5.8 DIMETHOMORPH (225)

RESIDUE AND ANALYTICAL ASPECTS

Dimethomorph is a fungicide with protective action against plant pathogenic *Phytophthora* species and a number of downy mildew diseases of fruit, vegetables and potatoes. It consists of a mixture of an E and Z isomers in approximately equal proportions. Its mode of action is through disruption of fungal cell wall formation.

Dimethomorph was evaluated for the first time by the JMPR in 2007 and the Meeting established an acceptable daily intake (ADI) of 0–0.2 mg/kg bw and an acute reference dose (ARfD) of 0.6 mg/kg bw. The residue (for compliance with the MRL and for the estimation of dietary intake) for plant and animal commodities was defined as dimethomorph (sum of isomers). Maximum residues levels for 20 commodities were proposed by the JMPR in 2007.

The current Meeting received information on supervised residue trial for dimethomorph in oranges, strawberries, grapes, papaya, bulb onions, leek, spring onions, head cabbage, broccoli, pepper, lettuce leaf, spinach, lettuce head, taro, green peas, vining peas, lima beans, artichoke, and celery. An analytical method for determination of dimethomorph in animal matrices were provided as well as validation data for an analytical method in oranges and processing studies in oranges, strawberry, onion, lettuce head, and peas.

Methods of analysis

The 2007 Meeting evaluated methods of analysis for dimethomorph in different plant and animal matrices with a LOQ of 0.01 mg/kg (LC-MS/MS or GC-NDP), LOQ of 0.02 mg/kg (GC-NDP or GC-MS) based on the multi-residue method DFG-S19.

The current Meeting received information on a new analytical method LO138/01 for dimethomorph in animal matrices. In this method dimethomorph is extracted with methanol/water/hydrochloric acid. The final determination of dimethomorph is performed by HPLC-MS/MS at two transitions. Transition m/z 388 → 301 is the target transition for quantification and transition m/z 388 →165 for confirmatory purposes. The method is suitable for measuring residues of 0.01 mg/kg for dimethomorph in milk, egg, muscle and liver.

Stability of pesticide residues in stored analytical samples

In 2007 the Meeting concluded that dimethomorph is stable (less than 10% loss of residues) under frozen conditions in stored samples in most crops and animal commodities if stored under frozen conditions at 18-24 months and 16 months, respectively.

Results of supervised residue trials on crops

Oranges

Data from supervised trials on oranges from Spain were presented to the Meeting. However, no registered GAP from Spain was available for oranges. As a result no estimation of a maximum residue level was made.

Grapes

Data from supervised trials on grapes from the USA were presented to the Meeting. The registered critical GAP in the USA is four foliar applications of 0.219 kg ai/ha and PHI of 14 days.

In twelve independent residue trials from USA matching the cGAP the residues of dimethomorph in grapes were (n=12): 0.11, 0.26, 0.41, 0.46, 0.49, 0.55, 0.65, 0.71, 0.75, 0.92, 1.77, 1.86 mg/kg.

The Meeting estimated a maximum residue level, an STMR value and an HR value for dimethomorph in grapes of 3 mg/kg, 0.60 mg/kg and 1.9 mg/kg, respectively. The Meeting replaces its previous recommendation of 2 mg/kg for a maximum residue level for grapes.

Strawberry

Data from supervised trials on strawberries were presented to the Meeting.

The critical GAP is from Belgium (protected and outdoor) with three successive root drench applications of 0.05 g ai/plant and a PHI of 35 days. No trials supporting the GAP were provided.

In Ireland the GAP (protected and outdoor) is one root drench application of 0.05 g ai/plant with a PHI of 35 days. A dataset on protected strawberries was submitted consisting of four trials with replicate plots treated either at 0.0625 g ai/plant or 0.125 g ai/plant and with four additional trials solely treated at 0.125 g ai/plant.

