Australian Government

Australian Pesticides and Veterinary Medicines Authority

TRADE ADVICE NOTICE

on Triallate in the product Nufarm Avadex Xtra Selective Herbicide

APVMA Product Number 56598

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(see new grazing withholding period on page 6)

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PREFACE

The Australian Pesticides and Veterinary Medicines Authority (APVMA) is the Australian Government regulator 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 proposed extensions of use for existing chemicals where there may be trade implications, as defined in *Ag MORAG: Manual of Requirements and Guidelines* Part 5B.

About this document

This is a Trade Advice Notice.

It 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 **Nufarm Avadex Xtra Selective Herbicide** containing the existing active constituent triallate 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. In relation to this document, these grounds relate to the **trade implications** of the extended use of the product. Comments received outside these grounds cannot be considered by the APVMA.

Submissions must be received by the APVMA by close of business on **30 September 2010** 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 Group name (if relevant)
- Postal Address
- Email Address (if available)

- The date you made the submission.

All personal and ***confidential commercial information (CCI)***[1] material contained in submissions will be treated confidentially.

Written submissions on the APVMA's proposal to grant the application for registration that relate to the **grounds for registration** should be addressed in writing to:

Contact Officer
Pesticide Program
Australian Pesticide and Veterinary Medicines Authority (APVMA)
PO Box 6182 Kingston ACT 2604
Phone: +61 2 6210 4748
Email: pesticides@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: http://www.apvma.gov.au

[1] A full definition of "confidential commercial information" is contained in the Agvet Code.

1 INTRODUCTION

The Australian Pesticides and Veterinary Medicines Authority (APVMA) has before it an application from Nufarm Australia Limited to change the residue definition of triallate to include the metabolite, 2, 3, 3-trichloro-2-propenesulfinic acid (TCPSA). Triallate is the active constituent of a number of products including *Nufarm Avadex Xtra Selective Herbicide* (APVMA Product Number 56589). No changes in use of *Nufarm Avadex Xtra Selective Herbicide,* other than to define grazing withholding periods, are proposed in the application. TCPSA is present in commodities treated with triallate at quantifiable levels and the change in residue definition is supported by the APVMA.

As a result to the change in the residue definition for triallate, it is recommended that the MRL for pulses and oilseeds be increased from *0.05 to 0.1 mg/kg. As an MRL has not previously been established for triallate residues in eggs, it is recommended that an MRL for eggs be established at *0.01 mg/kg. MRLs for other commodities treated with triallate, such as cereals, and other animal commodities derived from animals fed commodities treated with triallate remain appropriate and no change to current MRLs for these commodities are required.

The potential for occurrence of residues of triallate, expressed according to the revised residue definition, in pulses and oilseeds treated with triallate and eggs from birds fed grain treated with triallate are discussed below.

2 TRADE CONSIDERATIONS

2.1 Commodities exported

Poultry eggs, pulses and oilseeds are considered major export commodities, as listed in Appendix 1 of Part 5B of the APVMA Ag Manual of Requirements and Guidelines. Animal commodities, which may be derived from livestock that were fed on commodities treated with triallate, are also considered to be major trade commodities.

2.2 Destination and value of exports

Pulses

Export volumes and values for various pulse crops are tabulated below (Australian Bureau of Agricultural and Resource Economics, Australian commodity statistics, 2009)..

Table 1: Australian Pulse Exports (2003-04 to 2008-09)

COMMODITY	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
LUPINS						
Total production (kt)	1180.0	937.0	1285.0	470.0	662.0	716.0
Exports (kt)	645.6	418.5	469.5	173.7	76.2	105.5
Export value ($m)	147.7	88.8	99.4	37.8	31.4	39.6
FIELD PEA						
Total production (kt)	487.0	289.0	585.0	140.0	267.5	252.1
Exports (kt) #	209.3	116.1	156.1	247.7	142.2	118.2
Export value ($m)	55.6	33.4	43.2	80.1	60.8	62.6
CHICK PEAS						
Total production (kt)	178.0	115.6	122.8	232.4	313.0	377.9
Exports (kt)	163.8	151.2	211.4	244.1	218.1	466.5
Export value ($m)	70.6	65.3	106.4	168.2	139.0	275.1
TOTAL LEGUMES*						
Total production (kt)	2,396.1	1,683.3	2,619.4	1,057.8	151.3	1,560.4
Exports (kt)	2,041.7	1,328.7	1,706.9	1,146.7	692.2	1,014.9
Export value ($m)	588.0	397.1	533.0	483.9	415.2	618.6

includes on field peas and cow peas

* includes lupins, field peas, chickpeas, faba beans, mung beans, navy beans, vetch and lentils

The ten largest export markets for Australian lentils, peas (dry) and beans (dry) by quantity in 2005 are shown below (Food and Agriculture Organization of the United Nations figures). Lupins are primarily exported to Korea; with Japan, Spain and The Netherlands (*pers. comm.* Pulses Australia).

