



Proposals to Amend the New Zealand  
(Maximum Residue Limits of Agricultural  
Compounds) Food Standards 2009

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## Submissions

NZFSA seeks submissions from all interested parties on any aspect of the document. The following points may be of assistance in preparing comments:

- Wherever possible, comment should be specific to a particular section in the document. All major sections are numbered and these numbers should be used to link comments to the document.
- Omissions should be clearly and separately indicated.
- Comments should be to the point and, where possible, reasons and data to support comment are requested.
- The use of examples to illustrate particular points is encouraged.
- As a number of copies may be made of your comments, please use good quality type, or make sure the comments are clearly hand-written in black or blue ink.

Please include the following information in your submission:

- The title of the discussion document;
- Your name and title (if applicable);
- Your organisation's name (if applicable);
- Your address;
- The number(s) of the sections you are commenting on.

**Please submit your response by 5:00pm on Friday 22 February 2010 to:**

MRL Amendments, Policy Group, New Zealand Food Safety Authority

PO Box 2835, Wellington, fax: (04) 894 2583, or email: [policy@nzfsa.govt.nz](mailto:policy@nzfsa.govt.nz)

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## Introduction

The New Zealand Food Safety Authority (NZFSA) invites public comment on this discussion document which outlines proposals to amend the New Zealand (Maximum Residue Limits of Agricultural Compounds) Food Standards 2009.

Maximum residue limits (MRLs) are the maximum legal limits for residues of agricultural compounds and veterinary medicines in food for sale in New Zealand.

MRLs are primarily a tool for monitoring the use of agricultural compounds in accordance with good agricultural practice (GAP). GAP is not explicitly defined or regulated, but is the generally accepted means for producing safe primary produce in a particular location while taking account of climate, pests or diseases and other environmental factors.

MRLs are used to minimise risks to public health by ensuring that chemical residues in food are as low as practicable, without compromising the ability of the chemical to successfully do what is intended.

## Background

MRLs are set out in the New Zealand (Maximum Residue Limits of Agricultural Compounds) Food Standards. The Standards are amended a number of times each year to reflect changes in the use of agricultural compounds in the production of food. The current MRL Food Standards 2009 are on the NZFSA website at: <http://www.nzfsa.govt.nz/policy-law/legislation/food-standards/index.htm>

NZFSA administers the MRL Standards, but the final decision on any changes to the Standards rests with the Minister for Food Safety. Under section 11E of the Food Act, when amending or issuing the MRL Standards, the Minister must take into account the following:

- the need to protect public health
- the desirability of avoiding unnecessary restrictions on trade
- the desirability of maintaining consistency between New Zealand's food standards and those applying internationally
- New Zealand's obligations under any relevant international treaty, agreement, convention, or protocol, and, in particular, under the Australia-New Zealand Joint Food Standards Agreement
- such other matters as the Minister considers appropriate.

The proposed MRLs have been thoroughly assessed in accordance with international methodologies such as those utilised by the expert committees advising the Codex Alimentarius Commission (Codex). Information on the technical assessment of each proposal is included in this document and covers the following:

- rationale
- chemical information
- good agricultural practice (GAP)
- residues information
- dietary risk assessment
- toxicological / public health assessment
- international MRLs.

Possible implications for public health are considered during the toxicological and dietary risk assessments, by comparing the estimated dietary intake with a Potential Daily Exposure (food) ( $PDE_{\text{food}}$ ) or where there is no  $PDE_{\text{food}}$ , by comparing it with the Acceptable Daily Intake (ADI).  $PDE_{\text{food}}$  and ADI are described below.

A  $PDE_{\text{food}}$  or Potential Daily Exposure (food), is a value determined by a toxicological evaluation by Environmental Risk Management Authority New Zealand (ERMA NZ) as part of its responsibilities under the Hazardous Substances and New Organisms Act (the HSNO Act), which has some responsibility for managing public health.<sup>1</sup> A  $PDE_{\text{food}}$  gives the potential daily exposure a person may be subject to from a substance, via food. NZFSA uses a  $PDE_{\text{food}}$ , rather than the internationally-determined ADI, where a  $PDE_{\text{food}}$  is available, due to the HSNO Act in New Zealand. The ADI and  $PDE_{\text{food}}$  are largely equivalent, as they are determined using the same set of toxicology data and in a very similar scientific process.

An ADI or Acceptable Daily Intake is defined by the World Health Organization (WHO) as: “The daily intake which, during an entire lifetime, appears to be without appreciable risk on the basis of all the known facts at the time”. “Without appreciable risk” has been further defined as: “the practical certainty that injury will not result even after a lifetime of exposure”. ADIs are established by the WHO and Food and Agriculture Organization of the United Nations (FAO) joint expert committees, made up of toxicologists and residue specialists. The ADI information from these joint committees also feeds into the Codex Alimentarius Commission (Codex), which sets international MRLs.

NZFSA has reviewed the estimated dietary exposure assessments for the applications of these proposals and has determined that the residues associated with the proposed MRLs do not present any public health and safety concerns.

## Summary of Proposed Amendment

### New MRLs

NZFSA proposes to add the following new MRLs to the Standards:

- 0.1mg/kg for aviglycine in pome fruits and stonefruits (except cherries)
- 7mg/kg for chlorantraniliprole in leafy vegetables
- 0.01mg/kg\* for chlorantraniliprole in potatoes
- 0.01mg/kg\* for cyproconazole in bulb onions, garlic and peas
- 0.01mg/kg\* for diflufenican in barley and wheat
- 0.01mg/kg\* for fenoxaprop-P-ethyl in barley
- 0.05mg/kg\* for flufenacet in barley and wheat
- 0.5mg/kg for isopyrazam in barley
- 0.2mg/kg for isopyrazam in wheat
- 0.01mg/kg\* for metrafenone in pumpkins and winter squash;
- 0.5mg/kg for spiroteramat in potatoes
- 0.1mg/kg\* for tepraloxydim in onions
- 0.3mg/kg for thiacloprid in pome fruits

### MRL Deletions

NZFSA proposes to delete the following MRLs from the Standards

- MRLs for cypermethrin in kiwifruit and pome fruits

## Next Steps

Following the closing date for submissions (5:00pm on Friday 22 February 2010), all submissions will be considered and analysed before a recommendation is made to the Minister for Food Safety, the Hon Kate Wilkinson, who makes the final decision on issuing any amendments to the Food Standards.

If an amendment is agreed upon, it will be signed by the Minister for Food Safety and will come into force 28 days after being published in the *New Zealand Gazette*.

# 1 Proposal to set MRLs for Aviglycine

It is proposed that MRLs are set for aviglycine when used as a plant growth regulator for pome fruit and stone fruit. It is proposed that Schedule One of the NZ (MRL) Food Standards 2009 be amended to include the following, this will be the resulting entry for aviglycine in Schedule One of the NZ (MRL) Food Standards 2009:

Compound	CAS#	Residue definition	Food	Maximum Residue Limit (mg/kg)
Aviglycine	49669-74-1	Aviglycine	Pome fruits Stone fruits (except cherries)	0.1 0.1

## Amendment Rationale

The proposed MRLs represent a reassessment of the residue data held for the active ingredient aviglycine. MRLs of 0.1mg/kg are deemed appropriate to manage the uses of aviglycine as a plant growth regulator on pome fruits and stone fruits, to the application rates and withholding periods that are currently approved good agricultural practice in New Zealand.

