



Australian Government

**Australian Pesticides and
Veterinary Medicines Authority**



Trade Advice Notice

on tiafenacil in the product Terrad'or Herbicide for use on wheat and fallow

APVMA product number 88074

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Comments and enquiries regarding copyright:

Assistant Director, Communications
Australian Pesticides and Veterinary Medicines Authority
GPO Box 574
Canberra ACT 2601 Australia

Telephone: +61 2 6770 2300

Email: communications@apvma.gov.au

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 Terrad'or 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 10 October 2025 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, Agricultural Chemicals
Australian Pesticides and Veterinary Medicines Authority
GPO Box 574
Canberra ACT 2601 Australia

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 FarmHannong Co., Ltd. to vary the product registration of Terrad'or Herbicide, containing 700 g/kg tiafenacil, Water dispersible granule, to include a pre-harvest (late season) use in wheat, remove the current grazing restraint for fallow (i.e. Do not allow livestock to graze treated weeds) and establish a grazing withholding period (WHP) of 7 days for fallow.

The registered use of tiafenacil in fallows and cereals involve a pre-sowing application at rates of up to 28 g ai/ha tiafenacil + Nufarm CanDo Adjuvant (0.5 L/100 L), to be tank mixed with either Nufarm CRUCIAL Herbicide (P86761, 360-1080 g ai/ha glyphosate) or Nufarm Shirquat Herbicide (P53919, 500-600 g ai/ha paraquat), in conjunction with a harvest WHP of 'Not required when used as directed' and a grazing WHP of 'Do not allow livestock to graze treated weeds' for fallows and 8 weeks for cereals (Terrad'or Herbicide, Water dispersible granule, P88074).

The current tiafenacil Maximum Residue Limit (MRL) of *0.01 mg/kg for GC 0080 Cereal grains was established in 2020 based on 15 Australian trials on wheat, barley, oats and sorghum supported by 53 North American trials on wheat and field corn. Based on 11 Australian field trials over multiple seasons, no change to this MRL is required to support the new use pattern for pre-harvest application in wheat as detectable residues should not be found when the proposed label instructions are followed.

The current grazing restraint for fallow (i.e. Do not allow livestock to graze treated weeds) was established in 2020, noting that no residue data had been provided at that time to address the direct treatment of weeds in a fallow situation.

The proposed tiafenacil MRLs for wheat forage and wheat straw and fodder, dry are higher than the current tiafenacil MRL for cereal forage and fodder, so an increase in the current tiafenacil MRL for edible offal (mammalian) and the establishment of a finite tiafenacil MRL of 0.05 mg/kg for meat (mammalian) [in the fat] are proposed which therefore requires further consideration with respect to trade. Based on livestock metabolism and transfer studies, an Export Slaughter Interval (ESI) of 3 days is proposed which should ensure there are no residues in animal meat, fat and offal for export.

It is recommended that the current tiafenacil residue definition for commodities of plant origin for dietary exposure assessment (tiafenacil + M-36 + M-53 + M56, expressed as tiafenacil) be amended to replace the current metabolites with M-01 and M-10 (tiafenacil + M-01 + M-10, expressed as tiafenacil). The recommended change to the residue definition for dietary risk assessment is not relevant to trade, noting that no finite residues in wheat grain were observed in all components of the recommended residue definition.

Trade considerations

Commodities exported

Wheat is considered to be a major export commodity, as are commodities of animal origin, such as meat, offal and dairy products, which may be derived from livestock fed feeds produced from treated forages and fodders. Residues in these commodities resulting from the use of Terrad'or Herbicide may have the potential to unduly prejudice trade.

Destination and value of exports

Total exports of wheat were 22454 kt in the 2023 fiscal year, valued at \$9.87 billion. Major export destinations for Australian wheat were China, Indonesia, Philippines, Vietnam, Yemen, Korea, Japan, Malaysia, New Zealand, Thailand, Kuwait, United Arab Emirates, Papua New Guinea, Myanmar, South Africa, Taiwan, Fiji, Oman, Iraq, India and Singapore (Australian Bureau of Agricultural and Resource Economics and Science)¹.

The significant export markets for Australian beef, sheep, pig meat and offal are listed in the APVMA Regulatory Guidelines – Data Guidelines: Agricultural - Overseas trade (Part 5B)².

