Australian Government

Australian Pesticides and Veterinary Medicines Authority

Trade Advice Notice

on cyantraniliprole and diafenthiuron in the product Minecto Forte Insecticide for use on legume vegetables

APVMA product number 87610

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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 Minecto Forte Insecticide 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 26 June 2026 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

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 Minecto Forte Insecticide (APVMA product number 87610) to add uses on leafy vegetables, legume vegetables, plantago (*P. ovata, P. afra, P. cunninghammii* and *P. turrifera*) and potato. Minecto contains cyantraniliprole and diafenthiuron as its active ingredients in a Suspension Concentrate (SC) formulation.

The proposed use on legume vegetables and the subsequent residues in legume animal feeds requires increases to the mammalian commodity Maximum Residue Limits (MRLs) for both cyantraniliprole and diafenthiuron which is the reason for this Trade Advice Notice.

It is noted that the proposed varieties of plantago are grown for commercial psyllium production and are managed as high-value crops for their seed and husk. Grazing these would destroy the seed heads and render the harvest impossible. A grazing restraint has been proposed for the requested varieties of plantago.

It is also noted that leafy vegetables, fresh legume vegetables (not dried), potatoes and plantago are not considered to be significant feeds for poultry. No changes are required to the current poultry commodity MRLs for cyantraniliprole and diafenthiuron which should remain acceptable.

Trade considerations

Commodities exported

Leafy vegetables, legume vegetables, potatoes and plantago are not considered to be major export commodities.[1] Leafy vegetables, potatoes and plantago do not require further consideration in this Trade Advice Notice.

However, commodities of animal origin, such as meat, offal and dairy products, which may be derived from livestock fed feeds produced from treated legume crops are major export commodities. Residues in these commodities resulting from the use of Minecto Forte Insecticide may have the potential to unduly prejudice trade.

It is noted that a grazing restraint for animals producing milk for human consumption has been proposed due to the lack of suitable MRL coverage for dairy products in overseas markets and limited animal transfer data for diafenthiuron in milk.

Destination and value of exports

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).[1]

Proposed Australian use pattern

The proposed Australian use pattern for Minecto Forte Insecticide (80 g/L cyantraniliprole, 400 g/L diafenthiuron) on legume vegetables is summarised below (the other proposed uses do not require further consideration in this Trade Advice Notice):

[1] APVMA Regulatory Guidelines – Data Guidelines: Agricultural - Overseas trade (Part 5B), APVMA Website, accessed March 2026

Table 1: Proposed use pattern

Crop	Pest	Rate/concentration	Critical comments
Legume Vegetables including green beans, green peas, snow peas, sugar snap peas Open field only	Cluster caterpillar (*Spodoptera litura*) Cotton bollworm (*Helicoverpa armigera*) Cucumber moth (*Diaphania indica*) Melon aphid (*Aphis gossypii*) Native budworm (*Helicoverpa punctigera*) Potato Moth (*Phthorimaea operculella*)	500 mL/ha Δ (200 + 40 g ai/ha)	Monitor crops and commence MINECTO® Forte insecticide applications immediately once local economic spray thresholds are reached. Best results will be achieved when spray is applied to low insect populations. Avoid applying MINECTO® Forte to high established insect populations. Continue to monitor crops and make subsequent insecticide applications as necessary. Ensure spray volume is adequate to thoroughly cover all parts of the crop. Lepidopteran pests Target sprays against eggs and newly hatched larvae before they become entrenched. Silverleaf whitefly Target immature whitefly stages. DO NOT apply more than 2 applications of MINECTO® Forte per crop. Δ The addition of an adjuvant may assist control - refer to Adjuvant section in General Instructions. These uses are subject to a CropLife Australia Insecticide Resistance Management strategy.
	Green peach aphid (*Myzus persicae*) Brown sowthistle aphid (*Uroleucon sonchi*) Diamondback moth (*Plutella xylostella*) Bean podborer (*Maruca vitrata*) Silverleaf whitefly (*Bemisia t*abaci)	625 mL/ha Δ (250 + 50 g ai/ha)	
	Two-spotted mite (*Tetranychus urticae*) **Suppression of:** Plague thrips (*Thrips imaginis*) Tomato thrips (*Frankliniella schultzei*) Western flower thrips (*Frankliniella occidentalis*)	750 mL/ha Δ (300 + 60 g ai/ha)	

Withholding periods (Legume vegetables):

Harvest: DO NOT harvest for 7 days after application

Grazing: DO NOT graze or cut for stock food for 7 days after application.

