14	0.06		Anon., 1985b
1984	Sauce	14	< 0.05	< 0.8	
	Juice	14	< 0.05	< 0.8	9417-84
Germany	Fruit	14	0.04		Anon., 1985c
1984	Sauce	14	< 0.05	Not possible	
	Juice	14	< 0.05	Not possible	9418-84
Germany	Fruit	14	0.07		Anon., 1985d
1984	Sauce	14	< 0.05	< 0.7	
	Juice	14	< 0.05	< 0.7	9419-84
Germany	Fruit	14	0.1		Anon., 1985e
1984	Sauce	14	< 0.05	< 0.5	
	Juice	14	0.05	0.5	9420-84

Residues in the fruit were low, from < 0.05 to 0.1 mg/kg. Residues in the juice and sauce were below the LOQ (0.05 mg/kg) in all but one case -in the trial 9420-84 the residue in the juice was at the LOQ (0.05 mg/kg).

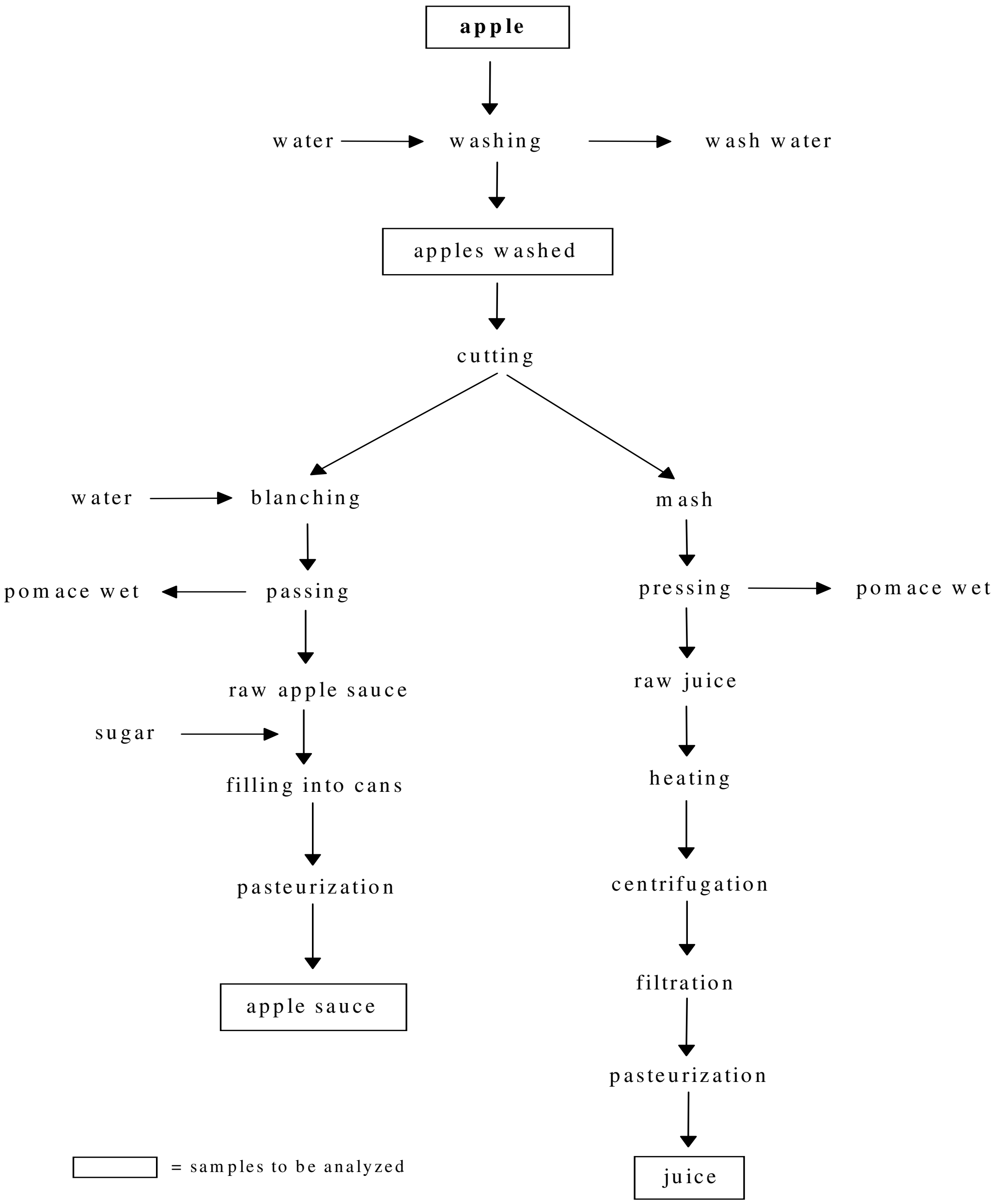


Figure 5. Processing scheme for apple sauce and apple juice

Grapes (Triadimefon)

Seventeen trials in Germany between 1979 and 1983 were conducted, in which Triadimefon 5 WP or 5 WG formulations were applied to grapes which were then processed to must and wine. The number of applications and the use rate are shown in the Table 129. Corresponding residues data is summarised in the field trial section in Table 63. The grapes were processed to must and wine which generally involved the crushing and pressing, fining, fermentation, racking, and filtration.

Table 129. Field trial parameters for triadimefon treated grapes, Germany, 1980-1983

Formulation Used	No. Applications	Use Rate, kg ai/ha	PHI, Days	Report No.
5 WP	7	0.025-0.05	35	9024-83
5 WP	8	0.025-0.05	35	9028-83
5 WG	8	0.025-0.05	35	9038-83
5 WP	7	0.05	42	9032-83
5 WP	8	0.03-0.045	35	9033-83
5 WP	7	0.045	37	9034-83
5 WG	7	0.05	35	9094-83

Formulation Used	No. Applications	Use Rate, kg ai/ha	PHI, Days	Report No.
5 WG	8	0.03-0.045	35	9095-83
5 WG	7	0.045	37	9096-83
5 WP	3	0.13	35	9014-81
5 WP	8	0.025-0.050	35	9015-81
5 WP	8	0.025-0.050	35	9016-81
5 WG	8	0.025-0.050	35	9000-81
5 WG	8	0.025-0.050	35	9001-81
5 WP	3	0.13	35	9000-80
5 WP	3	0.13	35	9002-80
5 WG	8	0.025-0.05	35	9028-79

In two further studies conducted in USA by Burger, R. N., 1992 & 1994 the grapes were processed into juice and into raisins simulating industrial practice. Treated samples from day 14 (see Table 130) were processed into juice, wet and dry pomace (see Figure 6), and into raisins (see Figure 7) and raisin waste. Juice processing involves destemming, crushing, depectinisation, finishing or pressing, filtration and pasteurisation. For raisin the processing involves drying, destemming and washing.

The results are given in Table 130. Residue levels in must and wine were not detectable in many cases, so that transfer factors could not be calculated in all instances.

Table 130. Results from processing triadimefon treated grapes to must and wine from trials in Germany 1979 – 1983

Country Year	Portion analysed	PHI (days)	Residues of Triadimefon (mg/kg)	Residues of Triadimenol (mg/kg)	Total residues of Triadimefon (mg/kg)	Transfer factor	Study No
Germany 1983	Grapes Must Wine	35	0.02 < 0.02 < 0.02	0.13 < 0.05 < 0.05	0.15 < 0.07 < 0.05	 < 0.47 < 0.33	9024-83
Germany 1983	Grapes Must Wine	35	< 0.02 < 0.02 < 0.02	< 0.05 < 0.05 < 0.05	< 0.05 < 0.05 < 0.05	Not possible	9028-83
Germany 1983	Grapes Must Wine	35	< 0.02 < 0.02 < 0.02	< 0.05 < 0.05 < 0.05	< 0.02 < 0.05 < 0.05	Not possible	9038-83
Germany 1983	Grapes Must	42	< 0.02 < 0.02	0.06 < 0.05	0.06 < 0.05	Not possible	9032-83
Germany 1983	Grapes Must	35	< 0.02 < 0.02	< 0.05 < 0.05	< 0.07 < 0.05	Not possible	9033-83
Germany 1983	Grapes Must	37	< 0.02 < 0.02	0.13 < 0.05	0.13 < 0.05	Not possible	9034-83
Germany 1983	Grapes Must	35	< 0.02 < 0.02	0.05 < 0.05	0.05 < 0.05	Not possible	9094-83
Germany 1983	Grapes Must	35	< 0.02 < 0.02	< 0.05 < 0.05	< 0.05 < 0.05	Not possible	9095-83
Germany 1983	Grapes Must	37	< 0.02 < 0.02	0.13 < 0.05	0.13 < 0.05	Not possible	9096-83
Germany 1981	Grapes Must Wine	35	0.078 < 0.02 < 0.02	0.13 < 0.05 < 0.05	0.21 < 0.05 < 0.07	 < 0.24 < 0.33	9014-81
Germany 1981	Grapes Must Wine	35	0.02 < 0.02 < 0.02	< 0.05 < 0.05 < 0.05	0.07 < 0.05 < 0.05	 < 0.71 < 0.71	9015-81
Germany 1981	Grapes Must Wine	35	0.047 < 0.02 < 0.02	1.2 0.2 0.11	1.25 0.22 0.13	 0.18 0.10	9016-81
Germany 1981	Grapes Must Wine	35	0.032 < 0.02 < 0.02	0.055 < 0.05 < 0.05	0.09 < 0.05 < 0.05	Not possible	9000-81
Germany 1981	Grapes Must Wine	35	0.08 < 0.02 < 0.02	3.1 0.39 0.27	3.2 0.41 0.29	 0.13 0.09	9001-81

Country Year	Portion analysed	PHI (days)	Residues of Triadimefon (mg/kg)	Residues of Triadimenol (mg/kg)	Total residues of Triadimefon (mg/kg)	Transfer factor	Study No
Germany	Grapes	35	0.04	0.13	0.17		9000-80
1980	Must		< 0.02	< 0.05	< 0.07	< 0.41	
	Wine		< 0.02	< 0.05	< 0.07	< 0.41	
Germany	Grapes	35	0.02	0.18	0.2		9002-80
1980	Must		< 0.02	< 0.05	< 0.07	< 0.35	
	Wine		< 0.02	< 0.05	< 0.07	< 0.35	
Germany	Grapes	35	< 0.02	0.2	0.2		9028-79
1980	Must		< 0.02	< 0.05	< 0.05	Not possible	
	Wine		< 0.02	< 0.05	< 0.05		
USA, 1992	Grapes	14	0.09	< 0.05	0.09		102637
	Juice	14	< 0.05	< 0.05	< 0.05	< 0.56	(Burger, R.
	Wet pomace						N., 1992)
	Dry pomace	14	1.03	0.35	1.4	16	
	Oven-dried						
	raisins	14	2.2	0.80	3.0	33	
	Sun-dried						
	raisins	14	0.11	0.30	0.51	5.7	
	Raisin waste						
	(sun dried)	14	0.08	0.10	0.25	2.8	
		14	0.53	0.17	0.79	8.8	
USA, 1992	Grapes	14	0.23	0.32	0.54		105043
	Juice	14	0.05	0.08	0.18	0.33	(Burger, R.
	Wet pomace						N., 1994)
	Dry pomace	14	0.98	0.88	1.9	3.5	
	Raisins						
	Raisin waste	14	2.0	1.9	4.0	7.4	
		14	< 0.05	0.26	0.36	0.67	
		14	0.83	0.42	1.4	2.6	
	Grapes	14	0.20	0.15	0.20		105043
	Juice	14	< 0.05	< 0.05	< 0.05	< 0.25	(Burger, R.
	Wet pomace						N., 1994)
	Dry pomace	14	0.17	0.31	0.48	2.4	
	Raisins						
	Raisin waste	14	0.23	0.47	0.70	3.5	
		14	0.15	0.54	0.9	4.5	
		14	0.86	0.30	1.6	8	

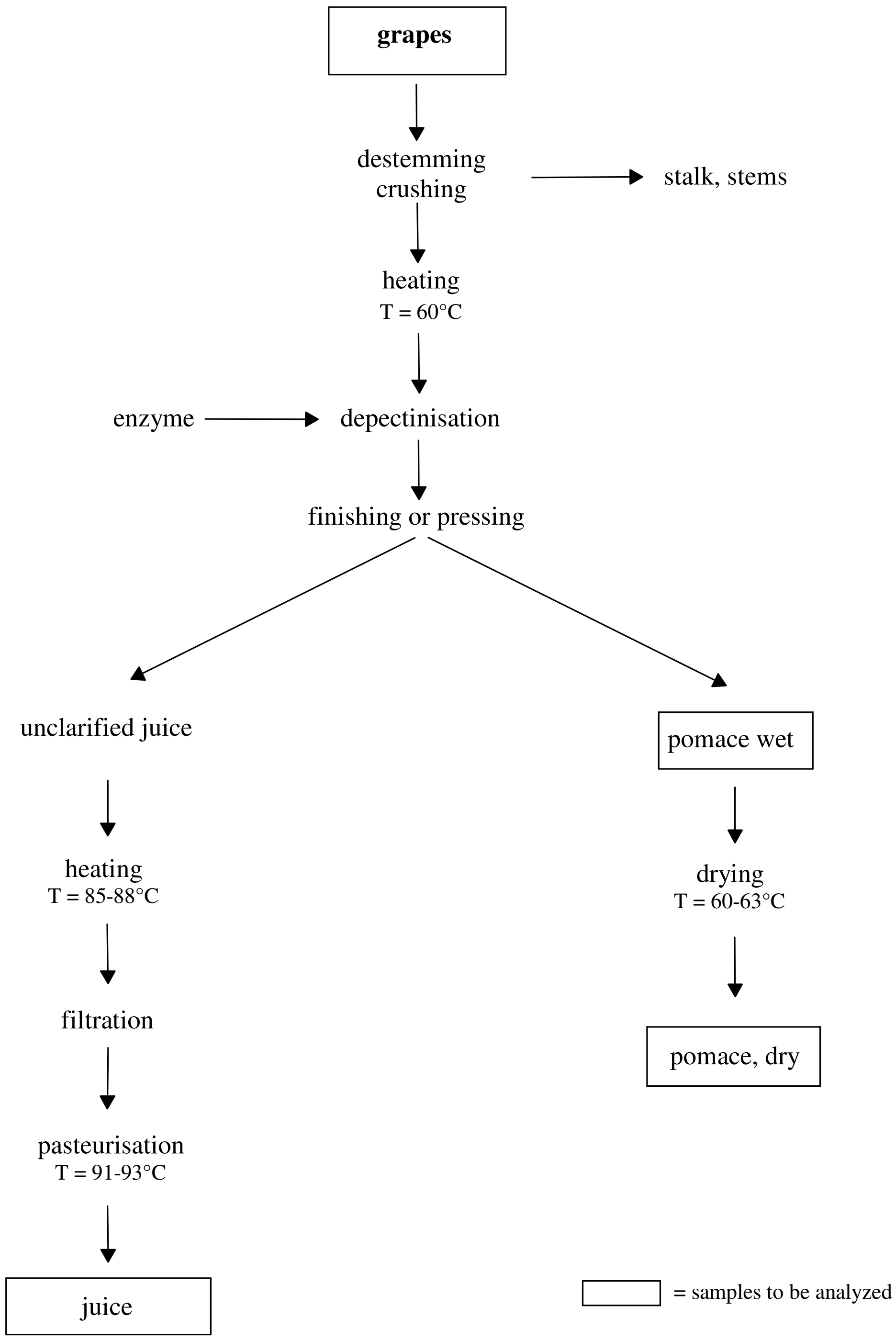


Figure 6. Processing of grapes into juice (USA)

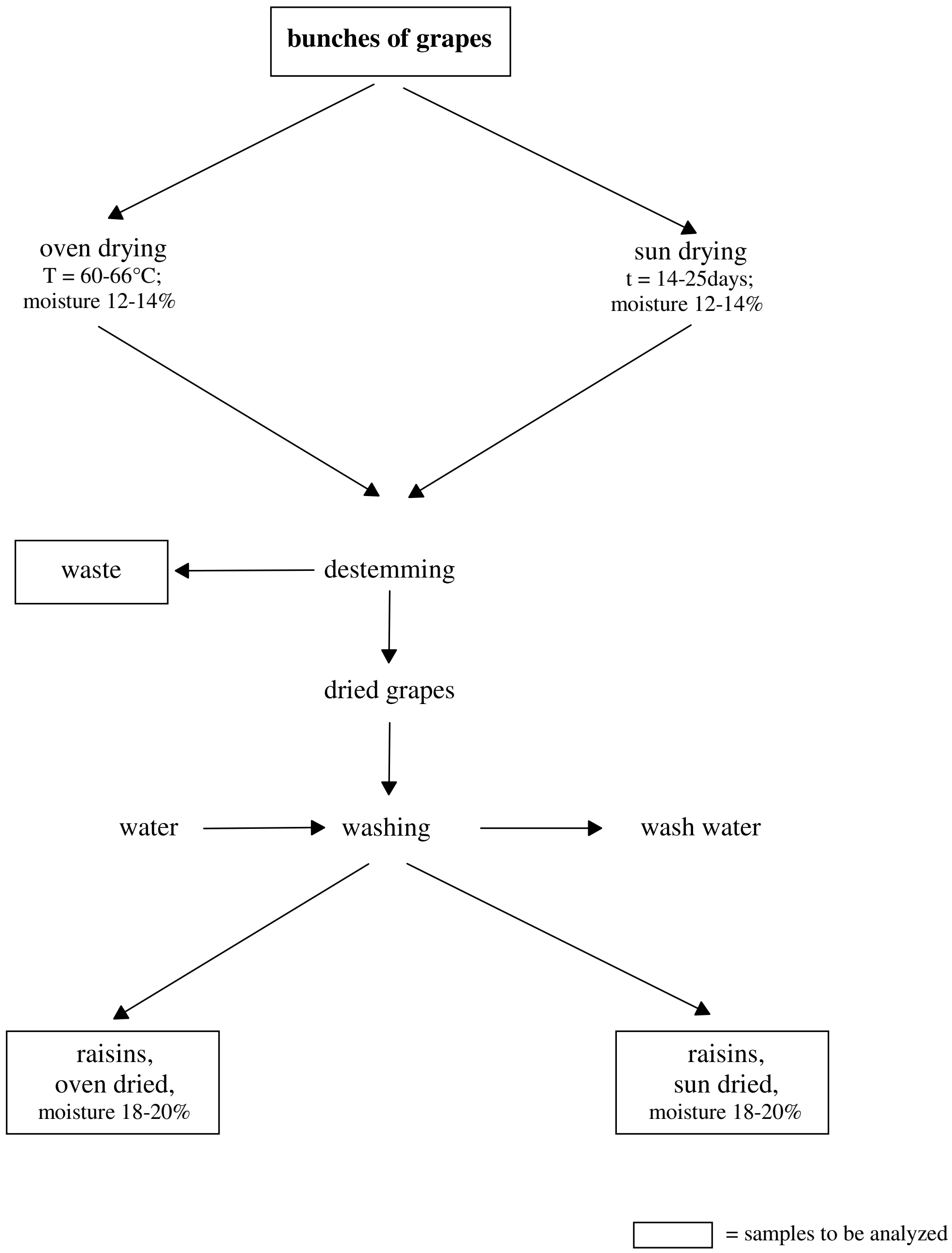


Figure 7. Processing of grapes into raisins (USA)

Grapes (Triadimenol)

Several studies were carried out to determine whether Triadimenol related residues concentrate in must and wine or in juice, raisins, raisin waste, raisin syrup, wet pomace and dry pomace. Samples from the German trials (samples from day 35, see Figure 8 for white and Figure 9 for red wine) and from the Spanish trial (samples from day 21, see Figure 10) were processed to both white and red wine. For the USA trial, treated samples from day 0 were processed to juice, wet pomace and dry pomace (see Figure 11). Grapes were processed into juice simulating industrial practice.

For raisins residue trials were carried out in Greece, USA and Turkey. Samples from day 7 of the trial in Greece were processed to give raisins. The processing procedure is shown in Figure 12. Samples from day 0 of the trial in the US were processed to give oven-dried raisins, sun-dried raisins, oven-dried raisin waste, sun-dried raisin waste and raisin syrup (see Figure 13).

Table 131. Results from processing studies on grapes (triadimenol)

Country Year	Portion analysed	PHI (days)	Residues of Triadimenol (mg/kg)	Transfer factor	Study No.
Germany	Grapes Must Wine	35 35 35	0.07 < 0.05 < 0.05	 < 0.71 < 0.71	9413-84
Germany, 1984 1984	Grapes Must Wine	35 35 35	0.09 < 0.05 < 0.05	 < 0.56 < 0.56	9414-84
Germany 1984	Grapes Must Wine	35 35 35	0.20 < 0.05 < 0.05	 < 0.25 < 0.25	9415-84
Germany 1984	Grapes Must Wine	35 35 35	0.07 0.02 0.02	 0.29 0.29	9416-84
Germany 1985	Grapes Must Wine	35 35 35	0.06 < 0.05 < 0.05	 < 0.83 < 0.83	9430-85
Germany 1985	Grapes Must Wine	35 35 35	0.07 < 0.05 < 0.05	 < 0.71 < 0.71	9431-85
Germany 1985	Grapes Must Wine	35 35 35	0.08 < 0.05 < 0.05	 < 0.63 < 0.63	9432-85
Germany 1985	Grapes Must Wine	35 35 35	0.12 < 0.05 < 0.05	 < 0.42 < 0.42	9433-85
Germany 1986	Grapes Must Wine	35 35 35	< 0.05 < 0.05 < 0.05	 - -	9487-86
USA, 1983	Grapes Juice Wet pomace Dry pomace	0 0 0 0	0.10 0.11 0.13 0.39	 1.1 1.3 3.9	84502
Spain, 1993	Grapes Must Wine	21 21 21	0.04 0.02 < 0.02	 0.5 < 0.5	RA-2016/93
Greece, 1993	Grapes Raisin	7 7	0.19 1.1	 5.8	RA-3023/95
USA, 1983	Grapes Oven-dried raisins Sun-dried raisins Oven-dried waste Sun-dried waste Raisin syrup	0 0 0 0 0 0	0.25 0.19 0.26 0.48 0.77 0.13	 0.76 1.0 1.9 3.1 0.52	84503
Turkey, 1990	Grapes Raisin	27 27	0.03 < 0.05	 -	0603-90
Turkey, 1990	Grapes Raisin	20 20	0.03 0.07	 2.3	0604-90
Turkey, 1990	Grapes Raisin	27 27	< 0.02 < 0.05	 -	0606-90
Turkey, 1990	Grapes Raisin	27 27	< 0.02 <.0.05	 -	0607-90
Turkey, 1990	Grapes Raisin	20 20	< 0.02 < 0.05	 -	0608-90
Turkey, 1990	Grapes Raisin	13 13	0.08 0.13	 1.6	0609-90

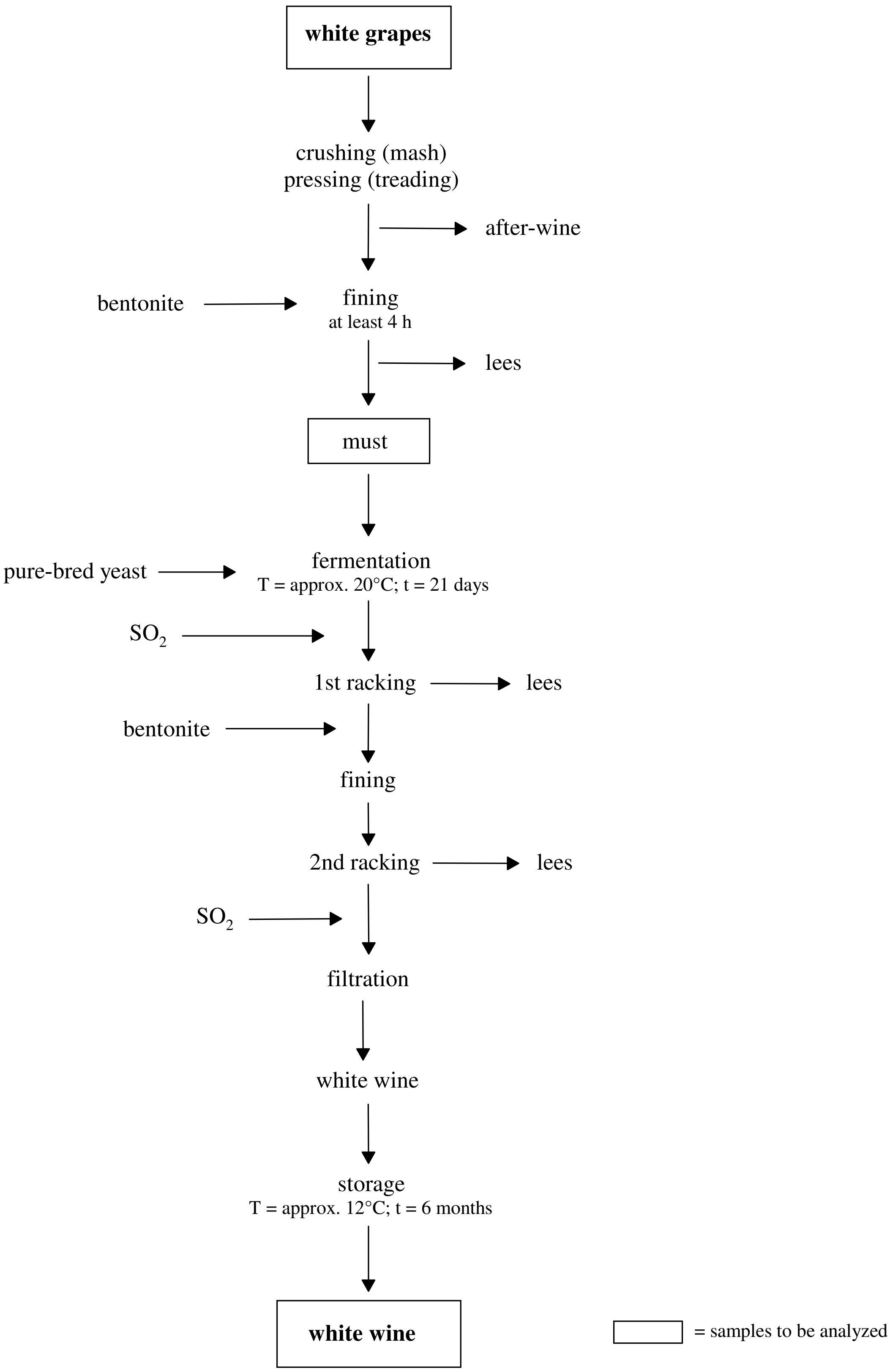


Figure 8. Processing of white grapes to must and wine

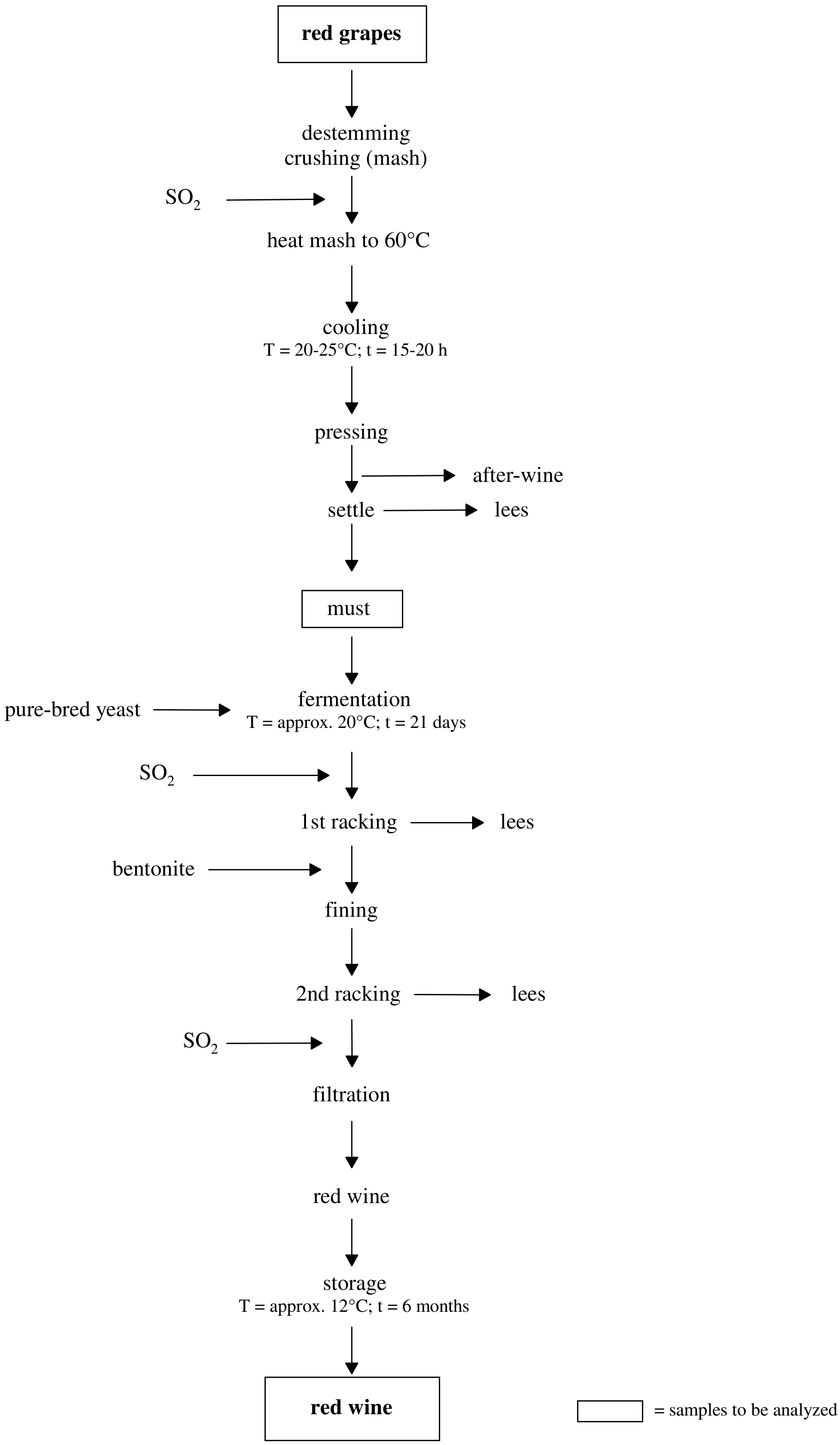


Figure 9. Processing of red grapes to must and wine

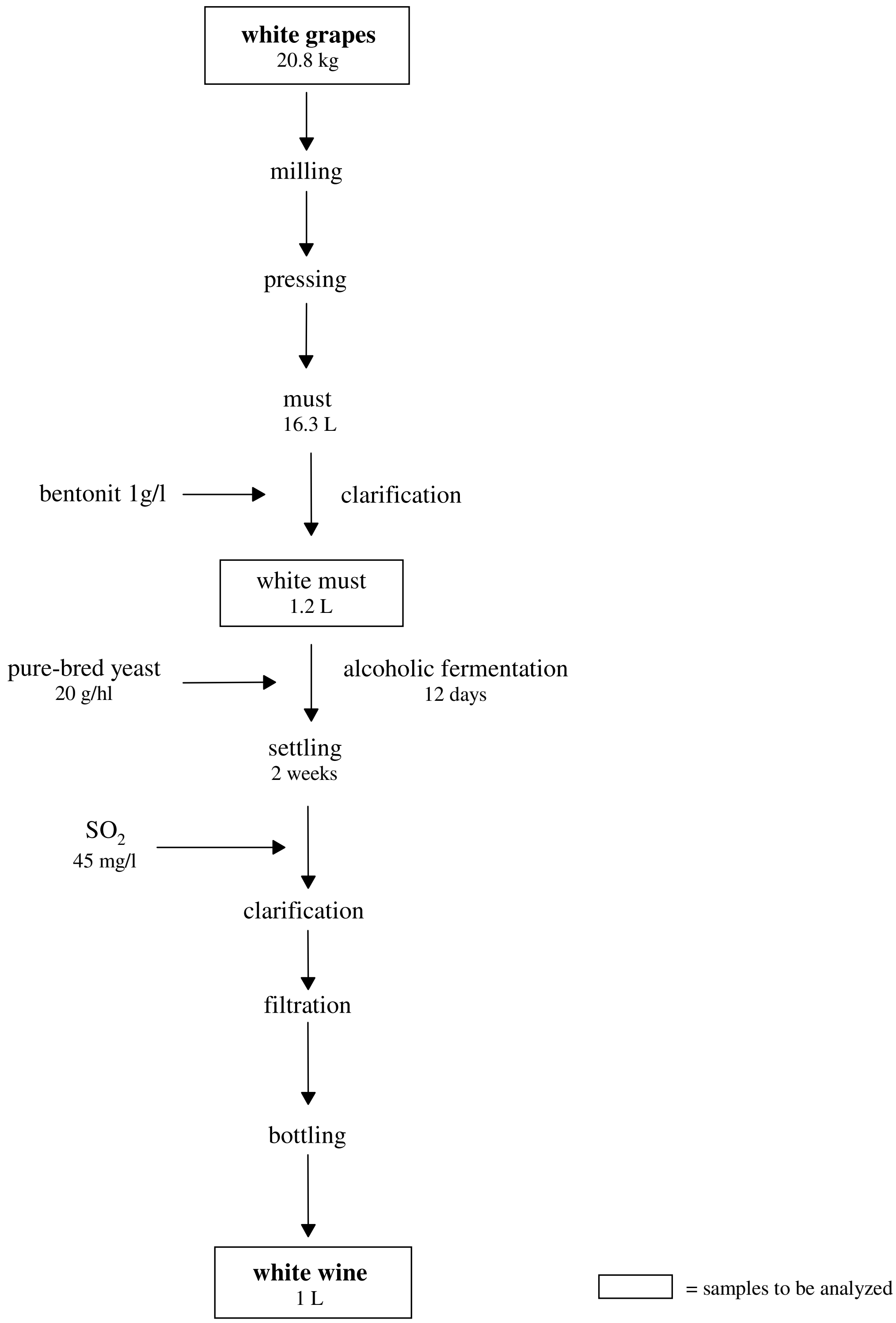


Figure 10. Processing of white grapes to must and wine (Spain)