¹ Australian Bureau of Agricultural and Resource Economics and Science (ABARES). [Agricultural commodities and trade data](#), ABARES website, accessed August 2025.

² APVMA Agricultural data guidelines. [Pesticides: Overseas trade \(Part 5B\)](#), APVMA website, accessed August 2025.

Proposed Australian use pattern

Table 1: Proposed use pattern – Terrad'or Herbicide (700 g/kg tiafenacil, Water dispersible granule)

Crop	Weeds/Situation	Rate	Critical comments
Section 1 – PRIOR TO SOWING			
<p>Prior to sowing the following winter or summer broadacre crops, pastures or starting a fallow and for fallow maintenance:</p> <p>Cereals; Pasture grasses; Pasture legumes; Pulses; Canola; Mustard (oilseed cultivars) (Brassica juncea); Cotton;</p> <p>as per the plantback table</p>	<p>Annual ryegrass (<i>Lolium rigidum</i>) including populations with weak levels of glyphosate resistance.</p>	<p>40 g/ha Terrad'or® +0.6-1.8 L/ha Nufarm CRUCIAL® Herbicide^ + 0.5 L/100L Nufarm CanDo™ Adjuvant*</p> <p>(28 g ai/ha)</p> <p>OR</p> <p>40 g/ha Terrad'or® + 2.0-2.4 L/ha Nufarm Shirquat® 250 Herbicide + 0.5 L/100L Nufarm CanDo™ Adjuvant*</p> <p>(28 g ai/ha)</p>	<p>Tank mixes of Terrad'or® and Nufarm CRUCIAL® have been demonstrated to provide higher levels of final control to annual ryegrass plants with a weak level of glyphosate resistance; compared to applications of glyphosate standalone. In populations where a moderate or strong glyphosate resistance level exists; use alternate management strategies.</p> <p>Annual ryegrass plants that exhibit weak resistance have 70% or more stunting compared to untreated plants when treated with glyphosate alone.</p> <p>Tank mixes of Terrad'or® with Nufarm Shirquat can also be used in strategies to manage glyphosate resistant annual ryegrass.</p> <p>Tank mixes with either Nufarm CRUCIAL or Nufarm Shirquat can be used as either single applications, or as one part of a sequential spray with 7-14 days between herbicide treatments.</p> <p>These use patterns should be used as part of an integrated weed management program; including non-herbicide methods of weed control.</p> <p>Observe the plant-back periods listed in the GENERAL INSTRUCTIONS.</p> <p>Sow following crops with a seeder that will move treated soil away from crop row (e.g. knife point with press wheels). Use of seeding machinery, or planting under conditions where product or treated soil remains or moves back into the crop row may result in crop damage. This may be caused by factors such as inappropriate seeding machinery, narrow row spacings, fast travel speeds, soil type, wind, heavy rainfall or irrigation after planting, etc. This is particularly important for susceptible crops such as canola.</p>

Crop	Weeds/Situation	Rate	Critical comments
			<p>Typically, use the minimum rate for smaller, younger weeds growing under good conditions. See GENERAL INSTRUCTIONS for further information.</p> <p>DO NOT apply post-sowing pre-emergent.</p> <p>Rainfast after 1 hour of daylight after application to seedling annual weeds when used with Nufarm CRUCIAL® or Nufarm Shirquat® (for other mixtures, refer to tank mix partner label for rainfastness information).</p> <p>^ Nufarm CRUCIAL is the recommended glyphosate partner. Alternative glyphosate products are listed in the compatibility section.</p> <p>* Nufarm CanDo™ is the recommended adjuvant and should be used at 0.5 L/100 L under normal conditions. Increasing the rate to 1 L/100 L may improve performance under less than ideal conditions. Alternatively to Nufarm CanDo™, use an alternate adjuvant listed in the compatibility section at 1 L/100L unless otherwise specified.</p>
	Annual grass and broadleaf weeds are controlled as listed in Section 2 weed table. Terrad'or® will also increase speed of brownout of treated broadleaf and grass weeds, especially at the highest application rate.	<p>20-40 g/ha Terrad'or® + 0.5 L/100L Nufarm CanDo™ Adjuvant* (14-28 g ai/ha)</p> <p>OR</p> <p>15-40 g/ha Terrad'or® + 0.6-1.8 L/ha Nufarm CRUCIAL® Herbicide^ + 0.5 L/100L Nufarm CanDo™ Adjuvant* (10.5-28 g ai/ha)</p>	<p>Observe the plant-back periods listed in the GENERAL INSTRUCTIONS.</p> <p>Sow following crops with a seeder that will move treated soil away from crop row (e.g. knife point with press wheels). Use of seeding machinery, or planting under conditions where product or treated soil remains or moves back into the crop row may result in crop damage. This may be caused by factors such as inappropriate seeding machinery, narrow row spacings, fast travel speeds, soil type, wind, heavy rainfall or irrigation after planting, etc. This is particularly important for susceptible crops such as canola.</p> <p>DO NOT apply post-sowing pre-emergent.</p> <p>Rainfast after 1 hour of daylight after application to seedling annual weeds when used with Nufarm CanDo™ or with Nufarm CRUCIAL® and Nufarm CanDo™ (for other mixtures, refer to tank mix partner label for rainfastness information).</p> <p>Refer to Section 2 for specific minimum application rates for each weed. Typically, use the minimum rate for smaller, younger weeds growing under good conditions. See GENERAL INSTRUCTIONS for further information.</p>

