Australian Government

Australian Pesticides and Veterinary Medicines Authority

Trade Advice Notice

on imazapic and imazapyr in the product Sentry Herbicide for use on oats

APVMA product number 67951

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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 Sentry Herbicide 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 Wednesday 23 December 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

Further information

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

Further information on Trade Advice Notices can be found on the APVMA website: apvma.gov.au.

Introduction

The APVMA has before it an application from Nufarm Australia Limited to vary the registration of Sentry Herbicide containing imazapic and imazapyr to add a new pre-emergent use for imidazolinone herbicide tolerant oat crops for grazing, oaten hay or seed production.

Sentry Herbicide is currently registered for pre-emergence control or suppression of certain annual grasses and broadleaf weeds in imidazolinone herbicide tolerant barley, wheat and canola, as well as early post-emergence treatment in imidazolinone herbicide tolerant canola and wheat. The proposed use is the first use of imazapic and imazapyr on imidazolinone herbicide oat varieties. The trade implications relating to the required MRLs for oats are discussed here.

Trade considerations

Commodities exported

Cereal grains (including oats) and oaten hay are considered to be major export commodities[1], as are commodities of animal origin, such as meat, offal and dairy products, which may be derived from livestock fed feeds produced from treated oats. Residues in these commodities resulting from the use of Sentry Herbicide may have the potential to unduly prejudice trade.

Destination and value of exports

Major export markets for Australian oaten hay are Japan, China, Taiwan and South Korea[2].

The export value of Australian oat grain was $151 million in 2016 to 2017, $104 million in 2017 to 2018 and $121 million in 2018 to 2019[3]. Major export destinations in 2017 were Japan, India, Philippines, China and Singapore.

[1] Australian Pesticides and Veterinary Medicines Authority, *APVMA Regulatory Guidelines—Data Guidelines: Agricultural—Overseas trade (Part 5B)*, 20 July 2020, accessed 25/11/2020.

[2] Agrifutures Australia, *Agrifutures export fodder*, accessed 25/11/2020.

[3] Department of Agriculture, Water and the Environment ABARES, *ABARES Agricultural commodities and trade data*, accessed 25/11/2020

Proposed Australian use pattern

Table 1: Proposed new use pattern for oats: directions for pre-emergence use

Crop	Pest	Rate	Critical comments
Imidazolinone herbicide tolerant Oat varieties only For application only to crops grown for grazing, oaten hay or seed production (such as Kingbale). **DO NOT** apply to crops intended for the harvest of grain.	Barley grass (*Hordeum* spp.), Brome grass (*Bromus* spp.), Climbing buckwheat (*Fallopia convolvulus*), Hedge mustard (*Sisymbrium officinale*), Indian hedge mustard (*S. orientale*), Wild radish (*Raphanus raphanistrum*), Wireweed (*Polygonum aviculare*) **Suppression of the following weeds:** Annual ryegrass (*Lolium rigidum*), Capeweed (*Arctotheca calendula*), Clover (*Trifolium* spp.), Fumitory (*Fumaria* spp.), Long storksbill (*Erodium botrys*), Paterson's curse (*Echium plantagineum*), Phalaris (*Phalaris* spp.), Volunteer barley (*Hordeum vulgare*) (other than imidazolinone herbicide tolerant barley varieties), Volunteer canola (*Brassica napus*) (other than imidazolinone herbicide tolerant canola varieties), Volunteer wheat (*Triticum aestivum*) (other than imidazolinone herbicide tolerant wheat varieties), Volunteer oats (*Avena sativa*), Wild oats (*Avena* spp.)	40 – 50 g/ha (21 – 26.3 g ai/ha imazapic, 7 – 8.75 g ai/ha imazapyr) Refer to Compatibility Section and Critical Comments for advice and rates of herbicide tank mix partners.	DO NOT apply Sentry (to a crop) more than once in a growing season. Where Sentry is used pre-emergence followed by a post-emergent treatment with another imidazolinone-based herbicide or any other Group B herbicide to control grasses in cereals or brassicaceous weeds in canola, only sow an imidazolinone herbicide tolerant crop the following season. Ensure follow crop comments and restrictions on the label are consulted prior to use. Sentry may be applied up to and immediately prior to planting with incorporation by the sowing process using knife/blade points and press wheels. Best weed control will be achieved when applied to weed free, moist, friable soil immediately prior to sowing. Sentry can be applied to dry soil but will not be active until follow up rain disperses the product to the root zone of germinating weeds. Applying Sentry to dry soil when weeds are germinating from depth can impair performance. A 15 – 20 mm rainfall event received within a fortnight of application will limit this risk. The low rate of Sentry may not provide adequate control when used in heavy stubble covers, on high weed density burdens and in heavier soil types. Tank mixing with a suitable pre-emergence grass herbicide is recommended (see Compatibility section). Applying Sentry in tank mix with pre-emergence grass herbicides will improve grass control, particularly Annual ryegrass, and the control of some broadleaf weed species. This is especially applicable when using Sentry at 40 g/ha. Choice of the mixing partner regime depends upon weed spectrum and site conditions. DO NOT apply a Sentry tank mix in a manner contrary to advice provided on the label of the mixing partner. Wherever possible, an appropriate follow up post-emergence herbicide regime using alternative modes of action herbicides is recommended for weed seed set management. Harvest Weed Seed Set Control (HWSSC) measures are recommended in all situations in order to limit the survival of Group B resistant seeds, but are essential where Group B based herbicides, including Sentry, have been applied pre- and post-emergence. See Best Management Practice.

