



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



## TRADE ADVICE NOTICE

on dinotefuran in the Product Starkle 200 SG Insecticide on mung beans

APVMA Product Number 69398

**AUGUST 2018**

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Director Public Affairs and Communication  
Australian Pesticides and Veterinary Medicines Authority  
PO Box 6182  
KINGSTON ACT 2604 Australia

Telephone: +61 2 6210 4701

Email: [communications@apvma.gov.au](mailto:communications@apvma.gov.au)

This publication is available from the APVMA website: [www.apvma.gov.au](http://www.apvma.gov.au).

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## CONTENTS

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<b>PREFACE</b>	<b>IV</b>
<b>About this document</b>	<b>iv</b>
<b>Making a submission</b>	<b>iv</b>
<b>Further information</b>	<b>v</b>
<hr/>	
<b>1 INTRODUCTION</b>	<b>1</b>
<b>2 TRADE CONSIDERATIONS</b>	<b>1</b>
<b>2.1 Commodities exported</b>	<b>1</b>
<b>2.2 Destination and value of exports</b>	<b>1</b>
<b>2.3 Proposed Australian use-pattern</b>	<b>2</b>
<b>2.4 Results from residues trials presented to the APVMA</b>	<b>3</b>
<b>2.5 Overseas registration and approved label instructions</b>	<b>3</b>
<b>2.6 Codex alimentarius commission and overseas MRLs</b>	<b>3</b>
<b>2.7 Current and proposed Australian MRLs for Dinotefuran</b>	<b>4</b>
<b>2.8 Potential risk to trade</b>	<b>5</b>
<hr/>	
<b>3 CONCLUSIONS</b>	<b>6</b>

## LIST OF TABLES

Table 1: Current and proposed Australian and overseas MRLs/tolerances for dinotefuran	3
Table 2: Current MRL Standard – Table 1 – Dinotefuran	4
Table 3: Current MRL Standard – Table 4 – Dinotefuran	4
Table 4: Proposed MRL Standard – Table 1 – Dinotefuran	5
Table 5: Proposed MRL Standard – Table 4 – Dinotefuran	5

## 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.

In undertaking this task, the APVMA works in close cooperation with advisory agencies, including the Department of Health and Aging, Department of the Environment and Energy, and State Departments of Primary Industry

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 is a Trade Advice Notice.

It 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 **Starkle 200 SG 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 **28 September 2018** 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. A summary of relevant comments and the APVMA's response will be published on the APVMA website.

When making a submission please include:

- Contact name
- Company or Group name (if relevant)
- Postal Address
- Email Address (if available)
- The date you made the submission.

All personal and **confidential commercial information (CCI)**<sup>1</sup> material contained in submissions will be treated confidentially.

Written submissions on the APVMA's proposal to grant the application for registration that relate to the **grounds for registration** should be addressed in writing to:

Residues and Trade  
Scientific Assessment and Chemical Review  
Australian Pesticides and Veterinary Medicines Authority  
PO Box 6182  
Symonston ACT 2609

**Phone:** (02) 6210 4701  
**Email:** enquiries@apvma.gov.au

## Further information

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

Further information on public release summaries can be found on the APVMA website:  
<http://www.apvma.gov.au>

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<sup>1</sup> A full definition of "confidential commercial information" is contained in the Agvet Code.



## 1 INTRODUCTION

The Australian Pesticides and Veterinary Medicines Authority (APVMA) has before it an application from AgNova Technologies Pty Ltd, to vary the registration of Starkle 200 SG Insecticide containing dinotefuran to include a new use on mung beans.

## 2 TRADE CONSIDERATIONS

### 2.1 Commodities exported

Mung beans are considered to be a major export commodity<sup>2</sup>, as are commodities of animal origin, such as meat, offal and dairy products, which may be derived from livestock fed on feeds produced from treated mung bean grains, forage and/or fodder. Residues in these commodities resulting from the use of Starkle 200 SG Insecticide may have the potential to unduly prejudice trade.

