

## REASONED OPINION OF EFSA

### Modification of the existing MRLs for pyraclostrobin in courgettes, gherkins and beet root<sup>1</sup>

Prepared by the Pesticides Unit (PRAPeR)

(Question No EFSA-Q-2009-00644)

Issued on 25 August 2009

#### SUMMARY

According to Article 6 of the Regulation (EC) No 396/2005, Belgium, hereafter referred to as the Evaluating Member State (EMS), compiled an application to modify the existing MRLs for pyraclostrobin in gherkins, courgettes and beet root. In order to accommodate for the new uses of pyraclostrobin in Belgium, it is proposed to raise the existing MRL which is set at the LOQ of 0.02 mg/kg to 0.5 mg/kg for gherkins and courgettes and to 0.1 mg/kg for beet root. Belgium drafted an evaluation report according to Article 8 of Regulation (EC) No 396/2005 which was submitted to the European Commission and forwarded to EFSA on 29 May 2009.

EFSA derives the following conclusions regarding the application, based on the above mentioned evaluation report as well as the Draft Assessment Report prepared by Germany.

The metabolism of pyraclostrobin in primary crops is elucidated in fruits and fruiting vegetables, root and tuber vegetables and cereals and the risk assessment and enforcement residue definition is established as parent pyraclostrobin for all plant commodities. Consequently, the MRL application does not require additional metabolism studies. Adequate analytical methods are available to enforce the proposed MRLs.

Submitted supervised residue trials indicate that the current MRL of 0.02 mg/kg for gherkins, courgettes and beet root does not accommodate the intended GAPs in Belgium and higher MRLs as proposed by the EMS would be necessary.

The occurrence of pyraclostrobin or its metabolites in rotational crops was also investigated. EFSA concluded that significant residue levels in rotational crops are not expected provided that pyraclostrobin is applied according to the proposed GAP.

Residues in commodities of animal origin were not assessed in the framework of this application considering that crops under consideration are not fed to livestock.

Consumer risk assessment was performed with revision 2 of the EFSA PRIMo. For the chronic intake assessment EFSA used the existing MRLs as established in Annexes II and III

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of Regulation (EC) No 396/2005 as well as the STMR values derived for the intended use of pyraclostrobin on courgettes, gherkins and beet root. The acute intake assessment was performed only with regard to the crops under consideration and the HR values derived for the intended use on beet root, gherkins and courgettes were used as input values in acute intake calculations.

No chronic consumer intake concerns were identified for any of the European diets. The intake values were in the range of 5.5 – 41.4% of the ADI. The contribution of gherkins, courgettes and beet root to the total dietary intake is insignificant, amounting for up to 0.05% of the ADI for beet root (WHO Cluster diet B), 0.1% of the ADI for gherkins (WHO Cluster diet B) and 0.33% of the ADI for courgettes (FR Infant diet).

Acute risk assessment did not identify consumer intake concerns regarding crops under consideration. The IESTI values for courgettes, gherkins and beet root were 41.2%, 14.5% and 8.8% of the ARfD respectively.

EFSA concludes that the intended uses of pyraclostrobin on gherkins, courgettes and beet root are acceptable with regard to consumer safety.

An overview of the proposed MRLs is presented in the table below:

#### Overview of the proposed EC MRLs

Commodity	Existing EC MRL (mg/kg)	Proposed EC MRL (mg/kg)	Justification for the proposal
Beet root	0.02*	0.1	The MRL proposals are sufficiently supported by data and no risk for consumers was identified for the intended uses.
Gherkins, courgettes	0.02*	0.5	

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

**Key words:** Pyraclostrobin, gherkins, courgettes, beet root, MRL application, Regulation (EC) No 396/2005, consumer risk assessment, strobilurin fungicide

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## BACKGROUND

Regulation (EC) No 396/2005 establishes the rules governing the setting of pesticide MRLs at Community level. Article 6 of that regulation lays down that where a Member State considers that the modification of an MRL is necessary, that Member State may compile and evaluate an application to modify the MRL in accordance with the provisions of Article 7 of that regulation.

In particular, Belgium, hereafter referred to as the Evaluating Member State (EMS), compiled an application to modify the existing MRLs for pyraclostrobin in gherkins, courgettes and beet root. This application was notified to the European Commission and EFSA and subsequently evaluated in accordance with Article 8 of the Regulation.

After completion, the evaluation report of the EMS was submitted to the European Commission who forwarded the application, the evaluation report and the supporting dossier to EFSA on 29 May 2009. The application was included in the EFSA Register of Questions with the reference number EFSA-Q-2009-00644 and the following subject:

*Pyraclostrobin - Application to modify the existing MRLs for pyraclostrobin in courgettes from 0.02\* mg/kg to 0.5 mg/kg, in gherkins from 0.02\* mg/kg to 0.5 mg/kg and in beetroot from 0.02\* mg/kg to 0.1 mg/kg.*

EFSA then proceeded with the assessment of the application as required by Article 10 of the Regulation.

## TERMS OF REFERENCE

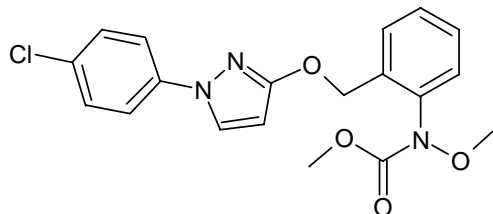
According to Article 10 of Regulation (EC) No 396/2005, EFSA shall, based on the evaluation report provided by the Evaluating Member State, provide a reasoned opinion on the risks to the consumer associated with the application.

According to Article 11 of that Regulation, the reasoned opinion shall be provided as soon as possible and at the latest within 3 months from the date of receipt of the application. Where EFSA requests supplementary information, the time limit laid down shall be suspended until that information has been provided.

In this particular case the calculated deadline for providing the reasoned opinion is 29 August 2009.

## THE ACTIVE SUBSTANCE AND ITS USE PATTERN

Pyraclostrobin is the ISO common name for methyl N-(2-[[1-(4-chlorophenyl)-1H-pyrazol-3-yl]oxymethyl]phenyl) N-methoxy carbamate (IUPAC).



Pyraclostrobin is a fungicide belonging to the group of strobilurins. The biochemical mode of action of the strobilurins is the inhibition of mitochondrial respiration. Pyraclostrobin is active against fungal development stages both on the plant surface and within the tissues. It has a protective as well as an eradicated/curative action. Pyraclostrobin is used on a wide range of dicotyledonous and monocotyledonous crop species.

Pyraclostrobin has been peer reviewed under Directive 91/414/EEC by Germany being the designated Rapporteur Member State. The active substance is included in Annex I to this Directive by the Commission Directive 2004/30/EC for use as a fungicide. Representative uses evaluated under the peer review were foliar application of the active substance on grapes. Pyraclostrobin has not been peer reviewed by EFSA.

