



Australian Government
**Australian Pesticides and
Veterinary Medicines Authority**



Trade Advice Notice

on glyphosate in the product Nufarm CRUCIAL Herbicide for use on lupins

APVMA product number 86761

November 2021

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Contents

Preface	1
About this document	1
Making a submission	1
Further information	2
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Introduction	3
Trade considerations	3
Commodities exported	3
Destination and value of exports	3
Proposed Australian use pattern	4
Results from residues trials presented to the APVMA	4
Codex Alimentarius Commission and overseas MRLs	5
Current Australian MRLs for glyphosate	7
Potential risk to trade	7
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Conclusion	8

List of tables

Table 1: Major destinations for Australian Pulses ² (Export data ABS 2015–18)	3
Table 2: Proposed use pattern – Nufarm CRUCIAL Herbicide (600 g/L glyphosate)	4
Table 3: Current and proposed Australian and overseas MRLs/tolerances for glyphosate	6
Table 4: Current MRL Standard – Table 1	7
Table 5: Current MRL Standard – Table 4	7

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 **Nufarm CRUCIAL 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 22 December 2021** 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
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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 Nufarm CRUCIAL Herbicide containing glyphosate, to extend the approved use in pulses to include lupins.

Nufarm CRUCIAL Herbicide is registered for use in in 'PULSE CROPS, including: Adzuki beans, Chickpeas, Cowpea, Faba beans, Field peas, Lentils, Mungbeans, Soybean and Vetch'. The registered use of glyphosate in pulse crops allows a single foliar application of glyphosate at 360 to 960 g ai/ha in conjunction with a harvest withholding period of 7 days.

A use of glyphosate on lupins for pre-harvest desiccation and late season weed control is currently approved under permit (PER91458). The first permit use for glyphosate on lupins (PER12559) was issued in November 2010.

The current proposal does not increase the maximum livestock dietary burden for glyphosate. No changes to animal commodity MRLs are required and the risk to trade for animal commodities remains unchanged and will not be discussed further in this document.

Trade considerations

Commodities exported

Lupins are considered to be major export commodities¹, as are commodities of animal origin, such as meat, offal and dairy products, which may be derived from livestock fed feeds produced from treated lupin seed, forage and fodder. Residues in these commodities resulting from the use of Nufarm CRUCIAL Herbicide may have the potential to unduly prejudice trade.

Destination and value of exports

Australian white lupins constitute 30% to 40% of the annual Australian pulse crop². In 2019–20 Australia exported 230 kt of lupins worth 95 million AUD. Total Australian pulse exports in 2019–20 were 1 731 kt worth 1 246 million AUD³.

Table 1: Major destinations for Australian Pulses² (Export data ABS 2015–18)

Crop	Major destinations
Pulses	India, Bangladesh, Pakistan, Egypt, UAE, Sri Lanka, The Netherlands, Korea, Vietnam, Saudi Arabia

¹ Australian Pesticides and Veterinary Medicines Authority, [APVMA Regulatory Guidelines – Data Guidelines: Agricultural - Overseas trade \(Part 5B\)](#), APVMA website, accessed November 2021.

² Australian Export Grains Innovation Centre, [Australian Pulses](#), AEGIC website, accessed November 2021.

³ Department of Agriculture, Water and the Environment (ABARES), [Agricultural commodities and trade data](#), Australian Government AWE website, accessed November 2021.

Proposed Australian use pattern

Table 2: Proposed use pattern – Nufarm CRUCIAL Herbicide (600 g/L glyphosate)

Crop	Pest	Rate	Critical comments
Lupins	Crop desiccation	0.6 to 1.6 L/ha	Use higher rates where crops or weeds are dense and where faster desiccation is required. Application should be made at or after crop maturity:
	As a harvest aid	(360 to 960 g ai/ha)	
	Annual Weeds		Apply at or after crop maturity when seed moisture content is below 30%.

Withholding periods:

Harvest: DO NOT harvest for 7 days after application.

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

Trade advice: EXPORT OF TREATED PRODUCE.

