Modification and setting of maximum residue levels for mefentrifluconazole in various crops

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Abstract
In accordance with Article 6 of Regulation (EC) No 396/2005, the applicant BASF Agro BV Arnhem submitted a request to the competent national authority in Austria to set and modify the maximum residue levels (MRLs) for the active substance mefentrifluconazole in various products of plant and animal origin. The data submitted in support of the request were found to be sufficient to derive MRL proposals for pome fruits, apricots, cherries, peaches, plums, grapes, potatoes, sweet corns, maize, sunflower seeds, rapeseeds, sugar beet roots, swine liver, bovine kidney and ruminant milk. Adequate analytical methods for enforcement are available to control the residues of mefentrifluconazole in plant and animal matrices at the validated limit of quantification (LOQ) of 0.01 mg/kg. A consumer risk assessment was performed for mefentrifluconazole. The short-term and the long-term intake of parent mefentrifluconazole resulting from the intended uses is unlikely to present a risk to consumer health. EFSA also performed an indicative risk assessment for the following four metabolites of mefentrifluconazole, which are called triazole derivative metabolites (TDMs): triazole alanine (TA), triazole lactic acid (TLA), triazole acetic acid (TAA) and 1,2,4-triazole (1,2,4-T). These metabolites are common metabolites for a number of triazole fungicides. For the TDM risk assessment, EFSA took into account not only data from the intended uses of mefentrifluconazole but also the information available from various triazole pesticides previously assessed. Overall, the estimated exposure for TDMs did not exceed the toxicological reference values, noting that the consumer exposure assessments for the TDMs are affected by uncertainties related to the data gaps identified in the EU peer review of confirmatory data for TDMs.

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Keywords: mefentrifluconazole, TDMs, various crops, pesticide, MRL, consumer risk assessment

Requestor: European Commission

Question number: EFSA-Q-2019-00082

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Acknowledgements: EFSA wishes to thank the following for the support provided to this scientific output: Chris Anagnostopoulos, Laszlo Bura, Georgios Chatzisotiriou, Viktoria Krivova, Silvia Ruocco and Viktor Toth.

Suggested citation: EFSA (European Food Safety Authority), Anastasiadou M, Bernasconi G, Brancato A, Carrasco Cabrera L, Ferreira L, Greco L, Jarrah S, Kazocina A, Leuschner R, Magrans JO, Miron I, Nave S, Pedersen R, Reich H, Rojas A, Sacchi A, Santos M, Stanek A, Theobald A, Vagenende B and Verani A, 2020. Reasoned Opinion on the modification and setting of maximum residue levels for mefentrifluconazole in various crops. EFSA Journal 2020;18(7):6193, 60 pp. https://doi.org/10.2903/j.efsa.2020.6193

ISSN: 1831-4732

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Summary

In accordance with Article 6 of Regulation (EC) No 396/2005, BASF Agro BV Arnhem submitted an application to the competent national authority in Austria (evaluating Member State, EMS) to set and modify the existing maximum residue levels (MRLs) for the active mefentrifluconazole in various products of plant and animal origin. The EMS drafted an evaluation report in accordance with Article 8 of Regulation (EC) No 396/2005, which was submitted to the European Commission and forwarded to the European Food Safety Authority (EFSA) on 7 February 2019. To accommodate for the intended uses of mefentrifluconazole, the EMS proposed the following MRLs: 0.4 mg/kg (pome fruits), 0.7 mg/kg (apricots and peaches), 0.5 mg/kg (plums), 2 mg/kg (cherries), 0.9 mg/kg (grapes), the LOQ of 0.01 mg/kg (potatoes, sweet corns, maize), 0.05 mg/kg (sunflower seeds), 0.06 mg/kg (rapeseeds, sugar beet roots), 0.015 mg/kg (swine liver), 0.15 mg/kg (bovine kidney) 0.03 mg/kg (cattle milk) and 0.04 mg/kg (sheep and goat milk).

EFSA assessed the application and the evaluation report as required by Article 10 of the MRL regulation. EFSA identified data gaps, which were requested from the EMS. On 18 July 2019, the EMS submitted the requested information and a revised evaluation report (Austria, 2019), which replaced the previously submitted evaluation report.

Based on the conclusions derived by EFSA in the framework of Regulation (EC) No 1107/2009 and the additional data provided by the EMS in the framework of this application, the following conclusions are derived.

The metabolism of mefentrifluconazole was investigated in primary crops following foliar applications and in rotational crops after bare soil application. The major residues identified were the parent compound mefentrifluconazole and triazole alanine (TA), triazole lactic acid (TLA), triazole acetic acid (TAA) and 1,2,4-triazole (1,2,4-T) (also known as triazole derivative metabolites, TDMs). TDMs are common plant and soil metabolites for a number of active substances belonging to the class of triazole fungicides. Studies investigating the effect of processing on the nature of mefentrifluconazole and the TDMs (hydrolysis studies) demonstrated that these compounds are stable under standard hydrolysis conditions representative for food processing.

Based on the metabolic pattern identified in metabolism studies, the hydrolysis studies and the toxicological significance of metabolites, the residue definition for enforcement in plant products was proposed as mefentrifluconazole. For risk assessment, separate residue definitions were set for mefentrifluconazole, triazole alanine (TA), triazole lactic acid (TLA), triazole acetic acid (TAA) and 1,2,4-triazole (1,2,4-T). These residue definitions are applicable to primary crops, rotational crops and processed products. EFSA concluded that for the crops assessed in this application, metabolism of mefentrifluconazole in primary and in rotational crops, and the possible degradation in processed products has been sufficiently addressed and that the previously derived residue definitions are applicable.

Sufficiently validated analytical methods are available to quantify residues in the crops assessed in this application according to the enforcement residue definition. The methods enable quantification of residues at or above 0.01 mg/kg in the crops assessed (LOQ).

The available residue trials are sufficient to derive MRL proposals for pome fruits, apricots, cherries, peaches, plums, table and wine grapes, potatoes, sweet corns, maize, sunflower seeds, rapeseeds and sugar beet roots. From processing studies submitted with the current application, several processing factors (PF) were derived for the parent compound and the TDMs and are recommended to be included in Annex VI of Regulation (EC) No 396/2005.

The occurrence residues in rotational crops were investigated in the framework of the EU pesticides peer review. Considering that mefentrifluconazole is persistent in soil, accumulation may occur after repeated/multiannual applications. Possible uptake of TDMs from soil can also not be excluded. Therefore, Member States are recommended to consider the need for specific risk mitigation measures to avoid the presence of residues in rotational crops.

As several crops under consideration and their by-products are used as feed products, a potential carry-over into food of animal origin was assessed. The dietary burden calculations were performed for both livestock and fish considering the parent compound and the individual TDMs separately. For mefentrifluconazole, triazole alanine (TA), triazole lactic acid (TLA), triazole acetic acid (TAA), the calculated dietary burden exceeded the trigger value set in the legislation for livestock, whereas no exceedance of the trigger value was observed for 1,2,4 triazole (1,2,4-T) in livestock. For fish, considering the uses assessed in the current application, the expected dietary burden for the parent compound and the TDMs is below the trigger values. The residue definition for enforcement in animal
commodities is set as parent mefentrifluconazole. For risk assessment, the following residue definitions were proposed: Livestock (except poultry): mefentrifluconazole, and, separately, the individual TDMs; Poultry: sum of mefentrifluconazole, metabolite M750F022 and fatty acid conjugates of M750F022, expressed as mefentrifluconazole, and, separately, the individual TDMs; Fish: mefentrifluconazole and, separately, 1,2,4 triazole (provisional).

Based on the estimated dietary burdens in livestock and the results of the feeding studies, a change of the existing MRL is proposed for liver of swine, kidney of bovine and milk of ruminants. Adequate analytical methods for enforcement are available to control the residues of mefentrifluconazole in animal matrices at or above the validated LOQ of 0.01 mg/kg.

Toxicological reference values (acute reference dose (ARfD) and acceptable daily intake (ADI)) were set for mefentrifluconazole in the framework of the EU pesticide peer review of the active substance. These reference values are also applicable to the metabolite M750F022 and its fatty acid conjugates. Toxicological reference values have been established also for each triazole derivative metabolite.

The consumer risk assessment was performed with revision 3.1 of the EFSA Pesticide Residues Intake Model (PRIMo). Separate calculations were performed for the parent compound and the TDMs. The short-term exposure was conducted only for the uses under assessment, whereas the long-term exposure took into account previously assessed uses of mefentrifluconazole and the contribution of TDM residues resulting from the uses of various triazole pesticides, as far as this information is available. The risk assessment for the TDMs is indicative, since a comprehensive long-term risk assessment including all triazole fungicides and all authorised uses in all relevant crops cannot yet be performed.

EFSA concluded that the short-term and the long-term intake of parent mefentrifluconazole resulting from the intended uses is unlikely to present a risk to consumer health. Regarding the individual TDMs, no risk for consumers was identified. The consumer exposure assessments for the TDMs are affected by uncertainties related to the data gaps identified in the EU peer review of TDMs in light of the confirmatory data submitted.

EFSA proposes to amend the existing MRLs as reported in the summary table below.

Full details of all endpoints and the consumer risk assessment can be found in Appendices B–D.

| Code(a) | Commodity            | Existing EU MRL (mg/kg) | Proposed EU MRL (mg/kg) | Comment/justification                                      |
|---------|----------------------|-------------------------|-------------------------|-----------------------------------------------------------|
| 0130010 | Apples               | 0.01*                   | 0.4                     | The submitted data on apples and pears are sufficient to derive an MRL proposal for the intended NEU and SEU use Risk for consumers unlikely |
| 0130020 | Pears                | 0.01*                   | 0.7                     | The submitted data on apricots and peaches are sufficient to derive an MRL proposal for the intended NEU and SEU use Risk for consumers unlikely |
| 0130030 | Quinces              | 0.01*                   | 2                       | The submitted data are sufficient to derive an MRL proposal for the intended NEU and SEU use Risk for consumers unlikely |
| 0130040 | Medlars              | 0.01*                   | 0.7                     | The submitted data on apricots and peaches are sufficient to derive an MRL proposal for the intended NEU and SEU use Risk for consumers unlikely |
| 0130050 | Loquats/ Japanese medlars | 0.01*               | 0.5                     | The submitted data are sufficient to derive an MRL proposal for the intended NEU and SEU use Risk for consumers unlikely |
| 0130990 | Other pome fruits    | 0.01*                   | 0.7                     | The submitted data on apricots and peaches are sufficient to derive an MRL proposal for the intended NEU and SEU use Risk for consumers unlikely |
| 0140010 | Apricots             | 0.01*                   | 0.7                     | The submitted data on apricots and peaches are sufficient to derive an MRL proposal for the intended NEU and SEU use Risk for consumers unlikely |
| 0140020 | Cherries             | 0.01*                   | 2                       | The submitted data are sufficient to derive an MRL proposal for the intended NEU and SEU use Risk for consumers unlikely |
| 0140030 | Peaches              | 0.01*                   | 0.7                     | The submitted data on apricots and peaches are sufficient to derive an MRL proposal for the intended NEU and SEU use Risk for consumers unlikely |
| 0140040 | Plums                | 0.01*                   | 0.5                     | The submitted data are sufficient to derive an MRL proposal for the intended NEU and SEU use Risk for consumers unlikely |
| Code<sup>(a)</sup> | Commodity | Existing EU MRL (mg/kg) | Proposed EU MRL (mg/kg) | Comment/justification |
|------------------|------------|------------------------|-------------------------|------------------------|
| 0151010 | Grapes, table | 0.01* | 0.9 | The submitted data on wine grapes are sufficient to derive an MRL proposal for the intended NEU and SEU use on both wine and table grapes. Risk for consumers unlikely. |
| 0151020 | Grapes, wine | 0.01* | 0.9 | |
| 0211000 | Potatoes | 0.01* | 0.01* | The submitted data are sufficient to derive an MRL proposal for the intended NEU and SEU use. Risk for consumers unlikely. |
| 0234000 | Sweet corn | 0.01* | 0.01* | The submitted data on maize are sufficient to derive an MRL proposal for the intended NEU and SEU use by extrapolation. Risk for consumers unlikely. |
| 0500030 | Maize | 0.01* | 0.01* | The submitted data are sufficient to derive an MRL proposal for the intended NEU and SEU use. Risk for consumers unlikely. |
| 0401050 | Sunflower seeds | 0.01* | 0.05 | The submitted data are sufficient to derive an MRL proposal for the intended NEU and SEU use. Risk for consumers unlikely. |
| 0401060 | Rapeseeds/canola seeds | 0.01* | 0.06 | The submitted data are sufficient to derive an MRL proposal for the intended NEU and SEU use. Risk for consumers unlikely. |
| 0900010 | Sugar beet roots | 0.01* | 0.06 | The submitted data are sufficient to derive an MRL proposal for the intended NEU use. Risk for consumers unlikely. |
| 1011030 | Swine, liver | 0.01* | 0.015 | The intended uses in the crops potentially fed to livestock support an MRL proposal. Risk for consumers unlikely. |
| 1012040 | Bovine kidney | 0.1 | 0.15 | |
| 1020010 | Milk, cattle | 0.02 | 0.03 | |
| 1020020 | Milk, sheep | 0.03 | 0.04 | |
| 1020030 | Milk, goat | 0.03 | 0.04 | |

*: Indicates that the MRL is set at the limit of analytical quantification (LOQ).
(a): Commodity code number according to Annex I of Regulation (EC) No 396/2005.
(F): Fat soluble.
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**Assessment**

The detailed description of the intended uses of mefentrifluconazole which are the basis for the current MRL application is reported in Appendix A.

Mefentrifluconazole is the ISO common name for \((2RS)-2-(4-(4-chlorophenoxy)-3,3,3-trifluoro-o-tolyl)-1-(1H-1,2,4-triazol-1-yl)propan-2-ol\) (IUPAC). Mefentrifluconazole is a racemic mixture of two enantiomers. The chemical structures of the active substance and its main metabolites are reported in Appendix E.

Mefentrifluconazole was evaluated in the framework of Regulation (EC) No 1107/2009 with the United Kingdom designated as rapporteur Member State (RMS); the representative use assessed was a foliar spray for the control of *Septoria tritici* in cereals. The draft assessment report (DAR) prepared by the RMS has been peer reviewed by EFSA (EFSA, 2018c). Mefentrifluconazole was approved for the use as fungicide on 20 March 2019.

EU MRLs for mefentrifluconazole are established in Annex II of Regulation (EC) No 396/2005 by Regulation (EU) 2019/977.

EFSA based its assessment on the evaluation report submitted by the EMS (Austria, 2019), the draft assessment report (DAR) and its addendum (United Kingdom, 2018a,b), the Commission review report on mefentrifluconazole (European Commission, 2019) as well as the conclusion on the peer review of the pesticide risk assessment of the active substance mefentrifluconazole (EFSA, 2018c) and on the peer review of the pesticide risk assessment for the TDMs in light of confirmatory data (TDMs confirmatory data) submitted (EFSA, 2018b).

For this application, the data requirements established in Regulation (EU) No 283/2013 and the guidance documents applicable at the date of submission of the application to the EMS are applicable (European Commission, 2000, 2010a,b, 2013, 2017; OECD, 2007a–h, 2008a,b, 2009a,b, 2011, 2013, 2016, 2018). The assessment is performed in accordance with the legal provisions of the Uniform Principles for the Evaluation and the Authorisation of Plant Protection Products adopted by Commission Regulation (EU) No 546/2011.

A selected list of end points of the studies assessed by EFSA in the framework of this MRL application including the end points of relevant studies assessed previously, are presented in Appendix B.

The evaluation report submitted by the EMS (Austria, 2019) and the exposure calculations using the EFSA Pesticide Residues Intake Model (PRIMo) are considered as supporting documents to this reasoned opinion and, thus, are made publicly available as background documents to this reasoned opinion.

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1 Regulation (EC) No 1107/2009 of the European Parliament and of the Council of 21 October 2009 concerning the placing of plant protection products on the market and repealing Council Directives 79/117/EEC and 91/414/EEC. OJ L 309, 24.11.2009, p. 1–50.
2 Commission Implementing Regulation (EU) 2019/337 of 27 February 2019 approving the active substance mefentrifluconazole in accordance with Regulation (EC) No 1107/2009 of the European Parliament and of the Council concerning the placing of plant protection products on the market, and amending the Annex to Commission Implementing Regulation (EU) No 540/2011. C/2019/1477. OJ L 60, 28.2.2019, p. 12–16.
3 Regulation (EC) No 396/2005 of the Parliament and of the Council of 23 February 2005 on maximum residue levels of pesticides in or on food and feed of plant and animal origin and amending Council Directive 91/414/EEC. OJ L 70, 16.3.2005, p. 1–16.
4 Please update with reference to Reg. Commission Regulation (EU) 2019/977 of 13 June 2019 amending Annexes II and IV to Regulation (EC) No 396/2005 of the European Parliament and of the Council regarding maximum residue levels for acldifen, Beauveria bassiana strain PPRI 5339, Clonostachys rosea strain J1446, fenpyrazamine, mefentrifluconazole and penconazole in or on certain products. C/2019/4256. OJ L 159, 17.6.2019, p. 1–25.
5 Commission Regulation (EU) No 283/2013 of 1 March 2013 setting out the data requirements for active substances, in accordance with Regulation (EC) No 1107/2009 of the European Parliament and of the Council concerning the placing of plant protection products on the market. OJ L 93, 3.4.2013, p. 1–84.
6 Commission Regulation (EU) No 546/2011 of 10 June 2011 implementing Regulation (EC) No 1107/2009 of the European Parliament and of the Council as regards uniform principles for evaluation and authorisation of plant protection products. OJ L 155, 11.6.2011, p. 127–175.
1. **Residues in plants**

1.1. **Nature of residues and methods of analysis in plants**

1.1.1. **Nature of residues in primary crops**

The metabolism of mefentri fluoride in primary crops has been investigated in fruit crops, pulses/oilseeds and cereals/grass in the framework of the EU pesticides peer review (EFSA, 2018c). After foliar applications, parent mefentri fluoride was the predominant residue (>60% total radioactive residue (TRR)) in tested plant parts, except in wheat grains and soybean seeds. The triazole derivative metabolites (TDMs) were formed in significantly higher amounts in these commodities (77% TRR in wheat grain and 82% TRR in soyabean seed), with triazole alanine (TA) as the most abundant compound. A preferential metabolism or uptake of one of the two mefentri fluoride enantiomers was not observed in plants. The available plant metabolism studies sufficiently address primary crop metabolism for the crops under assessment.

1.1.2. **Nature of residues in rotational crops**

Mefentri fluoride is intended to be used in the EU on several crops (potatoes, oilseeds, maize, sugar beets) that can be grown in rotation with other crops. The metabolism of mefentri fluoride in rotational crops has been investigated in leafy crops, root and tuber crops and cereals during the EU pesticides peer review (EFSA, 2018c). Mefentri fluoride and the TDMs were identified as relevant residues in rotational crops. Overall the metabolic pathway in rotational crops was found to be similar as in primary crops.

1.1.3. **Nature of residues in processed commodities**

The effect of processing on the nature of parent mefentri fluoride was investigated in the framework of the EU pesticides peer review (EFSA, 2018c). The standard hydrolysis studies showed that the active substance is hydrolytically stable under processing conditions simulating pasteurisation, baking, brewing/boiling and sterilisation.

In the framework of the assessment of the EU peer review of TDMs, EFSA concluded that triazole alanine (TA), 1,2,4-triazole (1,2,4-T), triazole acetic acid (TAA) and triazole lactic acid (TLA) remain stable under the standard hydrolysis conditions (EFSA, 2018b).

1.1.4. **Methods of analysis in plants**

Analytical methods for the determination of mefentri fluoride residues in plant products were assessed during the EU pesticides peer review (EFSA, 2018c). It was concluded that the Quick Easy Cheap Effective Rugged and Safe (QuEChERS) multi-residue method using liquid chromatography with tandem mass spectrometry (LC-MS/MS) is sufficiently validated for the determination of mefentri fluoride residues in all plant matrices. The method enables quantification of residues at or above 0.01 mg/kg (LOQ).

1.1.5. **Storage stability of residues in plants**

Studies on the storage stability of mefentri fluoride under frozen conditions were assessed in the framework of the EU pesticides peer review (EFSA, 2018c). The parent compound showed to be stable for at least 24 months in all plant category groups.

The storage stability data for the TDMs were summarised in the framework of the EU peer review of confirmatory data for TDMs (EFSA, 2018b). Storage stability data are available in high water content, high starch content and high oil content matrices covering the crops under assessment, except grapes (high acid content group).

In high acid content commodities, residues of TLA were stable under freezer conditions for 48 months. Storage stability data for 1,2,4-T, TA and TAA in high acid content commodities were identified as a data gap (EFSA, 2018b). No new information has been submitted with the MRL application. Formally, the data gap identified in the EU peer review of confirmatory data for TDMs is therefore not yet addressed. However, considering that among the crops assessed in the current application which are classified as high acid crops (i.e. table and wine grapes), 1,2,4-T, TA and TAA
residues are not likely to be present. Therefore, the lack of storage stability data is considered a minor deficiency. It is however noted that for applications submitted after 1 September 2019, missing data on TDMs will be systematically requested by EFSA.

1.1.6. Proposed residue definitions

Based on the metabolic pattern identified in metabolism studies, the results of hydrolysis studies, the toxicological significance of metabolites, the following residue definitions for enforcement and risk assessment were proposed in the EU pesticides peer review (EFSA, 2018c):

Residue definition for enforcement: Mefentrifluconazole
The residue definition for enforcement set in Regulation (EC) No 396/2005 is identical with the above-mentioned enforcement residue definition.

Residue definition for risk assessment:
- Mefentrifluconazole
- Triazole alanine (TA) and triazole lactic acid (TLA)
- Triazole acetic acid (TAA)
- 1,2,4-triazole (1,2,4-T)

For processed commodities and rotational crops, the same residue definitions were proposed.

EFSA concludes that the above-mentioned residue definitions are appropriate for the current assessment.

1.2. Magnitude of residues in plants

1.2.1. Magnitude of residues in primary crops

In support of the current MRL application, the applicant provided the results of residue trials conducted on apples, pears, apricots, peaches, cherries, plums, wine grapes, potatoes, sunflowers, rapeseeds, maize and sugar beets. The samples were analysed for the parent compound and for the TDMs included in the risk assessment residue definitions (TA, TLA, TAA and 1,2,4-T), separately.

The residue data for mefentrifluconazole are valid regarding storage stability in the crops assessed. Samples were analysed with analytical methods sufficiently validated and fit for purpose (Austria, 2019).

The storage period of residue trials for 1,2,4-T, TA, TLA and TAA was within the period for which stability of residues was demonstrated except for grapes. No storage stability data representative for high acid crops are available, except for TLA (see Section 1.1.5). Samples were analysed with analytical methods sufficiently validated for the TDMs and fit for purpose (Austria, 2019).

The residues levels in the supervised residue trials submitted are reported in Appendix B.1.2.1.

a) Pome fruits

NEU: Eight GAP-compliant residue trials on apples (four trials) and pears (four trials) support the proposed extrapolation to the whole group of pome fruits (European Commission, 2017).

SEU: Eight GAP-compliant residue trials on apples (four trials) and pears (four trials) support the proposed extrapolation to the whole group of pome fruits (European Commission, 2017).

The MRL proposal and the risk assessment values were derived combining the NEU and SEU data sets as belonging to same statistical population (Mann-Whitney U-test, 5%; FAO, 2016) and have the same GAP (OECD, 2016).

b) Apricots, Peaches

NEU: Eight GAP-compliant residue trials on apricots (four trials) and peaches (four trials) support the proposed extrapolation to peaches and apricots (European Commission, 2017).

SEU: Eight GAP-compliant residue trials on apricots (four trials) and peaches (four trials) support the proposed extrapolation to peaches and apricots (European Commission, 2017).

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7 It is noted that according to the residue trials in grapes residues of 1,2,4-T, TA and TAA were found in quantifiable concentrations (0.01 mg/kg of 1,2,4-T, up to 0.04 mg/kg of TA and 0.01 mg/kg of TAA). Since these metabolites were also found in untreated controls, the presence of these metabolites in grapes is most likely the result of an uptake of accumulated soil residues from previous treatments with triazole pesticides.

8 Summary Reports. Meetings held on 13-14 June 2019: Phytopharmaceuticals - Pesticide Residue, available online.
The NEU and SEU data sets fulfil the requirements for deriving an MRL proposal and risk assessment values; the data sets were combined to derive an MRL proposal since they belong to the same statistical population (U-test, 5%, same GAP).

c) Cherries

NEU: Eight GAP-compliant residue trials on both sweet and sour cherries support the intended use.
SEU: Eight GAP-compliant residue trials on both sweet and sour cherries support the intended use.

The NEU and SEU data sets fulfil the requirements for deriving an MRL proposal and risk assessment values; the data sets were combined to derive an MRL proposal since they belong to the same statistical population (U-test, 5%, same GAP).

d) Plums

NEU: Eight GAP-compliant residue trials on plums support the intended use.
SEU: Eight GAP-compliant residue trials on plums support the intended use.

The NEU and SEU data sets fulfil the requirements for deriving an MRL proposal and risk assessment values; the data sets were combined to derive an MRL proposal since they belong to the same statistical population (U-test, 5%, same GAP).

e) Grapes

NEU: Eight GAP-compliant residue trials on wine grapes support the intended use.
SEU: Eight GAP-compliant residue trials on wine grapes support the intended use.

The NEU and SEU data sets fulfil the requirements for deriving an MRL proposal and risk assessment values; the data sets were combined to derive an MRL proposal since they belong to the same statistical population (U-test, 5%, same GAP); the MRL can be extrapolated to table grapes (European Commission, 2017).

f) Potatoes

NEU: Eight GAP-compliant residue trials on potatoes support the intended use. Residues of mefentri fluoride were below the LOQ of 0.01 mg/kg.
SEU: Four GAP-compliant residue trials on potatoes showed that residues of mefentri fluoride are below the LOQ also in the SEU when the active substance is applied to potatoes according to the intended use. Therefore, the reduced number of residue trials conducted in the SEU, where potato is also classified as a major crop, is acceptable (European Commission, 2017).

