

## AZINPHOS-METHYL

### EXPLANATION

Azinphos-methyl was evaluated in 1965 and several times since. In 1991 a re-evaluation resulted in recommendations to withdraw or change several MRLs. New residue data from trials carried out according to GAP were required for apricots, black currants, citrus fruits, strawberries, kiwifruit and bulb and spring onions. The data from trials according to GAP on apricots, citrus fruits and kiwifruit were so limited that withdrawal of the existing MRLs was proposed, and this recommendation was accepted by the 25th Session of the CCPR (1993). Residue data from trials according to GAP on blueberries, cherries and grapes were also desirable as the data available were from only one country, the USA.

Information was provided to the Meeting on registered uses not available at the 1991 JMPR. Data were received from trials on cherries in Denmark and the USA, and on apricots, mandarins and oranges in Spain. The Meeting was informed that data from trials on grapes in Germany and Italy, including processing studies, would be available for the 1995 Meeting.

### USE PATTERN

Registered uses of azinphos-methyl which were not available for the re-evaluation in 1991, or have been changed since, are listed in Table 1. Commodities for which no data from trials were supplied are not included.

### RESIDUES RESULTING FROM SUPERVISED TRIALS

New data were supplied from trials on cherries in Denmark and the USA and on mandarins, oranges and apricots in Spain.

Table 1. Registered uses of azinphos-methyl.

{PRIVATE } Crop	Country	Application			PHI days
		No	kg ai /ha	g ai/hl	
Citrus fruit	Australia	>1	2.0-2.5	25-50	14
	Spain	1-2	2.0-2.5	40-50	15
Pome fruit	Finland		0.25-0.75		21
Stone fruit	Denmark	2	0.75		21
	Spain	2-3	0.6-0.75	40-50	15
Apricot	New Zealand	5-8	max 1.5	50-60	21
Cherry	New Zealand	5-8	max 1.5	50-60	14
Nectarin	Australia	>1 (3-4 weeks)		38-50	14
	New Zealand	5-8	max 1.5	50-60	14
Peach	New Zealand	5-8	max 1.5	50-60	21
Plum	Australia	>1		50	14
Currants	Finland		0.2-0.5		21
Grape	New Zealand	6-9	max 1.0	50	14
Strawberry	Canada	>1	0.53-0.55		5
	Finland		0.2-0.5		21
Kiwifruit	Australia	>1 (3-4 weeks)		40	14

Cherries. Three trials were carried out on cherries in Denmark

at the registered dosage of 0.8 kg ai/ha. All residues were below the limit of determination, 0.04 mg/kg, but samples were taken 59, 81 and 99 days after the last treatment and the PHI in Denmark is 21 days.

Information on many trials on cherries in the USA was supplied in addition to the data reviewed by the 1991 JMPR. In most of the trials the application rate was 0.84 kg ai/ha, and samples were taken after 14 days, which is approximately the registered use in the USA. The trials were carried out over 2 years and in a number of States. Residues after 14-15 days in all trials at 0.84 kg ai/ha were from <0.01 to 2.3 mg/kg with a mean value of 0.60 mg/kg, which supports the MRL of 2 mg/kg proposed by the JMPR in 1991.

Mandarins and oranges. Four trials on mandarins were carried out in Spain. In 3 of them from two experimental stations the dosage applied was 2.4 kg ai/ha, which is within the registered use in Spain, and in the fourth the rate was 4.8 kg ai/ha.

In the trials with 2.4 kg ai/ha the residues after 14 days (the registered PHI in Spain is 15 days although it is being revised) were 0.28-0.48 mg/kg. Even at the rate of 4.8 kg ai/ha residues were within this range. Except for samples taken at day 0, residues decreased only slowly during the periods of the trials.

Residue levels in oranges were about the same as in mandarins. In 2 trials with the registered application rates of 2.2-2.4 kg ai/ha residues were 0.23-0.37 mg/kg after 14 days.

