Australian Government

Australian Pesticides and Veterinary Medicines Authority

Trade Advice Notice

on prosulfocarb and S-metolachlor in the product Boxer Gold Herbicide for use on oats and triticale

APVMA product number 61234

September 2024

ISSN 2200-3894 (electronic)

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This publication is available from the APVMA website.

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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 APVMA is considering an application to vary the use of an existing registered agricultural 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 Boxer Gold 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 Monday, 28 October 2024 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
PO Box 574
Canberra ACT 2601

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 Syngenta Australia Pty Ltd to vary the registration of Boxer Gold Herbicide which contains prosulfocarb and S-metolachlor as the only active constituents. Syngenta wish to extend the application timing and the weeds controlled in oats and triticale. The use patterns will be the same as registered for wheat and barley.

Trade considerations

Commodities exported

Cereal grains and oaten hay are 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 and triticale. Residues in these commodities resulting from the use of Boxer Gold Herbicide may have the potential to unduly prejudice trade. However, quantifiable residues are not expected to occur in oat or triticale grain. The risk to trade in grain does not require further consideration. The risk to trade in animal commodities is also unchanged as the livestock dietary burden is unchanged and current animal commodity MRLs should remain appropriate. Only oaten hay requires further trade consideration in this notice.

Destination and value of exports

Key export markets for Australian fodder crops (including oaten hay) include Japan, Korea, China and Taiwan.[2]

Proposed Australian use pattern

Boxer Gold Herbicide (800 g/L prosulfocarb, 120 g/L S-metolachlor)

Table 1: Proposed use pattern

Crop	Weeds	Rate/ha	Critical comments
Oats, Triticale	Annual ryegrass (*Lolium rigidum*) including control of Group 3 resistant populations, Silver Grass (*Vulpia* spp.), Stone Crop (*Crassula* spp.) Suppression of Barley Grass (*Hordeum* spp.)	1.75 L pre-plant followed by 750 mL post plant pre-emergent (total ≡ 2 kg ai/ha prosulfocarb + 300 g ai/ha S- metolachlor)	Apply pre-plant and incorporate mechanically by the sowing operation (IBS). Application should be made to a moist seedbed up to 7 days prior to planting. Follow with the post-plant application as soon after sowing as possible, but before the crop and weeds emerge. Sufficient rain to thoroughly wet the top 3 to 4 cm of soil should occur within 10 days after each application. At planting, avoid soil throw into adjacent seeding rows or sites where furrow walls may collapse. Split application in oats crops may result in biomass reduction (reduction in dry matter yield). Impacts will be exacerbated in areas of double overlap. Crops generally recover well under good growing conditions. Barley Grass Management: Refer to IBS recommendation

[1] APVMA Regulatory Guidelines – Data Guidelines: Pesticides: Overseas trade (Part 5B), APVMA website, accessed August 2024

[2] AgriFutures Australia, Export Fodder, AgriFutures website, accessed August 2024

Crop	Weeds	Rate/ha	Critical comments
Oats, Triticale	Suppression of annual ryegrass (*Lolium rigidum*) (1 to 3 leaf growth stage)	2.5 to 3.0 L (≡ up to 2.4 kg ai/ha prosulfocarb + 360 g ai/ha S- metolachlor)	The use of BOXER GOLD® is intended as part of an integrated annual ryegrass management strategy that includes varied means to reduce ryegrass survival and seed-set, to sustain low seed bank numbers. Early post-emergent use of BOXER GOLD® should not be the primary means of managing ryegrass numbers. Surviving plants not controlled by BOXER GOLD® may be stunted and uncompetitive but may still set seed. Apply only to annual ryegrass growing where the soil moisture profile and growing conditions since planting have been good. A follow-up rainfall within14 days of application is required to achieve a high level of weed suppression. Use the higher rate under moderate to high ryegrass densities. Use of the higher rate will not restore efficacy where ryegrass has been stressed or where soil moisture conditions are not conducive to good activity. Early post-emergent application in oats crops may result in biomass reduction (reduction in dry matter yield). Impacts will be exacerbated in areas of double overlap and where other residual herbicides are applied. Crops generally recover well under good growing conditions. DO NOT apply BOXER GOLD® after growth stage Z25 (GS25). DO NOT apply BOXER GOLD® post-emergent to crops that have been treated with a pre-emergent or split application of BOXER GOLD®. DO NOT apply to crops that are water-logged or may be subject to waterlogging as unacceptable crop injury may result. DO NOT apply to annual ryegrass that has been stressed due to either a period of marginal moisture or waterlogging as the level of weed control may be reduced. DO NOT apply to crops under stress, such as herbicide damage, due to increased risk of further crop injury.

