



**Australian Government**  
**Australian Pesticides and  
Veterinary Medicines Authority**



## **Trade Advice Notice**

on fluopyram in the product Luna Sensation Fungicide for use in rotational  
cropping situations

APVMA product number 65560

October 2020

© Australian Pesticides and Veterinary Medicines Authority 2020

ISSN 2200-3894 (electronic)

### **Ownership of intellectual property rights in this publication**

Unless otherwise noted, copyright (and any other intellectual property rights, if any) in this publication is owned by the Australian Pesticides and Veterinary Medicines Authority (APVMA).

### **Creative Commons licence**

With the exception of the Coat of Arms and other elements specifically identified, this publication is licensed under a Creative Commons Attribution 4.0 Australia Licence. This is a standard form agreement that allows you to copy, distribute, transmit and adapt this publication provided that you attribute the work.



A [summary of the licence terms](#) and [full licence terms](#) are available from Creative Commons.

The APVMA's preference is that you attribute this publication (and any approved material sourced from it) using the following wording:

*Source: Licensed from the Australian Pesticides and Veterinary Medicines Authority (APVMA) under a Creative Commons Attribution 4.0 Australia Licence.*

In referencing this document the Australian Pesticides and Veterinary Medicines Authority should be cited as the author, publisher and copyright owner.

### **Photographic credits**

Cover image: iStockphoto (www.istockphoto.com)

iStockphoto images are not covered by this Creative Commons licence.

### **Use of the Coat of Arms**

The terms under which the Coat of Arms can be used are set out on the [Department of the Prime Minister and Cabinet website](#).

### **Disclaimer**

The material in or linking from this report may contain the views or recommendations of third parties. Third party material does not necessarily reflect the views of the APVMA, or indicate a commitment to a particular course of action. There may be links in this document that will transfer you to external websites. The APVMA does not have responsibility for these websites, nor does linking to or from this document constitute any form of endorsement. The APVMA is not responsible for any errors, omissions or matters of interpretation in any third-party information contained within this document.

### **Comments and enquiries regarding copyright:**

Assistant Director, Communications  
Australian Pesticides and Veterinary Medicines Authority  
GPO Box 3262  
Sydney NSW 2001 Australia

Telephone: +61 2 6770 2300

Email: [communications@apvma.gov.au](mailto:communications@apvma.gov.au)

This publication is available from the [APVMA website](#).

## CONTENTS

<b>PREFACE</b>	<b>1</b>
<b>About this document</b>	<b>1</b>
<b>Making a submission</b>	<b>1</b>
<b>Further information</b>	<b>2</b>
<b>1 INTRODUCTION</b>	<b>3</b>
<b>2 TRADE CONSIDERATIONS</b>	<b>3</b>
<b>2.1 Commodities exported</b>	<b>3</b>
<b>2.2 Destination and value of exports</b>	<b>3</b>
<b>2.3 Proposed Australian use-pattern</b>	<b>4</b>
<b>2.4 Results from residues trials presented to the APVMA</b>	<b>6</b>
Rotational cereal crops	6
Rotational pulse crops	6
Required MRLs for rotational cereal, pulse and oilseed crops	7
Sugarcane	7
All other foods	7
Animal commodities	8
<b>2.5 Overseas registration and approved label instructions</b>	<b>8</b>
<b>2.6 Codex Alimentarius Commission and overseas MRLs</b>	<b>9</b>
<b>2.7 Current and proposed Australian MRLs for fluopyram</b>	<b>10</b>
<b>2.8 Potential risk to trade</b>	<b>11</b>
<b>3 CONCLUSION</b>	<b>12</b>

## LIST OF TABLES

Table 1: Major destinations for Australian cereal, pulse and oilseed exports	4
Table 2: Proposed use pattern	4
Table 3: Plant back interval requirements for rotational crops	5
Table 4: Estimated residues in animal commodities and required MRLs	8
Table 5: International MRLs	9
Table 6: Current MRL Standard – Table1	10
Table 7: Proposed MRL Standard – Table1	10
Table 8: Proposed MRL Standard – Table4	11



## PREFACE

The Australian Pesticides and Veterinary Medicines Authority (APVMA) is an independent statutory authority with responsibility for assessing and approving agricultural and veterinary chemical products prior to their sale and use in Australia.