Growers should note that MRLs or import tolerances DO NOT exist in all markets for produce treated with CRUCIAL Herbicide. If you are growing produce for export, please check with Nufarm Australia Limited for the latest information on MRLs and import tolerance before using CRUCIAL Herbicide.

Results from residues trials presented to the APVMA

The proposed use in lupins allows a single foliar application of glyphosate at 360 to 960 g ai/ha in conjunction with harvest and grazing withholding periods of 7 days, each. It is proposed to apply glyphosate in lupins at or after crop maturity when seed moisture content is below 30%.

In 4 Australian lupin trials conducted in 2011–12, a single application of glyphosate was made BBCH 85 – 89, when seed moisture was below 30%. This aligns with the proposed directions for use which states ‘apply at or after crop maturity when seed moisture content is below 30%’. However, only one trial analysed glyphosate residues in lupin grain and straw at the proposed 7 days PHI. The other trials addressed a PHI of 14, 23 and 48 days. In each trial, residues of glyphosate and AMPA in lupin grain following application at ~1× or ~2× the maximum proposed rate were <LOQ (<1 mg/kg for each analyte).

According to the APVMA crop group guidelines, lupins are classified under the Sub Group 015A, Dry beans, of the Crop Group 015: Pulses. Dry beans (faba beans) and Dry peas are the representative crops of the pulse crop group. Nufarm CRUCIAL Herbicide is currently registered with a similar GAP in pulses including faba beans and field peas. Therefore it is considered that the registered use of glyphosate in pulses, and the applicable crop group MRL, can be extended to lupins.

It is noted that relevant dry bean data is publicly available in the 2005 JMPR evaluation of glyphosate. Thirteen trials in conducted in the USA approximated Canadian GAP (0.9 kg ai/ha, grain moisture <30%, PHI 7 to 14). Residues found in beans (dry) were <0.05, 0.07, 0.09, 0.10, 0.11, 0.13, 0.19, 0.30, 0.32, 0.37, 0.38, 0.68 and 1.6 mg/kg. Residues of AMPA were all <0.05 mg/kg. In 7 European trials matching the UK GAP,

which has a higher rate than proposed (1.4 kg ai/ha, grain moisture <30%, 7 to 14 day PHI), residues were <0.05, 0.11, 0.12, 0.16, 0.17, 0.20 and 1.8 mg/kg. AMPA residues were <0.05 mg/kg. Based on this data, the JMPR recommended an MRL at 2 mg/kg for dry beans (which includes lupins), which was adopted as a Codex MRL.

Based on the available information, the current glyphosate MRL of 5 mg/kg for [VD 0070] Pulses [except soybeans (dry), cowpeas (dry), adzuki beans (dry), mung beans (dry)] remains appropriate to cover glyphosate residues arising in lupin grains as a result of the proposed use in conjunction with a harvest withholding period of 7 days.

At a PHI of 7 days, the total residues of glyphosate in lupin straw following a single foliar application at ~1× or ~2× the maximum proposed rate were ~14.5 mg/kg and ~24.5 mg/kg respectively noting that AMPA residues were <LOQ.

Based on the available information, and noting the equivalent registered GAP in pulses, the current glyphosate MRL of 200 mg/kg for Primary feed commodities (except Cotton forage; Rape seed [canola] forage and fodder) is considered appropriate to cover glyphosate residues arising in lupin straw as a result of the proposed use.

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. Glyphosate has been considered by Codex. The following relevant Codex CXLs and international MRLs have been established for glyphosate

Table 3: Current and proposed Australian and overseas MRLs/tolerances for glyphosate