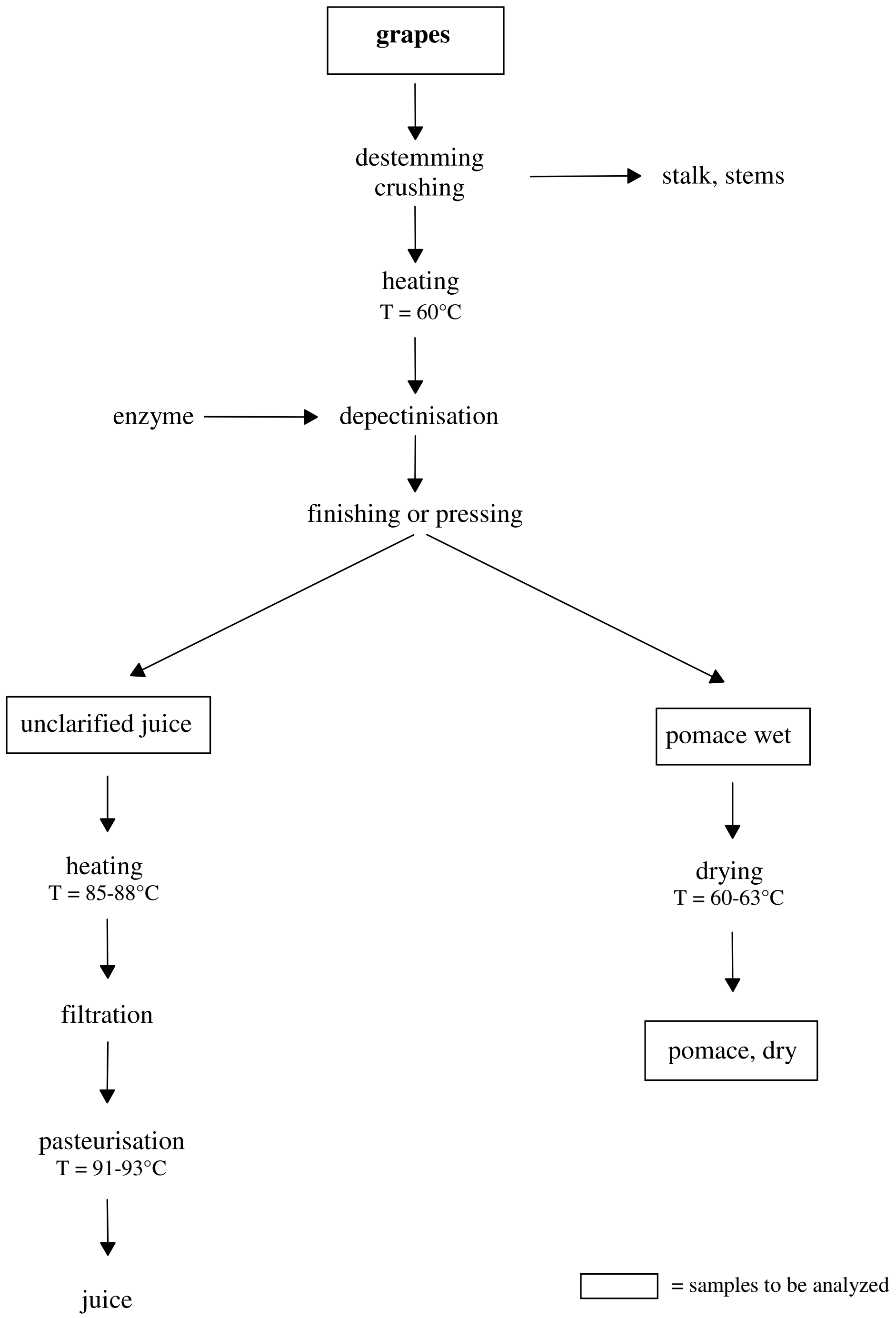


Figure 11. Processing of grapes to juice (USA)

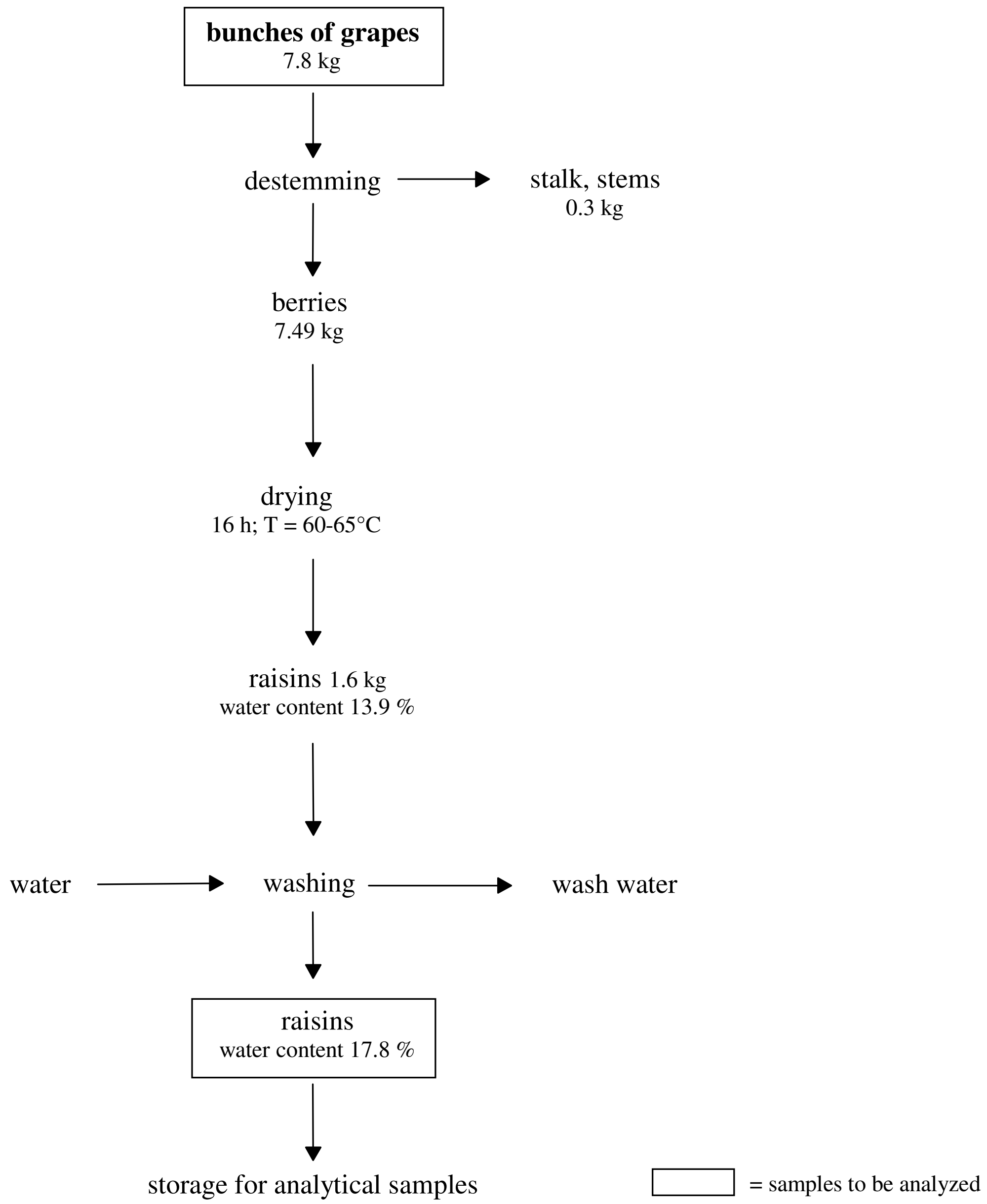


Figure 12. Processing of grapes to raisins (Greece)

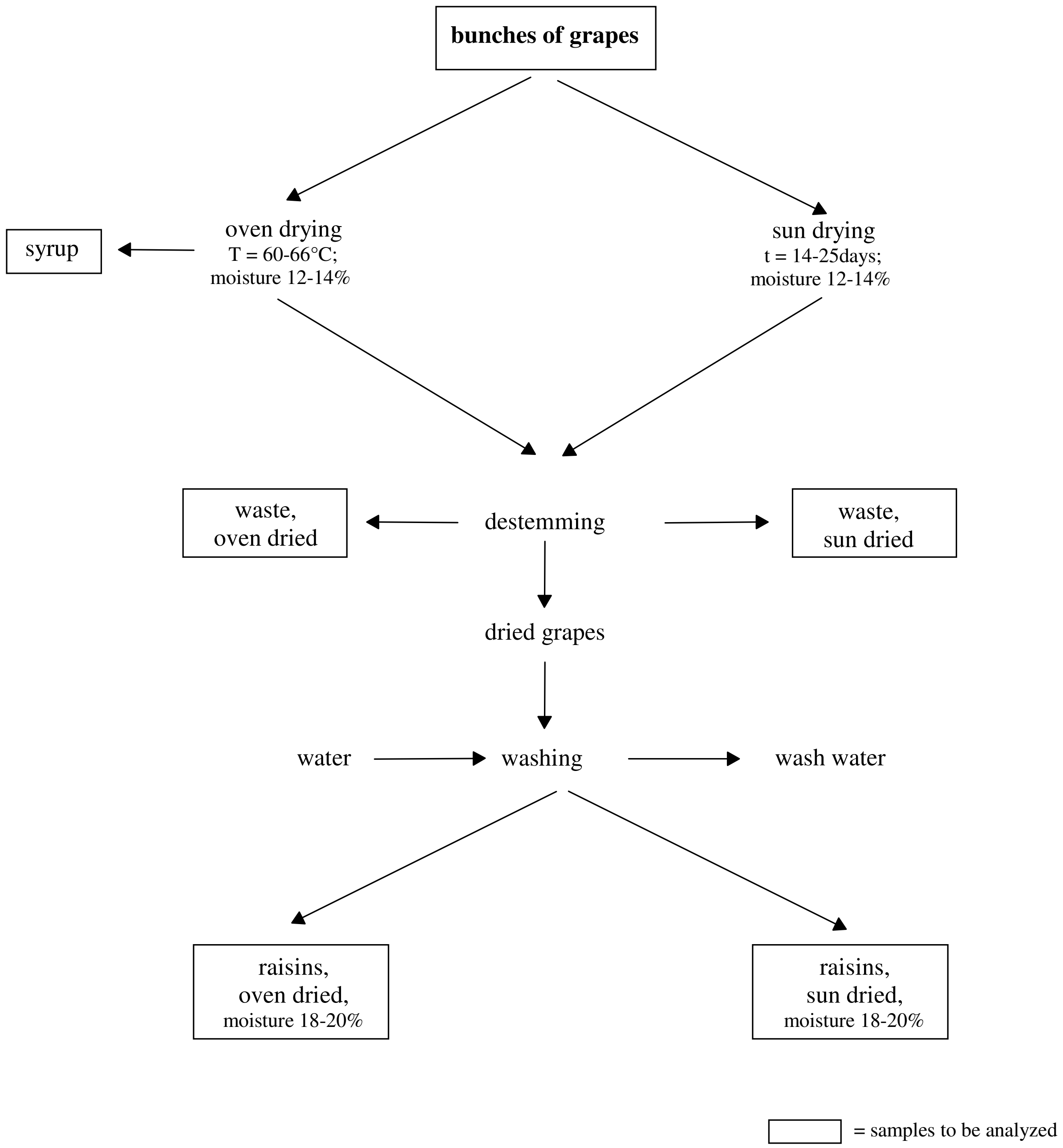


Figure 13. Processing of grapes to raisins (USA)

Pineapples (Triadimefon)

Pineapples were processed into juice and into bran simulating industrial practice (Pither, K. M., 1991). Treated samples from day 0 were processed to juice and bran, which includes the matrices pulp, waste pulp, peel and syrup (see Figure 14).

Samples were analysed for triadimefon and triadimenol according to method 00254. The LOQs for triadimefon in fruit was 0.1 mg/kg, washed peel, pulp 0.01 mg/kg and bran, syrup and waste 6 mg/kg respectively. The LOQs for triadimenol in fruit was 0.1 mg/kg, washed peel, pulp 0.01 mg/kg and bran, syrup and waste 0.14 mg/kg respectively.

Table 132. Results from processing studies on triadimefon treated pineapples

Country Year	Portion analysed	PHI (days)	Residues of Triadimefon (mg/kg)	Residues of Triadimenol (mg/kg)	Total residues of Triadimefon (mg/kg)	Transfer factor	*Study No.* Trial SubID
USA, 1991	Fruit	0	12.01	0.28	12.29		101325
	Pulp	0	0.04	< 0.01	0.04	< 1.0	
	Bran	0	13.97	1.83	15.8	1.29	
	Waste pulp	0	<6.0	0.62	<6	< 1.0	
	Juice	0	<6.0	< 0.14	<6	< 1.0	
	Syrup	0	<6.0	< 0.14	<6	< 1.0	
	Peel, washed	0	3.66	1.31	4.97	0.4	

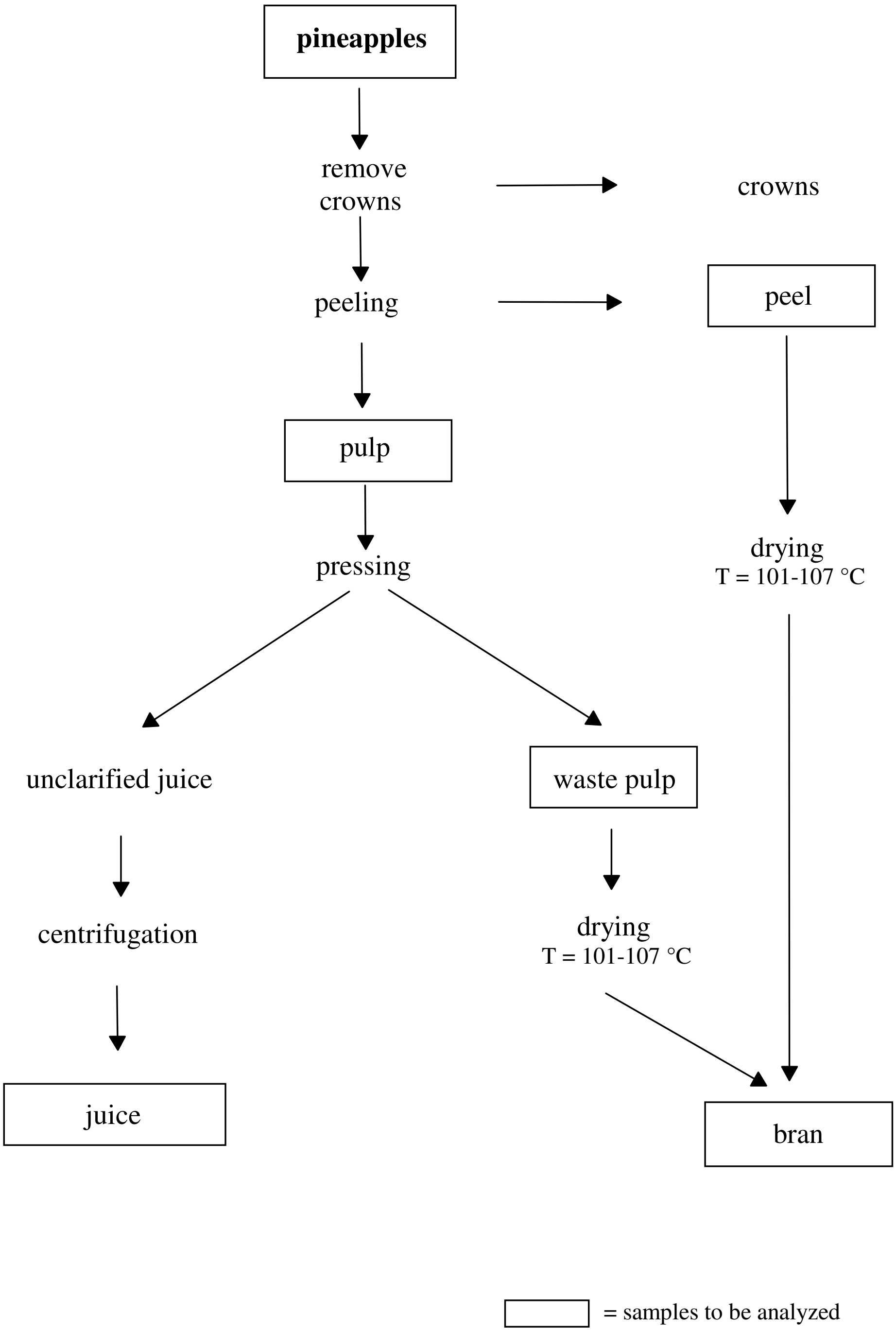


Figure 14. Processing of pineapples to juice (USA)

Tomatoes (Triadimefon)

Triadimefon was applied to tomatoes at a site in the USA (Texas) in 1983 (Anon., 1984be). The 50 WP formulation was used, and 4 applications were made at 0.18 kg ai/ha/application. The fruit was processed to juice, catsup, puree, paste, wet pulp and dried pulp according to simulated commercial practice (see Figure 15).

The results are shown in Table 133. The total residue in the fruit was 0.09 mg/kg. There was a reduction of residues in the juice, where the total residue was 0.05 mg/kg. There was also a reduction of residues in puree, where the total residue was 0.07 mg/kg. There was concentration of the total residues in catsup, paste, wet pulp and dried pulp.

Table 133. Results from processing triadimefon treated tomatoes

Portion analysed	Residues of Triadimefon, mg/kg	Residues of Triadimenol, mg/kg	Total residues of Triadimefon, mg/kg	Transfer Factor (Total residue)
Fruit	0.07	0.02	0.09	
Juice	0.03	0.02	0.05	0.56
Catsup	0.13	0.09	0.22	2.4
Puree	0.04	0.03	0.07	0.78
Paste	0.10	0.07	0.17	1.9
Wet pulp	0.24	0.08	0.32	3.6
Dried pulp	1.05	0.26	1.31	14

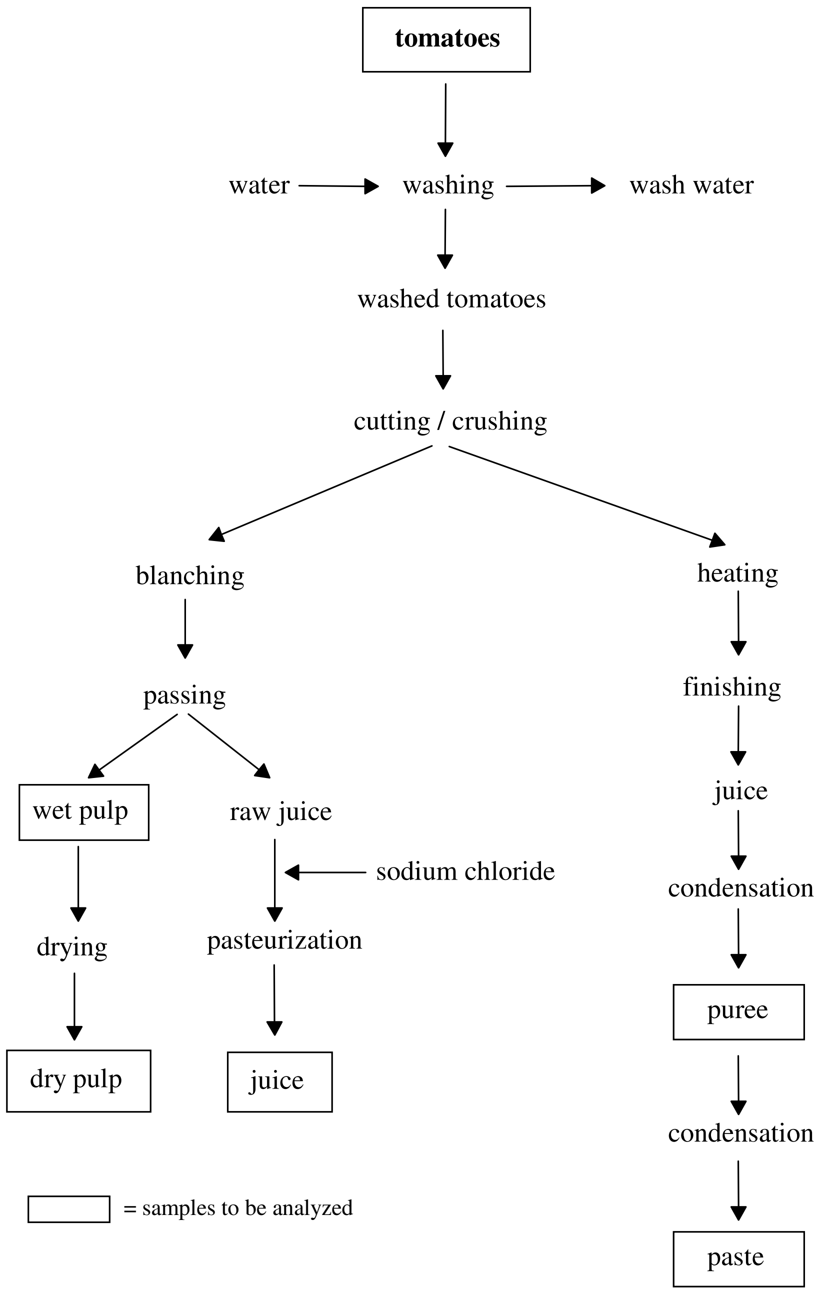


Figure 15. Processing scheme for tomato juice, pulp, puree and paste

Tomatoes (Triadimenol)

Triadimenol was applied as an EC formulation in a greenhouse to tomatoes in Spain in 1996 (Allmendinger, H.; Walz-Tylla, B., 1997). Two different plots were treated 3 times with 0.13 kg ai/ha followed by another 3 applications with 0.19 kg ai/ha. Samples were taken 7 days after the last application. The fruit was processed to juice, preserve, paste and peeled fruit (see Figure 16).

The results are shown in Table 134. The residues in the fruit were 0.17 – 0.19 mg/kg. Washing the fruit did not reduce the residue level, but clearly the residues are largely on the skin since the residues were greatly reduced upon peeling. There was a reduction of residues in the juice, where the residue averaged 0.12 mg/kg, and also in preserve, where the residue was max. 0.11 mg/kg. Residues of 0.98 – 1.0 mg/kg Triadimenol were found in paste, which indicates a concentration in this fraction.

Table 134. Results from processing triadimenol treated tomatoes

Portion analysed	Trial 0408-96 Residues of Triadimenol mg/kg	Transfer Factor	Trial 0073-96 Residues of Triadimenol mg/kg	Transfer Factor
Fruit	0.19		0.17	
Whole fruit, washed	0.19	1	0.16	0.94
Juice	0.14	0.74	0.10	0.59
Preserve	0.11	0.58	0.10	0.59
Paste	0.98	5.2	1.0	5.9
Fruit, peeled	0.07	0.37	0.05	0.29

Coffee

Harvested green coffee beans from Guatemala were processed to give roasted beans and instant coffee (Russo, L., 1999). A processing scheme for roasted coffee and instant coffee is given in Figure 17. The processing procedures involved the steps of roasting, grinding, extraction, filtration, concentration and freeze drying.

The Triadimenol residue in the RAC was 0.11 mg/kg, in roasted beans 0.12 mg/kg and in instant coffee 0.1 mg/kg. Beverages were not prepared for evaluation.

Table 135. Results from processing studies on triadimenol treated coffee

Country Year	Portion analysed	PHI (days)	Residues of Triadimenol (mg/kg)	Transfer factor	Study No.
Guatemala, 1995	Green coffee beans Roasted coffee beans Instant coffee	16 16 16	0.11 0.12 0.14	 1.1 1.3	107810

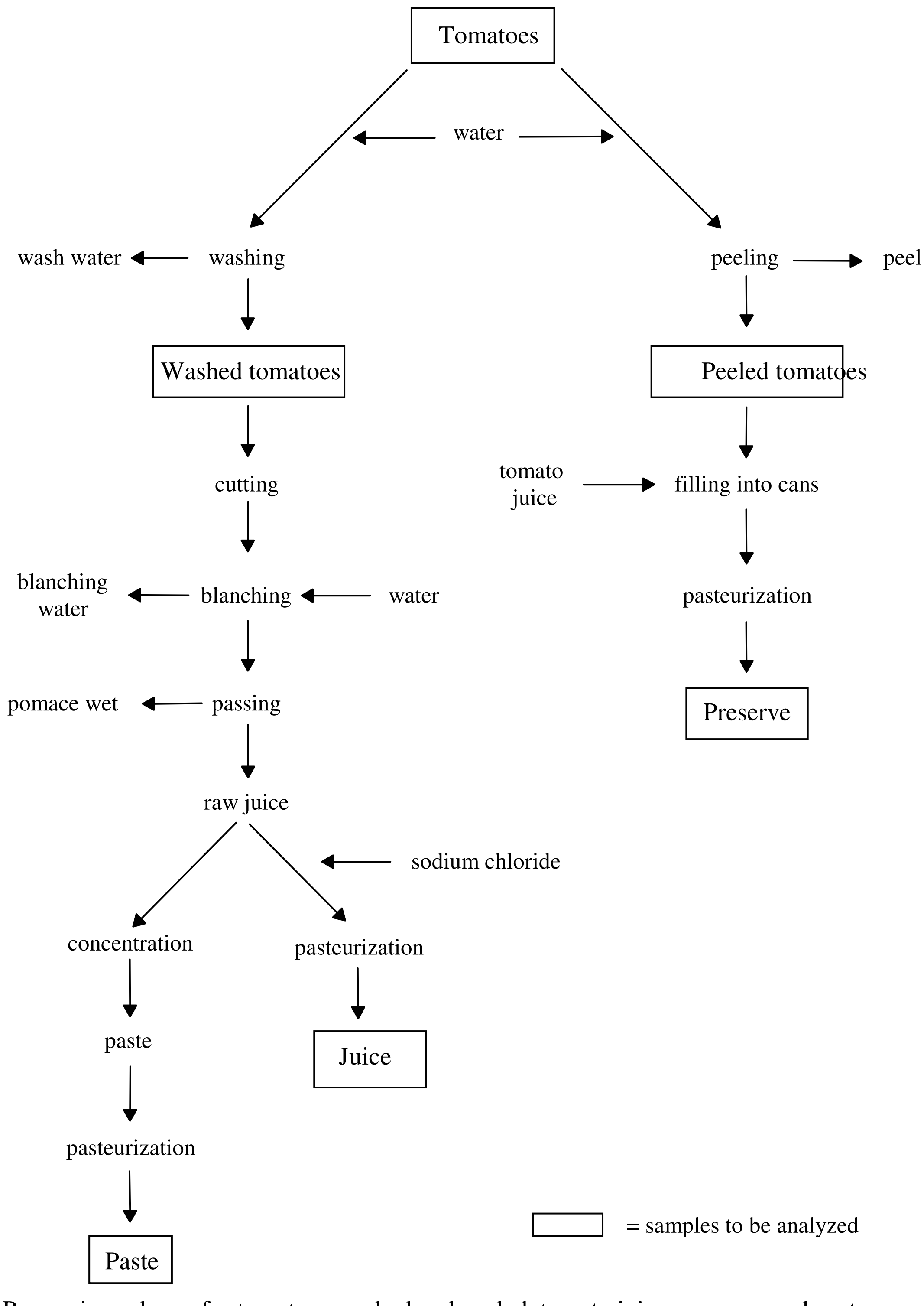


Figure 16. Processing scheme for tomatoes washed and peeled, tomato juice, preserve and paste

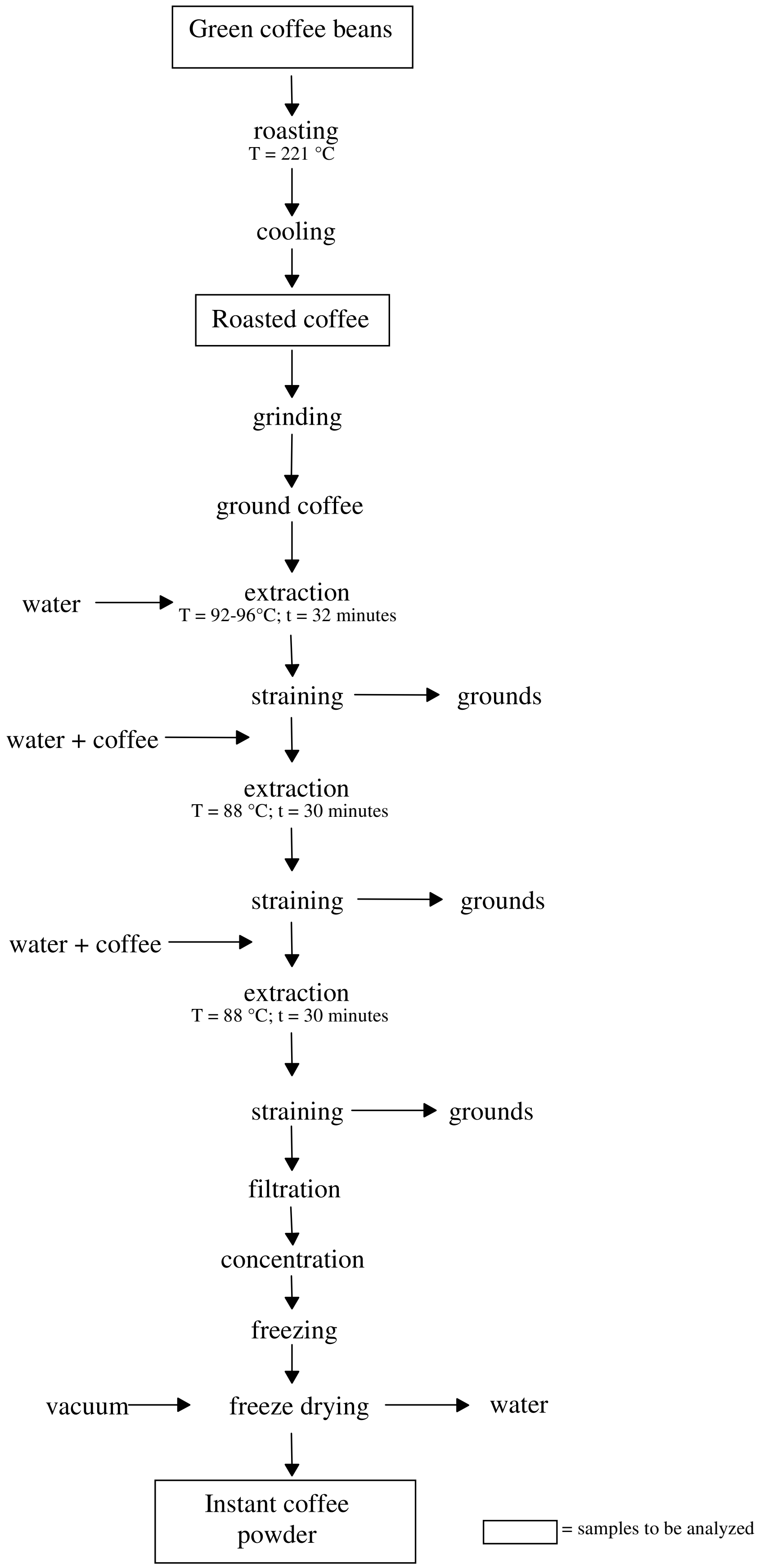


Figure 17. Processing scheme for roasted coffee and instant freeze dried coffee

Residues in animal commodities

Farm animal feeding studies

For triadimefon and triadimenol feeding studies with dairy cattle and laying hens were conducted.