The APVMA has a policy of encouraging openness and transparency in its activities and of seeking stakeholder involvement in decision making. Part of that process is the publication of Trade Advice Notices for all proposed extensions of use for existing products where there may be trade implications.

The information and technical data required by the APVMA to assess the safety of new chemical products and the methods of assessment must be undertaken according to accepted scientific principles. Details are outlined in regulatory guidance published on the APVMA website.

## About this document

This Trade Advice Notice indicates that the Australian Pesticides and Veterinary Medicines Authority (APVMA) is considering an application to vary the use of an existing registered agricultural or veterinary chemical.

It provides a summary of the APVMA's residue and trade assessment.

Comment is sought from industry groups and stakeholders on the information contained within this document.

## Making a submission

The APVMA invites any person to submit a relevant written submission as to whether the application to vary the registration of Luna Sensation Fungicide should be granted. Submissions should relate only to matters that the APVMA is required by legislation to take into account in deciding whether to grant the application. These grounds relate to the trade implications of the extended use of the product. Submissions should state the grounds on which they are based. Comments received outside these grounds cannot be considered by the APVMA.

Submissions must be received by the APVMA by close of business on Monday 23 November 2020 and be directed to the contact listed below. All submissions to the APVMA will be acknowledged in writing via email or by post.

Relevant comments will be taken into account by the APVMA in deciding whether to grant the application and in determining appropriate conditions of registration and product labelling.

When making a submission please include:

- contact name
- company or organisation name (if relevant)

- email or postal address (if available)
- the date you made the submission.

**Please note:** submissions will be published on the APVMA's website, unless you have asked for the submission to remain confidential, or if the APVMA chooses at its discretion not to publish any submissions received (refer to the [public consultation coversheet](#)).

Please lodge your submission using the [public consultation coversheet](#), which provides options for how your submission will be published.

Note that all APVMA documents are subject to the access provisions of the *Freedom of Information Act 1982* and may be required to be released under that Act should a request for access be made.

Unless you request for your submission to remain confidential, the APVMA may release your submission to the applicant for comment.

Written submissions should be addressed to:

Executive Director, Risk Assessment Capability  
Australian Pesticides and Veterinary Medicines Authority  
GPO Box 3262  
Sydney NSW 2001

**Phone:** +61 2 6770 2300

**Email:** [enquiries@apvma.gov.au](mailto:enquiries@apvma.gov.au)

## Further information

Further information can be obtained via the contact details provided above.

Further information on public release summaries can be found on the [APVMA website](#).

## 1 INTRODUCTION

The APVMA has before it an application from Bayer CropScience Pty Ltd to vary the registration of Luna Sensation Fungicide (containing fluopyram and trifloxystrobin) to add uses on lettuce and pyrethrum. These uses require a consideration of fluopyram residues in rotational crops and animal commodities.

In addition to fluopyram, Luna Sensation Fungicide also contains trifloxystrobin. Flint 500 WG Fungicide (P53871, Bayer CropScience) containing trifloxystrobin is registered for use on strawberries with up to 3 applications at 150 g ai/ha, for a total trifloxystrobin rate of 450 g ai/ha. As the maximum total proposed application rate is 400 g a.i./ha, the risk of trifloxystrobin residues in following crops is less than currently exists, noting there are no crop rotation restrictions on the Flint label.

The primary lettuce and pyrethrum crops on the draft label are not major export commodities. The trade risk with respect to trifloxystrobin is low and does not require further consideration. However, the proposed use has the potential to cause detectable residues of fluopyram in following or rotational crops that are major export commodities such as cereals, oilseeds and pulses and are significant feeds for livestock.