From 4 August 2009, according to Directive 2009/25/EC which amends Directive 91/414/EEC, pyraclostrobin can also be used as a plant growth regulator. When used as a fungicide, pyraclostrobin also affects the plant metabolism and physiology exhibiting properties of a plant growth regulator. It changes the phytohormone relationship in the plant, increases greening effect and improves tolerance against stresses.

MRLs for pyraclostrobin were set at EU level for the first time with Directive 2005/70/EC. The MRLs established under Directives 86/362/EEC, 86/363/EEC and 90/642/EEC have been transferred to Annex II of Regulation (EC) No 396/2005. In Annex III temporary MRLs have been established for crops that were not covered by the previous Community legislation. The existing MRLs for pyraclostrobin are established in Annexes II and IIIB of Regulation (EC) No 396/2005 and are summarized in Appendix B to this document. The current MRL for all crops under consideration is set at the LOQ of 0.02 mg/kg. Codex Alimentarius has established CXLs for pyraclostrobin in a wide range of commodities but there are no CXLs set for gherkins, courgettes and beet root.

The GAP for which an authorisation is requested in Belgium refers to indoor and outdoor uses of pyraclostrobin on gherkins and courgettes and on an outdoor use on beet root. The details of the GAPs can be found in Appendix A.

## ASSESSMENT

### 1. Methods of analysis

#### 1.1. Methods for enforcement of residues in food of plant origin

The analytical methods for the determination of pyraclostrobin in foodstuffs of plant origin were evaluated in the framework of the peer review of Directive 91/414/EEC (Germany, 2001). Pyraclostrobin residues in commodities of plant origin can be determined by LC-MS-MS or HPLC-UV methods with an LOQ of 0.02 mg/kg.

In addition, QuEChERS method (determination using GC-MS and/or LC-MS(/MS)) is sufficiently validated at the LOQ of 0.01 mg/kg for the determination of pyraclostrobin in plant matrices.

It is concluded that adequate analytical methods are available for the enforcement of the proposed MRLs for pyraclostrobin in courgettes, gherkins and beet root.

#### 1.2. Methods for enforcement of residues in food of animal origin

Commodities under consideration are not used as a livestock feeding stuff. Therefore analytical methods for the determination of pyraclostrobin in food of animal origin are not of relevance.

### 2. Mammalian toxicology

The toxicological reference values for pyraclostrobin were derived in the peer review under Directive 91/414/EEC and are compiled in Table 2-1 (European Commission, 2004).

Table 2-1. Overview of the toxicological reference values

	Source	Year	Value	Study relied upon	Safety factor
Pyraclostrobin					
ADI	COM	2004	0.03 mg/kg bw/d	Chronic rat	100
ARfD	COM	2004	0.03 mg/kg bw	Rabbit developmental toxicity	100

### 3. Residues

#### 3.1. Nature and magnitude of residues in plant

##### 3.1.1. Primary crops

##### 3.1.1.1. Nature of residues

Under the peer review of Directive 91/414/EEC, metabolism studies were submitted for the following crop categories (Germany, 2001):

- fruits and fruiting vegetables: grapes (foliar application 1.5 kg a.s./ha)

- root and tuber vegetables: potato (foliar application 6 x 0.3 kg a.s./ha)
- cereals: wheat (foliar application 2 x 0.3 kg a.s./ha)

The metabolism and distribution of pyraclostrobin in plants was investigated using [tolyl-U-<sup>14</sup>C]-pyraclostrobin and [chlorophenyl-U-<sup>14</sup>C]- pyraclostrobin.

The relevant residue in grapes consisted of parent pyraclostrobin (55.7 - 66% TRR) and its desmethoxy metabolite 500M07<sup>2</sup> (11.2 - 15.3 % TRR). In potatoes the highest TRR was identified in green matter (41.2 – 57.9 mg/kg) in both studies. Parent pyraclostrobin was the main component of the TRR in green matter and potato tubers in studies with [chlorophenyl-U-<sup>14</sup>C]-pyraclostrobin, amounting for 55% and 29.4 % of the TRR, respectively. In the green matter desmethoxy metabolite 500M07 was identified in levels > 20% of the TRR in both studies. In the tolyl study the major component of the TRR in potato tubers was identified as natural amino acid L-tryptophan (29.2% TRR). In cereals, the lowest TRR was found in grains, varying between 0.098 mg/kg in the chlorophenyl labelled and 0.441 mg/kg in the tolyl labelled matrix. The highest TRR was identified in wheat straw, amounting for up to 37.76 mg/kg (chlorophenyl study) and 40.46 mg/kg (tolyl study). The major component of the TRR in straw and grain in the chlorophenyl study was parent pyraclostrobin and its desmethoxy metabolite 500M07. In the tolyl study the major component of the TRR in grain was L-tryptophan (23% TRR), any other components being below 10% of the TRR. L-tryptophan is an essential natural amino acid therefore it is of no toxicological relevance.

Generally it was concluded in the peer review that the metabolic pathway is similar in all crop groups investigated. Results from the supervised residue trials indicated that desmethoxy metabolite 500M07 occurs in crops in small amounts compared to parent pyraclostrobin, therefore in the peer review it was concluded that a general residue definition for risk assessment and monitoring should be set as parent pyraclostrobin only.

Regarding crops under consideration, EFSA concludes that the metabolic pathway in gherkins, courgettes and beet root is sufficiently addressed and no additional metabolism studies are necessary.

### 3.1.1.2. Magnitude of residues

In support of the proposed GAP on gherkins and courgettes, Belgium reported four outdoor trials on courgettes and four indoor trials on cucumbers. All trials were designed as residue decline studies (with 1 and 3 day PHI). In one outdoor and one indoor trial the residue value within a trial was higher with longer PHI (3 days). These values were included in the data set for deriving the MRL proposal and risk assessment values.

In support of the proposed GAP on beet root, Belgium reported 12 trials on carrots, available from the temporary EU MRL setting exercise for carrots and performed in Northern and Southern EU Member States. Residues data were considered similar and therefore only a combined data set is available. Extrapolation from carrots to beet root is possible. In one trial the residue value within a trial was higher with longer PHI (21 day). Field trial samples were analyzed also for desmethoxy metabolite 500M07, but the residue values in all samples were below the LOQ of 0.02 mg/kg for the relevant PHI of 14 days.

Residues trials data are summarized in Table 3-1.