Apricots. Three trials were carried out on apricots in Spain with residues after 14 days at the level of 0.13-0.23 mg/kg, but the dosage used was about 3 times the registered application of 0.6-0.75 kg ai/ha.

Table 2. Residues of azinphos-methyl in cherries from supervised trials in Denmark and the USA. Underlined residues are from treatments approximating registered uses.

{PRIVATE } Country Year	Application			PHI, days	Residues, mg/kg	Report
	No	kg ai/ha	g ai/hl			
Denmark 1988	1	0.8	400	59 81 99	<0.04 <0.04 <0.04 <0.04 <0.04 <0.04 <0.04 <0.04 <0.04	0335-88 0336-88 0337-88
USA 1984 (New York)	4	0.56	120	7 14 21	3.7 0.80 0.43	151-GU014-84D
	4	0.84	180	7 14 21	5.0 <u>2.3</u> 1.2	151-GU014-84D
(Michigan)	4	0.84	80	0 7 14	2.7 0.14 <u>0.35</u>	855-GU015-84D
USA 1985						

{PRIVATE } Country Year	Application			PHI, days	Residues, mg/kg			Report
	No	kg ai/ha	g ai/hl					
(California)	2	0.56	140	3 7 14	0.42 0.71 0.90			455-GU030- 85D
	2	0.56	120	7 14	0.45 0.21			456-GU013- 85D
	2	0.56	120	7 14	0.55 0.20			456-GU009-85D
	2	0.56	600	3 7 14	0.36 0.16 0.30			455-GU027-85D
(Washington)	2	0.56	10	7 14 21	0.27 0.09 0.24			454-GU012-85D
	2	0.56	10	7 14 21	0.18 0.11 0.21			451-GU008-85D
(Oregon)	2	0,56	120	3 7 14	1.6 0.42 0.52			451-GU029-85D
	2	0.56	120	3 7 14	1.2 0.29 0.73			451-GU026-85D
(Michigan)	3	0.84	290	7 14 21	3.1 0.46 0.17			855-GU015-85D
	3	0.84	290	7 14 21	0,51 0.29 0.38			855-GU031-85D
	3	0.84	290	7 14 21	0.21 0.11 0.39			855-GU028-85D
	3	0.84	1800	7 14	0.05 <u>&lt;0.01</u>			855-GU011-85D
(New York)	3	0.84	30	7 14	0.41 <u>0.37</u>			151-GU032-85D
	3	0.84	30	7 14 21	1.5 <u>1.4</u> 0.31			151-GU007-85D
(Wisconsin)	5	0.84	20	7 15 21	2.1 0.35 <u>0.25</u>			851-GU014-85D
	5	0.84	20	7 15 21	1.7 0.40 0.20			851-GU010-85D

Table 3. Residues of azinphos-methyl in mandarins from supervised trials in Spain. Underlined residues are from treatments approximating registered uses.

{PRIVATE } Crop Year	Application			PHI, days	Residues, mg/kg			Report
	No	kg ai/ha	g ai/hl					
Mandarins/ satsumas 1986  (Algemesi)	>1	4.8	100	0 7 14 21 28	0.52 0.41 0.32 0.29 0.23	0.52 0.39 0.34 0.27 0.22	0.75 0.55 0.43 0.35 0.22	No information
(Pedrequer)	>1	2.4	50	0 7 14 21 28 35	0.42 0.38 0.30 0.25 0.21 0.18	0.35 0.40 0.35 0.30 0.23 0.21	0.45 0.42 0.34 0.30 0.22 0.21	