Dairy cattle

(Kruplak, J. F.; Bache, B.; Breault, G. O.; Wargo, J. P., 1980b; Kruplak, J. F.; Weissenburger, B., 1981b and Bornatsch, W., 1990)

Nine animals were used for treatment in the study, were between 2 and 9 years old and weighed between 455 and 784 kg. The animals (3 cows/level) were fed a mixture of triadimefon and triadimenol (1:1) by bolus capsules in amounts equivalent to 25, 75 and 250 ppm in feed or 0.75, 2.25, and 3.71 mg/kg bw for each analyte. The cows were dosed twice a day (immediately after milking, both morning and evening) for a period of 28 days. One animal was maintained as a control and received no dose. After 29 days the animals were sacrified and analysed for either the total residue of Triadimefon or for individual levels of triadimefon and triadimenol in liver, kidney, muscle and milk. Milk was not analysed at different time intervals since it was assumed that at the end of the study the residue levels then detected were either at a plateau, or represented the maximum amount of residue which could be expected during the duration of the study.

Samples were analysed using different methods of analysis. In study 68886 (Kruplak, J. F.; Bache, B.; Breault, G. O.; Wargo, J. P., 1980b) individual levels of Triadimefon and Triadimenol in samples were determined. In the other studies the Triadimefon total residue level in samples was determined.

No-dose related differences in feed consumption, body weight change and or milk production were evident between the treated and control animals. Tissue and milk samples were analysed from the control cow, and no residues above the LOQ (0.01 mg/kg for liver, kidney, muscle and fat; 0.001 mg/kg for milk) were found.

Individual residues for triadimefon and triadimenol in kidney, liver, and muscle samples from the 250 and 75 ppm treatment level groups contained no triadimefon or triadimenol greater than 0.01 mg/kg. Fat samples from the 250 ppm feeding level contained triadimefon residues up to 0.024 mg/kg, and up to 0.019 mg/kg at the 75 ppm feeding level, but all samples at the 25 ppm feeding level had residues < 0.01 mg/kg. Triadimenol residues in fat were equal to or less than 0.01 mg/kg in all samples from all feeding levels. In milk one sample from the high dose level group had residues of 0.0011 mg/kg of triadimefon on day 28. All other samples from the high dose level group as well as all samples from the 75 ppm dose level group showed no triadimefon residues in milk at or above the limit of detection. Triadimenol residues in milk were < 0.001 mg/kg in all samples from the 75 and 250 ppm feeding levels except for one of four samples from the high dose level group which contained 0.001 mg/kg at day 29. The results are summarised in Table 136.

For the total residue of triadimefon the mean residue levels were highest in the 250 ppm group: kidney 1.3 mg/kg, liver 0.74 mg/kg, muscle 0.03 mg/kg and fat 0.17 mg/kg. The total residues of Triadimefon for the lowest dose group in muscle and fat were below the LOQ (0.05 mg/kg). This method covers triadimefon and all known free or conjugated metabolites, including triadimenol. The results are summarised in Table 137.

Table 136. Triadimefon and Triadimenol residues in cattle tissues and milk from treated cows after administration of a mixture of Triadimefon and Triadimenol (1:1) on 28 consecutive days

	Residues (mg/kg)					
	25 ppm		75 ppm		250 ppm	
	Triadimefon	Triadimenol	Triadimefon	Triadimenol	Triadimefon	Triadimenol
Kidney			< 0.01 < 0.01 < 0.01 (< 0.01)	< 0.01 < 0.01 < 0.01 (< 0.01)	< 0.01 < 0.01 < 0.01 (< 0.01)	< 0.01 < 0.01 < 0.01 (< 0.01)
Liver			< 0.01 < 0.01 < 0.01 (< 0.01)	< 0.01 < 0.01 < 0.01 (< 0.01)	< 0.01 < 0.01 < 0.01 (< 0.01)	< 0.01 < 0.01 < 0.01 (< 0.01)
Muscle			< 0.01 < 0.01 < 0.01 (< 0.01)	< 0.01 < 0.01 < 0.01 (< 0.01)	< 0.01 < 0.01 < 0.01 (< 0.01)	< 0.01 < 0.01 < 0.01 (< 0.01)
Fat	< 0.01 < 0.01 < 0.01 (< 0.01)	< 0.01 < 0.01 < 0.01 (< 0.01)	0.017 0.013 0.019 (0.016)	< 0.01 0.01 < 0.01 (0.01)	< 0.01 0.024 0.024 (0.019)	< 0.01 < 0.01 < 0.01 (< 0.01)
Milk 28 days am [a]					< 0.001 < 0.001 < 0.001 (< 0.001)	< 0.001 < 0.001 < 0.001 < 0.001)
Milk 28 days pm [b]					< 0.001 0.0011 < 0.001 (0.001)	< 0.001 < 0.001 < 0.001 (< 0.001)
Milk 29 days am [a]			< 0.001 < 0.001 < 0.001 (< 0.001)	< 0.001 < 0.001 < 0.001 (< 0.001)	< 0.001 < 0.001 < 0.001 (< 0.001)	0.001 < 0.001 < 0.001 (0.001)

a - am: morning milking

b - pm: morning milking, day of sacrifice

Table 137. Total Triadimefon residues in cattle tissues and milk from treated cows after administration of a mixture of Triadimefon and Triadimenol (1:1) on 28 consecutive days

	Total residues of Triadimefon (mg/kg)		
	25 ppm	75 ppm	250 ppm
Kidney	0.41 0.35 0.30 (0.36)	0.26 0.57 0.79 (0.54)	0.81 0.79 2.3 (1.3)
Liver	0.09 0.07 0.07 (0.08)	0.25 0.26 0.29 (0.27)	1.0 0.40 0.82 (0.74)
Muscle	< 0.01 < 0.01 < 0.01 (< 0.01)	< 0.01 0.02 0.02 (0.02)	0.04 0.03 0.03 (0.03)
Fat	0.02 0.02 0.02 (0.02)	0.05 0.09 0.07 (0.07)	0.21 0.11 0.18 (0.17)

	Total residues of Triadimefon (mg/kg)		
	25 ppm	75 ppm	250 ppm
Milk 28 days am [a]	0.009 0.004 0.005 (0.006)	0.023 0.024 0.023 (0.023)	0.043 0.048 0.056 (0.049)
Milk 28 days pm [b]	0.008 0.009 0.009 (0.009)	0.014 0.028 0.035 (0.026)	0.068 0.059 0.077 (0.068)
Milk 29 days am [a]	0.014 0.005 0.007 (0.009)	0.018 0.022 0.027 (0.022)	0.042 0.026 0.030 (0.033)

a - am: morning milking

b - pm: morning milking, day of sacrifice

Laying hens

(Kruplak, J. F.; Bache, B.; Breault, G. O.; Wargo, J. P., 1980c and Kruplak, J. F.; Weissenburger, B., 1981c)

Sixteen hens (4 hens/level) were fed a mixture of triadimefon and triadimenol (1:1) equivalent to 10, 25, 75 and 250 ppm in feed for a period of 29 days, corresponding to 0.71, 1.79, 5.15, and 16.63 mg/kg bw and day for each analyte. Four animals were maintained as controls, receiving no dose. Test rations were prepared by mixing corn oil, containing a 1:1 mixture of triadimefon and triadimenol, with standard chicken feed. Aliquots of the treated feed were analysed in some of the samples prior to, during and after the dosing period. Hens were offered 150 g of fresh ration daily and water ad libitum. The amount of unconsumed feed was weighed back daily. The animals were sacrified and analysed either for the total residue of Triadimefon or for individual levels of Triadimefon and Triadimenol in tissues and eggs.

No-dose related differences in feed consumption, body weight change or egg production were evident between the treated and control animals. Tissue and egg samples were also analysed from control hens.

Triadimefon and triadimenol residues were < 0.01 mg/kg in muscle and liver samples from the 75 and 250 ppm feeding level groups. Triadimefon residues were < 0.01 in the fat samples from the 75 ppm feeding level group, and up to 0.02 mg/kg in the 250 ppm feeding level group. Triadimenol residues were < 0.01 mg/kg in fat samples from the 75 and 250 ppm feeding level groups. Both substances were non-detectable (< 0.01 mg/kg) in skin samples from the 75 and 250 ppm feeding level group, except for one of four skin samples in the 75 ppm feeding level group which showed a Triadimenol residue of 0.021 mg/kg. Residues in eggs were proportional to feeding levels; maximum triadimenol residues were 0.002 mg/kg, 0.005 mg/kg, 0.009 mg/kg, and 0.041 mg/kg at feeding levels of 10, 25, 75, and 250 ppm, respectively. The corresponding triadimefon residues were < 0.01 mg/kg, 0.001 mg/kg, 0.002 mg/kg, and 0.011 mg/kg. Only the triadimenol residues from the 75 and 250 ppm group and the triadimefon residues from the highest dose group were above the LOQ (0.005 mg/kg). The results are summarised in Table 138.

For the triadimefon total method the residue levels were highest in the 250 ppm group: liver 1.1 mg/kg, egg 0.93 mg/kg, fat 0.1 mg/kg, skin 0.092 mg/kg, gizzard 0.067 mg/kg, and muscle 0.018 mg/kg. In all matrices, residues were correspondingly lower at reduced feeding levels. The total residues of Triadimefon from the lowest dose group in liver and from the highest dose group in muscle were below the LOQ (0.05 mg/kg). The results are summarised in Table 139.

Table 138. Triadimefon and Triadimenol residues in poultry tissues and eggs from treated hens after administration of a mixture Triadimefon and Triadimenol (1:1) on 29 consecutive days

	Residues (mg/kg)							
	10 ppm		25 ppm		75 ppm		250 ppm	
	Triadimefon	Triadimenol	Triadimefon	Triadimenol	Triadimefon	Triadimenol	Triadimefon	Triadimenol
Liver					< 0.01 < 0.01 < 0.01 < 0.01 (< 0.01)	< 0.01 < 0.01 < 0.01 < 0.01 (< 0.01)	< 0.01 < 0.01 < 0.01 < 0.01 (< 0.01)	< 0.01 < 0.01 < 0.01 < 0.01 (< 0.01)
Fat					< 0.01 < 0.01 < 0.01 < 0.01 (< 0.01)	< 0.01 < 0.01 < 0.01 < 0.01 (< 0.01)	0.02 0.013 0.011 0.011 (0.014)	< 0.01 < 0.01 < 0.01 < 0.01 (< 0.01)
Skin					< 0.01, < 0.01 < 0.01 < 0.01 < 0.01 (< 0.01)	0.029, 0.021 < 0.01 < 0.01 < 0.01 (0.08)	< 0.01 < 0.01 < 0.01 < 0.01 (< 0.01)	< 0.01 < 0.01 < 0.01 < 0.01 (< 0.01)
Gizzard	< 0.01 < 0.01 < 0.01 < 0.01 (< 0.01)	< 0.01 < 0.01 < 0.01 < 0.01 (< 0.01)	< 0.01 < 0.01 < 0.01 < 0.01 (< 0.01)	< 0.01 < 0.01 < 0.01 < 0.01 (< 0.01)	< 0.01 < 0.01 < 0.01 < 0.01 (< 0.01)	0.012 < 0.01 < 0.01 < 0.01 (0.04)	< 0.01 < 0.01 < 0.01 < 0.01 (< 0.01)	0.015 0.020 0.019 0.038 (0.031)
Muscle					< 0.01 < 0.01 < 0.01 < 0.01 (< 0.01)	< 0.01 < 0.01 < 0.01 < 0.01 (< 0.01)	< 0.01 < 0.01 < 0.01 < 0.01 (< 0.01)	< 0.01 < 0.01 < 0.01 < 0.01 (< 0.01)
Eggs	< 0.001 < 0.001 < 0.001 < 0.001 (< 0.001)	0.0013 0.0018 < 0.001 0.0011 (0.001)	0.0011 0.0013 0.0011 < 0.001 (0.001)	0.0012 0.0048 0.0016 0.0014 (0.003)	0.0012 0.0015 0.0011 0.0011 (0.001)	0.0046 0.0093 0.0059 0.0062 (0.007)	0.0046 0.0087 0.011 0.0049 (0.007)	0.034 0.041 0.012 0.012 (0.025)

Table 139. Total Triadimefon residues in poultry tissues and eggs from treated hens after administration of a mixture of Triadimefon and Triadimenol (1:1) on 29 consecutive days

	Total residues of Triadimefon (mg/kg)			
	10 ppm	25 ppm	75 ppm	250 ppm
Liver	0.045 0.024 (0.035)	0.082 0.085 (0.084)	0.18 0.29 (0.23)	1.20 0.91 1.4 0.91 (1.1)
Fat				0.15 0.12 0.05 0.08 (0.1)
Skin				0.059 0.074 0.037 0.20 (0.092)
Gizzard				0.057 0.064 0.058 0.090 (0.067)

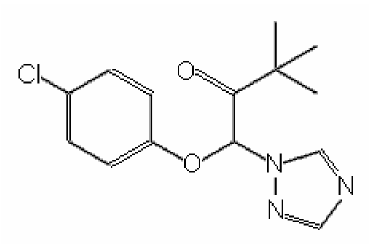
	Total residues of Triadimefon (mg/kg)			
	10 ppm	25 ppm	75 ppm	250 ppm
Muscle				0.016 0.014 0.023 0.017 (0.018)
Eggs	0.031 0.023 (0.027)	0.043 0.071 (0.057)	0.093 0.23 (0.16)	0.82 1.19 1.0 0.70 (0.93)

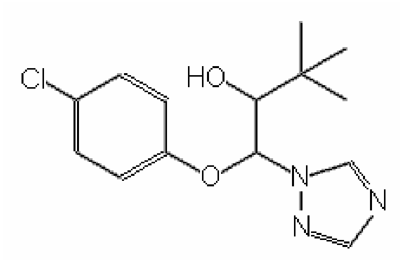
APPRAISAL – RESIDUE AND ANALYTICAL ASPECTS

Triadimenol and triadimefon are related substances and follow the same metabolic pathways in all matrices investigated. Both compounds were evaluated by JMPR several times since 1978 and the last time in 2004, when an ADI of 0–0.03 mg/kg bw and an ARfD of 0.08 mg/kg bw were established for triadimefon and triadimenol each. The residue evaluation of the compounds was completed by the current Meeting within the periodic re-evaluation program.

Data submitted by the manufacturer and evaluated at this Meeting include metabolism in animal and plants, degradation in soil, residues in succeeding crops, analytical methods, supervised residue trials and processing studies.

The following appraisal includes the evaluation of the residue behaviour for both triadimefon and triadimenol.





Triadimefon 1-(4-chlorophenoxy)-3,3-dimethyl-1-(1H-1,2,4-triazol-1-yl)-2-butanone

Triadimenol β-(4-chlorophenoxy)-α-(1,1-dimethylethyl)-1H-1,2,4-triazole-1-ethanol

Triadimefon and triadimenol are structurally related systemic fungicides with registered uses in many countries. Their main mode of action is inhibitors of ergosterol biosyntheses in fungi.

The following abbreviations are used for the metabolites discussed below:

M02	γ-(4-chlorophenoxy)-β-hydroxy-α,α-dimethyl-1H-1,2,4-triazole-1-butanoic acid
M09	1-(4-chlorophenoxy)-4-hydroxy-3,3-dimethyl-1-(1H-1,2,4-triazol-1-yl)-2-butanone
M10	β-(4-chlorophenoxy)-α-(1,1-dimethylethyl)-1H-1,2,4-triazole-1-ethanol

Animal metabolism

The Meeting received results of animal metabolism studies in rats, lactating goats and laying hens.

Rats

The metabolism of triadimefon and triadimenol in rats was evaluated within the toxicological assessment by the JMPR in 2004. In the following paragraphs the summaries of the metabolism for both active substances in rats from the 2004 Report are presented.

Triadimefon

In a study on the absorption, distribution, metabolism and excretion of triadimefon in rats, the dose given and pre-treatment with non-labelled triadimefon did not significantly affect excretion and metabolism patterns. In males about one-third and in females about two-thirds of the administered dose was excreted in the urine and vice versa in the faeces. After 96 h, 2% of the radioactivity remained in females and 9% in males, with the highest residue levels found in liver and kidneys.

The metabolism of triadimefon starts either by direct oxidation of a t-butyl methyl group to the hydroxy or the carboxy compound with subsequent glucuronidation, or these steps are preceded by reduction of the keto group of triadimefon to the putative intermediate, triadimenol. As a consequence, many of the metabolites found in triadimenol metabolism studies are also found with triadimefon. Nevertheless, the metabolism of triadimefon in rats provides a pathway for demethylation of the t-butyl group, which is not seen with triadimenol. This might be a result of the very low biotransformation of triadimenol via triadimefon as an intermediate.

Triadimenol

In rats, radiolabelled triadimenol is rapidly absorbed from the gastrointestinal tract, with radioactivity reaching peak concentrations in most tissues between 1 and 4 h after dosing. Up to 90% of the administered dose was excreted, with an elimination half-life for the radiolabel of between 6 and 15 h. Excretion was essentially complete within 96 h. After 5–6 days, radioactivity in most organs was below the limits of quantification.

Renal excretion accounted for up to 21% of the orally administered dose in males and up to 48% in females. The remainder was found in the faeces. In bile-duct cannulated males, 93% of the administered dose was recovered in the bile and only 6% in the urine, indicating that a substantial amount of the administered dose undergoes enterohepatic recycling. Radioactivity in expired air was negligible.

Triadimenol was extensively metabolized, predominantly by oxidation of one of the t-butyl methyl groups to give hydroxy or carboxy derivatives. The putative intermediate triadimefon has not been isolated. Cleavage of the chloro-phenyl and the triazole group was of minor significance. In the urine and faeces most of the metabolites were not conjugated, but in bile the metabolites were found to be extensively glucuronidated.

Goats

One lactating goat was dosed with [phenyl-UL-^{14}C]triadimefon at a rate of 2.6 mg ai/kg body weight for three consecutive days. Approximately 83% of the total radioactivity administered was excreted until sacrifice. At sacrifice the total radioactive residues (TRR) in the edible tissues were 3.5 mg/kg in kidney, 1.6 mg/kg in liver, 0.29 mg/kg in fat and 0.07 mg/kg in muscle. For milk TRR values of 0.027 to 0.029 mg/kg were detected.

Triadimefon was rapidly metabolised in the lactating goat. It was not identified in urine (0 – 24 h), kidney, liver and muscle and was present at low amounts in milk (1% of the TRR, < 0.001 mg/kg) and in fat (4% of the TRR, 0.013 mg/kg). Triadimenol as a metabolite of triadimefon was only identified in relevant amounts in the liver (20% of the TRR). In the fat, muscle and milk only minor amounts, 1 – 3% of the TRR, were detected. No triadimenol could be found in the kidney. The majority of the radioactive residues (57 – 82% of the TRR) in the tissues, milk and urine were identified as glucuronic acid or sulfate conjugates of the metabolites M02, M09 and M10. Unconjugated M02 accounted for 0.039 – 0.3 mg/kg or 4 – 17% of the TRR in kidney, liver, muscle, fat and urine. Unconjugated M09, unconjugated M10, and p-chlorophenol sulfate and triadimenol glucuronide were minor metabolites.

It was concluded that the metabolism of triadimefon in the goat is comparable to the metabolism in the rats.

Hens

A group of ten laying hens was fed with [phenyl-UL-^{14}C]triadimefon for three consecutive days at a dose rate of 2.5 mg/kg bw each. Data for the rate of absorption in hens was not presented in the study. At sacrifice the TRR in the edible tissues were 0.73 mg/kg in liver, 0.17 mg/kg in fat, 0.12 mg/kg in muscle and up to 0.09 mg/kg in whole eggs.

Triadimefon was rapidly metabolised in laying hens. It was not identified from liver and muscle and was detected in fat (0.038 mg/kg or 22% of the TRR) and in eggs (0.004 – 0.007 mg/kg or 4 – 9% of the TRR). For triadimenol in fat and eggs amounts of about 20% of the TRR were detected. In liver about 5% of the TRR was identified as triadimenol, while in muscle no detectable triadimenol residues could be found. As with the metabolism in lactating goats, a wide spectrum of metabolites could be identified, mostly in quantities below 10% of the TRR. The major metabolites detected were M10 in eggs (18% of the TRR; 0.016 mg/kg) and desmethyl-hydroxyl triadimenol (M31) in liver (13% TRR), muscle (24% TRR) and eggs (23% TRR).

The metabolism of triadimefon in hens is comparable to the metabolism in the rats.

Plant metabolism

The Meeting received plant metabolism studies for triadimefon following foliar application on grapes, barley and wheat. The metabolism of triadimenol was investigated after foliar application on grapes, wheat and sugar beets as well as after seed dressing application on barley and wheat. For tomatoes and cucumbers additional studies comparing foliar and soil treatment with triadimenol were conducted.

In each crop tested, triadimefon and triadimenol were found to be the main residue remaining (grapes: 55 – 61% TRR, barley: 30 – 36% TRR, wheat: 52 – 62% TRR, sugar beets: 26 – 73% TRR, cucumber: 61 – 98% TRR and tomato: 76 – 92% TRR). After foliar application, triadimefon was metabolised to triadimenol. After 14 to 28 days a higher level of triadimenol compared to triadimefon could be observed (except for tomatoes). The investigation of the metabolic pattern showed that the biochemical transformation processes involved consist mainly of conjugation reactions of the parent compound and to a lesser degree in the partial oxidation of the tertiary butyl group of the parent. The product M10 from this oxidation is also subsequently conjugated. A complete cleavage of the triadimenol and triadimefon chemical structure leading to formation of 4-chlorophenol and 1,2,4-triazole is observed in soil only. The 1,2,4-triazole is taken up by the plant via the roots and is conjugated through an enzymatic reaction with serine to form triazole alanine. Subsequent transformation into triazole hydroxy propanoic acid and triazole acetic acid also occurred. The other part of the active substance molecule, 4-chlorophenol, is conjugated in the plants into 4-chlorophenyl-glucoside.

Environmental fate in soil

The Meeting received information on the environmental fate of triadimefon and triadimenol in soil, including aerobic soil metabolism, field dissipation and crop rotational studies. In addition soil photolysis studies with both triadimefon and triadimenol were submitted.

The soil photolysis studies conducted with [phenyl-UL-^{14}C]triadimefon and [phenyl-UL-^{14}C]triadimenol showed that no accelerated degradation occurs under irradiation. Metabolites were identified only in small amounts mainly consisting of 1,2,4-triazole and p-chlorophenol.

In a confined rotational crop study, soil was treated with [phenyl-UL-^{14}C] triadimenol or [triazole-3,5-^{14}C] triadimenol. Over three subsequent years wheat was treated with a seed dressing application (corresponding to 0.038 kg ai/100 kg seeds) followed by an additional foliar treatment with identically labelled triadimefon at a rate of 0.25 kg ai/ha. In this part of the study most of the radioactivity identified in grain consisted of triazole alanine (approximately 50% of the TRR, 0.46-1.06 mg/kg) and triazole-lactic-acid (approximately 30% of the TRR, 0.24 – 0.72 mg/kg). Triazole acetic acid was only identified in traces at the level of the LOQ (< 0.01 mg/kg). No parent triadimefon or triadimenol could be identified in the harvested wheat grain.

In the fourth year wheat and sugar beets were planted as rotational crops without additional treatment. In grain, low amounts of TRR (0.03 mg/kg) could be identified for the phenyl-labelled substance. For the triazole-label, higher residues of 1.18 mg/kg were detected in grain. In grain most of the residues identified consisted of triazole-alanine (0.33 mg/kg) and triazole -lactic-acid (0.12 mg/kg). The rest of the plant showed comparable amounts of radioactivity between both labels ranging from 0.33 mg/kg (roots) up to 0.78 mg/kg (straw). The identification of the total radioactivity showed no triadimefon/triadimenol-residues above 0.01 mg/kg in grain. In straw and glumes triadimefon and triadimenol residues were detected at levels up to 0.14 mg/kg.

In four field rotational crop studies barley was treated with a dose rate of unlabelled triadimenol corresponding to 0.125 – 0.25 kg ai/ha. Fourteen days after harvesting the barley, turnips and oilseed rape were planted and grown to maturity. In barley no residues above the LOQ of 0.1 mg/kg were detected in all matrices. Further identification of the residues was not performed. The sampling of the rotational crops was conducted 103 (turnips) to 167 days (oilseed rape) after planting. In all plant matrices and in analysed soil layers of 0 – 10 cm and 10 – 20 cm no triadimenol residues above the LOQ of 0.1 mg/kg were detected.

The Meeting concluded that residues from the use of triadimefon and triadimenol under field conditions are unlikely to occur in concentrations above 0.01 mg/kg in succeeding crops.

Methods of analysis

The Meeting received description and validation data for analytical methods of triadimefon and triadimenol in plant and animal matrices. All enforcement methods are based on variations of the DFG S19 multi-residue method. The samples are extracted using acetone/water (2:1 v/v) and a subsequent clean-up by GPC or solid phase extraction. The residue of triadimefon and triadimenol is analysed on a gas chromatograph using an alkali-flame ionisation detector (GC-FID(N)). A mass selective detector (MS) is used for confirmatory purposes. MS detection was done at a mass charge ratio of m/z=208 for triadimefon and m/z=168 for triadimenol. For plant matrices an LOQ of 0.05 mg/kg for all commodities was achieved.

In animal matrices the enforcement methods follow the same scheme as in plant matrices and are validated with an LOQ of 0.01 mg/kg for all commodities. The recovery rates were within the range of 70% to 110%.

In addition the Meeting received information on various specialised methods. Most methods include only minor variations in the extraction technique according to the matrix analysed. In these specialised methods LOQs for triadimefon and triadimenol in plant matrices of 0.01 mg/kg up to 0.05 mg/kg were achieved with recovery rates above 70%. For animal matrices specialised methods to measure the total residues of all compounds containing 4-chlorophenyl were reported. Treatment with hypochloric acid resulted in complete transformation of the residues into 4-chlorophenyl. After derivatisation with 2,4-dinitrofluorobenzene the total amount of residue is detected using GC-MS techniques.

The Meeting concluded that adequate analytical methods exist for the determination of triadimefon and triadimenol in crops and livestock commodities both for data collection and MRL enforcement purposes.

Stability of pesticide residues in stored analytical samples

The Meeting received information on the stability of triadimefon and triadimenol in wheat, grapes, tomatoes, apples, cucumbers, pineapples, sugar beets, asparagus and coffee beans. All samples were stored at -20 °C for up to 24 months. Animal matrices eggs, fat, liver, muscle and milk were fortified with triadimenol and stored from 432 days (milk) up to 873 days (liver). In all matrices the remaining triadimenol and triadimefon levels were above 70% of the initial fortification concentrations.

The Meeting concluded that triadimefon and triadimenol are stable in plant and animal matrices under frozen storage conditions.

Residue definition

The plant metabolism studies with triadimefon used in foliar applications and triadimenol in seed dressing and foliar treatments show that a large part of the remaining residues consist of triadimefon and/or triadimenol. Further metabolites were identified in all matrices, but the amounts were much lower than for the active substances.

In rotational crop studies on barley and in a 3 year study on wheat with radiolabelled triadimefon and triadimenol, the triazole-metabolites triazole-alanine, triazole-lactate and triazole-acetic-acid were found in the grain. Triazole acetic acid was detected in traces at the limit of detection only. Triazole-alanine (0.33 mg/kg) and triazole-lactic-acid (0.12 mg/kg) formed the major part of the total radioactivity found in grain.