Table 2: Export Markets for Australian Pulses (2005)

LENTILS		PEAS, DRY		BEANS, DRY	
DESTINATION	TONNES	DESTINATION	TONNES	DESTINATION	TONNES
Unspecified	29,105	India	49,504	Saudi Arabia	15,590
Pakistan	25,111	Malaysia	23,388	Sri Lanka	7,523
Sri Lanka	23,179	Sri Lanka	22,092	Egypt	5,944
Bangladesh	15,496	Bangladesh	10,500	Philippines	2,939
Egypt	11,965	Belgium	3,764	Taiwan	2,522
Mauritius	1,123	Mauritius	3,241	Malaysia	2,165
Yemen	616	Taiwan	1,884	Yemen	1,929
South Africa	492	Philippines	935	United Kingdom	1,423
UAE	489	Yemen	889	India	1,242
Lebanon	328	Bahrain	864	Belgium	697

Oilseeds

Export volumes and values for oilseed commodities are tabulated below (Australian Bureau of Agricultural and Resource Economics, Australian commodity statistics, 2009). While numerous oilseed commodities are exported, canola and canola oil are the major export commodities. In 2008-09, the major export destinations for Australian canola were Pakistan (120.6 kt or 12% of total exports), Japan (96.5 kt or 10% of total exports) and China (43.5 kt or 5% of total exports), while the major export destination of Australian canola oil was New Zealand (20.1 kt or 26% of total).

Table 3 Australian Oilseed Exports (2003-04 to 2008-09)

COMMODITY	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
OILSEEDS						
Canola (kt)	1,048.8	1,018.6	884.3	237.6	519.1	973.0
Linseed (kt)	0.02	0.21	0.16	0.02	0.00	0.01

COMMODITY	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Sunflowerseed (kt)	1.39	3.17	3.46	2.52	2.76	2.46
Total (kt) #	1,235.2	1,261.2	1,106.7	254.4	547.7	1,019.9
Total value ($m) #	541.2	484.4	404.5	161.4	337.9	641.9
OILS						
Canola oil (kt)	46.9	47.2	34.4	28.3	56.8	76.3
Linseed oil (kt)	0.02	0.01	0.10	0.01	0.01	0.00
Sunflowerseed oil (kt)	1.06	3.52	7.76	5.58	1.76	1.86
Total (kt) *	62.2	63.1	61.0	59.7	93.4	112.0
Total value ($m) *	67.1	73.1	81.1	90.4	163.4	223.3
OILSEED MEALS						
Total (kt) ^	16.0	22.9	21.4	19.7	18.9	19.6
Total value ($m) ^	17.9	37.3	29.5	26.0	872.7	567.2

Total oilseed exports includes canola, cottonseed, linseed, oleaginous fruit, peanuts, safflowerseed, sesame seed, soybean and sunflowerseed

* Total oil exported includes canola, cottonseed, linseed, palm, peanut, safflowerseed, soybean, sunflowerseed and olive oil

^ Total oilseed meal included canola, cottonseed and sunflowerseed, linseed, oleaginous fruit and soybean meal.

Poultry eggs

The export value of egg products in 2005-06 was $4.27 million, which was 1.3% of the total value of Australian egg production ($340 million). Australian eggs are exported to Singapore, the United States of America and the Philippines, mostly as processed egg products[2].

2.3 Proposed Australian use-pattern

The Australian use pattern for NUFARM AVADEX XTRA SELECTIVE HERBICIDE (500 g/L triallate) is summarised below.