Crop	Weeds	Rate/ha	Critical comments
Oats, triticale	Toad Rush (*Juncus bufonius*)	1.25 to 2.5 L (≡ up to 2 kg ai/ha prosulfocarb + 300 g ai/ha S-metolachlor)	Apply pre-emergent and incorporate mechanically by the sowing operation (IBS). Application should be made to a moist seedbed up to 7 days prior to sowing and sufficient rain to thoroughly wet the top 3 to 4 cm of soil should occur within 10 days after spraying. Avoid soil throw into adjacent seeding rows or sites where furrow walls may collapse. Use upper label rate where longer residual control is required or in situations where crop competition is minimal. Refer to crop tolerance, incorporation and tillage requirements under GENERAL INSTRUCTIONS.

Withholding periods:

Harvest: Not required when used as directed

Grazing: Do not graze or cut for stock food for 10 weeks after application

Restraints:

DO NOT apply by aircraft

DO NOT use in seeding/tillage systems that cannot ensure accurate seed placement and adequate spatial separation of seed and herbicide

DO NOT apply to soils prone to waterlogging, sodic soils or soils affected by physical compaction

DO NOT apply if heavy rains or storms that are likely to cause runoff are forecast within 2 days of application

DO NOT irrigate treated fields to the point of run off within three days of application

DO NOT apply more than 2.5 L/ha per single growing season when applied pre-emergent, IBS or as a split application

DO NOT apply more than 3.0 L/ha per single growing season when applied post-emergent

Results from residues trials presented to the APVMA

The proposed new use patterns for oats and triticale are the same as registered for wheat and barley.

- There will be a split application of 1.75 L/ha pre-plant followed by 750 mL/ha post-plant-pre-emergent.
- Alternatively, there will be an early post-emergent application at up to 3 L/ha up to growth stage Z25.
- The third option is for a pre-emergent application at up to 2.5 L/ha incorporated mechanically by the sowing operation (IBS).

It is the early post emergent application up to growth stage Zadok's 25 at up to 3 L/ha (≡ 2.4 kg ai/ha prosulfocarb + 360 g ai/ha S-metolachlor) that has the greatest potential for increased residues.

The residue data considered when this use pattern was supported for wheat and barley are summarised below, noting that barley is the representative crop for oats and wheat is the representative crop for triticale.

Two residue trials in wheat and two in barley were conducted in Australia during the 2011/12 growing season. Plots were treated with Boxer Gold Herbicide by foliar application (at a targeted interval of Zadok's/ BBCH[3] stage 25, or 5th tiller visible) at 0.8× and 1.6× the currently proposed application rate.

Grain

No residues of either prosulfocarb or S-metolachlor at or above the limit of quantitation (0.01 mg/kg) were observed in wheat or barley grain at commercial harvest after early post-emergence application in any of the treated commodities at 0.8× the proposed application rate. Similarly, no quantifiable residues of prosulfocarb or S-metolachlor were observed at 1.6× the proposed application rate. No changes to the relevant established Maximum Residue Limits (MRLs) for metolachlor (cereal grains [except maize and sorghum] *0.02 mg/kg) or prosulfocarb (oats and triticale both at *0.01 mg/kg) are considered necessary. The current harvest withholding period (WHP) of "not required when used as directed" is supported.

Straw and Fodder

Residues of both prosulfocarb and S-metolachlor in straw were at or below the limit of quantitation in straw in 2 of the 4 trials at both the 0.8× and 1.6× rates. In one barley trial, prosulfocarb dry weight residues at 0.01 mg/kg were observed after application at the 1.6× rate. In the other barley trial, small finite dry weight residues were observed at both 0.8× (0.01 mg/kg for both prosulfocarb and S-metolachlor) and 1.6× (0.03 mg/kg for prosulfocarb and 0.01 mg/kg for S-metolachlor) rates.

Based on the results of these trials it is considered that the established Table 4 entry for metolachlor on primary feed commodities at 5 mg/kg will cover any residues in oat and triticale straw and fodder arising from the proposed use pattern. The current Table 4 MRLs for prosulfocarb on oat straw and fodder, dry, and triticale straw and fodder, dry, both at *0.01 mg/kg should be increased to 0.05 mg/kg in line with the current MRLs for barley and wheat straw and fodder. The current grazing WHP of "Do not graze or cut for stock food for 10 weeks after application" is supported.

Forage

S-metolachlor residues in wheat and barley forage on a dry weight basis at or near the current 10 week grazing WHP after application at 0.8× the proposed application rate were 0.03, 0.04, 0.04 and 0.05 (63 days) mg/kg. The residues at 1.6× the proposed application rate were 0.07, 0.11, 0.15 and 0.16 (63 days) mg/kg. Based on the 0.8× dataset the Organization for Economic Cooperation and Development (OECD) MRL

[3] BBCH (Biologische Bundesanstalt, Bundessortenamt und Chemische Industrie) scale is a system for uniform coding of growth stages which has been widely used for describing phenological stages of plants.

Calculator recommends an MRL of 0.15 mg/kg. The established metolachlor primary feed commodities MRL set at 5 mg/kg, will cover any residues in oat and triticale forage arising from the proposed use pattern.

