

Trade Advice Notice

on

Flumetsulam

in the product

Broadstrike Herbicide
(APVMA product number 40714)

Date: September 2009

About this document

This is a Trade Advice Notice.

It indicates that the Australian Pesticides and Veterinary Medicines Authority (APVMA) is considering an application for registration of an 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 notice.

The APVMA will only consider comment on submissions that relate to the **trade implications** of the extended use of the product. Comments received outside these grounds will not be considered by the APVMA. Comments made on appropriate grounds will be considered with details posted on the APVMA website noting what action has/will be taken in regard to concerns.

Any advice the APVMA receives through this consultation, which it relies on to grant this application will be noted in a subsequent Advice Summary.

Advice Summaries can be found at:

http://www.apvma.gov.au/registration/data_requirements_subpage.shtml

About this consultation

The APVMA invites comment on this Trade Advice Notice until the **29 October 2009**. Submissions should be addressed to:

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CONTENTS

1. INTRODUCTION	4
1.1 Proposed Use	5
1.2 Current and proposed Australian MRLs for flumetsulam	6
2. TRADE CONSIDERATIONS	
2.1 Commodities Exported	8
2.2 Destination and Value of Exports	8
2.3 Results from Residues Trials Presented to the APVMA	9
2.4 Codex Alimentarius Commission and Overseas MRLs	10
2.5 Potential Risk to Trade	11
3. CONCLUSION	11

1 INTRODUCTION

The Australian Pesticides and Veterinary Medicines Authority (APVMA) has before it an application from Dow AgroSciences Australia Limited to change the label of Broadstrike Herbicide, containing 800 g/kg flumetsulam. Broadstrike is currently approved for use on cereals, lucerne, pulses and pastures for the control of various weeds. The applicant is seeking to include application rates of up to 40 g ai/ha for use on pastures and for pre-emergent control of volunteer cotton (including Roundup Ready cotton) in pigeon pea refugia. No changes are proposed to the use on fenugreek, lathyrus, lucerne or serradella. No changes to the MRL Standard are required to support the use in pigeon pea refugia and that use will not be considered further.

To support the application new data from trials conducted in Argentina on various pastures at rates from 24 to 150 g ai/ha have been provided. Previously submitted pasture and cereal forage and fodder data has also been considered and changes to Table 4 entries of the MRL Standard for cereals are recommended.

The proposed Australian use pattern for Broadstrike Herbicide is given below:

1.1 Proposed Use

The critical use pattern for Broadstrike Herbicide (800 g/kg flumetsulam) is given below. Only uses considered in this application are included:

Crop	Pest	Rate
Cereal Winter crops	Various weeds	25 g/ha (20 g ai/ha)
Pulses*		
Fenugreek, lathyrus and serradella*		
Pastures (clover, medic, grasses etc.)		50 g/ha (40 g ai/ha)
Lucerne*		
Pigeon Pea refugia	Pre-emergence control of volunteer cotton	

* no change to current label uses other than to include use on pigeon pea refugia.

Withholding periods and Restraints:

HARVEST

Chickpeas, field peas, lentils, maize, peanuts, pigeon pea, soybean: Not required when used as directed.

Winter cereals: DO NOT harvest for 4 weeks after application.

GRAZING

Barley, cereal rye, oats, triticale, wheat, chickpeas, field peas, lentils, peanuts, pigeon pea, soybean, Popany vetch: DO NOT graze or cut for stock food for 28 days after application.

Fenugreek, lathyrus, lucerne and serradella: DO NOT graze or cut for stock food or harvest for 3 days after application.

Pastures (unless otherwise specified): DO NOT graze or cut for stock food for 7 days after application.

LIVESTOCK DESTINED FOR EXPORT MARKETS

The grazing withholding period only applies to stock slaughtered for the domestic market. Some export markets apply different standards. To meet these standards, ensure that in addition to complying with the grazing withholding period, the Export Slaughter Interval is observed before stock are sold or slaughtered.

EXPORT SLAUGHTER INTERVAL (ESI)

After observing the withholding period for grazing or cutting for stock food, livestock that have been grazed on or fed treated crops should be placed on clean feed for 7 days prior to slaughter.

EXPORT ANIMAL FEED INTERVAL (EAFI) (Fenugreek, lathyrus, lucerne, pasture and serradella only)

A minimum period of 28 days must elapse between the application of Broadstrike Herbicide and grazing or cutting the treated pasture as stockfeed for livestock intended for export.