The available analytical enforcement methods for plant matrices determine triadimefon and triadimenol. Additional methods for M09 and M10 are available.

The Meeting concluded that the residue definition for plant matrices is the sum of triadimefon and triadimenol for both enforcement and risk assessment purposes.

The animal metabolism studies conducted with triadimefon show a substantial degradation for triadimefon as well as for triadimenol. Although the metabolic pathways for goats and hens are similar, significant residues of triadimefon and triadimenol were only detected in goat liver and poultry fat and eggs. Goat muscle, fat and milk as well as poultry liver contained both active substances of between 1 and 5% of the TRR. In goat kidney and poultry muscle no triadimefon or triadimenol was detected. The main part of the radioactivity found consisted of glucuronide- and sulphate-conjugates of M09 and M10. No 1,2,4-triazole metabolites were identified in the animal matrices.

The available analytical enforcement methods determine triadimefon and triadimenol. Specialised methods for the measurement of all structures containing 4-chlorophenyl were submitted.

4-chlorophenyl is a common moiety in various pesticides and has a broad spectrum of other uses. The Meeting decided that the total residue based on 4-chlorophenyl would not be a specific marker for triadimefon and triadimenol and concluded the residue definition for enforcement of animal matrices to be the sum of triadimefon and triadimenol. As triadimefon and triadimenol were identified as the only compounds of toxicological concern, the Meeting concluded that the sum of triadimefon and triadimenol is also an appropriate residue definition for risk assessment purposes for animal matrices.

The log of the octanol/water partition coefficients for triadimefon and triadimenol are 3.1 and 3.3 respectively. In ruminant as well as in poultry metabolism studies, fat tissues contained much higher triadimefon and triadimenol residues than the corresponding muscle matrices (muscle: non-detect up to 0.001 mg/kg, fat: 0.009 mg/kg up to 0.043 mg/kg).

Based on the above, the Meeting agreed:

Definition of the residue in plant and animal commodities (for the estimation of dietary intake and for compliance with MRLs): sum of triadimefon and triadimenol

The Meeting also decided that triadimefon and triadimenol are fat-soluble.

Results of supervised residue trials on crops

The Meeting received supervised trials data for the application of triadimefon and triadimenol to a variety of crops, including apples, grapes, strawberries, currants, bananas, pineapples, sugar beets, cucumbers, courgettes, melons, watermelons, tomatoes, peppers, artichoke, barley, oats, wheat, oats and coffee.

Apples

Field trials involving triadimenol foliar applications to apples are available from France, Germany, Israel, Italy, New Zealand, Spain, South Africa and United Kingdom.

In Cyprus, triadimenol may be applied at a rate of 0.0025 kg ai/hL with a PHI of 14 days. The residues from trials in Germany and the United Kingdom, matching this GAP, were: < 0.05, 0.06(3) and 0.08(3) mg/kg (sum of triadimefon and triadimenol) in apples.

The GAP of Algeria consists of an application rate of 0.005 kg ai/hL and a PHI of 7 days. From one supervised residue trial on apples matching this GAP from Israel the corresponding residue in was 0.4 mg/kg (sum of triadimefon and triadimenol).

From Italy a GAP using 0.004 kg ai/hL and a PHI of 14 days was reported. The corresponding residues from trials in France, Germany, Italy, Spain and United Kingdom matching this GAP were < 0.05(3), 0.05, 0.06, 0.06, 0.07, 0.09, 0.1, 0.11, 0.14 and 0.18 mg/kg (sum of triadimefon and triadimenol) in apples.

The GAP of Spain for apples is 0.013 kg ai/hL with a PHI of 15 days. The residues from trials in Germany matching this GAP were: < 0.05(3), 0.07, 0.09 and 0.1 mg/kg (sum of triadimefon and triadimenol) in apples.

The Meeting decided to pool the data from all GAPs with the exception of the supervised trial data from Israel, as the PHI of 7 days results in a different residue population and insufficient data for an evaluation of that GAP was submitted. The combined residue trial results (n=25) for apples from the other GAPs in ranked order (median underlined) were: < 0.05(7), 0.05, 0.06(5), 0.07, 0.07, 0.08(3), 0.09, 0.09, 0.1, 0.1, 0.11, 0.14 and 0.18 mg/kg (sum of triadimefon and triadimenol).

The Meeting estimated an STMR value of 0.06 mg/kg, an HR value of 0.18 mg/kg and a maximum residue level of 0.3 mg/kg for the sum of triadimefon and triadimenol in apples.

The Meeting withdraws both of its previous recommendations for triadimefon and for triadimenol in pome fruits of 0.5 mg/kg.

Grapes

Field trials involving the foliar applications of triadimefon and triadimenol to grapes were made available from Australia, Chile, France, Germany, Greece, Italy, South Africa, Spain, Turkey and the United States. In several supervised residue trials the analysed commodities referred to grape bunches rather than grape berries. The Meeting decided that both results may be used for the evaluation as the differences are likely to have a negligible influence on the residue levels.

Triadimefon

The GAP of Croatia and Macedonia consists of an application rate of 0.0025 kg ai/hL with a PHI of 35 days. Residues from trials in Germany matching this GAP were: < 0.04, < 0.04, 0.09, 0.25 and 3.2 mg/kg (sum of triadimefon and triadimenol).

The GAP of Russia is 0.005 kg ai/hL with a PHI of 30 days. The residues from trials in Germany matching this GAP were: 0.21, 0.33, 0.43 and 0.69 mg/kg (sum of triadimefon and triadimenol).

The GAP of Belarus and Kazakhstan is 0.0075 kg ai/hL with a PHI of 30 days. The residues from trials in Germany matching this GAP were: < 0.05, < 0.05, 0.07, 0.07, 0.09, 0.15, 0.15, 0.28 and 1.7 mg/kg (sum of triadimefon and triadimenol).

The maximum GAP in South Africa is 0.095 kg ai/ha (0.0063 kg ai/hL) with a PHI of 7 days. The residues from trials in South Africa matching this GAP were: 0.11, 0.27, 0.36 and 0.37 mg/kg (sum of triadimefon and triadimenol).

The GAP of the United States is 0.21 kg ai/ha with a PHI of 14 days. The residues from trials in the US matching this GAP were: 0.03, 0.08, 0.15, 0.27, 0.59, 0.78 and 0.78 mg/kg (sum of triadimefon and triadimenol).

Triadimenol

The GAP of Australia and New Zealand is 0.0025 kg ai/hL with a PHI of 7 days. The residues from trials in Australia and New Zealand matching this GAP were: < 0.05, 0.05, 0.16, 0.18 and 0.6 mg/kg (sum of triadimefon and triadimenol).

The GAP of Bulgaria is 0.0025 kg ai/hL with a PHI of 30 days. The residues from trials in Germany matching this GAP were: < 0.05(3), 0.06, 0.07, 0.09, 0.1 and 0.15 mg/kg (sum of triadimefon and triadimenol).

The GAP of Cyprus and Italy is 0.005 kg ai/hL with a PHI of 14 days. The residues from trials in Germany, Italy, Israel and Turkey matching this GAP were: 0.04, 0.05, 0.06, 0.07, 0.08 and 0.6 mg/kg (sum of triadimefon and triadimenol).

The GAP of France is 0.075 kg ai/ha with a PHI of 15 days. The residues from trials in France, Greece and Spain matching this GAP were: < 0.02, < 0.02, 0.04, 0.04, 0.1 and 0.11 mg/kg (sum of triadimefon and triadimenol).

The GAP of Georgia, Moldova and the Ukraine is 0.013 kg ai/ha with a PHI of 30 days. The residue from one trial in France matching this GAP was < 0.02 mg/kg (sum of triadimefon and triadimenol).

The GAP of South Africa is 0.12 kg ai/ha (0.0075 kg ai/hL) with a PHI of 14 days. The residues from trials in South Africa matching this GAP were: 0.17, 0.3, 0.32, 0.46, 0.54, 0.58, 0.8, 1.4 and 1.9 mg/kg (sum of triadimefon and triadimenol).

The Meeting decided to pool the data from all GAPs for triadimefon and triadimenol in grapes. The combined results (n=63) in grapes in ranked order (median underlined) were: < 0.02(3), 0.03, < 0.04, < 0.04, 0.04(3), < 0.05(5), 0.05, 0.05, 0.06, 0.06, 0.07(4), 0.08, 0.08, 0.09(3), 0.1, 0.1, 0.11, 0.11, <u>0.15</u>(4), 0.16, 0.17, 0.18, 0.21, 0.25, 0.27, 0.27, 0.28, 0.3, 0.32, 0.33, 0.36, 0.37, 0.43, 0.46, 0.54, 0.58, 0.59, 0.6, 0.6, 0.69, 0.78, 0.78, 0.8, 1.4, 1.7, 1.9 and 3.2 mg/kg (sum of triadimefon and triadimenol).

Based on the uses of both triadimefon and triadimenol the Meeting estimated an STMR value of 0.15 mg/kg, an HR value of 3.2 mg/kg and estimated a maximum residue level of 5 mg/kg for the sum of triadimefon and triadimenol in grapes. The IESTI calculation indicates that the consumption of grapes at the HR level of 3.2 mg/kg will lead to an exceedance of the ARfD, but no residue data was available from an alternative GAP to estimate a lower HR value.

The Meeting withdraws both of its previous recommendations for triadimefon in grapes of 0.5 mg/kg and for triadimenol in grapes of 2 mg/kg.

Strawberries

Field trials involving foliar application of triadimenol to glasshouse <u>strawberries</u> are available from Belgium, Italy, Netherlands and Spain.

A GAP for protected strawberries is only available from Spain, with a spray concentration of 0.013 kg ai/hL and a PHI of 3 days. The residues from trials matching this GAP in ranked order (median underlined) were: 0.08, 0.09, 0.13, 0.24, <u>0.26</u>, <u>0.27</u>, 0.29, 0.3, 0.31 and 0.41 mg/kg (sum of triadimefon and triadimenol).

Based on the use of triadimenol in strawberries the Meeting estimated an STMR value of 0.265 mg/kg, a HR value of 0.41 mg/kg and a maximum residue level of 0.7 mg/kg for the sum of triadimefon and triadimenol in strawberries.

The Meeting withdraws both of its previous recommendations for triadimefon and triadimenol in strawberries of 0.1 mg/kg each.

Currants

Field trials involving foliar application of triadimenol to currants were reported from Germany, Netherlands and the United Kingdom.

The GAP from the Netherlands consists of a spray concentration of 0.0075 kg ai/hL with a PHI of 14 days. The residues from trials matching the GAP of the Netherlands in ranked order (median underlined) were: 0.06, 0.07, 0.19, 0.19, 0.23, 0.23, 0.25, 0.39 and 0.49 mg/kg (sum of triadimefon and triadimenol).

Based on the use of triadimenol in currants the Meeting estimated an STMR value of 0.23 mg/kg, a HR value of 0.49 mg/kg and a maximum residue level of 0.7 mg/kg for the sum of triadimefon and triadimenol in currants.

The Meeting withdraws both of its previous recommendations for triadimefon in currants (black, red) of 0.2 mg/kg and for triadimenol in currants (red, black) of 0.5 mg/kg.

Raspberries

GAP information for the use of triadimefon and triadimenol on raspberries was reported from Belarus and the United States. Field trials involving either active substance were not made available.

The Meeting withdraws both of its previous recommendations for triadimefon in raspberries (red, black) of 1 mg/kg and for triadimenol in raspberries (red, black) of 0.5 mg/kg.

Bananas

Field trials involving triadimenol in foliar application to bananas are available from Cameroon, Costa Rica, Honduras, Ivory Coast, Martinique, Puerto Rico, South Africa and the USA.

The GAP of Cuba is 0.14 kg ai/ha with a PHI of 7 days. The residues from trials matching this GAP were: < 0.01, < 0.04, < 0.04, 0.1, 0.11, 0.18 and 0.8 mg/kg (sum of triadimefon and triadimenol) in whole bananas (unbagged). In banana pulp (unbagged) the corresponding residues were: < 0.01, < 0.04, < 0.04, 0.09, 0.14, 0.18 and 0.3 mg/kg (sum of triadimefon and triadimenol).

The GAP of Brazil is 0.1 kg ai/ha with a PHI of 14 days. The residues from trials matching this GAP were: < 0.01, < 0.02, < 0.05, < 0.05, 0.08 and 0.14 mg/kg (sum of triadimefon and triadimenol) in whole bananas (unbagged). In banana pulp (unbagged) the corresponding residues were: < 0.01, < 0.02, < 0.05, < 0.05, 0.07 and 0.14 mg/kg (sum of triadimefon and triadimenol).

Field trials involving triadimenol a broadcast application of granules in bananas are available from Cameroon, Costa Rica, Ecuador and Ivory Coast.

Maximum GAPs in Guatemala and Nicaragua reported for the spreading of triadimenol in bananas is 1 kg ai/ha with a PHI of 21 days. The residues from trials matching the GAP were: < 0.01, 0.01, < 0.04, < 0.04, 0.04 and < 0.05 mg/kg (sum of triadimefon and triadimenol) in whole bananas. In banana pulp the corresponding residues were: < 0.01(4), 0.02, < 0.04, < 0.04, 0.04 and < 0.05 mg/kg (sum of triadimefon and triadimenol).

The Meeting decided to pool the data from all GAPs for foliar and spreading applications of triadimenol in bananas. The combined results (n=19) in whole banana fruits were: < 0.01(3), 0.01, < 0.02, < 0.04(4), 0.04, < 0.05(3), 0.08, 0.1, 0.11, 0.14, 0.18 and 0.8 mg/kg (sum of triadimefon and triadimenol). In banana pulp the combined result (n=22) were: < 0.01(6), < 0.02, 0.02, < 0.04(4), 0.04, < 0.05(3), 0.07, 0.09, 0.14, 0.14, 0.18 and 0.3 mg/kg (sum of triadimefon and triadimenol).

Based on the residue data on banana pulp the Meeting estimated an STMR value of 0.04 mg/kg and an HR of 0.3 mg/kg (sum of triadimefon and triadimenol) for bananas.

Based on the use of triadimenol in bananas the Meeting estimated a maximum residue level of 1 mg/kg for the sum of triadimefon and triadimenol in bananas.

The Meeting withdraws its previous recommendation for triadimenol in bananas of 0.2 mg/kg.

Mango

GAP information for the use of triadimefon and triadimenol on mangoes was reported from a number of countries. Field trials involving either active substance were not made available.

The Meeting withdraws both of its previous recommendations for triadimefon and triadimenol in mangoes of 0.05* mg/kg.

Pineapples

Field trials involving triadimefon in post-harvest dipping of pineapples are available from Ivory Coast and the United States.

The GAP of the Ivory Coast consists of a dipping solution of 0.01 kg ai/hL with a 0 days PHI. The residues from trials matching this GAP were: 0.1, 0.46 and 0.56 mg/kg (sum of triadimefon and triadimenol) in whole fruits. In pineapple pulp the corresponding residues were: < 0.06, < 0.06 and 0.1 mg/kg (sum of triadimefon and triadimenol).

The GAP of Costa Rica, Dominican Republic, Guatemala and Honduras involves a dipping solution of 0.05 kg ai/hL with a 0 days PHI. The residues from trials matching the GAP were: 0.82, 0.85, 0.97, 1.1, 1.1, 1.4, 1.5, 1.6, 1.6, 1.8, 2.0, 2.2 and 2.5 mg/kg (sum of triadimefon and triadimenol) in whole fruits. In pineapple pulp the corresponding residues in ranked order (median underlined) were: 0.07, 0.07, 0.09, 0.1, 0.1, 0.11, 0.11, 0.13, 0.13, 0.14, 0.14, 0.15 and 0.16 mg/kg (sum of triadimefon and triadimenol).

Based on the residue data on pineapple pulp complying with the GAPs of Costa Rica, the Dominican Republic, Guatemala and Honduras the Meeting estimated an STMR value of 0.11 mg/kg and a HR of 0.16 mg/kg (sum of triadimefon and triadimenol) for pineapples.

Based on the use of triadimenol in pineapples according to the GAPs from Costa Rica, the Dominican Republic, Guatemala and Honduras the Meeting estimated a maximum residue level of 5 mg/kg (Po) for the sum of triadimefon and triadimenol in pineapples.

The Meeting withdraws both of its previous recommendations for triadimefon in pineapples of 2 mg/kg and for triadimenol in pineapples of 1 mg/kg.

Sugar beets

Field trials involving triadimenol in sugar beets are available from Germany and the United Kingdom. The GAP of the United Kingdom for sugar beets consists of an application rate of 0.13 kg ai/ha with a PHI of 14 days. The residues from trials matching the GAP were: < 0.05(9) mg/kg (sum of triadimefon and triadimenol) in sugar beet roots.

Based on the use of triadimenol in sugar beets the Meeting estimated an STMR value of 0.05 mg/kg, an HR value of 0.05 mg/kg and a maximum residue level of 0.05* mg/kg for the sum of triadimefon and triadimenol in sugar beets.

The Meeting withdraws both of its previous recommendations for triadimefon and triadimenol in sugar beets of 0.1* mg/kg.

Onion, spring and welsh

GAP information for the use of triadimefon and triadimenol on onions was reported from Columbia, Japan and Korea. Field trials involving either active substance were not made available.

The Meeting withdraws all of its previous recommendations for triadimefon and triadimenol in onion, spring and onion, welsh of 0.05* mg/kg.

Fruiting vegetables, Cucurbits

Triadimefon

Field trials involving triadimefon in cucumbers are available from Australia, Japan and the United States. The GAP of New Zealand for the field application on cucumbers is 0.005 kg ai/hL with a PHI of 1 day. The residue from one trial matching the GAP was < 0.2 mg/kg (sum of triadimefon and triadimenol) in fruits.

Maximum GAP in Mexico, for the field application of triadimefon to cucumbers consists of an application rate of up to 0.13 kg ai/ha with a PHI of 0 days. The residues from United States trials matching this GAP were < 0.02, 0.02, 0.02, 0.03(3), 0.04, 0.04, 0.05, 0.08(3) and 0.11 mg/kg (sum of triadimefon and triadimenol) in fruits.

The GAP of the Ukraine for the application of triadimefon in glasshouse cucumbers is 0.0025 kg ai/hL with a PHI of 5 days. The residues from Japanese trials matching this GAP were: < 0.02, < 0.02 mg/kg (sum of triadimefon and triadimenol) in fruits.

Field trials involving triadimefon in melons are available from Mexico and the United States. Maximum GAP in Mexico for triadimefon in field application to melons is 0.15 kg ai/ha with a PHI of 0 days. The residues from trials in Mexico and the United States, matching this GAP, were: < 0.02, < 0.02, 0.03, 0.04, 0.05(4), 0.11, 0.11, 0.13 and 0.13 mg/kg (sum of triadimefon and triadimenol) in whole fruits. In melon pulp the corresponding residues were: 0.03, 0.03, 0.04 and 0.04 mg/kg (sum of triadimefon and triadimenol).

Triadimenol

Field trials involving triadimenol in cucumbers were made available from Australia and the United States. GAP in Australia involves the field application to cucumbers at a rate of 0.1 kg ai/ha with a PHI of 1 day. The residue from one trial matching this GAP was 0.1 mg/kg (sum of triadimefon and triadimenol) in fruits.

The GAP of Greece and Italy for triadimenol applications to glasshouse cucumbers is 0.005 kg ai/hL with a PHI of 14 to15 days. The residues from trials matching this GAP were: < 0.05(4) mg/kg (sum of triadimefon and triadimenol) in fruits.

In Spain the GAP for the application of triadimenol to glasshouse cucumbers is 0.013 kg ai/hL with a PHI of 3 days. The residues from trials matching this GAP were: < 0.05(5), 0.06, 0.06, 0.07, 0.08, 0.1, 0.1 and 0.12 mg/kg (sum of triadimefon and triadimenol) in the fruits.

Field trials involving triadimenol in melons are available from France, Greece, Italy and Spain. GAP from Morocco for triadimenol in field application to melons is 0.075 kg ai/hL with a PHI of 3 days. The residues from trials matching the GAP were: < 0.05(6), 0.05 and 0.06 mg/kg (sum of triadimefon and triadimenol) in whole fruits. In melon pulp the corresponding residues were < 0.05 and < 0.05 mg/kg (sum of triadimefon and triadimenol). GAP in Spain for triadimenol applications to glasshouse melons is 0.013 kg ai/hL with a PHI of 3 days. The residues from trials in Italy matching this GAP were: < 0.05(3), and 0.13 mg/kg (sum of triadimefon and triadimenol) in whole fruits. In melon pulp the corresponding residues were < 0.05(4) mg/kg (sum of triadimefon and triadimenol).

Field trials involving triadimenol in watermelons were made available from Italy and Spain. The GAP of Greece for the field application of triadimenol to watermelons is 0.005 kg ai/hL with a PHI of 15 days. The residue from one trial in Italy matching this GAP was < 0.05 mg/kg (sum of triadimefon and triadimenol) in whole fruits. In melon pulp the corresponding residue was < 0.05 mg/kg (sum of triadimefon and triadimenol).

The GAP for triadimenol in glasshouse application to watermelons (as a GAP for cucurbits) was reported from Chile at 0.13 kg ai/ha with a PHI of 3 days. The residues from glasshouse trials in Italy matching this GAP were < 0.05(3), 0.05 mg/kg (sum of triadimefon and triadimenol) in whole fruits. In melon pulp the corresponding residues were < 0.05(4) mg/kg (sum of triadimefon and triadimenol).

The Meeting decided to pool the data for triadimefon and triadimenol from all GAPs for field and glasshouse application in cucurbits. The combined results (n=61) in whole fruits were: < 0.02(5), 0.02, 0.02, 0.03(4), 0.04(3), < 0.05(22), 0.05(7), 0.06(3), 0.07, 0.08(4), 0.1(3), 0.11(3), 0.12, 0.13(3) and < 0.2 mg/kg (sum of triadimefon and triadimenol). In the edible part (whole fruit or pulp) the combined results (n=48) in ranked order (median underlined) were: < 0.02(3), 0.02, 0.02, 0.03(5), 0.04(4), < 0.05(20), 0.05, 0.06, 0.06, 0.07, 0.08(4), 0.1(3), 0.11, 0.12 and < 0.2 mg/kg (sum of triadimefon and triadimenol).

The Meeting estimated an STMR value of 0.05 mg/kg and a HR of 0.2 mg/kg (sum of triadimefon and triadimenol) for cucurbits, including melons and watermelons.

Based on the uses of both triadimefon and triadimenol the Meeting estimated a maximum residue level of 0.2 mg/kg for the sum of triadimefon and triadimenol in fruiting vegetables, cucurbits.

The Meeting withdraws both of its previous recommendations for triadimefon in fruiting vegetables, cucurbits of 0.1 mg/kg and for triadimenol in fruiting vegetables, cucurbits of 2 mg/kg.

Fruiting vegetables other than Cucurbits (except fungi and except sweet corn)

Triadimefon

Field trials involving triadimefon in peppers were made available from Australia. The GAP of Japan for the field application of triadimefon to peppers is 0.005 kg ai/hL with a PHI of 1 day. The residues from trials matching the GAP were < 0.05 and < 0.05 mg/kg (sum of triadimefon and triadimenol).

Field trials involving triadimefon in tomatoes were made available from Australia and Japan. GAP in Belarus for triadimefon in glasshouse application to tomatoes is 0.5 kg ai/ha with a PHI of 10 days. The residues from Japanese trials matching the GAP were: 0.14, 0.15, 0.43 and 0.68 mg/kg (sum of triadimefon and triadimenol).

Triadimenol

Field trials involving triadimenol in peppers were made available from Germany and Spain. The GAP of Spain for triadimenol in glasshouse peppers is 0.013 kg ai/hL with a PHI of 3 day. The residues from trials matching the GAP were 0.11, 0.16, 0.21, 0.21, 0.23, 0.33, 0.33 and 0.38 mg/kg (sum of triadimefon and triadimenol).

Field trials involving triadimenol in tomatoes are available from Belgium, France, Germany, Greece, Italy and Spain.

The GAP of Italy for the field application of triadimenol to tomatoes is 0.005 kg ai/hL with a PHI of 14 days. The residues from trials matching this GAP were < 0.05(4) mg/kg (sum of triadimefon and triadimenol).

The GAP of Morocco and Spain for the field application of triadimenol to tomatoes is 0.013 kg ai/hL with a PHI of 3 days. The residues from trials matching this GAP were < 0.05 and 0.21 mg/kg (sum of triadimefon and triadimenol).

The GAP of Italy for the glasshouse application of triadimenol to tomatoes is 0.005 kg ai/hL with a PHI of 14 days. The residues from trials matching this GAP were < 0.05(3) and 0.08 mg/kg (sum of triadimefon and triadimenol).

The GAP of Morocco and Spain for triadimenol in glasshouse application to tomatoes is 0.013 kg ai/hL with a PHI of 3 days. The residues from trials matching this GAP were 0.05, 0.05, 0.11, 0.12, 0.13, 0.15, 0.25, 0.27 and 0.29 mg/kg (sum of triadimefon and triadimenol).

The Meeting decided to pool the data for triadimefon and triadimenol from all GAPs for application in glasshouse for tomatoes and peppers. The combined results (n=25) in whole fruits in ranked order (median underlined) were: < 0.05(3), 0.05, 0.05, 0.08, 0.11, 0.11, 0.12, 0.13, 0.14, 0.15, 0.15, 0.16, 0.21, 0.21, 0.23, 0.25, 0.27, 0.29, 0.33, 0.33, 0.38, 0.43 and 0.68 mg/kg (sum of triadimefon and triadimenol).

The Meeting estimated an STMR value of 0.15 mg/kg and an HR of 0.68 mg/kg (sum of triadimefon and triadimenol) for fruiting vegetables other than cucurbits, except fungi and except sweet corn.

Based on the uses of both triadimefon and triadimenol the Meeting estimated a maximum residue level of 1 mg/kg for the sum of triadimefon and triadimenol in fruiting vegetables other than cucurbits, except fungi and except sweet corn.

The Meeting withdraws its previous recommendations for the triadimefon in peppers, sweet of 0.1 mg/kg and for tomatoes of 0.2 mg/kg. The Meeting also withdraws its previous recommendations for triadimenol in peppers, sweet of 0.1 mg/kg and in tomatoes of 0.5 mg/kg.

Peas and chick-peas

GAP information for the use of triadimefon and triadimenol on peas and chick-peas were reported from various countries. Field trials involving either active substance were not made available.

The Meeting withdraws its previous recommendations for triadimefon in chick-peas and in peas of 0.05(*) mg/kg. The Meeting also withdraws its previous recommendations for triadimenol in chick-peas of 0.05(*) mg/kg and in peas of 0.1 mg/kg.

Artichoke, globe

Field trials involving triadimenol in globe artichoke were made available from Italy and Spain. The GAP of Cyprus for triadimenol in globe artichoke consists of an application rate of 0.01 kg ai/hL with a PHI of 5 days. The residues from trials matching this GAP in ranked order (median underlined) were: < 0.05, 0.08, 0.08, 0.13, 0.14, 0.15, 0.16, 0.24 and 0.55 mg/kg (sum of triadimefon and triadimenol).

The Meeting estimated an STMR value of 0.14 mg/kg and an HR of 0.55 mg/kg (sum of triadimefon and triadimenol) for globe artichokes.

Based on the use of triadimenol the Meeting estimated a maximum residue level of 0.7 mg/kg for the sum of triadimefon and triadimenol in globe artichokes.

The Meeting withdraws its previous recommendation for triadimenol in artichoke, globe of 1 mg/kg.

Cereals, except maize and rice

Triadimefon

Field trials involving triadimefon in barley are available from Germany. The GAP of the Ukraine for the foliar application of triadimefon to barley is 0.13 kg ai/ha with a PHI of 30 days. The residues from trials matching this GAP were < 0.1(9) mg/kg (sum of triadimefon and triadimenol) for barley grain.

Field trials involving triadimefon in oats are available from Germany. The GAP of Belarus, Kazakhstan and Russia for the foliar application of triadimefon to oats is 0.18 kg ai/ha with a PHI of 30 days. The residues from trials matching this GAP were < 0.1(3) mg/kg (sum of triadimefon and triadimenol) for oats grain.

Field trials involving triadimefon in rye are available from Germany. The GAP of Macedonia for the foliar application of triadimefon to rye is 0.25 kg ai/ha with a PHI of 35 days. The residues from trials matching this GAP were < 0.08 and < 0.08 mg/kg (sum of triadimefon and triadimenol) for rye grain.

The GAP of Croatia for the foliar application of triadimefon to rye is 0.1 kg ai/ha with a PHI of 42 days. The residues from trials matching this GAP were: < 0.1(3), 0.15 mg/kg (sum of triadimefon and triadimenol) for rye grain.

Field trials involving triadimefon in wheat are available from Germany. GAP in Croatia for the foliar application of triadimefon to wheat is 0.1 kg ai/ha with a PHI of 42 days. The residues from trials matching this GAP were < 0.1(8) mg/kg (sum of triadimefon and triadimenol) for wheat grain.

Triadimenol

Field trials involving triadimenol in barley are available from Australia, Canada, France, Germany, Italy, Spain, United Kingdom and the United States.

The GAP of Cyprus and Poland for the foliar application of triadimenol to barley is 0.13 kg ai/ha with a PHI of 35 days. The residues from trials matching this GAP were: < 0.05(14), 0.05, 0.06, 0.06, 0.08, 0.09, 0.09 and < 0.1(11) mg/kg (sum of triadimefon and triadimenol) for barley grain.

The GAP for the use of triadimenol as a seed dressing in barley were reported from Australia and New Zealand with application rates of 0.022 kg/100 kg seed. The residue from one trial matching this GAP was < 0.04 mg/kg (sum of triadimefon and triadimenol) for barley grain.

The GAP for the use of triadimenol as seed dressing in barley from Austria, Brazil, Germany, Ireland, Mexico and the United Kingdom is 0.04 kg ai/100 kg/seeds with no specified PHI. The residues from trials matching this GAP in ranked order (median underlined) were: < 0.01(15), 0.02, < 0.05(10) and < 0.1(19) mg/kg (sum of triadimefon and triadimenol) for barley grain.

Field trials involving triadimenol in oats were available from Brazil, Canada, Germany and the United States. The GAP of the United Kingdom for the foliar application of triadimenol to oats is 0.13 kg ai/ha with growth dependent PHI. The residues from trials matching this GAP were: 0.1, 0.11 and 0.12 mg/kg (sum of triadimefon and triadimenol) for oat grain.

The GAP for the use of triadimenol as a seed dressing in oats in Australia is 0.015 kg ai/100 kg seeds with no specified PHI. The residues from trials matching this GAP were < 0.1(4) mg/kg (sum of triadimefon and triadimenol) for oat grain.

GAP in oats for the use of triadimenol as a seed dressing was reported from Brazil, Ireland and the United Kingdom with application rates of 0.04 kg ai/100 kg seed. The residues from trials matching this GAP were: < 0.01(14) and < 0.1(3) mg/kg (sum of triadimefon and triadimenol) for oats grain.