## Chemical Information

<b>Common name of compound</b>	Aviglycine (AVG)
<b>Use of compound</b>	Plant growth regulator
<b>Chemical Abstract Services (CAS) Registry number</b>	49669-74-1
<b>Type of compound</b>	Ethylene inhibitor
<b>Administration method</b>	Spray

## Good Agricultural Practice (GAP)

Aviglycine is approved as a plant growth regulator on pome fruits and stone fruits, with the exception of cherries. Application is made less than 28 days prior to harvest at a rate of 124.5gai/ha, with a withholding period of 7 days.

## Residues Information

Reassessment of the residue data for pome fruits and stone fruits support MRLs of 0.1mg/kg for aviglycine when the treatment is made earlier than 7 days before harvest. MRLs of 0.1mg/kg are therefore proposed to support GAP. No MRLs are proposed for cherries as there is no GAP for this crop specified in New Zealand.

## Dietary Risk Assessment

<b>Acceptable Daily Intake</b>	0.006mg/kg bw/day
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The potential daily exposure via food ( $PDE_{(food)}$ ) is used for dietary intake calculation where a value has been set. An appropriate acceptable daily intake (ADI) is used in the absence of a  $PDE_{(food)}$ .

The  $PDE_{(food)}$  is a value set by the Environmental Risk Management Authority (ERMA), which represents the proportion of the acceptable daily exposure (ADE) to a substance via the food route as relevant to the New Zealand population. The methodology for calculation of these values is set out in the Hazardous Substances (classes 6, 8, and 9 controls) regulations 2001 and can be found at [www.legislation.govt.nz](http://www.legislation.govt.nz).

The chronic dietary exposure to aviglycine is estimated by the National Estimated Dietary Intake (NEDI) calculation encompassing all registered uses of the chemical and food consumption data based upon the 1997 National Nutritional Survey for adults and the 1995 National Nutrition Survey of Australia, for children. The NEDI calculation is made in accordance with *Guidelines for predicting dietary intake of pesticide residues (revised)* [World Health Organisation, 1997].

The NEDI for aviglycine is equivalent to 1.35% of the ADI. It is therefore concluded that the chronic dietary exposure is small and the risk is acceptable.

## Toxicological / Public Health Assessment

It has been determined that the use of aviglycine as a plant growth regulator on pome fruits and stone fruits according to the good agricultural practice specified above, is very unlikely to pose any health risks from consumption of treated produce.

## Other International MRLs

Compound	Food	Maximum Residue Limit (mg/kg)
<b>Australia</b>		
Aminoethoxyvinylglycine	Apple	0.1
	Stone fruit [except cherries]	0.2
<b>USA</b>		
Aminoethoxyvinylglycine hydrochloride (Aviglycine HCl)	Apple	0.08
	Fruit, stone, group 12, except cherry	0.17
	Pear	0.08

Under Provision (3)(b) of the NZ (MRL) Food Standards 2009 imported food may contain residues of agricultural compounds no greater than the MRLs specified for that food in the current editions or supplements of the FAO/WHO Codex Alimentarius Commission publications titled "Pesticide Residues in Food" or "Residues of Veterinary Drugs in Foods".

To meet New Zealand's obligations under the Agreement on the Application of Sanitary and Phytosanitary Measures the proposed MRLs will be notified to the World Trade Organization. Any country may choose to comment if they believe the proposed MRLs represents a barrier to their trade.

## 2 Proposal to set MRLs for Chlorantraniliprole

It is proposed that MRLs are set for chlorantraniliprole when used as an insecticide on leafy vegetables and potatoes. It is proposed that Schedule One of the NZ (MRL) Food Standards 2009 be amended to include the following:

Compound	CAS#	Residue definition	Food	Maximum Residue Limit (mg/kg)
Chlorantraniliprole	500008-45-7	Chlorantraniliprole	Leafy vegetables Potatoes	7 0.01(*)

NOTE: (\*) indicates that the maximum residue limit has been set at or about the limit of analytical quantification.

The final entry for chlorantraniliprole in Schedule One of the NZ (MRL) Food Standards 2009 will therefore read:

Compound	CAS#	Residue definition	Food	Maximum Residue Limit (mg/kg)
Chlorantraniliprole	500008-45-7	Chlorantraniliprole	Brassica vegetables Leafy vegetables Pome fruits Potatoes	0.3 7 0.3 0.01(*)

NOTE: (\*) indicates that the maximum residue limit has been set at or about the limit of analytical quantification.

### Amendment Rationale

The proposed MRLs represent new use patterns in New Zealand for the active ingredient chlorantraniliprole. The proposed MRL will manage the new uses of chlorantraniliprole as an insecticide for control of caterpillars, to the application rates and withholding periods that are proposed good agricultural practice in New Zealand.

### Chemical Information

<b>Common name of compound</b>	Chlorantraniliprole
<b>Use of compound</b>	Insecticide
<b>Chemical Abstract Services (CAS) Registry number</b>	500008-45-7
<b>Type of compound</b>	Diamide
<b>Administration method</b>	Spray

## Good Agricultural Practice (GAP)

Chlorantraniliprole is proposed for use as an insecticide for control of caterpillars on leafy vegetables. Application is made up to 3 times a season with an interval of 7 days between sprays, at a rate of 20gai/ha, with a withholding period of 3 days.

Chlorantraniliprole is also proposed for use as an insecticide for control of caterpillars on potatoes. Application is made up to 3 times a season with an interval of 7-14 days between sprays, at a rate of 20gai/ha, with a withholding period of 0 days.

## Residues Information

Residue data for leafy vegetables supports an MRL of 7mg/kg for chlorantraniliprole when the last treatment is made 3 days before harvest. An MRL of 7mg/kg is therefore proposed to support GAP.

Residue data for potatoes supports a limit of quantification MRL of 0.01mg/kg for chlorantraniliprole when the last treatment is made 0 days before harvest. An MRL of 0.01mg/kg\* is therefore proposed to support GAP.

## Dietary Risk Assessment

<b>Potential daily exposure via food (PDE<sub>(food)</sub>)</b>	1.58mg/kg bw/day
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The potential daily exposure via food (PDE<sub>(food)</sub>) is used for dietary intake calculation where a value has been set. An appropriate acceptable daily intake (ADI) is used in the absence of a PDE<sub>(food)</sub>.

The PDE<sub>(food)</sub> is a value set by the Environmental Risk Management Authority (ERMA), which represents the proportion of the acceptable daily exposure (ADE) to a substance via the food route as relevant to the New Zealand population. The methodology for calculation of these values is set out in the Hazardous Substances (classes 6, 8, and 9 controls) regulations 2001 and can be found at [www.legislation.govt.nz](http://www.legislation.govt.nz).