## 2 TRADE CONSIDERATIONS

### 2.1 Commodities exported

Cereals, selected pulses (lupins, field peas, chickpeas, faba beans, navy beans and mung beans) and selected oilseeds (canola and cotton seed) are considered to be major export commodities, as are commodities of animal origin, such as meat, offal and dairy products, which may be derived from livestock fed feeds produced from following crops. Residues in these commodities resulting from the use of Luna Sensation Fungicide may have the potential to unduly prejudice trade.

### 2.2 Destination and value of exports

Exports of Australian cereals, pulses, canola, and cotton, are detailed below (Agricultural Commodity Statistics, Australian Bureau of Agriculture and Resource Economics and Sciences, Commonwealth of Australia).

Total exports of barley were estimated at 4,683 kilotonnes in 2018 to 2019, valued at \$1.8 billion. Total exports of wheat (including flour) were 15,492 kilotonnes in 2017 to 2018, valued at \$4.7 billion. Total exports of oats in 2018 to 2019 were estimated at 281 kilotonnes, valued at \$121 million. Exports of sorghum in 2018 to 2019 were estimated at 205 kilotonnes, valued at \$96 million. Maize exports in 2018 to 2019 were estimated at 62.9 kilotonnes, valued at \$33 million.

Total oilseed exports in 2018 to 2019 (including canola, cottonseed, linseed, peanuts, safflower, soya bean and sunflower) were 1,654 kilotonnes, worth \$1 billion. Total vegetable oil exports (including canola, cottonseed, linseed, palm, peanut, safflower, soya bean, sunflower and olive) were 221 kilotonnes, at a value of \$358 million, in 2018 to 2019. Total oilseed meal exports in 2018 to 2019 were 16.4 kilotonnes at a value of \$12 million.

Total pulse exports were valued at \$1 billion, in 2018 to 2019, with the most significant export commodities being chickpeas (336 kt, \$282 million), lupins (288 kt, \$157 million) and field peas (82.8 kt, \$49 million).

**Table 1: Major destinations for Australian cereal, pulse and oilseed exports**

Commodity	Major destinations
Barley	China, Japan, Korea, Vietnam, Thailand, the Philippines, Taiwan, Saudi Arabia, Kuwait, United Arab Emirates
Wheat	Indonesia, India, Korea, China, Japan, Thailand, Malaysia, the Philippines, Vietnam, Egypt, Yemen, Iraq, New Zealand
Sorghum	China, Japan, New Zealand, Taiwan, Papua New Guinea
Cottonseed (including seed, oil, and meal)	Japan, Korea, the USA
Canola (including seed, oil and meal)	Belgium, the Netherlands, France, Germany, Pakistan, Japan, China

The significant export markets for Australian beef, sheep, pig meat and offals are listed in the APVMA Regulatory Guidelines – Data Guidelines: Agricultural – Overseas trade (Part 5B).

## 2.3 Proposed Australian use-pattern

**Table 2: Proposed use pattern**

Crop	Disease	Rate	WHP	Critical Comments
Lettuce (including leafy lettuce, loose leaf types, greenhouse lettuce)	Lettuce drop ( <i>Sclerotinia rot</i> , <i>Sclerotinia sclerotiorum</i> and <i>Sclerotinia minor</i> )	800 mL/ha  (200 g fluopyram + 200 g trifloxystrobin/ha)	7 days	<p>Apply Luna Sensation preventively, prior to the onset of disease.</p> <p>Best results can be obtained where Luna Sensation is applied after seedling emergence in the case of direct seeded lettuce, or immediately following planting in the case of transplants.</p> <p>A repeat application should be applied 7 to 14 days after this initial application.</p> <p>Luna Sensation should be applied as part of an integrated disease control program that incorporates other measures such as crop rotation, planting resistant crop varieties and moisture management to reduce humidity and crop wetness in order to limit disease pressure.</p> <p><b>General</b></p> <p>Apply a maximum of 2 applications of Luna Sensation per year in the same paddock.</p> <p><b>Resistance Management</b></p> <p>This use is subject to a CropLife Australia fungicide resistance management strategy</p>