The GAP of Finland for the use of triadimenol as a seed dressing in barley is 0.045 kg ai/100 kg seeds with no specified PHI. The residues from trials matching the GAP were: < 0.01 and < 0.01 mg/kg (sum of triadimefon and triadimenol) for oat grain.

Field trials involving triadimenol in rye were available from Canada, Germany and the United States. The GAP of Poland and the United Kingdom for the foliar application of triadimenol to rye is 0.13 kg ai/ha with a PHI of 35 days. The residues from trials matching this GAP were: < 0.05 and < 0.1(4) mg/kg (sum of triadimefon and triadimenol) for rye grain.

The GAP for Ireland and the United Kingdom, for the use of triadimenol as a seed dressing in rye is 0.038 kg ai/100 kg seed. The residues from trials matching this GAP were: < 0.01(6), 0.02 and < 0.1(4) mg/kg (sum of triadimefon and triadimenol) for rye grain.

Field trials involving triadimenol in wheat are available from Australia, Brazil, Canada, France, Germany, Hungary, Italy, New Zealand, Spain and the United States. The GAP of Australia, Bulgaria, Cyprus, Italy and Poland for the foliar application of triadimenol to wheat is 0.13 kg ai/ha with PHI of 28 to 35 days. The residues from trials matching this GAP were: < 0.01, < 0.02, 0.03, < 0.05(39), 0.05 and 0.06 mg/kg (sum of triadimefon and triadimenol) for wheat grain.

In France GAP for the foliar application of triadimenol to wheat is 0.075 kg ai/ha with a PHI of 28 days. The residue from one trial matching this GAP was < 0.05 mg/kg (sum of triadimefon and triadimenol) for wheat grain.

The GAP for the use of triadimenol as a seed dressing in wheat were reported from Brazil, Ireland and the United Kingdom with application rates of 0.038 kg ai/100 kg seed. The residues from trials matching this GAP were: < 0.01(20), 0.03 and < 0.05(11) mg/kg (sum of triadimefon and triadimenol) for wheat grain.

The Meeting decided to pool the residue data for triadimefon and triadimenol from all foliar and seed dressing GAPs for cereals. The combined results (n=220) in grain in ranked order (median underlined) were: < 0.01(58), < 0.02, 0.02, 0.02, 0.03, < 0.05(76), 0.05, 0.05, 0.06(3), < 0.08, < 0.08, 0.08, 0.09, 0.09, < 0.1(68), 0.1, 0.11, 0.12 and 0.15 mg/kg (sum of triadimefon and triadimenol).

The Meeting estimated an STMR value of 0.05 mg/kg and a highest residue of 0.15 mg/kg (sum of triadimefon and triadimenol) for cereal grain, except maize and rice.

Based in the uses of both triadimefon and triadimenol the Meeting estimated a maximum residue level of 0.2 mg/kg for the sum of triadimefon and triadimenol in cereals, except maize and rice.

The Meeting withdraws its previous recommendations for the triadimefon in barley of 0.5 mg/kg and in oats, rye and wheat of 0.1 mg/kg. The Meeting also withdraws its previous recommendations for triadimenol in barley of 0.5 mg/kg and in oats, rye and wheat of 0.2 mg/kg.

Coffee beans

Field trials involving triadimenol in coffee were available from Brazil, El Salvador, Guatemala, Mexico and South Africa. The GAP of Brazil and Costa Rica for the foliar application of triadimenol to coffee is 0.25 kg ai/ha with a PHI of 30 days. The residues from trials matching this GAP were: 0.04, 0.04, < 0.05(3), 0.06, 0.07, < 0.1 and 0.4 mg/kg (sum of triadimefon and triadimenol) for coffee beans.

The GAP of Brazil for the broadcast application with incorporation of a granular formulation of triadimenol to coffee is 1.1 kg ai/ha with a PHI of 90 days. The residues from trials matching the GAP were: < 0.01, 0.01, < 0.05(3), 0.06, 0.07, 0.07 and 0.09 mg/kg (sum of triadimefon and triadimenol) for coffee beans.

A further GAP of Brazil, for the broadcast application of a granular formulation of triadimenol to coffee is 1.95 kg ai/ha with a PHI of 90 days. The residues from trials matching this GAP were: < 0.05 and 0.05 mg/kg (sum of triadimefon and triadimenol) for coffee beans.

The Meeting decided to pool the data for coffee beans from trials with foliar and spreading applications. The combined results (n=20) in ranked order (median underlined) were: < 0.01, 0.01, 0.04, 0.04, < 0.05(7), 0.05, 0.06, 0.06, 0.07(3), 0.09, < 0.1 and 0.4 mg/kg (sum of triadimefon and triadimenol) for coffee beans.

The Meeting estimated an STMR value of 0.05 mg/kg (sum of triadimefon and triadimenol) for coffee beans.

Based on the use of triadimenol the Meeting estimated a maximum residue level of 0.5 mg/kg for the sum of triadimefon and triadimenol in coffee beans.

The Meeting withdraws both of its previous recommendations for triadimefon in coffee beans of 0.05(*) mg/kg and for triadimenol in coffee beans of 0.1* mg/kg.

Hops, dry

GAP information for the use of triadimefon and triadimenol on hops was reported from Croatia and Spain. Field trials involving either active substance were not made available to the Meeting.

The Meeting withdraws both of its previous recommendations for triadimefon in hops, dry of 10 mg/kg and for triadimenol in hops, dry of 5 mg/kg.

Sugar beet leaves or tops

Field trials involving the application of triadimenol to sugar beets were available from Germany and the United Kingdom. The GAP of the United Kingdom for sugar beets is 0.13 kg ai/ha with a PHI of

14 days. The residues from trials matching this GAP in ranked order (median underlined) were: 0.08, 0.1, 0.1, 0.14, <u>0.14</u>, 0.18, 0.19, 0.19 and 0.42 mg/kg (sum of triadimefon and triadimenol) in sugar beet leaves.

The Meeting estimated an STMR value of 0.14 mg/kg and a highest residue of 0.42 mg/kg for the sum of triadimefon and triadimenol in sugar beet leaves (fresh weight).

Fodder beets

GAP information for the use of triadimefon or triadimenol in <u>fodder beets</u> was not submitted.

The Meeting withdraws both of its previous recommendations for triadimefon and triadimenol in fodder beets of 0.05(*) mg/kg.

Cereal forage, except maize forage

Triadimefon

Field trials involving triadimefon in <u>barley</u> were available from Germany. The GAP of the Ukraine for the <u>foliar application</u> of triadimefon to barley is 0.13 kg ai/ha. The residues from trials matching this GAP were: 1.4, 1.7(4), 1.9, 1.9, 2.0 and 2.2 mg/kg (sum of triadimefon and triadimenol) for barley forage.

Field trials involving triadimefon in <u>oats</u> were available from Germany. The GAP of Belarus, Kazakhstan and Russia for the foliar application of triadimefon to oats is 0.18 kg ai/ha. The residues from trials matching this GAP were 0.76, 1.9 and 2.3 mg/kg (sum of triadimefon and triadimenol) for oats forage.

Field trials involving triadimefon in <u>rye</u> were available from Germany. The GAP of Macedonia for the foliar application of triadimefon to rye is 0.25 kg ai/ha. The residues from trials matching this GAP were 5.9 and 10 mg/kg (sum of triadimefon and triadimenol) for rye forage.

The GAP of Croatia for the foliar application of triadimefon to rye is 0.1 kg ai/ha. The residues from trials matching this GAP were: 2.3, 2.5, 5.0 and 5.9 mg/kg (sum of triadimefon and triadimenol) for rye forage.

Field trials involving triadimefon in <u>wheat</u> were available from Germany. The GAP of Croatia for the foliar application of triadimefon to wheat is 0.1 kg ai/ha. The residues from trials matching this GAP were: 1.6, 1.8, 1.8, 2.2, 2.7 and 2.8 mg/kg (sum of triadimefon and triadimenol) for wheat forage.

Triadimenol

Field trials involving triadimenol in <u>barley</u> were available from Australia, Canada, France, Germany, Italy, Spain, United Kingdom and the United States.

The GAP of Cyprus and Poland for the <u>foliar application</u> of triadimenol to barley is 0.13 kg ai/ha. The residues from trials matching the GAP were: 0. 0.28, 1.1, 1.2, 1.6, 1.7, 1.7, 1.8, 1.9(3), 2.0, 2.0, 2.3, 2.3, 2.5, 2.6, 2.8, 2.9, 3.3, 3.4, 3.6, 3.6, 4.4, 4.4, 4.7, 4.8 and 5.0 mg/kg (sum of triadimefon and triadimenol) for barley forage.

The GAP for the use of triadimenol as a <u>seed dressing</u> in barley of Austria, Brazil, Germany, Ireland, Mexico and United Kingdom is 0.04 kg ai/100 kg/seeds with no specified PHI. The residues from trials matching this GAP were: < 0.01(4), 0.02, 0.02, 0.03(3), 0.05, 0.05, 0.06, 0.07, 0.08, < 0.1(13), 0.1, 0.16, 0.2, 0.27 and 1.7 mg/kg (sum of triadimefon and triadimenol) for barley forage.

Field trials involving triadimenol in <u>oats</u> were available from Brazil, Canada, Germany and the United States. The GAP of the United Kingdom for the <u>foliar application</u> of triadimenol to oats is 0.13 kg ai/ha with growth dependent PHI. The residues from trials matching this GAP were 2.4 and 2.5 mg/kg (sum of triadimefon and triadimenol) for oats forage.

The GAP for the use of triadimenol as a seed dressing in oats from Australia is 0.015 kg ai/100 kg seeds with no specified PHI. The residues from trials matching this GAP were < 0.1(4) mg/kg (sum of triadimefon and triadimenol) for oat forage.

GAPs in oats for the use of triadimenol as a seed dressing was reported from Brazil, Ireland and United Kingdom with application rates of 0.04 kg ai/100 kg seed. The residues from trials matching this GAP were: < 0.01, < 0.01, 0.02, 0.03, 0.03, 0.05, 0.08, 0.09, < 0.1(2), 0.1, 0.12, 0.12, 0.15, 0.16, 0.2, 0.27 mg/kg (sum of triadimefon and triadimenol) for oat forage.

The GAP of Finland for the use of triadimenol as a seed dressing in barley is 0.045 kg ai/100 kg seeds with no specified PHI. The residues from trials matching the GAP were 0.2 and 0.23 mg/kg (sum of triadimefon and triadimenol) for oat forage.

Field trials involving triadimenol in rye were available from Canada, Germany and the United States. The GAP of Poland and the United Kingdom for the foliar application of triadimenol to rye is 0.13 kg ai/ha with a PHI of 35 days. The residues from trials matching this GAP were: 1.7, 2.2, 2.7, 4.6 and 6.1 mg/kg (sum of triadimefon and triadimenol) for rye forage.

The GAP of Ireland and the United Kingdom for the use of triadimenol as a seed dressing in rye is 0.038 kg ai/100 kg seed. The residues from trials matching this GAP were: 0.03, 0.05, < 0.1(4), 0.26, 0.28, 0.77, 1.1 and 1.1 mg/kg (sum of triadimefon and triadimenol) for rye forage.

Field trials involving triadimenol in wheat were available from Australia, Brazil, Canada, France, Germany, Hungary, Italy, New Zealand, Spain and the United States.

The GAP of Australia, Bulgaria, Cyprus, Italy and Poland for the foliar application of triadimenol to wheat is 0.13 kg ai/ha with PHI of 28 to 35 days. The residues from trials matching this GAP were: 0.5, 0.61, 0.64, 1.1, 1.4(3), 1.5, 1.7, 1.9(3), 2.0, 2.1, 2.2(3), 2.3, 2.4, 2.5(3), 2.6, 2.6, 2.7, 2.9, 2.9, 3.0, 3.7, 3.9, 4.7 and 5.7 mg/kg (sum of triadimefon and triadimenol) for wheat forage.

In France the GAP for the foliar application of triadimenol to wheat is 0.075 kg ai/ha with a PHI of 28 days. The residue from one trial matching the GAP was 1.0 mg/kg (sum of triadimefon and triadimenol) for wheat forage.

The GAP for the use of triadimenol as a seed dressing in wheat was reported from Brazil, Ireland, and the United Kingdom with an application rate of 0.038 kg ai/100 kg seed (PHI unnecessary). The residues from trials matching this GAP were: < 0.01, < 0.01, 0.04(4), < 0.05(6), 0.09, < 0.1, 0.13, 0.13, 0.15, 0.31, 0.37, 0.38, 0.5, 0.52, 1.1, 1.2 and 1.8 mg/kg (sum of triadimefon and triadimenol) for wheat forage.

The Meeting decided to combine the data for triadimefon and triadimenol from all foliar GAPs for barley, oats, rye and wheat forage. The combined results (n=90) in ranked order (median underlined) were: 0.28, 0.5, 0.61, 0.64, 0.76, 1.1, 1.1, 1.2, 1.4(4), 1.5, 1.6, 1.6, 1.7(8), 1.8(3), 1.9(9), 2.0(4), 2.1, 2.2(6), 2.3(5), 2.4, 2.4, 2.5(6), 2.6(3), 2.7(3), 2.8, 2.8, 2.9(3), 3.0, 3.3, 3.4, 3.6, 3.6, 3.7, 3.9, 4.4, 4.4, 4.6, 4.7, 4.7, 4.8, 5.0, 5.0, 5.7, 5.9, 5.9, 6.1 and 10 mg/kg (sum of triadimefon and triadimenol) for combined barley, oats, rye and wheat forage (fresh based).

The Meeting estimated an STMR value of 2.2 mg/kg and a highest residue of 10 mg/kg for the sum of triadimefon and triadimenol in cereal forage.

Cereal hay

Triadimenol

Field trials involving triadimenol in barley hay were available from the United States. The GAP for the use of triadimenol as a seed dressing in barley for Austria, Brazil, Germany, Ireland, Mexico and the United Kingdom is 0.04 kg ai/100 kg/seeds with no specified PHI. The residues from trials matching this GAP were: 0.02, 0.02, 0.03, 0.04, 0.05 and 0.12 mg/kg (sum of triadimefon and triadimenol) for barley hay.

Field trials involving triadimenol in oats hay were available from the United States. The GAP in oats for the use of triadimenol as seed dressing was reported from Brazil, Ireland and United

Kingdom with application rates of 0.04 kg ai/100 kg seed (PHI unnecessary). The residues from trials matching the GAP were: < 0.01, 0.03, 0.05, 0.21, 0.33 and 0.98 mg/kg (sum of triadimefon and triadimenol) for oats hay.

Field trials involving triadimenol in wheat hay were available from the United States. The GAP for the use of triadimenol as a seed dressing in wheat were reported from Brazil, Ireland, and United Kingdom with an application rate of 0.038 kg ai/100 kg seed (PHI unnecessary). The residues from trials matching this GAP were: 0.05, 0.07, 0.07, 0.08, 0.15 and 0.19 mg/kg (sum of triadimefon and triadimenol) for wheat hay.

The Meeting decided to pool the data from barley, oats and wheat hay after seed dressing application of triadimenol. The combined results (n=18) in ranked order (median underlined) were: < 0.01, 0.02, 0.02, 0.03, 0.03, 0.04, 0.05(3), 0.07, 0.07, 0.08, 0.12, 0.15, 0.19, 0.21, 0.33 and 0.98 mg/kg (sum of triadimefon and triadimenol) for cereal hay.

The Meeting estimated an STMR value of 0.06 mg/kg and a highest residue of 0.98 mg/kg for the sum of triadimefon and triadimenol in cereal hay.

Cereal straw, straw and fodder (dry) of cereal grains

Triadimefon

Field trials involving triadimefon in barley were available from Germany. The GAP of the Ukraine for the foliar application of triadimefon to barley is 0.13 kg ai/ha with a PHI of 30 days. The residues from trials matching this GAP were: < 0.1(4), 0.35, 0.42, 0.48, 0.63, 0.7 mg/kg (sum of triadimefon and triadimenol) for barley straw.

Field trials involving triadimefon in oats were available from Germany. The GAP of Belarus, Kazakhstan and Russia for the foliar application of triadimefon to oats is 0.18 kg ai/ha with a PHI of 30 days. The residues from trials matching this GAP were: < 0.1, 0.22 and 0.63 mg/kg (sum of triadimefon and triadimenol) for oats straw.

Field trials involving triadimefon in rye were available from Germany. The GAP of Macedonia for the foliar application of triadimefon to rye is 0.25 kg ai/ha with a PHI of 35 days. The residues from trials matching this GAP were 0.91 and 1.9 mg/kg (sum of triadimefon and triadimenol) for rye straw.

The GAP of Croatia for the foliar application of triadimefon to rye is 0.1 kg ai/ha with a PHI of 42 days. The residues from trials matching this GAP were: 0.23, 1.5, 1.7 and 2.7 mg/kg (sum of triadimefon and triadimenol) for rye straw.

Field trials involving triadimefon in wheat are available from Germany. The GAP of Croatia for the foliar application of triadimefon to wheat is 0.1 kg ai/ha with a PHI 42 days. The residues from trials matching this GAP were: 0.45, 0.53, 0.53, 0.7, 0.83, 0.9, 1.1 and 2.7 mg/kg (sum of triadimefon and triadimenol) for wheat straw.

Triadimenol

Field trials involving triadimenol in barley were available from Australia, Canada, France, Germany, Italy, Spain, the United Kingdom and the United States. The GAP of Cyprus and Poland for the foliar application of triadimenol to barley is 0.13 kg ai/ha with a PHI of 35 days. The residues from trials matching this GAP were: 0.07, < 0.1, 0.1, 0.13, 0.17, 0.21, 0.24, 0.25, 0.29, 0.31, 0.41, 0.45, 0.48, 0.5, 0.55, 0.61, 0.62, 0.64, 0.67, 0.69, 0.81, 0.84, 0.85, 0.86, 0.92, 0.98, 1.2, 1.3, 1.4 and 4.1 mg/kg (sum of triadimefon and triadimenol) for barley straw.

The GAP for the use of triadimenol as a seed dressing in barley were reported with application rates of 0.022 kg ai/100 kg seed (PHI unnecessary) from Australia and New Zealand. The residue from one trial matching this GAP was < 0.04 mg/kg (sum of triadimefon and triadimenol) for barley straw.

The GAP for the use of triadimenol as a seed dressing in barley for Austria, Brazil, Germany, Ireland, Mexico and the United Kingdom is 0.04 kg ai/100 kg/seeds with no specified PHI. The residues from trials matching this GAP were: < 0.01(14), 0.01, < 0.05(6), 0.05 and < 0.1(20) mg/kg (sum of triadimefon and triadimenol) for barley straw.

Field trials involving triadimenol in oats were available from Brazil, Canada, Germany and the United States. The GAP of the United Kingdom for the foliar application of triadimenol to oats is 0.13 kg ai/ha with growth dependent PHI. The residues from trials matching the GAP were: 1.6 and 2.1 mg/kg (sum of triadimefon and triadimenol) for oat straw.

The GAP in oats for the use of triadimenol as a seed dressing in Australia is 0.015 kg ai/100 kg seeds with no specified PHI. The residues from trials matching this GAP were < 0.1(4) mg/kg (sum of triadimefon and triadimenol) for oat straw.

The GAP in oats for the use of triadimenol as a seed dressing was reported from Brazil, Ireland and United Kingdom with application rates of 0.04 kg ai/100 kg seed (PHI unnecessary). The residues from trials matching this GAP were: < 0.01(9), 0.03(4), 0.05, < 0.1(3) mg/kg (sum of triadimefon and triadimenol) for oat straw.

The GAP of Finland for the use of triadimenol as a seed dressing in barley is 0.045 kg ai/100 kg seeds with no specified PHI. The residues from trials matching this GAP were: < 0.01 and 0.02 mg/kg (sum of triadimefon and triadimenol) for oat grain. Field trials involving triadimenol in rye are available from Canada, Germany and the United States.

The GAP of Poland and the United Kingdom for the foliar application of triadimenol to rye is 0.13 kg ai/ha with a PHI of 35 days. The residues from trials matching this GAP were: 0.36, 1.2, 1.4, 1.9 and 1.9 mg/kg (sum of triadimefon and triadimenol) for rye straw.

The GAP from Ireland and the United Kingdom for the use of triadimenol as a seed dressing in rye were reported with an application rate of 0.038 kg ai/100 kg seed. The residues from trials matching this GAP were: < 0.01(7) and < 0.1(4) mg/kg (sum of triadimefon and triadimenol) for rye straw.

Field trials involving triadimenol in wheat were available from Australia, Brazil, Canada, France, Germany, Hungary, Italy, New Zealand, Spain and the United States. The GAP of Australia, Bulgaria, Cyprus, Italy and Poland for the foliar application of triadimenol to wheat is 0.13 kg ai/ha with a PHI of 28 to 35 days. The residues from trials matching this GAP were: 0.12, 0.12, 0.15, 0.16, 0.27, 0.27, 0.29, 0.31, 0.32, 0.39, 0.46, 0.47, 0.53, 0.56, 0.59, 0.66, 0.68, 0.7, 0.72, 0.75, 0.79, 0.82, 0.82, 0.83, 0.89, 0.91, 0.93, 1.0(3), 1.2, 1.3(3), 1.4, 2.1 and 2.5 mg/kg (sum of triadimefon and triadimenol) for wheat straw.

In France the GAP for the foliar application of triadimenol to wheat is 0.075 kg ai/ha with a PHI of 28 days. The residue from one trial matching the GAP was 0.62 mg/kg (sum of triadimefon and triadimenol) for wheat straw.

The GAP for the use of triadimenol as a seed dressing in wheat were reported from Brazil, Ireland, and the United Kingdom with an application rate of 0.038 kg ai/100 kg seed (PHI unnecessary). The residues from trials matching this GAP were: < 0.01(17), 0.02, 0.03, 0.03, 0.04, < 0.05(8), < 0.1, < 0.1, 0.15 and 0.2 mg/kg (sum of triadimefon and triadimenol) for wheat straw.

The Meeting decided to pool the data for triadimefon and triadimenol from all foliar GAPs for cereal straw. The combined results (fresh, n=101) in ranked order (median underlined) were: 0.07, < 0.1(6), 0.1, 0.12, 0.12, 0.13, 0.15, 0.16, 0.17, 0.21, 0.22, 0.23, 0.24, 0.25, 0.27, 0.27, 0.29, 0.29, 0.31, 0.31, 0.32, 0.35, 0.36, 0.39, 0.41, 0.42, 0.45, 0.45, 0.46, 0.47, 0.48, 0.48, 0.5, 0.53(3), 0.55, 0.56, 0.59, 0.61, 0.62, 0.62, 0.63, 0.63, 0.64, 0.66, 0.67, 0.68, 0.69, 0.7(3), 0.72, 0.75, 0.79, 0.81, 0.82, 0.82, 0.83, 0.83, 0.84, 0.85, 0.86, 0.89, 0.9, 0.91, 0.91, 0.92, 0.93, 0.98, 1.0(3), 1.1, 1.2(3), 1.3(4), 1.4(3), 1.5, 1.6, 1.7, 1.9(3), 2.1, 2.1, 2.5, 2.7, 2.7 and 4.1 mg/kg (sum of triadimefon and triadimenol).

The Meeting estimated an STMR value of 0.64 mg/kg and a highest residue of 4.1 mg/kg for the sum of triadimefon and triadimenol in cereal straw.

On a dry weight basis (88% DM) the values were: 0.08, < 0.11(6), 0.11, 0.14, 0.14, 0.15, 0.17, 0.18, 0.19, 0.24, 0.25, 0.26, 0.27, 0.28, 0.31, 0.31, 0.33, 0.33, 0.35, 0.35, 0.36, 0.4, 0.41, 0.44, 0.47, 0.48, 0.51, 0.51, 0.52, 0.53, 0.55, 0.55, 0.57, 0.6(3), 0.63, 0.64, 0.67, 0.69, 0.7, 0.7, 0.72, 0.72, 0.73, 0.75, 0.76, 0.77, 0.78, 0.8(3), 0.82, 0.85, 0.9, 0.92, 0.93, 0.93, 0.94, 0.94, 0.95, 0.97, 0.98, 1(4), 1.1(6), 1.3, 1.4(3), 1.5(4), 1.6(3), 1.7, 1.8, 1.9, 2.2(3), 2.4, 2.4, 2.8, 3.1, 3.1 and 4.7 mg/kg (sum of triadimefon and triadimenol).

Based on the uses of both triadimefon and triadimenol in barley, oats, rye and wheat after foliar treatment the Meeting estimated an MRL of 5 mg/kg (sum of triadimefon and triadimenol) for straw and fodder (dry) of cereal grains.

The Meeting withdraws its previous recommendations for the triadimefon in barley, oats, rye and wheat straw and fodder, dry of 2 mg/kg and for triadimenol in barley, oats, rye and wheat straw and fodder, dry of 5 mg/kg.

Fate of residues during processing

Triadimefon and triadimenol are in general stable to hydrolysis during pasteurization, baking and boiling conditions.

Information on the fate of triadimefon and triadimenol during food processing was available for apples, grapes, pineapples, tomatoes and coffee beans.

Calculated processing factors and the mean or best estimate are summarized in the following table (based on the total triadimefon and triadimenol residues).

Raw agricultural commodity (RAC)	Processed commodity	Calculated processing factors	Estimate of the processing factor
Apples	washed	0.83, 1.0	0.92
	juice	0.5, < 0.56, < 0.63, < 0.63, < 0.7, < 0.8, < 0.83	0.63
	sauce	< 0.5, < 0.56, < 0.63, < 0.63, < 0.7, < 0.8, < 0.83	0.63
Grapes	must	0.13, 0.18, < 0.24, < 0.25, 0.29, < 0.35, < 0.41, < 0.42, < 0.47, 0.5, < 0.56, < 0.63, < 0.71(3), < 0.83	0.45
	wine	0.09, 0.1, < 0.25, 0.29, < 0.33, < 0.33, < 0.35, < 0.41, < 0.42, < 0.5, < 0.56, < 0.63, < 0.71(3), < 0.83	0.42
	juice	< 0.25, 0.33, < 0.56, 1.1	0.45
	raisins	0.67, 1.6, 2.3, 3.1, 4.5, 5.7, 5.8	3.1
	wet pomace	1.3, 2.4, 3.5, 16	3
	dry pomace	3.5, 3.9, 7.4, 33	5.7
Pineapples	bran	1.3	1.3
	peel washed	0.4	0.4
Tomatoes	washed	0.94, 1	0.97
	peeled	0.29, 0.37	0.33
	juice	0.56, 0.59, 0.74	0.59
	puree	0.78	0.78
	paste	1.9, 5.2, 5.9	5.2
	preserve	0.58, 0.59	0.585
	catsup	2.4	2.4
	wet pulp	3.6	3.6
	dry pulp	14	14
Coffee	roasted beans	1.1	1.1
	instant coffee	1.3	1.3

For apples the estimated processing factors are applied to the STMR value of 0.06 mg/kg for pome fruits from the supervised trials. The Meeting estimated STMR-P values for apple juice and apple sauce of 0.04 mg/kg. For apples no processing data for wet pomace is available.

For grapes the estimated processing factors are applied to the STMR value of 0.15 mg/kg from the supervised trials. The Meeting estimated STMR-P values for grape must of 0.07 mg/kg, wine of 0.06 mg/kg, grape juice of 0.07 mg/kg, raisins of 0.47 mg/kg, wet grape pomace of 0.45 mg/kg and dry grape pomace of 0.86 mg/kg. The processing factor for raisins (3.1) was applied to the HR for grapes (3.2 mg/kg) to produce an HR-P value for raisins (9.9 mg/kg).

The Meeting estimated a maximum residue level for the sum of triadimefon and triadimenol, calculated as triadimefon in dried grapes of 10 mg/kg.

For pineapples the estimated processing factors are applied to the STMR value of 1.5 mg/kg for whole pineapple fruits from the supervised trials. The Meeting estimated STMR-P values for pineapple bran of 1.95 mg/kg. For pineapple pulp, juice and syrup the submitted data is not sufficient for a proposal of processing factors.

For tomatoes the estimated processing factors are applied to the STMR value of 0.15 mg/kg from the supervised trials. The Meeting estimated STMR-P values for peeled tomatoes of 0.05 mg/kg, tomato paste of 0.78 mg/kg, tomato puree of 0.12 mg/kg, tomato juice of 0.09 mg/kg, tomato preserve of 0.09 mg/kg, tomato catsup of 0.36 mg/kg, wet tomato pulp of 0.54 mg/kg and dry tomato pulp of 2.1 mg/kg.

Based on the residue data for sweet peppers (< 0.05, < 0.05, 0.11, 0.16, 0.21, 0.21, 0.23, 0.33, 0.33 and 0.38 mg/kg) and the default processing factor for sweet peppers to dried chilli peppers of 10 the Meeting estimated a maximum residue level of 5 mg/kg and an STMR value of 2.1 mg/kg for dried chilli peppers.

For coffee the estimated processing factors are applied to the STMR value of 0.05 mg/kg from the supervised trials. The Meeting estimated STMR-P values for roasted coffee beans of 0.06 mg/kg and instant coffee of 0.07 mg/kg.

Livestock dietary burden

The Meeting estimated the dietary burden of triadimefon and triadimenol in farm animals on the basis of the diets listed in Annex 6 of the 2006 JMPR Report (OECD Feedstuffs Derived from Field Crops). Calculation from highest residue, STMR (some bulk commodities) and STMR-P values provides the levels in feed suitable for estimating MRLs, while calculation from STMR and STMR-P values for feed is suitable for estimating STMR values for animal commodities.

Estimated maximum and mean livestock dietary burdens

Dietary burden calculations for beef cattle, dairy cattle, broilers and laying poultry are provided in Annex 6. The calculations were made according to the animal diets from US-Canada, EU and Australia in the OECD Table (Annex 6 of the 2006 JMPR Report).

	Livestock dietary burden, sum of triadimefon and triadimenol, ppm of dry matter diet					
	US-Canada		EU		Australia	
	max	mean	max	mean	max	mean
Beef cattle	12	3.1	9.6	2.1	40 [a]	8.8 [b]
Dairy cattle	18	4.4	9.7	2.1	27 [c]	7.7 [d]
Poultry - broiler	0.1	0.04	0.1	0.04	0.1	0.04
Poultry - layer	0.1	0.04	4.7 [e]	1.0 [f]	0.09	0.03

a - Highest maximum beef cattle dietary burden suitable for MRL estimates for mammalian meat

b - Highest mean beef cattle dietary burden suitable for STMR estimates for mammalian meat.

c - Highest maximum dairy dietary burden suitable for MRL estimates for milk.

d - Highest mean dairy cattle dietary burden suitable for STMR estimates for milk.

e - Highest maximum poultry dietary burden suitable for MRL estimates for poultry meat and eggs.

f - Highest mean poultry dietary burden suitable for STMR estimates for poultry meat and eggs.

Livestock feeding studies

The Meeting received animal feeding studies on dairy cattle and laying hens. In these studies residues were analysed with two different methods. Only the results from the specific determination of triadimefon and triadimenol are used in this appraisal according to the residue definition for animal matrices. Total triadimefon and triadimenol residues in animal matrices are reported in the evaluation.