The chronic dietary exposure to chlorantraniliprole is estimated by the National Estimated Dietary Intake (NEDI) calculation encompassing all registered uses of the chemical and food consumption data based upon the 1997 National Nutritional Survey for adults and the 1995 National Nutrition Survey of Australia, for children. The NEDI calculation is made in accordance with *Guidelines for predicting dietary intake of pesticide residues (revised)* [World Health Organisation, 1997].

The NEDI for chlorantraniliprole is equivalent to less than 1% of the ADI. It is therefore concluded that the chronic dietary exposure is small and the risk is acceptable.

## Toxicological / Public Health Assessment

It has been determined that the use of chlorantraniliprole as an insecticide for leafy vegetables, according to the good agricultural practice specified above, is very unlikely to pose any health risks from consumption of treated produce.

## Other International MRLs

Compound	Food	Maximum Residue Limit (mg/kg)
<b>Australia</b>		
Chlorantraniliprole	Leafy vegetables (except lettuce, head and rucola)	15
	Lettuce, head	3
	Potatoes	0.01*
<b>EU</b>		
Chlorantraniliprole	Lettuce and other salad plants including Brassicacea	10
	Spinach & similar (leaves)	20
	Potatoes	0.01*

Under Provision (3)(b) of the NZ (MRL) Food Standards 2009 imported food may contain residues of agricultural compounds no greater than the MRLs specified for that food in the current editions or supplements of the FAO/WHO Codex Alimentarius Commission publications titled "Pesticide Residues in Food" or "Residues of Veterinary Drugs in Foods".

To meet New Zealand's obligations under the Agreement on the Application of Sanitary and Phytosanitary Measures the proposed MRLs will be notified to the World Trade Organization. Any country may choose to comment if they believe the proposed MRLs represents a barrier to their trade.

### 3 Proposal to set MRLs for Cyproconazole

It is proposed that MRLs are set for cyproconazole when used as a fungicide for garlic, bulb onions and peas. It is proposed that Schedule One of the NZ (MRL) Food Standards 2009 be amended to include the following, this will be the resulting entry for cyproconazole in Schedule One of the NZ (MRL) Food Standards 2009:

Compound	CAS#	Residue definition	Food	Maximum Residue Limit (mg/kg)
Cyproconazole	94361-06-5	Cyproconazole, sum of isomers	Bulb onions	0.01(*)
			Garlic	0.01(*)
			Peas	0.01(*)

#### Amendment Rationale

The proposed MRLs represent a reassessment of the residue data held for the active ingredient cyproconazole. MRLs of 0.01mg/kg are deemed appropriate to manage the uses of cyproconazole as a fungicide for garlic, bulb onions and peas, to the application rates and withholding periods that are currently approved good agricultural practice in New Zealand

#### Chemical Information

<b>Common name of compound</b>	Cyproconazole
<b>Use of compound</b>	Fungicide
<b>Chemical Abstract Services (CAS) Registry number</b>	94361-06-5
<b>Type of compound</b>	DMI fungicide
<b>Administration method</b>	Spray

#### Good Agricultural Practice (GAP)

Cyproconazole is approved as a fungicide on peas. Application is as a protective spray made up to a maximum of two times a season at a rate of 25gai/ha, with a withholding period of 14 days.

Cyproconazole is approved as a fungicide on onions and garlic. Application is up to four times over the growing season from 6 weeks of planting, at a rate of 150gai/ha, with a withholding period of 21 days.

#### Residues Information

Reassessment of the residue data for garlic, bulb onions and peas support a limit of quantification MRLs of 0.01mg/kg for cyproconazole when the treatment is made earlier than 14 days before harvest

for peas and 21 days before harvest for garlic and bulb onions. MRLs of 0.01mg/kg are therefore proposed to support GAP.

### Dietary Risk Assessment

<b>Acceptable Daily Intake</b>	0.004mg/kg bw/day
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The potential daily exposure via food ( $PDE_{(food)}$ ) is used for dietary intake calculation where a value has been set. An appropriate acceptable daily intake (ADI) is used in the absence of a  $PDE_{(food)}$ .

The  $PDE_{(food)}$  is a value set by the Environmental Risk Management Authority (ERMA), which represents the proportion of the acceptable daily exposure (ADE) to a substance via the food route as relevant to the New Zealand population. The methodology for calculation of these values is set out in the Hazardous Substances (classes 6, 8, and 9 controls) regulations 2001 and can be found at [www.legislation.govt.nz](http://www.legislation.govt.nz).

The chronic dietary exposure to cyproconazole is estimated by the National Estimated Dietary Intake (NEDI) calculation encompassing all registered uses of the chemical and food consumption data based upon the 1997 National Nutritional Survey for adults and the 1995 National Nutrition Survey of Australia, for children. The NEDI calculation is made in accordance with *Guidelines for predicting dietary intake of pesticide residues (revised)* [World Health Organisation, 1997].

The NEDI for cyproconazole is equivalent to 12% of the ADI. It is therefore concluded that the chronic dietary exposure is small and the risk is acceptable.

### Toxicological / Public Health Assessment

It has been determined that the use of cyproconazole as a fungicide for garlic, bulb onions and peas, according to the good agricultural practice specified above, is very unlikely to pose any health risks from consumption of treated produce.

### Other International MRLs

Compound	Food	Maximum Residue Limit (mg/kg)
<b>EU</b>		
Cyproconazole	Garlic	0.05*
	Onions (silverskin onions)	0.05*
	Peas (without pods)	0.05*

Under Provision (3)(b) of the NZ (MRL) Food Standards 2009 imported food may contain residues of agricultural compounds no greater than the MRLs specified for that food in the current editions or supplements of the FAO/WHO Codex Alimentarius Commission publications titled "Pesticide Residues in Food" or "Residues of Veterinary Drugs in Foods".

To meet New Zealand's obligations under the Agreement on the Application of Sanitary and Phytosanitary Measures the proposed MRLs will be notified to the World Trade Organization. Any country may choose to comment if they believe the proposed MRLs represents a barrier to their trade.

## 4 Proposal to set MRLs for Diflufenican

It is proposed that MRLs are set for diflufenican when used as a herbicide for control of broad-leaf and grass weeds around barley and wheat. It is proposed that Schedule One of the NZ (MRL) Food Standards 2009 be amended to include the following, this will be the resulting entry for diflufenican in Schedule One of the NZ (MRL) Food Standards 2009:

Compound	CAS#	Residue definition	Food	Maximum Residue Limit (mg/kg)
Diflufenican	83164-33-4	Diflufenican	Barley Wheat	0.01(*) 0.01(*)

NOTE: (\*) indicates that the maximum residue limit has been set at or about the limit of analytical quantification.