<sup>2</sup> 500M07: Methyl N-(2-[[1-(4-chlorophenyl)-1H-pyrazol-3-yl]oxymethyl]phenyl) carbamate

The demonstrated storage stability of pyraclostrobin in treated crops has been evaluated under the peer review of Directive 91/414/EEC (Germany, 2001). Studies demonstrated storage stability of pyraclostrobin in peanut meal, peanut oil, wheat grain and straw, sugar beet tops and roots, tomatoes and grape juice for up to 18 months when stored deep frozen. Supervised residues trial samples of cucumbers and courgettes prior analyses were stored for a maximum of 14 months. Storage period of carrot samples is not reported by the EMS, but as the trials data were used to derive the existing EU MRL for carrots, results are considered valid regarding storage stability.

According to the evaluation of the EMS, the supervised residues trials data are considered valid with regard to analytical performance.



Table 3-1. Overview of the available residues trials data

Commodity	Region (a)	Outdoor /Indoor	Individual trial results (mg/kg)		STMR (mg/kg) <sup>(b)</sup>	HR (mg/kg) <sup>(c)</sup>	MRL proposal (mg/kg)	Median CF <sup>(d)</sup>	Comments
			Enforcement	Risk assessment					
Enforcement residue definition: Pyraclostrobin									
Beet root	NEU/ SEU	Outdoor	6 x <0.02; 0.027; 0.03; 0.03*; 0.04; 0.05; 0.06	6 x <0.02; 0.027; 0.03; 0.03*; 0.04; 0.05; 0.06	0.0235	0.06	0.1	1.0	Trials were performed on carrots but residue data can be extrapolated to beet root. From all trials 4 were performed in the NEU; 8 were performed in France, the regions are not known. R <sub>ber</sub> = 0.075 mg/kg R <sub>max</sub> = 0.067 mg/kg
Gherkins, courgettes	NEU	Outdoor	0.022; 0.029; 0.029* ; 0.031	0.022; 0.029; 0.029* ; 0.031	0.029	0.031	0.1	1.0	Outdoor trials were performed on courgettes but residue data can be extrapolated to gherkins. Indoor trials were performed on cucumbers but residue data can be extrapolated to gherkins and courgettes. Indoor use results in more critical residue situation therefore these data were used for deriving the MRL proposal and risk assessment values (indicated in bold): R <sub>ber(outdoor)</sub> = 0.061 mg/kg R <sub>max(outdoor)</sub> = 0.048 mg/kg R <sub>ber(indoor)</sub> = 0.5 mg/kg R <sub>max(indoor)</sub> = 0.55 mg/kg
		Indoor	0.096; 0.147; 0.201; 0.266*	0.096; 0.147; 0.201; 0.266 *	<b>0.147</b>	<b>0.266</b>	<b>0.5</b>	<b>1.0</b>	

(a): NEU, SEU, EU or Import (country code). In the case of indoor uses there is no necessity to differentiate between NEU and SEU.

(b): Median value of the individual trial results according to the enforcement residue definition.

(c): Highest value of the individual trial results according to the enforcement residue definition.

(d): The median conversion factor for enforcement to risk assessment is obtained by calculating the median of the individual conversion factors for each residues trial.

(\*): Residue values obtained at longer PHIs.

### 3.1.1.3. Effect of industrial processing and/or household preparation

In the peer review the effects of processing on the nature of pyraclostrobin was studied in hydrolysis study by stimulating pasteurization, baking, brewing, boiling and sterilization processes (Germany, 2001). Results showed no degradation of pyraclostrobin under these conditions.

Under the current application no processing studies have been submitted and are not considered necessary since the contribution of gherkins, courgettes and beet root to the total dietary intake is insignificant.

## 3.1.2. Rotational crops

### 3.1.2.1. Preliminary considerations

All crops under consideration can be grown in rotation. According to the soil degradation studies performed in the framework of the peer review, the highest DT<sub>90</sub> value of pyraclostrobin based on the field and laboratory studies is 230 and 163 days, respectively. Metabolite 500M07 shows higher persistency in the soil with DT<sub>90f</sub> amounting for up to 529 days.

In this case possible occurrence of pyraclostrobin residues in rotational crops should be investigated.

### 3.1.2.2. Nature of residues

In the peer review the metabolism of pyraclostrobin in rotational crops was studied in lettuce, radish and wheat with [tolyl-U-<sup>14</sup>C]-pyraclostrobin and [chlorophenyl-U-<sup>14</sup>C]-pyraclostrobin (Germany, 2001). The radiolabelled active substance was applied on a bare soil once at an application rate of 0.9 kg a.s./ha and 30, 120 and 365 DAT respective crops were sown or planted.

The peer review concluded that metabolic pathway of pyraclostrobin in rotational crops is similar to that in primary crops and no formation of new metabolites was observed. The relevant residue in rotational crops therefore should be defined as parent pyraclostrobin.

### 3.1.2.3. Magnitude of residues

According to the studies as reported in section 3.1.2.2., the total radioactive residues in the edible parts of succeeding crops were very low for all plant back intervals: radish roots, lettuce ≤ 0.04 mg/kg and wheat grain ≤ 0.089 mg/kg. No accumulation of pyraclostrobin or its residues was observed in rotational crops.

After a plant back period of 30 days, the highest TRR was identified in wheat straw: 0.114/0.112 mg/kg tolyl-/chlorophenyl-label. In wheat grain the residue levels were lower: 0.082/0.078 mg/kg tolyl-/chlorophenyl-label. The lowest residue levels were observed in lettuce head (0.013/0.011 mg/kg tolyl-/chlorophenyl-label) and in radish roots (0.025/0.04 mg/kg tolyl-/chlorophenyl-label). In all crop samples the residue levels decreased with longer plant back intervals, except for lettuce head where residue levels remained similar throughout various plant back intervals.

Considering that application rates proposed in the framework of this application are significantly lower and that a part of the applied substance is intercepted by the treated crop, it is concluded that significant residue levels in rotational crops are not expected provided that pyraclostrobin is applied according to the proposed GAPs.

### 3.2. Nature and magnitude of residues in livestock

Since crops under consideration are not fed to livestock, studies on the nature and magnitude of residues in livestock are not of relevance regarding the current MRL proposal.

## 4. Consumer risk assessment

The consumer risk assessment was performed with revision 2 of the EFSA PRIMo (Pesticide Residue Intake Model). For the chronic intake assessment EFSA used the existing MRLs as established in Annexes II and IIIB of Regulation (EC) No 396/2005 as well as STMR values derived for the intended use on gherkins, courgettes and beet root.

The acute intake assessment was performed only with regard to the crops under consideration and the HR values derived for the intended use on beet root, gherkins and courgettes were used as input values in the intake calculations. Input values are summarized in Table 4-1.

