The Meeting estimated an STMR of 0.01 mg/kg for milk and estimated a maximum residue level of 0.01 mg/kg for milk. The Meeting estimated STMRs of 0.0 mg/kg for each of meat and fat and maximum residue levels of 0.05 (*) mg/kg for meat. The Meeting estimated an STMR of 0.065 mg/kg for edible offal based on the STMR value for dairy cow kidney. The Meeting estimated a maximum residue level of 0.1 mg/kg for edible offal (mammalian) based on the value of kidney.

DIETARY RISK ASSESSMENT

Long-term intake

The International Estimated Daily Intakes (IEDI) of pyrimethanil based on the STMRs estimated for 32 commodities for the thirteen GEMS/Food cluster diets were in the range of 0% to 5% of the maximum ADI (0.2 mg/kg bw). The Meeting concluded that the long-term intake of residues of pyrimethanil resulting from its uses that have been considered by JMPR is unlikely to present a public health concern.

Short-term intake

The 2007 JMPR decided that an ARfD is unnecessary. The Meeting therefore concluded that the short-term intake of pyrimethanil residues is unlikely to present a public health concern.

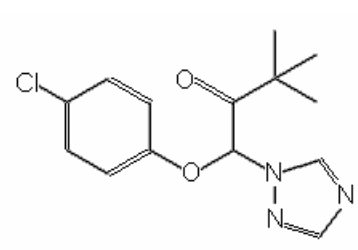
5.22 TRIADIMEFON (133)/ TRIADIMENOL (168)

RESIDUE AND ANALYTICAL ASPECTS

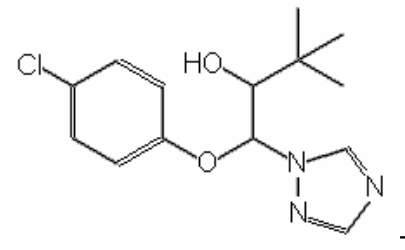
Triadimenol and triadimefon are related substances and follow the same metabolic pathways in all matrices investigated. Both compounds were evaluated by JMPR several times since 1978 and the last time in 2004, when an ADI of 0–0.03 mg/kg bw and an ARfD of 0.08 mg/kg bw were established for triadimefon 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.



ohenoxy)-3,3-dı



-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 6.1 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, 0.26, 0.27, 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, 0.14, 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 fodder beets 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 barley were available from Germany. The GAP of the Ukraine for the foliar application 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 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. 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 rye 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 wheat 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 barley were 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. 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 seed dressing 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 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 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

Raw agricultural commodity (RAC)	Processed commodity	Calculated processing factors	Estimate of the processing factor
	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 [1]	8.8 [2]
Dairy cattle	18	4.4	9.7	2.1	27 [3]	7.7 [4]
Poultry - broiler	0.1	0.04	0.1	0.04	0.1	0.04
Poultry - layer	0.1	0.04	4.7 [5]	1.0 [6]	0.09	0.03

[1] Highest maximum beef cattle dietary burden suitable for MRL estimates for mammalian meat.

[2] Highest mean beef cattle dietary burden suitable for STMR estimates for mammalian meat.

[3] Highest maximum dairy dietary burden suitable for MRL estimates for milk.

[4] Highest mean dairy cattle dietary burden suitable for STMR estimates for milk.

[5] Highest maximum poultry dietary burden suitable for MRL estimates for poultry meat and eggs.

[6] 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 cattle	(40)		(< 0.01)	(< 0.01)	(< 0.01)	(0.01)
	[25]					[< 0.01]
	[75]		[< 0.01]	[< 0.01]	[< 0.01]	[0.02]
MRL, dairy cattle	(27)	(< 0.01)				
	[25]					
	[75]	[< 0.001]				
STMR beef cattle	(8.8)		(< 0.01)	(< 0.01)	(< 0.01)	(< 0.01)
	[25]					[< 0.01]

	[75]		[< 0.01]	[< 0.01]	[< 0.01]	[0.02]
STMR	(7.7)	(< 0.01)				
dairy	[25]					
cattle	[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.

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.