### Amendment Rationale

The proposed MRLs represent a new use pattern in New Zealand for the active ingredient diflufenican. The proposed MRLs will manage the new use of diflufenican as a herbicide on barley and wheat, to the application rates and withholding periods that are approved good agricultural practice in New Zealand

### Chemical Information

<b>Common name of compound</b>	Diflufenican
<b>Use of compound</b>	Herbicide
<b>Chemical Abstract Services (CAS) Registry number</b>	83164-33-4
<b>Type of compound</b>	Anilide
<b>Administration method</b>	Spray

### Good Agricultural Practice

Diflufenican is proposed for use as a herbicide for barley and wheat. Application is once in the season prior to growth stage 21(single tiller) at a rate of 60gai/ha.

### Residues Information

Residue data for barley and wheat supports limit of quantification MRLs of 0.01mg/kg for diflufenican when the last treatment is made prior to growth stage 21. An MRL of 0.01mg/kg is therefore proposed to support GAP.

## Dietary Risk Assessment

<b>Acceptable Daily Intake</b>	0.2mg/kg bw/day
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The potential daily exposure via food ( $PDE_{(food)}$ ) is used for dietary intake calculation where a value has been set. An appropriate acceptable daily intake (ADI) is used in the absence of a  $PDE_{(food)}$ .

The  $PDE_{(food)}$  is a value set by the Environmental Risk Management Authority (ERMA), which represents the proportion of the acceptable daily exposure (ADE) to a substance via the food route as relevant to the New Zealand population. The methodology for calculation of these values is set out in the Hazardous Substances (classes 6, 8, and 9 controls) regulations 2001 and can be found at [www.legislation.govt.nz](http://www.legislation.govt.nz).

The chronic dietary exposure to diflufenican is estimated by the National Estimated Dietary Intake (NEDI) calculation encompassing all registered uses of the chemical and food consumption data based upon the 1997 National Nutritional Survey for adults and the 1995 National Nutrition Survey of Australia, for children. The NEDI calculation is made in accordance with *Guidelines for predicting dietary intake of pesticide residues (revised)* [World Health Organisation, 1997].

The NEDI for diflufenican is equivalent to less than 0.1% of the ADI. It is therefore concluded that the chronic dietary exposure is small and the risk is acceptable.

## Toxicological / Public Health Assessment

It has been determined that the use of diflufenican as a herbicide on barley and wheat according to the good agricultural practice specified above, is very unlikely to pose any health risks from consumption of treated produce.

## Other International MRLs

Compound	Food	Maximum Residue Limit (mg/kg)
<b>Australia</b>		
Diflufenican	Barley Wheat	0.05 0.02
<b>EU</b>		
Diflufenican	Cereals	0.05*

Under Provision (3)(b) of the NZ (MRL) Food Standards 2009 imported food may contain residues of agricultural compounds no greater than the MRLs specified for that food in the current editions or supplements of the FAO/WHO Codex Alimentarius Commission publications titled "Pesticide Residues in Food" or "Residues of Veterinary Drugs in Foods".

To meet New Zealand's obligations under the Agreement on the Application of Sanitary and Phytosanitary Measures the proposed MRLs will be notified to the World Trade Organization. Any country may choose to comment if they believe the proposed MRLs represents a barrier to their trade.

## 5 Proposal to set an MRL for Fenoxaprop-P-ethyl

It is proposed that an MRL is set for fenoxaprop-p-ethyl when used as a herbicide on barley. It is proposed that Schedule One of the NZ (MRL) Food Standards 2009 be amended to include the following :

Compound	CAS#	Residue definition	Food	Maximum Residue Limit (mg/kg)
Fenoxaprop-P-ethyl	71283-80-2	<i>Sum of:</i> Fenoxaprop-P-ethyl (all isomers), 2-(4-(6-chloro-2-benzoxazolylloxy)-phenoxy)-propionic acid and 6-chloro-2,3-dihydro-benzoxazol-2-one <i>Expressed as:</i> Fenoxaprop-P-ethyl	Barley	0.01(*)

The final entry for fenoxaprop-p-ethyl in Schedule One of the NZ (MRL) Food Standards 2009 will therefore read:

Compound	CAS#	Residue definition	Food	Maximum Residue Limit (mg/kg)
Fenoxaprop-P-ethyl	71283-80-2	<i>Sum of:</i> Fenoxaprop-P-ethyl (all isomers), 2-(4-(6-chloro-2-benzoxazolylloxy)-phenoxy)-propionic acid and 6-chloro-2,3-dihydro-benzoxazol-2-one <i>Expressed as:</i> Fenoxaprop-P-ethyl	Barley Cattle fat Cattle meat Edible offal of cattle Edible offal of goat Edible offal of sheep Goat fat Goat meat Sheep fat Sheep meat Wheat	0.01(*) 0.02(*) 0.02(*) 0.05 0.05 0.05 0.02(*) 0.02(*) 0.02(*) 0.02(*) 0.02(*)

### Amendment Rationale

The proposed MRL represents a new use for the herbicide fenoxaprop-p-ethyl to control wild oats and canary grass in barley. The proposed MRL will manage the use of fenoxaprop-P-ethyl to good agricultural practice

## Chemical Information

<b>Common name of compound</b>	Fenoxaprop-P-ethyl
<b>Use of compound</b>	Herbicide
<b>Chemical Abstract Services (CAS) Registry number</b>	71283-80-2
<b>Type of compound</b>	Aryloxyphenoxypropionic acid
<b>Administration method</b>	Broadcast spray

## Good Agricultural Practice

Fenoxaprop-P-ethyl is proposed for use as a herbicide for control of wild oats and canary grass in barley as a single application post emergence of 51.75gai/ha made 70 days before harvest.

## Residues Information

Residue data for barley supports a limit of quantification MRL of 0.01mg/kg at harvest following application of fenoxaprop-P-ethyl 70 days before harvest. An MRL of 0.01mg/kg is therefore proposed to support GAP.

## Dietary Risk Assessment

<b>Acceptable Daily Intake</b>	0.0014mg/kg bw/day
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The potential daily exposure via food ( $PDE_{(food)}$ ) is used for dietary intake calculation where a value has been set. An appropriate acceptable daily intake (ADI) is used in the absence of a  $PDE_{(food)}$ .

The chronic dietary exposure to fenoxaprop-p-ethyl is estimated by the National Estimated Dietary Intake (NEDI) calculation encompassing all registered uses of the chemical and food consumption data based upon the 1997 National Nutritional Survey for adults and the 1995 National Nutrition Survey of Australia, for children. The NEDI calculation is made in accordance with *Guidelines for predicting dietary intake of pesticide residues (revised)* [World Health Organisation, 1997].

The NEDI for fenoxaprop-P-ethyl is equivalent to 7% of the ADI. It is therefore concluded that the chronic dietary exposure is small and the risk is acceptable.

## Toxicological / Public Health Assessment

It has been determined that the use of fenoxaprop-P-ethyl as a herbicide for the control of wild oats and canary grass in barley in accordance with the specified good agricultural practice, is very unlikely to pose any health risks from consumption of the harvested commodity.