Table 4-1. **Input values for the consumer risk assessment**

Commodity	Chronic risk assessment		Acute risk assessment	
	Input value (mg/kg)	Comment	Input value (mg/kg)	Comment
Pyraclostrobin				
Beet root	0.0235	STMR	0.06	HR
Gherkins, courgettes	0.147	STMR	0.266	HR
Other commodities	MRL	See Appendix B	Acute intake assessment was performed only with regard to crops under consideration	

The summary of intake calculations can be found in Appendix C.

No chronic consumer intake concerns were identified for any of the European diets. The intake values were in the range of 5.5 – 41.4% of the ADI. The contribution of gherkins, courgettes and beet root to the total dietary intake is insignificant, amounting for up to 0.05% of the ADI for beet root (WHO Cluster diet B), 0.1% of the ADI for gherkins (WHO Cluster diet B) and 0.33% of the ADI for courgettes (FR Infant diet).

Acute risk assessment did not identify consumer intake concerns regarding crops under consideration. The IESTI values for courgettes, gherkins and beet root were 41.2%, 14.5% and 8.8% of the ARfD respectively.

EFSA concludes that the intended uses of pyraclostrobin on gherkins, courgettes and beet root are acceptable with regard to consumer safety.

## CONCLUSIONS AND RECOMMENDATIONS

The metabolism of pyraclostrobin in primary crops is elucidated in fruits and fruiting vegetables, root and tuber vegetables and cereals and the risk assessment and enforcement residue definition is established as parent pyraclostrobin for all plant commodities. Consequently, the MRL application does not require additional metabolism studies. Adequate analytical methods are available to enforce the proposed MRLs.

Submitted supervised residue trials indicate that the current MRL of 0.02 mg/kg for gherkins, courgettes and beet root does not accommodate the intended GAPs in Belgium and higher MRLs as proposed by the EMS would be necessary.

The occurrence of pyraclostrobin or its metabolites in rotational crops was also investigated. EFSA concluded that significant residue levels in rotational crops are not expected provided that pyraclostrobin is applied according to the proposed GAP.

Residues in commodities of animal origin were not assessed in the framework of this application considering that crops under consideration are not fed to livestock.

Consumer risk assessment was performed with revision 2 of the EFSA PRIMo. For the chronic intake assessment EFSA used the existing MRLs as established in Annexes II and III of Regulation (EC) No 396/2005 as well as the STMR values derived for the intended use of pyraclostrobin on courgettes, gherkins and beet root. The acute intake assessment was performed only with regard to the crops under consideration and the HR values derived for the intended use on beet root, gherkins and courgettes were used as input values in acute intake calculations.

No chronic consumer intake concerns were identified for any of the European diets. The intake values were in the range of 5.5 – 41.4% of the ADI. The contribution of gherkins, courgettes and beet root to the total dietary intake is insignificant, amounting for up to 0.05% of the ADI for beet root (WHO Cluster diet B), 0.1% of the ADI for gherkins (WHO Cluster diet B) and 0.33% of the ADI for courgettes (FR Infant diet).

Acute risk assessment did not identify consumer intake concerns regarding crops under consideration. The IESTI values for courgettes, gherkins and beet root were 41.2%, 14.5% and 8.8% of the ARfD respectively.

EFSA concludes that the intended uses of pyraclostrobin on gherkins, courgettes and beet root are acceptable with regard to consumer safety.

An overview of the proposed MRLs is presented in the table below:

Table 5-1. Overview of the proposed EC MRLs

Commodity	Existing EC MRL (mg/kg)	Proposed EC MRL (mg/kg)	Justification for the proposal
Beet root	0.02*	0.1	The MRL proposals are sufficiently supported by data and no risk for consumers was identified for the intended uses.
Gherkins, courgettes	0.02*	0.5	

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

## **DOCUMENTATION PROVIDED TO EFSA**

1. Evaluation report on the modification of the existing MRLs for pyraclostrobin in gherkins, courgettes and beet root under Regulation (EC) No 396/2005. Submitted in EFSA on 29 May 2009. Prepared by Belgium.

## **REFERENCES**

- European Commission, 2004. Review report for the active substance pyraclostrobin. 8 September 2004.
- Germany, 2001. Draft Assessment Report on pyraclostrobin under Directive 91/414/EEC. August 2001.

**APPENDIX A – GOOD AGRICULTURAL PRACTICES (GAPS)**

Crop and/or situation (a)	Member State or Country	F G or I (b)	Pests or group of pests controlled (c)	Formulation		Application				Application rate per treatment			PHI (days) (l)	Remarks: (m)
				Type (d-f)	Conc. of as (i)	method kind (f-h)	growth stage & season (j)	number min max (k)	interval between applications (min)	kg as/hL min max	water L/ha min max	kg as/ha min max		
Courgette, gherkin	Belgium	F/G	Powdery mildew, leaf mould	WG	67%	Spray		1-2	14 days			0.1	1	+26.7% boscalid
Beet root	Belgium	F	Powdery mildew, <i>Alternaria</i>	WG	67%	Spray		1-2	14 days			0.05	14	+26.7% boscalid

(a) In case of group of crops the Codex classification should be used

(b) Outdoor or field use (F), glasshouse application (G) or indoor application (I)

(c) e.g. biting and sucking insects, soil born insects, foliar fungi

(d) Suspension concentrate (= flowable concentrate) (SC)

(e) Use CIPAC/FAO Codes where appropriate

(f) All abbreviations used must be explained

(g) Method, e.g. high volume spraying, low volume spraying, spreading, dusting, drench

(h) Kind, e.g. overall, broadcast, aerial spraying, row, individual plant, between the plants

(i) g/kg or g/l

(j) Growth stage at last treatment

(k) PHI = Pre-harvest interval

(l) Remarks may include: Extent of use/economic importance/restrictions (e.g. feeding, grazing)/minimal intervals between applications

**APPENDIX B – EXISTING EC MRLs**

Code number	Groups and examples of individual products to which the MRLs apply (a)	Pyraclostrobin (F)
100000	1. FRUIT FRESH OR FROZEN; NUTS	
110000	(i) Citrus fruit	1
110010	Grapefruit (Shaddocks, pomelos, sweeties, tangelo, ugli and other hybrids)	1
110020	Oranges (Bergamot, bitter orange, chinotto and other hybrids)	1
110030	Lemons (Citron, lemon )	1
110040	Limes	1
110050	Mandarins (Clementine, tangerine and other hybrids)	1
110990	Others	1
120000	(ii) Tree nuts (shelled or unshelled)	
120010	Almonds	0,02*
120020	Brazil nuts	0,02*
120030	Cashew nuts	0,02*
120040	Chestnuts	0,02*
120050	Coconuts	0,02*
120060	Hazelnuts (Filbert)	0,02*
120070	Macadamia	0,02*
120080	Pecans	0,02*
120090	Pine nuts	0,02*
120100	Pistachios	1
120110	Walnuts	0,02*
120990	Others	0,02*
130000	(iii) Pome fruit	0,3
130010	Apples (Crab apple)	0,3
130020	Pears (Oriental pear)	0,3
130030	Quinces	0,3
130040	Medlar	0,3
130050	Loquat	0,3
130990	Others	0,3