[2] Source: http://www.daff.gov.au/agriculture-food/meat-wool-dairy/ilg/industries/australian_egg_industry

Table 4: Currently approved use pattern

HOST	PEST/DISEASE	RATE	CRITICAL COMMENTS
Barley, Triticale, Wheat Chickpeas, Faba beans, Lupins, Peas Linseed, Canola, Sunflower	Wild Oats	1.6 L/ha (800 g a.i./ha)	Apply immediately prior to or up to 3 weeks before sowing to a friable seedbed under conditions which will allow for the incorporation of the product to a depth of 2 to 4 cm with either a single or double pass of suitable incorporation equipment (see incorporation). A delay of 1 week between application and planting is recommended for linseed. COMPLETE AND UNIFORM INCORPORATION OF AVADEX XTRA IS ESSENTIAL FOR WEED CONTROL. See GENERAL INSTRUCTIONS for details at incorporation. AVADEX XTRA may be used in crops undersown with legumes. For shallow-sown legume and oil seed crops, complete incorporation by cultivation to a depth of 5 cm must be undertaken before planting: AVADEX XTRA may be tank mixed with Lusta or Nugran for control of annual ryegrass, paradoxa grass and certain broadleaf weeds prior to planting of wheat only. AVADEX XTRA may be tank mixed with Nufarm Triflur 480 for control of annual ryegrass, annual phalaris, paradoxa grass, enhanced control of wild oats (emerging from top 1 cm of seedbed) and wireweed. Do not apply less than 1 week prior to planting of wheat, barley, triticale and linseed (do not use the tank mix in Qld). Incorporation of this tank mix should be within 4-5 hours of application. Refer to the Triflur 480 label incorporation details. Read and follow label instructions, restraints, plant-back periods and safety directions for tank mix products.
Wheat, barley and triticale	Annual Ryegrass, Phalaris spp., Fumitory, Wild oats, Cereal oats, Sand Fescue (*Vulpia fasciculata*), Silvergrass (*V. bromoides*), Wintergrass (*Poa annua*), Paradoxa grass (Canary grass) (*Phalaris paradoxa*), Corn Gromwell (Sheepweed) (*Buglossoides anvensis*), Rough Poppy (*Papaver hybridum*) Suppression Soil Surface-Bromegrass (*Bromus diandrus*), Barleygrass (*Hordeum leporinum*), Three Cornered Jack (doublegee)	1.6-2.0 L plus 1.5-2.0 L TriflurX (800-1000 g triallate/ha)	**For use in no-till/min-till Cropping Systems, Pre-Sowing or Incorporated by Sowing (IBS)** Use only with knife/blade points and presswheels- refer to table 13 for method of incorporation. Use higher rates on light sandy and sandy loam soils. **DO NOT use on heavy soils.** Avoid soils, which are non-wetting or are likely to become clumpy or cloddy as they may suffer reduced weed control. Use higher rates for heavier stubble coverage and high weed density situations. Stubble coverage above 40-50% ground cover can reduce weed control below acceptable levels. Suppression of Bromegrass and Barleygrass may be reduced in medium to high weed density

	(*Emex australis*), Caltrop (Yellowvine and Bullhead) (*Tribulus terrestris*), Yellow Burr Weed (*Amsinckia* spp), Deadnettle (*Laminum amplexicaule*), Speedwell (*Veronica* spp.)		situations. Higher rates are likely to provide improved control of Bromegrass, Wild oats, Cereal oats, Barleygrass and Silvergrass. Control of deep/late germinating weeds may be reduced. Insufficient incorporation of Avadex Xtra will reduce Wild oat control. Control may be poor in the first years of practising no-till/min-till. To maintain crop safety attention to sowing speed and soil throw is required. **Avoid throwing treated soil into adjacent sowing furrows.** This is especially critical at higher use rates. **Avoid sites that water log or where furrow walls may collapse as crop establishment and vigour may be reduced.** Incorporate within 24 hours of application when applied onto a dry soil. Incorporate within 6 hours when applied onto a moist soil. If applied onto a dry soil, and it rains before sowing/incorporation is planned, incorporate within 6 hours to ensure the effectiveness of Avadex Xtra is retained.

WITHHOLDING PERIOD
NOT REQUIRED when used as directed

The following new grazing withholding periods are required:

WITHHOLDING PERIOD - HARVEST
NOT REQUIRED when used as directed.

WITHHOLDING PERIOD - GRAZING
Cereal forage: DO NOT graze or cut for stockfood for 11 weeks after application.
*Oilseed forage: DO NOT graze or cut for stockfood for 13 weeks after application**.*
Pulse forage: DO NOT graze or cut for stockfood for 13 weeks after application.

*** Note**: The withholding period for grazing forage and fodder of oilseed crops was inadvertently omitted from the August 2010 TAN. This information was included on 31 January 2011 and relevant stakeholders were advised of the change.