Prosulfocarb residues in wheat and barley forage on a dry weight basis at or near the current 10 week grazing WHP after application at 0.8× the proposed application rate 0.14, 0.14 (63 days), 0.17 and 0.17 mg/kg. Residues arising at 1.6× the proposed application rate were 0.30, 0.48, 0.56 (63 days) and 0.63 mg/kg. Based on the 0.8× dataset the OECD MRL Calculator recommends an MRL of 0.5 mg/kg. The current prosulfocarb MRLs for oat forage and triticale forage, both at *0.01 mg/kg should be increased to 0.5 mg/kg in line with the current MRLs for barley and wheat forage to cover the proposed use pattern. The current grazing WHP of “Do not graze or cut for stock food for 10 weeks after application” is supported.

Overseas registration and approved label instructions

The applicant indicated that Boxer Gold is registered for use on wheat or barley or triticale in a range of countries including Chile, Egypt, Iraq, Morocco, Tunisia and Turkey.

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. Neither prosulfocarb nor S-metolachlor have been considered by Codex. No relevant international MRLs have been established for prosulfocarb or S- metolachlor in forage or fodder.

It is noted that neither prosulfocarb nor S-metolachlor are listed in the Ministerial Ordinance on the Specifications and Standards of Feeds and Feed Additives, Ministry of Agriculture and Forestry, Japan.[4]

[44] Ministerial Ordinance on the Specifications and Standards of Feeds and Feed Additives, Ministry of Agriculture and Forestry, Japan, accessed August 2024

Current and proposed Australian MRLs for prosulfocarb and metolachlor

Current entries in the APVMA MRL Standard relevant to the proposed application are listed below.

Table 2: Current MRL Standard – Table 1

Compound	Food	MRL (mg/kg)
Metolachlor		
GC 0080	Cereal grains {except Maize; Sorghum}	*0.02
MO 0105	Edible offal (mammalian)	*0.05
PE 0112	Eggs	*0.01
MM 0095	Meat (mammalian)	*0.05
ML 0106	Milks	*0.05
PM 0110	Poultry meat	0.01
PO 0111	Poultry, edible offal of	*0.01
Prosulfocarb		
GC 0640	Barley	*0.01
MO 0105	Edible offal (mammalian)	*0.02
PE 0112	Eggs	*0.02
MM 0095	Meat (mammalian)	0.02
ML 0106	Milks	0.02
GC 0647	Oats	*0.01
PM 0110	Poultry meat	0.02
PO 0111	Poultry, edible offal of	0.02
GC 0653	Triticale	*0.01
GC 0654	Wheat	*0.01

Table 3: Current MRL Standard – Table 4

Compound	Animal Feed Commodity	MRL (mg/kg)
Metolachlor		
	Primary feed commodities	5
Prosulfocarb		
	Barley forage	0.5
AS 0640	Barley straw and fodder, dry	0.05
	Oat forage	*0.01
AS 0647	Oat straw and fodder, dry	*0.01
	Triticale forage	*0.01
	Triticale straw and fodder, dry	*0.01
	Wheat forage	0.5
AS 0654	Wheat straw and fodder, dry	0.05

Table 4: Proposed MRL Standard – Table 4

Compound	Food	MRL (mg/kg)
Prosulfocarb		
Delete:		
	Oat forage	*0.01
AS 0647	Oat straw and fodder, dry	*0.01
	Triticale forage	*0.01
	Triticale straw and fodder, dry	*0.01
Add:		
	Oat forage	0.5
AS 0647	Oat straw and fodder, dry	0.05
	Triticale forage	0.5
	Triticale straw and fodder, dry	0.05

Potential risk to trade

Export of treated produce containing finite (measurable) residues of prosulfocarb or S-metolachlor 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.

It is proposed to increase the MRL for prosulfocarb on AS 0647 Oat straw and fodder, dry from *0.01 mg/kg to 0.05 mg/kg. No changes are proposed to the metolachlor Primary feed commodities MRL at 5 mg/kg.

No relevant MRLs for oaten hay are established overseas. However, residues of both prosulfocarb and S- metolachlor in straw were at or below the limit of quantitation in straw in two of the four trials at both the 0.8× and 1.6× rates. In one barley trial prosulfocarb dry weight residues at 0.01 mg/kg were observed after application at the 1.6× rate. In the other barley trial, small finite dry weight residues were observed at both 0.8× (0.01 mg/kg for both prosulfocarb and S-metolachlor) and 1.6× (0.03 mg/kg for prosulfocarb and 0.01 mg/kg for S-metolachlor) rates.

Comment is sought on the potential risk to trade in oaten hay if Boxer Gold Herbicide is used on oats as proposed.

Conclusion

Syngenta Australia Pty Ltd have applied to vary the registration of Boxer Gold Herbicide which contains prosulfocarb and S-metolachlor as the only active constituents. Syngenta wish to extend the application timing and the weeds controlled in oats and triticale. The use patterns will be the same as registered for wheat and barley. Comment is sought from relevant industry groups on the potential risk to trade in oaten hay from the proposed new use on oats.