Crop	Weeds/Situation	Rate	Critical comments
			<p>To broaden the weed spectrum Terrad'or® may be tank mixed with the recommended rate of another knockdown herbicide other than glyphosate (Nufarm Shirquat® 250, Spray.Seed*, Nufarm BIFFO®, Amitrole T, Nufarm DROPZONE®, Nufarm 2,4-D Ester 680, Nufarm Kamba® 750).</p> <p>^ Nufarm CRUCIAL is the recommended glyphosate partner. Alternative glyphosate products are listed in the compatibility section.</p> <p>* Nufarm CanDo™ is the recommended adjuvant. Alternative adjuvants are listed in the compatibility section and should be used at 1 L/100L unless otherwise specified.</p>

Section 4. PRE-HARVEST APPLICATION

Wheat	Desiccation and seed set reduction of:	40 g/ha Terrad'or®	DO NOT use on crops intended for seed production or sprouting.
Including Durum	Annual ryegrass (<i>Lolium rigidum</i>)	+ 0.5 L/100 L Nufarm CanDo™ Adjuvant	DO NOT apply more than one (1) pre-harvest application of Terrad'or® per crop.
(BBCH 75-83 only)	Prickly lettuce (<i>Lactuca serriola</i>)	(28 g ai/ha)	DO NOT apply on crops which will be windrowed, for use only on direct harvested crops.
	Sowthistle (<i>Sonchus oleraceus</i>)		DO NOT apply before Zadoks crop stage 75 (BBCH75) otherwise yield and grain quality penalties may occur. This is described as 'medium milk'; when grains have reached their final size.
	Wild radish (<i>Raphanus raphanistrum</i>)		DO NOT apply after Zadoks crop stage 83 (BBCH83) otherwise residues may be detected in harvested grain. This is described as 'early dough'. Note that whilst the harvest withholding period is not required when used as directed, it is critical that this growth stage restriction is followed. Typically crops will not be ready to harvest for at least 21 days after application.
	Harvest aid		Some minor black spotting may be observed on stems and glumes of wheat following application but does not impact yield or grain quality.

Crop	Weeds/Situation	Rate	Critical comments
			<p>Along with desiccation and seed set reduction of annual ryegrass, prickly lettuce, sowthistle and wild radish, Terrad'or® acts as a harvest aid through desiccation of weeds and foliage which can aid timely and efficient harvesting. Note that in some situations weed regrowth may occur, however significant seed set reduction can still be achieved. Efficacy of Terrad'or® may vary depending on:</p> <ul style="list-style-type: none">• Environmental conditions (ie: soil moisture, air temperature) prior to, and following, spray application.• Spray coverage (penetration into crop canopy) on the target. Terrad'or® will only provide seed set reduction to weeds where they receive adequate coverage from an application.• Growth stage of target weeds. Higher levels of seed set reduction are observed where weeds are at flowering or early seed development stages. This targeted weed stage may not coincide with the recommended application timing based on crop growth stage, but Terrad'or® can only be applied in the BBCH75-83 crop growth stage. Once weed seeds have set, the application of Terrad'or® will only have an effect as a harvest aid. <p>* Nufarm CanDo™ is the recommended adjuvant. Alternative adjuvants are listed in the compatibility section and should be used at 1 L/100L unless otherwise specified.</p>

Withholding periods

Harvest: Not required when used as directed

Grazing:

Wheat, Fallow: DO NOT graze treated areas or cut for stockfeed for 7 days after application.