{PRIVATE } Crop Year	Application			PHI, days	Residues, mg/kg			Report
	No	kg ai/ha	g ai/hl					
Mandarins/ clementines 1986  (Algemesi)	>1	2.4	50	0	0.84	0.80	0.65	No information
				7	0.61	0.55	0.43	
				14	<u>0.48</u>	<u>0.35</u>	<u>0.32</u>	
				21	<u>0.30</u>	<u>0.27</u>	<u>0.22</u>	
				28	0.26	0.24	0.23	
42	0.20	0.17	0.17					
(Pedrequer)	>1	2.4	50	0	0.53	0.47	0.38	
				7	0.40	0.41	0.36	
				14	<u>0.28</u>	<u>0.36</u>	<u>0.28</u>	
				21	<u>0.24</u>	<u>0.28</u>	<u>0.26</u>	
				28	0.18	0.20	0.23	
				35	0.18	0.20	0.19	
				42	0.13	0.13	0.15	
56	0.12	0.12	0.12					

Table 4. Residues of azinphos-methyl in oranges from supervised trials in Spain (1986). Underlined residues are from treatments approximating registered uses.

{PRIVATE } Application			PHI, days	Residues, mg/kg			Report
No	kg ai/ha	kg ai/hl					
>1	2.4	50	0	0.44	0.69	0.40	No information
			7	0.24	0.34	0.39	
			14	<u>0.27</u>	<u>0.23</u>	<u>0.29</u>	
			21	0.24	0.26	0.16	
			28	0.25	0.33	0.24	
			42	0.21	0.25	0.30	
			56	0.29	0.22	0.22	
>1	2.2	50	0	0.66	0.75	0.69	
			7	0.30	0.38	0.41	
			14	<u>0.27</u>	<u>0.28</u>	<u>0.37</u>	
			21	<u>0.25</u>	<u>0.23</u>	<u>0.27</u>	
			28	0.21	0.22	0.25	
			35	0.28	0.31	0.32	
			42	0.27	0.28	0.20	

Table 5. Residues of azinphos-methyl in apricots from supervised trials in Spain (1988).

{PRIVATE } Application			PHI, days	Residues, mg/kg			Report
No	kg ai/ha	kg ai/hl					
>1	1.9	50	0	2.1	2.3	2.0	No information
			3	1.5	1.4	1.6	
			7	0.46	0.80	0.86	
			14	0.13	0.22	0.16	
			21	0.14	0.13	0.08	

#### APPRAISAL

Azinphos-methyl was evaluated in 1965 and several times since. In 1991 a re-evaluation resulted in recommendations to withdraw or change several MRLs. New residue data from trials carried out according to GAP were required for apricots, black currants, citrus fruits, strawberries, kiwifruit and bulb and spring onions. The data from trials according to GAP on apricots, citrus fruits and kiwifruit were so limited that withdrawal of the existing MRLs was proposed, and this recommendation was accepted by the 25th Session of the CCPR (1993). Residue data from trials according to GAP on blueberries, cherries and grapes were also desirable as the data available were from only one country, the USA.

The Meeting received summarized residue data from Spain from trials on mandarins and oranges according to registered use in Spain. Residue data on apricots were also available from Spain, but the dosage used was about 3 times the registered rate. The Meeting was unable to

recommend MRLs on the basis of the summarized data.

Residue data from trials on cherries were received from Denmark, but samples were taken more than 50 days after the last treatment whereas the registered PHI in Denmark is 21 days. Information was received on several trials on cherries carried out in the USA, which supported the MRL of 2 mg/kg proposed by the 1991 JMPR. The Meeting was informed that data from trials on grapes in Germany and Italy, including processing studies, would be available in 1995.

At the 1991 JMPR a temporary residue limit was proposed for wheat straw and fodder. As no supplementary data were received the Meeting proposes that the temporary limit should be withdrawn.

#### RECOMMENDATIONS

The residues found in supervised trials did not enable the Meeting to recommend MRLs. The withdrawal of the limit shown below is recommended.

{PRIVATE } Commodity		Recommended MRL (mg/kg)	
CCN	Name	New	Previous
AS 0654	Wheat straw and fodder, dry	W	1 T

W: the previous recommendation is withdrawn.

#### FURTHER WORK OR INFORMATION

##### Desirable

1. Detailed information from trials on citrus fruits carried out in Spain.
2. Residue data from trials on citrus fruits from other countries.