Code number	Groups and examples of individual products to which the MRLs apply (a)	Pyraclostrobin (F)
140000	(iv) Stone fruit	
140010	Apricots	0,2
140020	Cherries (sweet cherries, sour cherries)	0,3
140030	Peaches (Nectarines and similar hybrids)	0,2
140040	Plums (Damson, greengage, mirabelle)	0,2
140990	Others	0,02*
150000	(v) Berries & small fruit	
151000	(a) Table and wine grapes	
151010	Table grapes	1
151020	Wine grapes	2
152000	(b) Strawberries	0,5
153000	(c) Cane fruit	0,02*
153010	Blackberries	1
153020	Dewberries (Loganberries, Boysenberries, and cloudberries)	0,02*
153030	Raspberries (Wineberries )	1
153990	Others	0,02*
154000	(d) Other small fruit & berries	0,02*
154010	Blueberries (Bilberries cowberries (red bilberries))	0,5
154020	Cranberries	0,5
154030	Currants (red, black and white)	2
154040	Gooseberries (Including hybrids with other ribes species)	0,5
154050	Rose hips	0,02*
154060	Mulberries (arbutus berry)	0,02*
154070	Azarole (mediteranean medlar)	0,02*

Code number	Groups and examples of individual products to which the MRLs apply (a)	Pyraclostrobin (F)
154080	Elderberries (Black chokeberry (appleberry), mountain ash, azarole, buckthorn (sea shallowthorn), hawthorn, service berries, and other treeberries)	0,02*
154990	Others	0,5
160000	(vi) Miscellaneous fruit	
161000	(a) Edible peel	0,02*
161010	Dates	0,02*
161020	Figs	0,02*
161030	Table olives	0,02*
161040	Kumquats (Marumi kumquats, nagami kumquats)	0,02*
161050	Carambola (Bilimbi)	0,02*
161060	Persimmon	0,02*
161070	Jambolan (java plum) (Java apple (water apple), pomegranate, rose apple, Brazilian cherry (grumichama), Surinam cherry)	0,02*
161990	Others	0,02*
162000	(b) Inedible peel, small	0,02*
162010	Kiwi	0,02*
162020	Lychee (Litchi) (Pulasan, rambutan (hairy litchi))	0,02*
162030	Passion fruit	0,02*
162040	Prickly pear (cactus fruit)	0,02*
162050	Star apple	0,02*
162060	American persimmon (Virginia kaki) (Black sapote, white sapote, green sapote, canistel (yellow sapote), and mammey sapote)	0,02*
162990	Others	0,02*
163000	(c) Inedible peel, large	
163010	Avocados	0,02*

Code number	Groups and examples of individual products to which the MRLs apply (a)	Pyraclostrobin (F)
163020	Bananas (Dwarf banana, plantain, apple banana)	0,02*
163030	Mangoes	0,05
163040	Papaya	0,05
163050	Pomegranate	0,02*
163060	Cherimoya (Custard apple, sugar apple (sweetsop), lily and other medium sized Annonaceae)	0,02*
163070	Guava	0,02*
163080	Pineapples	0,02*
163090	Bread fruit (Jackfruit)	0,02*
163100	Durian	0,02*
163110	Soursop (guanabana)	0,02*
163990	Others	0,02*
200000	2. VEGETABLES FRESH OR FROZEN	
210000	(i) Root and tuber vegetables	
211000	(a) Potatoes	0,02*
212000	(b) Tropical root and tuber vegetables	0,02*
212010	Cassava (Dasheen, eddoe (Japanese taro), tannia)	0,02*
212020	Sweet potatoes	0,02*
212030	Yams (Potato bean (yam bean), Mexican yam bean)	0,02*
212040	Arrowroot	0,02*
212990	Others	0,02*
213000	(c) Other root and tuber vegetables except sugar beet	
213010	Beetroot	0,02*
213020	Carrots	0,1
213030	Celeriac	0,02*
213040	Horseradish	0,3
213050	Jerusalem artichokes	0,02*
213060	Parsnips	0,3
213070	Parsley root	0,1



Code number	Groups and examples of individual products to which the MRLs apply (a)	Pyraclostrobin (F)
213080	Radishes (Black radish, Japanese radish, small radish and similar varieties)	0,2
213090	Salsify (Scorzonera, Spanish salsify (Spanish oysterplant))	0,1
213100	Swedes	0,02*
213110	Turnips	0,02*
213990	Others	0,02*
220000	(ii) Bulb vegetables	
220010	Garlic	0,2
220020	Onions (Silverskin onions)	0,2
220030	Shallots	0,2
220040	Spring onions (Welsh onion and similar varieties)	0,02*
220990	Others	0,02*
230000	(iii) Fruiting vegetables	
231000	(a) Solanacea	
231010	Tomatoes (Cherry tomatoes, )	0,2
231020	Peppers (Chilli peppers)	0,5
231030	Aubergines (egg plants) (Pepino)	0,2
231040	Okra, lady's fingers	0,02*
231990	Others	0,02*
232000	(b) Cucurbits - edible peel	0,02*
232010	Cucumbers	0,02*
232020	Gherkins	0,02*
232030	Courgettes (Summer squash, marrow (patisson))	0,02*
232990	Others	0,02*
233000	(c) Cucurbits-inedible peel	0,02*
233010	Melons (Kiwano )	0,02*
233020	Pumpkins (Winter squash)	0,02*
233030	Watermelons	0,02*
233990	Others	0,02*

Code number	Groups and examples of individual products to which the MRLs apply (a)	Pyraclostrobin (F)
234000	(d) Sweet corn	0,02*
239000	(e) Other fruiting vegetables	0,02*
240000	(iv) Brassica vegetables	
241000	(a) Flowering brassica	0,1
241010	Broccoli (Calabrese, Chinese broccoli, Broccoli raab)	0,1
241020	Cauliflower	0,1
241990	Others	0,1
242000	(b) Head brassica	
242010	Brussels sprouts	0,2
242020	Head cabbage (Pointed head cabbage, red cabbage, savoy cabbage, white cabbage)	0,2
242990	Others	0,02*
243000	(c) Leafy brassica	0,02*
243010	Chinese cabbage (Indian (Chinese) mustard, pak choi, Chinese flat cabbage (tai goo choi), peking cabbage (pe-tsai), cow cabbage)	0,02*
243020	Kale (Borecole (curly kale), collards)	0,02*
243990	Others	0,02*
244000	(d) Kohlrabi	0,02*
250000	(v) Leaf vegetables & fresh herbs	
251000	(a) Lettuce and other salad plants including Brassicacea	2
251010	Lamb's lettuce (Italian cornsalad)	10
251020	Lettuce (Head lettuce, lollo rosso (cutting lettuce), iceberg lettuce, romaine (cos) lettuce)	2