Trade advice

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) 3 days

Livestock that has grazed on or been fed treated crops or weeds should be placed on clean feed for 3 days prior to slaughter.

Results from residues trials presented to the APVMA

Wheat

The critical use pattern for wheat is for a maximum of one pre-harvest application per crop, applied between BBCH³ 75-83 only (medium milk to early dough) at a rate of 28 g ai/ha + 0.5 L/100 L Nufarm CanDo™ Adjuvant, in conjunction with a harvest withholding period (WHP) of 'Not required when used as directed' and a grazing WHP of 7 days. The wheat may also receive the registered application prior to sowing.

A total of 11 Australian trials for tiafenacil on wheat were considered relevant to the proposed use of tiafenacil on wheat.

Wheat grains

In 9 Australian trials on wheat, parent tiafenacil residues on wheat grains at commercial harvest [21-46 days after last application (DALA)], following an incorporation by sowing (IBS) application of a WG formulation containing tiafenacil at 27.6-29.7 g ai/ha (~1-1.1 × the currently registered rate for the IBS use) followed by one foliar application at BBCH 83 at 27.0-30.1 g ai/ha (~1-1.1 × the proposed rate), were < 0.010 mg/kg [< Limit of Quantification (LOQ), n=9].

³ The **B**iologische **B**undesanstalt, **B**undessortenamt and **C**hemical industry (BBCH) scale is a system for a uniform coding of phenologically similar growth stages of all mono- and dicotyledonous plant species.

In 2 Australian trials on wheat, parent tiafenacil residues on wheat grains at commercial harvest [23-24 days after application (DAA)], following one foliar application of a WG formulation containing tiafenacil at BBCH 83 at 26.9-30.1 g ai/ha ($\sim 1.1 \times$ the proposed rate), were < 0.01 mg/kg ($< \text{LOQ}$, $n=2$).

Based on the available data, the current tiafenacil MRL of $*0.01$ mg/kg for GC 0080 Cereal grains remain appropriate and should cover the proposed pre-harvest use on wheat.

Wheat forage and fodder

In 9 Australian trials on wheat, parent tiafenacil residues on wheat forage at 6-7 DALA and wheat straw at commercial harvest (21-46 DALA), following an IBS application of a WG formulation containing tiafenacil at 27.6-29.7 g ai/ha ($\sim 1.1 \times$ the currently registered rate for the IBS use) followed by one foliar application at BBCH 83 at 27.0-30.1 g ai/ha ($\sim 1.1 \times$ the proposed rate), were in ranked order:

- forage: 0.10, 0.115, 0.128, 0.334, 0.400, 0.484, 0.652 and 0.801 mg/kg on a dry weight (DW) basis ($n=8$)
- straw: 0.029, 0.064, 0.078 (2), 0.081, 0.100, 0.11, 0.137 and 0.167 mg/kg DW ($n=9$)

In 2 Australian trials on wheat, parent tiafenacil residues on wheat forage at 6-8 DALA and wheat straw at commercial harvest (23-24 DALA, converted to a dry weight basis using 88% dry matter), following one foliar application of a WG formulation containing tiafenacil at BBCH 83 at 26.9-30.1 g ai/ha ($\sim 1.1 \times$ the proposed rate), were in ranked order:

- forage: 0.34 and 0.68 mg/kg DW
- straw: 0.086 and 0.25 mg/kg DW

The combined dataset for each matrix is:

- forage: 0.10, 0.115, 0.128, 0.334, 0.34, 0.400, 0.484, 0.652, 0.68 and 0.801 mg/kg DW ($n=10$)
- straw: 0.029, 0.064, 0.078 (2), 0.081, 0.086, 0.100, 0.11, 0.137, 0.167 and 0.25 mg/kg DW ($n=11$)

Based on the combined forage dataset, the Organisation for Economic Co-operation and Development (OECD) MRL calculator estimates an MRL of 1.5 mg/kg. The STMR is 0.37 mg/kg. A tiafenacil MRL of 1.5 mg/kg for Wheat forage is considered appropriate for the proposed use on wheat in conjunction with a grazing WHP of 7 days.