1.2 Current and proposed Australian MRLs for flumetsulam

The current MRLs for flumetsulam are listed below:

Table 1

Compound	Food	MRL (mg/kg)	
Flumetsulam	GC0640	Barley	*0.05
	MO0105	Edible offal (mammalian)	*0.2
	PE0112	Eggs	*0.1
	VP0528	Garden pea	*0.1
	MM0095	Meat (mammalian)	*0.1
	ML0106	Milks	*0.1
	GC0647	Oats	*0.05
	MO0111	Poultry, Edible offal of	*0.1
	MM0110	Poultry meat	*0.1
	VD0070	Pulses	*0.05
	GC0650	Rye	*0.05
	GC0653	Triticale	*0.05
	GC0654	Wheat	*0.05

Table 3

Compound	Residue
Flumetsulam	Flumetsulam

Table 4

Compound	Animal feed commodity	MRL (mg/kg)	
Flumetsulam		Barley forage [Fresh weight]	*0.1
	AS0640	Barley straw and fodder, dry	0.05
		Legume pasture	15
	AF0647	Oat forage [Fresh weight]	*0.1
	AF0647	Oat straw and fodder, dry	0.05
		Pulse forage and fodder	*0.05
	AF0650	Rye forage (green) [Fresh weight]	*0.1
		Triticale straw and fodder, dry	0.05
		Wheat forage [Fresh weight]	*0.1
	AS0654	Wheat straw and fodder, dry	0.05

The following changes to the Australian MRL standard are proposed for flumetsulam:

Table 1

Compound	Food	MRL mg/kg)
Flumetsulam DELETE:	MO0105	Edible offal (mammalian) *0.2
ADD:	MO0105	Edible offal (mammalian) 0.3

Table 4

Compound	Animal feed commodity	MRL (mg/kg)
Flumetsulam DELETE:		
	AS0640	Barley forage [Fresh weight] *0.1 Barley straw and fodder, dry 0.05 Legume pasture 15
	AF0647	Oat forage [Fresh weight] *0.1
	AF0650	Rye forage (green) [Fresh weight] *0.1 Triticale straw and fodder, dry 0.05 Wheat forage [Fresh weight] *0.1
	AS0654	Wheat straw and fodder, dry 0.05
ADD:	AF0081	Forage of cereal grains (green) 2
	AS0081	Straw and fodder (dry) of cereal grains 2 Pastures (mixed grasses/leguminous) 15
	AL1020	Alfalfa fodder [Lucerne] 15
	AL1021	Alfalfa forage (green) [Lucerne] 15

For full details of current flumetsulam MRLs, please refer to the APVMA website <http://www.apvma.gov.au> and follow the Residues link.

2. TRADE CONSIDERATIONS

2.1 Commodities Exported

The major export commodities considered here are animal commodities derived from livestock that have been fed pasture or fodders treated with flumetsulam. Oaten hay treated with flumetsulam may also be exported.

2.2 Destination and Value of Exports

Major markets for beef are the EU, Japan, Republic of Korea, Russia, Taiwan and the USA. For sheep meat are China, the EU, Japan, Saudi Arabia, Russia, the United Arab Emirates and the USA.

Total hay and straw exports from Australia at the year ending June 2006 were 730,000 tonnes and worth approximately \$220 million. The majority of this hay and straw was exported to Japan with increasing amounts to Korea. Growth in exported fodder over the last decade has averaged more than 8% per year and is projected to increase in the future¹.

Table 1: Export markets for Australian dairy products.

	Unit	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08
Cheese								
Japan	\$m	429.5	272.0	299.6	378.9	298.5	337.9	426.7
Philippines	\$m	20.0	15.7	11.1	18.4	13.7	13.1	23.4
Saudi Arabia	\$m	148.2	98.9	69.0	81.5	103.5	86.7	89.7
United Kingdom	\$m	21.5	15.2	18.3	20.5	20.1	14.8	21.2
United States	\$m	48.3	36.1	33.9	45.4	54.2	52.7	37.2
Other	\$m	367.3	362.4	307.4	332.0	347.2	319.0	370.1
Total	\$m	1 034.8	800.3	739.2	876.7	837.2	824.2	968.3
Butter and butterfat a								
Egypt	\$m	23.5	18.9	6.4	10.5	12.5	13.9	5.0
Malaysia	\$m	14.4	12.7	13.5	11.6	15.8	11.0	17.4
Philippines	\$m	5.1	3.7	1.9	2.8	5.4	3.2	2.4
Singapore	\$m	20.4	15.5	18.2	16.8	21.1	14.4	26.2
Thailand	\$m	23.0	13.2	12.7	13.5	12.0	9.8	13.9
Other	\$m	211.1	160.0	130.1	133.2	157.9	126.2	129.6
Total	\$m	297.5	224.0	182.9	188.5	224.7	178.6	194.6
Skim milk powder								
Japan	\$m	53.7	29.6	13.3	10.6	12.5	11.1	9.8
Malaysia	\$m	88.4	51.4	52.7	64.2	77.1	72.2	63.4
Philippines	\$m	143.5	71.8	60.1	49.4	72.0	46.1	64.1
Singapore	\$m	52.8	38.4	42.4	57.8	56.1	67.1	61.8
Thailand	\$m	69.1	33.2	20.0	21.7	76.8	51.1	48.6
Other	\$m	290.5	184.1	199.0	216.4	234.3	257.3	285.6
Total	\$m	698.0	408.5	387.5	420.1	528.9	505.0	533.2
Casein								
Japan	\$m	26.7	20.6	23.3	23.1	30.4	31.8	38.4
United States	\$m	80.5	81.4	68.8	56.6	27.3	32.4	42.2
Other	\$m	15.5	26.4	30.5	36.5	31.3	49.3	44.2
Total	\$m	122.6	128.4	122.5	116.2	89.0	113.5	124.8