It is calculated that the current mammalian and poultry commodity MRLs remain appropriate. As no changes are required to the current mammalian and poultry commodity MRLs, the risk to the export trade in animal commodities is unchanged and will not be considered further.

### 2.2 Destination and value of exports

According to the Australian Mung bean Association, nearly all (95%) of the mung bean produced in Australia is exported<sup>3</sup>. For 2017-18 season, the Australian Mung bean Association estimated mung bean production at 85 000 tonnes with an estimated value of \$85 million<sup>4</sup>.

The two main export regions for Australian mung beans are the Indian sub-continent and Asia with major markets in 2016-17 being China and Vietnam<sup>4</sup>.

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<sup>2</sup> APVMA Regulatory Guidelines – Data Guidelines: Agricultural - Overseas trade (Part 5B)

<sup>3</sup> <http://www.mungbean.org.au/best-management-guide.html>

<sup>4</sup> Personal Communication – Australian Mungbean Association

## 2.3 Proposed Australian use-pattern

### STARKLE 200 SG INSECTICIDE (Dinotefuran 200 g/kg)

CROP	PEST	RATE	CRITICAL COMMENTS
Mung beans	Green mirid ( <i>Creontiades dilutes</i> )	90 g/ha (18 g ai/ha)	Monitor crops and commence applications once local thresholds are reached.
	Green vegetable bug ( <i>Nezara viridula</i> )	375 g/ha (75 g ai/ha)	Ensure thorough spray coverage of the target. Inadequate spray coverage may result in reduced pest control, especially in the lower crop canopy and against established populations.  Performance can be reduced in stressed crops.  Continue to monitor crops and make a subsequent application as necessary.

Withholding periods:

Harvest: Do not harvest for 14 days after application.

Grazing: Do not graze or cut for stock food for 14 days after last application.

Restrictions:

DO NOT apply more than 2 applications per mung bean crop

DO NOT re-treat mung bean crops earlier than 14 days

DO NOT apply where the slope exceeds 4%.

#### SPRAY DRIFT RESTRAINTS

DO NOT apply droplets smaller than a MEDIUM spray droplet size category according to nozzle manufacturer specifications that refer to the ASAE S572 Standard or the British Crop Production guideline.

DO NOT apply when wind speed is less than 3 or more than 20 km/h at the application site.

DO NOT apply during surface temperature inversion conditions at the application site.

Trade advice:

#### EXPORT TRADE ADVICE

TREATED CROPS: Treated crop commodities destined for export may require extra time between application and harvest to be accepted in some export markets. Before you use this product, you are advised to contact AgNova Technologies and/or your industry body about any potential trade issues and their management.

## 2.4 Results from residues trials presented to the APVMA

The proposed use of Starkle 200 SG Insecticide (200 g/kg dinotefuran) on mung beans involves up to two applications of dinotefuran at 18-75 g ai/ha in conjunction with a harvest withholding period of 14 days.

Six Australian GLP trials were conducted on mung beans in 2016-17. Following two applications at 75 g ai/ha (1x the maximum proposed rate), residues of parent dinotefuran in mung bean seeds at 14 days PHI (or later if higher residues were observed) were: 0.20, 0.24, 0.27, 0.32, 0.35 and 0.52 mg/kg (n=6). The OECD MRL calculator estimates a MRL of 1 mg/kg. The STMR was 0.30 mg/kg.

A MRL of 1 mg/kg is recommended for VD 0536 Mung bean (dry) as a result of proposed use in conjunction with a harvest withholding period of 14 days.

Residues of parent dinotefuran in mung bean stubble (dry weight) after 2 applications at a nominal rate of 75 g ai/ha (1x the maximum proposed rate) at 14 days PHI (or later if higher residues were observed) were: 0.03, 0.05, 0.07, 0.22, 0.23 and 0.30 mg/kg.

A MRL of 0.7 mg/kg for mung bean forage and fodder is recommended in conjunction with a grazing withholding period of 14 days.