Based on the combined straw dataset, the OECD MRL calculator estimates an MRL of 0.4 mg/kg. The STMR is 0.086 mg/kg. A tiafenacil MRL of 0.4 mg/kg for AS 0654 Wheat straw and fodder, dry is considered appropriate for the proposed use on wheat in conjunction with a grazing WHP of 7 days.

Noting the recommended tiafenacil MRLs for Wheat forage and AS 0654 Wheat straw and fodder, dry, the current tiafenacil MRL of $*0.01$ mg/kg for Cereal forage and fodder should be amended to "Cereal forage and fodder {except Wheat forage; Wheat straw and fodder, dry} at $*0.01$ mg/kg.

Fallow

The Applicant has requested to remove the current grazing restraint for fallow (i.e. Do not allow livestock to graze treated weeds) and establish a grazing WHP of 7 days for fallow.

A total of 24 Australian trials for tiafenacil on chickpea (1), faba beans (3), field peas (2), lentils (2), lupins (4) and wheat (12) were considered relevant to the proposed grazing WHP of 7 days for fallow.

Wheat

In 12 Australian trials on wheat, parent tiafenacil residues on wheat forage at 6-8 DALA, following 1-2 applications of a WG formulation containing tiafenacil at either of the following use patterns:

1. an IBS application at 27.6-29.7 g ai/ha ($\sim 1.1 \times$ the currently registered rate) followed by one foliar application at BBCH 77-87 at 27.0-30.1 g ai/ha ($\sim 1.1 \times$ the proposed rate), or
2. one foliar application at BBCH 83-85 at 26.9-30.1 g ai/ha ($\sim 1.1 \times$ the proposed rate), were in ranked order:
 - forage: 0.10, 0.115, 0.128, 0.21, 0.334, 0.34, 0.400, 0.484, 0.652, 0.68, 0.801 and 1.1 mg/kg DW (n=12)

Pulses

In 12 Australian trials on chickpea (1), faba beans (3), field peas (2) lentils (2) and lupins (4), parent tiafenacil residues on pulse forage at 6-7 DAA/DALA (or later if higher residues are observed), following 1-2 applications of a WG formulation containing tiafenacil at either of the following use patterns:

1. an IBS application at 27.8-29.7 g ai/ha ($\sim 1.1 \times$ the currently registered rate) followed by one foliar application at BBCH 79-88 at 26.3-31.8 g ai/ha ($\sim 0.9-1.1 \times$ the proposed rate), or
2. one foliar application at BBCH 84-89 at 25.9-30.6 g ai/ha ($\sim 0.9-1.1 \times$ the proposed rate), were in ranked order:
 - forage: < 0.01, 0.097, 0.14, 0.176, 0.19, 0.237, 0.357, 0.45, 0.515, 0.592, 0.800 and 1.2 mg/kg DW (n=12)

The available wheat forage and pulse forage data are combined to estimate an MRL to cover potential residues in weeds, following the use of tiafenacil in fallow situations.

The combined dataset suitable for the estimation of an MRL, are, in ranked order: < 0.01, 0.097, 0.10, 0.115, 0.128, 0.14, 0.176, 0.19, 0.21, 0.237, 0.334, 0.34, 0.357, 0.400, 0.45, 0.484, 0.515, 0.592, 0.652, 0.68, 0.800, 0.801, 1.1 and 1.2 mg/kg DW (n=24). The OECD MRL calculator estimates an MRL of 2 mg/kg. The STMR is 0.35 mg/kg.

Noting that the highest residue (HR) from the extrapolation of wheat and pulse forage to treated weeds in fallow situations is 1.2 mg/kg DW and that it is considered appropriate to establish MRLs which are at least 2 \times the HR as a conservative approach, a tiafenacil MRL of 3 mg/kg for Primary feed commodities {except Cereal forage and fodder; Mixed pastures (leguminous/grasses); Mustard seed forage and fodder; Pulse

forage and fodder; Rape seed [canola] forage and fodder; Wheat forage; Wheat straw and fodder, dry} is recommended, noting also that the current Cereal forage and fodder MRL should be deleted and tiafenacil MRLs for Wheat forage and AS 0654 Wheat straw and fodder, dry are recommended.