Livestock Producing Milk for Human Consumption: DO NOT graze livestock producing milk for human consumption on treated legume vegetable crops.

Restraints:

DO NOT use on kale grown as a feed for livestock

Plantago (*P. ovata, P. afra, P. cunninghammii* and *P. turrifera*): DO NOT graze treated area or cut for stock food.

DO NOT apply by aircraft

DO NOT apply if heavy rains or storms are forecast within 3 days

DO NOT irrigate to the point of runoff for at least 3 days after application

DO NOT apply by backpack application

DO NOT use in protected cropping situations

DO NOT apply consecutive applications of MINECTO® Forte insecticide

DO NOT apply within 28 days of a previous application of MINECTO® Forte insecticide

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) 14 DAYS

Livestock that has grazed on or been fed treated crops should be placed on clean feed for 14 days prior to slaughter.

Results from residues trials presented to the APVMA

The critical Good Agricultural Practice (GAP) for legume vegetables (field grown only) is for up to 2 applications each at up to 60 g cyantraniliprole/ha + 300 g diafenthiuron/ha with a minimum of 28 days between applications. The proposed grazing withholding period is 7 days.

The applicant has submitted an Australian Good Laboratory Practice (GLP) study conducted with Minecto Forte Insecticide on green beans and peas (4 trial sites for each, 2 trials on each sampled bean or pea forage).

Highest residues of cyantraniliprole in bean and pea forage at 6-7 days after the last application at approximately 60 g ai/ha were 1.09, 1.22, 3.00 and 3.05 mg/kg on a dry weight basis. The Organisation for Economic Development (OECD) MRL Calculator recommends an MRL of 7 mg/kg (Supervised Trial Median Residue (STMR) = 2.11 mg/kg, n = 4). An MRL of 7 mg/kg is recommended for cyantraniliprole on AL 0157 Legume animal feeds in conjunction with a 7 day grazing withholding period. This MRL can replace the current temporary MRL of T30 already established for cyantraniliprole on Legume animal feeds associated with Permit 90652/129688 for use on green beans which expired on 31 May 2021.

Highest total residues of difethialone in bean and pea forage at 6-7 days after the last application at approximately 300 g ai/ha were 2.46, 5.89, 6.29 and 6.48 mg/kg on a dry weight basis. The OECD MRL Calculator recommends an MRL of 20 mg/kg (15.8 mg/kg unrounded, STMR = 6.09 mg/kg, n = 4). An MRL of 15 mg/kg is recommended for diafenthiuron on AL 0157 Legume animal feeds {except Peanut forage and fodder; Pulse forage and fodder} in conjunction with a 7 day grazing withholding period.

Animal commodity MRLs

The OECD Feed Calculator indicates bean vines, pea vines and pea hay can form 40 – 100% of the diet for beef or dairy cattle in Australia. As a worse case, APVMA Part 5B Guidelines indicate that legume forage can form 100% of the diet for cattle and sheep in Australia.[2]

The maximum mammalian livestock dietary burdens for both cyantraniliprole and diafenthiuron will increase because of this proposal given high residues in legume forage of 3.052 and 6.478 mg/kg for cyantraniliprole and diafenthiuron respectively on a dry weight basis. Estimated burdens are therefore 3.05 ppm for cyantraniliprole and 6.48 ppm for diafenthiuron.