Crop	Disease	Rate	WHP	Critical Comments
				which limits the total number and consecutive number of applications of Luna Sensation and other Group 7 and 11 fungicides.
Pyrethrum	Sclerotinia flower blight ( <i>Sclerotinia sclerotiorum</i> ), ray blight ( <i>Stagonosporopsis tanacetii</i> )	800 mL/ha  (200 g fluopyram + 200 g trifloxystrobin/ha)	-	<p>Apply Luna Sensation preventively, prior to the onset of disease. Generally best results can be obtained where Luna Sensation is applied at 10 to 30% open flowers, but is not limited to these timings.</p> <p>A repeat application should be applied 7 to 14 days after this initial application.</p> <p>Luna Sensation should be applied as part of an integrated disease control program that incorporates other measures such as crop rotation, planting resistant crop varieties and moisture management to reduce humidity and crop wetness in order to limit disease pressure.</p> <p><b>General</b></p> <p>Apply a maximum of 2 applications of Luna Sensation per year in the same paddock.</p> <p><b>Resistance Management</b></p> <p>This use is subject to a CropLife Australia fungicide resistance management strategy which limits the total number and consecutive number of applications of Luna Sensation and other Group 7 and 11 fungicides.</p>

Luna Sensation Fungicide (250 g/L fluopyram, 250 g/L trifloxystrobin)

Withholding periods:

Lettuce: DO NOT harvest for 7 days after application

Restrains: DO NOT apply with aircraft

The following plant back intervals listed in Table 3 are required for rotational crops:

**Table 3: Plant back interval requirements for rotational crops**

Crop group	Plant back interval
Vegetables	None
Cereals, pulses, oil seed crops, pastures	7 months

**EXPORT SLAUGHTER INTERVAL (ESI) – 30 DAYS**

Livestock that has been grazed on or fed treated crops should be placed on clean feed for 30 days prior to slaughter.

Trade advice:

## EXPORT OF TREATED PRODUCE

Growers should note that suitable MRLs or import tolerances may not exist in all markets for produce treated with Luna Sensation. If you are growing produce for export, please check with Bayer CropScience Pty Ltd for the latest information on MRLs and import tolerances and for advice on any potential trade issues and their management.

## 2.4 Results from residues trials presented to the APVMA

### Rotational cereal crops

Field rotational crop studies involving wheat, sorghum and maize were provided in which crops were grown following a 210 day plant back interval (PBI) after a total application rate of 500 g ai/ha (1.3x the maximum seasonal application rate proposed for lettuce and pyrethrum).

Residues of fluopyram in wheat grain at harvest were <0.01 (n = 9), 0.011, 0.015 (n = 2), 0.016 and 0.027 mg/kg.

Residues of fluopyram in sorghum grain at harvest were <0.01 (n = 10), 0.012 and 0.016 mg/kg.

Residues of fluopyram in field corn grain at harvest were <0.01 (n = 15) mg/kg. Residues of parent fluopyram in sweet corn kernels plus cobs with husks removed were also <0.01 (n = 9) mg/kg.

Residues of fluopyram in wheat forage were 0.09, 0.15, 0.18, 0.33, 0.41, 0.60, 0.76, 1.1, 2.2, 2.5, 2.7, 3.2, 3.3 and 4.7 mg/kg (dry weight). Residues in wheat hay were 0.02, 0.10, 0.12, 0.16, 0.17, 0.26 (n = 2), 0.32, 0.48, 0.58, 0.66, 0.84 and 1.7 mg/kg (dry weight). Residues in wheat straw at harvest were 0.02, 0.04, 0.08, 0.08, 0.11, 0.15, 0.20, 0.33, 0.43, 0.46, 0.48, 0.53, 0.80 and 1.3 mg/kg (dry weight).