Animal commodities

Cattle

Based on the available data (pulse forage HR for tiafenacil parent = 1.2 mg/kg DW and M-01 residues of 0.29 mg/kg in the same trial, which forms part of the residue definition for animal commodities for tiafenacil), the existing dietary burden for dairy cattle and beef cattle will increase to 1.5 ppm each. A dairy cattle transfer study for tiafenacil has been submitted. Estimated residues in tissues and milk from a dietary burden of 1.5 ppm are summarised below.

Table 2: Estimated residues in mammalian tissues and milk and required MRLs

Feeding level (ppm)	Milk	Muscle	Liver	Kidney	Fat
Tiafenacil + M-01 residues, expressed as parent (mg/kg)					
5 (observed)	< 0.02	< 0.02	0.244	0.176	0.088
1.5 (estimated burden)	< 0.02	< 0.02	0.073	0.053	0.026
Established MRLs	*0.02 (milks)	*0.02 (meat)	*0.02 (offal)		–
Recommended MRLs	No change	Change to 0.05 (meat [in the fat])	0.1		Captured in recommended meat [in the fat] MRL (0.05)

To account for the potential transfer of tiafenacil residues to livestock commodities which may occur as a result of the proposed establishment of a grazing WHP for fallow, it is recommended that the current tiafenacil MRLs of *0.02 mg/kg for MO 0105 Edible offal (mammalian) be increased to 0.1 mg/kg and *0.02 mg/kg for MM 0095 Meat (mammalian) be replaced with 0.05 mg/kg for MM 0095 Meat (mammalian) [in the fat].

Consideration of an Export Slaughter Interval (ESI)

The JMPR has not evaluated tiafenacil and there are currently no Codex MRLs for tiafenacil. Noting that no animal commodity MRLs for tiafenacil are established by Codex and in international markets (EU, Japan, USA, China Korea and Taiwan), the endpoint for an ESI will be taken as the LOQ (0.02 mg/kg). As residues in the available transfer study were all < LOQ after 3 days depuration following feeding at 50 ppm, the proposed 3 day ESI should ensure there are no residues in animal meat, fat and offal for export.

Poultry

No changes are required to the current tiafenacil MRL of *0.01 mg/kg for GC 0080 Cereal grains. As cereal grains can form 100% of the diet for poultry, the maximum livestock dietary burden for tiafenacil for poultry

(0.01 ppm) is unchanged and the current tiafenacil poultry commodity MRLs established at the LOQ (*0.02 mg/kg) should remain appropriate.

Overseas registration and approved label instructions

The Applicant did not provide details of overseas registrations of Terrad'or Herbicide, but did supply details of MRLs established for tiafenacil in the USA, Canada, Brazil and South Korea.

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. Tiafenacil has not been considered by Codex. The following relevant international MRLs have been established for tiafenacil.

Table 3: Overseas MRLs/tolerances for tiafenacil

Commodity	Tolerance for residues arising from the use of tiafenacil (mg/kg)	
	Australia ⁴	USA ⁵
Residue definition	<p>Commodities of plant origin for enforcement: Tiafenacil</p> <p>Commodities of animal origin: Sum of tiafenacil and 3-(2-(2-chloro-4-fluoro-5-(3-methyl-2,6-dioxo-4-(trifluoromethyl)-2,3-dihydropyrimidin-1(6H)-yl)phenylthio)propanamido)propanoic acid (M-01), expressed as tiafenacil</p>	<p>Food: tiafenacil, methyl N-[2-[[2-chloro-5-[3,6-dihydro-3-methyl-2,6-dioxo-4-(trifluoromethyl)-1(2H)-pyrimidinyl]-4-fluorophenyl]thio]-1-oxopropyl]-β-alaninate</p> <p>Feed: sum of tiafenacil, methyl N-[2-[[2-chloro-5-[3,6-dihydro-3-methyl-2,6-dioxo-4-(trifluoromethyl)-1(2H)-pyrimidinyl]-4-fluorophenyl]thio]-1-oxopropyl]-β-alaninate and its metabolites 2-(2-chloro-4-fluoro-5-(3-methyl-2,6-dioxo-4-(trifluoromethyl)-2,3-dihydropyrimidin-1(6H)-yl)phenylsulfinyl)propanoic acid and 2-(2-chloro-5-(2,6-dioxo-4-(trifluoromethyl)-2,3-dihydropyrimidin-1(6H)-yl)-4-fluorophenylsulfinyl)propanoic acid, calculated as the stoichiometric equivalent of tiafenacil</p>
Cereal grains	*0.01 (no change proposed)	0.01 (wheat, grain)
Edible offal (mammalian)	*0.02 (current) 0.1 (proposed)	-
Meat (mammalian) [in the fat]	*0.02 (current, not in fat) 0.05 (proposed)	-
Wheat forage	*0.01 (Cereal forage and fodder) 1.5 (proposed)	0.05 (Wheat, forage)
Wheat straw and fodder, dry	*0.01 (Cereal forage and fodder) 0.4 (proposed)	0.08 (Wheat, hay), 0.07 (Wheat straw)