Code number	Groups and examples of individual products to which the MRLs apply (a)	Pyraclostrobin (F)
251030	Scarole (broad-leaf endive) (Wild chicory, red-leaved chicory, radicchio, curld leave endive, sugar loaf)	2
251040	Cress	2
251050	Land cress	2
251060	Rocket, Rucola (Wild rocket)	2
251070	Red mustard	2
251080	Leaves and sprouts of Brassica spp (Mizuna)	2
251990	Others	2
252000	(b) Spinach & similar (leaves)	
252010	Spinach (New Zealand spinach, turnip greens (turnip tops))	0,5
252020	Purslane (Winter purslane (miner's lettuce), garden purslane, common purslane, sorrel, glasswort)	2
252030	Beet leaves (chard) (Leaves of beetroot)	0,5
252990	Others	0,5
253000	(c) Vine leaves (grape leaves)	0,02*
254000	(d) Water cress	0,02*
255000	(e) Witloof	0,02*
256000	(f) Herbs	2
256010	Chervil	2
256020	Chives	2
256030	Celery leaves (fennel leaves, Coriander leaves, dill leaves, Caraway leaves, lovage, angelica, sweet cicely and other Apiacea)	2
256040	Parsley	2
256050	Sage (Winter savory, summer savory, )	2

Code number	Groups and examples of individual products to which the MRLs apply (a)	Pyraclostrobin (F)
256060	Rosemary	2
256070	Thyme ( marjoram, oregano)	2
256080	Basil (Balm leaves, mint, peppermint)	2
256090	Bay leaves (laurel)	2
256100	Tarragon (Hyssop)	2
256990	Others	2
260000	(vi) Legume vegetables (fresh)	0,02*
260010	Beans (with pods) (Green bean (french beans, snap beans), scarlet runner bean, slicing bean, yardlong beans)	0,02*
260020	Beans (without pods) (Broad beans, Flageolets, jack bean, lima bean, cowpea)	0,02*
260030	Peas (with pods) (Mangetout (sugar peas))	0,02*
260040	Peas (without pods) (Garden pea, green pea, chickpea)	0,02*
260050	Lentils	0,02*
260990	Others	0,02*
270000	(vii) Stem vegetables (fresh)	
270010	Asparagus	0,02*
270020	Cardoons	0,02*
270030	Celery	0,02*
270040	Fennel	0,02*
270050	Globe artichokes	0,02*
270060	Leek	0,5
270070	Rhubarb	0,02*
270080	Bamboo shoots	0,02*
270090	Palm hearts	0,02*
270990	Others	0,02*
280000	(viii) Fungi	0,02*
280010	Cultivated (Common mushroom, Oyster mushroom, Shi-	0,02*

Code number	Groups and examples of individual products to which the MRLs apply (a)	Pyraclostrobin (F)
	take)	
280020	Wild (Chanterelle, Truffle, Morel ,)	0,02*
280990	Others	0,02*
290000	(ix) Sea weeds	
300000	3. PULSES, DRY	0,3
300010	Beans (Broad beans, navy beans, flageolets, jack beans, lima beans, field beans, cowpeas)	0,3
300020	Lentils	0,3
300030	Peas (Chickpeas, field peas, chickling vetch)	0,3
300040	Lupins	0,3
300990	Others	0,3
400000	4. OILSEEDS AND OILFRUITS	0,02*
401000	(i) Oilseeds	0,02*
401010	Linseed	0,02*
401020	Peanuts	0,02*
401030	Poppy seed	0,02*
401040	Sesame seed	0,02*
401050	Sunflower seed	0,02*
401060	Rape seed (Bird rapeseed, turnip rape)	0,02*
401070	Soya bean	0,02*
401080	Mustard seed	0,02*
401090	Cotton seed	0,02*
401100	Pumpkin seeds	0,02*
401110	Safflower	0,02*
401120	Borage	0,02*
401130	Gold of pleasure	0,02*
401140	Hempseed	0,02*
401150	Castor bean	0,02*
401990	Others	0,02*
402000	(ii) Oilfruits	0,02*
402010	Olives for oil production	0,02*
402020	Palm nuts (palmoil kernels)	0,02*
402030	Palmfruit	0,02*
402040	Kapok	0,02*
402990	Others	0,02*

Code number	Groups and examples of individual products to which the MRLs apply (a)	Pyraclostrobin (F)
500000	5. CEREALS	
500010	Barley	0,3
500020	Buckwheat	0,02*
500030	Maize	0,02*
500040	Millet (Foxtail millet, teff)	0,02*
500050	Oats	0,3
500060	Rice	0,02*
500070	Rye	0,1
500080	Sorghum	0,02*
500090	Wheat (Spelt Triticale)	0,1
500990	Others	0,02*
600000	6. TEA, COFFEE, HERBAL INFUSIONS AND COCOA	0,05*
610000	(i) Tea (dried leaves and stalks, fermented or otherwise of Camellia sinensis)	0,05
620000	(ii) Coffee beans	0,05*
630000	(iii) Herbal infusions (dried)	0,05*
631000	(a) Flowers	0,05*
631010	Camomille flowers	0,05*
631020	Hybiscus flowers	0,05*
631030	Rose petals	0,05*
631040	Jasmine flowers	0,05*
631050	Lime (linden)	0,05*
631990	Others	0,05*
632000	(b) Leaves	0,05*
632010	Strawberry leaves	0,05*
632020	Rooibos leaves	0,05*
632030	Maté	0,05*
632990	Others	0,05*
633000	(c) Roots	0,05*
633010	Valerian root	0,05*
633020	Ginseng root	0,05*
633990	Others	0,05*
639000	(d) Other herbal infusions	0,05*
640000	(iv) Cocoa (fermented beans)	0,05*
650000	(v) Carob (st johns bread)	0,05*