Three groups of cows were dosed at levels equivalent to 25 ppm (0.75 mg/kg bw) (1×), 75 ppm (2.3 mg/kg bw) (3×) and 250 ppm (3.7 mg/kg bw) (10×) triadimefon and triadimenol (1:1 mixture) in the diet together with a control group (0×). In all matrices except fat (3× and 10×) and milk (10×) no residues above the LOQs (0.001 mg/kg for milk, 0.01 mg/kg for other matrices) were detected. In cattle fat from the 3× group the mean value of triadimefon and triadimenol residues was 0.017 mg/kg (highest value 0.02 mg/kg). In the 10× group the mean fat residues were 0.02 mg/kg (highest value 0.025 mg/kg). For milk in the 10× group residues at the LOQ of 0.001 mg/kg were detected.

In the study with laying hens four hens per dose group received levels of 10 ppm (0.71 mg/kg bw), 25 ppm (1.8 mg/kg bw), 75 ppm (5.2 mg/kg bw) and 250 ppm (16.6 mg/kg bw) triadimefon and triadimenol (1:1 mixture) in the diet together with a control group. In liver and muscle no residues above the LOQ of 0.01 mg/kg were detected in all dose groups. Poultry fat contained measurable residues of 0.015 mg/kg in the mean only in the highest dose group (highest value of 0.02 mg/kg). Poultry skin showed one detectable residue of 0.03 mg/kg in the 75 ppm group. In the higher dose group no residues above the LOQ were found in poultry fat. In eggs residues were found in all dose groups: 10 ppm=0.002 mg/kg (highest value 0.003 mg/kg), 25 ppm=0.004 mg/kg (highest value 0.006 mg/kg), 75 ppm=0.008 mg/kg (highest value 0.01 mg/kg) and 250 ppm=0.03 mg/kg (highest value 0.04 mg/kg).

A linear relation between the dose levels and the residue concentrations was observed.

Animal commodity maximum residue levels

The dietary burden for beef and dairy cattle was estimated at a maximum level of 40 and 27 ppm respectively. For poultry the maximum burden was estimated at a level of 4.7 ppm. The mean dietary burdens were estimated at 8.8 and 7.7 ppm for beef and dairy cattle and 1.0 ppm for poultry.

Dietary burden (ppm) Feeding level [ppm]		Milk	Muscle	Liver	Kidney	Fat
		Mean	Highest	Highest	Highest	Highest
MRL, beef	(40)		(< 0.01)	(< 0.01)	(< 0.01)	(0.01)
cattle	[25]					[< 0.01]
	[75]		[< 0.01]	[< 0.01]	[< 0.01]	[0.02]
MRL,	(27)	(< 0.01)				
dairy cattle	[25]					
	[75]	[< 0.001]				
STMR	(8.8)		(< 0.01)	(< 0.01)	(< 0.01)	(< 0.01)
beef cattle	[25]					[< 0.01]
	[75]		[< 0.01]	[< 0.01]	[< 0.01]	[0.02]
STMR	(7.7)	(< 0.01)				
dairy cattle	[25]					
	[75]	[< 0.001]				

Dietary burden (ppm) Feeding level [ppm]		Eggs		Muscle	Liver	Fat
		Highest	Mean	Highest	Highest	Highest
MRL,	(4.7)	(< 0.01)		(< 0.01)	(< 0.01)	(< 0.01)
poultry-	[10]					
layer	[25]	0.003				
	[75]	0.006		[< 0.01]	[< 0.01]	[< 0.01]
STMR	(1.0)		[< 0.01]	(< 0.01)	(< 0.01)	(< 0.01)
poultry-	[10]					
broiler	[25]		0.002			
	[75]		0.004	[< 0.01]	[< 0.01]	[< 0.01]

No residues are expected above the LOQ of 0.01 mg/kg for all cattle animal matrices (except meat in the fat). For eggs detectable residues were found in the livestock feeding studies, but the levels for the sum of triadimefon and triadimenol are about an order of magnitude below the LOQ for the enforcement method.

The Meeting estimated maximum residue levels for the sum of triadimefon and triadimenol of 0.01* mg/kg in edible offal (mammalian), milk, poultry meat, poultry offal and eggs. The Meeting also estimated a maximum residue levels for the sum of triadimefon and triadimenol of 0.02 mg/kg in meat (from mammals except marine mammals) [in the fat].

The HR and STMR values for the sum of triadimefon and triadimenol for meat (from mammals except marine mammals) as muscle was estimated at 0 mg/kg. For meat (from mammals except marine mammals) as fat and eggs HR and STMR values were estimated at 0.01 mg/kg for both. The HR and STMR values for the sum of triadimefon and triadimenol for edible offal (mammalian), milk, poultry meat and poultry offal were estimated at 0 mg/kg.

The Meeting withdraws its previous recommendations for triadimefon in milk, meat (from mammals except marine mammals), poultry meat and eggs of 0.05* mg/kg. The Meeting also withdraws the previous recommendations for triadimenol in milk of 0.01* mg/kg and in meat (from mammals except marine mammals), poultry meat and eggs of 0.05* mg/kg.

RECOMMENDATIONS

The Meeting estimated the STMR, HR and MRL values shown below.

Definition of the residue (for compliance with the MRL and for estimation of dietary intake) for plant and animal commodities: sum of triadimefon and triadimenol.
Separate MRLs for triadimefon and triadimenol previously recommended by the Meeting are withdrawn.

The residue is fat soluble.

Commodity		MRL, mg/kg		STMR or STMR-P, mg/kg	HR, mg/kg
CCN	Name	New	Previous		
FP 0226	Apples	0.3[c]	-	0.06	0.18
	Apple juice			0.04	
	Apple sauce			0.04	
VS 0620	Artichoke, globe	0.7[c]	1[c]	0.14	0.55
FI 0327	Bananas	1[c]	0.2 [c]	0.04	0.3
GC 0640	Barley	W	0.5 [a]		
AS 0640	Barley straw and fodder, dry	W	2 [b] 5 [c]		
	Cereal forage			2.2 (fresh matter)	10 (fresh matter)
GC 0080	Cereal grain [d]	0.2[a]		0.05	0.15
	Cereal hay			0.06	0.98
VD 0524	Chick-pea	W	0.05* [a]		
HS 0444	Chilli peppers, dried	5 [a]		2.1	
SB 0716	Coffee beans	0.5 [c]	0.05* [b] 0.1* [c]	0.05	0.4
	Coffee beans, roasted			0.06	

Commodity		MRL, mg/kg		STMR or STMR-P, mg/kg	HR, mg/kg
CCN	Name	New	Previous		
FB 0021	Currants, black, red, white	0.7 [c]	0.2 [b] 0.5 [c]	0.23	0.49
DF 0269	Dried grapes	10 [a]		0.47	9.9
MO 0105	Edible offal (mammalian)	0.01* [a]		0	0
PE 0112	Eggs	0.01* [a]	0.05* [a]	0.01	0.01
AM 1051	Fodder Beets	W	0.05* [a]		
VO 0050	Fruiting vegetables other than cucurbits [e]	1 [a]		0.15	0.68
VC 0045	Fruiting vegetables, cucurbits	0.2 [a]	0.1 [b] 2 [c]	0.05	0.2
FB 0269	Grapes	5 [a]	0.5 [b] 2 [c]	0.15	3.2
	Grapes juice			0.07	0.07
	Grapes must			0.07	
DH 1100	Hops	W	10 [b] 5 [c]		
FI 0345	Mango	W	0.05* [a]		
MM 0095	Meat (from mammals other than marine mammals) [in the fat]	0.02 [a]	0.05* [a]	0.01	0.01
ML 0106	Milks	0.01* [a]	0.05* [b] 0.01* [c]	0	0
GC 0647	Oats	W	0.1 [b] 0.2 [c]		
AS 0647	Oats straw and fodder, dry	W	2 [b] 5 [c]		
VA 0389	Onion, spring	W	0.05* [a]		
VA 0387	Onion, welsh	W	0.05* [a]		
VP 0063	Peas	W	0.05* [b] 0.1 [c]		
VO 0445	Peppers, sweet	W	0.1 [a]		
	Pineapple process residue			1.95	
FI 0353	Pineapples	5 [c] (po)	2 [b] 1 [c]	0.11	0.16
FP 0009	Pome fruit	W	0.5 [a]	0.06	0.18
PM 0110	Poultry meat	0.01* [a]	0.05* [a]	0	0
PO 0111	Poultry, Edible offal of	0.01* [a]		0	0
FB 0272	Raspberries, red and black	W	1 [b] 0.5 [c]		
GC 0650	Rye	W	0.1 [b] 0.2 [c]		
AS 0650	Rye straw and fodder, dry	W	2 [b] 5 [c]		
AS 0081	Straw and fodder (dry) of cereal grains, except maize	5 [a]		0.64 (fresh matter)	4.1 (fresh matter)
FB 0275	Strawberries	0.7 [c]	0.1[a]	0.265	0.41
AV 0596	Sugar beet leafs or tops (dry)	2 [c]		0.35	1.1
AV 0596	Sugar beet leaves or tops	2 [c]		0.14 (fresh matter)	0.42 (fresh matter)
VR 0596	Sugar beets	0.05* [c]	0.1* [a]	0.05	0.05

Commodity		MRL, mg/kg		STMR or STMR-P, mg/kg	HR, mg/kg
CCN	Name	New	Previous		
VO 0448	Tomato	W	0.2 [b] 0.5 [c]		
	Tomato juice			0.09	
	Tomato paste			0.78	
	Tomato puree			0.12	
GC 0654	Wheat	W	0.1 [b] 0.2 [c]		
AS 0654	Wheat straw and fodder, dry	W	2 [b] 5 [c]		
	Wine			0.06	

a - Based on triadimefon and triadimenol uses

b - Based on triadimefon use only

c - Based on triadimenol use only

d - Except maize and rice

e - Except fungi and exept sweet and fresh corn

DIETARY RISK ASSESSMENT

Long-term intake

The International Estimated Daily Intakes (IEDI) of triadimefon and triadimenol, based on the estimated STMRs were 1 – 4% of the maximum ADI (0.03 mg/kg bw). The Meeting concluded that the long-term intake of residues of triadimefon and triadimenol from the uses that have been considered by the JMPR is unlikely to present a public health concern.

Short-term intake

The International Estimated Short Term Intake (IESTI) of triadimefon and triadimenol calculated on the basis of the estimations made by JMPR represented for children 0 – 60% and for the general population 0 – 20% of the AR_fD (0.08 mg/kg bw). The IESTI for grapes (excluding wine) for children was 220% of the ARfD.

The Meeting concluded that the short-term intake of residues of triadimefon and triadimenol resulting from the uses that have been considered by the JMPR, except the use on grapes, is unlikely to present a public health concern. The information provided to the JMPR precludes an estimate that the dietary intake would be below the ARfD for consumption of grapes by children. The Meeting noted that no alternative GAP for triadimefon or triadimenol in grapes could be used to identify a lower HR value.

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TRIA-051	Anon.	1982e	Modification M024 of method 00254: Residue analysis procedure for Bayleton and metabolites in barley and wheat Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 00254/M024, Edition Number: M-017789-02-1 Method Report No.: AS 82-1547

Code	Author	Year	Title, Institute, Report reference
			Method Report No.: F168 Date: 1982-05-25 Non GLP, unpublished
TRIA-052	Anon.	1982f	Modification M025 of method 00254: Residue analysis procedure for Bayleton and metabolites in barley and wheat Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 00254/M025, Edition Number: M-017790-02-1 Method Report No.: AS 82-1546 Method Report No.: F168 Date: 1982-06-03 Non GLP, unpublished
TRIA-053	Anon.	1982g	MEB 6447; 5 WP; grape; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9014-81, Edition Number: M-092667-02-2 Date: 1982-12-17 Non GLP, unpublished
TRIA-054	Anon.	1982h	MEB 6447; 5 WP; grape; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9015-81, Edition Number: M-092666-02-2 Date: 1982-12-17 Non GLP, unpublished
TRIA-055	Anon.	1982i	MEB 6447; 5 WG; grape; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9000-81, Edition Number: M-092671-02-2 Date: 1982-12-17 Non GLP, unpublished
TRIA-056	Anon.	1982j	MEB 6447; 250 EC; pineapple; Ivory coast; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9003-81, Edition Number: M-104467-01-2 Date: 1982-01-05 Non GLP, unpublished
TRIA-057	Anon.	1982k	MEB 6447; 250 EC; pineapple; Ivory coast; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9004-81, Edition Number: M-104471-01-2 Date: 1982-01-05 Non GLP, unpublished
TRIA-058	Anon.	1982l	MEB 6447; 25 WP; anilazine; 75 WP; spring barley; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9035-82, Edition Number: M-182430-01-2 Date: 1982-11-05 Non GLP, unpublished
TRIA-059	Anon.	1982m	MEB 6447; 25 WP; anilazine; 480 SC; winter barley; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9043-82, Edition Number: M-182483-01-2 Date: 1982-10-29 Non GLP, unpublished
TRIA-060	Anon.	1982n	MEB 6447; 25 WP; anilazine; 480 SC; winter barley; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9044-82, Edition Number: M-182491-01-2 Date: 1982-10-29 Non GLP, unpublished
TRIA-061	Anon.	1982o	MEB 6447; 25 WP; anilazine; 75 WP; winter barley; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9029-82, Edition Number: M-182407-01-2 Date: 1982-10-29 Non GLP, unpublished
TRIA-062	Anon.	1982p	MEB 6447; 25 WP; anilazine; 75 WP; winter barley; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9032-82, Edition Number: M-182423-01-2 Date: 1982-10-29 Non GLP, unpublished
TRIA-063	Anon.	1982q	MEB 6447; 25 WP; anilazine; 480 SC; spring barley; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9045-82, Edition Number: M-182333-01-2 Date: 1982-11-05 Non GLP, unpublished
TRIA-064	Anon.	1982r	KWG 0519; 150 FS; barley; USA Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 80892, Edition Number: M-031238-01-1 Date: 1982-05-19 Non GLP, unpublished
TRIA-065	Anon.	1982s	KWG 0519; 150 FS; barley; USA Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 80893, Edition Number: M-031232-01-1 Date: 1982-05-19 Non GLP, unpublished
TRIA-066	Anon.	1982t	KWG 0519; 150 FS; barley; USA Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 80894, Edition Number: M-031230-01-1 Date: 1982-05-19 Non GLP, unpublished
TRIA-067	Anon.	1982u	KWG 0519; 150 FS; barley; USA Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 80885, Edition Number: M-031262-01-1 Date: 1982-05-25 Non GLP, unpublished
TRIA-068	Anon.	1982v	KWG 0519; 150 FS; barley; USA Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 80886, Edition Number: M-031260-01-1 Date: 1982-06-02 Non GLP, unpublished
TRIA-069	Anon.	1982w	KWG 0519; 150 FS; barley; USA Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 80887, Edition Number: M-031259-01-1 Date: 1982-05-19 Non GLP, unpublished
TRIA-070	Anon.	1982x	KWG 0519; 150 FS; barley; USA Mobay Chemical Corporation, USA

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			Bayer CropScience AG, Report No.: 80888, Edition Number: M-031253-01-1 Date: 1982-06-03 Non GLP, unpublished
TRIA-071	Anon.	1982y	KWG 0519; 150 FS; barley; USA Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 80889, Edition Number: M-031250-01-1 Date: 1982-06-02 Non GLP, unpublished
TRIA-072	Anon.	1982z	KWG 0519; 150 FS; barley; USA Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 80890, Edition Number: M-031246-01-1 Date: 1982-05-19 Non GLP, unpublished
TRIA-073	Anon.	1982aa	KWG 0519; 150 FS; barley; USA Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 80891, Edition Number: M-031240-01-1 Date: 1982-05-19 Non GLP, unpublished
TRIA-074	Anon.	1982ab	KWG 0519; 150 FS; barley; USA Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 80895, Edition Number: M-031226-01-1 Date: 1982-05-19 Non GLP, unpublished
TRIA-075	Anon.	1982ac	KWG 0519; 250 EC; barley; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9947-82, Edition Number: M-031183-01-2 Date: 1982-10-21 Non GLP, unpublished
TRIA-076	Anon.	1982ad	KWG 0519; 250 EC; barley; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9948-82, Edition Number: M-031180-01-2 Date: 1982-10-21 Non GLP, unpublished
TRIA-077	Anon.	1982ae	KWG 0519; 25 WP; barley; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9910-82, Edition Number: M-031214-02-2 Date: 1982-10-18 Non GLP, unpublished
TRIA-078	Anon.	1982af	KWG 0519; 25 WP; barley; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9911-82, Edition Number: M-031211-01-2 Date: 1982-10-18 Non GLP, unpublished
TRIA-079	Anon.	1982ag	KWG 0519; 250 EC; barley; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9937-82, Edition Number: M-031202-01-2 Date: 1982-09-20 Non GLP, unpublished
TRIA-080	Anon.	1982ah	KWG 0519; 250 EC; barley; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9938-82, Edition Number: M-031195-01-2 Date: 1982-09-20 Non GLP, unpublished
TRIA-081	Anon.	1982ai	KWG 0519; 25 WP; barley; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9900-82, Edition Number: M-031222-01-2 Date: 1982-09-20 Non GLP, unpublished
TRIA-082	Anon.	1982aj	KWG 0519; 150 FS; oats; USA Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 80901, Edition Number: M-031303-01-1 Date: 1982-05-19 Non GLP, unpublished
TRIA-083	Anon.	1982ak	KWG 0519; 150 FS; oats; USA Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 80902, Edition Number: M-031294-01-1 Date: 1982-06-03 Non GLP, unpublished
TRIA-084	Anon.	1982al	KWG 0519; 150 FS; oats; USA Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 80903, Edition Number: M-031269-01-1 Date: 1982-05-19 Non GLP, unpublished
TRIA-085	Anon.	1982am	KWG 0519; 150 FS; oats; USA Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 80896, Edition Number: M-031314-01-1 Date: 1982-05-19 Non GLP, unpublished
TRIA-086	Anon.	1982an	KWG 0519; 150 FS; oats; USA Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 80897, Edition Number: M-031313-01-1 Date: 1982-05-19 Non GLP, unpublished
TRIA-087	Anon.	1982ao	KWG 0519; 150 FS; oats; USA Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 80898, Edition Number: M-031308-01-1 Date: 1982-05-19 Non GLP, unpublished
TRIA-088	Anon.	1982ap	KWG 0519; 150 FS; oats; USA Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 80899, Edition Number: M-031307-01-1 Date: 1982-05-19 Non GLP, unpublished
TRIA-089	Anon.	1982aq	KWG 0519; 150 FS; oats; USA Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 80900, Edition Number: M-031305-01-1 Date: 1982-05-19 Non GLP, unpublished
TRIA-090	Anon.	1982ar	KWG 0519; 150 FS; oats; USA Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 80904, Edition Number: M-031267-01-1 Date: 1982-05-19 Non GLP, unpublished
TRIA-091	Anon.	1982as	KWG 0519; 150 FS; oats; USA Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 80905, Edition Number: M-031265-01-1 Date: 1982-05-19 Non GLP, unpublished
TRIA-092	Anon.	1982at	KWG 0519; 150 FS; rye; Canada Mobay Chemical Corporation, USA

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			Bayer CropScience AG, Report No.: 80908, Edition Number: M-031441-01-1 Date: 1982-06-03 Non GLP, unpublished
TRIA-093	Anon.	1982au	KWG 0519; 150 FS; rye; USA Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 80911, Edition Number: M-031423-01-1 Date: 1982-05-18 Non GLP, unpublished
TRIA-094	Anon.	1982av	KWG 0519; 150 FS; rye; USA Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 80906, Edition Number: M-031455-01-1 Date: 1982-05-18 Non GLP, unpublished
TRIA-095	Anon.	1982aw	KWG 0519; 150 FS; rye; USA Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 80907, Edition Number: M-031448-01-1 Date: 1982-05-18 Non GLP, unpublished
TRIA-096	Anon.	1982ax	KWG 0519; 150 FS; rye; USA Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 80909, Edition Number: M-031436-01-1 Date: 1982-05-19 Non GLP, unpublished
TRIA-097	Anon.	1982ay	KWG 0519; 150 FS; rye; USA Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 80910, Edition Number: M-031430-01-1 Date: 1982-05-18 Non GLP, unpublished
TRIA-098	Anon.	1982az	KWG 0519; 150 FS; rye; USA Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 80912, Edition Number: M-031412-01-1 Date: 1982-05-19 Non GLP, unpublished
TRIA-099	Anon.	1982ba	KWG 0519; 250 EC; rye; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9949-82, Edition Number: M-031376-01-1 Date: 1982-10-21 Non GLP, unpublished
TRIA-100	Anon.	1982bb	KWG 0519; 250 EC; rye; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9950-82, Edition Number: M-031363-01-2 Date: 1982-10-21 Non GLP, unpublished
TRIA-101	Anon.	1982bc	KWG 0519; 25 WP; rye; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9912-82, Edition Number: M-031405-01-2 Date: 1982-10-18 Non GLP, unpublished
TRIA-102	Anon.	1982bd	KWG 0519; 25 WP; rye; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9913-82, Edition Number: M-031393-01-2 Date: 1982-10-18 Non GLP, unpublished
TRIA-103	Anon.	1982be	MEB 6447; 25 WP; anilazine; 480 SC; spring wheat; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9047-82, Edition Number: M-182402-01-2 Date: 1982-11-05 Non GLP, unpublished
TRIA-104	Anon.	1982bf	MEB 6447; 25 WP; anilazine; 75 WP; spring wheat; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9037-82, Edition Number: M-182473-01-2 Date: 1982-11-05 Non GLP, unpublished
TRIA-105	Anon.	1982bg	MEB 6447; 25 WP; anilazine; 480 SC; winter wheat; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9046-82, Edition Number: M-182382-01-2 Date: 1982-11-05 Non GLP, unpublished
TRIA-106	Anon.	1982bh	MEB 6447; 25 WP; anilazine; 75 WP; winter wheat; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9036-82, Edition Number: M-182456-01-2 Date: 1982-11-05 Non GLP, unpublished
TRIA-107	Anon.	1982bi	KWG 0519; 150 FS; wheat; Canada Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 80923, Edition Number: M-031203-01-1 Date: 1982-05-19 Non GLP, unpublished
TRIA-108	Anon.	1982bj	KWG 0519; 150 FS; wheat; Canada Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 80924, Edition Number: M-031200-01-1 Date: 1982-05-19 Non GLP, unpublished
TRIA-109	Anon.	1982bk	KWG 0519; 150 FS; wheat; Canada Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 80925, Edition Number: M-031197-01-1 Date: 1982-05-19 Non GLP, unpublished
TRIA-110	Anon.	1982bl	KWG 0519; 150 FS; wheat; USA Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 80922, Edition Number: M-031209-01-1 Date: 1982-05-19 Non GLP, unpublished
TRIA-111	Anon.	1982bm	KWG 0519; 150 FS; wheat; USA Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 80926, Edition Number: M-031193-01-1 Date: 1982-05-19 Non GLP, unpublished
TRIA-112	Anon.	1982bn	KWG 0519; 150 FS; wheat; USA Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 80927, Edition Number: M-031187-01-1 Date: 1982-05-19 Non GLP, unpublished

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TRIA-113	Anon.	1982bo	KWG 0519; 150 FS; wheat; USA Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 80928, Edition Number: M-031182-01-1 Date: 1982-05-19 Non GLP, unpublished
TRIA-114	Anon.	1982bp	KWG 0518; 150 FS; wheat; Canada Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 80916, Edition Number: M-031339-01-1 Date: 1982-05-18 Non GLP, unpublished
TRIA-115	Anon.	1982bq	KWG 0519; 150 FS; wheat; Canada Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 80917, Edition Number: M-031338-01-1 Date: 1982-05-18 Non GLP, unpublished
TRIA-116	Anon.	1982br	KWG 0519; 150 FS; wheat; USA Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 80913, Edition Number: M-031361-01-1 Date: 1982-06-03 Non GLP, unpublished
TRIA-117	Anon.	1982bs	KWG 0519; 150 FS; wheat; USA Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 80914, Edition Number: M-031352-01-1 Date: 1982-05-25 Non GLP, unpublished
TRIA-118	Anon.	1982bt	KWG 0519; 150 FS; wheat; USA Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 80915, Edition Number: M-031350-01-1 Date: 1982-05-18 Non GLP, unpublished
TRIA-119	Anon.	1982bu	KWG 0519; 150 FS; wheat; USA Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 80918, Edition Number: M-031333-01-1 Date: 1982-06-03 Non GLP, unpublished
TRIA-120	Anon.	1982bv	KWG 0519; 150 FS; wheat; USA Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 80919, Edition Number: M-031330-01-1 Date: 1982-05-25 Non GLP, unpublished
TRIA-121	Anon.	1982bx	KWG 0519; 150 FS; wheat; USA Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 80920, Edition Number: M-031329-01-1 Date: 1982-06-03 Non GLP, unpublished
TRIA-122	Anon.	1982by	KWG 0519; 150 FS; wheat; USA Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 80921, Edition Number: M-031322-01-1 Date: 1982-06-03 Non GLP, unpublished
TRIA-123	Anon.	1982bz	KWG 0519; 250 EC; wheat; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9945-82, Edition Number: M-030956-02-1 Date: 1982-10-18 Non GLP, unpublished
TRIA-124	Anon.	1982ca	KWG 0519; 250 EC; wheat; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9946-82, Edition Number: M-030947-01-2 Date: 1982-10-18 Non GLP, unpublished
TRIA-125	Anon.	1982cb	KWG 0519; 25 WP; wheat; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9908-82, Edition Number: M-030981-01-2 Date: 1982-10-18 Non GLP, unpublished
TRIA-126	Anon.	1982cc	KWG 0519; 25 WP; wheat; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9909-82, Edition Number: M-030978-01-1 Date: 1982-10-18 Non GLP, unpublished
TRIA-127	Anon.	1983	Modification M028 of method 00254: Residue analysis procedure for Bayleton and metabolites in barley and wheat Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 00254/M028, Edition Number: M-017811-01-1 Method Report No.: AS 84-621 Method Report No.: F168 Date: 1983-12-21 Non GLP, unpublished
TRIA-128	Anon.	1983a	MEB 6447; 5 WP; grape; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9016-81, Edition Number: M-092664-02-2 Date: 1983-02-04 Non GLP, unpublished
TRIA-129	Anon.	1983b	MEB 6447; 5 WG; grape; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9001-81, Edition Number: M-092669-02-2 Date: 1983-02-04 Non GLP, unpublished
TRIA-130	Anon.	1983c	KWG 0159; 250 EC; grape; Australia Bayer Australia Ltd., Botany, Australia Bayer CropScience AG, Report No.: 13/83, Edition Number: M-036093-01-1 Date: 1983-02-16 Non GLP, unpublished
TRIA-131	Anon.	1983d	MEB6447; 50 WP; cucumber; USA Mobay Chemical Corporation, Kansas, USA Bayer CropScience AG, Report No.: 81186, Edition Number: M-257990-01-1 Date: 1983-02-02 Non GLP, unpublished
TRIA-132	Anon.	1983e	MEB6447; 50 WP; cucumber; USA Mobay Chemical Corporation, Kansas, USA Bayer CropScience AG, Report No.: 81187, Edition Number: M-257989-01-1 Date: 1983-02-02 Non GLP, unpublished
TRIA-133	Anon.	1983f	MEB6447; 50 WP; cucumber; USA Mobay Chemical Corporation, Kansas, USA Bayer CropScience AG, Report No.: 81188, Edition Number: M-257986-01-1 Date: 1983-02-02 Non GLP, unpublished
TRIA-134	Anon.	1983g	MEB6447; 50 WP; cucumber; USA Mobay Chemical Corporation,

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			Kansas, USA Bayer CropScience AG, Report No.: 81189, Edition Number: M-257985-01-1 Date: 1983-02-02 Non GLP, unpublished
TRIA-135	Anon.	1983h	MEB6447; 50 WP; cucumber; USA Mobay Chemical Corporation, Kansas, USA Bayer CropScience AG, Report No.: 81190, Edition Number: M-257984-01-1 Date: 1983-02-02 Non GLP, unpublished
TRIA-136	Anon.	1983i	MEB6447; 50 WP; cucumber; USA Mobay Chemical Corporation, Kansas, USA Bayer CropScience AG, Report No.: 81191, Edition Number: M-257983-01-1 Date: 1983-02-02 Non GLP, unpublished
TRIA-137	Anon.	1983j	MEB6447; 50 WP; cucumber; USA Mobay Chemical Corporation, Kansas, USA Bayer CropScience AG, Report No.: 81192, Edition Number: M-257981-01-1 Date: 1983-02-02 Non GLP, unpublished
TRIA-138	Anon.	1983k	MEB6447; 50 WP; cucumber; USA Mobay Chemical Corporation, Kansas, USA Bayer CropScience AG, Report No.: 81193, Edition Number: M-257980-01-1 Date: 1983-02-02 Non GLP, unpublished
TRIA-139	Anon.	1983l	MEB6447; 50 WP; cucumber; USA Mobay Chemical Corporation, Kansas, USA Bayer CropScience AG, Report No.: 81194, Edition Number: M-257979-01-1 Date: 1983-02-02 Non GLP, unpublished
TRIA-140	Anon.	1983m	MEB6447; 50 WP; cucumber; USA Mobay Chemical Corporation, Kansas, USA Bayer CropScience AG, Report No.: 81195, Edition Number: M-257978-01-1 Date: 1983-02-02 Non GLP, unpublished
TRIA-141	Anon.	1983n	MEB6447; 50 WP; cucumber; USA Mobay Chemical Corporation, Kansas, USA Bayer CropScience AG, Report No.: 81196, Edition Number: M-257977-01-1 Date: 1983-02-02 Non GLP, unpublished
TRIA-142	Anon.	1983o	MEB6447; 50 WP; cucumber; USA Mobay Chemical Corporation, Kansas, USA Bayer CropScience AG, Report No.: 81197, Edition Number: M-257975-01-1 Date: 1983-02-02 Non GLP, unpublished
TRIA-143	Anon.	1983p	MEB 6447; 125 EC; anilazine; 480 SC; spring barley; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9052-83, Edition Number: M-182434-01-2 Date: 1983-10-07 Non GLP, unpublished
TRIA-144	Anon.	1983q	MEB 6447; 125 EC; anilazine; 480 SC; winter barley; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9050-83, Edition Number: M-182411-01-2 Date: 1983-10-07 Non GLP, unpublished
TRIA-145	Anon.	1983r	MEB 6647; 125 EC; anilazine; 480 SC; winter barley; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9051-83, Edition Number: M-182418-01-2 Date: 1983-10-07 Non GLP, unpublished
TRIA-146	Anon.	1983s	KWG 0519 & WVII/117 & SAS 9244; 30.7 DS; barley; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 10509-82, Edition Number: M-047496-01-1 Date: 1983-07-13 Non GLP, unpublished
TRIA-147	Anon.	1983t	KWG 0519 & WVII/117 & SAS 9244; 30.7 DS; barley; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 10510-82, Edition Number: M-047483-01-2 Date: 1983-07-13 Non GLP, unpublished
TRIA-148	Anon.	1983u	KWG 0519 & WVII/117 & SAS 9244; 30,7 DS; barley; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 10511-82, Edition Number: M-046977-02-1 Date: 1983-07-13 Non GLP, unpublished
TRIA-149	Anon.	1983v	KWG 0519 & WVII/117 & SAS 9244; 30.7 DS; barley; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 10512-82, Edition Number: M-047527-01-1 Date: 1983-07-13 Non GLP, unpublished
TRIA-150	Anon.	1983w	KWG 0519; 250 EC; anilazine; 480 SC; barley; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9942-83, Edition Number: M-023411-01-2 Date: 1983-10-31 Non GLP, unpublished
TRIA-151	Anon.	1983x	KWG 0519; 250 EC; anilazine; 480 SC; barley; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9940-83, Edition Number: M-023423-01-2 Date: 1983-10-13 Non GLP, unpublished
TRIA-152	Anon.	1983y	KWG 0519; 250 EC; anilazine; 480 SC; barley; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9941-83, Edition Number: M-023416-01-2 Date: 1983-10-13 Non GLP, unpublished