The data sets support the intended NEU and SEU use and an MRL proposal at the LOQ of 0.01 mg/kg.

g) Sweet corn

The results of residue trials on maize grain (see below point j) with samples harvested at BBCH 75–79 (except one trial at BBCH 83) can be extrapolated to sweet corn (immature maize) as conducted at the same GAP (European Commission, 2017) to support an MRL proposal for the intended NEU and SEU use on sweet corn.

h) Sunflower seeds

NEU: Eight GAP-compliant residue trials on sunflowers support the intended use.
SEU: Eight GAP-compliant residue trials on sunflowers support the intended use.

The NEU and SEU data sets fulfil the requirements (U-test, 5%, same GAP) and were combined to derive an MRL proposal and risk assessment values.

i) Rapeseeds

NEU: Eight GAP-compliant residue trials on oilseed rapes support the intended use.
SEU: Eight GAP-compliant residue trials on oilseed rapes support the intended use.

The NEU and SEU data sets fulfil the requirements for deriving an MRL proposal and risk assessment values; the data sets were combined to derive an MRL proposal since they belong to the same statistical population (U-test, 5%, same GAP).
**j) Maize grain**

The eight NEU and the eight SEU residue trials submitted showed that residues of mefentri氟conazole are not quantifiable when the active substance is applied to maize according to the intended use. The data sets support the intended NEU and SEU use and an MRL proposal at the LOQ of 0.01 mg/kg.

Residues of mefentri氟conazole and TDMs were also determined in maize stover,\(^9\) which is used as feed item.

**k) Sugar beet roots**

NEU: Eight GAP-compliant residue trials on sugar beets are sufficient to derive an MRL proposal.

Residues of mefentri氟conazole and TDMs were also determined in sugar beet tops, which are used as feed item.

### 1.2.2. Magnitude of residues in rotational crops

Mefentri氟conazole exhibited high to very high persistence in soil (DT\(_{90}\) 616–> 1,000 days), and accumulation following subsequent years of treatment is expected.

In the limited field rotational crop studies with mefentri氟conazole on wheat, radishes, carrots, cauliflowers, broccoli, lettuces and spinaches at the dose of 300 g/ha, quantifiable residues (> 0.01 mg/kg) of the parent compound were not found. The application rate tested corresponds to a mefentri氟conazole concentration in soil of 0.1 mg/kg (assuming soil depth: 20 cm, soil density 1.5 g/cm\(^3\)) (EFSA, 2018c). These studies cover the expected plateau concentration in soil for the intended uses in the non-permanent crops assessed, except for the intended use on sugar beets (2 × 110 g/ha, BBCH 39–49).

In this crop, the rate tested in the limited field rotational crop studies is equivalent to 0.44N compared to the maximum plateau concentration after multiple years of applications. Since residues of mefentri氟conazole were not quantified in rotational crops, the data do not allow the scaling up with the proportionality concept to calculate the expected mefentri氟conazole residues.

TDM residues except 1,2,4 triazole were observed in the tested rotated crops. Most controls contained background levels but lower than treated samples. The levels observed were comparable to the residues in rotational crops for other triazole active substances assessed in the EU peer review of confirmatory data for TDMs (EFSA, 2018b,c). Taking into account multiple applications of different triazole pesticides per crop or per season, the EU peer review of TDMs concluded that the possible uptake of TDMs in crops via soil previously treated with triazole pesticides cannot be excluded and TDM residues in rotational crops have to be considered in the risk assessment (EFSA, 2018b). However, due to the lack of a comprehensive overview on all authorised uses of the different triazole active substances and expected soil concentration for TDMs, a reliable estimation of the TDM residues expected in rotational crops grown in soil containing residues of TDMs at the soil plateau concentration cannot be performed.

EFSA recommends Member States when granting national authorisations of mefentri氟conazole to consider the need of setting specific risk mitigation measures to limit the uptake of the parent compound and its metabolites in rotated root crops and the TDMs in rotational crops.

### 1.2.3. Magnitude of residues in processed commodities

The results of specific processing studies on apples, plums, grapes, potatoes, maize, sugar beets and soyabean were provided (Austria, 2019). Samples were analysed for parent mefentri氟conazole and for the TDMs. Robust processing factors could be derived for the major part of processing types. An overview of the processing factors derived for mefentri氟conazole, TA, TLA, TAA and 1,2,4-T is presented in Appendix B.1.2.3. Processing studies showed that parent compound is likely to concentrate in fruit pomace and dried products (i.e. prune, raisins, dried pulp, dry milling of grain).

### 1.2.4. Proposed MRLs

The available data are considered sufficient to derive MRL proposals and risk assessment input values for all the commodities under assessment (See Appendix B.1.2.1).

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\(^9\) Since the applicant did not proposed a specific GAP for forage/silage, EFSA considered as feed item the residues determined in maize stover (sometimes called corn straw) collected after the harvest of maize grain (BBCH 89). Instead, the EMS used for the dietary burden calculations the residue levels determined in the plant at the earlier growth stage of BBCH 85.
In Section 3, EFSA assessed whether the residues of mefentri fluorconazole expected on these crops are likely to pose a consumer health risk.

2. Residues in livestock

Several crops under consideration and/or their by-products can be used as feed items for livestock and fish. Therefore, the potential of transfer of residues in products of animal origin was investigated. For livestock, calculations were based on the OECD feeding stuff tables (OECD, 2013). For fish, the maximum reasonably balanced diet (MRBD) approach was used (European Commission, 2013).

The input values for the relevant feed commodities are summarised in Appendix D.1 (livestock) and D.2 (fish). The results of the dietary burden calculation are presented in Appendix B.2 Livestock.

EFSA updated the livestock dietary burdens conducted in the framework of the EU pesticides peer review (EFSA, 2018c) with the input values for apple pomace and for potatoes, maize, sweet corn and sugar beet products and by-products. In the absence of specific processing factors, EFSA used the default processing factors of 2 for oilseed meal and 3 and 18 for dried pulp and ensiled pulp of sugar beets, respectively. When the specific processing studies showed that residues in the raw commodity and in the processed product were below the LOQ, no default processing factor was applied because residues are not expected to concentrate in the by-product.

For parent mefentri fluorconazole, the revised dietary burden exceeded the trigger value of 0.004 mg/kg body weight (bw) per day for all livestock animal species; compared with the previous calculations, the calculated dietary burden is in the same order of magnitude except for poultry and breeding swine where the estimated dietary burden is slightly higher; the main contributors to the diet are wheat grain and sugar beet tops, respectively.

Regarding TDMs, the calculated intakes exceeded the trigger value of 0.004 mg/kg bw per day for TA, TLA and TAA. The calculations demonstrated that the livestock exposure to the residues of these three metabolites resulting from the existing and intended uses of mefentri fluorconazole are lower than the indicative dietary burdens calculated in the framework of the review of the confirmatory data on TDMs. These calculations considered the contribution of TDM residues in animal commodities from the uses of a number of triazole pesticides (EFSA, 2018b). Given that residues of 1,2,4 triazole is not significant in the livestock diets (< 0.004 mg/kg bw per day) further consideration is not required.

a) Fish

The results of the dietary burden calculations of mefentri fluorconazole, one for rainbow trout and one for common carp, were provided (Austria, 2019). The trigger value of 0.1 mg/kg dry matter (DM) was not exceeded for both species. Consequently, a feeding study that estimates MRLs in fish is unnecessary.

Although the calculations for the TDMs were not provided, considering the results of the dietary burden calculations performed with parent mefentri fluorconazole in livestock and the residue levels of TDMs in feed which may occur from the intended applications, it can be reasonably assumed that significant residues of the individual TDMs (> 0.1 mg/kg DM) are not likely in the total diet of fish.

2.1. Nature of residues and methods of analysis in livestock

The metabolism of mefentri fluorconazole after repeated oral administration has been investigated in hens, goats and trout in the framework of the EU pesticides peer review (EFSA, 2018c). Parent mefentri fluorconazole was the dominant residue in goat and trout edible commodities and the metabolite M750F022 (with its fatty acid conjugates) in poultry. Beside parent, significant amounts were observed of 1,2,4-triazole only. Chiral analysis of mefentri fluorconazole revealed a significant change of the ratio in most goat matrices (70–80% R-enantiomer in cream, muscle, liver, kidney, fat); but in the faeces, the racemate was maintained. Such a change was not observed in poultry and was not analysed for in fish.

For commodities of animal origin, the following residue definitions for enforcement and risk assessment were proposed in the EU pesticides peer review (EFSA, 2018c):

Residue definition for enforcement: Mefentri fluorconazole

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10 The software Dietary Burden Calculator, version 2.0.3 developed by Fraunhofer Institute for Molecular Biology and Applied Ecology IME (Germany) was used (Austria, 2019).
The residue definition for enforcement set in Regulation (EC) No 396/2005 is identical with the above-mentioned residue definition. A LC–MS/MS analytical method was sufficiently validated for the determination of mefentri fluoride at the LOQ of 0.01 mg/kg in animal matrices.

In livestock, the residue definition for risk assessment should include mefentri fluoride, the metabolite M750F022 and its fatty acid conjugates (in poultry) and, separately, the triazole derivative metabolites (TA, TLA, TAA, 1,2,4-T) as agreed during the EU peer review of confirmatory data for TDMs (EFSA, 2018b). For fish, the residue definition for risk assessment is provisional and includes parent mefentri fluoride and 1,2,4-triazole, separately.

### 2.2. Magnitude of residues in livestock

Feeding studies with mefentri fluoride in ruminants and poultry were assessed in the framework of the EU pesticides peer review of this active substance (EFSA, 2018c). The metabolic pathway in ruminants was comparable to that in rats, so the results of the ruminant feeding study may be extrapolated to pigs and other domestic animals (OECD, 2007e). Based on the updated dietary burden calculations and the results of the feeding studies, EFSA concludes that the setting of an MRL in liver of swine and an increase of the existing MRLs in kidney of cattle and in milk of ruminants is required. A modification of the existing MRLs for the other tissues of ruminants and of poultry tissues and eggs is not necessary.

The magnitude of residues of each TDM in animal matrices was estimated based on the ruminants and poultry feeding studies conducted with TAA and TA; feeding studies with TLA and 1,2,4-T are not available. Thus, the data gap identified in the EU peer review of confirmatory data for TDMs is not yet addressed. Provisionally, transfer factors were derived from the feeding studies with TAA and TA to estimate the residue concentration for TLA and 1,2,4-T, respectively (EFSA, 2018b).

In Section 3, EFSA assessed whether the residues of mefentri fluoride expected in products of animal origin are likely to pose a consumer health risk. Moreover, EFSA calculated indicative exposure to TDMs.

### 3. Consumer risk assessment

The consumer risk assessment was performed with revision 3.1 of the EFSA PRIMo (EFSA, 2018a, 2019). This exposure assessment model contains the relevant European food consumption data for different subgroups of the EU population and allows acute and chronic exposure assessment to be performed according to the internationally agreed methodology (FAO, 2016).

Separate consumer risk assessments were conducted for the parent mefentri fluoride and the TDMs (Section 3). The toxicological reference values for mefentri fluoride (ADI of 0.035 mg/kg bw per day; ARFD of 0.15 mg/kg bw) used in the risk assessment were derived in the framework of the EU pesticides peer review of the active substance (European Commission, 2019). The toxicological reference values of parent mefentri fluoride are also applicable to the metabolite M750F022 and its fatty acid conjugates (EFSA, 2018c). Toxicological reference values have been established for each triazole derivative metabolites during the EU peer review of confirmatory data for TDMs (EFSA, 2018b). The reference values for TDMs have been formally taken note by the European Commission.

For further details on the exposure calculations, screenshots of the Report sheet of the individual PRIMo are presented in Appendix C.

- **Consumer risk assessment for mefentri fluoride**
  - **a) Short-term (acute) dietary exposure**
    
    The acute consumer exposure was calculated considering the intended uses and the residues expected to occur in swine liver, bovine kidney and ruminant milk. The calculations were based on the highest residues (HR) or the median residues (STMR) for oilseeds, maize and milk as derived from the data submitted.

    The short-term exposure did not exceed the ARFD for any of the commodity under consideration, with maximum individual acute exposure being 29% of the ARFD for peaches.

  - **b) Long-term (chronic) dietary exposure**

    In addition to the STMRs derived for the products of plant and animal origin under assessment, the chronic risk assessment took into account STMRs for barley, oat, rye, wheat and other products of animal origin derived in the framework of the EU pesticides peer review of the active substance (EFSA,
CFs for risk assessment were applied to poultry tissues and eggs to consider the contribution of residues of the metabolite M750F022 and its fatty acid conjugates. Other plant commodities were not taken into account in the exposure calculation.

No long-term consumer intake concerns were identified for any of the diets included in the EFSA PRIMo, as the estimated maximum long-term dietary intake accounted for up to 0.7% of the ADI.

- Indicative consumer risk assessment for TDMs

TDMs may be generated by several pesticides belonging to the class of triazole fungicides. A ‘worst-case’ consumer dietary intake assessment has been conducted in the framework of the TDM conclusion, using the information available on various triazole pesticides (EFSA, 2018b, United Kingdom, 2018a). Mefentifluconazole was not among the pesticides assessed.

For the current application, EFSA calculated an indicative chronic and acute dietary risk assessment using the following approaches for the short-term and long-term exposure calculations:

a) Short-term (acute) dietary exposure

The acute consumer exposure was performed considering the intended uses of mefentifluconazole and the residues expected in swine liver, bovine kidney and ruminant milk. Comparing the HR/STMR values derived under the current assessment with the input values used in the framework of the conclusion on the confirmatory data for various triazole pesticides (EFSA, 2018b), it became evident that following the use of mefentifluconazole higher residues of TA, TLA and TAA are expected for peaches, apricots and cherries. The previous acute consumer exposure was therefore recalculated with the revised input values for peaches, apricots and cherries. For the remaining commodities, the acute consumer risk assessment conducted in the framework of the EU peer review of confirmatory data for TDMs is still valid as covering the intended uses of mefentifluconazole. For 1,2,4-triazole, an acute risk assessment was not deemed necessary because residues (above LOQ) are not expected in the concerned products.

The short-term exposure did not exceed the respective ARfD for any of the commodities under consideration. The maximum individual acute exposure (expressed as % of the respective ARfD) for peaches was 35% (TA), 0.8% (TAA) and 4% (TLA); for apricots: 13% (TA), 0.3% (TAA), 2% (TLA); for cherries: 0.06% (TAA).

b) Long-term (chronic) dietary exposure

For the long-term dietary exposure calculation, the STMR values for TA, TLA, TAA and 1,2,4-T derived in the framework of the previous TDM risk assessment (EFSA, 2018b, United Kingdom, 2018a) were used, since the uses assessed in the current assessment resulted in risk assessment values that were lower than the previously derived risk assessment values. No chronic intake concerns were identified for any of the diets included in the EFSA PRIMo model as the estimated maximum long-term dietary intake accounted for up to 6% of the ADI for TA and up to 1% of the respective ADI for TLA and TAA.

Considering that TDMs are common metabolites that are also formed by other triazole fungicides, a comprehensive cumulative risk assessment for TDM residues covering all triazole fungicides should be performed once a complete database of residues for all authorised EU uses and import tolerances is available.

- Overall conclusions

EFSA concluded that the short-term and the long-term intake resulting from the intended uses of mefentifluconazole and TDMs on the crops under consideration is unlikely to present a risk to consumer health. It is noted that the consumer risk assessment for the TDMs is indicative, since a comprehensive database for all authorised uses on triazole fungicides is not yet available. The calculations are also affected by additional non-standard uncertainties related to the data gaps identified in the EU peer review of confirmatory data for TDMs (EFSA, 2018b).

The summary of the input values used in the exposure calculations is provided in Appendix D.3. The results of the calculations are summarised in Appendix B.3.

4. Conclusion and Recommendations

The data submitted in support of this MRL application were found to be sufficient to derive MRL proposals for pome fruits, apricots, cherries, peaches, plums, grapes, potatoes, sweet corns, maize, sunflower seeds, rapeseeds, sugar beet roots, liver of swine, kidney of cattle and in milk of ruminants.
EFSA concluded that the short-term and the long-term intake of parent mefentrifluconazole resulting from the intended uses is unlikely to present a risk to consumer health.

EFSA calculated an indicative risk assessment for the TDMs, which are common metabolites to triazole pesticides, taking into account the information provided for the uses assessed in the current reasoned opinion and information provided previously for a range of triazole pesticides. No risk for consumers was identified. The TDM risk assessment will be updated systematically when new information on the use of triazole fungicides for authorised/intended uses is provided in the framework of EU assessments. The risk assessment is affected by additional, non-standard uncertainties related to data gaps identified in the EU peer review of confirmatory data for TDMs.

The MRL recommendations are summarised in Appendix B.4.

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Abbreviations

a.s. active substance
ADI acceptable daily intake
ARF acute reference dose
BBCH growth stages of mono- and dicotyledonous plants
bw body weight
CAC Codex Alimentarius Commission
CAS Chemical Abstract Service
CF conversion factor for enforcement to risk assessment residue definition
CIRCA (EU) Communication & Information Resource Centre Administrator
CS capsule suspension
CV coefficient of variation (relative standard deviation)
DALA days after last application
DAR draft assessment report
DAT days after treatment
DM dry matter
DP dustable powder
DS powder for dry seed treatment
DT$_{90}$ period required for 90% dissipation (define method of estimation)
EC emulsifiable concentrate
EDI estimated daily intake
EMS evaluating Member State
eq residue expressed as a.s. equivalent
FAO Food and Agriculture Organization of the United Nations
FID flame ionisation detector
GAP Good Agricultural Practice
GC gas chromatography
GC-FID gas chromatography with flame ionisation detector
GC-MS gas chromatography with mass spectrometry
GC-MS/MS gas chromatography with tandem mass spectrometry
GS growth stage
HR highest residue
IEDI international estimated daily intake
IESTI international estimated short-term intake
ISO International Organisation for Standardisation
IUPAC International Union of Pure and Applied Chemistry
LC liquid chromatography
LOQ limit of quantification
MRL maximum residue level
MS Member States
MS mass spectrometry detector
MS/MS tandem mass spectrometry detector
MW molecular weight
NEU northern Europe
OECD Organisation for Economic Co-operation and Development
PBI plant back interval
PF processing factor
PHI pre-harvest interval
PRIMo (EFSA) Pesticide Residues Intake Model
QuEChERS Quick, Easy, Cheap, Effective, Rugged, and Safe (analytical method)
RA risk assessment
RAC raw agricultural commodity
RD residue definition
RMS rapporteur Member State
SANCO Directorate-General for Health and Consumers
SC suspension concentrate
SEU southern Europe
SL soluble concentrate
SP water-soluble powder
STMR supervised trials median residue
TAR total applied radioactivity
TRR total radioactive residue
UV ultraviolet (detector)
WHO World Health Organization
## Appendix A – Summary of intended GAP triggering the amendment of existing EU MRLs

| Crop and/or situation | NEU, SEU, MS or country | Pests or group of pests controlled | Preparation | Application | Application rate per treatment | PHI (days)(d) | Remarks |
|-----------------------|-------------------------|-----------------------------------|-------------|-------------|------------------|--------------|---------|
|                       | Crop                   | and/or                              | Type(b) | Conc. a.s. | Method kind | Range of growth stages & season(e) | Number min–max | Interval between application (min) | Rate | Unit |                   |
|                       |                        | situation                            |         |            |          |     |                          |              |                           |      |      | 28 |
| Apples                | NEU F                  | Fungal diseases                       | SC       | 75.0 g/L | Foliar treatment – broadcast spraying | BCCH 53–85 | 2 | 7 | 150–2,000 | 0.15 | kg a.i./ha | |
| Apples                | SEU F                  | Fungal diseases                       | SC       | 75.0 g/L | Foliar treatment – broadcast spraying | BCCH 53–85 | 2 | 7 | 150–2,000 | 0.15 | kg a.i./ha | |
| Pears                 | NEU F                  | Fungal diseases                       | SC       | 75.0 g/L | Foliar treatment – broadcast spraying | BCCH 53–85 | 2 | 7 | 150–2,000 | 0.15 | kg a.i./ha | |
| Pears                 | SEU F                  | Fungal diseases                       | SC       | 75.0 g/L | Foliar treatment – broadcast spraying | BCCH 53–85 | 2 | 7 | 150–2,000 | 0.15 | kg a.i./ha | |
| Quinces               | NEU F                  | Fungal diseases                       | SC       | 75.0 g/L | Foliar treatment – broadcast spraying | BCCH 53–85 | 2 | 7 | 150–2,000 | 0.15 | kg a.i./ha | |
| Quinces               | SEU F                  | Fungal diseases                       | SC       | 75.0 g/L | Foliar treatment – broadcast spraying | BCCH 53–85 | 2 | 7 | 150–2,000 | 0.15 | kg a.i./ha | |
| Medlars               | NEU F                  | Fungal diseases                       | SC       | 75.0 g/L | Foliar treatment – broadcast spraying | BCCH 53–85 | 2 | 7 | 150–2,000 | 0.15 | kg a.i./ha | |
| Crop and/or situation | Neur, SEU, or country | F, G, or I<sup>(a)</sup> | Pests or group of pests controlled | Preparation | Application | Application rate per treatment | Remarks |
|-----------------------|------------------------|-------------------------|----------------------------------|--------------|-----------------|-------------------------------|---------|
|                       |                        |                         |                                  | Type<sup>(b)</sup> | Conc. a.s. | Method kind | Range of growth stages & season<sup>(c)</sup> | Number min-max | Interval between application (min) | g a.s./hl min-max | Water L/ha min-max | Rate | Unit | PHI (days)<sup>(d)</sup> | |
| Medlars               | SEU                    | F                       | Fungal diseases                  | SC           | 75.0 g/L   | Foliar treatment – broadcast spraying | BCCH 53–85 | 2     | 7     | 150–2,000 | 0.15 | kg a.i./ha  | 28  |       |         |         |
| Loquats/ Japanese medlars | NEU       | F                       | Fungal diseases                  | SC           | 75.0 g/L   | Foliar treatment – broadcast spraying | BCCH 53–85 | 2     | 7     | 150–2,000 | 0.15 | kg a.i./ha  | 28  |       |         |         |
| Japanese medlars      | SEU                    | F                       | Fungal diseases                  | SC           | 75.0 g/L   | Foliar treatment – broadcast spraying | BCCH 53–85 | 2     | 7     | 150–2,000 | 0.15 | kg a.i./ha  | 28  |       |         |         |
| Japanese medlars      | SEU                    | F                       | Fungal diseases                  | SC           | 75.0 g/L   | Foliar treatment – broadcast spraying | BCCH 53–85 | 2     | 7     | 150–2,000 | 0.15 | kg a.i./ha  | 28  |       |         |         |
| Other pome fruits     | NEU                    | F                       | Fungal diseases                  | SC           | 75.0 g/L   | Foliar treatment – broadcast spraying | BCCH 53–85 | 2     | 7     | 150–2,000 | 0.15 | kg a.i./ha  | 28  |       |         |         |
| Other pome fruits     | SEU                    | F                       | Fungal diseases                  | SC           | 75.0 g/L   | Foliar treatment – broadcast spraying | BCCH 53–85 | 2     | 7     | 150–2,000 | 0.15 | kg a.i./ha  | 28  |       |         |         |
| Cherries (sweet)      | NEU                    | F                       | Fungal diseases                  | SC           | 75.0 g/L   | Foliar treatment – broadcast spraying | BCCH 55–89 | 2     | 7     | 200–2,000 | 0.14 | kg a.i./ha  | 3   |       |         |         |

<sup>(a)</sup> F, G, or I depending on the country.

<sup>(b)</sup> Type: SC = suspension concentrate.

<sup>(c)</sup> Range of growth stages & season: BCCH = 53–85.