To meet New Zealand's obligations under the Agreement on the Application of Sanitary and Phytosanitary Measures the proposed MRLs will be notified to the World Trade Organization. Any country may choose to comment if they believe the proposed MRLs represents a barrier to their trade.

## 6 Proposal to set MRLs for Flufenacet

It is proposed that MRLs are set for flufenacet when used as a herbicide for the control of broad-leaf and grass weeds around barley and wheat. It is proposed that Schedule One of the NZ (MRL) Food Standards 2009 be amended to include the following, this will be the resulting entry for flufenacet in Schedule One of the NZ (MRL) Food Standards 2009:

Compound	CAS#	Residue definition	Food	Maximum Residue Limit (mg/kg)
Flufenacet	142459-58-3	<i>Sum of:</i> Flufenacet, flufenacet sulfonic acid, flufenacet thioglycolate sulfoxide and flufenact oxalate <i>Expressed as:</i> Flufenacet	Barley Wheat	0.05(*) 0.05(*)

NOTE: (\*) indicates that the maximum residue limit has been set at or about the limit of analytical quantification.

### Amendment Rationale

The proposed MRLs represent a new registration in New Zealand for the active ingredient flufenacet. The proposed MRLs will manage the new use of flufenacet as a herbicide for the control of broad-leaf and grass weeds around barley and wheat, to the application rates and withholding periods that are approved good agricultural practice in New Zealand.

### Chemical Information

<b>Common name of compound</b>	Flufenacet
<b>Use of compound</b>	Herbicide
<b>Chemical Abstract Services (CAS) Registry number</b>	142459-58-3
<b>Type of compound</b>	Oxyacetamide
<b>Administration method</b>	Spray

### Good Agricultural Practice

Flufenacet is proposed for use as a herbicide for barley and wheat. Application is once in the season prior to growth stage 21(single tiller) at a rate of 120gai/ha.

## Residues Information

Residue data for barley and wheat supports limit of quantification MRLs of 0.05mg/kg for flufenacet when the last treatment is made prior to growth stage 21. MRLs of 0.05mg/kg are therefore proposed to support GAP.

## Dietary Risk Assessment

<b>Potential daily exposure via food (PDE<sub>(food)</sub>)</b>	0.008mg/kg bw/day
<b>Acute Reference Dose (ARfD)</b>	0.017mg/kg bw

The potential daily exposure via food (PDE<sub>(food)</sub>) is used for dietary intake calculation where a value has been set. An appropriate acceptable daily intake (ADI) is used in the absence of a PDE<sub>(food)</sub>.

The PDE<sub>(food)</sub> is a value set by the Environmental Risk Management Authority (ERMA), which represents the proportion of the acceptable daily exposure (ADE) to a substance via the food route as relevant to the New Zealand population. The methodology for calculation of these values is set out in the Hazardous Substances (classes 6, 8, and 9 controls) regulations 2001 and can be found at [www.legislation.govt.nz](http://www.legislation.govt.nz).

The chronic dietary exposure to flufenacet is estimated by the National Estimated Dietary Intake (NEDI) calculation encompassing all registered uses of the chemical and food consumption data based upon the 1997 National Nutritional Survey for adults and the 1995 National Nutrition Survey of Australia, for children. The NEDI calculation is made in accordance with *Guidelines for predicting dietary intake of pesticide residues (revised)* [World Health Organisation, 1997].

The NEDI for flufenacet is equivalent to 1.5% of the PDE<sub>(food)</sub>. It is therefore concluded that the chronic dietary exposure is small and the risk is acceptable.

The ARfD is a value set by the Environmental Risk Management Authority (ERMA) which represents the health standard for short term intake of a substance relevant to the New Zealand population.

The acute dietary exposure to flufenacet is estimated by the National Estimated Short Term Intake (NESTI) calculation encompassing 97.5<sup>th</sup> percentile high consumers of an individual commodity, containing the highest residue, based upon the 1997 National Nutritional Survey for adults.

The NESTI for flufenacet for either wheat or barley is equivalent to less than 2% of the ARfD. It is therefore concluded that the acute dietary exposure is acceptable.

## Toxicological / Public Health Assessment

It has been determined that the use of flufenacet when used as a herbicide for the control of broad-leaf and grass weeds around barley and wheat according to the good agricultural practice specified above, is very unlikely to pose any health risks from consumption of treated produce.

## Other International MRLs

Compound	Food	Maximum Residue Limit (mg/kg)
<b>EU</b>		
Flufenacet	Cereals	0.05*

Under Provision (3)(b) of the NZ (MRL) Food Standards 2009 imported food may contain residues of agricultural compounds no greater than the MRLs specified for that food in the current editions or supplements of the FAO/WHO Codex Alimentarius Commission publications titled "Pesticide Residues in Food" or "Residues of Veterinary Drugs in Foods".

To meet New Zealand's obligations under the Agreement on the Application of Sanitary and Phytosanitary Measures the proposed MRLs will be notified to the World Trade Organization. Any country may choose to comment if they believe the proposed MRLs represents a barrier to their trade.

## 7 Proposal to set MRLs for Isopyrazam

It is proposed that MRLs are set for isopyrazam when used as a fungicide on barley and wheat. It is proposed that Schedule One of the NZ (MRL) Food Standards 2009 be amended to include the following, this will be the resulting entry for isopyrazam in Schedule One of the NZ (MRL) Food Standards 2009:

Compound	CAS#	Residue definition	Food	Maximum Residue Limit (mg/kg)
Isopyrazam	881685-58-1	Isopyrazam (sum of isomers)	Barley Wheat	0.5 0.2

### Amendment Rationale

The proposed MRLs represent a new registration in New Zealand for the active ingredient isopyrazam. The proposed MRLs will manage the use of isopyrazam when used as a fungicide on barley and wheat, to the application rates and withholding periods that are approved good agricultural practice in New Zealand.

### Chemical Information

<b>Common name of compound</b>	Isopyrazam
<b>Use of compound</b>	Fungicide
<b>Chemical Abstract Services (CAS) Registry number</b>	881685-58-1
<b>Type of compound</b>	Carboxamide
<b>Administration method</b>	Spray

### Good Agricultural Practice

Isopyrazam is proposed for use as a fungicide for barley. Application is twice in the season prior to growth stage 59(ear emergence) at a rate of 75gai/ha. The proposed withholding period for grain is 42 days.

Isopyrazam is proposed for use as a fungicide for wheat. Application is twice in the season prior to growth stage 69(end of flowering) at a rate of 75-125gai/ha. The proposed withholding period is 42 days.

### Residues Information

Residue data for barley supports an MRL of 0.5mg/kg for isopyrazam when the last treatment is made 42 days before harvest. An MRL of 0.5mg/kg is therefore proposed to support GAP.

Residue data for wheat supports an MRL of 0.2mg/kg for isopyrazam when the last treatment is made 42 days before harvest. An MRL of 0.2mg/kg is therefore proposed to support GAP.