In four GAP compliant plots conducted at 0.0625 g ai/plant residues in strawberry fruits were (n=4): 0.03, 0.18, 0.26, 0.3 mg/kg.

In four additional trials solely conducted at 0.125 g ai/plant residues in strawberry fruits were (n=4): 0.04 (2), 0.05 and 0.21 mg/kg.

Since the four trials provided according to GAP are insufficient for an evaluation of residues in strawberries, the Meeting decided to extend the dataset by applying the proportionality approach. In accordance to the general principles outlined in the 2012 JMPR report, all residue values within and above 25% deviation from GAP were scaled to match the application rate of 0.05 g ai/plant. From replicated plots conducted at different application rates, the higher scaled residue was selected for the assessment. Scaled residues in strawberry fruits were: 0.024, 0.14, 0.21, 0.24 mg/kg (factor 0.8, based on 0.0625 g ai/plant→0.05 g ai/plant and 0.016, 0.016, 0.02, 0.084 mg/kg (factor 0.4, based on 0.125 g ai/plant→0.05 g ai/plant.

The combined scaled dataset is (n=8) 0.016, 0.016, 0.02, 0.024, 0.084, 0.14, 0.21 and 0.24 mg/kg.

Three similar outdoor trials with a PHI of 43 days from Belgium, the Netherlands and Germany were also available. The residues in these trials were for 0.125 g ai/plant (n=3) 0.01, 0.02 and 0.04 mg/kg.

For drip irrigation eight trials from Spain using 2 × 0.75 kg ai/ha with a PHI of one day were presented to the Meeting. No registered GAP from Spain was available for strawberries.

In the United Kingdom the registered GAP for outdoor is one foliar spray at 1.5 kg ai/ha applied just after planting/transplanting with a PHI of 35 days. Eight trials presented to JMPR 2007 from the Netherlands and four trials from northern Europe presented to the current Meeting match this GAP and could be combined. The residues found in these combined trials were (n=12): < 0.01mg/kg (9), 0.01, 0.02 and 0.03 mg/kg.

The highest residues came from the protected root drench treatment. Based on the combined scaled dataset from protected root drench trials for strawberries in Ireland, the Meeting estimated a maximum residue level, an STMR value and an HR value for dimethomorph for strawberries of 0.5 mg/kg, 0.05 mg/kg and 0.24 mg/kg, respectively. The Meeting replaces its previous recommendation of 0.05 mg/kg for maximum residue level for strawberry.

Papaya

Data from supervised trials on papaya from Brazil were presented to the Meeting. No registered GAP from Brazil was available for papaya. As a result no maximum residue level estimation was made.

Bulb vegetables

Bulb onion

The Meeting received results from supervised trials with dimethomorph on bulb onions. The critical GAP is for Bulb Vegetables (Garlic, Garlic great headed, Leek, Onion dry bulb, Onion green, Onion Welsh Shallot) in the USA and Canada with three foliar applications of 0.21 kg ai/ha and PHI of 0 days.

Ten independent residue trials from the USA (nine) and Canada (one) were presented on bulb onions matching the cGAP. Residues of dimethomorph in bulb onions were (n=10): 0.06, 0.08, 0.10, 0.12, 0.16, 0.18 (2), 0.23, 0.28 and 0.38 mg/kg. The highest residue of 0.40 mg/kg was measured in individual onion samples.

The Meeting estimated a maximum residue level, an STMR value and an HR value for dimethomorph in bulb onions of 0.6 mg/kg, 0.17 mg/kg and 0.40 mg/kg, respectively. The Meeting also agreed to extrapolate these estimations to shallot and garlic.

Leek

Data from supervised trials on leek were presented to the Meeting. The critical GAP is in France with two foliar applications of 0.18 kg ai/ha and a PHI of 14 days.