Residues of fluopyram in sorghum forage were <0.01 (fw), 0.07, 0.09, 0.12, 0.14, 0.15, 0.21, 0.22, 0.24, 0.29, 0.44 and 0.48 mg/kg (dry weight). Residues in sorghum stover at harvest were <0.01 (fw, n = 2), 0.07, 0.09, 0.10, 0.21, 0.25, 0.28, 0.35, 0.42, 0.43 and 0.62 mg/kg (dry weight).

Residues of fluopyram in corn forage were <0.01 (fw, n = 9), 0.05, 0.06, 0.07, 0.09, 0.11, 0.12, 0.15 (n = 2), 0.19, 0.28, 0.45, 0.46, 0.61, 0.63 and 0.84 mg/kg (dry weight).

Residues of fluopyram in corn stover were <0.01 (fw, n = 2), 0.03, 0.03, 0.04, 0.05, 0.06, 0.07, 0.09, 0.11, 0.12 (n = 3), 0.21 (n = 2), 0.24, 0.25 (n = 2), 0.35, 0.38, 0.43, 0.49 and 0.72 mg/kg (dry weight).

### Rotational pulse crops

Residues of fluopyram in soybean grain grown after a 210 day PBI after a total application rate of 500 g ai/ha (1.3x maximum seasonal application rate) <0.01 (n = 18) and 0.013 (n = 2) mg/kg.

Residues of fluopyram in soybean forage were <0.01 (fw), 0.04, 0.06, 0.07, 0.07, 0.09, 0.13, 0.14 (n = 2), 0.19, 0.25, 0.40 (n = 3), 0.49, 0.50, 1.0, 1.1, 2.3 and 2.8 mg/kg (dry weight). Residues in soybean hay were <0.01 (fw), 0.03, 0.04, 0.05, 0.05, 0.07, 0.07, 0.11, 0.16 (n = 2), 0.17, 0.23, 0.26, 0.36, 0.45, 0.47, 0.50, 0.80, 1.7 and 2.5 mg/kg (dry weight).

### Required MRLs for rotational cereal, pulse and oilseed crops

Residues were generally not detected, or were detected at low concentrations, in grains/seeds grown after a 7 month plant back interval. Highest residues were <0.01 mg/kg in corn grain, 0.013 mg/kg in soybean seed, 0.016 mg/kg in sorghum grain and 0.027 mg/kg in wheat grain. MRLs of 0.03 mg/kg are recommended for fluopyram on GC 0080 cereal grains, SO 0088 oilseed and VD 0070 pulses to cover residues in these commodities when grown as rotational crops with lettuce and pyrethrum after a 7 month plant back interval. The oilseed MRL should replace the current lower MRL at \*0.01 mg/kg for fluopyram on canola which covers the registered seed treatment use.

Highest residues in animal feeds were 0.48 mg/kg in sorghum forage, 0.62 mg/kg in sorghum stover, 0.72 mg/kg in corn stover, 0.84 mg/kg in corn forage, 1.3 mg/kg in wheat straw, 1.7 mg/kg in wheat hay, 2.5 mg/kg in soybean hay, 2.8 mg/kg in soybean forage, 4.7 mg/kg in wheat forage. Scaled for the proposed maximum seasonal application rate the highest residue is 3.7 mg/kg (wheat forage). An MRL of 5 mg/kg would be required for fluopyram on Primary feed commodities to cover residues in animal feeds from cereals, pulses, oilseeds and pastures grown as rotational crops after a 7 month plant back interval. This MRL should replace the current Primary feed commodities and rape seed forage and fodder MRLs.