¹ Fodder Industry Practices to Meet Export Market Standards, RIRDC Publication no. 08/102, Australian Government, Rural Industries Research and Development Corporation.

Wholemilk powder								
Malaysia	\$m	39.2	22.3	28.9	33.1	23.8	14.5	27.3
Singapore	\$m	29.7	25.2	21.4	30.9	44.6	41.4	88.9
Taiwan	\$m	54.1	44.9	40.0	31.5	22.8	13.5	11.8
Thailand	\$m	22.6	14.0	12.0	8.6	10.5	12.3	14.7
Other	\$m	425.5	273.4	219.6	220.3	231.9	193.1	249.4
Total	\$m	571.1	379.8	321.8	324.4	333.6	274.9	392.2
Other products								
Fresh milk	\$m	98.2	98.2	104.0	108.8	107.3	96.3	83.6
Other fresh products	\$m	7.9	5.6	9.6	9.1	6.3	11.8	12.0
Condensed milk	\$m	123.7	133.3	121.0	139.8	147.5	156.9	152.4
Other powders	\$m	277.3	274.4	257.3	248.3	241.5	211.0	247.4
Total	\$m	507.0	511.5	492.0	506.0	502.6	476.0	495.4
a Includes ghee, dry butterfat, butter concentrate and butter oil, all expressed as butter.								
Source: ABS, <i>International Trade</i> , Australia, cat. no. 5465.0, Canberra.								

2.3 Results from residues trials presented to the APVMA

Cereal Grain

No changes are proposed to the approved cereal grain use or cereal grain MRLs and no consideration of cereal grain is required.

Cereal Forage and Fodder

Following application of flumetsulam at 20 g ai/ha residues in wheat forage were 0.02, 0.02 and 0.07 mg/kg (DW) 30 to 31 days after treatment and in barley forage were 0.01 mg/kg (DW) 31 days after treatment.

Following application of flumetsulam at 20 g ai/ha residues in wheat fodder were 0.49 mg/kg (DW) 22 days after treatment and in barley fodder were <0.05 mg/kg (DW) 34 days after treatment. Other data indicate that finite residues may occur at up to 0.08 mg/kg after extended PHIs (to 70 days).

It is proposed that the current cereal forage MRLs for flumetsulam of *0.1 mg/kg (FW) and cereal straw and fodder MRLs for flumetsulam of 0.05 mg/kg be increased to 2 mg/kg (DW).

Pasture

Residues data from trials undertaken in Australia, New Zealand and Argentina were considered. Following application of flumetsulam at 32 to 50 g ai/ha to lucerne, medic, sub-clover and mixed ryegrass/clover swards residues, in rank order, 7 days after treatment were <0.05, <0.05, 0.23, 0.27, 2.12, 2.28, 2.4, 2.73, 2.81, 3.62, 3.64, 4.08, 8.12 mg/kg. For residues trials undertaken in Argentina on *Bromus unioloides*, *Dactylis glomerata*, *Medicago sativa*, *Phalaris tuberosa* and *Trifolium repens* swards residues, in rank order, 6 – 7 days after treatment were (<0.05), 0.2 (3), 0.4 (2), 0.48 (2), 0.57, 0.96, 1.16, 1.4, 1.43 and 1.84 mg/kg (DW). The highest observed residue of 8.1 mg/kg (DW) was observed in lucerne. Pasture (mixed grasses/leguminous), alfalfa fodder [Lucerne], and alfalfa forage (green) [Lucerne] MRLs of 15 mg/kg are proposed with a 7 day grazing and cutting for stockfood WHP.