Eighteen independent trials from Belgium, Germany, Greece, Italy, France, the Netherlands, Spain, and the UK matching this GAP were presented. The dimethomorph residues from trials on leek in south EU were (n=4): 0.06, 0.08, 0.3 and 0.69 mg/kg and north EU (n=14): 0.01 (2), < 0.02 (2), 0.03, 0.04 (2), 0.07, 0.08 (2), 0.10 (2), 0.11, 0.13.

The combined data set is (n=18) 0.01 < 0.02 (2), 0.03 0.04 (2), 0.05, 0.06, 0.07, 0.08 (3), 0.10 (2), 0.11, 0.13, 0.30 and 0.69 mg/kg.

The Meeting estimated a maximum residue level, an STMR value and an HR value for dimethomorph in leek of 0.8 mg/kg, 0.08 mg/kg and 0.69 mg/kg, respectively.

Spring onion

Data from supervised trials on spring onion were presented to the Meeting. The critical GAP is for Bulb Vegetables (Garlic, Garlic great headed, Leek, Onion dry bulb, Onion green, Onion Welsh Shallot) in USA and Canada with three foliar applications of 0.21 kg ai/ha and a PHI of 0 days.

Six independent residue trials from the USA matched the cGAP. Residue of dimethomorph in whole plant were (n=6) 1.27, 1.56, 1.79, 2.35, 2.45 and 5.36 mg/kg. The highest residue of 6.6 mg/kg was measured in individual spring onion samples.

The Meeting estimated a maximum residue level, an STMR value and an HR value for dimethomorph in spring onion of 9 mg/kg, 2.1 mg/kg and 6.6 mg/kg, respectively. The Meeting also agreed to extrapolate this estimation to Onion, Welsh.

Brassica vegetables

Head cabbage

The Meeting received results from supervised trials with dimethomorph on head cabbage. The critical GAP is in USA with three foliar applications of 0.21 kg ai/ha and a PHI of 0 days.

Ten independent residue trials from USA matched the cGAP. Residue from dimethomorph in cabbage heads were: 0.17, 0.45, 0.46, 0.86, 1.08 (2), 1.22, 1.37 1.51 and 4.26 mg/kg (n=10). The highest residue of 4.6 mg/kg was measured in individual head cabbage samples.

The Meeting estimated a maximum residue level, an STMR value and an HR value for dimethomorph in head cabbage of 6 mg/kg, 1.1 mg/kg and 4.6 mg/kg, respectively. The Meeting replaces its previous recommendation of 2 mg/kg for maximum residue level for head cabbage.

Broccoli

Data from supervised trials on broccoli were presented to the Meeting. The critical GAP is from the USA which consists of three foliar applications of 0.21 kg ai/ha and a PHI of 0 days.

Ten independent residue trials performed in USA match the US GAP. Residues for dimethomorph in broccoli were: 0.25, 0.68, 0.74, 0.90, 0.95, 1.49, 1.62, 1.75, 1.88 and 2.33 mg/kg (n=10). The highest residue of 2.6 mg/kg was measured in an individual broccoli sample.

The Meeting estimated a maximum residue level, an STMR value and an HR value for dimethomorph in broccoli of 4 mg/kg, 1.3 mg/kg and 2.6 mg/kg, respectively. The Meeting replaces its previous recommendation of 1 mg/kg for a maximum residue level for broccoli.

Fruiting vegetables, other than cucurbits

Peppers

Data from supervised trials on pepper were presented to the Meeting. The GAP in Canada for Fruiting vegetables (tomato, eggplant, ground cherry, peppers (all varieties), pepino and tomatillo) is five foliar applications of 0.225 kg ai/ha and a PHI of 0 days.

In eleven outdoor independent residue trials in USA matching the Canadian GAP the residues of dimethomorph in peppers were: 0.04, 0.06, 0.08, 0.11, 0.13(2), 0.14, 0.25, 0.7, 0.84 and 1.05 mg/kg (n=11).