### Dietary Risk Assessment

<b>Potential daily exposure via food (PDE<sub>(food)</sub>)</b>	0.0385mg/kg bw/day (provisional)
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The potential daily exposure via food (PDE<sub>(food)</sub>) is used for dietary intake calculation where a value has been set. An appropriate acceptable daily intake (ADI) is used in the absence of a PDE<sub>(food)</sub>.

The PDE<sub>(food)</sub> is a value set by the Environmental Risk Management Authority (ERMA), which represents the proportion of the acceptable daily exposure (ADE) to a substance via the food route as relevant to the New Zealand population. The methodology for calculation of these values is set out in the Hazardous Substances (classes 6, 8, and 9 controls) regulations 2001 and can be found at [www.legislation.govt.nz](http://www.legislation.govt.nz).

The chronic dietary exposure to isopyrazam is estimated by the National Estimated Dietary Intake (NEDI) calculation encompassing all registered uses of the chemical and food consumption data based upon the 1997 National Nutritional Survey for adults and the 1995 National Nutrition Survey of Australia, for children. The NEDI calculation is made in accordance with *Guidelines for predicting dietary intake of pesticide residues (revised)* [World Health Organisation, 1997].

The NEDI for isopyrazam is equivalent to 1% of the PDE<sub>(food)</sub>. It is therefore concluded that the chronic dietary exposure is small and the risk is acceptable.

### Toxicological / Public Health Assessment

It has been determined that the use of isopyrazam when used as a fungicide on barley and wheat according to the good agricultural practice specified above, is very unlikely to pose any health risks from consumption of treated produce.

### Other International MRLs

Under Provision (3)(b) of the NZ (MRL) Food Standards 2009 imported food may contain residues of agricultural compounds no greater than the MRLs specified for that food in the current editions or supplements of the FAO/WHO Codex Alimentarius Commission publications titled "Pesticide Residues in Food" or "Residues of Veterinary Drugs in Foods".

To meet New Zealand's obligations under the Agreement on the Application of Sanitary and Phytosanitary Measures the proposed MRL will be notified to the World Trade Organization. Any country may choose to comment if they believe the proposed MRL represents a barrier to their trade.

## 8 Proposal to set MRLs for Metrafenone

It is proposed that MRLs are set for metrafenone when used as a fungicide for pumpkins and winter squash. It is proposed that Schedule One of the NZ (MRL) Food Standards 2009 be amended to include the following, this will be the resulting entry for Metrafenone in Schedule One of the NZ (MRL) Food Standards 2009:

Compound	CAS#	Residue definition	Food	Maximum Residue Limit (mg/kg)
Metrafenone	220899-03-6	Metrafenone	Pumpkins Winter Squash	0.01* 0.01*

NOTE: (\*) indicates that the maximum residue limit has been set at or about the limit of analytical quantification.

### Amendment Rationale

The proposed MRLs represent a new registration in New Zealand for the active ingredient metrafenone. The proposed MRLs will manage the new uses of metrafenone as a fungicide on pumpkins and winter squash, to the application rates and withholding periods that are approved good agricultural practice in New Zealand.

### Chemical Information

Common name of compound	Metrafenone
Use of compound	Fungicide
Chemical Abstract Services (CAS) Registry number	220899-03-6
Type of compound	Benzophenone
Administration method	Spray

### Good Agricultural Practice

Metrafenone is proposed for use as a fungicide for pumpkins and winter squash. Application is twice throughout crop growth in rotation with other protective fungicides at a rate of 150gai/ha, with a withholding period of 14 days.

### Residues Information

Residue data for pumpkins and winter squash supports a limit of quantification MRL of 0.01mg/kg for metrafenone when the last treatment is made 14 days before harvest. An MRL of 0.01mg/kg is therefore proposed to support GAP.

## Dietary Risk Assessment

<b>Potential daily exposure via food (PDE<sub>(food)</sub>)</b>	0.18mg/kg bw/day
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The potential daily exposure via food (PDE<sub>(food)</sub>) is used for dietary intake calculation where a value has been set. An appropriate acceptable daily intake (ADI) is used in the absence of a PDE<sub>(food)</sub>.

The PDE<sub>(food)</sub> is a value set by the Environmental Risk Management Authority (ERMA), which represents the proportion of the acceptable daily exposure (ADE) to a substance via the food route as relevant to the New Zealand population. The methodology for calculation of these values is set out in the Hazardous Substances (classes 6, 8, and 9 controls) regulations 2001 and can be found at [www.legislation.govt.nz](http://www.legislation.govt.nz).

The chronic dietary exposure to metrafenone is estimated by the National Estimated Dietary Intake (NEDI) calculation encompassing all registered uses of the chemical and food consumption data based upon the 1997 National Nutritional Survey for adults and the 1995 National Nutrition Survey of Australia, for children. The NEDI calculation is made in accordance with *Guidelines for predicting dietary intake of pesticide residues (revised)* [World Health Organisation, 1997].

The NEDI for metrafenone is equivalent to 0.002% of the PDE<sub>(food)</sub>. It is therefore concluded that the chronic dietary exposure is small and the risk is acceptable.

## Toxicological / Public Health Assessment

It has been determined that the use of metrafenone as a fungicide for use on pumpkins and winter squash according to the good agricultural practice specified above, is very unlikely to pose any health risks from consumption of treated produce.

## Other International MRLs

Compound	Food	Maximum Residue Limit (mg/kg)
<b>EU</b>		
Metrafenone	Pumpkins (Winter squash)	0.05*

Under Provision (3)(b) of the NZ (MRL) Food Standards 2009 imported food may contain residues of agricultural compounds no greater than the MRLs specified for that food in the current editions or supplements of the FAO/WHO Codex Alimentarius Commission publications titled "Pesticide Residues in Food" or "Residues of Veterinary Drugs in Foods".

To meet New Zealand's obligations under the Agreement on the Application of Sanitary and Phytosanitary Measures the proposed MRL will be notified to the World Trade Organization. Any country may choose to comment if they believe the proposed MRL represents a barrier to their trade.

## 9 Proposal to set an MRL for Spirotetramat

It is proposed that an MRL is set for spirotetramat when used as an insecticide for control of psyllid on potatoes. It is proposed that Schedule One of the NZ (MRL) Food Standards 2009 be amended to include the following, this will be the resulting entry for spirotetramat in Schedule One:

Compound	CAS#	Residue definition	Food	Maximum Residue Limit (mg/kg)
Spirotetramat	203313-25-1	Sum of: Spirotetramat and its enol metabolite Expressed as: Spiroteramat	Potatoes	0.5

### Amendment Rationale

The proposed MRL represents a new use pattern in New Zealand for the active ingredient spirotetramat. The proposed MRL will manage the new use of spirotetramat as an insecticide for control of psyllid on potatoes, to the application rates and withholding periods that are proposed good agricultural practice in New Zealand.