Animal Commodity MRLs

When used according to the proposed use pattern residues in pastures (grasses/leguminous) had a highest residue (HR) of 10.16 mg/kg. A cattle feeding study at the feeding level of 11.6-16.7 mg/kg showed highest residues of 0.15 mg/kg in kidney, 0.023 mg/kg in liver and 0.011 mg/kg in renal fat. No residues greater than the LOQ were found in muscle or milk.

Sample	Flumetsulam residues after dosing at 11.6-16.7 (avg 13.5; mg/kg)	Calculated residues when 10.16 mg/kg flumetsulam is in feed	Required MRLs (mg/kg)
Kidney	0.15	0.15	0.3 [#]
Liver	0.023	0.02	
Renal fat	0.011	0.0096	Not established
Muscle	LOQ	<LOQ	*0.1

[#]Proposed

MRLs of *0.2 mg/kg for edible offal of (mammalian) and *0.1 mg/kg for meat and milk are already established. Highest residues are seen in kidney. The current milk and meat (mammalian) MRLs are adequate, however it is recommended that the edible offal of (mammalian) MRL be increased from *0.2 to 0.3 mg/kg.

2.4 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, however CXLs have not been established for flumetsulam.

The following overseas residue MRLs / tolerances have been established:

Commodity	Australia	Codex ^a	Japan	USA	Korea	Taiwan	EU
Mammalian meat	*0.1	-	0.1	-	-	-	-
Mammalian meat, in the fat	-	-	0.1	-	-	-	-
Milk	*0.1	-	0.1	-	-	-	-
Milk, fat	-	-	-	-	-	-	-
Edible offal	[#] 0.3	-	0.2	-	-	-	-
Kidney	-	-	0.2	-	-	-	-
Liver	-	-	0.2	-	-	-	-
Cereal fodder	[#] 2	-	-	-	-	-	-

[#]proposed MRL

^a Saudi Arabia and UAE are understood to reference Codex MRLs.

Appropriate MRLs for animal commodities are not known to be established in China or Russia.

2.5 Potential Risk to Trade

Export of treated produce containing finite (measurable) residues of flumetsulam 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.

There is a potential risk of detectable residues being found in exported meat and meat product. The proposed MRL of 0.3 mg/kg for edible offal (mammalian) is greater than the edible offal MRL set in Japan (0.2 mg/kg). However cattle exposed to feeding levels of 11.6-16.7 mg/kg (1.14x higher than the maximum anticipated dietary burden of cattle consuming pastures treated with flumetsulam) resulted in highest residues of 0.15 mg/kg in the kidney, which is still below the Japanese MRL.

Since some export markets for Australian meat do not have residue tolerances in place it must be assumed that residues of flumetsulam in animal commodities exported to those markets must be non-detectable (<0.01 mg/kg). At the feeding level of 33.3-50 mg/kg, residues in kidney, liver, fat and muscle were 0.35, 0.04, 0.1 and 0.01 mg/kg respectively and declined to <0.01 mg/kg after 7 days depuration. The estimated half life of flumetsulam in kidney is <1.4 days and in fat <2 days. To mitigate any risk to trade a 7 day export slaughter interval is supported.

It is estimated that residues in animal feed must be below 0.52 mg/kg for residues in kidney to be below the LOQ of 0.01 mg/kg. At or near the application rate of 40 g flumetsulam /ha after a 28 day WHP residues in Australian and New Zealand pasture trials in rank order were <0.05 (x12), 0.2 & 0.64 mg/kg. Similarly residues in Argentinean pasture trials in rank order were <0.01 (x10), <0.17 (x4), 0.17, 0.2 (x2) & 0.23 mg/kg. The highest Australian residue of 0.64 mg/kg is marginally higher than 0.52 mg/kg, however residues in 13 Australian trials and 18 Argentinean pasture trials had residues significantly less than 0.52 mg/kg (max 0.23 mg/kg). Noting the short half life of flumetsulam in tissues a 28 day export animal feed interval (EAFI) for pastures and lucerne is recommended.

Finite residues may be observed in oaten hay following treatment with flumetsulam. However no relevant MRL is established in Japan so residues will be acceptable should they meet Australian Standards.

3. CONCLUSION

It is considered that the risks to trade associated with the proposed changes in use of Broadstrike Herbicide are low. Comment is sought on the potential for the proposed uses to unduly prejudice trade in Australian animal commodities and oaten hay.

A more detailed technical assessment report on the evaluation of the trade implications of this chemical can be obtained by contacting the APVMA at [to be arranged] alternatively, the reports can be viewed at the APVMA Library, which is located at:

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Symonston ACT, 2609

Office hours: 9.00 - 5.00 (EST) Monday to Friday