No tiafenacil MRLs are currently established by Codex and in the EU, Japan, Taiwan and China.

Tiafenacil MRLs are currently established in Korea but not for wheat and animal commodities relevant to this evaluation.

⁴ [Agricultural and Veterinary Chemicals Code \(MRL Standard for Residues of Chemical Products\) Instrument 2023](#), accessed August 2025.

⁵ Electronic Code of Federal Regulations, [USA Electronic Code of Federal Regulations](#), eCFR website, accessed August 2025.

Current and proposed Australian MRLs for tiafenacil

Table 4: Current MRL Standard – Table 1

Compound	Food	MRL (mg/kg)
Tiafenacil		
GC 0080	Cereal grains	*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
PM 0110	Poultry meat	*0.02
PO 0111	Poultry, edible offal of	*0.02

Table 5: Current MRL Standard – Table 4

Compound	Animal feed commodity	MRL (mg/kg)
Tiafenacil		
	Cereal forage and fodder	*0.01

Table 6: Proposed MRL Standard – Table 1

Compound	Food	MRL (mg/kg)
Tiafenacil		
Delete:		
MO 0105	Edible offal (mammalian)	*0.02
MM 0095	Meat mammalian	*0.02
Add:		
MO 0105	Edible offal (mammalian)	0.1
MM 0095	Meat (mammalian) [in the fat]	0.05

Table 7: Proposed MRL Standard – Table 4

Compound	Food	MRL (mg/kg)
Tiafenacil		
Delete:		
	Cereal forage and fodder	*0.01
Add:		
	Cereal forage and fodder {except Wheat forage; Wheat straw and fodder, dry}	*0.01
	Primary feed commodities {except Cereal forage and fodder; Mixed pastures (leguminous/grasses); Mustard seed forage and fodder; Pulse forage and fodder; Rape seed [canola] forage and fodder; Wheat forage; Wheat straw and fodder, dry}	3
	Wheat forage	1.5
AS 0654	Wheat straw and fodder, dry	0.4

Current and proposed residue definition for tiafenacil

Table 8: Current residue definition – Table 3

Compound	Residue
Tiafenacil	<p><i>Commodities of plant origin for enforcement:</i> Tiafenacil</p> <p><i>Commodities of plant origin for dietary exposure assessment:</i></p> <p>sum of tiafenacil, 2-(2-chloro-4-fluoro-5-(3-methyl-2,6-dioxo-4-(trifluoromethyl)-2,3-dihydropyrimidin-1(6H)-yl)phenylsulfinyl)propanoic acid (M-36), 2-((2-chloro-4-fluoro-5-(3-methyl-2,6-dioxo-4-(trifluoromethyl)tetrahydropyrimidin-1(2H)-yl)phenyl)sulfinyl)propanoic acid (M-53) and 2-((2-chloro-5-(2,6-dioxo-4-(trifluoromethyl)-2,3-dihydropyrimidin-1(6H)-yl)-4-fluorophenyl)sulfinyl)propanoic acid (M-56), expressed as tiafenacil</p> <p><i>Commodities of animal origin:</i> Sum of tiafenacil and 3-2-(2-chloro-4-fluoro-5-(3-methyl-2,6-dioxo-4-(trifluoromethyl)-2,3-dihydropyrimidin-1(6H)-yl)phenylthio)propanamido)propanoic acid (M-01), expressed as tiafenacil</p>