<sup>(d)</sup> PHI (days): PHI = 28 days.
| Crop and/or situation | NEU, SEU, MS or country | F or G or I(a) | Pests or group of pests controlled | Preparation | Application | Application rate per treatment | Remarks |
|----------------------|-------------------------|----------------|-----------------------------------|-------------|-------------------------|-----------------------------|---------|
|                      |                         |                |                                   | Type(b)     | Conc. a.s.              | Method kind                  |         |
|                      |                         |                |                                   | Range of growth stages & season(c) | Number min-max | Interval between application (min) |          |
|                      |                         |                |                                   |           |                         |                             |         |
| Cherries (sweet)     | SEU                     | F              | Fungal diseases                   | SC         | 75.0 g/L                | Foliar treatment – broadcast spraying | BCCH 55–89 | 2 | 7 | 200–2,000 | 0.14 kg a.i./ha | 3 |         |
| Plums                | NEU                     | F              | Fungal diseases                   | SC         | 75.0 g/L                | Foliar treatment – broadcast spraying | BCCH 55–89 | 2 | 7 | 200–2,000 | 0.14 kg a.i./ha | 3 |         |
| Plums                | SEU                     | F              | Fungal diseases                   | SC         | 75.0 g/L                | Foliar treatment – broadcast spraying | BCCH 55–89 | 2 | 7 | 200–2,000 | 0.14 kg a.i./ha | 3 |         |
| Peaches              | NEU                     | F              | Fungal diseases                   | SC         | 75.0 g/L                | Foliar treatment – broadcast spraying | BCCH 55–89 | 2 | 7 | 200–2,000 | 0.14 kg a.i./ha | 3 |         |
| Peaches              | SEU                     | F              | Fungal diseases                   | SC         | 75.0 g/L                | Foliar treatment – broadcast spraying | BCCH 55–89 | 2 | 7 | 200–2,000 | 0.14 kg a.i./ha | 3 |         |
| Apricots             | NEU                     | F              | Fungal diseases                   | SC         | 75.0 g/L                | Foliar treatment – broadcast spraying | BCCH 55–89 | 2 | 7 | 200–2,000 | 0.14 kg a.i./ha | 3 |         |
| Apricots             | SEU                     | F              | Fungal diseases                   | SC         | 75.0 g/L                | Foliar treatment – broadcast spraying | BCCH 55–89 | 2 | 7 | 200–2,000 | 0.14 kg a.i./ha | 3 |         |
| Table grapes         | NEU                     | F              | Fungal diseases                   | SC         | 75.0 g/L                | Foliar treatment – broadcast spraying | BCCH 14–83 | 2 | 10 | 100–1,200 | 0.15 kg a.i./ha | 21 |         |
| Crop and/or situation | NEU, SEU, MS or country | F, G or I(1) | Pests or group of pests controlled | Preparation | Application | Application rate per treatment | Remarks |
|-----------------------|-------------------------|--------------|------------------------------------|-------------|-------------|-----------------------------|---------|
|                       |                         |              |                                    | Type(b) Conc. a.s. | Method kind | Range of growth stages & season(c) | Number min-max | Interval between application (min) | g a.s./ha L | Water L/ha | Rate | Unit | PHI (days)(d) | |
| Table grapes          | SEU                     | F            | Fungal diseases                    | SC 75.0 g/L     | Foliar treatment – broadcast spraying | BCCH 14–83 | 2 | 10 | 100–1,200 | 0.15 | kg a.i./ha | 21 |
| Wine grapes           | NEU                     | F            | Fungal diseases                    | SC 75.0 g/L     | Foliar treatment – broadcast spraying | BCCH 14–83 | 2 | 10 | 100–1,200 | 0.15 | kg a.i./ha | 21 |
| Wine grapes           | SEU                     | F            | Fungal diseases                    | SC 75.0 g/L     | Foliar treatment – broadcast spraying | BCCH 14–83 | 2 | 10 | 100–1,200 | 0.15 | kg a.i./ha | 21 |
| Potatoes              | NEU                     | F            | Fungal diseases                    | SC 75.0 g/L     | Foliar treatment – broadcast spraying | BCCH 20–97 | 3 | 7 | 100–400 | 0.09 | kg a.i./ha | 3 |
| Potatoes              | SEU                     | F            | Fungal diseases                    | SC 75.0 g/L     | Foliar treatment – broadcast spraying | BCCH 20–97 | 3 | 7 | 100–400 | 0.09 | kg a.i./ha | 3 |
| Sweet corn            | NEU                     | F            | Fungal diseases                    | SC 75.0 g/L     | Foliar treatment – broadcast spraying | BCCH 31–69 | 1 |  | 100–400 | 0.09 | kg a.i./ha | n.a. |
| Sweet corn            | SEU                     | F            | Fungal diseases                    | SC 75.0 g/L     | Foliar treatment – broadcast spraying | BCCH 31–69 | 1 |  | 100–400 | 0.09 | kg a.i./ha | n.a. |
| Sunflower seeds       | NEU                     | F            | Fungal diseases                    | SC 75.0 g/L     | Foliar treatment – broadcast spraying | BCCH 31–69 | 2 | 14 | 100–400 | 0.11 | kg a.i./ha | n.a. |
| Crop and/or situation | NEU, SEU, MS or country | F or G or I<sup>(a)</sup> | Pests or group of pests controlled | Preparation | Application | Application rate per treatment | PHI (days)<sup>(d)</sup> | Remarks |
|-----------------------|------------------------|-----------------|---------------------------------|-------------|-----------------|--------------------------------|----------------|---------|
| Sunflower seeds       | SEU                    | F               | Fungal diseases                 | SC 75.0 g/L | Foliar treatment – broadcast spraying | BCCH 31-69 | 2 | 14 | 100–400 | 0.11 | kg a.i./ha | n.a. |
| Rapeseeds/canola seeds| NEU                    | F               | Fungal diseases                 | SC 75.0 g/L | Foliar treatment – broadcast spraying | BCCH 13-75 | 2 | 14 | 100–400 | 0.15 | kg a.i./ha | n.a. |
| Maize/corn            | SEU                    | F               | Fungal diseases                 | SC 75.0 g/L | Foliar treatment – broadcast spraying | BCCH 31-69 | 1 | 100–400 | 0.09 | kg a.i./ha | n.a. |
| Maize/corn            | NEU                    | F               | Fungal diseases                 | SC 75.0 g/L | Foliar treatment – broadcast spraying | BCCH 31-69 | 1 | 100–400 | 0.09 | kg a.i./ha | n.a. |
| Sugar beet roots      | SEU                    | F               | Fungal diseases                 | SC 75.0 g/L | Foliar treatment – broadcast spraying | BCCH 39-49 | 2 | 14 | 100–400 | 0.11 | kg a.i./ha | 28 |

**MRL:** maximum residue level; **GAP:** Good Agricultural Practice; **NEU:** northern European Union; **SEU:** southern European Union; **MS:** Member State; a.s.: active substance; **SC:** suspension.  
(a): Outdoor or field use (F), greenhouse application (G) or indoor application (I).  
(b): CropLife International Technical Monograph no 2, 7th Edition. Revised March 2017. Catalogue of pesticide formulation types and international coding system.  
(c): Growth stage range from first to last treatment (BBCH Monograph, Growth Stages of Plants, 1997, Blackwell, ISBN 3-8263-3152-4), including, where relevant, information on season at time of application.  
(d): PHI – minimum preharvest interval.
Appendix B – List of end points

B.1. Residues in plants

B.1.1. Nature of residues and methods of analysis in plants

B.1.1.1. Metabolism studies, methods of analysis and residue definitions in plants

| Primary crops (available studies) | Crop groups | Crops | Applications | Sampling (DALA) | Comment/Source |
|---------------------------------|-------------|-------|--------------|-----------------|----------------|
| Fruit crops | Grape | Foliar, 3 x 150 g/ha (10-day interval) | 12 | Radiolabelled active substance: Chlorophenyl-U-14C/Chlorophenyl-1,13C- MFZ and triazole-3(5)-14C/ Triazole-3(5)-13C-MFZ (EFSA, 2018c) |
| Cereals/ grass | Wheat | Foliar, 2 x 150 g/ha (at BBCH 49, 69; 21-day-interval) | 35 | Radiolabelled active substance: Chlorophenyl-U-14C/Chlorophenyl-1,13C- MFZ and triazole-3(5)-14C/ Triazole-3(5)-13C-MFZ (EFSA, 2018c) |
| Pulses/ oilseeds | Soybean | Foliar, 3 x 125 g/ha (at BBCH 60, 72, 77; 18-day interval) | 47/48 | Radiolabelled active substance: Chlorophenyl-U-14C/Chlorophenyl-1,13C- MFZ and triazole-3(5)-14C/ Triazole-3(5)-13C-MFZ (EFSA, 2018c) |

| Rotational crops (available studies) | Crop groups | Crops | Application | PBI (DAT) | Comment/Source |
|---------------------------------|-------------|-------|--------------|-----------|----------------|
| Root/tuber crops | White radish | Bare soil, 300 g/ha | 30, 120, 365 | Radiolabelled active substance: Chlorophenyl-U-14C/Chlorophenyl-1,13C- MFZ and triazole-3(5)-14C/ Triazole-3(5)-13C-MFZ (EFSA, 2018c) |
| Leafy crops | Spinach | Bare soil, 300 g/ha | 30, 120, 365 | Radiolabelled active substance: Chlorophenyl-U-14C/Chlorophenyl-1,13C- MFZ and triazole-3(5)-14C/ Triazole-3(5)-13C-MFZ (EFSA, 2018c) |
| Cereal (small grain) | Wheat | Bare soil, 300 g/ha | 30, 120, 365 | Radiolabelled active substance: Chlorophenyl-U-14C/Chlorophenyl-1,13C- MFZ and triazole-3(5)-14C/ Triazole-3(5)-13C-MFZ (EFSA, 2018c) |

| Processed commodities (hydrolysis study) | Conditions | Compound | Stable? | Comment/Source |
|---------------------------------|-------------|-----------|---------|----------------|
| Pasteurisation (20 min, 90°C, pH 4) | MFZ, 1,2,4-T, TA, TAA, TLA | Yes | Radiolabelled active substance: Chlorophenyl-14C MFZ and triazole-13C-MFZ; triazole-14C 1,2,4-T, TA, TAA, TLA (EFSA, 2018b,c) |
| Baking, brewing and boiling (60 min, 100°C, pH 5) | MFZ, 1,2,4-T, TA, TAA, TLA | Yes | Radiolabelled active substance: Chlorophenyl-14C MFZ and triazole-13C-MFZ; triazole-14C 1,2,4-T, TA, TAA, TLA (EFSA, 2018b,c) |
| Sterilisation (20 min, 120°C, pH 6) | MFZ, 1,2,4-T, TA, TAA, TLA | Yes | Radiolabelled active substance: Chlorophenyl-14C MFZ and triazole-13C-MFZ; triazole-14C 1,2,4-T, TA, TAA, TLA (EFSA, 2018b,c) |
Can a general residue definition be proposed for primary crops?  
Yes  
EFSA (2018c)

Rotational crop and primary crop metabolism similar?  
Yes  
Mefentrifluconazole and TDMs, no other components identified (EFSA, 2018c)

Residue pattern in processed commodities similar to residue pattern in raw commodities?  
Yes  
Residues not susceptible to degradation under standard processing conditions (EFSA, 2018c)

Plant residue definition for monitoring (RD-Mo)  
Mefentrifluconazole

Plant residue definition for risk assessment (RD-RA)  
a) Mefentrifluconazole  
b) TDMs, with a separate assessment of:  
   TA and TLA  
   TAA  
   1,2,4-Triazole

Methods of analysis for monitoring of residues (analytical technique, crop groups, LOQs)  
Matrices with high water content, high oil content, high acid content and starch content, high protein content:  
LC–MS/MS – LOQ 0.01 mg/kg (EFSA, 2018c)

B.1.1.2. Stability of residues in plants

| Plant products (available studies) | Category | Commodity | T(°C) | Stability period (months) | Comment/Source |
|-----------------------------------|----------|-----------|-------|---------------------------|----------------|
|                                   |          |           | MFZ   | 1,2,4-T | TA | TAA | TLA |               |
| High water content                | Fruiting (Tomato) | ≤ –18°C | 24 | 6 | 53 | 53 | – | EFSA (2018b,c) |
|                                  | Pome fruit (Apple) | ≤ –18°C | 24 | 6 | 12 | 12 | – | EFSA (2018b,c) |
|                                  | Leafy (Lettuce) | ≤ –18°C | – | – | – | – | 48 | EFSA (2018b,c) |
|                                  | Brassica (Mustard greens) | ≤ –18°C | – | 6 | 53 | 53 | – | EFSA (2018b,c) |
|                                  | Leaves of R/T (Radish tops) | ≤ –18°C | – | 12 | 26 | 12 | – | EFSA (2018b,c) |
|                                  | Forage/fodder crops (Wheat forage) | ≤ –18°C | 24 | 4 | 53 | 53 | – | EFSA (2018b,c) |
| High oil content                 | Oilseeds (Soybean) | ≤ –18°C | 24 | 12 | 26 | 26 | 48 | EFSA (2018b,c) |
|                                  | Oilseeds (Rape seed) | ≤ –18°C | 24 | Not stable | Not stable | 53 | 48 | EFSA (2018b,c) |
| High protein content             | Dry legume vegetables/ Pulses (Dried pea, Dried bean) | ≤ –18°C | 24 | – | 15 | 25 | 48 | EFSA (2018b,c) |
| High starch content              | Cereal grain (Wheat, Barley) | ≤ –18°C | 24 | 12 | 26 | 26 | 48 | EFSA (2018b,c) |
|                                  | Starchy roots (Potato) | ≤ –18°C | 24 | – | – | – | – | EFSA (2018b,c) |
| High acid content                | Grape | ≤ –18°C | 24 | – | – | – | – | EFSA (2018b,c) |
|                                  | Citrus (Lemon, Orange) | ≤ –18°C | 24 | – | – | – | 48 | EFSA (2018b,c) |
| Others                           | Cereal straw (Wheat) | ≤ –18°C | 24 | 12 | 53 | 40 | – | EFSA (2018b,c) |

MFZ (EFSA, 2018c), TDMs (EFSA, 2018b).

DALA: days after last application; PBI: plant-back interval; DAT: days after treatment; MFZ: mefentrifluconazole (BAS 750F); 1,2,4-T: 1,2,4-triazole; TA: triazole alanine; TAA: triazole acetic acid; TLA: triazole lactic acid; LC–MS/MS: liquid chromatography with tandem mass spectrometry; LOQ: limit of quantification.
B.1.2. Magnitude of residues in plants

B.1.2.1 Summary of residues data from the supervised residue trials

- Mefentrifluconazole

| Commodity                  | Region/indoor(a) | Residue levels observed in the supervised residue trials (mg/kg) | Comments/Source                                                                 | Calculated MRL (mg/kg) | HR(b) (mg/kg) | STMR(c) (mg/kg) | CF(d) |
|----------------------------|------------------|-----------------------------------------------------------------|---------------------------------------------------------------------------------|------------------------|---------------|----------------|-------|
| Pome fruits                | NEU              | 3 × 0.04; 2 × 0.08; 2 × 0.14; 0.27                               | Combined data set (U-test, 5%) of trials on apples (4 NEU, 4 SEU) and pears (4 NEU, 4 SEU) compliant with GAP. Extrapolation to the group of pome fruits possible. | 0.4                    | 0.27          | 0.08           | n/a              |
|                           | SEU              | 0.02; 0.03; 0.05; 0.06; 0.08; 0.09; 0.10; 0.11                  |                                                                                  |                        |               |                |       |
| Apricots, peaches         | NEU              | 0.04; 0.07; 0.09; 0.11; 0.12; 0.17; 0.19; 0.20                  | Combined data set (U-test, 5%) of trials on apricots (4 NEU, 4 SEU) and peaches (4 NEU, 4 SEU) compliant with GAP. Extrapolation to apricots and peaches possible. | 0.7                    | 0.45          | 0.15           | n/a              |
|                           | SEU              | 0.06; 0.08; 0.12; 0.17; 0.26; 0.29; 0.30; 0.45                 |                                                                                  |                        |               |                |       |
| Cherries                  | NEU              | 0.08; 0.21; 0.39; 0.44; 0.48; 0.49; 0.50; 1.20                | Combined data set (U-test, 5%) of trials on cherries compliant with GAP.         | 2                      | 1.20          | 0.48           | n/a              |
|                           | SEU              | 0.35; 0.41; 0.44; 0.48; 0.56; 0.76; 1.00; 1.20               |                                                                                  |                        |               |                |       |
| Plums                     | NEU              | 0.03; 0.10; 0.11; 3 × 0.16; 0.19; 0.30                          | Combined data set (U-test, 5%) of trials on cherries compliant with GAP.         | 0.5                    | 0.30          | 0.11           | n/a              |
|                           | SEU              | 0.02; 0.06; 0.07; 0.08; 2 × 0.10; 0.14; 0.23                 |                                                                                  |                        |               |                |       |
| Grapes, wine and table    | NEU              | 0.10; 3 × 0.17; 0.41; 0.44; 0.48; 0.53                        | Combined data set (U-test, 5%) of trials on wine grapes compliant with GAP. Extrapolation to table grapes possible. | 0.9                    | 0.53          | 0.18           | n/a              |
|                           | SEU              | 0.04; 3 × 0.07; 0.18; 0.19; 0.25; 0.42                        |                                                                                  |                        |               |                |       |
| Potatoes                  | NEU              | 8 × 0.01                                                     | Residue trials on potatoes compliant with GAP.                                    | 0.01*                  | 0.01          | 0.01           | n/a              |
|                           | SEU              | 4 × 0.01                                                     | Reduced data set of residue trials on potatoes compliant with GAP.                 |                        |               |                |       |

Residue definition for enforcement and risk assessment: Mefentrifluconazole

(a) Region denotes unless stated otherwise: NEU = Northern Europe; SEU = Southern Europe.
(b) HR = Harmonised residue level.
(c) STMR = Scientific target residue level.
(d) CF = Conversion factor.
| Commodity                | Region/indoor(a) | Residue levels observed in the supervised residue trials (mg/kg) | Comments/Source                                                                 | Calculated MRL (mg/kg) | HR(b) (mg/kg) | STMR(c) (mg/kg) | CF(d) |
|-------------------------|------------------|------------------------------------------------------------------|---------------------------------------------------------------------------------|------------------------|--------------|----------------|-------|
| Sweet corn              | NEU              | 8 × < 0.01                                                       | Residue trials on immature maize compliant with GAP. Extrapolation to sweet corns possible | 0.01*                  | 0.01         | 0.01           | n/a   |
|                         | SEU              | 8 × < 0.01                                                       |                                                                                  |                        |              |                |       |
| Sunflower seeds         | NEU              | 6 × < 0.01; 0.01; 0.02                                           | Combined data set (U-test, 5%) of trials on sunflower seeds compliant with GAP   | 0.05                   | 0.04         | 0.01           | n/a   |
|                         | SEU              | 3 × < 0.01; 0.01; 3 × 0.02; 0.04                                   |                                                                                  |                        |              |                |       |
| Rapeseeds               | NEU              | 7 × < 0.01; 0.02                                                 | Combined data set (U-test, 5%) of trials on oilseed rapes compliant with GAP     | 0.06                   | 0.05         | 0.01           | n/a   |
|                         | SEU              | 5 × < 0.01; 0.02; 0.03; 0.05                                      |                                                                                  |                        |              |                |       |
| Maize grain             | NEU              | 8 × < 0.01                                                       | Residue trials on maize compliant with GAP                                      | 0.01*                  | 0.01         | 0.01           | n/a   |
|                         | SEU              | 8 × < 0.01                                                       |                                                                                  |                        |              |                |       |
| Maize stover            | NEU              | 0.05; 2 × 0.08; 0.09; 0.11; 0.13; 0.50; 0.59                    | Combined data set (U-test, 5%) of trials on maize compliant with GAP             | –                      | 0.61         | 0.13           | n/a   |
|                         | SEU              | 0.04; 0.09; 0.13; 0.13; 0.15; 0.21; 0.27; 0.61                  |                                                                                  |                        |              |                |       |
| Sugar beet roots        | NEU              | < 0.01; 2 × 0.01; 2 × 0.02; 2 × 0.03; 0.04                      | Residue trials on sugar beets compliant with GAP                                | 0.06                   | 0.04         | 0.02           | n/a   |
| Sugar beet tops         | NEU              | 0.05; 0.16; 2 × 0.21; 0.26; 0.42; 1.00; 1.10                    |                                                                                  | –                      | 1.10         | 0.24           | n/a   |

MRL: maximum residue level; GAP: Good Agricultural Practice; n/a: not applicable.
(a): NEU: Outdoor trials conducted in northern Europe, SEU: Outdoor trials conducted in southern Europe, Indoor: indoor EU trials or Country code: if non-EU trials.
(b): Highest residue. The highest residue for risk assessment refers to the whole commodity and not to the edible portion.
(c): Supervised trials median residue. The median residue for risk assessment refers to the whole commodity and not to the edible portion.
(d): Conversion factor to recalculate residues according to the residue definition for monitoring to the residue definition for risk assessment.
## Triazole Derivatives Metabolites (TDMs)

| Commodity                      | Region/Indoor(a) | Residue levels observed in the supervised residue trials (mg/kg) | Comments/Source | Calculated MRL (mg/kg) | HR(b) (mg/kg) | STMR(c) (mg/kg) | CF(d) |
|--------------------------------|------------------|----------------------------------------------------------------|-----------------|------------------------|--------------|----------------|-------|
| Pome fruits                    | NEU              | $2 \times 0.02; 0.03; 0.05; 2 \times 0.07; 0.08; 0.17$            | See table B.1.2.1 for mefentrifluconazole | n/a        | 0.41          | 0.07            | n/a   |
|                               | SEU              | 0.01; 0.03; 0.06; 0.07; 2 \times 0.12; 0.24; 0.41               |                 |                        |              |                |       |
| Apricots, peaches             | NEU              | 0.04; 0.05; 0.06; 0.07; 0.13; 0.16; 0.26; 0.28                 | See table B.1.2.1 for mefentrifluconazole | n/a        | 1.10          | 0.11            | n/a   |
|                               | SEU              | 0.04; 0.06; 2 \times 0.09; 0.12; 0.20; 0.78; 1.10              |                 |                        |              |                |       |
| Cherries                      | NEU              | $2 \times 0.02; 0.03; 2 \times 0.04; 0.05; 0.07; 0.14$         | See table B.1.2.1 for mefentrifluconazole | n/a        | 0.24          | 0.04            | n/a   |
|                               | SEU              | $3 \times 0.02; 0.03; 0.04; 0.11; 0.16; 0.24$                |                 |                        |              |                |       |
| Plums                         | NEU              | 0.02; 0.03; 0.04; 0.08; 0.09; 0.13; 0.22; 0.51                | See table B.1.2.1 for mefentrifluconazole | n/a        | 0.51          | 0.08            | n/a   |
|                               | SEU              | $6 \times < 0.01; 0.01; 2 \times 0.02; 0.03$                  |                 |                        |              |                |       |
| Grapes, wine and table        | NEU              | $4 \times < 0.01; 0.01; 2 \times 0.02; 0.03$                  | See table B.1.2.1 for mefentrifluconazole | n/a        | 0.04          | 0.01            | n/a   |
|                               | SEU              | $6 \times < 0.01; 0.01; 0.04$                                   |                 |                        |              |                |       |
| Potatoes                      | NEU              | $< 0.01; 3 \times 0.02; 0.04; 0.07; 0.09$                      | See table B.1.2.1 for mefentrifluconazole | n/a        | 0.17          | 0.03            | n/a   |
|                               | SEU              | $< 0.01; 0.04; 0.06; 0.17$                                    |                 |                        |              |                |       |
| Sweet corn                    | NEU              | $2 \times 0.02; 2 \times 0.03; 0.07; 0.08; 0.09; 0.24$       | See table B.1.2.1 for mefentrifluconazole | n/a        | 0.29          | 0.04            | n/a   |
|                               | SEU              | $2 \times 0.02; 0.03; 2 \times 0.04; 0.05; 0.09; 0.29$      |                 |                        |              |                |       |
| Sunflower seeds               | NEU              | 0.03; 2 \times 0.04; 0.05; 2 \times 0.06; 0.08; 0.14         | See table B.1.2.1 for mefentrifluconazole | n/a        | 0.26          | 0.06            | n/a   |
|                               | SEU              | $2 \times 0.03; 0.04; 2 \times 0.06; 0.07; 0.11; 0.26$      |                 |                        |              |                |       |
| Rapeseeds                     | NEU              | 0.03; 0.05; 0.09; 0.17; 0.34; 0.51; 0.94; 1.20                | See table B.1.2.1 for mefentrifluconazole | n/a        | 1.20          | 0.13            | n/a   |
|                               | SEU              | $0.02; 2 \times 0.06; 2 \times 0.08; 0.16; 0.20; 0.40$      |                 |                        |              |                |       |
| Maiz grain                    | NEU              | 0.04; 0.05; 2 \times 0.08; 0.10; 0.12; 0.16; 0.38            | See table B.1.2.1 for mefentrifluconazole | n/a        | 0.38          | 0.08            | n/a   |
|                               | SEU              | $0.03; 3 \times 0.05; 2 \times 0.07; 0.16; 0.29$            |                 |                        |              |                |       |
| Maize stover                  | NEU              | $6 \times < 0.01; 0.01; 0.02$                                  | See table B.1.2.1 for mefentrifluconazole | n/a        | 0.04          | 0.01            | n/a   |
|                               | SEU              | $7 \times < 0.01; 0.04$                                        |                 |                        |              |                |       |
| Sugar beet roots              | NEU              | $< 0.01; 3 \times 0.01; 2 \times 0.02; 2 \times 0.03$        | See table B.1.2.1 for mefentrifluconazole | n/a        | 0.03          | 0.02            | n/a   |
|                               | SEU              | $0.01; 2 \times 0.02; 0.03; 3 \times 0.04; 0.07$            |                 |                        |              |                |       |

(a) Region/Indoor: NEU = near-exposure; SEU = supervised exposure.

(b) HR: Highest residue.

(c) STMR: Sum of trends mean residue.