Withholding periods:

Harvest: Not required when used as directed.

Grazing: Do not graze or cut for stock food for 8 weeks after application.

Restraints:

DO NOT apply to oat crops intended for the harvest of grain. Only use in oat crops for grazing, oaten hay or seed production.

DO NOT apply to oat varieties that lack imidazolinone tolerance.

DO NOT apply post-emergence to imidazolinone tolerant oat.

DO NOT apply by aircraft.

DO NOT apply to crops or weeds which are suffering moisture stress (waterlogged or drought affected), insect, disease or nutritional disorders, are frost affected (or if frosts are imminent) or stressed from previous herbicide or foliar fertiliser treatment.

Results from residues trials presented to the APVMA

The applicant has provided six Australian GLP residue trials conducted over two seasons (2018 and 2019) on one imidazolinone tolerant oaten hay variety (KingBale). Each trial involved one pre-emergent application of Sentry Herbicide at 50 or 100 g product/ha (1× and 2× the maximum proposed rate). One of the 2018 trials failed due to drought conditions and therefore only 5 trials produced reliable results for grain and hay.

The proposed label includes the restraint ‘DO NOT apply to oat crops intended for the harvest of grain. Only use in oat crops for grazing, oaten hay or seed production’. Grain from treated crops should not be harvested and therefore MRLs at the LOQ (*0.02 mg/kg for imazapic and *0.01 mg/kg for imazapyr) are recommended as imazapic and imazapyr residues should not occur in oat grain. While the proposed use is not for oat grain production, the residue trials conducted on the KingBale oaten hay variety did analyse for residues in grain and those results are presented below along with the results for hay and forage.

Imazapic

In oat grain sampled at commercial harvest (160 to 204 days after sowing) after 1 pre-emergence application was made at 1× and 2× the proposed rate, residues of imazapic were below the LOD of 0.01 mg/kg (n = 5).

In oat hay sampled at 129 to 154 days after sowing after 1 pre-emergence application was made at 1× and 2× the proposed rate, residues of imazapic were below the LOD of 0.01 mg/kg (n = 5).

In oat forage sampled 8 weeks after 1 pre-emergence application was made to soil at 1× and 2× the proposed rate, residues of imazapic were below the LOD of 0.01 mg/kg in each sample with exception the sample from the 2× treatment in the drought affected trial where residues were below the LOQ of 0.02 mg/kg.

It is recommended an oat straw and fodder, dry MRL be established at *0.02 mg/kg and that the current MRL for cereal grains forage (fresh weight) at *0.05 mg/kg remains appropriate for oats.

Imazapyr

In oat grain sampled at commercial harvest (160 to 204 days after sowing) after 1 pre-emergence application was made at 1× the proposed rate, residues of imazapyr were below the LOD of 0.005 mg/kg (n=5). At 2x the proposed rate, residues were <0.005 (4) and 0.027 mg/kg.

In oat hay sampled at 129 to 154 days after sowing after 1 application was made at 1× and 2× the proposed rate, residues of imazapyr were not detected (<0.005 mg/kg, n = 5).

In oat forage sampled 8 weeks after 1 application was made at 1x the proposed rate, residues of imazapyr were not detected (<0.005 mg/kg) in each sample with the exception of the sample from the 2× treatment in the drought affected trial where residues were below the LOQ of 0.01 mg/kg.

It is recommended an oat forage and fodder MRL be established at *0.01 mg/kg.

Overseas registration and approved label instructions

The applicant indicated that there are no imazapic and imazapyr products are registered for use on imidazolinone herbicide tolerant oats overseas.

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. Imazapic and imazapyr has been considered by Codex.

While Codex[4] and Japanese[5] MRLs have been established for imazapic and imazapyr in some cereal grains, they have not been established for oats. Japanese MRLs for cereal forage and fodder (which would include oats) have been established for imazapic at 3 mg/kg and imazapyr at 30 mg/kg[6]. Other significant markets have not established relevant MRLs for imazapic and imazapyr.

[4] Codex Alimentarius, *Codex Pesticide MRLs*, accessed 25/11/2020.

[5] The Japanese Food and Chemical Research Foundation, *Japanese MRLs*, accessed 25/11/2020.