Code	Author	Year	Title, Institute, Report reference
TRIA-153	Anon.	1983z	MEB 6447; 25 WP; oat; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9000-82, Edition Number: M-128922-01-2 Date: 1983-05-04 Non GLP, unpublished
TRIA-154	Anon.	1983aa	MEB 6447; 25 WP; oat; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9001-82, Edition Number: M-128924-01-2 Date: 1983-05-04 Non GLP, unpublished
TRIA-155	Anon.	1983ab	MEB 6447; 25 WP; oat; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9002-82, Edition Number: M-128927-01-2 Date: 1983-05-04 Non GLP, unpublished
TRIA-156	Anon.	1983ac	MEB 6447; 125 EC; rye; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9003-83, Edition Number: M-265990-01-2 Date: 1983-10-14 Non GLP, unpublished
TRIA-157	Anon.	1983ae	MEB 6447; 125 EC; rye; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9005-83, Edition Number: M-265980-01-2 Date: 1983-10-24 Non GLP, unpublished
TRIA-158	Anon.	1983af	MEB 6447; 25 WP; winter rye; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9003-82, Edition Number: M-128940-01-2 Date: 1983-05-04 Non GLP, unpublished
TRIA-159	Anon.	1983ag	MEB 6447; 25 WP; winter rye; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9004-82, Edition Number: M-128942-01-2 Date: 1983-05-04 Non GLP, unpublished
TRIA-160	Anon.	1983ah	MEB 6447; 25 WP; winter rye; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9005-82, Edition Number: M-128944-01-2 Date: 1983-05-04 Non GLP, unpublished
TRIA-161	Anon.	1983ai	MEB 6447; 125 EC; anilazine; 480 SC; spring wheat; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9054-83, Edition Number: M-182476-01-2 Date: 1983-10-13 Non GLP, unpublished
TRIA-162	Anon.	1983aj	MEB 6447; 125 EC; anilazine; 480 SC; winter wheat; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9053-83, Edition Number: M-182465-01-2 Date: 1983-10-13 Non GLP, unpublished
TRIA-163	Anon.	1983ak	KWG 0519; 25 WP; wheat; USA Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 82869, Edition Number: M-030944-01-1 Date: 1983-04-29 Non GLP, unpublished
TRIA-164	Anon.	1983al	KWG 0519; 250 EC; anilazine; 480 SC; wheat; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9944-83, Edition Number: M-023451-01-2 Date: 1983-10-13 Non GLP, unpublished
TRIA-165	Anon.	1983am	KWG 0519; 25 WP; wheat; France; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9921-82, Edition Number: M-030975-01-2 Date: 1983-08-29 Non GLP, unpublished
TRIA-166	Anon.	1983an	KWG 0519; 25 WP; wheat; France; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9922-82, Edition Number: M-030970-02-2 Date: 1983-08-29 Non GLP, unpublished
TRIA-167	Anon.	1983ao	KWG 0519; 25 WP; coffee; Brazil Bayer do Brasil S/A, Sao Paulo, Brazil Bayer CropScience AG, Report No.: 70132, Edition Number: M-036222-01-2 Date: 1983-11-30 Non GLP, unpublished
TRIA-168	Anon.	1984	KWG 0519; 25 WP; Soil; Turnip; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9906-82, Edition Number: M-038586-01-2 Date: 1984-01-23 Non GLP, unpublished
TRIA-169	Anon.	1984a	KWG 0519; 25 WP; Soil; Rape; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9907-82, Edition Number: M-038618-01-2 Date: 1984-01-23 Non GLP, unpublished
TRIA-170	Anon.	1984b	KWG 0519; 25 WP; Soil; Turnip; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9902-82, Edition Number: M-038559-01-2 Date: 1984-01-23 Non GLP, unpublished
TRIA-171	Anon.	1984c	KWG 0519; 25 WP; Soil; Rape; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9903-82, Edition Number: M-038575-01-2 Date: 1984-01-23 Non GLP,

Code	Author	Year	Title, Institute, Report reference
			unpublished
TRIA-172	Anon.	1984d	KWG 0519; 250 EC; Soil; Turnip; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9939-82, Edition Number: M-038651-01-2 Date: 1984-01-23 Non GLP, unpublished
TRIA-173	Anon.	1984e	KWG 0519; 250 EC; Soil; Rape; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9944-82, Edition Number: M-038712-01-2 Date: 1984-01-23 Non GLP, unpublished
TRIA-174	Anon.	1984f	KWG 0519; 250 EC; Soil; Rape; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9940-82, Edition Number: M-038680-01-2 Date: 1984-01-23 Non GLP, unpublished
TRIA-175	Anon.	1984g	KWG 0519; 250 EC; Soil; Turnip; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9943-82, Edition Number: M-038698-01-2 Date: 1984-01-23 Non GLP, unpublished
TRIA-176	Anon.	1984h	Modification M037 of method 00254: Residue analysis procedure for Bayleton and metabolites in barley and wheat Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 00254/M037, Edition Number: M-017844-02-1 Method Report No.: AS 84-874 Method Report No.: F168 Date: 1984-02-14 Non GLP, unpublished
TRIA-177	Anon.	1984i	Modification M055 of method 00254: Residue analysis procedure for Bayleton and metabolites in barley and wheat Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 00254/M055, Edition Number: M-018037-01-1 Method Report No.: AS 84-651 Method Report No.: F168 Date: 1984-02-28 Non GLP, unpublished
TRIA-178	Anon.	1984j	Modification M059 of method 00254: Residue analysis procedure for Bayleton and metabolites in barley and wheat Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 00254/M059, Edition Number: M-018048-02-1 Method Report No.: AS 84-641 Method Report No.: F168 Date: 1984-02-27 Non GLP, unpublished
TRIA-179	Anon.	1984k	MEB 6447; 5 WP; grape; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9024-83, Edition Number: M-092663-01-2 Date: 1984-06-12 Non GLP, unpublished
TRIA-180	Anon.	1984l	MEB 6447; 5 WP; grape; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9028-83, Edition Number: M-092660-01-2 Date: 1984-06-12 Non GLP, unpublished
TRIA-181	Anon.	1984m	MEB 6447; 5 WG; grape; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9038-83, Edition Number: M-092650-01-2 Date: 1984-06-12 Non GLP, unpublished
TRIA-182	Anon.	1984n	MEB 6447; 5 WP; grape; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9032-83, Edition Number: M-092658-01-2 Date: 1984-01-19 Non GLP, unpublished
TRIA-183	Anon.	1984o	MEB 6447; 5 WP; grape; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9033-83, Edition Number: M-092655-01-2 Date: 1984-01-19 Non GLP, unpublished
TRIA-184	Anon.	1984p	MEB 6447; 5 WP; grape; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9034-83, Edition Number: M-092652-01-2 Date: 1984-01-19 Non GLP, unpublished
TRIA-185	Anon.	1984q	MEB 6447; 5 WG; grape; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9094-83, Edition Number: M-092648-01-2 Date: 1984-01-19 Non GLP, unpublished
TRIA-186	Anon.	1984r	MEB 6447; 5 WG; grape; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9095-83, Edition Number: M-092645-01-2 Date: 1984-01-19 Non GLP, unpublished
TRIA-187	Anon.	1984s	MEB 6447; 5 WG; grape; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9096-83, Edition Number: M-092642-01-2 Date: 1984-01-19 Non GLP, unpublished
TRIA-188	Anon.	1984t	Triadimefon residues in table grapes South African Bureau of Standards, Pretoria, South Africa Bayer CropScience AG, Report No.: 311/88563/A43, Edition Number: M-090444-01-1 Date: 1984-10-24 Non GLP, unpublished
TRIA-189	Anon.	1984u	KWG 0519; 25 WG; grape; USA Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 84493, Edition Number: M-036088-01-1 Date: 1984-03-06 Non GLP, unpublished

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TRIA-190	Anon.	1984v	KWG 0519; 25 WG; grape; USA Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 84498, Edition Number: M-036021-01-1 Date: 1984-03-06 Non GLP, unpublished
TRIA-191	Anon.	1984w	KWG 0519; 25 WG; grape; USA Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 84499, Edition Number: M-036013-01-1 Date: 1984-03-06 Non GLP, unpublished
TRIA-192	Anon.	1984x	KWG 0519; 25 WG; grape; USA Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 84494, Edition Number: M-036077-01-1 Date: 1984-03-06 Non GLP, unpublished
TRIA-193	Anon.	1984y	KWG 0519; 25 WG; grape; USA Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 84495, Edition Number: M-036057-01-1 Date: 1984-03-06 Non GLP, unpublished
TRIA-194	Anon.	1984z	KWG 0519; 25 WG; grape; USA Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 84496, Edition Number: M-036038-01-1 Date: 1984-03-06 Non GLP, unpublished
TRIA-195	Anon.	1984aa	KWG 0519; 25 WG; grape; USA Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 84497, Edition Number: M-036035-01-1 Date: 1984-03-06 Non GLP, unpublished
TRIA-196	Anon.	1984ab	KWG 0519; 25 WG; grape; USA Mobay Chemical Corporation, USA Bayer CropScience AG, Report No.: 84501, Edition Number: M-035999-01-1 Date: 1984-03-06 Non GLP, unpublished
TRIA-197	Anon.	1984ac	KWG 0519; 25 WP; banana; Martinique; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9410-84, Edition Number: M-030224-01-2 Date: 1984-07-16 Non GLP, unpublished
TRIA-198	Anon.	1984ad	KWG 0519; 250 EC; melon; France; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9916-83, Edition Number: M-033188-01-2 Date: 1984-03-26 Non GLP, unpublished
TRIA-199	Anon.	1984ad	MEB 6447; 125 EC; winter rye; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9004-83, Edition Number: M-182338-01-2 Date: 1984-03-22 Non GLP, unpublished
TRIA-200	Anon.	1984ae	KWG 0519; 5 WP; melon; France; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9922-83, Edition Number: M-033176-01-2 Date: 1984-03-26 Non GLP, unpublished
TRIA-201	Anon.	1984af	KWG 0519; 5 WP; melon; France; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9926-83, Edition Number: M-033148-01-1 Date: 1984-03-26 Non GLP, unpublished
TRIA-202	Anon.	1984ag	KWG 0519; 5 WP; melon; France; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9927-83, Edition Number: M-033125-01-2 Date: 1984-03-26 Non GLP, unpublished
TRIA-203	Anon.	1984ah	KWG 0519 & WVII/117 & SAS 9244; 231 FS; barley; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9917-84, Edition Number: M-046784-01-1 Date: 1984-12-17 Non GLP, unpublished
TRIA-204	Anon.	1984ai	KWG 0599 & KWG 0519 & WVII/117 & SAS 9244; 323 LS; barley; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 10281-84, Edition Number: M-046666-02-2 Date: 1984-12-20 Non GLP, unpublished
TRIA-205	Anon.	1984aj	KWG 0519 & WVII/117 & Imazalil; 94 FS; barley; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9980-83, Edition Number: M-048083-01-2 Date: 1984-01-16 Non GLP, unpublished
TRIA-206	Anon.	1984ak	KWG 0519 & WVII/117 & Imazalil; 94 FS; barley; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9981-83, Edition Number: M-048071-01-1 Date: 1984-01-16 Non GLP, unpublished
TRIA-207	Anon.	1984al	KWG 0519 & WVII/117 & SAS 9244; 30.7 DS; barley; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 10502-83, Edition Number: M-047520-01-1 Date: 1984-05-09 Non GLP, unpublished
TRIA-208	Anon.	1984am	KWG 0519 & WVII/117 & SAS 9244; 30.7 DS; barley; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 10503-83, Edition Number: M-047512-01-2 Date: 1984-05-09 Non GLP, unpublished
TRIA-209	Anon.	1984an	KWG 0519 & WVII/117 & SAS 9244; 231 FS; barley; Germany;

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			BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9916-84, Edition Number: M-046786-01-2 Date: 1984-12-17 Non GLP, unpublished
TRIA-210	Anon.	1984ao	KWG 0599 & KWG 0519 & WVII/117 & SAS 9244; 323 LS; barley; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 10280-84, Edition Number: M-046673-02-2 Date: 1984-12-20 Non GLP, unpublished
TRIA-211	Anon.	1984ap	KWG 0519 & WVII/117 & SAS 9244; 30.7 DS; barley; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 10500-83, Edition Number: M-047565-01-2 Date: 1984-05-09 Non GLP, unpublished
TRIA-212	Anon.	1984aq	KWG 0519 & WVII/117 & SAS 9244; 30.7 DS; barley; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 10501-83, Edition Number: M-047545-01-2 Date: 1984-05-09 Non GLP, unpublished
TRIA-213	Anon.	1984ar	KWG 0519; 15 DS; barley; Australia Bayer Australia Ltd., Botany, Australia Bayer CropScience AG, Report No.: 32/83, Edition Number: M-030625-01-1 Date: 1984-02-01 Non GLP, unpublished
TRIA-214	Anon.	1984as	KWG 0599 & KWG 0519 & WVII/117 & SAS 9244; 323 LS; oats; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 10285-84, Edition Number: M-046678-02-2 Date: 1984-12-20 Non GLP, unpublished
TRIA-215	Anon.	1984at	KWG 0519 & KWG 0599 & Imazalil; 23.3 DS; oat; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 10282-83, Edition Number: M-068356-01-2 Date: 1984-03-30 Non GLP, unpublished
TRIA-216	Anon.	1984au	KWG 0519 & KWG 0599 & Imazalil; 23.3 DS; oat; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 10283-83, Edition Number: M-068319-01-2 Date: 1984-03-30 Non GLP, unpublished
TRIA-217	Anon.	1984av	KWG 0599 & KWG 0519 & WVII/117 & SAS 9244; 323 LS; oats; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 10284-84, Edition Number: M-046685-02-2 Date: 1984-12-20 Non GLP, unpublished
TRIA-218	Anon.	1984aw	KWG 0519; 15 DS; wheat; Australia Bayer Australia Ltd., Botany, Australia Bayer CropScience AG, Report No.: 42/83, Edition Number: M-033887-01-1 Date: 1984-05-03 Non GLP, unpublished
TRIA-219	Anon.	1984ax	KWG 0519 & WVII/117 & SAS 9244; 231 FS; wheat; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9918-84, Edition Number: M-046954-01-2 Date: 1984-12-17 Non GLP, unpublished
TRIA-220	Anon.	1984ay	KWG 0519 & SAS 9244 & WVII/117; 231 FS; wheat; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9919-84, Edition Number: M-046944-01-2 Date: 1984-12-17 Non GLP, unpublished
TRIA-221	Anon.	1984az	KWG 0519 & WVII/117 & Imazalil; 94 FS; wheat; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9982-83, Edition Number: M-048115-01-2 Date: 1984-03-16 Non GLP, unpublished
TRIA-222	Anon.	1984ba	KWG 0519 & WVII/117 & Imazalil; 94 FS; wheat; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9983-83, Edition Number: M-048108-01-1 Date: 1984-03-16 Non GLP, unpublished
TRIA-223	Anon.	1984bb	KWG 0519; 250 EC; anilazine; 480 SC; wheat; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9483-84, Edition Number: M-023444-01-2 Date: 1984-11-30 Non GLP, unpublished
TRIA-224	Anon.	1984bc	KWG 0519; 250 EC; anilazine; 480 SC; wheat; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9482-84, Edition Number: M-023445-01-2 Date: 1984-12-21 Non GLP, unpublished
TRIA-225	Anon.	1984bd	KWG 0519; 250 EC; wheat; Hungary Ministry of Agriculture and Food, Budapest, Hungary Bayer CropScience AG, Report No.: UNG1/84, Edition Number: M-033861-01-1 Date: 1984-10-01 Non GLP, unpublished
TRIA-226	Anon.	1984be	MEB 6447; 50 WP; tomato; processing; USA Morse Laboratories,

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			Inc., Sacramento, California, USA Bayer CropScience AG, Report No.: 84655, Edition Number: M-257716-01-1 Date: 1984-07-26 Non GLP, unpublished
TRIA-227	Anon.	1984bf	Determination of triadimenol residues in apples South African Bureau of Standards, Pretoria, South Africa Bayer CropScience AG, Report No.: 311/88540/A17, Edition Number: M-036148-01-1 Date: 1984-03-22 Non GLP, unpublished
TRIA-228	Anon.	1985	KWG 0519; 50 EW; apple; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9434-85, Edition Number: M-035847-01-1 Date: 1985-11-19 Non GLP, unpublished
TRIA-229	Anon.	1985a	KWG 0519; 50 EW; apple; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9435-85, Edition Number: M-035839-01-2 Date: 1985-12-09 Non GLP, unpublished
TRIA-230	Anon.	1985b	KWG 0519; 50 EW; apple; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9417-84, Edition Number: M-035894-01-2 Date: 1985-04-24 Non GLP, unpublished
TRIA-231	Anon.	1985c	KWG 0519; 50 EW; apple; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9418-84, Edition Number: M-035887-02-1 Date: 1985-04-24 Non GLP, unpublished
TRIA-232	Anon.	1985d	KWG 0519; 50 EW; apple; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9419-84, Edition Number: M-035869-01-2 Date: 1985-04-24 Non GLP, unpublished
TRIA-233	Anon.	1985e	KWG 0519; 50 EW; apple; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9420-84, Edition Number: M-035863-01-1 Date: 1985-04-24 Non GLP, unpublished
TRIA-234	Anon.	1985f	KWG 0519; 50 EW; grape; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9413-84, Edition Number: M-036351-01-2 Date: 1985-08-12 Non GLP, unpublished
TRIA-235	Anon.	1985g	KWG 0519; 50 EW; grape; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9414-84, Edition Number: M-036338-01-1 Date: 1985-08-12 Non GLP, unpublished
TRIA-236	Anon.	1985h	KWG 0519; 50 EW; grape; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9415-84, Edition Number: M-036315-01-2 Date: 1985-08-12 Non GLP, unpublished
TRIA-237	Anon.	1985i	KWG 0519; 50 EW; grape; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9416-84, Edition Number: M-034902-01-2 Date: 1985-08-12 Non GLP, unpublished
TRIA-238	Anon.	1985j	Triadimenol residues in grapes South African Bureau of Standards, Pretoria, South Africa Bayer CropScience AG, Report No.: 311/88741/B145, Edition Number: M-035897-01-1 Date: 1985-06-21 Non GLP, unpublished
TRIA-239	Anon.	1985k	KWG 0519; 50 EW; currant, red; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9433-84, Edition Number: M-032837-01-2 Date: 1985-04-19 Non GLP, unpublished
TRIA-240	Anon.	1985l	KWG 0519; 50 EW; currant, red; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9434-84, Edition Number: M-032801-01-2 Date: 1985-04-19 Non GLP, unpublished
TRIA-241	Anon.	1985m	KWG 0519; 250 EC; beet; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9406-84, Edition Number: M-033977-01-2 Date: 1985-01-31 Non GLP, unpublished
TRIA-242	Anon.	1985n	KWG 0519; 250 EC; beet; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9407-84, Edition Number: M-033969-01-2 Date: 1985-02-12 Non GLP, unpublished
TRIA-243	Anon.	1985o	KWG 0519; 250 EC; beet; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9408-84, Edition Number: M-033951-01-2 Date: 1985-02-22 Non GLP, unpublished
TRIA-244	Anon.	1985p	KWG 0519; 250 EC; beet; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9409-84, Edition Number: M-033934-01-2 Date: 1985-03-07 Non GLP, unpublished
TRIA-245	Anon.	1985q	KWG 0519; 50 EW; zucchini; Italy; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9436-84, Edition Number: M-034407-01-2 Date: 1985-04-19 Non GLP, unpublished
TRIA-246	Anon.	1985r	KWG 0519; 50 EW; artichoke; Italy; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9435-84, Edition

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			Number: M-029767-01-2 Date: 1985-09-11 Non GLP, unpublished
TRIA-247	Anon.	1985s	KWG 0519; 25 WS; barley; Australia Bayer Australia Ltd., Botany, Australia Bayer CropScience AG, Report No.: 44/84, Edition Number: M-030586-01-1 Date: 1985-03-14 Non GLP, unpublished
TRIA-248	Anon.	1985t	KWG 0519 & SAS 9244; 22 WS; barley; France; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9480-85, Edition Number: M-048028-02-2 Date: 1985-12-17 Non GLP, unpublished
TRIA-249	Anon.	1985u	KWG 0519 & SAS 9244; 22 WS; barley; France; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9481-85, Edition Number: M-048022-02-2 Date: 1985-12-17, Amended: 2002-07-04 Non GLP, unpublished
TRIA-250	Anon.	1985v	KWG 0519 & WVII/117 & Imazalil; 94 FS; barley; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9900-84, Edition Number: M-048060-01-2 Date: 1985-02-25 Non GLP, unpublished
TRIA-251	Anon.	1985w	KWG 0519 & WVII/117 & Imazalil; 94 FS; rye; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9901-84, Edition Number: M-048093-01-2 Date: 1985-02-25 Non GLP, unpublished
TRIA-252	Anon.	1985x	KWG 0519 & WVII/117 & Imazalil; 94 FS; rye; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9902-84, Edition Number: M-048088-01-1 Date: 1985-02-25 Non GLP, unpublished
TRIA-253	Anon.	1985y	KWG 0519 & WVII/117 & Imazalil; 94 FS; wheat; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9903-84, Edition Number: M-048099-01-1 Date: 1985-02-25 Non GLP, unpublished
TRIA-254	Anon.	1985z	KWG 0519; 250 EC; wheat; Australia Bayer Australia Ltd., Botany, Australia Bayer CropScience AG, Report No.: 42/84, Edition Number: M-034434-01-1 Date: 1985-04-30 Non GLP, unpublished
TRIA-255	Anon.	1985aa	KWG 0519; 250 EC; wheat; Australia Bayer Australia Ltd., Botany, Australia Bayer CropScience AG, Report No.: 45/84, Edition Number: M-034443-01-1 Date: 1985-05-01 Non GLP, unpublished
TRIA-256	Anon.	1986	KWG 0519; 5 WG; apple; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9484-86, Edition Number: M-035824-01-2 Date: 1986-12-09 Non GLP, unpublished also filed: 6.2.2.1 /09
TRIA-257	Anon.	1986a	KWG 0519; 5 WG; apple; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9485-86, Edition Number: M-035807-01-2 Date: 1986-12-09 Non GLP, unpublished also filed: 6.2.2.1 /10
TRIA-258	Anon.	1986b	KWG 0519; 5 WG; apple; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9486-86, Edition Number: M-029936-01-1 Date: 1986-12-01 Non GLP, unpublished
TRIA-259	Anon.	1986c	KWG 0519; 50 EW; apple; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9488-86, Edition Number: M-029931-01-2 Date: 1986-12-01 Non GLP, unpublished
TRIA-260	Anon.	1986d	KWG 0519; 50 EW; apple; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9436-85, Edition Number: M-035835-01-2 Date: 1986-01-14 Non GLP, unpublished
TRIA-261	Anon.	1986e	KWG 0519; 50 EW; apple; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9437-85, Edition Number: M-035829-01-2 Date: 1986-01-14 Non GLP, unpublished
TRIA-262	Anon.	1986f	Triadimefon residues in grapes South African Bureau of Standards, Pretoria, South Africa Bayer CropScience AG, Report No.: 311/88948/C196, Edition Number: M-090440-01-1 Date: 1986-09-05 Non GLP, unpublished
TRIA-263	Anon.	1986g	Triadimefon residues in table grapes South African Bureau of Standards, Pretoria, South Africa Bayer CropScience AG, Report No.: 311/88737/B141, Edition Number: M-090432-01-1 Date: 1986-01-24 Non GLP, unpublished
TRIA-264	Anon.	1986h	KWG 0519; 50 EW; grape; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9430-85, Edition Number: M-034845-01-2 Date: 1986-01-10 Non GLP, unpublished
TRIA-265	Anon.	1986i	KWG 0519; 50 EW; grape; Germany; BBA Bayer AG, Leverkusen,

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			Germany Bayer CropScience AG, Report No.: 9431-85, Edition Number: M-036280-01-1 Date: 1986-01-11 Non GLP, unpublished
TRIA-266	Anon.	1986j	KWG 0519; 50 EW; grape; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9432-85, Edition Number: M-036275-01-2 Date: 1986-01-10 Non GLP, unpublished
TRIA-267	Anon.	1986k	KWG 0519; 50 EW; grape; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9433-85, Edition Number: M-036260-01-2 Date: 1986-01-10 Non GLP, unpublished
TRIA-268	Anon.	1986l	KWG 0519; 100 OL; banana; Ivory Coast; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9456-86, Edition Number: M-030095-01-3 Date: 1986-07-25 Non GLP, unpublished
TRIA-269	Anon.	1986m	KWG 0519; 5 WG; banana; Ivory Coast; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9472-86, Edition Number: M-030039-01-2 Date: 1986-09-05 Non GLP, unpublished
TRIA-270	Anon.	1986n	KWG 0519; 250 EC; beet; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9410-85, Edition Number: M-033927-01-1 Date: 1986-04-22 Non GLP, unpublished
TRIA-271	Anon.	1986o	KWG 0519; 250 EC; beet; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9411-85, Edition Number: M-033920-01-2 Date: 1986-04-22 Non GLP, unpublished
TRIA-272	Anon.	1986p	KWG 0519; 250 EC; beet; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9412-85, Edition Number: M-033912-01-2 Date: 1986-04-22 Non GLP, unpublished
TRIA-273	Anon.	1986q	KWG 0519; 250 EC; beet; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9413-85, Edition Number: M-033904-01-2 Date: 1986-04-22 Non GLP, unpublished
TRIA-274	Anon.	1986r	KWG 0519; 250 EC; cucumber; Australia Bayer Australia Ltd., Botany, Australia Bayer CropScience AG, Report No.: 39/85, Edition Number: M-031323-01-1 Date: 1986-03-03 Non GLP, unpublished
TRIA-275	Anon.	1986s	KWG 0519; 250 EC; artichoke; Spain; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9418-85, Edition Number: M-029759-01-1 Date: 1986-01-30 Non GLP, unpublished
TRIA-276	Anon.	1986t	KWG 0519; 150 FS; barley; France; BBA Bayer France, Puteaux Cedex, France Bayer CropScience AG, Report No.: 9400-86, Edition Number: M-030565-02-2 Date: 1986-07-29, Amended: 2002-07-02 Non GLP, unpublished
TRIA-277	Anon.	1986u	KWG 0519; 150 FS; barley; France; BBA Bayer France, Puteaux Cedex, France Bayer CropScience AG, Report No.: 9401-86, Edition Number: M-030556-02-2 Date: 1986-07-25, Amended: 2002-07-02 Non GLP, unpublished
TRIA-278	Anon.	1986v	KWG 0519 & WVII/117 & SAS 9244; 231 FS; rye; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9900-85, Edition Number: M-046788-01-2 Date: 1986-07-22 Non GLP, unpublished
TRIA-279	Anon.	1986w	KWG 0519 & WVII/117 & SAS 9244; 231 FS; rye; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9901-85, Edition Number: M-046882-01-2 Date: 1986-07-22 Non GLP, unpublished
TRIA-280	Anon.	1986x	KWG 0519; 250 EC; wheat; Australia Bayer Australia Ltd., Botany, Australia Bayer CropScience AG, Report No.: 48/85, Edition Number: M-033877-01-1 Date: 1986-05-16 Non GLP, unpublished
TRIA-281	Anon.	1986y	KWG 0519; 250 EC; wheat; New Zealand Analytical Research Laboratories Ltd., Napier, New Zealand Bayer CropScience AG, Report No.: CF8505, Edition Number: M-031868-01-1 Date: 1986-03-10 Non GLP, unpublished
TRIA-282	Anon.	1987	Bayfidan 5 DF / apples - Six point decay curve following nine applications of Bayfidan 5 DF from tight cluster to sixth cover Analytical Research Laboratories Ltd., Napier, New Zealand Bayer CropScience AG, Report No.: IG/6/86, Edition Number: M-029942-02-1 Date: 1987-08-07 Non GLP, unpublished
TRIA-283	Anon.	1987a	KWG 0519; 5 WG; grape; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9480-86, Edition Number: M-036249-01-2 Date: 1987-04-06 Non GLP, unpublished