[2] APVMA Regulatory Guidelines – Data Guidelines: Agricultural - Overseas trade (Part 5B), APVMA Website, accessed March 2026

Estimated cyantraniliprole residues in tissues and milk and required MRLs based on extrapolation from a previously submitted animal transfer study are summarised below:

Table 2: Estimated cyantraniliprole residues in animal commodities and required MRLs

Feeding level (ppm)	Milk	Muscle	Liver	Kidney	Fat
	Cyantraniliprole residue (mg/kg)				
3*	0.030	0.011	0.066	0.031	0.015
10*	0.11	0.037	0.16	0.14	0.066
3.05 – cattle, estimated burden	0.033	0.011	0.049	0.043	0.020
Established MRLs	*0.01 (milks)	-	0.05 (offal)		*0.01 (meat in the fat)
Required MRLs	0.05	-	0.1		0.03

**For tissues highest residues from lactating cows dosed with cyantraniliprole at 3 or 10 ppm for 28 days*

**For milk average residues from lactating cows dosed with cyantraniliprole at 3 or 10 ppm for 28 days*

Estimated diafenthiuron residues in tissues and milk and required MRLs based on extrapolation from a previously submitted sheep transfer study are summarised below:

Table 3: Estimated diafenthiuron residues in animal commodities and required MRLs

Feeding level (ppm)	Muscle	Kidney	Liver	Omental fat	Renal Fat	Subcutaneous fat
	CGA 177960 residue*(mg/kg)					
20	<0.02	<0.02	<0.02	0.11	0.12	<0.02
6.48 – cattle, estimated burden	<0.02	<0.02	<0.02	0.036	0.039	<0.02
Established MRLs	*0.02 (meat - in the fat)	*0.02 (offal)		*0.02 (meat - in the fat)		
Recommended MRLs		No change		0.05 (meat – in the fat)		

**The diimide (urea metabolite) CGA 177960 is the predominant compound present in animal tissues in metabolism studies.*

Codex Alimentarius Commission and overseas MRLs

The Codex Alimentarius Commission (Codex) is responsible for establishing Codex Maximum Residue Limits (CXLs) for pesticides and veterinary medicines. 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. Cyantraniliprole has been considered by Codex, diafenthiuron has not been considered by Codex. The following relevant international MRLs have been established for cyantraniliprole and diafenthiuron.

Table 4: International MRLs for cyantraniliprole

Commodity	Tolerance for residues arising from the use of cyantraniliprole (mg/kg)							
	Australia	Codex[3]	China[4]	Eu[5]	Japan[6]	Korea[7]	Taiwan[8]	USA[9]
Residue Definition	Parent	Parent	Parent	Parent	Parent	-	-	Parent
Edible offal (mammalian)	0.05 (current) 0.1 (proposed)	1.5	1.5*	1.5	2	-	0.4	0.4 (meat byproducts)
Meat (mammalian)[in the fat)	*0.01 (current) 0.03 (proposed)	0.2 (meat) 0.5 (fats)	0.2* (meat) 0.5* (fat)	0.2 (muscle) 0.5 (fat)	0.2 (muscle) 0.5 (fat)	-	0.1 (muscle, fat)	0.1 (meat, fat
Milk fats	0.07 (current) 0.3 (proposed)	-		-	-	-	-	-
Milks	*0.01 (current) 0.05 (proposed)	0.6	0.6*	0.02	0.01	-	0.1	0.2

*China * = the MRL is at the temporary limit*

[3] Food and Agriculture Organisation of the United Nations, *Codex Alimentarius, International Food Standards*, FAO website, accessed February 2026.

[4] United States Department of Agriculture, Translation of Maximum Residue Limits for Pesticides in Foods, China – People's Republic of, accessed February 2026.

[5] European Commission, *EU Pesticide residue(s) and maximum residue levels (mg/kg)*, European Commission website, accessed February 2026.

[6] Japanese Food Chemistry Research Foundation, *Table of MRLs for Agricultural Chemicals*, JFCRPF website, accessed February 2026.

[7] Ministry of Food and Drug Safety, Korea, MRLs in Pesticides, accessed February 2026.

[8] Laws & Regulations Database of the Republic of China (Taiwan), Standards for Pesticide Residue Limits in Foods, Standards for Pesticide Residue Limits in Animal Products, accessed February 2026.

[9] Electronic Code of Federal Regulations, *USA Electronic Code of Federal Regulations*, eCFR website, accessed July February 2026.