[6] Food and Agricultural Materials Inspection Centre, *Japanese animal feed MRLs*, accessed 24/11/2020

Current and proposed Australian MRLs for imazapic and imazapyr

Table 2: Current MRL Standard – Table1

Compound		Food	MRL (mg/kg)
Imazapic (formerly known as imazameth)			
GC	0640	Barley	0.02
MO	0115	Edible offal (mammalian)	*0.05
PE	0112	Eggs	*0.01
MM	0095	Meat (mammalian)[in the fat]	*0.05
ML	0106	Milks	*0.01
PO	0111	Poultry, edible offal	*0.01
PO	0110	Poultry meat	*0.01
GC	0654	Wheat	*0.05
Imazapyr			
GC	0640	Barley	0.7
MO	0115	Edible offal (mammalian)	*0.05
PE	0112	Eggs	*0.01
GC	0645	Maize	*0.05
MM	0095	Meat (mammalian)[in the fat]	*0.05
ML	0106	Milks	*0.01
PO	0111	Poultry, edible offal	*0.01
PO	0110	Poultry meat	*0.01
GC	0654	Wheat	*0.05

Table 3: Current MRL Standard – Table4

Compound		Food	MRL (mg/kg)
Imazapic (formerly known as imazameth)			
		Cereal grains forage (fresh weight)	*0.05
AS	0081	Straw and fodder (fresh weight) of cereal grains	0.5

Compound	Food	MRL (mg/kg)
Imazapyr		
	Forage and fodder of cereal grains {except maize fodder, dry; maize forage (fresh weight}	1
	Primary feed commodities {except forage and fodder (dry) of cereal grains; maize fodder, dry; maize forage (fresh weight), rape seed [canola] fodder (dry); rape seed [canola] forage; straw of cereal grains, dry; Sunflower forage and fodder}	15
	Straw of cereal grains, dry	*0.05

Table 4: Proposed MRL Standard – Table 1

Compound		Food	MRL (mg/kg)
Imazapic (formerly known as imazameth)			
ADD:			
GC	0647	Oats	*0.02
Imazapyr			
ADD:			
GC	0647	Oats	*0.01

Table 5: Proposed MRL Standard – Table 4

Compound		Food	MRL (mg/kg)
Imazapic (formerly known as imazameth)			
DELETE:			
AS	0081	Straw and fodder (fresh weight) of cereal grains	0.5
ADD:			
AS	0647	Oat straw and fodder, dry	*0.02
AS	0081	Straw and fodder (fresh weight) of cereal grains {except oat straw and fodder, dry}	0.5
Imazapyr			
DELETE:			
		Forage and fodder of cereal grains {except maize fodder, dry; maize forage (fresh weight}	1

Compound	Food	MRL (mg/kg)
	Primary feed commodities {except forage and fodder (dry) of cereal grains; maize fodder, dry; maize forage (fresh weight), rape seed [canola] fodder (dry); rape seed [canola] forage; straw of cereal grains, dry; sunflower forage and fodder}	15
	Straw of cereal grains, dry	*0.05
ADD:		
	Forage and fodder of cereal grains {except maize fodder, dry; maize forage (fresh weight); oat forage and fodder}	1
	Oat forage and fodder	*0.01
	Primary feed commodities {except forage and fodder (dry) of cereal grains; maize fodder, dry; maize forage (fresh weight); oat forage and fodder; rape seed [canola] fodder (dry); rape seed [canola] forage; straw of cereal grains, dry; sunflower forage and fodder}	15
	Straw of cereal grains, dry {expect oat forage and fodder}	*0.05

Potential risk to trade

Oat grain and hay are considered to be major export commodities and imazapic and imazapyr residues in these commodities resulting from the use of Sentry Herbicide may have the potential to unduly prejudice trade.

Residues of imazapic and imazapyr are not expected above the LOQ in oaten hay and therefore this potential risk to trade to hay is considered low.

A ‘DO NOT apply to oat crops intended for the harvest of grain’ restraint has been proposed and MRLs at the LOQ (*0.02 mg/kg for imazapic and *0.01 mg/kg for imazapyr) have been recommended for oat grain. Therefore the risk to the international trade of oat grain associated with the proposed use is considered low.

As finite residues of imazapic and imazapyr are not expected in oat commodities which are considered to be significant animal feeds, no changes to established animal commodity MRLs are required as the risk to trade of animal commodities is considered low.

Conclusion

Nufarm Australia Ltd have applied to vary the registration of the product Sentry Herbicide to include a new use for imidazolinone herbicide tolerant oats for grazing, oaten hay or seed production. The proposed use will require the establishment of the new MRLs for imazapic and imazapyr in oat commodities.

Comment is sought on the potential for Sentry Herbicide to prejudice Australian trade when used on imidazolinone herbicide tolerant oats according to the proposed label directions.