### Chemical Information

Common name of compound	Spirotetramat
Use of compound	Insecticide
Chemical Abstract Services (CAS) Registry number	203313-25-1
Type of compound	Tetramic acid
Administration method	Spray

### Good Agricultural Practice

Spirotetramat is proposed for use as an insecticide for control of psyllid on potatoes. Application is made twice during growth as part of a psyllid control programme, at a rate of 84gai/ha, with a withholding period of 7 days.

### Residues Information

Residue data for potatoes supports an MRL of 0.5mg/kg for spirotetramat when the last treatment is made 7 days before harvest. An MRL of 0.5mg/kg is therefore proposed to support GAP.

### Dietary Risk Assessment

Potential daily exposure via food ( $PDE_{(food)}$ )	0.09mg/kg bw/day
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The potential daily exposure via food ( $PDE_{(food)}$ ) is used for dietary intake calculation where a value has been set. An appropriate acceptable daily intake (ADI) is used in the absence of a  $PDE_{(food)}$ .

The  $PDE_{(food)}$  is a value set by the Environmental Risk Management Authority (ERMA), which represents the proportion of the acceptable daily exposure (ADE) to a substance via the food route as relevant to the New Zealand population. The methodology for calculation of these values is set out in the Hazardous Substances (classes 6, 8, and 9 controls) regulations 2001 and can be found at [www.legislation.govt.nz](http://www.legislation.govt.nz).

The chronic dietary exposure to spirotetramat is estimated by the National Estimated Dietary Intake (NEDI) calculation encompassing all registered uses of the chemical and food consumption data based upon the 1997 National Nutritional Survey for adults and the 1995 National Nutrition Survey of Australia, for children. The NEDI calculation is made in accordance with *Guidelines for predicting dietary intake of pesticide residues (revised)* [World Health Organisation, 1997].

The NEDI for spirotetramat is equivalent to 1.1% of the  $PDE_{(food)}$ . It is therefore concluded that the chronic dietary exposure is acceptable.

### Toxicological / Public Health Assessment

It has been determined that the use of spirotetramat as an insecticide for control of psyllid on potatoes, according to the good agricultural practice specified above, is very unlikely to pose any health risks from consumption of the harvested commodity.

### Other International MRLs

Compound	Food	Maximum Residue Limit (mg/kg)
<b>EU</b>		
Spirotetramat	Potatoes	0.1*
<b>Codex</b>		
Spirotetramat	Potatoes	0.8

Under Provision (3)(b) of the NZ (MRL) Food Standards 2009 imported food may contain residues of agricultural compounds no greater than the MRLs specified for that food in the current editions or supplements of the FAO/WHO Codex Alimentarius Commission publications titled "Pesticide Residues in Food" or "Residues of Veterinary Drugs in Foods".

To meet New Zealand's obligations under the Agreement on the Application of Sanitary and Phytosanitary Measures the proposed MRL will be notified to the World Trade Organization. Any country may choose to comment if they believe the proposed MRL represents a barrier to their trade.

## 10 Proposal to set an MRL for Tepraloxymid

It is proposed that an MRL is set for tepraloxymid when used as a herbicide for control of grass weeds around onions. It is proposed that Schedule One of the NZ (MRL) Food Standards 2009 be amended to include the following, this will be the resulting entry for tepraloxymid in Schedule One:

Compound	CAS#	Residue definition	Food	Maximum Residue Limit (mg/kg)
Tepraloxymid	149979-4-9	Sum of: Tepraloxymid and metabolites converted to 3-(tetrahydro-pyran-4-yl)-glutaric acid and 3-hydroxy-3-(tetrahydro-pyran-4-yl)-glutaric acid, <i>Expressed as:</i> Tepraloxymid	Onions	0.1*

NOTE: (\*) indicates that the maximum residue limit has been set at or about the limit of analytical quantification.

### Amendment Rationale

The proposed MRL represents a new registration in New Zealand for the active ingredient tepraloxymid. The proposed MRL will manage the new use of tepraloxymid as a herbicide for control of grass weeds around onions, to the application rates and withholding periods that are approved good agricultural practice in New Zealand.

### Chemical Information

<b>Common name of compound</b>	Tepraloxymid
<b>Use of compound</b>	Herbicide
<b>Chemical Abstract Services (CAS) Registry number</b>	149979-4-9
<b>Type of compound</b>	Cyclohexene oxime
<b>Administration method</b>	Spray

### Good Agricultural Practice

Tepraloxymid is proposed for use as a herbicide for onions. Application is as a single application post-emergence and before weeds flower at a rate of 75gai/ha, with a withholding period of 35 days.

## Residues Information

Residue data for onions supports a limit of quantification MRL of 0.1mg/kg for tepraloxymid when the last treatment is made 35 days before harvest. An MRL of 0.1mg/kg is therefore proposed to support GAP.

## Dietary Risk Assessment

Potential daily exposure via food ( $PDE_{(food)}$ )	0.035mg/kg bw/day
Acute Reference Dose (ARfD)	0.4mg/kg bw

The potential daily exposure via food ( $PDE_{(food)}$ ) is used for dietary intake calculation where a value has been set. An appropriate acceptable daily intake (ADI) is used in the absence of a  $PDE_{(food)}$ .

The  $PDE_{(food)}$  is a value set by the Environmental Risk Management Authority (ERMA), which represents the proportion of the acceptable daily exposure (ADE) to a substance via the food route as relevant to the New Zealand population. The methodology for calculation of these values is set out in the Hazardous Substances (classes 6, 8, and 9 controls) regulations 2001 and can be found at [www.legislation.govt.nz](http://www.legislation.govt.nz).

The chronic dietary exposure to tepraloxymid is estimated by the National Estimated Dietary Intake (NEDI) calculation encompassing all registered uses of the chemical and food consumption data based upon the 1997 National Nutritional Survey for adults and the 1995 National Nutrition Survey of Australia, for children. The NEDI calculation is made in accordance with *Guidelines for predicting dietary intake of pesticide residues (revised)* [World Health Organisation, 1997].

The NEDI for tepraloxymid is equivalent to 0.1% of the  $PDE_{(food)}$ . It is therefore concluded that the chronic dietary exposure is acceptable.

The ARfD is a value set by the Environmental Risk Management Authority (ERMA) which represents the health standard for short term intake of a substance relevant to the New Zealand population

The acute dietary exposure to tepraloxymid is estimated by the National Estimated Short Term Intake (NESTI) calculation encompassing 97.5<sup>th</sup> percentile high consumers of an individual commodity, containing the highest residue, based upon the 1997 National Nutritional Survey for adults.

The NESTI for tepraloxymid in onions is equivalent to less than 0.1% of the ARfD. It is therefore concluded that the acute dietary exposure is acceptable.

## Toxicological / Public Health Assessment

It has been determined that the use of tepraloxymid as a herbicide for use around onions, according to the good agricultural practice specified above, is very unlikely to pose any health risks from consumption of the harvested commodity.