2.4 Results from residues trials presented to the APVMA

Pulses

Residue studies undertaken in pulses according to the approved Australian use pattern (8 trials) found residues of <0.01 to 0.08 mg/kg in pulse grain. It is recommended that the MRL for VD 0070 Pulses be increased from *0.05 mg/kg to 0.1 mg/kg.

In dried pea vines 11 weeks after application, dried soybean vines 8 weeks after application and dried bean vines 8 weeks after application, the highest combined residues observed following treatment according to the Australian GAP were 0.23, 0.34 and 0.72 mg/kg respectively. In lupin foliage, the highest residues from trials undertaken at the Australian GAP were 1.0 mg/kg 13 weeks after application. An MRL at 2 mg/kg for Pulse forage (green) is proposed.

In the straw / hay of lupins, soybean, beans and peas, the highest residues observed following treatment according to the Australian GAP were 0.15, 0.03, 0.31 and 0.37 mg/kg respectively. An MRL at 1 mg/kg for Pulse fodder is proposed.

The following grazing withholding period is also recommended:

Pulse forage: DO NOT graze or cut for stockfood for 13 weeks after treatment

Oilseeds

When triallate was applied to sunflowers according to the currently approved use pattern, residues at the time of normal harvest ranged from <0.01 to 0.07 mg/kg (3 trials). On the basis of the available data, an MRL of 0.1 mg/kg is recommended for oilseeds.

Cereals

Residue studies undertaken in cereals according to the approved Australian use pattern (18 wheat and 12 barley trials) found residues of <0.04 mg/kg in cereal grains. This data confirms that the current MRL at *0.05 mg/kg for GC 0080 Cereal grains remains appropriate.

In wheat forage 11 weeks after application and barley forage 10 weeks after application, the highest combined residues observed following treatment according to the Australian GAP were 2.38 and 1.58 mg/kg respectively. An MRL at 3 mg/kg for AF 0081 Forage of cereal grains is proposed.

In wheat and barley straw, the highest combined residues from Australian trials were 0.53 and 0.48 mg/kg on a dry weight basis respectively. An MRL at 1 mg/kg for AS 0081 Straw and fodder (dry) of cereal grains is proposed.

The following grazing withholding period is also recommended:

Cereal forage: DO NOT graze or cut for stockfood for 11 weeks after treatment

Animal commodities

Animal transfer studies involving dairy cattle, swine and laying hens that were dosed with 0, 1, 3 and 10 mg/kg in the feed each of triallate and TCPSA once daily for 28 days were provided. Based on a maximum feeding level of 3 mg/kg in the feed (cereal forage), residues of <0.02 mg/kg are expected in cattle muscle, liver and milk, swine muscle, liver, kidney and fat and poultry muscle, liver, kidney and eggs. Quantifiable residues may occur in cattle kidney (0.10 mg/kg), cattle fat (0.06 mg/kg) and poultry fat (0.02 mg/kg).

Based on the available data, it is considered that the current animal commodity MRLs remain appropriate. However there is no existing MRL for eggs and therefore an MRL at *0.01 mg/kg is recommended for eggs.

2.5 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. Triallate has not been considered by Codex. The following relevant overseas residue MRLs/ tolerances have been established for triallate in relevant plant commodities:

Table 5: Overseas residue MRLs/tolerances for triallate

COMMODITY	COUNTRY / RESIDUE DEFINITION / TOLERANCE (mg/kg)					
	Australia[3]	EU[4]	Japan[5]	Korea[6]	Russia[7]	USA[8]
	Triallate + TCPSA	Tri-allate	Tri-allate	Tri-allate	Triallate	Triallate + TCPSA
Cereal grains	*0.05	*0.1	0.05	0.05	0.5	0.05
Edible offal (mammalian) (except kidney)	*0.1	*0.05	0.1 (liver)	-	-	-
Eggs	*0.01 (proposed)	*0.05	-	-	-	-
Kidney of cattle, goats, pigs and sheep	0.2	*0.05	0.2	-	-	-
Legume vegetables	*0.05	*0.1	0.05	0.05 (pea)	-	-
Mammalian fats	0.2	*0.05	0.2	-	-	-
Meat [mammalian]	*0.1	*0.05	0.1	-	-	-
Milks	*0.1	*0.05	0.1	-	-	-