### Sugarcane

No plant back restrictions have been proposed for sugarcane. Residues of parent fluopyram in sugarcane grown after a 14 day Plant Back Interval after application at 500 g ai/ha (1.3x maximum seasonal application rate) were <0.01 (n = 3), 0.01, 0.03 and 0.05 mg/kg. Residues in sugarcane grown as a rotational crop would therefore likely be below the proposed fluopyram 'All other foods' MRL of 0.2 mg/kg (see below). It is noted that a fluopyram sugar processing study showed no detectable residues in refined sugar, however residues were also not detected in the raw sugarcane in this study.

### All other foods

Residues of parent fluopyram in potato tubers at harvest after a 30 day PBI after application to bare soil at 500 g ai/ha (1.3x maximum seasonal application rate) were 0.01 and 0.02 (n = 3) mg/kg. Residues in peas (green seeds) were <0.01 (n = 4) mg/kg. Residues in leeks were <0.01, 0.02, 0.03 and 0.04 mg/kg. Residues in white cabbage were <0.01 (n = 3) and 0.01 mg/kg. Residues in cauliflower were <0.01 (n = 4) mg/kg. Residues in tomato were <0.01 (n = 4) mg/kg. Residues in onion were <0.01 (n = 3) and 0.01 mg/kg. Residues in strawberries were <0.01 (n = 4) mg/kg. Residues in spinach were <0.01 (n = 2), 0.01 and 0.07 mg/kg (noting residues up to 0.09 mg/kg in samples collected 12 to 14 days before normal harvest).

An 'All other foods' MRL at 0.2 mg/kg would be appropriate to cover residues in vegetable crops and strawberries grown as rotational crops with no plant back restrictions.

## Animal commodities

The primary lettuce and pyrethrum crops are not considered to be a significant feed for livestock. The livestock dietary burden for fluopyram will be driven by rotational forage crops with a scaled HR of 3.7 mg/kg.

A dairy cow transfer study for fluopyram has been provided previously. Transfer factors (parent + benzamide) for liver, muscle and milk were 0.13x, 0.021x and 0.018x assuming a linear dose response between the 1.5 and 14.4 ppm feeding levels. Predicted residues and required MRLs from a maximum feeding level of 3.7 ppm are summarised in Table 4.

**Table 4: Estimated residues in animal commodities and required MRLs**

Commodity	Transfer factor*	Predicted residue from feeding at 3.7 ppm (mg/kg)	Required MRL (mg/kg)
Liver	0.13x	0.48	0.7 (offal)
Muscle	0.021x	0.078	0.1 (meat)
Milk	0.018x	0.067	0.1 (milk)

\*Transfer factors were calculated for total residues of parent + benzamide metabolite by extrapolating from the residues observed in each matrix for the 1.5 and 14.4 ppm dose groups in the dairy cattle feeding study<sup>1</sup>.

No change is required to the current mammalian meat MRL at 0.1 mg/kg. The mammalian offal and milk MRLs for fluopyram should be increased from 0.5 and \*0.02 mg/kg to 0.7 and 0.1 mg/kg respectively.

For poultry, consumption of rotational grains with an STMR of <0.01 mg/kg (dietary burden <0.01 ppm) is unlikely to result in fluopyram residues above the current egg, meat and offal MRLs established at the method LOQ (\*0.02 mg/kg). No changes are required to the current fluopyram poultry commodity MRLs to cover the proposed uses in rotational cropping situations.

## 2.5 Overseas registration and approved label instructions

The applicant indicated that Luna Sensation Fungicide is approved in a number of countries, including China, Tanzania, Cote d'Ivoire, Uganda, Hungary, New Zealand, Kenya, Bangladesh, Moldova, Georgia, Bulgaria, Ukraine, Serbia, Portugal, Italy, Algeria, Tunisia, Belgium, Netherlands, Taiwan, Korea, Morocco, Thailand, Austria, Spain, Ethiopia, Poland, Switzerland, Germany, United Kingdom, France, Tunisia, Greece, Cambodia, Cyprus, Lebanon, Saudi Arabia, Turkey, Bosnia and Herzegovina, Malaysia, Kosovo, Indonesia, Jordan, Kuwait, United States of America, Canada, Czech Republic, Romania, Croatia, Iran and Armenia.