Tomato

Data from supervised trials on tomato were presented to the 2007 Meeting. The critical GAP is from Canada for Fruiting vegetable with five foliar applications of 0.225 kg ai/ha and PHI of 0 day.

In twelve outdoor independent residue **t**rials on tomato from the USA matching the cGAP the residue of dimethomorph in tomato fruit were (n=12): 0.05(2), 0.06(2), 0.07, 0.11, 0.14, 0.21, 0.3, and 0.38, 0.41 and 0.51 mg/kg.

The Meeting noted that the GAP in Canada was for fruiting vegetables, other than cucurbits, the medians of the data sets for peppers and tomatoes differed by less than 5-fold and that the residue populations were statistically similar. The Meeting therefore decided to consider recommending a crop group maximum residue level. Residue in the combined data set, matching the Canadian GAP, were: 0.04, 0.05(2) 0.06(3), 0.07, 0.08, 0.11(2), 0.13(2), 0.14(2), 0.21, 0.25, 0.30, 0.38, 0.41, 0.51 0.70, 0.84 and 1.05 mg/kg (n=23). The highest residue of 1.2 mg/kg was measured in an individual pepper sample.

The Meeting estimated a group maximum residue level, an STMR value and an HR value for dimethomorph in fruiting vegetables, other than cucurbits except mushrooms and sweet corn of 1.5 mg/kg, 0.13 mg/kg and 1.2 mg/kg, respectively.

The Meeting withdraws its previous recommendation of 1 mg/kg for fruiting vegetable, other than cucurbits except mushrooms and sweet corn.

Leafy vegetables

Lettuce, Head

Data from supervised field trials on head lettuce were presented to the Meeting. The critical GAP is from USA for Leafy vegetables, except brassica vegetables, consisting of three foliar applications at 0.19 kg/ha and a PHI of 0 days.

In fourteen independent trials from the USA matching the cGAP the residues from dimethomorph in head lettuce were: 1.08, 1.21, 1.36, 1.42, 1.46, 1.68, 1.72, 2.06, 2.3, 2.82, 3.63, 4.1, 4.37 and 6.45 mg/kg (n=14).

The Meeting noted that the US trials reported by the 2007 JMPR resulted in higher residues. The Meeting therefore, confirmed the previous recommendations made by the 2007 JMPR.

Lettuce, Leaf

Data from supervised trials on leaf lettuce were presented to the Meeting. The critical GAP is from USA for Leafy vegetables, except brassica vegetables with three foliar applications 0.19 kg/ha and a PHI of 0 days.

In nine independent trials from the USA matching the cGAP the residues from dimethomorph in lettuce leaf were: 2.09, 3.37, 3.68, 4.61, 5.19, 5.38, 5.83, 9.77 and 9.88 mg/kg (n=9). The highest residue of 10.5 mg/kg was measured in an individual lettuce sample.

The Meeting estimated a maximum residue level, an STMR value and a HR value for dimethomorph in leaf lettuce of 20 mg/kg, 5.2 mg/kg and 10.5 mg/kg.

Short-term intake assessment showed that residues in leaf lettuce exceeded the acute reference dose of 0.6 mg/kg bw by 110% for children.

Spinach

Data from supervised trials on spinach were presented to the Meeting. The critical GAP is from USA for Leafy vegetables, except brassica vegetables with three foliar applications 0.19 kg/ha and a PHI of 0 days.

In eight independent trials from the USA matching the cGAP the residues from dimethomorph in spinach leaves were: 4.69, 5.30, 5.91, 8.21, 8.35, 8.48, 10.18 and 11.26 mg/kg (n=8). The highest residue of 11.5 mg/kg was measured in individual spinach samples.

The Meeting estimated a maximum residue level, an STMR value and an HR value for dimethomorph in spinach of 30 mg/kg, 8.3 mg/kg and 11.5 mg/kg, respectively.