Table 5: International MRLs for diafenthiuron

Commodity	Tolerance for residues arising from the use of diafenthiuron (mg/kg)							
	Australia	Codex	China	Eu	Japan	Korea	Taiwan	USA
Residue Definition	Sum of diafenthiuron; N-[2,6-bis(1-methylethyl)- 4-phenoxyphenyl]-N'-(1,1-dimethylethyl)urea; and N-[2,6-bis(1-methylethyl)-4-phenoxyphenyl]- N'-(1,1-dimethylethyl)carbodiimide, expressed as diafenthiuron	-	Diafenthiuron	-	Sum of residues of diafenthiuron and each of diafenthiuron-urea [1-tert-butyl-3-(2,6-diisopropyl-4-phenoxyphenyl) urea] and diafenthiuron methaneimide-amide [1-tert-butyl-3-(2,6-diisopropyl-4-phenoxyphenyl) methaneimide-amide], which are individually calculated as diafenthiuron.	-	-	-
Edible offal (mammalian)	*0.02 (current)	-	-	-	0.02	-	-	-
Meat (mammalian)[in the fat)	*0.02 (current) 0.05 (proposed)	-	-	-	0.02 (fat, muscle)	-	-	-
Milks	*0.02 (current) 0.05 (required)	-	-	-	0.02	-	-	-

Current and proposed Australian MRLs for cyantraniliprole and diafenthiuron

Table 6: Current MRL Standard – Table1

Compound	Food	MRL (mg/kg)
Cyantraniliprole		
MO 0105	Edible offal (mammalian)	0.05
MM 0095	Meat (mammalian) [in the fat]	*0.01
FM 0183	Milk fats	0.07
ML 0106	Milks	*0.01
Diafenthiuron		
MO 0105	Edible offal (mammalian)	*0.02
MM 0095	Meat (mammalian) [in the fat]	*0.02
ML 0106	Milks	*0.02

Table 7: Proposed MRL Standard – Table1

Compound	Food	MRL (mg/kg)
Cyantraniliprole		
Delete:		
MO 0105	Edible offal (mammalian)	0.05
MM 0095	Meat (mammalian) [in the fat]	*0.01
Add:		
MO 0105	Edible offal (mammalian)	0.1
MM 0095	Meat (mammalian) [in the fat]	0.03
Diafenthiuron		
Delete:		
MM 0095	Meat (mammalian) [in the fat]	*0.02
Add:		
MM 0095	Meat (mammalian) [in the fat]	0.05

Potential risk to trade

Export of treated produce containing finite (measurable) residues of cyantraniliprole and diafenthiuron 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.

Required animal commodity MRLs for cyantraniliprole are lower than those established by Codex and generally lower than those in other markets. No animal commodity MRLs for cyantraniliprole appear to be established in Korea.

Diafenthiuron has not been considered by Codex and there is limited coverage for animal commodities in other markets, with MRLs only established in Japan which has a lower meat fat MRL than required to cover the proposed use pattern. In the available sheep animal transfer study, an average diafenthiuron residue of 0.0675 mg/kg in the fat of four sheep at the end of dosing declined to average residue of 0.035 mg/kg in the fat of 2 sheep after a 14 day depuration period. The half-life for diafenthiuron in fat is therefore approximately 14 days. The estimated diafenthiuron High Residue (HR) of 0.039 mg/kg in fat from feeding on legume forage would be expected to be at or below the Limit of Quantitation (LOQ, 0.02 mg/kg) after a 14 day Export slaughter interval is observed. In the cyantraniliprole feeding study, no quantifiable residues were observed in tissues by 10 days post dosing at 100 ppm. A 14 day ESI would also ensure that there would be no quantifiable residues of cyantraniliprole in animal tissues.

With the recommended ESI and the grazing restraint for animals producing milk for human consumption the risk to trade in animal commodities from the proposed use on legume vegetables should be low.

Conclusion

Syngenta Australia Pty Ltd have applied to vary the registration of Minecto Forte Insecticide to add uses on leafy vegetables, legume vegetables, plantago and potato. The use on legume vegetables will require an increase to the animal commodity MRLs for livestock grazing on treated legume animal feeds. However, it is proposed that the risk to trade will be managed by an ESI and a grazing restraint for animals producing milk for human consumption. Comment is sought from relevant industry groups on the potential risk to trade in animal commodities from this use.