<sup>1</sup> The Lactating cattle transfer study for fluopyram is summarized in the 2010 Joint Meeting of Pesticide Residues evaluation: [fao.org/fileadmin/templates/agphome/documents/Pests\\_Pesticides/JMPR/Evaluation10/Fluopyram.pdf](http://fao.org/fileadmin/templates/agphome/documents/Pests_Pesticides/JMPR/Evaluation10/Fluopyram.pdf)

## 2.6 Codex Alimentarius Commission and overseas MRLs

The Codex Alimentarius Commission (Codex) is responsible for establishing Codex Maximum Residue Limits (CXLs) for pesticides. Codex CXLs are primarily intended to facilitate international trade, and accommodate differences in Good Agricultural Practice (GAP) employed by various countries. Some countries may accept Codex CXLs when importing foods. Fluopyram has been considered by Codex. The following relevant Codex CXLs and overseas MRLs have been established for fluopyram.

**Table 5: International MRLs**

Commodity	Tolerance for residues arising from the use of fluopyram (mg/kg)						
	Australia	EU	Japan	Codex	Korea	Taiwan	USA
Residue definition	Fluopyram (plants)	Fluopyram	Fluopyram (plants)	Fluopyram (plants)	-	-	Fluopyram (plants)
	Fluopyram + benzamide metabolite (animals)		Fluopyram + benzamide metabolite (animals)	Fluopyram + benzamide metabolite (animals)			Fluopyram + benzamide metabolite (animals)
Edible offal (mammalian)	0.5 (current)	8 (bovine liver, kidney)	5 (cattle liver)	8	-	0.7	7.5 (cattle meat by products)
	0.7 (proposed)		0.8 (cattle kidney)				
Meat (mammalian)	0.1 (current)	1.5 (bovine muscle, fat)	0.8 (cattle muscle, fat)	1.5	-	0.1 (cattle muscle, fat)	0.8 (cattle meat)
							0.7 (cattle fat)
Milk	*0.02 (current)	0.6	0.6	0.8	-	0.1	0.4
	0.1 (proposed)						
Cereal grains	0.03 (proposed)	0.2 (barley, oats)	-	0.2 (barley, oats)	0.9 (wheat)	0.8 (wheat)	4 (cereal group 15, except corn and rice)
		0.02 (maize/corn)		0.02 (maize cereals)	0.05 (rice)		0.02 (corn, field, grain)
		0.9 (wheat)		0.9 (wheat, rye, triticale)			
		*0.01 (rice)		4 (rice)			
Oilseed	0.03 (proposed)	0.8 (cotton seed)	0.8 (cotton seeds)	0.8 (cotton seed)	0.8 (cotton seed)	-	0.8 (cotton seed)
		1 (rape seed)	5 (rape seeds)	1 (rape seed)	1 (rape seed)		5 (rape seed)

Commodity	Tolerance for residues arising from the use of fluopyram (mg/kg)						
	Australia	EU	Japan	Codex	Korea	Taiwan	USA
Pulses	0.03 (proposed)	0.4	2 (soybeans, dried)	0.15 (dry beans)	0.5 (mung bean)	0.07 (other dry beans except peanut and cowpea), 0.15 cowpea (dry)	0.7 (bean, dry)
			1 (beans, dried)	0.7 (dry peas)			0.7 (lentil, dry seed)
			2 (peas)	0.3 soya bean (dry)			0.7 (pea, dry seed)
			2 (other legumes/pulses)				0.3 (soybean seed)
Sugarcane	0.2 (all other foods) (proposed)	*0.01	-	-	-	-	0.08

## 2.7 Current and proposed Australian MRLs for fluopyram

Table 6: Current MRL Standard – Table1

COMPOUND	FOOD	MRL (mg/kg)
Fluopyram		
MO 0105	Edible offal (mammalian)	0.5
PE 0112	Eggs	*0.02
MM 0095	Meat (mammalian)	0.1
ML 0106	Milks	*0.02
PM 0110	Poultry meat	*0.02
PO 0111	Poultry, edible offal of	*0.02
SO 0495	Rape seed [canola]	*0.01