(d) CF: Conversion factor.
### Residue definition for risk assessment: Triazole lactic acid (TLA)

| Commodity                  | Region/Indoor(a) | Residue levels observed in the supervised residue trials (mg/kg) | Comments/Source | Calculated MRL (mg/kg) | HR(b) (mg/kg) | STMR(c) (mg/kg) | CF(d) |
|----------------------------|------------------|------------------------------------------------------------------|----------------|------------------------|--------------|----------------|-------|
| Pome fruits                | NEU              | 6 × < 0.01; 0.01; 0.06                                           | See table B.1.2.1 for mefentrifluconazole | n/a                     | 0.06         | 0.01           | n/a   |
|                            | SEU              | 5 × < 0.01; 2 × 0.01; 0.03                                        |                |                        |              |                |       |
| Apricots, peaches          | NEU              | 4 × < 0.01; 0.02; 0.03; 0.04; 0.05                                | See table B.1.2.1 for mefentrifluconazole | n/a                     | 0.14         | 0.02           | n/a   |
|                            | SEU              | 2 × < 0.01; 0.01; 3 × 0.04; 0.06; 0.14                            |                |                        |              |                |       |
| Cherries                   | NEU              | 3 × < 0.01; 0.01; 2 × 0.02; 0.03; 0.04                            | See table B.1.2.1 for mefentrifluconazole | n/a                     | 0.09         | 0.02           | n/a   |
|                            | SEU              | 3 × 0.01; 0.02; 2 × 0.03; 0.05; 0.09                              |                |                        |              |                |       |
| Plums                      | NEU              | 5 × < 0.01; 0.02; 0.03; 0.06                                      | See table B.1.2.1 for mefentrifluconazole | n/a                     | 0.06         | 0.01           | n/a   |
|                            | SEU              | 7 × < 0.01; 0.05                                                 |                |                        |              |                |       |
| Grapes, wine and table     | NEU              | 2 × < 0.01; 2 × 0.01; 0.02; 0.03; 0.04; 0.07                      | See table B.1.2.1 for mefentrifluconazole | n/a                     | 0.07         | 0.02           | n/a   |
|                            | SEU              | 3 × < 0.01; 0.01; 2 × 0.02; 0.03; 0.07                            |                |                        |              |                |       |
| Potatoes                   | NEU              | 8 × < 0.01                                                      | See table B.1.2.1 for mefentrifluconazole | n/a                     | 0.01         | 0.01           | n/a   |
|                            | SEU              | 4 × < 0.01                                                      |                |                        |              |                |       |
| Sweet corn                 | NEU              | 8 × < 0.01                                                      | See table B.1.2.1 for mefentrifluconazole | n/a                     | 0.01         | 0.01           | n/a   |
|                            | SEU              | 8 × < 0.01                                                      |                |                        |              |                |       |
| Sunflower seeds            | NEU              | 8 × < 0.01                                                      | See table B.1.2.1 for mefentrifluconazole | n/a                     | 0.01         | 0.01           | n/a   |
|                            | SEU              | 7 × < 0.01; 0.01                                                |                |                        |              |                |       |
| Rapeseeds                  | NEU              | 6 × < 0.01; 0.01; 0.03                                           | See table B.1.2.1 for mefentrifluconazole | n/a                     | 0.03         | 0.01           | n/a   |
|                            | SEU              | 8 × < 0.01                                                      |                |                        |              |                |       |
| Maize grain                | NEU              | 5 × < 0.01; 2 × 0.01; 0.04                                       | See table B.1.2.1 for mefentrifluconazole | n/a                     | 0.08         | 0.01           | n/a   |
|                            | SEU              | 5 × < 0.01; 2 × 0.01; 0.08                                       |                |                        |              |                |       |
| Maize stover               | NEU              | 5 × < 0.01; 0.01; 0.03                                           | See table B.1.2.1 for mefentrifluconazole | n/a                     | 0.03         | 0.01           | n/a   |
|                            | SEU              | 6 × < 0.01; 2 × 0.02                                              |                |                        |              |                |       |
| Sugar beet roots           | NEU              | 8 × < 0.01                                                      | See table B.1.2.1 for mefentrifluconazole | n/a                     | 0.01         | 0.01           | n/a   |
| Sugar beet tops            | NEU              | 4 × 0.02; 0.07; 0.08; 0.10; 0.13                                  | See table B.1.2.1 for mefentrifluconazole | n/a                     | 0.13         | 0.05           | n/a   |

### Residue definition for risk assessment: 1,2,4-T (1,2,4 Triazole)

| Commodity                  | Region/Indoor(a) | Residue levels observed in the supervised residue trials (mg/kg) | Comments/Source | Calculated MRL (mg/kg) | HR(b) (mg/kg) | STMR(c) (mg/kg) | CF(d) |
|----------------------------|------------------|------------------------------------------------------------------|----------------|------------------------|--------------|----------------|-------|
| Pome fruits                | NEU              | 8 × < 0.01                                                      | See table B.1.2.1 for mefentrifluconazole | n/a                     | 0.01         | 0.01           | n/a   |
|                            | SEU              | 8 × < 0.01                                                      |                |                        |              |                |       |
| Apricots, peaches          | NEU              | 8 × < 0.01                                                      | See table B.1.2.1 for mefentrifluconazole | n/a                     | 0.01         | 0.01           | n/a   |
|                            | SEU              | 8 × < 0.01                                                      |                |                        |              |                |       |
## Modification and setting of maximum residue levels for mefentrifluconazole in various crops

| Commodity                     | Region/Indoor<sup>(a)</sup> | Residue levels observed in the supervised residue trials (mg/kg) | Comments/Source                                                                 | Calculated MRL (mg/kg) | HR<sup>(b)</sup> (mg/kg) | STMR<sup>(c)</sup> (mg/kg) | CF<sup>(d)</sup> |
|-------------------------------|-----------------------------|-----------------------------------------------------------------|---------------------------------------------------------------------------------|------------------------|--------------------------|-----------------------------|----------------|
| Cherries                      | NEU                         | 8 × < 0.01                                                      | See table B.1.2.1 for mefentrifluconazole                                        | n/a                    | 0.01                     | 0.01                        | n/a            |
|                              | SEU                         | 8 × < 0.01                                                      |                                                                                  |                        |                         |                             |                |
| Plums                         | NEU                         | 8 × < 0.01                                                      | See table B.1.2.1 for mefentrifluconazole                                        | n/a                    | 0.01                     | 0.01                        | n/a            |
|                              | SEU                         | 8 × < 0.01                                                      |                                                                                  |                        |                         |                             |                |
| Grapes, wine and table        | NEU                         | 7 × < 0.01; 0.01                                               | See table B.1.2.1 for mefentrifluconazole. Validity of the residue data with regard to storage stability should be confirmed | n/a                    | 0.01                     | 0.01                        | n/a            |
|                              | SEU                         | 7 × < 0.01; 0.01                                               |                                                                                  |                        |                         |                             |                |
| Potatoes                      | NEU                         | 8 × < 0.01                                                      | See table B.1.2.1 for mefentrifluconazole                                        | n/a                    | 0.01                     | 0.01                        | n/a            |
|                              | SEU                         | 4 × < 0.01                                                      |                                                                                  |                        |                         |                             |                |
| Sweet corn                    | NEU                         | 8 × < 0.01                                                      | See table B.1.2.1 for mefentrifluconazole                                        | n/a                    | 0.01                     | 0.01                        | n/a            |
|                              | SEU                         | 8 × < 0.01                                                      |                                                                                  |                        |                         |                             |                |
| Sunflower seeds               | NEU                         | 8 × < 0.01                                                      | See table B.1.2.1 for mefentrifluconazole                                        | n/a                    | 0.01                     | 0.01                        | n/a            |
|                              | SEU                         | 8 × < 0.01                                                      |                                                                                  |                        |                         |                             |                |
| Rapeseeds                     | NEU                         | 8 × < 0.01                                                      | See table B.1.2.1 for mefentrifluconazole                                        | n/a                    | 0.01                     | 0.01                        | n/a            |
|                              | SEU                         | 8 × < 0.01                                                      |                                                                                  |                        |                         |                             |                |
| Maize grain                   | NEU                         | 8 × < 0.01                                                      | See table B.1.2.1 for mefentrifluconazole                                        | n/a                    | 0.01                     | 0.01                        | n/a            |
|                              | SEU                         | 8 × < 0.01                                                      |                                                                                  |                        |                         |                             |                |
| Maize stover                  | NEU                         | 8 × < 0.01                                                      | See table B.1.2.1 for mefentrifluconazole                                        | n/a                    | 0.01                     | 0.01                        | n/a            |
|                              | SEU                         | 8 × < 0.01                                                      |                                                                                  |                        |                         |                             |                |
| Sugar beet roots              | NEU                         | 8 × < 0.01                                                      | See table B.1.2.1 for mefentrifluconazole                                        | n/a                    | 0.01                     | 0.01                        | n/a            |
| Sugar beet tops               | NEU                         | 7 × < 0.01; 0.02                                               | See table B.1.2.1 for mefentrifluconazole                                        | n/a                    | 0.02                     | 0.01                        | n/a            |

**Residue definition for risk assessment:** Triazole acetic acid (TAA)

| Pome fruits                   | NEU                         | 6 × < 0.01; 0.01; 0.03                                         | See table B.1.2.1 for mefentrifluconazole                                        | n/a                    | 0.03                     | 0.01                        | n/a            |
|                              | SEU                         | 7 × < 0.01; 0.01                                               |                                                                                  |                        |                         |                             |                |
| Apricots, peaches            | NEU                         | 3 × < 0.01; 0.01; 0.02; 0.03; 0.05; 0.08                      | See table B.1.2.1 for mefentrifluconazole                                        | n/a                    | 0.08                     | 0.02                        | n/a            |
|                              | SEU                         | < 0.01; 2 × 0.01; 2 × 0.02; 0.04; 0.05; 0.07                 |                                                                                  |                        |                         |                             |                |
| Cherries                      | NEU                         | 8 × < 0.01                                                      | See table B.1.2.1 for mefentrifluconazole                                        | n/a                    | 0.05                     | 0.01                        | n/a            |
|                              | SEU                         | 5 × < 0.01; 2 × 0.01; 0.05                                      |                                                                                  |                        |                         |                             |                |
| Commodity               | Region/Indoor\(^{(a)}\) | Residue levels observed in the supervised residue trials (mg/kg) | Comments/Source                                                                 | Calculated MRL (mg/kg) | HR\(^{(b)}\) (mg/kg) | STMR\(^{(c)}\) (mg/kg) | CF\(^{(d)}\) |
|------------------------|--------------------------|----------------------------------------------------------------|--------------------------------------------------------------------------------|------------------------|----------------------|------------------------|---------------|
| Plums                  | NEU                      | 7 × < 0.01; 0.02                                                | See table B.1.2.1 for mefentrifluconazole                                          | n/a                    | 0.02                 | 0.01                   | n/a           |
|                        | SEU                      | 7 × < 0.01; 0.01                                                |                                                                                  |                        |                      |                        |               |
| Grapes, wine and table | NEU                      | 8 × < 0.01                                                     | See table B.1.2.1 for mefentrifluconazole Validity of the residue data with regard to storage stability should be confirmed | n/a                    | 0.01                 | 0.01                   | n/a           |
|                        | SEU                      | 8 × < 0.01                                                     |                                                                                  |                        |                      |                        |               |
| Sweet corn             | NEU                      | 8 × < 0.01                                                     | See table B.1.2.1 for mefentrifluconazole                                          | n/a                    | 0.01                 | 0.01                   | n/a           |
|                        | SEU                      | 8 × < 0.01                                                     |                                                                                  |                        |                      |                        |               |
| Potatoes               | NEU                      | 8 × < 0.01                                                     | See table B.1.2.1 for mefentrifluconazole                                          | n/a                    | 0.01                 | 0.01                   | n/a           |
|                        | SEU                      | 4 × < 0.01                                                     |                                                                                  |                        |                      |                        |               |
| Sunflower seeds        | NEU                      | 0.02; 2 × 0.03; 3 × 0.06; 0.08; 0.09                            | See table B.1.2.1 for mefentrifluconazole                                          | n/a                    | 0.29                 | 0.06                   | n/a           |
|                        | SEU                      | 2 × 0.04; 0.05; 0.06; 0.07; 0.08; 0.15; 0.29                   |                                                                                  |                        |                      |                        |               |
| Rapeseeds              | NEU                      | 8 × < 0.01                                                     | See table B.1.2.1 for mefentrifluconazole                                          | n/a                    | 0.01                 | 0.01                   | n/a           |
|                        | SEU                      | 8 × < 0.01                                                     |                                                                                  |                        |                      |                        |               |
| Maize grain            | NEU                      | 8 × < 0.01                                                     | See table B.1.2.1 for mefentrifluconazole                                          | n/a                    | 0.01                 | 0.01                   | n/a           |
|                        | SEU                      | 8 × < 0.01                                                     |                                                                                  |                        |                      |                        |               |
| Maize stover           | NEU                      | 7 × < 0.01; 0.01                                               | See table B.1.2.1 for mefentrifluconazole                                          | n/a                    | 0.02                 | 0.01                   | n/a           |
|                        | SEU                      | 7 × < 0.01; 0.02                                               |                                                                                  |                        |                      |                        |               |
| Sugar beet roots       | NEU                      | 8 × < 0.01                                                     | See table B.1.2.1 for mefentrifluconazole                                          | n/a                    | 0.01                 | 0.01                   | n/a           |
|                        | SEU                      | 8 × < 0.01                                                     |                                                                                  |                        |                      |                        |               |

MRL: maximum residue level; n/a: not applicable.
(a): NEU: Outdoor trials conducted in northern Europe, SEU: Outdoor trials conducted in southern Europe, Indoor: indoor EU trials or Country code: if non-EU trials.
(b): Highest residue. The highest residue for risk assessment refers to the whole commodity and not to the edible portion.
(c): Supervised trials median residue. The median residue for risk assessment refers to the whole commodity and not to the edible portion.
(d): Conversion factor to recalculate residues according to the residue definition for monitoring to the residue definition for risk assessment.
B.1.2.2. Residues in rotational crops

| Residues in rotational and succeeding crops expected based on confined rotational crop study? | Levels of mefentrifluconazole lower than TDMs. Rotational crop field trials triggered (EFSA, 2018c) |
| Residues in rotational and succeeding crops expected based on field rotational crop study? | Application at 300 g/ha. Determination of residues of MFZ and TDMs in different representative succeeding crops (wheat, carrot/radish, broccoli/cauliflower, spinach/lettuce) planted at plant-back intervals (PBI) of 30, 120, 365 days. |
| | • MFZ = residues do not exceed the LOQ of 0.01 mg/kg for different representative succeeding crops at any PBI |
| | • 1,2,4-T = residues do not exceed the LOQ of 0.01 mg/kg for different representative succeeding crops at any PBI |
| | • TAA = residues do not exceed the LOQ of 0.01 mg/kg for R/T, brassica and leafy crops at any PBI. Residues were detected in wheat at all PBIs (up to 0.35 mg/kg in treated wheat grain, up to 0.15 mg/kg in straw, most controls contained background levels but lower than treated samples) |
| | • TA = residues were detected in all commodities at all PBIs. Residues were highest in wheat commodities (up to 0.52 mg/kg in wheat grain) and leafy crops (up to 0.35 mg/kg in flowering brassica); most controls contained background levels but lower than treated samples) |
| | • TLA = residues were detected in all commodities except leafy crops and carrot roots at all PBIs. Residues were highest in wheat commodities (up to 0.16 mg/kg in treated wheat straw, followed by spinach/lettuce leaves (up to 0.092 mg/kg) and radish tops (up to 0.038 mg/kg; most controls contained background levels but commonly lower than treated samples) |

TDM: triazole derivative metabolite; LOQ: limit of quantification; MFZ: mefentrifluconazole (BAS 750F); 1,2,4-T: 1,2,4-triazole; TA: triazole alanine; TAA: triazole acetic acid; TLA: triazole lactic acid.

B.1.2.3. Processing factors

| Processed commodity | Number of valid studies | Processing Factor (PF) | CF<sub>P</sub><sup>(a)</sup> | Comment/Source |
|---------------------|------------------------|-----------------------|----------------------|----------------|
|                     |                        | Individual values<sup>(a)</sup> | Median PF |                  |
| Mefentrifluconazole |                        |                       |          |                  |
| Apples, washed      | 3                      | 0.68; 0.75; 0.81      | 0.75     | n/a Austria (2019) |
| Apple, juice        | 3                      | 0.09; < 0.13; 0.16    | < 0.13   | n/a Austria (2019) |
| Processed commodity                          | Number of valid studies | Processing Factor (PF) | CF$_P$ (b) | Comment/Source |
|---------------------------------------------|-------------------------|------------------------|------------|----------------|
|                                             |                         | Individual values (a)  | Median PF  |                |
| Apple, syrup                                | 3                       | 0.38; 0.40; 0.88       | 0.40       | n/a            | Austria (2019) |
| Apple, sauce                                | 3                       | 0.05; 0.11; < 0.13     | 0.11       | n/a            | Austria (2019) |
| Apple, canned                               | 3                       | 0.05; < 0.13; 0.25     | 0.13       | n/a            | Austria (2019) |
| Apple, dried                                | 3                       | 0.25; 0.31; 0.33       | 0.31       | n/a            | Austria (2019) |
| Apple, wet pomace                           | 3                       | 2.36; 3.10; 3.25       | 3.10       | n/a            | Austria (2019) |
| Apple, dried pomace                         | 3                       | 7.51; 9.88; 11.46      | 9.88       | n/a            | Austria (2019) |
| Plum, washed                                | 3                       | 1.04; 1.08; 1.16       | 1.08       | n/a            | Austria (2019) |
| Plum, juice                                 | 3                       | 0.08; 0.15; 0.20       | 0.15       | n/a            | Austria (2019) |
| Plum, puree                                 | 3                       | 0.43; 0.56; 0.76       | 0.56       | n/a            | Austria (2019) |
| Plum, dried prune                           | 3                       | 2.57; 4.08; 4.26       | 4.08       | n/a            | Austria (2019) |
| Grape, pasteurised juice (rose)             | 3                       | 0.04; 0.05; 0.05       | 0.05       | n/a            | Austria (2019) |
| Grape, pasteurised juice (red)              | 3                       | 0.12; 0.13; 0.13       | 0.13       | n/a            | Austria (2019) |
| Grape, cloudy must (rose wine)              | 3                       | 0.11; 0.13; 0.14       | 0.13       | n/a            | Austria (2019) |
| Grape, must deposit (rose wine)             | 3                       | 0.44; 0.75; 0.89       | 0.75       | n/a            | Austria (2019) |
| Grape, cloudy must (red wine)               | 3                       | 0.16; 0.18; 0.21       | 0.18       | n/a            | Austria (2019) |
| Grape, must deposit (red wine)              | 3                       | 0.18; 0.20; 0.38       | 0.20       | n/a            | Austria (2019) |
| Grape, pomace (rose wine)                   | 3                       | 3.09; 3.13; 3.93       | 3.13       | n/a            | Austria (2019) |
| Grape, pomace (red wine)                    | 3                       | 3.55; 4.26; 5.21       | 4.26       | n/a            | Austria (2019) |
| Grape, young wine (rose wine)               | 3                       | 0.02; 0.02; 0.03       | 0.02       | n/a            | Austria (2019) |
| Grape, young wine (red wine)                | 3                       | 0.02; 0.03; 0.03       | 0.03       | n/a            | Austria (2019) |
| Grape, raisins                              | 3                       | 2.5; 3.73; 3.93        | 3.73       | n/a            | Austria (2019) |
| Potato, peeled                              | 2                       | 0.40; 0.50             | 0.45       | n/a            | Austria (2019) |
| Potato, wet peel                            | 2                       | 1.25; 2.00             | 1.63       | n/a            | Austria (2019) |
| Potato, boiled (unpeeled)                   | 2                       | 0.40; 0.50             | 0.45       | n/a            | Austria (2019) |
| Potato, microwaves (unpeeled)               | 2                       | 0.40; 0.50             | 0.45       | n/a            | Austria (2019) |
| Potato, baked                               | 3                       | 0.40; 0.75; > 2.0      | 0.75       | n/a            | Austria (2019) |
| Potato, fried                               | 2                       | 0.40; 0.50             | 0.45       | n/a            | Austria (2019) |
| Potato, crisp                               | 2                       | 0.40; 0.50             | 0.45       | n/a            | Austria (2019) |
| Potato, chip                                | 2                       | 0.40; 0.50             | 0.45       | n/a            | Austria (2019) |
| Potato, flake                               | 2                       | 0.40; 0.50             | 0.45       | n/a            | Austria (2019) |
| Potato, process waste                       | 2                       | 0.40; 0.50             | 0.45       | n/a            | Austria (2019) |
| Potato, ensiled                             | 2                       | 0.40; 0.75             | 0.58       | n/a            | Austria (2019) |
| Potato, starch                              | 2                       | 0.40; 0.50             | 0.45       | n/a            | Austria (2019) |
| Potato, dried pulp                          | 2                       | 1.60; 3.25             | 2.43       | n/a            | Austria (2019) |
| Potato, protein                             | 3                       | 1.20; > 1.50; 3.25     | 1.50       | n/a            | Austria (2019) |
| Soybean, flour                              | 1                       | < 0.83                 | tentative(c) | n/a            | Austria (2019) |
| Soybean, soymilk                            | 1                       | < 0.83                 | tentative(c) | n/a            | Austria (2019) |
| Soybean, tofu                               | 1                       | < 0.83                 | tentative(c) | n/a            | Austria (2019) |
| Soybean, soy sauce                          | 1                       | < 0.83                 | tentative(c) | n/a            | Austria (2019) |
| Soybean, miso                               | 1                       | < 0.83                 | tentative(c) | n/a            | Austria (2019) |
| Soybean, refined oil                        | 1                       | < 0.83                 | tentative(c) | n/a            | Austria (2019) |
| Soybean, hulls                              | 1                       | < 0.83                 | tentative(c) | n/a            | Austria (2019) |
| Processed commodity | Number of valid studies | Processing Factor (PF) | CF<sub>P</sub> | Comment/Source |
|---------------------|-------------------------|------------------------|--------------|----------------|
|                     |                         | Individual values<sup>(a)</sup> | Median PF    |                |
| Soybean, meal (toasted) | 1 | < 0.83 | tentative<sup>(c)</sup> | n/a Austria (2019) |
| Soybean, aspir. grain fraction | 3 | 93.1; 188; 251 | 188 | n/a Austria (2019) |
| Soybean, pollard | 1 | < 0.83 | tentative<sup>(c)</sup> | n/a Austria (2019) |
| Maize, bran | 1 | > 1.70 | tentative<sup>(c)</sup> | n/a Austria (2019) |
| Maize, aspir. grain fraction | 3 | > 21.0; > 24.0; > 25.0 | > 24.0 | n/a Austria (2019) |
| Maize, gluten feed meal | 1 | > 2.70 | tentative<sup>(c)</sup> | n/a Austria (2019) |
| Maize, silage | 3 | 0.56; 0.86; 1.32 | 0.86 | n/a Austria (2019) |
| Sugar beet, raw juice | 3 | 0.11; 0.12; 0.12 | 0.12 | n/a Austria (2019) |
| Sugar beet, thin juice | 0 | 0.06; 0.08; 0.08 | 0.08 | n/a Austria (2019) |
| Sugar beet, raw sugar | 3 | < 0.05; < 0.06; 0.10 | < 0.06 | n/a Austria (2019) |
| Sugar beet, refined sugar | 3 | < 0.05; < 0.06; 0.10 | < 0.06 | n/a Austria (2019) |
| Sugar beet, pressed pulp | 3 | 0.53; 0.75; 0.86 | 0.75 | n/a Austria (2019) |
| Sugar beet, dried pulp | 3 | 3.24; 4.75; 5.24 | 4.75 | n/a Austria (2019) |
| Sugar beet, molasses | 3 | 0.53; 0.88; 1.10 | 0.88 | n/a Austria (2019) |
| Sugar beet, ensiled pulp | 3 | 0.68; 0.88; 1.14 | 0.88 | n/a Austria (2019) |
| Sugar beet, affinated syrup | 3 | 0.11; 0.11; 0.18 | 0.11 | n/a Austria (2019) |

**Triazole alanine (TA)**

| Processed commodity | Number of valid studies | Processing Factor (PF) | CF<sub>P</sub> | Comment/Source |
|---------------------|-------------------------|------------------------|--------------|----------------|
|                     |                         | Individual values<sup>(a)</sup> | Median PF    |                |
| Apples, washed      | 2 | 1.00; 1.00 | 1.00 | n/a Austria (2019) |
| Apple, juice        | 2 | < 1.00; 1.00 | 1.00 | n/a Austria (2019) |
| Apple, syrup        | 2 | 3.50; 5.00 | 4.25 | n/a Austria (2019) |
| Apple, sauce        | 2 | < 0.50; < 1.00 | 0.75 | n/a Austria (2019) |
| Apple, canned       | 2 | 0.50; 1.00 | 0.75 | n/a Austria (2019) |
| Apple, dried        | 3 | 1.50; 3.00; > 3.00 | 3.00 | n/a Austria (2019) |
| Apple, wet pomace   | 2 | 0.50; 1.00 | 0.75 | n/a Austria (2019) |
| Apple, dried pomace | 2 | 2.50; 4.00 | 3.25 | n/a Austria (2019) |
| Plum, juice         | 3 | 0.83; 1.14; 1.20 | 1.14 | n/a Austria (2019) |
| Plum, puree         | 3 | 0.72; 1.14; 1.20 | 1.14 | n/a Austria (2019) |
| Plum, dried prune   | 3 | 0.86; 1.40; 3.00 | 1.40 | n/a Austria (2019) |
| Grape, pasteurised juice (rose) | 3 | 0.90; 0.90; 0.94 | 0.90<sup>(d)</sup> | n/a Austria (2019) |
| Grape, pasteurised juice (red) | 3 | 0.85; 1.07; 1.44 | 1.07<sup>(d)</sup> | n/a Austria (2019) |
| Grape, cloudy must (rose wine) | 3 | 0.81; 0.90; 1.48 | 0.90<sup>(d)</sup> | n/a Austria (2019) |
| Grape, must deposit (rose wine) | 3 | 0.89; 0.98; 1.20 | 0.98<sup>(d)</sup> | n/a Austria (2019) |
| Grape, cloudy must (red wine) | 3 | 0.97; 0.96; 1.03 | 0.96<sup>(d)</sup> | n/a Austria (2019) |
| Grape, must deposit (red wine) | 3 | 0.87; 0.94; 1.44 | 0.94<sup>(d)</sup> | n/a Austria (2019) |
| Grape, pomace (rose wine) | 3 | 0.60; 1.60; 2.04 | 1.60<sup>(d)</sup> | n/a Austria (2019) |
| Grape, pomace (red wine) | 3 | 0.74; 0.90; 1.63 | 0.90<sup>(d)</sup> | n/a Austria (2019) |
| Grape, young wine (rose wine) | 3 | 0.50; 0.69; 1.07 | 0.69<sup>(d)</sup> | n/a Austria (2019) |
| Grape, young wine (red wine) | 3 | 0.48; 0.63; 1.37 | 0.63<sup>(d)</sup> | n/a Austria (2019) |
| Grape, raisins       | 3 | 0.61; 0.93; 0.93 | 0.93<sup>(d)</sup> | n/a Austria (2019) |
| Potato, peeled       | 3 | < 0.50; 0.92; 1.31 | 0.92 | n/a Austria (2019) |
| Processed commodity                  | Number of valid studies | Processing Factor (PF) | CF<sub>P</sub> | Comment/Source |
|-------------------------------------|-------------------------|------------------------|----------------|----------------|
|                                     |                         | Individual values<sup>(a)</sup> | Median PF |                  |
| Potato, wet peel                    | 3                       | 0.37; 0.46; 1.00        | 0.46        | n/a             |
| Potato, boiled (unpeeled)           | 3                       | 1.00; 1.25; 1.30        | 1.25        | n/a             |
| Potato, microwaves (unpeeled)      | 3                       | 1.00; 1.33; 1.85        | 1.33        | n/a             |
| Potato, baked                       | 3                       | 0.14; 1.69; 14.5        | 1.69        | n/a             |
| Potato, fried                       | 3                       | 1.25; 1.94; 2.00        | 1.94        | n/a             |
| Potato, crisp                       | 3                       | 1.25; 1.51; 2.00        | 1.51        | n/a             |
| Potato, chip                        | 3                       | 1.25; 1.88; 2.00        | 1.88        | n/a             |
| Potato, flake                       | 3                       | 0.75; 1.23; 1.40        | 1.23        | n/a             |
| Potato, process waste               | 3                       | 0.84; 1.08; 1.75        | 1.08        | n/a             |
| Potato, ensiled                     | 3                       | 0.50; 0.92; 1.02        | 0.92        | n/a             |
| Potato, starch                      | 3                       | 0.11; < 0.15; < 0.50    | 0.15        | n/a             |
| Potato, dried pulp                  | 3                       | 1.00; 1.46; 1.71        | 1.46        | n/a             |
| Potato, protein                     | 3                       | 1.00; 1.07; 1.25        | 1.07        | n/a             |
| Soybean, flour                      | 3                       | 1.40; 1.41; 1.66        | 1.41        | n/a             |
| Soybean, soy drink                  | 3                       | 0.13; < 0.16; 0.17      | < 0.16      | n/a             |
| Soybean, tofu                       | 3                       | 0.11; 0.13; < 0.16      | 0.13        | n/a             |
| Soybean, refined oil                | 3                       | < 0.03; < 0.06; < 0.16  | < 0.06      | n/a             |
| Soybean, hulls                      | 3                       | 0.38; 0.50; 0.66        | 0.50        | n/a             |
| Soybean, meal (toasted)             | 3                       | 1.40; 1.67; 2.66        | 1.67        | n/a             |
| Soybean, aspir. grain fraction      | 3                       | 0.73; 1.00; 1.66        | 1.00        | n/a             |
| Soybean, pollard                    | 3                       | 0.86; 0.91; 1.00        | 0.91        | n/a             |
| Maize, bran                         | 3                       | 0.58; 0.83; 1.04        | 0.83        | n/a             |
| Maize, aspir. grain fraction        | 3                       | 0.21; 0.38; 2.28        | 0.38        | n/a             |
| Maize, gluten feed meal             | 3                       | 0.24; 0.30; 0.33        | 0.30        | n/a             |
| Maize, milled by-products           | 3                       | 0.80; 0.85; 1.05        | 0.85        | n/a             |
| Maize, silage                       | 3                       | 0.55; 1.53; 2.00        | 1.53        | n/a             |
| Sugar beet, raw sugar               | 3                       | < 0.45; 1.00; 4.14      | 1.00        | n/a             |
| Sugar beet, refined sugar           | 3                       | < 0.31; < 0.34; < 0.45  | < 0.34      | n/a             |
| Sugar beet, molasses                | 3                       | 10.5; 11.0; 12.5        | 11.0        | n/a             |