[3] http://www.apvma.gov.au/residues/standard.php#tables
[4] http://ec.europa.eu/sanco_pesticides/public/index.cfm?event=activesubstance.selection&a=1
[5] http://www.m5.ws001.squarestart.ne.jp/foundation/search.html
[6] http://eng.kfda.go.kr/file/PesiticideMRLs.pdf
[7] http://ec.europa.eu/food/international/trade/eu-russia_spsissues_en.htm
[8] http://www.access.gpo.gov/nara/cfr/waisidx_08/40cfr180_08.html

Oilseed	0.1 (proposed)	*0.1	0.05	-	-	-
Poultry, Edible offal of	0.2	*0.05	0.2	-	-	-
Poultry fats	0.2	*0.05	0.2	-	-	-
Poultry meat	*0.1	*0.05	0.1	-	-	-
Pulses	0.1 (proposed)	*0.1	0.05	0.05 (pea)	0.5 (Legume grain)	0.2 (pea, dry)

MRLs / Tolerances have not been established for triallate in China.

2.6 Current and proposed Australian MRLs for triallate

Current relevant MRLs and the residue definition for triallate are presented below. A full listing of MRLs can be found at http://www.apvma.gov.au/residues/standard.php.

Table 6: Current relevant entries in the MRL Standard – Table 1 and Table 3

MRL Standard: Table 1

COMPOUND	FOOD	MRL (mg/kg)
TRIALLATE		
GC 0080	Cereal grains	*0.05
MO 0105	Edible offal (mammalian) (except kidney)	*0.1
MO 0098	Kidney of cattle, goats, pigs and sheep	0.2
VP 0060	Legume vegetables	*0.05
MF 0100	Mammalian fats	0.2
MM 0095	Meat [mammalian]	*0.1
ML 0106	Milks	*0.1
SO 0088	Oilseed	*0.05
PO 0111	Poultry, Edible offal of	0.2
PF 0111	Poultry fats	0.2
PM 0110	Poultry meat	*0.1
VD 0070	Pulses	*0.05

MRL Standard: Table 3

COMPOUND	RESIDUE
TRIALLATE	Triallate

The following changes are proposed to Australian triallate MRLs

Table 7: Proposed changes to the MRL Standard – Table 1, Table 3 and Table 4

MRL Standard: Table 1

COMPOUND	FOOD	MRL (mg/kg)
TRIALLATE		
DELETE:		
SO 0088	Oilseed	*0.05
VD 0070	Pulses	*0.05
ADD:		
PE 0112	Eggs	*0.01
SO 0088	Oilseed	0.1
VD 0070	Pulses	0.1

MRL Standard: Table 3

COMPOUND	RESIDUE
TRIALLATE	
DELETE:	Triallate
ADD:	Sum of triallate and 2,3,3-trichloroprop-2-ene sulfonic acid (TCPSA), expressed as triallate

MRL Standard: Table 4

COMPOUND	FOOD	MRL (mg/kg)
TRIALLATE		
ADD:		
AF 0081	Forage of cereal grains	3
	Pulse forage (green)	2
AS 0081	Straw and fodder (dry) of cereal grains	1
	Pulse fodder	1

2.7 Potential risk to trade

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

Residues of triallate are expected to occur at low levels in treated pulses and oilseeds. As the MRL increases are the result of a change in residue definition rather than as the result of a change in use pattern, there is no change in actual residue occurrence or trade risk as a result of this application.

Grazing withholding periods and Table 4 MRLs for animal commodities are being introduced to ensure residues in animal commodities are below the established MRLs. With the exception of an MRL for eggs which is being established at *0.01 mg/kg, no amendment to existing animal commodity MRLs is required. The risk to trade in these commodities is unchanged or reduced owing to the establishment of grazing withholding periods.

3 CONCLUSIONS

The APVMA proposes to change the residue definition for triallate to include the metabolite, 2, 3, 3-trichloro-2-propenesulfinic acid (TCPSA). This will require an increase in the MRL for pulses and oilseeds from *0.05 mg/kg to 0.1 mg/kg. An MRL for eggs at *0.01 mg/kg will also be established. No changes in use pattern, other than establishment of grazing withholding periods, are proposed. As such, the risk to trade in commodities treated with NUFARM AVADEX XTRA SELECTIVE HERBICIDE remains unchanged, and the risk to trade in animal commodities produced from animals supplied treated feeds remains unchanged or is reduced.

A more detailed technical assessment report on the evaluation of the trade implications of this chemical can be obtained by contacting the APVMA at (02) 6210 4748. Alternatively, the reports can be viewed at the APVMA Library, which is located at:

18 Wormald Street
Symonston ACT, 2609
Office hours: 9.00 - 5.00 (EST) Monday to Friday