Taro leaves

Data from supervised trials on taro leaves from USA were presented to the Meeting. The critical GAP is five foliar applications of 0.19 kg ai/ha and PHI 7 days for use in USA except California.

Dimethomorph was applied seven times to taro at the rate of 0.225 kg ai/ha with an interval of 7–8 days. Presented residue trials from head lettuce, leaf lettuce and spinach show that residues of

dimethomorph decline significantly three days after application. The Meeting, therefore, concluded that the first two applications would not contribute significantly to the residues in leaves at harvest.

In three independent trials from USA matching the cGAP residues in taro leaves were (n=3): 1.44, 1.64 and 4.53 mg/kg. The highest residue of 5.4 mg/kg was measured in an individual taro sample.

The Meeting estimated a maximum residue level, an STMR value and an HR value for dimethomorph in taro leaves of 10 mg/kg, 1.64 mg/kg and 5.4 mg/kg, respectively.

Legume vegetable

Peas, shelled (succulent seed)

Data on supervised trials on peas were presented to the Meeting. The critical GAP is from France with two foliar applications at 0.18 kg ai/ha and a PHI of 21 days.

In twelve independent trials from north (eight) and south (four) Europe matching the cGAP residues of dimethomorph in fresh peas without pods were: < 0.01 (8), 0.016, 0.044 and 0.063 mg/kg (n=12).

The Meeting estimated a maximum residue level, an STMR value and an HR value for dimethomorph in peas without pods of 0.15 mg/kg, of 0.01 mg/kg and 0.063 mg/kg, respectively.

Lima bean

Data from supervised trials on Lima bean were presented to the Meeting. The critical GAP is from the USA with five applications at 0.19 kg ai/ha and a PHI of 0 days.

Ten independent trials matching the cGAP were conducted on Lima bean in USA. Residues of dimethomorph in beans (succulent seed without pods) (n=10) were: 0.01, 0.03(4), 0.05, 0.06, 0.08, 0.1, 0.21 and 0.47 mg/kg. The highest residue of 0.48 mg/kg was measured in an individual Lima bean sample.

The Meeting estimated a maximum residue level, an STMR value and an HR value for dimethomorph in Lima bean of 0.7 mg/kg, 0.055 mg/kg and 0.48 mg/kg, respectively.

Root and tuber vegetables

Ginseng

Data from supervised trials on ginseng were presented to the Meeting. The critical GAP from the USA, except California, is five applications of 0.19 kg ai/ha and a PHI of 14 days. Four trials were presented where dimethomorph was applied seven times at 0.225 kg ai/ha. Residue decline trials were not provided for any root and tuber vegetable to support that the first two applications did not contribute to the residues at harvest. Consequently, no maximum residue level estimation was made.

Taro root

Data on supervised trials on taro corms from Hawaii were presented to the Meeting. The critical GAP is five applications of 0.19 kg ai/ha and a PHI of 30 days in the USA, except California. Three trials were presented where dimethomorph was applied seven times at 0.225 kg ai/ha. Residue decline trials were not presented for any root and tuber vegetable to support that the first two applications not contribute to the residues at harvest. Consequently, no maximum residue level estimation was made.

Stalk and stem vegetables

Globe artichoke

Data from supervised trials on globe artichoke were presented to the Meeting. The critical GAP from France is three foliar applications of 0.18 kg ai/ha and PHI of 3 days.

In ten independent trials from Europe matching the French GAP residues of dimethomorph in artichoke heads were in North Europe (n=5) 0.11, 0.24, 0.26, 0.55 and 0.75 mg/kg and in South EU (n=5) 0.06, 0.09, 0.14, 0.32 and 1.14 mg/kg.

The combined data set was (n=10): 0.06, 0.09, 0.11, 0.14, 0.24, 0.26, 0.32, 0.55, 0.75 and 1.14 mg/kg.