**Triazole acetic acid (TAA)**

| Processed commodity                  | Number of valid studies | Processing Factor (PF) | CF<sub>P</sub> | Comment/Source |
|-------------------------------------|-------------------------|------------------------|----------------|----------------|
|                                     |                         | Individual values<sup>(a)</sup> | Median PF |                  |
| Apple, dried pomace                 | 1                       | > 2.00                 | tentative<sup>(c)</sup> | n/a             |
| Plum, juice                         | 2                       | 1.00; > 1.00           | 1              | n/a             |
| Plum, prune                         | 2                       | 1.00; > 1.00           | 1              | n/a             |
| Grape, young wine (rose wine)       | 1                       | > 1.00                 | tentative<sup>(c),(d)</sup> | n/a             |
| Grape, raisins                      | 1                       | > 1.30                 | tentative<sup>(c),(d)</sup> | n/a             |
| Soybean, flour                      | 3                       | 1.00; 1.33; 1.50       | 1.33           | n/a             |
| Soybean, soy drink                  | 3                       | < 0.33; < 0.50; < 1.00 | < 0.50        | n/a             |
| Soybean, tofu                       | 3                       | < 0.33; < 0.50; < 1.00 | < 0.50        | n/a             |
| Soybean, refined oil                | 3                       | < 0.33; < 0.50; < 1.00 | < 0.50        | n/a             |
| Soybean, hulls                      | 3                       | 0.33; 0.50; < 1.00     | 0.50           | n/a             |
| Soybean, meal (toasted)             | 3                       | 1.00; 1.33; 1.50       | 1.33           | n/a             |
| Soybean, aspir. grain fraction      | 3                       | 0.5; 1.00; 2.50        | 1.00           | n/a             |
| Processed commodity | Number of valid studies | Processing Factor (PF) | CF<sub>P</sub><sup>(b)</sup> | Comment/Source |
|---------------------|-------------------------|------------------------|-----------------|----------------|
| Soybean, pollard    | 3                       | < 1.00; 1.00; 1.00     | 1.00            | n/a            |
| Maize, bran         | 1                       | > 1.00                 | tentative<sup>(c)</sup> | n/a            |
| Maize, milled by-products | 2               | > 2.00; > 2.00         | 2               | n/a            |

**Triazole lactic acid (TLA)**

| Processed commodity | Number of valid studies | Processing Factor (PF) | CF<sub>P</sub><sup>(b)</sup> | Comment/Source |
|---------------------|-------------------------|------------------------|-----------------|----------------|
| Apple, dried        | 2                       | > 3.00; > 4.00         | > 4.00          | n/a            |
| Apple, dried pomace | 2                       | > 3.00; > 5.00         | > 4.00          | n/a            |
| Plum, puree         | 1                       | > 1.00                 | tentative<sup>(c)</sup> | n/a            |
| Plum, dried prune   | 1                       | > 1.50                 | tentative<sup>(c)</sup> | n/a            |
| Grape, pasteurised juice (rose) | 3              | 0.56; 0.92; 1.00       | 0.92            | n/a            |
| Grape, pasteurised juice (red) | 3          | 0.62; 0.90; 1.00       | 0.90            | n/a            |
| Grape, cloudy must (rose wine) | 3        | 0.66; 0.71; 1.00       | 0.71            | n/a            |
| Grape, must deposit (rose wine) | 3         | 0.52; 0.86; 1.00       | 0.86            | n/a            |
| Grape, cloudy must (red wine) | 3        | 0.52; 0.86; 1.00       | 0.86            | n/a            |
| Grape, must deposit (red wine) | 3         | 0.63; 0.88; 1.00       | 0.88            | n/a            |
| Grape, pomace (rose wine) | 3          | 0.90; 2.19; 2.60       | 2.19            | n/a            |
| Grape, pomace (red wine) | 3          | 0.88; 1.07; 1.20       | 1.07            | n/a            |
| Grape, young wine (rose wine) | 3          | 0.66; 0.96; 1.90       | 0.96            | n/a            |
| Grape, young wine (red wine) | 3          | 0.77; 1.57; 1.90       | 1.57            | n/a            |
| Grape, raisins      | 3                       | 2.19; 2.24; 5.80       | 2.24            | n/a            |
| Soybean, flour      | 3                       | 1.00; 1.20; 1.40       | 1.20            | n/a            |
| Soybean, soy drink  | 3                       | < 0.10; < 0.20; < 0.50 | < 0.20          | n/a            |
| Soybean, tofu       | 3                       | < 0.10; < 0.20; < 0.50 | < 0.20          | n/a            |
| Soybean, refined oil| 3                       | < 0.10; < 0.20; < 0.50 | < 0.20          | n/a            |
| Soybean, hulls      | 3                       | 1.00; 1.20; 1.20       | 1.20            | n/a            |
| Soybean, meal (toasted) | 3         | 1.00; 1.00; 1.30       | 1.00            | n/a            |
| Soybean, aspir. grain fraction | 2  | 0.66; 1.00          | 0.83            | n/a            |
| Soybean, pollard    | 3                       | 0.80; 1.00; 1.00       | 1.00            | n/a            |
| Maize, bran         | 3                       | 0.66; 1.00; 1.50       | 1.00            | n/a            |
| Maize, aspir. grain fraction | 2  | 0.33; > 2.00         | 1.17            | n/a            |
| Maize, gluten feed meal | 3      | 0.33; < 0.50; < 0.50  | < 0.50          | n/a            |
| Maize, milled by-products | 3     | 0.83; 1.00; 1.50; > 1.00 | 1.00            | n/a            |
| Maize, silage       | 3                       | > 1.00; 1.00; 2.00     | 1.00            | n/a            |
| Sugar beet, molasses | 3                       | > 1.19; > 1.50; > 2.00 | > 1.50          | n/a            |

n/a: not applicable.

(a): Studies with residues of mefentrifluconazole or the TDMs in the RAC at the LOQ were disregarded (unless concentration occurs). For these cases, the calculated PF (level in processed commodity/LOQ in RAC) was reported with a ‘higher than’ (> ) symbol (FAO, 2009).

(b): Conversion factor for risk assessment in the processed commodity. n/a, not applicable.

(c): A tentative PF is derived based on a limited data set.

(d): Validity of the PF with regard to storage stability should be confirmed.
### B.2. Residues in livestock

- **Mefenfluroconazole**

| Relevant groups (sub groups) | Dietary burden for mefenfluroconazole expressed in | Most critical sub group(a) | Most critical commodity(b) | Trigger exceeded (Yes/No) | Previous Max DB (EFSA, 2018c) mg/kg bw/day |
|-----------------------------|--------------------------------------------------|---------------------------|---------------------------|---------------------------|------------------------------------------|
|                             | mg/kg bw per day | mg/kg DM | Median | Maximum | Median | Maximum | Dairy cattle | Barley, straw | Yes | 0.148 |
| Cattle (beef)               | 0.038            | 0.150    | 1.61   | 6.25    |       |         |             |              |     |        |
| Cattle (dairy)              | 0.060            | 0.238    | 1.55   | 6.18    |       |         | Dairy cattle | Barley, straw | Yes | 0.237 |
| Sheep (Ram/ewe)             | 0.098            | 0.407    | 2.95   | 12.22   |       |         | Ram/Ewe     | Barley, straw | Yes | 0.407 |
| Sheep (Lamb)                | 0.126            | 0.520    | 2.96   | 12.23   |       |         | Lamb        | Barley, straw | Yes | 0.518 |
| Swine/pig (breeding)        | 0.005            | 0.014    | 0.22   | 0.60    |       |         | Swine (breeding) | Beet, sugar top | Yes | 0.003 |
| Swine/pig (finishing)       | 0.004            | 0.004    | 0.12   | 0.12    |       |         | Swine (breeding) | Barely grain | No  | 0.004 |
| Poultry (broiler)           | 0.008            | 0.008    | 0.11   | 0.11    |       |         | Poultry (layer) | Barely grain | Yes | 0.007 |
| Poultry (layer)             | 0.035            | 0.147    | 0.51   | 2.15    |       |         | Poultry (layer) | Wheat straw | Yes | 0.148 |
| Poultry (turkey)            | 0.008            | 0.008    | 0.11   | 0.11    |       |         | Poultry (layer) | Barely grain | Yes | 0.007 |
| Fish (carp)                 | –                | –        | –      | 0.061   |       |         |              |               | No  | –      |
| Fish (trout)                | –                | –        | –      | 0.042   |       |         |              |               | No  | –      |

bw: body weight; DM: dry matter; DB: dietary burden.

(a): When one group of livestock includes several subgroups (e.g. poultry ‘all’ including broiler, layer and turkey), the result of the most critical subgroup is identified from the maximum dietary burdens expressed as ‘mg/kg bw per day’.

(b): The most critical commodity is the major contributor identified from the maximum dietary burden expressed as ‘mg/kg bw per day’.

### Triazole Derivative metabolites (TDMs)

| Relevant groups (sub groups) | Dietary burden for TDM expressed in | Most critical sub group(a) | Most critical commodity(b) | Trigger exceeded (Yes/No) | Previous Max DB (United Kingdom, 2018b) mg/kg bw/day |
|------------------------------|-----------------------------------|---------------------------|---------------------------|---------------------------|------------------------------------------|
|                             | mg/kg bw per day | mg/kg DM | Median | Maximum | Median | Maximum | Dairy cattle | Potato culls | Yes | 0.405 |
| Triazole alanine (TA)        |                    |          |        |         |        |         |             |              |     |        |
| Cattle (all diets)           | 0.010               | 0.024    | 0.32   | 0.61    |       |         | Dairy cattle | Potato culls | Yes | 0.405 |
| Cattle (dairy)               | 0.010               | 0.024    | 0.26   | 0.61    |       |         | Dairy cattle | Potato culls | Yes | 0.405 |
| Sheep (all diets)            | 0.012               | 0.033    | 0.29   | 0.82    |       |         | Lamb        | Potato culls | Yes | 0.454 |
| Sheep (ewe)                  | 0.008               | 0.027    | 0.25   | 0.82    |       |         | Ram/Ewe     | Potato culls | Yes | 0.454 |
| Swine (all diets)            | 0.012               | 0.021    | 0.41   | 0.69    |       |         | Swine (finishing) | Distiller’s grain | Yes | 0.178 |
| Poultry (all diets)          | 0.024               | 0.031    | 0.35   | 0.43    |       |         | Turkey       | Distiller’s grain | Yes | 0.165 |
| Poultry (layer)              | 0.024               | 0.029    | 0.35   | 0.43    |       |         | Poultry layer | Distiller’s grain | Yes | 0.149 |
| Relevant groups (sub groups) | Dietary burden for TDM expressed in mg/kg bw per day | Most critical sub group(a) | Most critical commodity(b) | Trigger exceeded (Yes/No) | Previous Max DB (United Kingdom, 2018b) | Previous Max DB (United Kingdom, 2018b) |
|-----------------------------|-----------------------------------------------|--------------------------|----------------------------|--------------------------|------------------------------------------|------------------------------------------|
|                             | Median | Maximum | Median | Maximum | mg/kg bw/day | mg/kg bw/day | mg/kg bw/day | mg/kg bw/day | mg/kg bw/day | mg/kg bw/day | mg/kg bw/day |
| **Triazole lactic acid (TLA)** | Utmost | Dairy | Barley | Yes | 0.177 | | |
| Cattle (all diets)           | 0.009  | 0.146  | 0.24   | 3.81    | | | | | | | |
| Cattle (dairy)               | 0.009  | 0.146  | 0.24   | 3.81    | | | | | | | |
| Sheep (all diets)            | 0.016  | 0.319  | 0.38   | 7.50    | | | | | | | |
| Sheep (ewe)                  | 0.011  | 0.250  | 0.33   | 7.50    | | | | | | | |
| Swine (all diets)            | 0.002  | 0.003  | 0.09   | 0.13    | | | | | | | |
| Poultry (all diets)          | 0.004  | 0.044  | 0.05   | 0.65    | | | | | | | |
| Poultry (layer)              | 0.004  | 0.044  | 0.05   | 0.65    | | | | | | | |
| **Triazole acetic acid (TAA)** | Utmost | Dairy | Barley | Yes | 0.140 | | |
| Cattle (all diets)           | 0.003  | 0.007  | 0.10   | 0.19    | | | | | | | |
| Cattle (dairy)               | 0.003  | 0.007  | 0.09   | 0.19    | | | | | | | |
| Sheep (all diets)            | 0.005  | 0.012  | 0.11   | 0.28    | | | | | | | |
| Sheep (ewe)                  | 0.003  | 0.009  | 0.10   | 0.28    | | | | | | | |
| Swine (all diets)            | 0.004  | 0.004  | 0.12   | 0.12    | | | | | | | |
| Poultry (all diets)          | 0.007  | 0.008  | 0.11   | 0.12    | | | | | | | |
| Poultry (layer)              | 0.007  | 0.008  | 0.11   | 0.12    | | | | | | | |
| **1,2,4 Triazole (1,2,4-T)** | Utmost | Dairy | Beet sugar ensiled pulp | No | 0.109 | | |
| Cattle (all diets)           | 0.002  | 0.002  | 0.06   | 0.06    | | | | | | | |
| Cattle (dairy)               | 0.002  | 0.002  | 0.05   | 0.05    | | | | | | | |
| Sheep (all diets)            | 0.002  | 0.002  | 0.06   | 0.06    | | | | | | | |
| Sheep (ewe)                  | 0.002  | 0.002  | 0.06   | 0.06    | | | | | | | |
| Swine (all diets)            | 0.001  | 0.001  | 0.05   | 0.05    | | | | | | | |
| Poultry (all diets)          | 0.001  | 0.001  | 0.02   | 0.02    | | | | | | | |
| Poultry (layer)              | 0.001  | 0.001  | 0.02   | 0.02    | | | | | | | |

bw: body weight; DM: dry matter; DB: dietary burden.
(a): When several diets are relevant (e.g. cattle, sheep and poultry ‘all diets’), the most critical diet is identified from the maximum dietary burdens expressed as ‘mg/kg bw per day’.
(b): The most critical commodity is the major contributor identified from the maximum dietary burden expressed as ‘mg/kg bw per day’.
### B.2.1. Nature of residues and methods of analysis in livestock

#### B.2.1.1. Metabolism studies, methods of analysis and residue definitions in livestock

| Livestock (available studies) | Animal                   | Dose (mg/kg bw per day) | Duration (days) | Comment/Source                                                                 |
|-------------------------------|--------------------------|-------------------------|-----------------|--------------------------------------------------------------------------------|
|                               | Laying hen               | 1.1                     | 14              | Laying hens; Label position C-ring, TFMP-ring or T-ring MFZ (EFSA, 2018c)       |
|                               | Lactating ruminants      | 0.36 – 0.43             | 12 – 14         | Goat; Label position C-ring, TFMP-ring or T-ring MFZ (EFSA, 2018c)             |
|                               | Pig                      | n/a                     | n/a             | EFSA (2018c)                                                                  |
|                               | Fish                     | 5 mg/kg DM              | 10 – 14         | Rainbow trout; Label position C-ring or T-ring MFZ (EFSA, 2018c)              |

**Time needed to reach a plateau concentration in milk and eggs (days)**

- Milk: 5 – 8  
  - EFSA (2018c)
- Eggs: 5 – 7  
  - EFSA (2018c)

**Metabolism in rat and ruminant similar**

- Yes  
  - EFSA (2018c)

**Can a general residue definition be proposed for animals?**

- Yes  
  - EFSA (2018c)

**Animal residue definition for monitoring (RD-Mo)**

- Mefentrifluconazole

**Animal residue definition for risk assessment (RD-RA)**

- Farm animals, except poultry:
  - Mefentrifluconazole
  - TDMs, with a separate assessment of:
    - TA and TLA
    - TAA
    - 1,2,4-Triazole
- Poultry:
  - Sum of mefentrifluconazole, metabolite M750F022 and fatty acid conjugates of M750F022, expressed as parent
    - CF<sub>rat</sub>: 6.2 for muscle; 16.3 for fat; 4.9 for liver and eggs
  - TDMs, with a separate assessment of:
    - TA and TLA
    - TAA
    - 1,2,4-Triazole
- Fishes:
  - Mefentrifluconazole
  - 1,2,4-triazole

‡In future TA, TAA and TLA, (of which metabolism in fish is currently unknown), may also need to be included in the RD-RA as demonstrated appropriate for other animals, i.e. ruminant and poultry (EFSA, 2018c)
Fat soluble residues

Methods of analysis for monitoring of residues (analytical technique, matrix, LOQs)

|                      | Yes                  | EFSA (2018c)          |
|----------------------|----------------------|-----------------------|

Muscle fat, liver, kidney, milk and egg matrices:

LC–MS/MS – LOQ 0.01 mg/kg (EFSA, 2018c)

bw: body weight; MRL: maximum residue level; C-ring: chlorophenyl ring; TFMP-ring: trifluoromethylphenyl ring; T-ring: triazole ring; n/a: not applicable; LC–MS/MS: liquid chromatography with tandem mass spectrometry; LOQ: limit of quantification; TDM: triazole derivative metabolite; LOQ: limit of quantification; MFZ: mefentrifluconazole (BAS 750F); 1,2,4-T: 1,2,4-triazole; TA: triazole alanine; TAA: triazole acetic acid; TLA: triazole lactic acid.

B.2.1.2. Stability of residues in livestock

| Animal products (available studies) | Animal | Commodity | T (°C) | Stability (months) | Comment/ Source |
|-------------------------------------|--------|-----------|--------|--------------------|-----------------|
|                                     |        |           |        | MFZ M750F022 1,2,4-T TA/TA/TLA(a) |                 |
| Bovine                              | Muscle | ≤ –18     | 5.9    | 5.9 12             | No data EFSA (2018c) |
| Bovine                              | Liver  | ≤ –18     | 5.9    | 5.9 12             | No data EFSA (2018c) |
| Bovine                              | Kidney | ≤ –18     | 5.9    | 5.9 12             | No data EFSA (2018b,c) |
| Bovine                              | Milk   | ≤ –18     | 5.9    | 5.9 18             | No data EFSA (2018c) |
| Poultry                             | Eggs   | ≤ –18     | 5.9    | 5.9 12             | No data EFSA (2018b,c) |

(a): Identified as data gaps in the framework of the EU peer review of the pesticide risk assessment for the TDMs in light of confirmatory data submitted (EFSA, 2018b).

B.2.2. Magnitude of residues in livestock

B.2.2.1. Summary of the residue data from livestock feeding studies

| Animal commodity | Residues at the closest feeding level (mg/kg) | Estimated value at 1N MRL proposal (mg/kg) | CF(c) |
|------------------|---------------------------------------------|------------------------------------------|-------|
|                  | Mean | Highest | STMR(a) (mg/kg) | HR(b) (mg/kg) |                  |
| Mefentrifluconazole |      |         |                |                |                  |
| Cattle (all)     |      |         |                |                |                  |
| Closest feeding level (0.192 mg/kg bw; 0.8N rate dairy cattle)(d) | | | | | |
| Muscle           | 0.01 | 0.01    | 0.01           | 0.03           | 0.03 n/a |
| Fat              | 0.05 | 0.06    | 0.06           | 0.20           | 0.2 n/a  |
| Liver            | 0.15 | 0.18    | 0.09           | 0.34           | 0.4 n/a   |
| Kidney           | 0.05 | 0.07    | 0.02           | 0.11           | 0.15 n/a  |
| Cattle (dairy only) |      |         |                |                |                  |
| Closest feeding level (0.192 mg/kg bw; 0.8N rate dairy cattle)(d) | | | | | |
| Milk             | 0.01 | 0.01    | 0.01           | 0.021          | 0.03 n/a |
| Sheep (all)      |      |         |                |                |                  |
| Closest feeding level (0.192 mg/kg bw; 0.4N rate lamb)(d) | | | | | |
| Muscle           | 0.01 | 0.01    | 0.02           | 0.05           | 0.05 n/a  |
| Fat              | 0.05 | 0.06    | 0.09           | 0.39           | 0.4 n/a   |
| Liver            | 0.15 | 0.18    | 0.14           | 0.65           | 0.7 n/a   |
| Kidney           | 0.05 | 0.07    | 0.03           | 0.25           | 0.3 n/a   |
| Sheep (ewe only) |      |         |                |                |                  |
| Closest feeding level (0.192 mg/kg bw; 0.5N rate ewe)(d) | | | | | |
| Milk(d)          | 0.01 | 0.01    | 0.01           | 0.03           | 0.04 n/a  |

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### Animal commodity

| Animal commodity | Residues at the closest feeding level (mg/kg) | Estimated value at 1N MRL proposal (mg/kg) | CF<sup>(c)</sup> |
|-----------------|-----------------------------------------------|------------------------------------------|--------------|
|                 | Mean  | Highest | STMR<sup>(a)</sup> (mg/kg) | HR<sup>(b)</sup> (mg/kg) |               |
| Swine (all)<sup>(e)</sup> |       |         |                             |                |
| Closest feeding level (0.034 mg/kg bw; × 2.5N rate breeding)<sup>(d)</sup> |       |         |                             |                |
| Muscle          | 0.01  | 0.01    | 0.010                       | 0.010       | 0.01* n/a    |
| Fat             | 0.02  | 0.02    | 0.003                       | 0.007       | 0.01* n/a    |
| Liver           | 0.03  | 0.03    | 0.005                       | 0.014       |               |
| kidney          | 0.01  | 0.01    | 0.002                       | 0.006       | 0.01* n/a    |

**Poultry (all, laying only)**

Calculations reported in the EFSA conclusions on the EU pesticides peer review still valid (EFSA, 2018c)

*: Indicates that the MRL is set at the limit of analytical quantification (LOQ).

(a): The mean residue level for milk and the mean residue levels for tissues were recalculated at the 1N rate for the median dietary burden.

(b): The mean residue level in milk and the highest residue levels in tissues were recalculated at the 1N rate for the maximum dietary burden.

(c): Conversion factor for risk assessment in the processed commodity. n/a: not applicable.

(d): Closest feeding level and N dose rate related to the maximum dietary burden.

(e): Since metabolism of mefentrifluconazole in rats and ruminants is the same, results of the livestock feeding study on ruminants were relied upon to derive the MRL and risk assessment values in swine.

### B.3. Consumer risk assessment

**Mefentrifluconazole**

0.15 mg/kg bw (European Commission, 2019)

| Fruit            | Percentage of ARfD |
|------------------|--------------------|
| Peaches          | 29%                |
| Table grapes     | 26%                |
| Pears            | 25%                |
| Apples           | 19%                |
| Apricots         | 10%                |
| Cherries (sweet) | 10%                |
| Plums            | 8%                 |
| Quinces          | 4%                 |
| Wine grapes      | 3%                 |
| Medlar           | 2%                 |
| Potatoes         | 1%                 |
| Milk of cattle   | 0.8%               |
| Other commodities | <0.8%             |

**Triazole alanine**

0.3 mg/kg bw (EFSA, 2018b)

| Fruit            | Percentage of ARfD |
|------------------|--------------------|
| Peaches          | 35%                |
| Apricots         | 13%                |

**Triazole acetic acid**

1 mg/kg bw (EFSA, 2018b)

| Fruit            | Percentage of ARfD |
|------------------|--------------------|
| Peaches          | 0.8%               |
| Apricots         | 0.3%               |
| Cherries (sweet) | 0.06%              |

**Triazole lactic acid**

0.3 mg/kg bw (EFSA, 2018b)

| Fruit            | Percentage of ARfD |
|------------------|--------------------|
| Peaches          | 4%                 |
**ARfD**

Highest IESTI, according to EFSA PRIMo

Assumptions made for the calculations

| Compounds        | Remarks                        |
|------------------|--------------------------------|
| Apricots         | 2% of ARfD                     |
| **1,2,4-Triazole** | 0.1 mg/kg bw (EFSA, 2018b)    |
| **Mefentrifluconazole** | Not necessary                  |

The calculation is based on the highest residue levels or the median residue levels (sunflower seed, rape seed, maize grain, milk) expected in raw agricultural commodities under assessment.