## Other International MRLs

Compound	Food	Maximum Residue Limit (mg/kg)
<b>EU</b>		
Tepraloxymid	Onions (Silverskin onions)	0.3
<b>Japan</b>		
Tepraloxymid	Onions	0.5

Under Provision (3)(b) of the NZ (MRL) Food Standards 2009 imported food may contain residues of agricultural compounds no greater than the MRLs specified for that food in the current editions or supplements of the FAO/WHO Codex Alimentarius Commission publications titled "Pesticide Residues in Food" or "Residues of Veterinary Drugs in Foods".

To meet New Zealand's obligations under the Agreement on the Application of Sanitary and Phytosanitary Measures the proposed MRL will be notified to the World Trade Organization. Any country may choose to comment if they believe the proposed MRL represents a barrier to their trade.

## 11 Proposal to set an MRL for Thiocloprid

It is proposed that an MRL is set for thiocloprid when used as an insecticide on pome fruits.

It is proposed that Schedule One of the NZ (MRL) Food Standards 2009 be amended by deleting the following MRL:

Compound	CAS#	Residue definition	Food	Maximum Residue Limit (mg/kg)
Thiocloprid	111988-49-9	Thiocloprid	Pome fruits	0.02(*)

NOTE: (\*) indicates that the maximum residue limit has been set at or about the limit of analytical quantification.

As a replacement for the deleted MRL it is proposed that the NZ (MRL) Food Standards 2009 be amended to include the following:

Compound	CAS#	Residue definition	Food	Maximum Residue Limit (mg/kg)
Thiocloprid	111988-49-9	Thiocloprid	Pome fruits	0.3

The final entry for Thiocloprid in Schedule One of the NZ (MRL) Food Standards 2009 will therefore read:

Compound	CAS#	Residue definition	Food	Maximum Residue Limit (mg/kg)
Thiocloprid	111988-49-9	Thiocloprid	Avocados Kiwifruit Onions Pome fruits Stone fruit (except cherries)	0.05 0.02(*) 0.01(*) 0.3 0.02(*)

NOTE: (\*) indicates that the maximum residue limit has been set at or about the limit of analytical quantification.

### Amendment Rationale

The proposed MRL represents a reduction in the withholding period for the active ingredient thiocloprid. The withholding period is proposed to reduce from 42 days to 14 days to allow greater flexibility in the control of insect pests. The proposed MRL will manage the use of thiocloprid as an insecticide on pome fruits, to the application rates and withholding periods that are approved good agricultural practice in New Zealand.

## Chemical Information

<b>Common name of compound</b>	Thiacloprid
<b>Use of compound</b>	Insecticide
<b>Chemical Abstract Services (CAS) Registry number</b>	111988-49-9
<b>Type of compound</b>	Pyridylmethanimine
<b>Administration method</b>	Spray

## Good Agricultural Practice

Thiacloprid is currently approved for use on pome fruit with an application rate of 14.4gai/100L. Application is after petal fall with further applications made when pests exceed threshold levels, the withholding period is proposed to decrease from 42 days to 14 days.

## Residues Information

Residue data for pome fruits supports an MRL of 0.3mg/kg for thiacloprid when the last treatment is made 14 days before harvest. An MRL of 0.3mg/kg is therefore proposed to support GAP.

## Dietary Risk Assessment

<b>Acceptable Daily Intake</b>	0.01mg/kg bw/day
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The potential daily exposure via food ( $PDE_{(food)}$ ) is used for dietary intake calculation where a value has been set. An appropriate acceptable daily intake (ADI) is used in the absence of a  $PDE_{(food)}$ .

The  $PDE_{(food)}$  is a value set by the Environmental Risk Management Authority (ERMA), which represents the proportion of the acceptable daily exposure (ADE) to a substance via the food route as relevant to the New Zealand population. The methodology for calculation of these values is set out in the Hazardous Substances (classes 6, 8, and 9 controls) regulations 2001 and can be found at [www.legislation.govt.nz](http://www.legislation.govt.nz).

The chronic dietary exposure to thiacloprid is estimated by the National Estimated Dietary Intake (NEDI) calculation encompassing all registered uses of the chemical and food consumption data based upon the 1997 National Nutritional Survey for adults and the 1995 National Nutrition Survey of Australia, for children. The NEDI calculation is made in accordance with *Guidelines for predicting dietary intake of pesticide residues (revised)* [World Health Organisation, 1997].

The NEDI for thiacloprid is equivalent to 3% of the  $PDE_{(food)}$ . It is therefore concluded that the chronic dietary exposure is acceptable.

## Toxicological / Public Health Assessment

It has been determined that the use of thiacloprid as an insecticide for use on pome fruits, according to the good agricultural practice specified above, is very unlikely to pose any health risks from consumption of the harvested commodity.

## Other International MRLs

Compound	Food	Maximum Residue Limit (mg/kg)
<b>Australia</b>		
Thiacloprid	Pome fruits	1
<b>Codex Alimentarius</b>		
Thiacloprid	Pome fruits	0.7
<b>EU</b>		
Thiacloprid	Pome fruits	0.3
<b>Japan</b>		
Thiacloprid	Apple	2
	Pear	2
<b>United States</b>		
Thiacloprid	Fruits, Pome	0.3

Under Provision (3)(b) of the NZ (MRL) Food Standards 2009 imported food may contain residues of agricultural compounds no greater than the MRLs specified for that food in the current editions or supplements of the FAO/WHO Codex Alimentarius Commission publications titled "Pesticide Residues in Food" or "Residues of Veterinary Drugs in Foods".

To meet New Zealand's obligations under the Agreement on the Application of Sanitary and Phytosanitary Measures the proposed MRL will be notified to the World Trade Organization. Any country may choose to comment if they believe the proposed MRL represents a barrier to their trade.

## 12 Proposal to delete MRLs for Cypermethrin

It is proposed that Schedule One of the NZ (MRL) Food Standards 2009 be amended by deleting the following MRLs:

Compound	CAS#	Residue definition	Food	Maximum Residue Limit (mg/kg)
Cypermethrin	52315-07-8	Cypermethrin, sum of isomers	Kiwifruit	2
			Pome fruit	1

The final entry for cypermethrin in Schedule One of the NZ (MRL) Food Standards 2009 will therefore read:

Compound	CAS#	Residue definition	Food	Maximum Residue Limit (mg/kg)
Cypermethrin	52315-07-8	Cypermethrin, sum of isomers	Brassica vegetables	1

### Amendment Rationale

The above MRLs are proposed to be deleted as there are no remaining use patterns approved for application to fruit bearing trees or vines. Only use directions for non-bearing trees remain and these do not require regulation with the current MRLs.

### International MRLs

Under Provision (3)(b) of the NZ (MRL) Food Standards 2009 imported food may contain residues of agricultural compounds no greater than the MRLs specified for that food in the current editions or supplements of the FAO/WHO Codex Alimentarius Commission publications titled "Pesticide Residues in Food" or "Residues of Veterinary Drugs in Foods".

To meet New Zealand's obligations under the Agreement on the Application of Sanitary and Phytosanitary Measures the proposed MRL deletion will be notified to the World Trade Organization. Any country may choose to comment if they believe the proposed MRL deletion represents a barrier to their trade.