The Meeting estimated a maximum residue level, an STMR value and an HR value for dimethomorph in globe artichoke of 2 mg/kg, 0.25 mg/kg and 1.14 mg/kg, respectively.

Celery

Data from supervised trials on celery were presented to the Meeting. The critical GAP is from the USA with three foliar applications of 0.21 g ai/ha and a PHI of 0 days.

In nine independent trials from Canada (two) and from USA (seven) matching the cGAP residues of dimethomorph in leaf stalks were (n=9): 1.27, 1.55, 1.85, 1.91, 2.44, 3.27, 4.02, 5.54 and 8.21 mg/kg.

The highest residue of 8.8 mg/kg was measured from an individual celery sample.

The Meeting estimated a maximum residue level, an STMR value and an HR value for dimethomorph in celery of 15 mg/kg, 2.44 mg/kg and 8.8 mg/kg, respectively.

Animal feeds

Pea forage

Data on supervised trials on peas were presented to the Meeting. The critical GAP is from France with two foliar applications at 0.18 kg ai/ha and a PHI of 21 days. However, the residues (10) 28 days after the second treatment were found to be higher and were used for animal burden calculation: 0.42, 0.59, 1.57, 1.59, 1.88, 2.40, 4.60, 4.97, 5.45 and 9.58 mg/kg.

The Meeting estimated in pea forage a median residue of 2.14 mg/kg (fresh weight) and a highest residue of 9.58 mg/kg (fresh weight).

Fate of residue during processing

The Meeting received information on processing of oranges, strawberries, onions, lettuce head and peas.

Processing factors calculated for the processed commodities for the above raw agricultural commodities, including previously estimated, are shown in the table below. STMP-Ps was calculated for processed commodities of strawberry, onion and peas for which maximum residue levels were estimated.

Processed commodity	Processing factor	PF (Best estimate)	STMR-P	HR-P
Strawberry, jam	0.24, 0.43, 0.44, 0.54	0.435	0.02	
Strawberry, canned	0.57, 1, 1.21, 1.52	1.11	0.0555	
Onions, raw without skin	0.02, 0.04, 0.12, 0.34	0.08	0.014	0.032

Processed commodity	Processing factor	PF (Best estimate)	STMR-P	HR-P
Dried onion	0.03, 0.12, 0.04, 0.34	0.13	0.022	0.053
Peas (cooked)	0.08, 0.17, 0.24, 0.26	0.21	0.002	
Peas (canned)	0.06, 0.08, 0.20, 0.24	0.14	0.0014	

*estimated by 2007JMPR Meeting
** PF =processing factor

The Meeting confirmed its previous maximum residue level estimation of 5 mg/kg for dried grapes.

Residues in animal commodities

Farm animal dietary burden

Dietary burden calculation for beef cattle, dairy cattle, broilers and laying poultry based on feed items evaluated by JMPR in 2007 and 2014 are provided in table below. The calculations were made according to the livestock diets from US-Canada, EU, Australia and Japan according to OECD feeding table. Noting that fresh forage commodities are not significant in international trade, the Meeting only included the burden contributions from the pea forages in the European dietary burden calculation, as dimethomorph is not authorised for use on peas in US-Canada, Australia or Japan.

Dietary burden calculations for beef cattle, dairy cattle, broilers and laying poultry are presented in Annex 6 and are summarised below.

Estimated maximum and mean dietary burden of farm animals Summary (ppm of dry matter diet)

	US-Canada		EU		Australia		Japan	
	max	mean	max	mean	max	mean	max	mean
Beef cattle	0.4	0.3	14.2 [a]	3.6 [c]	2.6	2.6	0.007	0.007
Dairy cow	0.1	0.1	14.1 [b]	3.5 [d]	2.6	2.6	0.01	0.01
Poultry-broiler	0.002	0.002	0.06	0.05	0.04	0.04	0.002	0.002
Poultry layer	0.002	0.002	5.4 [e g]	1.27 [f h]	0.04	0.04	0.007	0.007