Table 7: Proposed MRL Standard – Table1

COMPOUND	FOOD	MRL (mg/kg)
Fluopyram		
DELETE:		
MO 0105	Edible offal (mammalian)	0.5
ML 0106	Milks	*0.02

COMPOUND	FOOD	MRL (mg/kg)
SO 0495	Rape seed [canola]	*0.01
ADD:		
	All other foods	0.2
GC 0080	Cereal grains	0.03
MO 0105	Edible offal (mammalian)	0.7
VL 0482	Lettuce, head	15
VL 0483	Lettuce, leaf	15
ML 0106	Milks	0.1
SO 0088	Oilseed	0.03
VD 0070	Pulses	0.03

Table 8: Proposed MRL Standard – Table4

COMPOUND	Animal feed commodity	MRL (mg/kg)
Fluopyram		
DELETE:		
	Primary feed commodities {except Rape seed [canola] fodder, dry; Rape seed [canola] forage}	0.3
	Rape seed [canola] fodder, dry	0.03
	Rape seed [canola] forage	3
ADD:		
	Primary feed commodities	5

## 2.8 Potential risk to trade

Export of treated produce containing finite (measurable) residues of fluopyram may pose a risk to Australian trade in situations where (i) no residue tolerance (import tolerance) is established in the importing country or (ii) where residues in Australian produce are likely to exceed a residue tolerance (import tolerance) established in the importing country.

MRLs for cereals, oilseeds and pulses are proposed at 0.03 mg/kg to account for residues which may occur in grain of crops grown in rotation with lettuce and pyrethrum crops treated with the proposed use. Highest residues in the rotational crop studies were <0.01 mg/kg in corn grain, 0.013 mg/kg in soybean seed,

---

0.016 mg/kg in sorghum grain and 0.027 mg/kg in wheat grain. The risk to trade in these commodities is considered to be low for the following reasons:

- The median residue in grain from the rotational crop studies was <LOQ.
- The proposed MRLs at 0.03 mg/kg are generally lower than those established overseas.
- The scale of use to lettuce and pyrethrum crops which may be rotated with grains is expected to be low.

For animal commodities, fluopyram MRLs were previously established for edible offal (mammalian) at 0.5 mg/kg, meat (mammalian) at 0.1 mg/kg and milks at \*0.02 mg/kg to account for residues which may result from a now registered use as a canola seed treatment with a 5 week ESI<sup>2</sup>.

To account for residues which may occur in animal commodities from animals which may consume feed crops grown in rotation with lettuce and pyrethrum treated with the proposed use, it is proposed to increase the fluopyram offal and milk MRLs.

The proposed fluopyram edible offal (mammalian) MRL at 0.7 mg/kg is at the same level as that established by Taiwan. The current fluopyram meat MRL and proposed milk MRL are at the same level as the Taiwanese MRLs at 0.1 mg/kg. Animal commodity MRLs for fluopyram have not been established by the Republic of Korea, however the Republic of Korea currently may accept Codex MRLs but this may change in the future as they implement their Positive List System. Bayer have indicated that they are investigating the potential to apply for import tolerances for these commodities.

### 3 CONCLUSION

Bayer CropScience Pty Ltd has applied for approval of a new use of Luna Sensation Fungicide containing fluopyram and trifloxystrobin on lettuce and pyrethrum. These uses require a consideration of fluopyram residues in rotational crops and animal commodities. Comment is sought on the potential risk to Australian trade when Luna Sensation Fungicide is used as proposed.

---

<sup>2</sup> Trade Advice Notice on fluopyram in the product ILeVO Seed Treatment Fungicide for use on canola: [apvma.gov.au/node/42361](http://apvma.gov.au/node/42361)