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TRIA-284	Anon.	1987b	KWG 0519; 5 WG; grape; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9481-86, Edition Number: M-036199-01-1 Date: 1987-04-06 Non GLP, unpublished
TRIA-285	Anon.	1987c	KWG 0519; 5 WG; grape; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9482-86, Edition Number: M-036193-01-2 Date: 1987-02-19 Non GLP, unpublished
TRIA-286	Anon.	1987d	KWG 0519; 5 WG; grape; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9483-86, Edition Number: M-036119-01-2 Date: 1987-02-19 Non GLP, unpublished
TRIA-287	Anon.	1987e	KWG 0519; 50 EW; grape; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9487-86, Edition Number: M-035965-01-2 Date: 1987-04-06 Non GLP, unpublished
TRIA-288	Anon.	1987f	KWG 0519; 5 WP; grape; Morocco; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9440-86, Edition Number: M-035854-01-2 Date: 1987-02-19 Non GLP, unpublished
TRIA-289	Anon.	1987g	Bayfidan 5 DF / grapes; seven point decay curve following five applications of Bayfidan 5 DF from 5% capfall to bunch closure Bayer New Zealand, Auckland, New Zealand Bayer CropScience AG, Report No.: NF/05/87, Edition Number: M-036139-01-1 Date: 1987-08-07 Non GLP, unpublished
TRIA-290	Anon.	1987h	KWG 0519; 100 OL; banana; Cameroon; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9455-86-B, Edition Number: M-030108-01-3 Date: 1987-02-20 Non GLP, unpublished
TRIA-291	Anon.	1987i	KWG 0519; 250 EC; banana; Costa Rica; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9441-87A, Edition Number: M-033981-01-2 Date: 1987-12-10 Non GLP, unpublished
TRIA-292	Anon.	1987j	KWG 0519; 25 WS; barley; Australia; BBA Bayer Australia Ltd., Botany, Australia Bayer CropScience AG, Report No.: 4/87, Edition Number: M-030510-03-1 Date: 1987-07-03, Amended: 1988-03-09 Non GLP, unpublished
TRIA-293	Anon.	1987k	KWG 0519 & SAS 9244; 22 WS; barley; France; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 10511-86, Edition Number: M-048016-02-1 Date: 1987-02-23 Non GLP, unpublished
TRIA-294	Anon.	1987l	KWG 0519 & SAS 9244; 165 FS; barley; France; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 10500-86, Edition Number: M-048012-02-1 Date: 1987-05-22 Non GLP, unpublished
TRIA-295	Anon.	1987m	KWG 0519 & SAS 9244; 165 FS; barley; France; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 10501-86, Edition Number: M-048007-02-1 Date: 1987-05-22 Non GLP, unpublished
TRIA-296	Anon.	1987n	KWG 0519 & SAS 9244; 22 WS; barley; France; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 10510-86, Edition Number: M-048018-02-1 Date: 1987-02-23 Non GLP, unpublished
TRIA-297	Anon.	1987o	HWG 1608 & KWG 0519; 375 EC; barley; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 10650-86, Edition Number: M-075124-01-2 Date: 1987-04-13 Non GLP, unpublished
TRIA-298	Anon.	1987p	HWG 1608 & KWG 0519; 375 EC; barley; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 10651-86, Edition Number: M-075115-01-1 Date: 1987-04-13 Non GLP, unpublished
TRIA-299	Anon.	1987q	HWG 1608 & KWG 0519; 375 EC; barley; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 11001-87, Edition Number: M-075087-01-2 Date: 1987-10-30 Non GLP, unpublished
TRIA-300	Anon.	1987r	HWG 1608 & KWG 0519; 375 EC; oat; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 10656-86, Edition Number: M-075162-01-2 Date: 1987-06-09 Non GLP, unpublished
TRIA-301	Anon.	1987s	HWG 1608 & KWG 0519; 375 EC; oat; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 10657-86,

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			Edition Number: M-075142-01-2 Date: 1987-06-09 Non GLP, unpublished
TRIA-302	Anon.	1987t	HWG 1608 & KWG 0519; 375 EC; rye; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 10655-86, Edition Number: M-075168-01-2 Date: 1987-06-05 Non GLP, unpublished
TRIA-303	Anon.	1987u	KWG 0519; 25 WS; wheat; Australia Bayer Australia Ltd., Botany, Australia Bayer CropScience AG, Report No.: 2/87, Edition Number: M-034500-01-1 Date: 1987-07-03 Non GLP, unpublished
TRIA-304	Anon.	1987v	HWG 1608 & KWG 0519; 375 EC; wheat; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 11004-87, Edition Number: M-075033-01-2 Date: 1987-10-30 Non GLP, unpublished
TRIA-305	Anon.	1987w	HWG 1608 & KWG 0519; 375 EC; wheat; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 11005-87, Edition Number: M-075028-01-2 Date: 1987-10-30 Non GLP, unpublished
TRIA-306	Anon.	1987x	HWG 1608 & KWG 0519; 375 EC; wheat; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 10652-86, Edition Number: M-075079-01-2 Date: 1987-06-19 Non GLP, unpublished
TRIA-307	Anon.	1987y	HWG 1608 & KWG 0519; 375 EC; wheat; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 10653-86, Edition Number: M-075066-01-2 Date: 1987-06-19 Non GLP, unpublished
TRIA-308	Anon.	1987z	HWG 1608 & KWG 0519; 375 EC; wheat; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 10658-86, Edition Number: M-075057-01-3 Date: 1987-06-19 Non GLP, unpublished
TRIA-309	Anon.	1987aa	HWG 1608 & KWG 0519; 375 EC; wheat; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 10659-86, Edition Number: M-075054-01-2 Date: 1987-06-19 Non GLP, unpublished
TRIA-310	Anon.	1988	Bayfidan 5 DF / grapes; 6 point decay curve following 2 applications of Bayfidan 5 DF at bunch closure and veraison Bayer New Zealand, Auckland, New Zealand Bayer CropScience AG, Report No.: CF/25/87, Edition Number: M-036143-01-1 Date: 1988-06-24 Non GLP, unpublished
TRIA-311	Anon.	1988a	Bayfidan 5 DF / grapes; 6 point decay curve following 2 applications of Bayfidan 5 DF at bunch closure and veraison Bayer New Zealand, Auckland, New Zealand Bayer CropScience AG, Report No.: NF/26/87, Edition Number: M-036156-01-1 Date: 1988-06-24 Non GLP, unpublished
TRIA-312	Anon.	1988b	KWG 0519; 250 OL; banana; Ivory Coast; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 0036-88, Edition Number: M-030489-01-3 Date: 1988-05-13 Non GLP, unpublished
TRIA-313	Anon.	1988c	KWG 0519; 250 OL; banana; Martinique; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9451-87, Edition Number: M-033955-01-3 Date: 1988-09-19 Non GLP, unpublished
TRIA-314	Anon.	1988d	KWG 0519; 250 OL; banana; Martinique; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9452-87, Edition Number: M-033944-01-1 Date: 1988-09-19 Non GLP, unpublished
TRIA-315	Anon.	1988e	KWG 0519; 1 GR; banana; Ecuador; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9402-87, Edition Number: M-034051-01-2 Date: 1988-01-05 Non GLP, unpublished
TRIA-316	Anon.	1988f	KWG 0519; 1 GR; banana; Ecuador; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9403-87, Edition Number: M-034039-01-1 Date: 1988-01-05 Non GLP, unpublished
TRIA-317	Anon.	1988g	KWG 0519; 150 LS; barley; Australia; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: AUS-5-87, Edition Number: M-030494-01-1 Date: 1988-03-09 Non GLP, unpublished
TRIA-318	Anon.	1988h	KWG 0519; 150 LS; wheat; Australia; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: AUS-3-87, Edition

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			Number: M-031513-01-2 Date: 1988-03-09 Non GLP, unpublished
TRIA-319	Anon.	1988i	KWG 0519; 250 EC; anilazine; 480 SC; wheat; France; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9490-87, Edition Number: M-023441-01-2 Date: 1988-02-09 Non GLP, unpublished
TRIA-320	Anon.	1988j	KWG 0519; 250 EC; anilazine; 480 SC; wheat; France; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9491-87, Edition Number: M-023437-01-2 Date: 1988-02-09 Non GLP, unpublished
TRIA-321	Anon.	1988k	KWG 0519; 250 EC; coffee; Brazil; BBA Bayer do Brasil S/A, Sao Paulo, Brazil Bayer CropScience AG, Report No.: 12000/87, Edition Number: M-033383-01-3 Date: 1988-05-20 Non GLP, unpublished
TRIA-322	Anon.	1988l	KWG 0519; 250 EC; coffee; Brazil Bayer do Brasil S/A, Sao Paulo, Brazil Bayer CropScience AG, Report No.: 102718, Edition Number: M-034804-01-3 Date: 1988-08-18 Non GLP, unpublished
TRIA-323	Anon.	1988m	KWG 0519; 1 GR; coffee; Brazil; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9447-87, Edition Number: M-033340-01-1 Date: 1988-04-18 Non GLP, unpublished
TRIA-324	Anon.	1989	Bayfidan 5DF / apples; Seven point decay curve following eleven application of Bayfidan 5 DF applied from pink to pre harvest in Cox's orange pippin apples Analytical Research Laboratories Ltd., Napier, New Zealand Bayer CropScience AG, Report No.: 05/04/87, Edition Number: M-029921-01-1 Date: 1989-03-29 Non GLP, unpublished
TRIA-325	Anon.	1989a	Determination of triadimenol residues in apples South African Bureau of Standards, Pretoria, South Africa Bayer CropScience AG, Report No.: 311/88435/E445, Edition Number: M-029904-01-1 Date: 1989-04-25 Non GLP, unpublished
TRIA-326	Anon.	1989b	Determination of triadimenol residues in apples South African Bureau of Standards, Pretoria, South Africa Bayer CropScience AG, Report No.: 311/88545/F115, Edition Number: M-029908-01-1 Date: 1989-04-24 Non GLP, unpublished
TRIA-327	Anon.	1989c	KWG 0519; 97,15 DP; grape; processing; France; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 0440-88, Edition Number: M-266061-01-2 Date: 1989-06-27 Non GLP, unpublished
TRIA-328	Anon.	1989d	Determination of triadimenol residues in grapes South African Bureau of Standards, Pretoria, South Africa Bayer CropScience AG, Report No.: 311/88430/E440, Edition Number: M-035508-01-1 Date: 1989-06-07 Non GLP, unpublished
TRIA-329	Anon.	1989e	Determination of triadimenol residues in grapes South African Bureau of Standards, Pretoria, South Africa Bayer CropScience AG, Report No.: 311/88431/E441, Edition Number: M-035497-01-1 Date: 1989-06-02 Non GLP, unpublished
TRIA-330	Anon.	1989f	Determination of triadimenol residues in grapes South African Bureau of Standards, Pretoria, South Africa Bayer CropScience AG, Report No.: 311/88558/F128, Edition Number: M-035397-01-1 Date: 1989-06-02 Non GLP, unpublished
TRIA-331	Anon.	1989g	KWG 0519; 50 EW; grape; Turkey; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 0100-88, Edition Number: M-035466-01-2 Date: 1989-09-22 Non GLP, unpublished
TRIA-332	Anon.	1989h	Determination of triadimenol residues in bananas South African Bureau of Standards, Pretoria, South Africa Bayer CropScience AG, Report No.: 311/88592/F221, Edition Number: M-030352-02-1 Date: 1989-08-22 Non GLP, unpublished
TRIA-333	Anon.	1989i	KWG 0519; 5 GR; banana; Cameroon; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9476-87, Edition Number: M-033931-01-2 Date: 1989-05-19 Non GLP, unpublished
TRIA-334	Anon.	1989j	KWG 0519; 3 GR; banana; Costa Rica; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 9407-87, Edition Number: M-033986-01-2 Date: 1989-11-20 Non GLP, unpublished
TRIA-335	Anon.	1989k	HWG 1608 & KWG 0519; 375 EC + Anilazine; 480 SC; barley; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 0246-88, Edition Number: M-076968-01-2 Date: 1989-10-17 Non GLP, unpublished
TRIA-336	Anon.	1989l	HWG 1608 & KWG 0519; 375 EC + Anilazine; 480 SC; barley; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience

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			AG, Report No.: 0412-88, Edition Number: M-076963-01-2 Date: 1989-10-17 Non GLP, unpublished
TRIA-337	Anon.	1989m	HWG 1608 & KWG 0519 & tridemorph; 401 EC; wheat; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 0247-88, Edition Number: M-077103-01-2 Date: 1989-12-18 Non GLP, unpublished
TRIA-338	Anon.	1989n	HWG 1608 & KWG 0519; 375 EC + Anilazine; 480 SC; barley; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 0244-88, Edition Number: M-076984-01-2 Date: 1989-10-17 Non GLP, unpublished
TRIA-339	Anon.	1989o	HWG 1608 & KWG 0519; 375 EC + Anilazine; 480 SC; wheat; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 0413-88, Edition Number: M-077009-01-2 Date: 1989-10-17 Non GLP, unpublished
TRIA-340	Anon.	1989p	HWG 1608 & KWG 0519; 375 EC; wheat; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 0627-88, Edition Number: M-073409-01-2 Date: 1989-04-19 Non GLP, unpublished
TRIA-341	Anon.	1989q	HWG 1608 & KWG 0519; 375 EC; wheat; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 0635-88, Edition Number: M-073405-01-2 Date: 1989-04-14 Non GLP, unpublished
TRIA-342	Anon.	1989r	HWG 1608 & KWG 0519; 375 EC; wheat; Deutschland; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 0639-88, Edition Number: M-074884-01-2 Date: 1989-04-19 Non GLP, unpublished
TRIA-343	Anon.	1989s	HWG 1608 & KWG 0519; 375 EC; wheat; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 0641-88, Edition Number: M-074869-01-2 Date: 1989-04-21 Non GLP, unpublished
TRIA-344	Anon.	1989t	HWG 1608 & KWG 0519; 375 EC; wheat; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 0653-88, Edition Number: M-074859-01-2 Date: 1989-04-14 Non GLP, unpublished
TRIA-345	Anon.	1989u	HWG 1608 & KWG 0519; 375 EC; wheat; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 0645-88, Edition Number: M-075016-01-2 Date: 1989-05-08 Non GLP, unpublished
TRIA-346	Anon.	1989v	HWG 1608 & KWG 0519; 375 EC; wheat; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 0647-88, Edition Number: M-075003-01-2 Date: 1989-05-08 Non GLP, unpublished
TRIA-347	Anon.	1989w	KWG 0519; 250 EC; coffee; Brazil Bayer do Brasil S/A, Sao Paulo, Brazil Bayer CropScience AG, Report No.: 594/89, Edition Number: M-034736-01-2 Date: 1989-07-05 Non GLP, unpublished
TRIA-348	Anon.	1989x	KWG 0519; 250 EC; coffee; Brazil Bayer do Brasil S/A, Sao Paulo, Brazil Bayer CropScience AG, Report No.: 595/89, Edition Number: M-034705-02-1 Date: 1989-10-24 Non GLP, unpublished
TRIA-349	Anon.	1989y	KWG 0519; 1 GR; coffee; Guatemala; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 0703-88, Edition Number: M-033235-01-2 Date: 1989-04-14 Non GLP, unpublished
TRIA-350	Anon.	1989z	KWG 0519; 1 GR; coffee; Mexico; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 12020/87, Edition Number: M-033337-01-2 Date: 1989-02-17 Non GLP, unpublished
TRIA-351	Anon.	1989aa	KWG 0519; 1 GR; coffee; Mexico; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 12021/87, Edition Number: M-033325-01-2 Date: 1989-02-17 Non GLP, unpublished
TRIA-352	Anon.	1989ab	KWG 0519; 1 GR; coffee; Mexico; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 12022/87, Edition Number: M-033309-01-2 Date: 1989-02-17 Non GLP, unpublished
TRIA-353	Anon.	1989ac	KWG 0519; 1 GR; coffee; Mexico; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 12023/87, Edition Number: M-033252-01-1 Date: 1989-02-17 Non GLP, unpublished
TRIA-354	Anon.	1989ad	KWG 0519; 1 GR; coffee; Mexico; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 12024/87, Edition Number: M-033240-01-2 Date: 1989-02-17 Non GLP, unpublished

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TRIA-356	Anon.	1990a	Determination of tebuconazole and triadimenol residues in grape samples South African Bureau of Standards, Pretoria, South Africa Bayer CropScience AG, Report No.: 311/88870/G303, Edition Number: M-075327-01-1 Date: 1990-09-24 Non GLP, unpublished
TRIA-357	Anon.	1990b	Determination of triadimenol residues in grapes South African Bureau of Standards, Pretoria, South Africa Bayer CropScience AG, Report No.: 311/88670/F358, Edition Number: M-036167-01-1 Date: 1990-02-16 Non GLP, unpublished
TRIA-358	Anon.	1990c	HWG 1608 & KWG 0519 & tridemorph; 401 EC; barley; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 0250-88, Edition Number: M-077083-01-2 Date: 1990-01-24 Non GLP, unpublished
TRIA-359	Anon.	1990d	HWG 1608 & KWG 0519 & tridemorph; 309 EC; wheat; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 0250-89, Edition Number: M-077069-01-2 Date: 1990-12-20 Non GLP, unpublished
TRIA-360	Anon.	1990e	HWG 1608 & KWG 0519 & tridemorph; 309 EC; wheat; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 0251-89, Edition Number: M-077049-01-2 Date: 1990-12-20 Non GLP, unpublished
TRIA-361	Anon.	1990f	Determination of triadimenol residues in coffee beans South African Bureau of Standards, Pretoria, South Africa Bayer CropScience AG, Report No.: 311/88590/F219, Edition Number: M-034696-02-1 Date: 1990-02-15 Non GLP, unpublished
TRIA-362	Anon.	1990g	KWG 0519; 1 GR; coffee; El Salvador; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 0393-89, Edition Number: M-033218-01-1 Date: 1990-10-31 Non GLP, unpublished
TRIA-363	Anon.	1991	Determination of tebuconazole and triadimenol residues in grape samples South African Bureau of Standards, Pretoria, South Africa Bayer CropScience AG, Report No.: 311/88086/H187, Edition Number: M-075422-01-1 Date: 1991-07-01 Non GLP, unpublished
TRIA-364	Anon.	1991a	Determination of tebuconazole and triadimenol residues in wine grapes South African Bureau of Standards, Pretoria, South Africa Bayer CropScience AG, Report No.: 311/88087/H188, Edition Number: M-075412-01-1 Date: 1991-06-24 Non GLP, unpublished
TRIA-365	Anon.	1991b	Determination of triadimenol residues in grapes South African Bureau of Standards, Pretoria, South Africa Bayer CropScience AG, Report No.: 311/88872/G305, Edition Number: M-036161-01-1 Date: 1991-09-09 Non GLP, unpublished
TRIA-366	Anon.	1991c	KWG 0519; 5 WG; banana; Cameroon; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 0589-88, Edition Number: M-030456-01-2 Date: 1991-08-02 Non GLP, unpublished
TRIA-367	Anon.	1991d	HWG 1608 & KWG 0519 & tridemorph; 309 EC; barley; Germany; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 0253-89, Edition Number: M-077019-01-2 Date: 1991-01-14 Non GLP, unpublished
TRIA-368	Anon.	1992b	KWG 0519; 50 EW; grape; Turkey; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 0603-90, Edition Number: M-035371-01-2 Date: 1992-03-02 Non GLP, unpublished
TRIA-369	Anon.	1992c	KWG 0519; 50 EW; grape; Turkey; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 0604-90, Edition Number: M-035350-01-1 Date: 1992-03-02 Non GLP, unpublished
TRIA-370	Anon.	1992d	KWG 0519; 50 EW; grape; Turkey; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 0606-90, Edition Number: M-035331-01-2 Date: 1992-03-02 Non GLP, unpublished
TRIA-371	Anon.	1992e	KWG 0519; 50 EW; grape; Turkey; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 0607-90, Edition Number: M-035298-01-2 Date: 1992-03-02 Non GLP, unpublished
TRIA-372	Anon.	1992f	KWG 0519; 50 EW; grape; Turkey; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 0608-90, Edition Number: M-035275-01-2 Date: 1992-03-02 Non GLP, unpublished
TRIA-373	Anon.	1992g	KWG 0519; 50 EW; grape; Turkey; BBA Bayer AG, Leverkusen,

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TRIA-374	Anon.	1992h	KWG 0519; 5 WG; artichoke; Italy; BBA Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 0260-90, Edition Number: M-029727-01-2 Date: 1992-03-02 Non GLP, unpublished
TRIA-375	Anon.	1992i	KWG 0519; 250 EC; oats; Brazil Bayer do Brasil S/A, Sao Paulo, Brazil Bayer CropScience AG, Report No.: 131491, Edition Number: M-031325-01-2 Date: 1992-09-10 Non GLP, unpublished
TRIA-376	Anon.	1992j	KWG 0519; 150 FS; wheat; Brazil Bayer do Brasil S/A, Sao Paulo, Brazil Bayer CropScience AG, Report No.: 130436, Edition Number: M-034596-01-2 Date: 1992-07-23 Non GLP, unpublished
TRIA-377	Anon.	1993b	KWG 0519 & S 276; 9 GR; coffee; BBA Bayer do Brasil S/A, Sao Paulo, Brazil Bayer CropScience AG, Report No.: 137506, Edition Number: M-265995-01-3 Date: 1993-08-17 Non GLP, unpublished
TRIA-378	Anon.	1993c	S 276, KWG 0519; 9 GR; coffee; Brazil Bayer do Brasil, Sao Paulo, Brazil Bayer CropScience AG, Report No.: 137505, Edition Number: M-121840-01-2 Date: 1993-08-17 Non GLP, unpublished
TRIA-379	Anon.	1998	MEB 6447; 25 WP; grape; Chile Bayer de Chile S. A., Santiago de Chile, Chile Bayer CropScience AG, Report No.: CHL-F-C5-014-97-T2, Edition Number: M-128108-01-2 Date: 1998-05-19 Non GLP, unpublished
TRIA-380	Anon.	1998a	MEB 6447; 250 EC; grape; Chile Bayer de Chile S. A., Santiago de Chile, Chile Bayer CropScience AG, Report No.: CHL-F-C5-014-97-T3, Edition Number: M-128061-01-2 Date: 1998-05-19 Non GLP, unpublished
TRIA-381	Babczinski, P.	2002	Aqueous hydrolysis of triadimenol under conditions of processing studies Bayer CropScience AG, Report No.: MR-456/02, Edition Number: M-087195-01-1 Date: 2002-12-02 GLP, unpublished
TRIA-382	Bachmann, J.	1994	Supplement E018 to method 00181 for the gas chromatographic determination of residues of Bayfidan 250 EC in/on pepper Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 00181/E018, Edition Number: M-016936-01-2 Method Report No.: RA-45/94 Date: 1994-02-25 GLP, unpublished
TRIA-383	Bachmann, J.	1995	Determination of residues of Bayfidan 250 EC and Bayfidan spezial 5 WG in/on grape under actual use conditions in the Federal Republic of Germany Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: RA-2015/93, Edition Number: M-033673-01-1 Date: 1995-03-07 GLP, unpublished
TRIA-384	Bachmann, J.	1994a	Supplement E020 to method 00181 for the gas chromatographic determination of residues of Bayfidan 250 EC in/on tomato Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 00181/E020, Edition Number: M-016941-01-2 Method Report No.: RA-145/94 Date: 1994-03-23 GLP, unpublished
TRIA-385	Bachmann, J.	1994b	Amendment E021 of method 00181 for the gas chromatographic determination of the residues of Bayfidan, Folicur and Matador in/on grape Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 00181/E021, Edition Number: M-016944-02-1 Method Report No.: RA-171/94 Date: 1994-05-04 GLP, unpublished
TRIA-386	Bachmann, J.	1994c	Supplement E019 to method 00181/M001 for the gas chromatographic determination of residues of Bayfidan in/on artichoke Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 00181/M001/E019, Edition Number: M-017000-02-2 Method Report No.: RA-140/94 Date: 1994-03-23 GLP, unpublished
TRIA-387	Bachmann, J.	1994d	Determination of residues of Matador 300 EC in/on grapes under actual use conditions in France Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: RA-2084/93, Edition Number: M-075223-01-1 Date: 1994-09-21 GLP, unpublished
TRIA-388	Bachmann, J.	1995a	Determination of residues of Bayfidan 250 EC in/on tomato and pepper under actual use conditions in Spain Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: RA-2014/93, Edition Number: M-033627-01-1 Date: 1995-04-13 GLP, unpublished
TRIA-389	Bagnall, B. H.	1981	Determination of residues of triadimenol in wheat and barley grown in the UK in 1980 following treatment of seed with Baytan Bayer UK Limited, Agrochem Division, Great Britain Bayer CropScience AG, Report No.: TCR 201, Edition Number: M-070045-01-1 Date: 1981-05-08 Non GLP, unpublished

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TRIA-391	Bagnall, B. H.	1984	Studies to determine residues of triadimefon and triadimenol in spring barley grain and straw following treatment with UK136a and UK134 respectively in the UK in 1983 Bayer UK Limited, Agrochem Division, Great Britain Bayer CropScience AG, Report No.: TCR 249, Edition Number: M-077782-01-1 Date: 1984-08-22 Non GLP, unpublished
TRIA-392	Bagnall, B. H.	1985	Determination of residues of triadimenol and triadimefon in apples, blackcurrants and gooseberries in the UK in 1984 Bayer UK Limited, Agrochem Division, Great Britain Bayer CropScience AG, Report No.: TCR 267, Edition Number: M-029989-01-1 Date: 1985-06-10 Non GLP, unpublished
TRIA-393	Bagnall, B. H.	1985a	Studies to determine residues of triadimenol or triadimefon in various crops in the UK where Bayfidan EC (UK 134) had been applied, sometimes in comparison with Bayleton WP, during 1984 Bayer UK Limited, Agrochem Division, Great Britain Bayer CropScience AG, Report No.: TCR 266, Edition Number: M-034467-01-1 Date: 1985-06-10 Non GLP, unpublished
TRIA-394	Becker, G.; Schug, P.	1992	Organohalogen, organophosphorus and triazine compounds VCH Verlagsgesellschaft mbH, Weinheim, Germany Bayer CropScience AG, Report No.: 00082, Edition Number: M-006185-09-1 Method Report No.: S8 Date: 1992-01-01 Non GLP, unpublished
TRIA-395	Blass, W.	1997	Determination of residues of Baytan U & Gaucho (145.2 FS) on spring barley in the field in the Federal Republic of Germany Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: RA-2105/96, Edition Number: M-048120-01-1 Date: 1997-08-11 GLP, unpublished
TRIA-396	Blass, W.	2001	Determination of residues of triadimenol in/on winter barley in the field in France after application of Bayfidan 250 EC Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: RA-2000/98, Edition Number: M-033605-01-1 Date: 2001-02-01 GLP, unpublished
TRIA-397	Bornatsch, W.	1990	Effect of feeding Bayleton and the metabolite KWG 0519 (Baytan) to dairy cattle Mobay Chemical Corporation, Kansas City, MO, USA Bayer CropScience AG, Report No.: 69930-S, Edition Number: M-077757-01-1 Date: 1990-05-07 Non GLP, unpublished
TRIA-398	Brauner, A.; Vogeler, K.	1988	Investigations on the metabolism of (benzene ring-U-14C) triadimenol in winter barley Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: PF3238, Edition Number: M-039511-01-2 Date: 1988-12-01 Non GLP, unpublished
TRIA-399	Brennecke, R.	1981	Modifications in residue analysis method F 136: Separation of interfering plant constituents by the introduction of additional cleanup steps Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 00029/M009, Edition Number: M-006994-01-2 Method Report No.: F136 Method Report No.: RA-1117/81 Date: 1981-12-18 Non GLP, unpublished
TRIA-400	Brennecke, R.	1982	Modification M003 of method 00029: Method for gas-chromatographic determination of crop protectant residues after cleanup by gel permeation chromatography and silica gel mini-column chromatography Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 00029/M003, Edition Number: M-006956-01-2 Method Report No.: F136 Method Report No.: RA-1303/82 Date: 1982-12-06 Non GLP, unpublished
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TRIA-402	Brennecke, R.	1984	Method for gas-chromatographic determination of residues of

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TRIA-403	Brennecke, R.	1991	Supplement E004 to method 00181 : Gas chromatographic method for determination of residues of the fungicide Folicur and Bayfidan in plant material and soil Dr. Specht & Partner, Chemische Laboratorien GmbH, Hamburg, Germany Bayer CropScience AG, Report No.: 00181/E004, Edition Number: M-016900-01-2 Method Report No.: Az.76073-78/90 Method Report No.: BAY 9016 Method Report No.: BAY 9021 Date: 1991-07-02 Non GLP, unpublished
TRIA-404	Brennecke, R.	1992	Supplement E008 to method 00181 : Gas chromatographic method for determination of residues of the fungicide Folicur and Bayfidan in plant material and soil Dr. Specht & Partner, Chemische Laboratorien GmbH, Hamburg, Germany Bayer CropScience AG, Report No.: 00181/E008, Edition Number: M-016912-01-2 Method Report No.: Az.84048/91 Method Report No.: BAY 9109 Date: 1992-02-10 Non GLP, unpublished
TRIA-405	Brennecke, R.	1983a	Supplement E039 to method 00029/M003: Method for gas-chromatographic determination of crop protectant residues after cleanup by gel permeation chromatography and silica gel mini-column chromatography Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 00029/M003/E039, Edition Number: M-033334-02-2 Method Report No.: F136 Method Report No.: RA-1303/82 Method Report No.: RA-467/83 Date: 1983-08-18 Non GLP, unpublished
TRIA-406	Brennecke, R.	1983b	Modification M019 of method 00029: Method for gas-chromatographic determination of crop protectant residues after cleanup by gel permeation chromatography and silica gel mini-column chromatography Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 00029/M019, Edition Number: M-033774-01-2 Method Report No.: F136 Method Report No.: RA-720/83 Date: 1983-07-13 Non GLP, unpublished
TRIA-407	Brennecke, R.	1983c	Modification M020 of method 00029: Method for gas-chromatographic determination of crop protectant residues after cleanup by gel permeation chromatography and silica gel mini-column chromatography Bayer AG, Leverkusen, Germany Bayer CropScience AG, Report No.: 00029/M020, Edition Number: M-033802-01-2 Method Report No.: F136 Method Report No.: RA-1150/83 Date: 1983-12-02 Non GLP, unpublished
TRIA-408	Brennecke, R.	1991a	Modification M003 of method 00181: Gas chromatographic method for determination of residues of the fungicide Folicur and Bayfidan in plant material and soil Dr. Specht & Partner, Chemische Laboratorien GmbH, Hamburg, Germany Bayer CropScience AG, Report No.: 00181/M003, Edition Number: M-017003-01-2 Method Report No.: Az.76072/90 Method Report No.: BAY-9015 Date: 1991-05-07 Non GLP, unpublished
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TRIA-411	Brumhard, B.	2003	Degradation and metabolism of triadimenol (BayfidanR) in soil Bayer CropScience AG, Report No.: MR-538/00, Edition Number: M-090735-01-1 Date: 2003-05-05 GLP, unpublished
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TRIA-416	Burger, R. N.; Williams, B. B.	1992	Triadimefon 50 DF - Magnitude of the residue on pineapple ABC Laboratories, Columbia, MO, USA ... Bayer CropScience AG, Report No.: 102649-1, Edition Number: M-091094-02-1 Date: 1992-05-15, Amended: 1996-03-01 GLP, unpublished
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TRIA-421	Class, T.	2003b	Independent laboratory validation of DFG method S19 (extended revision) for the determination of residues of Triadimefon in materials of animal origin (Bayer CropScience enforcement method 00086/M051) PTRL Europe, Ulm, Germany Bayer CropScience AG, Report No.: P 620 G, Edition Number: M-078307-01-1 Method Report No.: P 620 G Date: 2003-02-03 GLP, unpublished
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TRIA-425	Duah, F. K.; Myers, T. M.	1994	Metabolism of triadimefon in laying hens - Additional data as requested by EPA Miles Inc. Agriculture Division, Stilwell, KS, USA Bayer CropScience AG, Report No.: 105183-1, Edition Number: M-077956-01-1 Date: 1994-08-31 GLP, unpublished
TRIA-426	Duah, F. K.; Smasal, T. M.	1993	Metabolism of triadimefon in laying hens Miles Inc. Agriculture Division, Stilwell, KS, USA Bayer CropScience AG, Report No.: 105183, Edition Number: M-077946-01-1 Date: 1993-07-22 GLP,

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TRIA-429	Freitag, T.	2004	Determination of residues of triadimenol in/on tomato following spray application of Bayfidan (250 EC) in the greenhouse in Spain, Germany, and Italy Bayer CropScience AG, Report No.: RA-2013/03, Edition Number: M-093686-01-1 Date: 2004-10-25 GLP, unpublished
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