**Individual TDMs**

The calculations for TA, TLA and TAA are based on the highest residue levels expected in raw agricultural commodities for peaches, apricots and cherries as derived from the residue trials with mefentrifluconazole.

For the remaining commodities, the highest/median residues of TDMs derived from the intended uses of mefentrifluconazole are covered in the assessment of the EU pesticides peer review confirmatory data for TDMs (EFSA, 2018b, United Kingdom, 2018a)

Calculations for 1,2, 4-T not necessary (no residues expected in the commodities under concern).

Calculations were performed with PRIMo 3.1

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**ADI**

Highest IEDI, according to EFSA PRIMo

| Compounds       | Remarks                          |
|-----------------|---------------------------------|
| Mefentrifluconazole | 0.035 mg/kg bw per day (European Commission, 2019) |

7% ADI (NL toddler diet)

Contribution of crops assessed:

- Apples: 2.85% of ADI
- Milk of cattle: 1.71% of ADI
- Wine grapes: 1.28% of ADI
- Pears: 0.99% of ADI
- Table grapes: 0.80% of ADI
- Cherries (sweet): 0.52% of ADI
- Sugar beet roots: 0.48% of ADI
- Maize/corn: 0.20% of ADI
- Apricots: 0.16% of ADI
- Peaches: 0.16% of ADI
- Potatoes: 0.15% of ADI
- Plums: 0.09% of ADI
- Other commodities: <0.09% of ADI
Contribution of crops under consideration covered by previous risk assessment

**ADI**

**Triazole alanine**

0.3 mg/kg bw per day (EFSA, 2018b)

Highest IEDI, according to EFSA PRIMo

6% ADI (NL toddler)

Contribution of crops under consideration covered by previous risk assessment

**ADI**

**Triazole acetic acid**

1 mg/kg bw per day (EFSA, 2018b)

Highest IEDI, according to EFSA PRIMo

1% ADI (NL toddler)

Contribution of crops under consideration covered by previous risk assessment

**ADI**

**Triazole lactic acid**

0.3 mg/kg bw per day (EFSA, 2018b)

Highest IEDI, according to EFSA PRIMo

1% ADI (NL toddler)

Contribution of crops under consideration covered by previous risk assessment

**ADI**

**1,2,4-Triazole**

0.023 mg/kg bw per day (EFSA, 2018b)

Highest IEDI, according to EFSA PRIMo

Not necessary

Assumptions made for the calculations

**Mefentrifluconazole**

The calculation is based on the median residue levels derived for raw agricultural commodities under consideration and in a previous assessment (EFSA, 2018c). For poultry products, the conversion factors for risk assessment of 6.2 for muscle, 16.3 for fat, 4.9 for liver and eggs derived during the EU pesticides peer review (EFSA, 2018c) were used to take into consideration residues of M750F022 and its fatty acid conjugates in tissues and eggs.

The contribution of commodities where no GAP was reported to EFSA were not included in the calculation.

**Individual TDMs:**

The calculations for TA, TLA and TAA are based on the median residue levels expected in raw agricultural commodities and selected in the framework of the EU pesticides peer review of confirmatory data for TDMs (EFSA, 2018b; United Kingdom, 2018a).

Median residues of TDMs derived from the intended and existing uses of mefentrifluconazole are covered by the previous assessment.

Calculations for 1,2, 4 T not necessary (no residues expected in the commodities under concern).

Calculations were perfumed with PRIMo 3.1

ARFD: acute reference dose; bw: body weight; IESTI: international estimated short-term intake; PRIMo: (EFSA) Pesticide Residues Intake Model; ADI: acceptable daily intake; IEDI: international estimated daily intake; GAP: Good Agricultural Practice; TDM: triazole derivative metabolite; LOQ: limit of quantification; MFZ: mefentrifluconazole (BAS 750F); 1,2,4- T: 1,2,4-triazole; TA: triazole alanine; TAA: triazole acetic acid; TLA: triazole lactic acid.
### B.4. Recommended MRLs

| Code\(^{(a)}\) | Commodity | Existing EU MRL (mg/kg) | Proposed EU MRL (mg/kg) | Comment/justification          |
|------------|-----------|-------------------------|-------------------------|-------------------------------|
| 0130010    | Apples    | 0.01*                   | 0.4                     | The submitted data on apples and pears are sufficient to derive an MRL proposal for the intended NEU and SEU use. Risk for consumers unlikely. |
| 0130020    | Pears     |                         |                         |                               |
| 0130030    | Quinces   |                         |                         |                               |
| 0130040    | Medlars   |                         |                         |                               |
| 0130050    | Loquats/Japanese medlars |            |                         |                               |
| 0130990    | Other pome fruits |                |                         |                               |
| 0140010    | Apricots  | 0.01*                   | 0.7                     | The submitted data on apricots and peaches are sufficient to derive an MRL proposal for the intended NEU and SEU use. Risk for consumers unlikely. |
| 0140020    | Cherries  | 0.01*                   | 2                       | The submitted data are sufficient to derive an MRL proposal for the intended NEU and SEU use. Risk for consumers unlikely. |
| 0140030    | Peaches   | 0.01*                   | 0.7                     | The submitted data on apricots and peaches are sufficient to derive an MRL proposal for the intended NEU and SEU use. Risk for consumers unlikely. |
| 0140040    | Plums     | 0.01*                   | 0.5                     | The submitted data are sufficient to derive an MRL proposal for the intended NEU and SEU use. Risk for consumers unlikely. |
| 0151010    | Grapes, table | 0.01*             | 0.9                     | The submitted data on wine grapes are sufficient to derive an MRL proposal for the intended NEU and SEU use on both wine and table grapes. Risk for consumers unlikely. |
| 0151020    | Grapes, wine | 0.01*             | 0.9                     | The submitted data on wine grapes are sufficient to derive an MRL proposal for the intended NEU and SEU use on both wine and table grapes. Risk for consumers unlikely. |
| 0211000    | Potatoes  | 0.01*                   | 0.01*                   | The submitted data are sufficient to derive an MRL proposal for the intended NEU and SEU use. Risk for consumers unlikely. |
| 0234000    | Sweet corn | 0.01*                   | 0.01*                   | The submitted data on maize are sufficient to derive an MRL proposal for the intended NEU and SEU use by extrapolation. Risk for consumers unlikely. |
| 0500030    | Maize     | 0.01*                   | 0.01*                   | The submitted data are sufficient to derive an MRL proposal for the intended NEU and SEU use. Risk for consumers unlikely. |
| 0401050    | Sunflower seeds | 0.01*             | 0.05                    | The submitted data are sufficient to derive an MRL proposal for the intended NEU and SEU use. Risk for consumers unlikely. |
| 0401060    | Rapeseeds/canola seeds | 0.01*             | 0.06                    | The submitted data are sufficient to derive an MRL proposal for the intended NEU and SEU use. Risk for consumers unlikely. |
| 0900010    | Sugar beet roots | 0.01*             | 0.06                    | The submitted data are sufficient to derive an MRL proposal for the intended NEU use. Risk for consumers unlikely. |
| 1011030    | Swine, liver | 0.01*               | 0.015                   | The intended uses in the crops potentially fed to livestock support an MRL proposal. Risk for consumers unlikely. |
| 1012040    | Bovine kidney | 0.1                | 0.15                    |                               |
| 1020010    | Milk, cattle | 0.02               | 0.03                    |                               |
| 1020020    | Milk, sheep | 0.03                | 0.04                    |                               |
| 1020030    | Milk, goat | 0.03                | 0.04                    |                               |

*: Indicates that the MRL is set at the limit of analytical quantification (LOQ).
\(^{(a)}\): Commodity code number according to Annex I of Regulation (EC) No 396/2005.
\(^{(F)}\): Fat soluble.
Appendix C – Pesticide Residue Intake Model (PRIMo)

- PRIMo Mefentrifluconazole

### Toxological reference values

| LOQs (mg/kg) range from: | ADI (mg/kg bw per day): |
|-------------------------|------------------------|
| 0.01 to: 0.05           | 0.035                  |

Source of ADI: COM

Source of ARfD: COM

| EFSA PRIMo revision 3.1; 2019/03/19 |
|------------------------------------|
| Year of evaluation: 2019            |

No of diets exceeding the ADI : ---

#### Refined calculation mode

##### Chronic risk assessment: JMPR methodology (IEDI/TMDI)

| Commodity/group of commodities | Exposure resulting from (µg/kg bw per day) | Highest contributor to MS diet (in % of ADI) | 2nd contributor to MS diet (in % of ADI) | 3rd contributor to MS diet (in % of ADI) |
|-------------------------------|-----------------------------------------|-------------------------------------------|------------------------------------------|------------------------------------------|
| Pears                         | 7%                                      | 2.59                                       | 2%                                       | 1.0%                                     |
| Milk: Cattle                  | 6%                                      | 2.00                                       | 3%                                       | 0.7%                                     |
| Table grapes                  | 4%                                      | 1.45                                       | 1%                                       | 0.7%                                     |
| Apples                        | 3%                                      | 0.91                                       | 0.9%                                     | 0.3%                                     |
| Sugar beet roots              | 3%                                      | 0.88                                       | 0.7%                                     | 0.3%                                     |
| Milk: Cattle                  | 2%                                      | 0.86                                       | 0.6%                                     | 0.4%                                     |
| Milk: Cattle                  | 2%                                      | 0.85                                       | 0.6%                                     | 0.4%                                     |
| Eggs: Chicken                 | 2%                                      | 0.84                                       | 0.6%                                     | 0.4%                                     |
| Sugar beet roots              | 2%                                      | 0.83                                       | 0.6%                                     | 0.2%                                     |
| Poultry: Muscle/meat          | 2%                                      | 0.80                                       | 0.5%                                     | 0.3%                                     |
| Barley                        | 2%                                      | 0.79                                       | 0.5%                                     | 0.3%                                     |
| Milk: Cattle                  | 2%                                      | 0.78                                       | 0.4%                                     | 0.2%                                     |
| Milk: Cattle                  | 2%                                      | 0.77                                       | 0.4%                                     | 0.2%                                     |
| Eggs: Chicken                 | 2%                                      | 0.76                                       | 0.4%                                     | 0.2%                                     |
| Bovine: Muscle/meat           | 2%                                      | 0.75                                       | 0.4%                                     | 0.2%                                     |
| Sugar beet roots              | 2%                                      | 0.74                                       | 0.4%                                     | 0.2%                                     |
| Peaches                       | 2%                                      | 0.73                                       | 0.4%                                     | 0.2%                                     |
| Wheat                         | 2%                                      | 0.72                                       | 0.4%                                     | 0.2%                                     |
| Apples                        | 2%                                      | 0.71                                       | 0.4%                                     | 0.2%                                     |
| Eggs: Chicken                 | 2%                                      | 0.70                                       | 0.4%                                     | 0.2%                                     |
| Sugar beet roots              | 2%                                      | 0.69                                       | 0.4%                                     | 0.2%                                     |
| Milk: Cattle                  | 2%                                      | 0.68                                       | 0.4%                                     | 0.2%                                     |
| Eggs: Chicken                 | 2%                                      | 0.67                                       | 0.4%                                     | 0.2%                                     |
| Sugar beet roots              | 1%                                      | 0.66                                       | 0.3%                                     | 0.2%                                     |
| Barley                        | 1%                                      | 0.65                                       | 0.3%                                     | 0.2%                                     |
| Milk: Cattle                  | 1%                                      | 0.64                                       | 0.3%                                     | 0.2%                                     |
| Apples                        | 1%                                      | 0.63                                       | 0.3%                                     | 0.2%                                     |
| Bovine: Muscle/meat           | 1%                                      | 0.62                                       | 0.3%                                     | 0.2%                                     |
| Oat                           | 1%                                      | 0.61                                       | 0.3%                                     | 0.2%                                     |
| Barley                        | 1%                                      | 0.60                                       | 0.3%                                     | 0.2%                                     |
| Wheat                         | 1%                                      | 0.59                                       | 0.3%                                     | 0.2%                                     |

#### Comments:

- FI 6 yr Apples
- FR adult
- PT general
- GEMS/Food G08
- GEMS/Food G11
- DK child
- DE child
- GEMS/Food G15
- FI adult
- IE child
- GEMS/Food G16
- FR toddler 2-3 yr
- GEMS/Food G17
- DK adult
- SE general
- FR toddler 2-3 yr
- GEMS/Food G18
- ES child
- DE general
- UK toddler
- IT toddler
- NL general
- RO general
- FR child 3-15 yr
- DE women 14-50 yr
- UK child
- IT child
- PL general
- LT child
- FR infant
- UK infant
- IT child
- IE adult
- NL toddler
- NL child
- FR toddler 2-3 yr
- DE women 14-50 yr
- UK child
- IT child
- PL general
- LT child
- FR infant
- UK infant
- IT child
- IE adult

The estimated long-term dietary intake (TMDI/NEDI/IEDI) was below the ADI.

The long-term intake of residues of Mefentrifluconazole (F) is unlikely to present a public health concern.

#### Conclusion:

- The estimated long-term dietary intake (TMDI/NEDI/IEDI) was below the ADI.
- The long-term intake of residues of Mefentrifluconazole (F) is unlikely to present a public health concern.

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The acute risk assessment is based on the ARfD.
The calculation is based on the large portion of the most critical consumer group.

## Unprocessed commodities

| Highest % of ARfD/ADI | Commodities     | MRL/Input for RA (mg/kg) | Exposure (µg/kg bw) | Highest % of ARfD/ADI | Commodities     | MRL/Input for RA (mg/kg) | Exposure (µg/kg bw) |
|-----------------------|-----------------|--------------------------|--------------------|-----------------------|-----------------|--------------------------|--------------------|
| 29%                   | Peaches         | 0.7/0.45                 | 43                 | 12%                   | Table grapes    | 0.9/0.53                 | 18                 |
| 26%                   | Table grapes    | 0.9/0.53                 | 39                 | 8%                    | Wire grapes     | 0.9/0.53                 | 13                 |
| 25%                   | Pears           | 0.4/0.27                 | 37                 | 8%                    | Cherries (sweet)| 2/1.2                    | 12                 |
| 19%                   | Apples          | 0.4/0.27                 | 29                 | 6%                    | Peaches         | 0.7/0.45                 | 8.4                |
| 10%                   | Apricots        | 0.7/0.45                 | 16                 | 5%                    | Pears           | 0.4/0.27                 | 7.6                |
| 10%                   | Cherries (sweet)| 2/1.2                    | 15                 | 5%                    | Apples          | 0.4/0.27                 | 7.6                |
| 8%                    | Plums           | 0.5/0.3                  | 13                 | 4%                    | Plums           | 0.5/0.3                  | 5.3                |
| 4%                    | Quinces         | 0.4/0.27                 | 6.6                | 3%                    | Apricots        | 0.7/0.45                 | 4.9                |
| 3%                    | Wine grapes     | 0.9/0.53                 | 4.9                | 3%                    | Quinces         | 0.4/0.27                 | 4.1                |
| 2%                    | Medlar          | 0.4/0.27                 | 3.7                | 1%                    | Medlar          | 0.4/0.27                 | 1.8                |
| 2%                    | Bovine: Liver   | 0.4/0.34                 | 2.7                | 1%                    | Sheep: Liver    | 0.7/0.45                 | 1.8                |
| 1%                    | Potatoes        | 0.01/0.01                | 1.5                | 0.9%                  | Bovine: Liver   | 0.4/0.34                 | 1.4                |
| 0.8%                  | Milk: Cattle    | 0.03/0.01                | 1.2                | 0.5%                  | Poultry: Muscle | 0.02/0.07                | 0.77               |
| 0.7%                  | Poultry: Muscle/meat | 0.02/0.07 | 1.1 | 0.4% | Poultry: Liver | 0.03/0.13 | 0.60 |
| 0.5%                  | Bovine: Edible offals (other) | 0.15/0.11 | 0.80 | 0.3% | Barley | 0.6/1 | 0.48 |

## Details – acute risk assessment/children

- **Conclusion:**
  - No exceedance of the toxicological reference value was identified for any unprocessed commodity.
  - A short-term intake of residues of Mefentrifluconazole (F) is unlikely to present a public health risk.
  - For processed commodities, no exceedance of the ARfD/ADI was identified.

## Details – acute risk assessment/adults

| Highest % of ARfD/ADI | commodities     | MRL/Input for RA (mg/kg) | Exposure (µg/kg bw) | Highest % of ARfD/ADI | commodities     | MRL/Input for RA (mg/kg) | Exposure (µg/kg bw) |
|-----------------------|-----------------|--------------------------|--------------------|-----------------------|-----------------|--------------------------|--------------------|
| 8%                    | Peaches/canned  | 0.7/0.45                 | 12                 | 3%                    | Wine grapes/wine| 0.9/0.53                 | 5.0                |
| 5%                    | Wine grapes/juice | 0.9/0.18               | 7.9                | 2%                    | Wine grapes/juice | 0.9/0.18               | 3.7                |
| 3%                    | Apples/juice    | 0.4/0.08                 | 4.3                | 2%                    | Peaches/canned  | 0.7/0.45                 | 3.7                |
| 2%                    | Pears/juice     | 0.4/0.08                 | 2.6                | 2%                    | Table grapes/raisins | 0.92/0.49               | 3.4                |
| 2%                    | Peaches/juice   | 0.7/0.15                 | 2.5                | 2%                    | Bovine/beer     | 0.6/0.08                 | 3.0                |
| 1%                    | Sugar beets (root) | 0.06/0.24 | 2.2 | 2% | Apples/juice | 0.4/0.08 | 2.7 |
| 1.0%                  | Oat/boiled      | 0.6/0.41                 | 1.5                | 0.6%                  | Sugar beets (root) | 0.06/0.24               | 0.88               |
| 1.0%                  | Barley/cooked   | 0.6/0.41                 | 1.5                | 0.4%                  | Oat/boiled      | 0.6/0.41                 | 0.62               |
| 0.8%                  | Oat/milling (flakes) | 0.6/0.41 | 1.2 | 0.08% | Maize/rid | 0.01/0.25 | 0.13 |
| 0.7%                  | Plums/juice     | 0.5/0.11                 | 1.0                | 0.08%                  | Wheat/bread/pizza | 0.05/0.03              | 0.11               |
| 0.6%                  | Potatoes/fried  | 0.01/0.01                | 0.93               | 0.07%                  | Quinces/jam     | 0.4/0.08                 | 0.10               |
| 0.5%                  | Barley/milling (flour) | 0.6/0.41 | 0.74 | 0.07% | Wheat/pasta | 0.05/0.03 | 0.10 |
| 0.4%                  | Potatoes/dried (flakes) | 0.01/0.05 | 0.59 | 0.06% | Wheat/bread (wholemeal) | 0.05/0.03 | 0.09 |
| 0.2%                  | Wheat/milling (flour) | 0.05/0.03 | 0.31 | 0.06% | Potatoes/chips | 0.01/0.01 | 0.08 |
| 0.2%                  | Quinces/jam     | 0.4/0.08                 | 0.24               | 0.04%                  | Potatoes/dried (flakes) | 0.01/0.05 | 0.06 |
### Triazole alanine (TA)

**Toxicological reference values**

| Exposure (µg/kg bw per day) | ADI (mg/kg bw per day) | ARfD (mg/kg bw) |
|-----------------------------|------------------------|-----------------|
| LOQs (mg/kg) range from:    | 0.3                    | 0.3             |

**Source**
- ADI: EFSA
- ARfD: EFSA

**EFSA PRIMo revision 3.1; 2019/03/19**
- Year of evaluation: 2018

#### Calculated exposure (% of ADI)

| MS Diet | Commodity/group of commodities | Exposure (µg/kg bw per day) | Highest contributor (in % of ADI) | 2nd contributor to MS diet (in % of ADI) | 3rd contributor to MS diet (in % of ADI) |
|---------|--------------------------------|-----------------------------|----------------------------------|----------------------------------------|----------------------------------------|
| NL adult | Milk: Cattle                   | 6%                          | 17.01                            | 1%                                     | 0.8%                                     |
| NL child | Rice                           | 4%                          | 12.33                            | 1%                                     | 0.8%                                     |
| DE adult | Rice                           | 4%                          | 12.12                            | 1%                                     | 0.3%                                     |
| DE child | Rice                           | 4%                          | 11.22                            | 1%                                     | 0.8%                                     |
| DE adult | Olives for oil production      | 4%                          | 11.04                            | 1%                                     | 0.3%                                     |
| DE child | Potatoes                       | 4%                          | 10.78                            | 1%                                     | 0.2%                                     |
| NL adult | Bovine: Muscle/meat            | 3%                          | 10.49                            | 1%                                     | 0.2%                                     |
| NL child | Milk: Cattle                   | 3%                          | 10.10                            | 1%                                     | 0.2%                                     |
| NL adult | Bovine: Muscle/meat            | 3%                          | 9.18                             | 1%                                     | 0.2%                                     |
| NL child | Milk: Cattle                   | 3%                          | 8.94                             | 1%                                     | 0.2%                                     |
| NL adult | Potatoes                       | 3%                          | 8.01                             | 1%                                     | 0.2%                                     |
| NL child | Potatoes                       | 3%                          | 7.74                             | 1%                                     | 0.2%                                     |
| NL adult | Oranges                        | 2%                          | 7.38                             | 1%                                     | 0.2%                                     |
| NL child | Potatoes                       | 2%                          | 6.81                             | 1%                                     | 0.2%                                     |
| NL adult | Potatoes                       | 2%                          | 6.01                             | 1%                                     | 0.2%                                     |
| NL child | Potatoes                       | 2%                          | 5.00                             | 1%                                     | 0.2%                                     |
| NL adult | Potatoes                       | 2%                          | 4.71                             | 1%                                     | 0.2%                                     |
| NL child | Potatoes                       | 2%                          | 4.36                             | 1%                                     | 0.2%                                     |
| NL adult | Potatoes                       | 2%                          | 4.13                             | 1%                                     | 0.2%                                     |
| NL child | Potatoes                       | 2%                          | 3.98                             | 1%                                     | 0.2%                                     |
| NL adult | Bovine: Muscle/meat            | 1%                          | 3.74                             | 1%                                     | 0.2%                                     |
| NL child | Bovine: Muscle/meat            | 1%                          | 3.58                             | 1%                                     | 0.2%                                     |
| NL adult | Bovine: Muscle/meat            | 1%                          | 3.26                             | 1%                                     | 0.2%                                     |
| NL child | Bovine: Muscle/meat            | 1%                          | 2.97                             | 1%                                     | 0.2%                                     |
| NL adult | Bovine: Muscle/meat            | 1%                          | 2.67                             | 1%                                     | 0.2%                                     |
| NL child | Bovine: Muscle/meat            | 1%                          | 2.37                             | 1%                                     | 0.2%                                     |
| NL adult | Bovine: Muscle/meat            | 1%                          | 2.08                             | 1%                                     | 0.2%                                     |
| NL child | Bovine: Muscle/meat            | 1%                          | 1.83                             | 1%                                     | 0.2%                                     |
| NL adult | Bovine: Muscle/meat            | 1%                          | 1.63                             | 1%                                     | 0.2%                                     |
| NL child | Bovine: Muscle/meat            | 1%                          | 1.43                             | 1%                                     | 0.2%                                     |
| NL adult | Bovine: Muscle/meat            | 1%                          | 1.23                             | 1%                                     | 0.2%                                     |
| NL child | Bovine: Muscle/meat            | 1%                          | 1.05                             | 1%                                     | 0.2%                                     |
| NL adult | Bovine: Muscle/meat            | 1%                          | 0.87                             | 1%                                     | 0.2%                                     |
| NL child | Bovine: Muscle/meat            | 1%                          | 0.69                             | 1%                                     | 0.2%                                     |
| NL adult | Bovine: Muscle/meat            | 1%                          | 0.51                             | 1%                                     | 0.2%                                     |
| NL child | Bovine: Muscle/meat            | 1%                          | 0.34                             | 1%                                     | 0.2%                                     |
| NL adult | Bovine: Muscle/meat            | 1%                          | 0.27                             | 1%                                     | 0.2%                                     |
| NL child | Bovine: Muscle/meat            | 1%                          | 0.20                             | 1%                                     | 0.2%                                     |
| NL adult | Bovine: Muscle/meat            | 1%                          | 0.13                             | 1%                                     | 0.2%                                     |
| NL child | Bovine: Muscle/meat            | 1%                          | 0.06                             | 1%                                     | 0.2%                                     |
| NL adult | Bovine: Muscle/meat            | 1%                          | 0.03                             | 1%                                     | 0.2%                                     |
| NL child | Bovine: Muscle/meat            | 1%                          | 0.01                             | 1%                                     | 0.2%                                     |
| NL adult | Bovine: Muscle/meat            | 1%                          | 0.01                             | 1%                                     | 0.2%                                     |
| NL child | Bovine: Muscle/meat            | 1%                          | 0.01                             | 1%                                     | 0.2%                                     |
| NL adult | Bovine: Muscle/meat            | 1%                          | 0.01                             | 1%                                     | 0.2%                                     |
| NL child | Bovine: Muscle/meat            | 1%                          | 0.01                             | 1%                                     | 0.2%                                     |
| NL adult | Bovine: Muscle/meat            | 1%                          | 0.01                             | 1%                                     | 0.2%                                     |
| NL child | Bovine: Muscle/meat            | 1%                          | 0.01                             | 1%                                     | 0.2%                                     |
| NL adult | Bovine: Muscle/meat            | 1%                          | 0.01                             | 1%                                     | 0.2%                                     |
| NL child | Bovine: Muscle/meat            | 1%                          | 0.01                             | 1%                                     | 0.2%                                     |
| NL adult | Bovine: Muscle/meat            | 1%                          | 0.01                             | 1%                                     | 0.2%                                     |
| NL child | Bovine: Muscle/meat            | 1%                          | 0.01                             | 1%                                     | 0.2%                                     |
| NL adult | Bovine: Muscle/meat            | 1%                          | 0.01                             | 1%                                     | 0.2%                                     |
| NL child | Bovine: Muscle/meat            | 1%                          | 0.01                             | 1%                                     | 0.2%                                     |
| NL adult | Bovine: Muscle/meat            | 1%                          | 0.01                             | 1%                                     | 0.2%                                     |
| NL child | Bovine: Muscle/meat            | 1%                          | 0.01                             | 1%                                     | 0.2%                                     |
| NL adult | Bovine: Muscle/meat            | 1%                          | 0.01                             | 1%                                     | 0.2%                                     |
| NL child | Bovine: Muscle/meat            | 1%                          | 0.01                             | 1%                                     | 0.2%                                     |
| NL adult | Bovine: Muscle/meat            | 1%                          | 0.01                             | 1%                                     | 0.2%                                     |
| NL child | Bovine: Muscle/meat            | 1%                          | 0.01                             | 1%                                     | 0.2%                                     |
| NL adult | Bovine: Muscle/meat            | 1%                          | 0.01                             | 1%                                     | 0.2%                                     |
| NL child | Bovine: Muscle/meat            | 1%                          | 0.01                             | 1%                                     | 0.2%                                     |
| NL adult | Bovine: Muscle/meat            | 1%                          | 0.01                             | 1%                                     | 0.2%                                     |
| NL child | Bovine: Muscle/meat            | 1%                          | 0.01                             | 1%                                     | 0.2%                                     |
| NL adult | Bovine: Muscle/meat            | 1%                          | 0.01                             | 1%                                     | 0.2%                                     |

**Chronic risk assessment**

- JMPR methodology (IEDI/TMDI)

**Conclusion:**
- UK vegetarian
- FR infant
- DK adult

**Comments:**
- EFSa-Q-2019-00082

**Refined calculation mode**

| Input values | Details – chronic risk assessment | Supplementary results – chronic risk assessment | Details – acute risk assessment | Details – acute risk assessment/children | Details – acute risk assessment/adults |
|--------------|-----------------------------------|-----------------------------------------------|--------------------------------|----------------------------------------|----------------------------------------|
|              |                                   |                                 |                               |                                        |                                        |

**Modelling and setting of maximum residue levels for mefentrifluconazol in various crops**

[www.efsa.europa.eu/efsajournal 46 EFSA Journal 2020;18(7):6193]
The acute risk assessment is based on the ADI.