Table 9: Proposed residue definition – Table 3

Compound	Residue
Tiafenacil	
Delete:	<p><i>Commodities of plant origin for enforcement:</i> Tiafenacil</p> <p><i>Commodities of plant origin for dietary exposure assessment:</i> sum of tiafenacil, 2-(2-chloro-4-fluoro-5-(3-methyl-2,6-dioxo-4-(trifluoromethyl)-2,3-dihydropyrimidin-1(6H)-yl)phenylsulfinyl)propanoic acid (M-36), 2-((2-chloro-4-fluoro-5-(3-methyl-2,6-dioxo-4-(trifluoromethyl)tetrahydropyrimidin-1(2H)-yl)phenyl)sulfinyl)propanoic acid (M-53) and 2-((2-chloro-5-(2,6-dioxo-4-(trifluoromethyl)-2,3-dihydropyrimidin-1(6H)-yl)-4-fluorophenyl)sulfinyl)propanoic acid (M-56), expressed as tiafenacil</p> <p><i>Commodities of animal origin:</i> Sum of tiafenacil and 3-(2-(2-chloro-4-fluoro-5-(3-methyl-2,6-dioxo-4-(trifluoromethyl)-2,3-dihydropyrimidin-1(6H)-yl)phenylthio)propanamido)propanoic acid (M-01), expressed as tiafenacil</p>
Add:	<p><i>Commodities of plant origin for enforcement:</i> Tiafenacil</p> <p><i>Commodities of plant origin for dietary exposure assessment:</i> sum of tiafenacil, 3-(2-(2-chloro-4-fluoro-5-(3-methyl-2,6-dioxo-4-(trifluoromethyl)-2,3-dihydropyrimidin-1(6H)-yl)phenylthio)propanamido)propanoic acid (M-01) and methyl 3-(2-(2-chloro-4-fluoro-5-(3-methyl-2,6-dioxo-4-(trifluoromethyl)-2,3-dihydropyrimidin-1(6H)-yl)-phenylsulfinyl)propanamido)propanoate (M-10), expressed as tiafenacil</p> <p><i>Commodities of animal origin:</i> Sum of tiafenacil and 3-(2-(2-chloro-4-fluoro-5-(3-methyl-2,6-dioxo-4-(trifluoromethyl)-2,3-dihydropyrimidin-1(6H)-yl)phenylthio)propanamido)propanoic acid (M-01), expressed as tiafenacil</p>

Potential risk to trade

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

Wheat grain

It is noted that no Codex, EU, Japan, Taiwan and China MRLs for tiafenacil are currently established. Tiafenacil MRLs are currently established in Korea but not for wheat. However, detectable residues are not expected to occur in wheat grain from the proposed use. The risk to trade in wheat grain should be low.

Wheat forage, Wheat straw and fodder, dry

Whilst the proposed tiafenacil MRLs for wheat forage (1.5 mg/kg) and wheat straw and fodder, dry (0.4 mg/kg) is higher than the USA MRLs for wheat, forage (0.05 mg/kg), wheat, hay (0.08 mg/kg) and wheat, straw (0.07 mg/kg), animal feeds derived from wheat are not considered to be major export commodities.

Animal commodities

Grazing of livestock on treated fallow requires an increase to the tiafenacil MRL for edible offal (mammalian) to 0.1 mg/kg. The establishment of a tiafenacil MRL of 0.05 mg/kg for meat (mammalian) [in the fat] has also been proposed. However, no tiafenacil MRLs for these animal commodities are established by Codex, EU, Japan, USA, China, Korea and Taiwan. The proposed 3 day ESI should ensure that there are no quantifiable residues of tiafenacil animal tissues for export. The risk to trade in these commodities is considered to be low.

Conclusion

FarmHannong Co., Ltd. have made an application to vary the registration of Terrad'or Herbicide, containing tiafenacil, to add a pre-harvest use on wheat, remove the current grazing restraint for fallow and establish a grazing WHP of 7 days for fallow. Comment is sought on the potential for Terrad'or Herbicide to prejudice Australian trade when used as proposed and the ability of industry to manage potential trade risk.