## 2.5 Overseas registration and approved label instructions

The applicant indicated that currently there are no overseas registrations of products containing dinotefuran for use on mung beans.

## 2.6 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. Codex has not established CXLs for the use of dinotefuran in mung beans. Proposed Australian and established overseas MRLs/tolerances for dinotefuran are presented below:

Table 1: Current and proposed Australian and overseas MRLs/tolerances for dinotefuran

Commodity	Tolerance for residues arising from the use of dinotefuran (mg/kg)				
	Australia	EU <sup>5</sup>	Japan <sup>6</sup>	Codex <sup>7</sup>	USA <sup>8</sup>
Residue Definition	Commodities of plant origin for enforcement: Dinotefuran	Not established	Plant commodities: Dinotefuran only	For compliance with the MRL for plant commodities: dinotefuran.	Plant commodities: the sum of dinotefuran and its metabolites DN, 1-methyl-3-(tetrahydro-3-furylmethyl)guanidine, and UF, 1-methyl-3-(tetrahydro-3-furylmethyl)urea
Mung bean	1 (proposed)	Default (0.01 mg/kg)	0.3 (beans, dried)	Not established	Not established

Dinotefuran definition and MRL not established by China<sup>9</sup>

## 2.7 Current and proposed Australian MRLs for Dinotefuran

Table 2: Current MRL Standard - Table 1 - Dinotefuran

COMPOUND	FOOD	MRL (mg/kg)
DINOTEFURAN		
SO 0691	Cotton seed	0.1
MO 0105	Edible offal (Mammalian)	*0.02
PE 0112	Eggs	*0.02
MM 0095	Meat [mammalian]	*0.02
ML 0106	Milks	*0.02
PO 0111	Poultry, Edible offal of	*0.02

Table 3: Current MRL Standard - Table 4 - Dinotefuran

COMPOUND	FOOD	MRL (mg/kg)
DINOTEFURAN		

<sup>5</sup> <http://ec.europa.eu>

<sup>6</sup> [http://db.ffcr.or.jp/front/pesticide\\_detail?id=29400](http://db.ffcr.or.jp/front/pesticide_detail?id=29400)

<sup>7</sup> <http://www.codexalimentarius.net>

<sup>8</sup> <http://www.ecfr.gov>

<sup>9</sup> <http://202.127.42.84/tbt-sps/mrlsdb/mrlsdbEnglish.do>

COMPOUND	FOOD	MRL (mg/kg)
	Cotton seed hulls	0.2

Table 4: Proposed MRL Standard - Table 1 - Dinotefuran

COMPOUND	FOOD	MRL (mg/kg)
DINOTEFURAN		
VD 0536	Mung bean (dry)	1

Table 5: Proposed MRL Standard - Table 4 - Dinotefuran

COMPOUND	FOOD	MRL (mg/kg)
DINOTEFURAN		
	Mung bean forage and fodder	0.7

## 2.8 Potential risk to trade

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

A mung bean seed MRL is recommended at 1 mg/kg which is higher than the Japanese MRL of 0.3 mg/kg for dried beans. It is noted that the highest dinotefuran residue in mung bean seed after treatment at the maximum proposed rate of 75 g ai/ha was observed at 0.52 mg/kg which is higher than the Japanese MRL and Japan is currently not a major export market for Australian mung beans.

The major export markets for mung beans are China and Vietnam. Codex and China have not established an MRL for dinotefuran in mung beans.

The applicant has proposed the following risk mitigation statement:

### EXPORT TRADE ADVICE

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### 3 CONCLUSIONS

AgNova Technologies Pty Ltd have made an application to vary the registration of Starkle 200 SG Insecticide containing dinotefuran. AgNova propose adding a use on mung beans which will require the establishment of permanent MRLs for dinotefuran on mung beans.

Comment is sought on the potential for Starkle 200 SG Insecticide to prejudice Australian trade when used on mung bean according to the proposed label directions.