Code number	Groups and examples of individual products to which the MRLs apply (a)	Pyraclostrobin (F)
700000	7. HOPS (dried) , including hop pellets and unconcentrated powder	10
800000	8. SPICES	0,05*
810000	(i) Seeds	0,05*
810010	Anise	0,05*
810020	Black caraway	0,05*
810030	Celery seed (Lovage seed)	0,05*
810040	Coriander seed	0,05*
810050	Cumin seed	0,05*
810060	Dill seed	0,05*
810070	Fennel seed	0,05*
810080	Fenugreek	0,05*
810090	Nutmeg	0,05*
810990	Others	0,05*
820000	(ii) Fruits and berries	0,05*
820010	Allspice	0,05*
820020	Anise pepper (Japan pepper)	0,05*
820030	Caraway	0,05*
820040	Cardamom	0,05*
820050	Juniper berries	0,05*
820060	Pepper, black and white (Long pepper, pink pepper)	0,05*
820070	Vanilla pods	0,05*
820080	Tamarind	0,05*
820990	Others	0,05*
830000	(iii) Bark	0,05*
830010	Cinnamon (Cassia )	0,05*
830990	Others	0,05*
840000	(iv) Roots or rhizome	0,05*
840010	Liquorice	0,05*
840020	Ginger	0,05*
840030	Turmeric (Curcuma)	0,05*
840040	Horseradish	0,05*
840990	Others	0,05*
850000	(v) Buds	0,05*
850010	Cloves	0,05*
850020	Capers	0,05*
850990	Others	0,05*
860000	(vi) Flower stigma	0,05*
860010	Saffron	0,05*
860990	Others	0,05*

Code number	Groups and examples of individual products to which the MRLs apply (a)	Pyraclostrobin (F)
870000	(vii) Aril	0,05*
870010	Mace	0,05*
870990	Others	0,05*
900000	9. SUGAR PLANTS	0,02*
900010	Sugar beet (root)	0,02*
900020	Sugar cane	0,02*
900030	Chicory roots	0,02*
900990	Others	0,02*
1000000	10. PRODUCTS OF ANIMAL ORIGIN- TERRESTRIAL ANIMALS	
1010000	(i) Meat, preparations of meat, offals, blood, animal fats fresh chilled or frozen, salted, in brine, dried or smoked or processed as flours or meals other processed products such as sausages and food preparations based on these	0,05*
1011000	(a) Swine	0,05*
1011010	Meat	0,05*
1011020	Fat free of lean meat	0,05*
1011030	Liver	0,05*
1011040	Kidney	0,05*
1011050	Edible offal	0,05*
1011990	Others	0,05*
1012000	(b) Bovine	0,05*
1012010	Meat	0,05*
1012020	Fat	0,05*
1012030	Liver	0,05*
1012040	Kidney	0,05*
1012050	Edible offal	0,05*
1012990	Others	0,05*
1013000	(c) Sheep	0,05*
1013010	Meat	0,05*
1013020	Fat	0,05*
1013030	Liver	0,05*
1013040	Kidney	0,05*
1013050	Edible offal	0,05*
1013990	Others	0,05*

Code number	Groups and examples of individual products to which the MRLs apply (a)	Pyraclostrobin (F)
1014000	(d) Goat	0,05*
1014010	Meat	0,05*
1014020	Fat	0,05*
1014030	Liver	0,05*
1014040	Kidney	0,05*
1014050	Edible offal	0,05*
1014990	Others	0,05*
1015000	(e) Horses, asses, mules or hinnies	0,05*
1015010	Meat	0,05*
1015020	Fat	0,05*
1015030	Liver	0,05*
1015040	Kidney	0,05*
1015050	Edible offal	0,05*
1015990	Others	0,05*
1016000	(f) Poultry - chicken, geese, duck, turkey and Guinea fowl-, ostrich, pigeon	0,05*
1016010	Meat	0,05*
1016020	Fat	0,05*
1016030	Liver	0,05*
1016040	Kidney	0,05*
1016050	Edible offal	0,05*
1016990	Others	0,05*
1017000	(g) Other farm animals (Rabbit, Kangaroo)	0,05*
1017010	Meat	0,05*
1017020	Fat	0,05*
1017030	Liver	0,05*
1017040	Kidney	0,05*
1017050	Edible offal	0,05*
1017990	Others	0,05*

Code number	Groups and examples of individual products to which the MRLs apply (a)	Pyraclostrobin (F)
1020000	(ii) Milk and cream, not concentrated, nor containing added sugar or sweetening matter, butter and other fats derived from milk, cheese and curd	0,01*
1020010	Cattle	0,01*
1020020	Sheep	0,01*
1020030	Goat	0,01*
1020040	Horse	0,01*
1020990	Others	0,01*
1030000	(iii) Birds' eggs, fresh preserved or cooked Shelled eggs and egg yolks fresh, dried, cooked by steaming or boiling in water, moulded, frozen or otherwise preserved whether or not containing added sugar or sweetening matter	0,05*
1030010	Chicken	0,05*
1030020	Duck	0,05*
1030030	Goose	0,05*
1030040	Quail	0,05*
1030990	Others	0,05*
1040000	(iv) Honey (Royal jelly, pollen)	
1050000	(v) Amphibians and reptiles (Frog legs, crocodiles)	
1060000	(vi) Snails	
1070000	(vii) Other terrestrial animal products	
*- limit of analytical determination (F)- fat soluble		

## APPENDIX C – PESTICIDE RESIDUES INTAKE MODEL (PRIMO)

<b>Pyraclostrobin</b>			
Status of the active substance:	included	Code no.:	#N/A
LOQ (mg/kg bw):	0.02	proposed LOQ:	
Toxicological end points			
ADI (mg/kg bw/day):	0.03	ARfD (mg/kg bw):	0.03
Source of ADI:	COM	Source of ARfD:	COM
Year of evaluation:	2004	Year of evaluation:	2004