The calculation is based on the large portion of the most critical consumer group.

### Unprocessed Commodities

| Commodity            | MRL/Input for RA (mg/kg) | Exposure (µg/kg bw) | Commodity            | MRL/Input for RA (mg/kg) | Exposure (µg/kg bw) |
|----------------------|--------------------------|---------------------|----------------------|--------------------------|---------------------|
| Peaches              | 0.1/1                    | 105                 | Head cabbages        | 0.0/0.5                  | 21                  |
| Oranges              | 0.0/0.63                 | 83                  | Peaches              | 0.1/1                    | 21                  |
| Pears                | 0.0/0.53                 | 73                  | Oranges              | 0.0/0.63                 | 19                  |
| Melons               | 0.0/0.46                 | 70                  | Watermelons          | 0.0/0.46                 | 19                  |
| Apples               | 0.0/0.53                 | 57                  | Melons               | 0.0/0.46                 | 18                  |
| Watermelons          | 0.0/0.46                 | 56                  | Pears                | 0.0/0.53                 | 16                  |
| Grapefruits          | 0.0/0.63                 | 49                  | Apples               | 0.0/0.53                 | 15                  |
| Apricots             | 0.1/1                    | 38                  | Cucumbers            | 0.0/0.46                 | 13                  |
| Mandarins            | 0.0/0.63                 | 37                  | Chinese cabbages/po-tsal | 0.0/0.5 | 13                  |
| Potatoes             | 0.0/0.24                 | 37                  | Aubergines/log plants | 0.0/0.46                 | 12                  |
| Cucumbers            | 0.0/0.46                 | 30                  | Apricots             | 0.1/1                    | 12                  |
| Cauliflowers         | 0.0/0.5                  | 29                  | Broccoli             | 0.0/0.5                  | 12                  |
| Sweet peppers/bell peppers | 0.0/0.46 | 27                  | Cauliflowers         | 0.0/0.5                  | 12                  |
| Tomatoes             | 0.0/0.46                 | 27                  | Mandarins            | 0.0/0.63                 | 11                  |
| Plums                | 0.0/0.63                 | 26                  | Grapefruits          | 0.0/0.63                 | 11                  |

### Processed Commodities

| Commodity                  | MRL/Input for RA (mg/kg) | Exposure (µg/kg bw) |
|----------------------------|--------------------------|---------------------|
| Pumpkins/boiled            | 0.0/0.46                 | 41                  |
| Broccoli/boiled            | 0.0/0.5                  | 39                  |
| Cauliflowers/boiled        | 0.0/0.5                  | 35                  |
| Peaches/boiled             | 0.1/1                    | 29                  |
| Potatoes/boiled            | 0.0/0.24                 | 22                  |
| Oranges/fruit              | 0.0/0.32                 | 17                  |
| Courgettes/boiled          | 0.0/0.46                 | 16                  |
| Maize/oil                  | 0/15.53                  | 14                  |
| Kale/boiled                | 0.0/0.5                  | 14                  |
| Parsnips/boiled            | 0.0/0.24                 | 12                  |
| Parsnips/boiled            | 0.0/0.24                 | 12                  |
| Sweet potatoes/boiled      | 0.0/0.24                 | 12                  |
| Potatoes/dried (flakes)    | 0.0/0.85                 | 11                  |
| Beetroots/boiled           | 0.0/0.24                 | 11                  |
| Cherries/pickled           | 0.0/0.46                 | 11                  |

### Results for Children

No exceedance of the toxicological reference value was identified for any unprocessed commodity. A short-term intake of residues of Triazole alanine (TA) is unlikely to present a public health risk. For processed commodities, no exceedance of the ARfD/ADI was identified.

### Conclusion

No exceedance of the toxicological reference value was identified for any unprocessed commodity. A short-term intake of residues of Triazole alanine (TA) is unlikely to present a public health risk. For processed commodities, no exceedance of the ARfD/ADI was identified.
### PRIMo Triazole lactic acid

#### Triazole lactic acid (TLA)

**EFSA PRIMo**

Wheat: Cattle

2018

EFSA

**Milk: Cattle**

2018

EFSA

**EFSA PRIMo revision 3.1; 2019/03/19**

**Comments**

EFSA-Q-2019-00082. The risk assessment for TLA conducted in the framework of the EU peer review of the confirmatory data for TA (EFSA, 2018) was updated only if the median level of TA in the specific crop generated from the intended and authorised uses of mefentrifluconazole was higher than the "worst-case" level.

#### Toxicological reference values

| Input values | Source of ADI | Source of ARfD |
|--------------|--------------|---------------|
| Toxicological reference values | | |
| ADI (mg/kg bw/day) | | |
| ARfD (mg/kg bw) | | |

#### Details – chronic risk

**ADI (mg/kg bw/day):** 0.3

**Year of evaluation:** 2018

**Details – acute risk**

**ARfD (mg/kg bw):**

**Source of ADI:**

**Source of ARfD:**

#### Refined calculation mode

**Chronic risk assessment: JMPR methodology (IEDI/TMDI)**

| Commodity | Exposure resulting from commodities (µg/kg bw per diet) | Highest contributor to MS diet (in % of ADI) | 2nd contributor to MS diet (in % of ADI) | 3rd contributor to MS diet (in % of ADI) |
|-----------|-------------------------------------------------------|---------------------------------------------|----------------------------------------|----------------------------------------|
| Wheat     | 0.7% 1.96 0.3% 0.1% 0.1% Wheat 0.7%                  |                                             |                                        |                                        |
| Corn/corn | 1% 3.94 0.8% 0.1% 0.1% Maize/corn 1%                 |                                             |                                        |                                        |
| Milk: Cattle |                                           |                                             |                                        |                                        |
| US toddler | 1% 0.1% 0.1% Milk: Cattle 1%                        |                                             |                                        |                                        |
| US child   | 0.7% 1.96 0.3% 0.1% 0.1% Wheat 0.7%                  |                                             |                                        |                                        |
| NL toddler | 1% 0.1% 0.1% Milk: Cattle 1%                        |                                             |                                        |                                        |
| NL child   | 0.7% 1.96 0.3% 0.1% 0.1% Wheat 0.7%                  |                                             |                                        |                                        |
| DE toddler | 0.7% 1.96 0.3% 0.1% 0.1% Wheat 0.7%                  |                                             |                                        |                                        |
| DE child   | 0.6% 1.82 0.4% 0.0% 0.0% Wheat 0.6%                  |                                             |                                        |                                        |
| FR toddler | 0.6% 1.82 0.4% 0.0% 0.0% Wheat 0.6%                  |                                             |                                        |                                        |
| FR child   | 0.6% 1.82 0.4% 0.0% 0.0% Wheat 0.6%                  |                                             |                                        |                                        |
| UK toddler | 0.5% 1.39 0.3% 0.0% 0.0% Oranges 0.5%                |                                             |                                        |                                        |
| UK child   | 0.5% 1.39 0.3% 0.0% 0.0% Oranges 0.5%                |                                             |                                        |                                        |
| NL general | 0.4% 1.25 0.2% 0.0% 0.0% Potatoes 0.4%               |                                             |                                        |                                        |
| DE general | 0.4% 1.25 0.2% 0.0% 0.0% Potatoes 0.4%               |                                             |                                        |                                        |
| NL adult   | 0.4% 1.25 0.2% 0.0% 0.0% Potatoes 0.4%               |                                             |                                        |                                        |
| ES adult   | 0.4% 1.25 0.2% 0.0% 0.0% Potatoes 0.4%               |                                             |                                        |                                        |
| FR adult   | 0.4% 1.25 0.2% 0.0% 0.0% Potatoes 0.4%               |                                             |                                        |                                        |
| PT adult   | 0.4% 1.25 0.2% 0.0% 0.0% Potatoes 0.4%               |                                             |                                        |                                        |
| FI adult   | 0.4% 1.25 0.2% 0.0% 0.0% Potatoes 0.4%               |                                             |                                        |                                        |
| DK adult   | 0.4% 1.25 0.2% 0.0% 0.0% Potatoes 0.4%               |                                             |                                        |                                        |
| FI child   | 0.4% 1.25 0.2% 0.0% 0.0% Potatoes 0.4%               |                                             |                                        |                                        |
| IE child   | 0.4% 1.25 0.2% 0.0% 0.0% Potatoes 0.4%               |                                             |                                        |                                        |
| IE adult   | 0.4% 1.25 0.2% 0.0% 0.0% Potatoes 0.4%               |                                             |                                        |                                        |
| RO general | 0.4% 1.25 0.2% 0.0% 0.0% Potatoes 0.4%               |                                             |                                        |                                        |
| RO infant  | 0.4% 1.25 0.2% 0.0% 0.0% Potatoes 0.4%               |                                             |                                        |                                        |

#### Conclusion:

The estimated long-term dietary intake (TMDI/NEDI/IEDI) was below the ADI. The long-term intake of residues of Triazole lactic acid (TLA) is unlikely to present a public health concern.
The acute risk assessment is based on the ARfD. The calculation is based on the large portion of the most critical consumer group.

### Results for all crops

#### Unprocessed commodities

| Highest % of ARfD/ADI | Commodity | MRL/input for RA (mg/kg) | Exposure (µg/kg bw) |
|-----------------------|-----------|--------------------------|------------------|
| 7%                    | Potatoes  | 0.01/0.13                | 20               |
| 6%                    | Oranges   | 0.01/0.14                | 19               |
| 6%                    | Melons    | 0.01/0.17                | 17               |
| 5%                    | Pears     | 0.01/0.11                | 15               |
| 4%                    | Watermelons | 0.01/0.11        | 13               |
| 4%                    | Plums     | 0.01/0.13                | 13               |
| 4%                    | Apples    | 0.01/0.11                | 12               |
| 3%                    | Table grapes | 0.01/0.14          | 10               |
| 3%                    | Carrots   | 0.01/0.13                | 8.3              |
| 3%                    | Mandarins | 0.01/0.13                | 8.3              |
| 2%                    | Beetroots | 0.01/0.13                | 7.5              |
| 2%                    | Celeriacs/turnip rooted | 0.01/0.13 | 7.2          |
| 2%                    | Cucumbers | 0.01/0.11                | 7.2              |
| 2%                    | Sweet peppers/bell peppers | 0.01/0.11 | 6.5          |
| 2%                    | Tomatoes  | 0.01/0.11                | 6.4              |
| 2%                    | Onions    | 0.01/0.27                | 6.1              |
| 2%                    | Plums     | 0.01/0.14                | 5.8              |
| 2%                    | Escaroles/broad-leaved | 0.01/0.14 | 5.6          |
| 2%                    | Witloofs/Belgian endives | 0.01/0.14 | 5.6          |
| 2%                    | Lettuces  | 0.01/0.14                | 5.3              |
| 2%                    | Courgettes | 0.01/0.11                | 5.1              |
| 2%                    | Mil: Cattle | 0.01/0.04               | 5.0              |
| 2%                    | Apricots  | 0.01/0.14                | 4.9              |

#### Processed commodities

| Highest % of ARfD/ADI | Processed commodities | MRL/input for RA (mg/kg) | Exposure (µg/kg bw) |
|-----------------------|-----------------------|--------------------------|------------------|
| 4%                    | Witloofs/boiled       | 0.01/0.14                | 12               |
| 4%                    | Potatoes/fried        | 0.01/0.13                | 12               |
| 3%                    | Pumpkins/boiled       | 0.01/0.11                | 9.8              |
| 3%                    | Escaroles/broad-leaved | 0.01/0.14                | 9.3              |
| 3%                    | Turnips/boiled        | 0.01/0.13                | 6.6              |
| 2%                    | Parsnips/boiled       | 0.01/0.13                | 6.6              |
| 2%                    | Sweet potatoes/boiled | 0.01/0.14                | 6.6              |
| 2%                    | Beetroots/boiled      | 0.01/0.13                | 5.8              |
| 1%                    | Carrots/leaves/boiled | 0.01/0.14                | 4.4              |
| 1%                    | Courgettes/boiled     | 0.01/0.11                | 3.9              |
| 1%                    | Mace/curry            | 0.01/0.04                | 3.7              |
| 1%                    | Peaches/canned        | 0.01/0.14                | 3.6              |
| 1%                    | Salsify/boiled        | 0.01/0.13                | 3.4              |

### Conclusion

- No exceedance of the toxicological reference value was identified for any unprocessed commodity.
- A short-term intake of residues of Triazole lactic acid (TLA) is unlikely to present a public health risk.
PRIMO Triazole acetic acid

### Triazole acetic acid (TAAs)

| Source of Acute | EFSA Source | Year of evaluation | RAC (mg/kg) | MR (mg/kg) |
|----------------|-------------|--------------------|-------------|------------|
| Source of Acute | EFSA         | 2018               | 1           | 1          |
| RAC (mg/kg)    |              |                    |             |            |
| MR (mg/kg)     |              |                    |             |            |

**Toxicological reference values**

### Refined calculation mode

#### Chronic risk assessment: JMPR methodology (IED/TMDI)

| Calculated exposure (mg/kg of ADI) | Exposure (mg/kg of ADI) | Highest contributor to ADI (mg/kg of ADI) | 2nd contributor to ADI (mg/kg of ADI) | 3rd contributor to ADI (mg/kg of ADI) |
|-----------------------------------|-------------------------|------------------------------------------|--------------------------------------|--------------------------------------|
| Calculated exposure (mg/kg of ADI) |                          | Calculated exposure (mg/kg of ADI)        |                                      |                                      |
| Calculated exposure (mg/kg of ADI) |                          | Calculated exposure (mg/kg of ADI)        |                                      |                                      |
| Calculated exposure (mg/kg of ADI) |                          | Calculated exposure (mg/kg of ADI)        |                                      |                                      |

**Chronic risk assessment:**

- Military & non-military
- Childhood exposure
- Total exposure

**Results:**

- Military & non-military
- Childhood exposure
- Total exposure

**Conclusion:**

The calculated long-term dietary intake (TAAs) exceed the ADI. The long-term intake of Triazole acetic acid (TAAs) is unlikely to present a public health concern.

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### Show results for all crops

| Unprocessed commodities | Results for children | Results for adults |
|-------------------------|----------------------|--------------------|
|                         | No. of commodities for which ARDIADI is exceeded (ESTI): | No. of commodities for which ARDIADI is exceeded (ESTI): |
|                         | IESTI                | IESTI              |
|                         |                       |                    |
| **Highest % of ARDIADI** | MRL / input for RA (mg/kg) | Exposure (µg/kg bw) | MRL / input for RA (mg/kg) | Exposure (µg/kg bw) |
| 1% Oranges              | 0/0.1                | 13                 | 0.7% Rice                 | 0/0.19                | 6.7                 |
| 1% Wheat                | 0/0.79               | 11                 | 0.7% Wheat                | 0/0.19                | 6.6                 |
| 1% Rice                 | 0/0.79               | 10.9               | 0.4% Rye                  | 0/0.19                | 3.8                 |
| 0.8% Peers              | 0/0.06               | 6.3                | 0.4% Barley               | 0/0.23                | 1.8                 |
| 0.8% Grapefruits        | 0/0.79               | 7.9                | 0.3% Table grapes         | 0/0.23                | 3.4                 |
| 0.8% Peaches            | 0/0.06               | 7.5                | 0.3% Oranges              | 0/0.23                | 3.1                 |
| 0.7% Tangerine          | 0/0.1                | 7.3                | 0.3% Buckwheat and other  | 0/0.79                | 2.7                 |
| 0.6% Apples             | 0/0.1                | 6.5                | 0.2% Wine grapes          | 0/0.1                | 2.4                 |
| 0.5% Mandarins          | 0/0.1                | 5.7                | 0.2% Pears                | 0/0.1                | 1.8                 |
| 0.5% Maizecorn          | 0/0.79               | 5.3                | 0.2% Mandarins            | 0/0.23                | 1.8                 |
| 0.5% Rye                | 0/0.79               | 5.0                | 0.2% Grapefruits          | 0/0.23                | 1.8                 |
| 0.5% Milky Cattle        | 0/0.04               | 5.0                | 0.2% Maizecorn            | 0/0.79                | 1.7                 |
| 0.5% bananas            | 0/0.05               | 4.9                | 0.2% Apples               | 0/0.06                | 1.8                 |
| 0.4% Berley             | 0/0.79               | 4.4                | 0.2% Milky Cattle          | 0/0.1                | 1.8                 |
| 0.4% Buckwheat and other | 0/0.79               | 3.9                | 0.1% Peaches              | 0/0.08                | 1.5                 |
| 0.3% Lemons             | 0/0.1                | 3.4                | 0.1% Bananas              | 0/0.05                | 1.1                 |
| 0.3% Melons             | 0/0.02               | 3.0                | 0.09% Strawberries        | 0/0.1                | 0.93                |
| 0.3% Apricots           | 0/0.08               | 2.8                | 0.09% Quinces             | 0/0.06                | 0.91                |
| 0.3% Sorghum            | 0/0.79               | 2.5                | 0.09% Blueberries         | 0/0.1                | 0.09                |
| 0.2% Watermelons        | 0/0.02               | 2.4                | 0.09% Leeks               | 0/0.1                | 0.09                |
| 0.2% Limes              | 0/0.1                | 2.0                | 0.09% Peaches             | 0/0.08                | 0.87                |
| 0.2% Leeks              | 0/0.03               | 1.8                | 0.09% Blackberries        | 0/0.01                | 0.82                |
| 0.2% Strawberries       | 0/0.1                | 1.6                | 0.09% Plantain            | 0/0.01                | 0.81                |
| 0.2% Potatoes           | 0/0.01               | 1.5                | 0.09% Peaches             | 0/0.01                | 0.78                |
| 0.1% Quinces             | 0/0.06               | 1.5                 | 0.09% Millet              | 0/0.04                | 0.74                |
| 0.1% Escaroles/broad-leaf | 0/0.04               | 1.4                | 0.09% Escaroles/broad-leaf | 0/0.04                | 0.73                |
| 0.1% Plums              | 0/0.03               | 1.4                | 0.09% Common millet/proso millet | 0/0.79 | 0.71 |
| 0.1% Wuilofs/Belgian endives | 0/0.04 | 1.4 | 0.09% Limes | 0/0.1 | 0.70 |
| 0.1% Lettuces            | 0/0.04               | 1.4                | 0.09% Carrots/bread leaves | 0/0.04                | 0.68                |
| 0.1% Cucumbers           | 0/0.02               | 1.3                | 0.09% Wuilofs/Belgian endives | 0/0.04 | 0.66 |
| 0.1% Sweat peppers/bred peppers | 0/0.02 | 1.2 | 0.09% Soyabean            | 0/0.12                | 0.66                |
| 0.1% Tomatoes            | 0/0.02               | 1.2                | 0.09% Corns (red, black and yellow) | 0/0.1 | 0.66 |
| 0.1% Celery              | 0/0.03               | 1.1                | 0.09% Plums               | 0/0.03                | 0.61                |
| 0.1% Rhubarbs            | 0/0.03               | 1.1                | 0.09% Millet              | 0/0.04                | 0.60                |
| 0.1% Common millet/proso | 0/0.1                | 1.1                | 0.09% Florence fennel      | 0/0.03                | 0.56                |
| 0.1% Blackberries        | 0/0.1                | 1.1                | 0.09% Cucumbers           | 0/0.02                | 0.56                |
| 0.1% Milk: Goat          | 0/0.04               | 0.97               | 0.09% Asparagus/egg plants | 0/0.02                | 0.54                |
| 0.09% Corn               | 0/0.02               | 0.93               | 0.09% Raspberries (red and yellow) | 0/0.1 | 0.54 |
| 0.09% Raspberries (red and yellow) | 0/0.1 | 0.92 | 0.09% Oat | 0/0.79 | 0.51 |
| 0.09% Cherries (sweet)   | 0/0.05               | 0.81               | 0.09% Cherries (sweet)    | 0/0.05                | 0.50                |
| 0.09% Beans              | 0/0.05               | 0.81               | 0.09% Celeri              | 0/0.03                | 0.48                |
| 0.09% Cereal             | 0/0.79               | 0.88               | 0.09% Poultry: Muscina     | 0/0.04                | 0.47                |
| 0.09% MSW                | 0/0.02               | 0.87               | 0.09% Corn                  | 0/0.02                | 0.47                |
| 0.08% Medlar             | 0/0.06               | 0.83               | 0.09% Bovine: Kidney       | 0/0.22                | 0.46                |
| 0.08% Bovine: Kidney     | 0/0.22               | 0.83               | 0.09% Gooseberries (green, red) | 0/0.1 | 0.45 |
| 0.08% Spinach            | 0/0.04               | 0.81               | 0.09% Lettuces             | 0/0.04                | 0.44                |
| 0.08% Currants (red, black and yellow) | 0/0.04 | 0.79 | 0.09% Head cabbage         | 0/0.01                | 0.42                |
| 0.07% Poultry: Muscle/meat | 0/0.04              | 0.68               | 0.09% Medlar               | 0/0.06                | 0.41                |
| 0.07% Poultry: Muscle/meat | 0/0.01              | 0.53               | 0.09% Seafood              | 0/0.33                | 0.39                |
| 0.05% Cherries (sweet)   | 0/0.05               | 0.53               | 0.09% Globe artichokes     | 0/0.03                | 0.39                |
| 0.05% Cherries (sweet)   | 0/0.05               | 0.53               | 0.09% Globe artichokes     | 0/0.03                | 0.39                |

**Total number of commodities exceeding the ARDIADI in children and adult diets (ESTI calculation):**

- Children: 44 commodities exceeded the ARDIADI.
- Adults: 44 commodities exceeded the ARDIADI.

**Details—acute risk assessment / children**

**Details—acute risk assessment / adults**

The acute risk assessment is based on the ARDI.