Commodity	Tolerance for residues arising from the use of glyphosate (mg/kg)							
	Australia	EU ⁴	Japan ⁵	Codex ⁶	US ⁷	Korea ⁸	China ⁹	Taiwan ¹⁰
Residue definition	For enforcement: Sum of glyphosate, N-acetyl-glyphosate and aminomethylphosphonic acid (AMPA) metabolite, expressed as glyphosate	Glyphosate	For soya bean, corn and rape: Sum of glyphosate and N-acetylglyphosate, expressed as glyphosate For other crops: Glyphosate	For soya bean, maize and rape: Sum of glyphosate and N-acetylglyphosate, expressed as glyphosate For other crops: Glyphosate	Glyphosate (N-phosphonomethyl) glycine	–	Glyphosate	–
Lupins (Pulse)	5 (Pulse)	10 (lupins /lupini beans)	10 (beans, dried) 5 (other legumes/pulses)	2 (beans, dry) 5 (lentil, dry) 5 (peas, dry)	8 (Pea, dry) 5 (Vegetable, legume, group 6 except soybean and dry pea)	5 (Beans)	5 (lentils) 5 (pea)	2 (other dry beans (except lentil, sunflower seed, pea, soybean)) 5 (lentil, dry) 5 (pea, dry)

⁴ European Commission, [EU Pesticide residues\(s and maximum residue levels \(mg/kg\)\)](#), European Commission website, accessed November 2021.

⁵ Japanese Food Chemistry Research Foundation, [Table of MRLs for Agricultural Chemicals](#), JFCRPF website, accessed November 2021.

⁶ Food and Agriculture Organisation of the United Nations, [Codex Alimentarius, International Food Standards](#), European Commission website, accessed November 2021

⁷ Electronic Code of Federal Regulations, [USA Electronic Code of Federal Regulations](#), eCFR website, accessed November 2021.

⁸ Food Safety Korea, [Pesticide MRLs for agricultural commodities](#), FSK website, accessed November 2021.

⁹ Grain Trade Australia, [New China MRL Standard](#), Member Update News Letter, Update 17 of 21 to 27 August 2021, Grain Trade website, accessed November 2021.

¹⁰ Food and Drug Administration Taiwan, [Standards for Pesticide Residue Limits in Foods](#), FDA website, accessed November 2021.

Current Australian MRLs for glyphosate

Table 4: Current MRL Standard – Table 1

Compound	Food	MRL (mg/kg)
Glyphosate		
VD 0070	Pulses {except Cowpeas (dry); Adzuki beans (dry); Mungbeans (dry); Soya bean (dry)}	5

Table 5: Current MRL Standard – Table 4

Compound	Food	MRL (mg/kg)
Glyphosate		
	Primary feed commodities {except Cotton forage; Rape seed [canola] forage and fodder}	200

No changes to the existing glyphosate MRLs are proposed. The current Table 1 and Table 4 MRLs for glyphosate will cover the proposed use on lupins.

Potential risk to trade

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

The registered use of glyphosate on a number of pulse crops is proposed for extension to lupins. The current glyphosate MRL for pulses is established at 5 mg/kg and this remains appropriate for the proposed use on lupins. Major export destinations of Australian pulses are Asia, Middle East and Europe. The Codex and Taiwanese MRLs for dry beans is established at 2 mg/kg, less than the Australian MRL for pulses. China currently does not have a glyphosate MRL established for lupins or dried beans. Other markets however have a MRL established for dry beans or lupins at 5 or 10 mg/kg.

It is noted that the product is currently registered for use in 'PULSE CROPS, including: Adzuki beans, Chickpeas, Cowpea, Faba beans, Field peas, Lentils, Mungbeans, Soybean and Vetch' and that an equivalent use pattern for lupins has been approved under permit since PER12559 was issued in November 2010. The applicant has proposed the following risk mitigation statement which is considered appropriate and acceptable:

EXPORT OF TREATED PRODUCE

Growers should note that MRLs or import tolerances DO NOT exist in all markets for produce treated with CRUCIAL Herbicide. If you are growing produce for export, please check with Nufarm Australia Limited for the latest information on MRLs and import tolerance before using CRUCIAL Herbicide.

Conclusion

Nufarm Australia Limited has applied to vary the registration of Nufarm CRUCIAL Herbicide containing glyphosate to extend the approved use in pulses to include lupins.

Comment is sought on the potential for the proposed use to prejudice Australian trade when used on lupins according to the proposed label directions.