**Chronic risk assessment - refined calculations**

		TMDI (range) in % of ADI minimum - maximum							
		6                      41							
		<b>No of diets exceeding ADI:</b>		---					
Highest calculated TMDI values in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities	pTMRs at LOQ (in % of ADI)	
41.4	DE child	12.7	Oranges	12.1	Apples	4.2	Table grapes	0.9	
35.2	FR all population	26.7	Wine grapes	1.3	Other lettuce and other salad plants	1.1	Wheat	0.3	
34.4	NL child	10.4	Oranges	6.3	Oranges	2.5	Table grapes	1.7	
33.7	WHO Cluster diet B	11.9	Wine grapes	2.8	Wheat	2.8	Oranges	1.1	
30.2	IE adult	8.3	Wine grapes	3.5	Oranges	2.3	Grapefruit	1.1	
25.5	PT General population	16.6	Wine grapes	2.0	Oranges	1.3	Wheat	0.6	
22.9	WHO cluster diet E	10.7	Wine grapes	1.5	Oranges	1.3	Wheat	0.8	
20.7	FR toddler	6.7	Oranges	2.6	Apples	1.3	Milk and cream,	1.9	
18.5	UK Toddler	6.6	Oranges	1.7	Apples	1.5	Sugar beet (root)	2.6	
18.4	NL general	5.0	Oranges	4.2	Wine grapes	1.2	Apples	0.5	
17.9	ES child	7.2	Oranges	2.8	Lettuce	1.5	Wheat	0.8	
16.5	ES adult	4.3	Oranges	3.6	Lettuce	2.8	Wine grapes	0.4	
16.3	WHO Cluster diet F	4.0	Wine grapes	2.9	Oranges	2.0	Lettuce	0.6	
14.2	UK vegetarian	5.4	Wine grapes	2.9	Oranges	0.9	Lettuce	0.6	
14.1	DK adult	9.3	Wine grapes	0.8	Apples	0.7	Wheat	0.4	
14.0	WHO regional European diet	2.5	Lettuce	1.7	Oranges	1.5	Wine grapes	0.7	
13.7	UK Adult	7.2	Wine grapes	1.9	Oranges	0.8	Lettuce	0.5	
13.1	UK Infant	4.3	Oranges	1.6	Apples	1.3	Milk and cream,	2.5	
12.7	DK child	2.3	Apples	1.8	Wheat	1.5	Rye	0.8	
12.5	WHO cluster diet D	2.4	Wine grapes	2.2	Wheat	0.8	Oranges	0.7	
12.3	FR infant	3.0	Oranges	2.5	Apples	0.9	Carrots	1.3	
11.9	IT kids/toddler	2.2	Wheat	1.9	Lettuce	1.6	Oranges	0.3	
11.7	SE general population 90th percentile	2.5	Oranges	1.5	Mandarins	1.1	Wheat	1.0	
11.2	IT adult	2.5	Lettuce	1.4	Wheat	1.2	Oranges	0.2	
9.5	FI adult	3.2	Oranges	2.0	Wine grapes	0.5	Lettuce	0.3	
6.2	PL general population	2.0	Apples	1.1	Table grapes	0.6	Tomatoes	0.3	
5.5	LT adult	1.9	Apples	0.4	Lettuce	0.4	Tomatoes	0.4	

**Conclusion:**  
The estimated Theoretical Maximum Daily Intakes (TMDI), based on pTMRs were below the ADI.  
A long-term intake of residues of Pyraclostrobin is unlikely to present a public health concern.

Acute risk assessment /children - refined calculations	Acute risk assessment / adults / general population - refined calculations
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The acute risk assessment is based on the ARfD.

For each commodity the calculation is based on the highest reported MS consumption per kg bw and the corresponding unit weight from the MS with the critical consumption. If no data on the unit weight was available from that MS an average European unit weight was used for the IESTI calculation.

In the IESTI 1 calculation, the variability factors were 10, 7 or 5 (according to JMPR manual 2002), for lettuce a variability factor of 5 was used.

In the IESTI 2 calculations, the variability factors of 10 and 7 were replaced by 5. For lettuce the calculation was performed with a variability factor of 3.

Threshold MRL is the calculated residue level which would lead to an exposure equivalent to 100 % of the ARfD.

Unprocessed commodities	No of commodities for which ARfD/ADI is exceeded (IESTI 1):			No of commodities for which ARfD/ADI is exceeded (IESTI 2):			No of commodities for which ARfD/ADI is exceeded (IESTI 1):			No of commodities for which ARfD/ADI is exceeded (IESTI 2):		
	---			---			---			---		
	IESTI 1 *) **)			IESTI 2 *) **)			IESTI 1 *) **)			IESTI 2 *) **)		
	Highest % of ARfD/ADI	Commodities	pTMRL/ threshold MRL (mg/kg)	Highest % of ARfD/ADI	Commodities	pTMRL/ threshold MRL (mg/kg)	Highest % of ARfD/ADI	Commodities	pTMRL/ threshold MRL (mg/kg)	Highest % of ARfD/ADI	Commodities	pTMRL/ threshold MRL (mg/kg)
	41.2	Courgettes	0.266 / -	29.4	Courgettes	0.266 / -	23.9	Courgettes	0.266 / -	18.0	Courgettes	0.266 / -
14.5	Gherkins	0.266 / -	10.5	Gherkins	0.266 / -	4.4	Gherkins	0.266 / -	3.4	Gherkins	0.266 / -	
8.8	Beetroot	0.06 / -	6.5	Beetroot	0.06 / -	2.8	Beetroot	0.06 / -	2.2	Beetroot	0.06 / -	
No of critical MRLs (IESTI 1)			---			No of critical MRLs (IESTI 2)			---			

Processed commodities	No of commodities for which ARfD/ADI is exceeded:			No of commodities for which ARfD/ADI is exceeded:		
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	Highest % of ARfD/ADI	Processed commodities	pTMRL/ threshold MRL (mg/kg)	Highest % of ARfD/ADI	Processed commodities	pTMRL/ threshold MRL (mg/kg)

\*) The results of the IESTI calculations are reported for at least 5 commodities. If the ARfD is exceeded for more than 5 commodities, all IESTI values > 90% of ARfD are reported.

\*\*) pTMRL: provisional temporary MRL

\*\*\*) pTMRL: provisional temporary MRL for unprocessed commodity

**Conclusion:**

For Pyraclostrobin IESTI 1 and IESTI 2 were calculated for food commodities for which pTMRLs were submitted and for which consumption data are available.

No exceedance of the ARfD/ADI was identified for any unprocessed commodity.

For processed commodities, no exceedance of the ARfD/ADI was identified.



## GLOSSARY / ABBREVIATIONS

a.s.	active substance
ADI	acceptable daily intake
ARfD	acute reference dose
BBCH	Federal Biological Research Centre for Agriculture and Forestry (Germany)
bw	body weight
CF	conversion factor for enforcement residue definition to risk assessment residue definition
CXL	codex maximum residue limit
d	day
DAR	Draft Assessment Report (prepared under Directive 91/414/EEC)
DAT	days after treatment
DT <sub>90lab</sub>	period required for 90 percent dissipation (from laboratory studies)
DT <sub>90f</sub>	period required for 90 percent dissipation (from field studies)
dw	dry weight
EC	European Community
EFSA	European Food Safety Authority
EMS	Evaluating Member State
EU	European Union
GAP	good agricultural practice
GC	gas chromatography
GS	growth stage
ha	hectare
hL	hectolitre
HPLC	high performance liquid chromatography
HR	highest residue
ISO	International Organization for Standardization
IUPAC	International Union of Pure and Applied Chemistry
L	litre
LC	liquid chromatography
LC-MS	liquid chromatography-mass spectrometry
LC-MS-MS	liquid chromatography with tandem mass spectrometry
LOQ	limit of quantification
MRL	maximum residue limit
MS	Member States

NEU	Northern European Union
PHI	pre harvest interval
PRIMo	Pesticide Residues Intake Model
RMS	Rapporteur Member State
SEU	Southern European Union
STMR	supervised trials median residue
TMDI	theoretical maximum daily intake
TRR	total radioactive residue
UVD	ultra-violet detection
WG	water dispersible granules