The calculation is based on the large portion of the most critical consumer group.
## Results for children

| Processed commodities for which ARID/ADI is exceeded (EFSTI): | Results for adults |
|---------------------------------------------------------------|--------------------|
| No of processed commodities | No of processed commodities for which ARID/ADI is exceeded (EFSTI): |

### (EFSTI)

| MRL / input (mg/kg) | Exposure (µg/kg bw) | Highest % of ARID/ADI Processed commodities | MRL / input (mg/kg) | Exposure (µg/kg bw) | Highest % of ARID/ADI Processed commodities |
|---------------------|---------------------|---------------------------------------------|---------------------|---------------------|---------------------------------------------|
| 4%                  | Wheat / oil         | 0.0173 21                                   | 2%                  | Wheat / oil         | 0.0173 22                                   |
| 2.5%                | Wheat / milling (flour) | 0.0173 6.3                                  | 2%                  | Wheat / oil         | 0.0173 22                                   |
| 0.6%                | Oat / boiled         | 0.0173 5.3                                  | 2%                  | Wheat / oil         | 0.0173 22                                   |
| 0.3%                | Oat / boiled         | 0.0173 5.3                                  | 2%                  | Wheat / oil         | 0.0173 22                                   |
| 0.1%                | Barley / cooked      | 0.0173 5.3                                  | 2%                  | Wheat / oil         | 0.0173 22                                   |
| 0.6%                | Sugar beets (root) / sugar | 0.0173 4.3                               | 2%                  | Wheat / oil         | 0.0173 22                                   |
| 0.5%                | Oat / milling (flakes) | 0.0173 4.3                                  | 2%                  | Wheat / oil         | 0.0173 22                                   |
| 0.5%                | Rice / milling (polishing) | 0.0173 4.3                             | 2%                  | Wheat / oil         | 0.0173 22                                   |
| 0.4%                | Millet / boiled      | 0.0173 4.3                                  | 2%                  | Wheat / oil         | 0.0173 22                                   |
| 0.4%                | Buckwheat / bulgar and grit | 0.0173 4.3                             | 2%                  | Wheat / oil         | 0.0173 22                                   |
| 0.4%                | Malt / processed (not spec) | 0.0173 4.3                              | 2%                  | Wheat / oil         | 0.0173 22                                   |
| 0.3%                | Wheat / oil         | 0.0173 4.3                                  | 2%                  | Wheat / oil         | 0.0173 22                                   |
| 0.3%                | Wheat / oil         | 0.0173 4.3                                  | 2%                  | Wheat / oil         | 0.0173 22                                   |
| 0.3%                | Barley / milling (flour) | 0.0173 4.3                              | 2%                  | Wheat / oil         | 0.0173 22                                   |

### (EFSTI)

**Conclusion:**
No exceedances of the toxicological reference value were identified for any unprocessed commodity.
A short-term intake of residues of Triazole acetic acid (TAA) is unlikely to present a public health risk.
For processed commodities, no exceedance of the ARID/ADI was identified.
## Appendix D – Input values for the exposure calculations

### D.1. Dietary burden calculations for livestock

| Feed commodity | Median dietary burden | Maximum dietary burden |
|----------------|-----------------------|------------------------|
|                | Input value (mg/kg)   | Comment                | Input value (mg/kg)   | Comment                |
| **Risk assessment residue definition:** Mefentrifluconazole |                       |                        |                         |                        |
| Barley, straw  | 4.25 STMR (EFSA, 2018c) | 18.00 HR (EFSA, 2018c) |                         |                        |
| Beet, sugar tops| 0.24 STMR              | 1.10 HR                |                         |                        |
| Corn, field stover| 0.13 STMR            | 0.61 HR                |                         |                        |
| Corn, pop stover| 0.13 STMR             | 0.61 HR                |                         |                        |
| Oat, straw     | 4.25 STMR (EFSA, 2018c) | 18.00 HR (EFSA, 2018c) |                         |                        |
| Rye, straw     | 3.60 STMR (EFSA, 2018c) | 18.00 HR (EFSA, 2018c) |                         |                        |
| Triticale, straw| 3.60 STMR (EFSA, 2018c) | 18.00 HR (EFSA, 2018c) |                         |                        |
| Wheat, straw   | 3.60 STMR (EFSA, 2018c) | 18.00 HR (EFSA, 2018c) |                         |                        |
| Potato, culls  | 0.01 STMR             | 0.01 HR                |                         |                        |
| Barley, grain  | 0.10 STMR (EFSA, 2018c) | 0.10 STMR (EFSA, 2018c) |                         |                        |
| Corn, field (Maize), grain | 0.01 STMR |                         | 0.01 STMR               |                        |
| Corn, pop, grain| 0.01 STMR            |                         | 0.01 STMR               |                        |
| Oat, grain     | 0.10 STMR (EFSA, 2018c) | 0.10 STMR (EFSA, 2018c) |                         |                        |
| Rye, grain     | 0.01 STMR (EFSA, 2018c) | 0.01 STMR (EFSA, 2018c) |                         |                        |
| Triticale, grain| 0.01 STMR (EFSA, 2018c) | 0.01 STMR (EFSA, 2018c) |                         |                        |
| Wheat, grain   | 0.01 STMR (EFSA, 2018c) | 0.01 STMR (EFSA, 2018c) |                         |                        |
| Apple, wet pomace | 0.25 STMR × PF (3.10) |                         | --                      |                        |
| Beet, sugar, dried pulp | 0.10 STMR × PF (4.75) | --                      | --                      |                        |
| Beet, sugar, ensiled pulp | 0.02 STMR × PF (0.88) | --                      | --                      |                        |
| Beet, sugar, molasses | 0.02 STMR × PF (0.88) | --                      | --                      |                        |
| Brewer’s grain | 0.24 STMR × PF (EFSA, 2018c) | --                      | --                      |                        |
| Canola (Rape seed), meal | 0.02 STMR × PF (2)(a) | --                      | --                      |                        |
| Corn, field, milled by-products | 0.09 STMR × PF (8.80) | --                      | --                      |                        |
| Corn, field, hominy meal | 0.02 STMR × PF (1.70)(c) | --                      | --                      |                        |
| Corn, field, gluten feed | 0.03 STMR × PF (2.70)(c) | --                      | --                      |                        |
| Corn, field, gluten meal | 0.03 STMR × PF (2.70)(c) | --                      | --                      |                        |
| Distiller’s grain, dried | 0.03 STMR × PF (EFSA, 2018c) | --                      | --                      |                        |
| Potato, process waste | 0.005 STMR × PF (0.45) | --                      | --                      |                        |
| Potato, dried pulp | 0.02 STMR × PF (2.43) | --                      | --                      |                        |
| Rape, meal | 0.02 STMR × PF (2)(a) | --                      | --                      |                        |
| Sunflower, meal | 0.02 STMR × PF (2)(a) | --                      | --                      |                        |
| Wheat gluten, meal | 0.003 STMR × PF (EFSA, 2018c) | --                      | --                      |                        |
| Wheat, milled by-products | 0.01 STMR × PF (EFSA, 2018c) | --                      | --                      |                        |

**Risk assessment residue definition:** Triazole alanine (TA)
| Feed commodity                        | Median dietary burden | Maximum dietary burden |
|---------------------------------------|-----------------------|------------------------|
|                                       | Input value (mg/kg)   | Comment                | Input value (mg/kg)   | Comment                |
| Oat, straw                            | 0.09                  | STMR (EFSA, 2018c)     | 0.71                  | HR (EFSA, 2018c)       |
| Rye, straw                            | 0.04                  | STMR (EFSA, 2018c)     | 0.47                  | HR (EFSA, 2018c)       |
| Triticale, straw                     | 0.04                  | STMR (EFSA, 2018c)     | 0.47                  | HR (EFSA, 2018c)       |
| Wheat, straw                          | 0.04                  | STMR (EFSA, 2018c)     | 0.47                  | HR (EFSA, 2018c)       |
| Potato, culls                         | 0.03                  | STMR                   | 0.17                  | HR                     |
| Barley, grain                         | 0.25                  | STMR (EFSA, 2018c)     | 0.25                  | STMR (EFSA, 2018c)     |
| Corn, field (Maize), grain           | 0.08                  | STMR                   | 0.08                  | STMR                   |
| Corn, pop, grain                      | 0.08                  | STMR                   | 0.08                  | STMR                   |
| Oat, grain                            | 0.25                  | STMR (EFSA, 2018c)     | 0.25                  | STMR (EFSA, 2018c)     |
| Rye, grain                            | 0.25                  | STMR (EFSA, 2018c)     | 0.25                  | STMR (EFSA, 2018c)     |
| Triticale, grain                      | 0.25                  | STMR (EFSA, 2018c)     | 0.25                  | STMR (EFSA, 2018c)     |
| Wheat, grain                          | 0.25                  | STMR (EFSA, 2018c)     | 0.25                  | STMR (EFSA, 2018c)     |
| Apple, wet pomace                     | 0.05                  | STMR × PF (0.75)       | –                     | –                      |
| Beet, sugar, dried pulp              | 0.27                  | STMR × PF (18)(a)      | –                     | –                      |
| Beet, sugar, ensiled pulp            | 0.05                  | STMR × PF (3)(a)       | –                     | –                      |
| Beet, sugar, molasses                | 0.17                  | STMR × PF (11)         | –                     | –                      |
| Brewer’s grain                       | 0.01                  | STMR × PF (EFSA, 2018c)| 0.01                  |                        |
| Canola (Rape seed), meal             | 0.26                  | STMR × PF (2)(c)(a)    | –                     | –                      |
| Corn, field, milled by-products      | 0.06                  | STMR × PF (0.85)       | –                     | –                      |
| Corn, field, hominy meal             | 0.06                  | STMR × PF (0.83)       | –                     | –                      |
| Corn, field, gluten feed             | 0.02                  | STMR × PF (0.30)       | –                     | –                      |
| Corn, field, gluten meal             | 0.02                  | STMR × PF (0.30)       | –                     | –                      |
| Distiller’s grain, dried             | 0.83                  | STMR × PF (EFSA, 2018c)| 0.83                  |                        |
| Potato, process waste                | 0.03                  | STMR × PF (1.08)       | –                     | –                      |
| Potato, dried pulp                   | 0.04                  | STMR × PF (1.46)       | –                     | –                      |
| Rape, meal                           | 0.26                  | STMR × PF (2)(a)       | –                     | –                      |
| Sunflower, meal                      | 0.12                  | STMR × PF (2)(a)       | –                     | –                      |
| Wheat gluten, meal                   | 0.05                  | STMR × PF (EFSA, 2018c)| 0.05                  | –                      |
| Wheat, milled by-products            | 0.15                  | STMR × PF (EFSA, 2018c)| 0.15                  | –                      |

**Risk assessment residue definition:** Triazole lactic acid (TLA)
| Feed commodity                   | Median dietary burden | Maximum dietary burden |
|---------------------------------|-----------------------|------------------------|
|                                 | Input value (mg/kg)   | Comment                | Input value (mg/kg) | Comment                |
| Corn, pop, grain                | 0.01                  | STMR                   | –                    | n/a                    |
| Oat, grain                      | 0.01                  | STMR (EFSA, 2018c)     | –                    | n/a                    |
| Rye, grain                      | 0.01                  | STMR (EFSA, 2018c)     | –                    | n/a                    |
| Triticale, grain                | 0.01                  | STMR (EFSA, 2018c)     | –                    | n/a                    |
| Wheat, grain                    | 0.01                  | STMR (EFSA, 2018c)     | –                    | n/a                    |
| Apple, wet pomace               | 0.01                  | STMR(b)                | –                    | n/a                    |
| Beet, sugar, dried pulp         | 0.18                  | STMR × PF (18)(a)      | –                    | n/a                    |
| Beet, sugar, ensiled pulp       | 0.03                  | STMR × PF (3)(a)       | –                    | n/a                    |
| Beet, sugar, molasses           | 0.03                  | STMR × PF (1.5)        | –                    | n/a                    |
| Brewer’s grain                  | 0.001                 | STMR × PF (EFSA, 2018c) | –                    | n/a                    |
| Canola (Rape seed), meal        | 0.02                  | STMR × PF (2)(a)       | –                    | n/a                    |
| Corn, field, milled by-products | 0.01                  | STMR × PF (1)          | –                    | n/a                    |
| Corn, field, hominy meal        | 0.01                  | STMR × PF (1)          | –                    | n/a                    |
| Corn, field, gluten feed        | 0.005                 | STMR × PF (0.5)        | –                    | n/a                    |
| Corn, field, gluten meal        | 0.005                 | STMR × PF (0.5)        | –                    | n/a                    |
| Distiller's grain, dried        | 0.03                  | STMR × PF (EFSA, 2018b)| –                    | n/a                    |
| Potato, process waste           | 0.01                  | STMR(b)                | –                    | n/a                    |
| Potato, dried pulp              | 0.01                  | STMR(b)                | –                    | n/a                    |
| Rape, meal                      | 0.02                  | STMR × PF (2)(a)       | –                    | n/a                    |
| Sunflower, meal                 | 0.02                  | STMR × PF (2)(a)       | –                    | n/a                    |
| Wheat gluten, meal              | 0.02                  | STMR × PF (EFSA, 2018c)| –                    | n/a                    |
| Wheat, milled by-products       | 0.07                  | STMR × PF (EFSA, 2018c)| –                    | n/a                    |

**Risk assessment residue definition:** Triazole acetic acid (TAA)

| Feed commodity | Input value (mg/kg) | Comment                  | Input value (mg/kg) | Comment                  |
|----------------|---------------------|--------------------------|---------------------|--------------------------|
| Barley, straw  | 0.04                | STMR (EFSA, 2018c)       | 0.33                | HR (EFSA, 2018c)         |
| Beet, sugar tops | 0.01               | STMR                     | 0.01                | HR                       |
| Corn, field stover | 0.01              | STMR                     | 0.02                | HR                       |
| Corn, pop stover | 0.01               | STMR                     | 0.02                | HR                       |
| Oat, straw      | 0.04                | STMR (EFSA, 2018c)       | 0.33                | HR (EFSA, 2018c)         |
| Rye, straw      | 0.03                | STMR (EFSA, 2018c)       | 0.16                | HR (EFSA, 2018c)         |
| Triticale, straw | 0.03               | STMR (EFSA, 2018c)       | 0.16                | HR (EFSA, 2018c)         |
| Wheat, straw    | 0.03                | STMR (EFSA, 2018c)       | 0.16                | HR (EFSA, 2018c)         |
| Potato, culls   | 0.01                | STMR                     | 0.01                | HR                       |
| Barley, grain   | 0.08                | STMR (EFSA, 2018c)       | –                   | n/a                      |
| Corn, field (Maize), grain      | 0.01               | STMR                     | –                   | n/a                      |
| Corn, pop, grain | 0.01               | STMR                     | –                   | n/a                      |
| Oat, grain      | 0.08                | STMR (EFSA, 2018c)       | –                   | n/a                      |
| Rye, grain      | 0.07                | STMR (EFSA, 2018c)       | –                   | n/a                      |
| Triticale, grain | 0.07               | STMR (EFSA, 2018c)       | –                   | n/a                      |
| Wheat, grain    | 0.07                | STMR (EFSA, 2018c)       | –                   | n/a                      |
| Apple, wet pomace | 0.01              | STMR(b)                  | –                   | n/a                      |
| Beet, sugar, dried pulp         | 0.01                | STMR(b)                  | –                   | n/a                      |
| Feed commodity                          | Median dietary burden | Maximum dietary burden |
|-----------------------------------------|-----------------------|------------------------|
|                                        | Input value (mg/kg)   | Comment                | Input value (mg/kg) | Comment |
| Beet, sugar, ensiled pulp              | 0.01                  | STMR<sup>(b)</sup>     | –                    | n/a     |
| Beet, sugar, molasses                  | 0.01                  | STMR<sup>(b)</sup>     | –                    | n/a     |
| Brewer’s grain                         | 0.01                  | STMR × PF (EFSA, 2018c) | –                    | n/a     |
| Canola (Rape seed), meal               | 0.02                  | STMR × PF (2)<sup>(a)</sup> | –                    | n/a     |
| Corn, field, milled by-products        | 0.02                  | STMR × PF (2)          | –                    | n/a     |
| Corn, field, hominy meal               | 0.01                  | STMR × PF (1)<sup>(c)</sup> | –                    | n/a     |
| Corn, field, gluten feed               | 0.01                  | STMR<sup>(b)</sup>     | –                    | n/a     |
| Distiller’s grain, dried               | 0.22                  | STMR × PF (EFSA, 2018c) | –                    | n/a     |
| Potato, process waste                  | 0.01                  | STMR<sup>(b)</sup>     | –                    | n/a     |
| Potato, dried pulp                     | 0.01                  | STMR<sup>(b)</sup>     | –                    | n/a     |
| Rape, meal                             | 0.02                  | STMR × PF (2)<sup>(a)</sup> | –                    | n/a     |
| Sunflower, meal                        | 0.12                  | STMR × PF (2)<sup>(a)</sup> | –                    | n/a     |
| Wheat gluten, meal                     | 0.06                  | STMR × PF (EFSA, 2018c) | –                    | n/a     |
| Wheat, milled by-products              | 0.04                  | STMR × PF (EFSA, 2018c) | –                    | n/a     |

**Risk assessment residue definition:** 1,2,4 Triazole

| Feed commodity                          | Dietary burden |
|-----------------------------------------|----------------|
|                                        | Input value (mg/kg) | Comment |
| Beet, sugar tops                        | 0.01            | STMR     |
| All other feed items                    | 0.01            | STMR (LOQ) |
|                                        | 0.02            | HR       |
|                                        | 0.01            | HR/STMR (LOQ) |

**STMR:** supervised trials median residue; **HR:** highest residue; **PF:** processing factor; **LOQ:** limit of quantification; **n/a:** not applicable.

(a): In the absence of specific processing factors supported by data, default processing factors of 2 (oilseed meal), 18 and 3 (sugar beet dried and ensiled pulp, respectively) were included in the calculation to consider the potential concentration of residues in these commodities.

(b): Since residues in RAC and in processed products were below the LOQ (Austria, 2019), a processing factor was not applied. Concentration of residues is not expected.

(c): Tentative processing factor derived based on a limited data set.

**D.2. Dietary burden calculations for fish**

| Feed commodity                          | Dietary burden |
|-----------------------------------------|----------------|
|                                        | Input value (mg/kg) | Comment |
| Triticale/Wheat grain                   | 0.01            | STMR (EFSA, 2018c) |
| Brewer’s grain dried                    | 0.24            | STMR × PF (EFSA, 2018c) |
| Corn, field grain meal                  | 0.01            | STMR<sup>(a)</sup> |
| Corn, field bran                        | 0.02            | STMR × PF |
| Corn gluten feed                        | 0.03            | STMR × PF |
| Corn gluten meal                        | 0.03            | STMR × PF |
| Corn starch                             | 0.01            | STMR<sup>(a)</sup> |
| Distiller’s grain meal                  | 0.01            | STMR<sup>(a)</sup> |
| Potato protein                          | 0.015           | STMR × PF |
| Rapeseed/Canola meal                    | 0.02            | STMR × PF |
| Sunflower, meal decorticated            | 0.02            | STMR × CF (2)<sup>(b)</sup> |
| Wheat bran                              | 0.03            | STMR × PF (EFSA, 2018c) |
### D.3. Consumer risk assessment

| Commodity          | Chronic risk assessment | Acute risk assessment |
|--------------------|-------------------------|-----------------------|
|                    | Input value (mg/kg)     | Comment               | Input value (mg/kg) | Comment               |
| Risk assessment residue definition: Mefentrifluconazole |
| Apples             | 0.08 STMR               | 0.27 HR               |
| Pears              | 0.08 STMR               | 0.27 HR               |
| Quinces            | 0.08 STMR               | 0.27 HR               |
| Medlar             | 0.08 STMR               | 0.27 HR               |
| Loquats            | 0.08 STMR               | 0.27 HR               |
| Apricots           | 0.15 STMR               | 0.45 HR               |
| Cherries (sweet)   | 0.48 STMR               | 1.20 HR               |
| Peaches            | 0.15 STMR               | 0.45 HR               |
| Plums              | 0.11 STMR               | 0.30 HR               |
| Table grapes       | 0.18 STMR               | 0.53 HR               |
| Wine grapes        | 0.18 STMR               | 0.53 HR               |
| Potatoes           | 0.01 STMR               | 0.01 HR               |
| Sweet corn         | 0.01 STMR               | 0.01 HR               |
| Sunflower seeds    | 0.01 STMR               | 0.01 STMR             |
| Rapeseeds/canola seeds | 0.01 STMR             | 0.01 STMR             |
| Barley             | 0.10 STMR (EFSA, 2018c) | 0.1 STMR (EFSA, 2018c) |
| Maize/corn         | 0.01 STMR               | 0.01 STMR             |
| Oat                | 0.10 STMR (EFSA, 2018c) | 0.1 STMR (EFSA, 2018c) |
| Rye                | 0.01 STMR (EFSA, 2018c) | 0.01 STMR (EFSA, 2018c) |
| Wheat              | 0.01 STMR (EFSA, 2018c) | 0.01 STMR (EFSA, 2018c) |
| Sugar beet roots   | 0.02 STMR               | 0.04 HR               |
| Swine: Meat<sup>(a)</sup> | 0.01 STMR (LOQ) | 0.01 HR (LOQ)          |
| Swine: Fat tissue  | 0.01 STMR (LOQ)         | 0.01 HR (LOQ)          |
| Swine: Liver       | 0.005 STMR              | 0.014 HR              |
| Swine: Kidney      | 0.01 STMR (LOQ)         | 0.01 HR (LOQ)          |
| Swine: Edible offal | 0.01 STMR (LOQ)         | 0.01 HR (LOQ)          |
| Bovine: Meat<sup>(a)</sup> | 0.01 STMR (EFSA, 2018c) | 0.03 HR (EFSA, 2018c) |
| Bovine: Fat tissue | 0.06 STMR               | 0.20 HR               |
| Bovine: Liver      | 0.09 STMR               | 0.34 HR               |
| Bovine: Kidney     | 0.02 STMR               | 0.11 HR               |
| Bovine: Edible offal | 0.02 STMR               | 0.11 HR               |

STMR: supervised trials median residue; PF: processing factor; CF: conversion factor.

(a): Since residues in RAC grain and (dry milling) meal or (wet milling) starch of maize were < LOQ (Austria, 2019), a processing factor was not applied. Concentration of residues is not expected.

(b): Default processing factor.

(c): Tentative processing factor derived based on a limited data set.
| Commodity          | Chronic risk assessment | Acute risk assessment |
|--------------------|-------------------------|-----------------------|
|                    | Input value (mg/kg)     | Comment               | Input value (mg/kg) | Comment    |
| Sheep: Meat        | 0.02 STMR               | 0.05 HR               |
| Sheep: Fat tissue  | 0.09 STMR               | 0.39 HR               |
| Sheep: Liver       | 0.14 STMR               | 0.64 HR               |
| Sheep: Kidney      | 0.03 STMR               | 0.25 HR               |
| Sheep: Edible offal| 0.03 STMR               | 0.25 HR               |
| Goat: Meat         | 0.02 STMR               | 0.05 HR               |
| Goat: Fat tissue   | 0.09 STMR               | 0.39 HR               |
| Goat: Liver        | 0.14 STMR               | 0.64 HR               |
| Goat: Kidney       | 0.03 STMR               | 0.25 HR               |
| Goat: Edible offal | 0.03 STMR               | 0.25 HR               |
| Poultry: Meat      | 0.062 STMR × CF (6.2)   | 0.06 HR × CF (6.2)    |
| Poultry: Fat tissue| 0.163 STMR × CF (16.3)  | 0.35 HR × CF (16.3)   |
| Poultry: Liver     | 0.05 STMR × CF (4.9)    | 0.12 HR × CF (4.9)    |
| Poultry: Kidney    | 0.05 STMR × CF (4.9)    | 0.12 HR × CF (4.9)    |
| Poultry: Edible offal | 0.05 STMR × CF (4.9) | 0.12 HR × CF (4.9) |
| Milk: Cattle       | 0.01 STMR               | 0.01 STMR             |
| Milk: Sheep        | 0.01 STMR               | 0.01 STMR             |
| Milk: Goat         | 0.01 STMR               | 0.01 STMR             |
| Milk: Horse        | 0.01 STMR               | 0.01 STMR             |
| Eggs: Chicken      | 0.05 STMR × CF (4.9)    | 0.05 HR × CF (4.9)    |
| Eggs: Duck         | 0.05 STMR × CF (4.9)    | 0.05 HR × CF (4.9)    |
| Eggs: Goose        | 0.05 STMR × CF (4.9)    | 0.05 HR × CF (4.9)    |
| Eggs: Quail        | 0.05 STMR × CF (4.9)    | 0.05 HR × CF (4.9)    |

**Risk assessment residue definition:** Triazole alanine (TA)

- Apricots 0.32 STMR (United Kingdom, 2018a) 1.10 HR
- Peaches 0.32 STMR (United Kingdom, 2018a) 1.10 HR

**Risk assessment residue definition:** Triazole lactic acid (TLA)

- Apricots 0.04 STMR (United Kingdom, 2018a) 0.14 HR
- Peaches 0.04 STMR (United Kingdom, 2018a) 0.14 HR

**Risk assessment residue definition:** Triazole acetic acid (TAA)

- Apricots 0.02 STMR (United Kingdom, 2018a) 0.08 HR
- Cherries (sweet) 0.02 STMR (United Kingdom, 2018a) 0.05 HR
- Peaches 0.02 STMR (United Kingdom, 2018a) 0.08 HR

**Risk assessment residue definition:** 1,2,4 Triazole (c)

- Plant and animal products Refer to Table 7.7-1. of Appendix E to the Assessment report (United Kingdom, 2018a)(b)

STMR: supervised trials median residue; HR: highest residue; CF: conversion factor; LOQ: limit of quantification.

(a): Consumption figures in the EFSA PRIMo are expressed as meat. Since the a.s. is a fat-soluble pesticide, STMR and HR residue values were calculated considering an 80%/90% muscle and 20%/10% fat content for mammal/poultry meat respectively (FAO, 2016).
(b): The complete list of input values for TA, TLA, TAA and 1,2,4 T is reported in Table 7.7-1. of Appendix E to the Assessment report Triazole Derivate Metabolites, addendum – confirmatory data prepared by the rapporteur Member State, the United Kingdom in the framework of Regulation (EC) No 1107/2009, revised version of February 2018 (United Kingdom, 2018a). The input values for oil fruits were applied to olives for oil production only.

(c): The consumer risk assessment for 1,2,4 triazole has not been updated. Residue levels generated from the intended or authorised uses of mefentri fluoride were all < LOQ).
## Appendix E – Used compound codes

| Code/trivial name(a) | IUPAC name/SMILES notation/InChiKey(b) | Structural formula(b) |
|---------------------|----------------------------------------|-----------------------|
| **Mefentriconazole**<br>BAS 750 F | (2RS)-2-[(4-(4-chlorophenoxy)-2,2,2-trifluoro-5 trifluoromethyl)phenyl]propan-2-ol | ![Structure](image) |
| **Triazole alanine (TA)** | 3-(1H-1,2,4-triazol-1-yl)-D,L-alanine | ![Structure](image) |
| **Triazole lactic acid (TLA)** | 2-hydroxy-3-(1H-1,2,4-triazol-1-yl)propanoic acid | ![Structure](image) |
| **Triazole acetic acid (TAA)** | (1H-1,2,4-triazol-1-yl)acetic acid | ![Structure](image) |
| **1,2,4-triazole**<br>MF750F001 | 1H-1,2,4-triazole | ![Structure](image) |
| **M750F022**<br>2-[4-(4-chlorophenoxy)-2-(trifluoromethyl)phenyl]propane-1,2-diol | 2-[4-(4-chlorophenoxy)-2-(trifluoromethyl)phenyl]propane-1,2-diol | ![Structure](image) |

(a): The metabolite name in bold is the name used in the conclusion.<br>(b): Names, SMILES, InChiKey and structures are generated by ChemBioDraw Ultra v. 13.0.2.3021.