[a] Highest maximum beef or dairy cattle dietary burden suitable for MRL estimates for mammalian tissues
[b] Highest maximum dairy cattle dietary burden suitable for MRL estimates for mammalian milk
[c] Highest mean beef or dairy cattle dietary burden suitable for STMR estimates for mammalian tissues.
[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 tissues.
[f] Highest mean poultry dietary burden suitable for STMR estimates for poultry tissues.
[g] Highest maximum poultry dietary burden suitable for MRL estimates for poultry eggs.
[h] Highest mean poultry dietary burden suitable for STMR estimates for poultry eggs

For beef and dairy cattle, the calculated maximum dietary burdens suitable for estimating maximum residue levels in mammalian tissues and milk are 14.2 and 14.1 ppm dry weight of feed respectively.

The calculated mean dietary burden, suitable for estimating STMRs in mammalian tissues and in milk is 3.6 and 3.5 ppm, dry weight of feed, respectively.

In the cattle feeding study evaluated by JMPR in 2007 where lactating cows were dosed at 37.5 ppm (approximately 40% higher than estimated maximum burden) no residues of parent dimethomorph were detected in edible tissue or milk. Therefore the Meeting concluded that no residues are to be expected at the maximum calculated dietary burden for ruminants.

The calculated maximum dietary burden suitable for estimating maximum residue levels in poultry tissues and eggs is 5.4 ppm dry weight of feed and the calculated mean dietary burden, suitable for estimating STMRs in poultry tissues and in eggs is 1 ppm dry weight of feed.

In the metabolism study where laying hens were fed the equivalent of 40 ppm in the feed for seven days, dimethomorph residues in fat and skin were < 0.02 mg/kg and were not detected in tissue or eggs. On the basis that the maximum calculated dietary burden is eight times lower than the dose rate in the metabolism study the Meeting concluded that no residues of dimethomorph are to be expected at the maximum calculated dietary burden for poultry.

The Meeting confirmed the previous recommendations for animal commodities.

RECOMMENDATIONS

On the basis of the data from supervised residue trials the Meeting concluded that the residue levels listed below are suitable for establishing maximum residue limits and for the IEDI and IESTI assessment.

Definition of the residue (for compliance with the MRL and for estimation of dietary intake) for plant and animal commodities: dimethomorph (sum of isomers).

The residue is not fat soluble.

DIETARY RISK ASSESSMENT

Long-term intake

The International Estimated Daily Intakes (IEDI) of dimethomorph, based on the STMRs estimated for 30 commodities, for the 17 cluster diets were in the range of 0–2% of maximum ADI (0.2 mg/kg bw), see Annex 3 to the 2014 Report. The Meeting concluded that the long-term intake of residues of dimethomorph resulting from its uses that have been considered by JMPR is unlikely to present a health concern.

Short-term intake

The WHO Panel of the 2007 JMPR established an Acute Reference Dose (ARFD) of 0.6 mg/kg bw for dimethomorph.

The International Estimated Short Intake (IESTI) for dimethomorph was calculated for new food commodities and their processed fractions for which maximum residue levels were estimated and for which consumption data were available, see Annex 4 to the 2014 Report.

For lettuce leaf, the IESTI represented 110% of the ARfD of 0.6 mg/kg bw. On the basis of the information provided to the JMPR it was not possible to conclude that the estimate of the short-term intake of dimethomorph, from the consumption of lettuce leaf, was less than the ARfD. The Meeting noted than an alternative GAP for lettuce leaf was not available.

For the other commodities the IESTI for dimethomorph calculated on the basis of recommendations made by the JMPR represented 0–90% of the ARfD (0.6 mg/kg bw) for children and 0–30% for the general population.

The Meeting concluded that except for lettuce leaf, the short-term intake of residues of dimethomorph, when used in ways that have been considered by the JMPR is unlikely to present a public concern.