

Trade Advice Note
on
Boscalid and Pyraclostrobin
in the product
Pristine Fungicide
(APVMA Product Number 61377)

Australian Pesticides and Veterinary Medicines Authority

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Trade Advice Note on the Product

Pristine Fungicide (252g/kg boscalid and 128 g/kg pyraclostrobin)

Introduction

The Australian Pesticides and Veterinary Medicines Authority (APVMA) has before it an application from BASF Australia Ltd to register the new product, *Pristine Fungicide* containing the active constituents 252 g/kg boscalid and 128 g/kg pyraclostrobin, for control of black spot and powdery mildew in apples.

Commodities exported

Apples and animal commodities derived from livestock fed on apple pomace from treated crops are the commodities exported.

Destination and Value of Exports

The total exports of Australian apples in the 2002/03 season amounted to 32,480 tonnes, valued at \$41,374,000.¹

The 10 largest export markets for Australian apples in 2002/03 by value are shown below.

Destination	Value, \$ '000
United Kingdom	8,494
India	7,635
Malaysia	6,984
Taiwan	4,589
Sri Lanka	4,015
Singapore	2,725
Bangladesh	1,361
Indonesia	944
Hong Kong	880
Japan	336

In the 2005-2006 fiscal year, Australia exported \$A836 m (202 kt) of cheese products, \$A224 m (82 kt) of butter and butterfat products, \$A529 m (181 kt) of skim milk powder, \$A89 m (8.3 kt) of casein, \$A334 m (110 kt) of wholemilk powder and \$A502 m (251 kt) of other milk products. These export markets include Japan, Philippines, Saudi Arabia, the UK, USA, Egypt, Malaysia, Singapore and Thailand.²

In 2005, Australia exported \$A4347 m (910 kt) of beef and veal, and \$A337 m (572 800) live cattle.² Beef and veal are exported to the USA, Canada, Japan, Korea, Chinese Taipei, Hong Kong, Indonesia, Malaysia, Singapore, Philippines, the EU, the Middle East (Kuwait, Saudi Arabia, UAE), New Zealand, Pacific Isles and Papua New Guinea. Live cattle are exported to Indonesia, Malaysia, Philippines, Japan, Israel, Jordan, Egypt and Saudi Arabia.²

¹ The Australian Horticulture Statistics Handbook 2004

² Australian Commodity Statistics, 2006. ABARE

Proposed Australian use-pattern

Pristine Fungicide (252 g/kg Boscalid, 128 g/kg Pyraclostrobin)

Crop	Disease	Rate	Critical Comments
Apple	Blackspot (scab) <i>Venturia inaequalis</i> Powdery mildew <i>Podosphaera leucotricha</i>	<u>Dilute spray</u> 40 g/100 L water (equivalent to 10.1 g a.i. boscalid + 5.1 g a.i. pyraclostrobin/100L) <u>Concentrate spray</u> Refer to the application section	Application may commence at spurburst for black spot/scab, and at early pink stage for powdery mildew control. Apply at 7 to 10 day intervals prior to petal fall and during periods of rapid growth. Later applications should be at 10 to 14 day intervals, or according to prevailing weather conditions and disease incidence. Apply by dilute or concentrate spraying equipment. Apply the same total amount of product to the target crop whether applying this product by dilute or concentrate spraying methods. Do not use in equipment that requires concentrations greater than 200 g of Pristine / 100 L water (i.e. 5× concentration), as crop safety has not been assessed at these concentrations. Ensure thorough and even coverage of all plant parts. May be used with the recommended rate of a non-ionic wetting agent. The use of Pristine is subject to an AVCARE Resistance Management Strategy. DO NOT apply more than three applications of Pristine or other Group G or K fungicides per season. Refer to Resistance Management Strategy in General Instructions for further details.

Withholding periods:

Harvest: DO NOT harvest for 4 weeks after application.

Grazing: DO NOT treat orchards that will or may be grazed by livestock.

Export slaughter interval:

DO NOT feed treated produce to livestock for 7 days before slaughter.

Apples and apple products intended for export:

Consult your peak industry body or BASF for the recommended withholding period.

Residues data

Residues data were provided from trials on apples conducted in Australia and Europe. In the Australian residue trials, various formulations of product were applied as a foliar spray to apple trees either early or late in the season. For the late season applications the fruit measured 60-70 mm. In both cases, 3 applications were made at 7-10 day intervals at spray concentrations corresponding to 15 g boscalid plus 7.5 g pyraclostrobin per 100 L water (equivalent to 1.5× the proposed spray concentration).

At the proposed 28 day withholding period, residues of boscalid in apples from the Australian trials were: 0.10, 0.12, 0.13, 0.56, 0.58, 0.66, 0.68, 0.91 and 1.01 mg/kg.

At the proposed 28 day withholding period, residues of pyraclostrobin in apples from the Australian trials were: <0.02 (n=4), 0.03, 0.24, 0.34, 0.48 and 0.64 mg/kg.

In the European residue trials, various formulations of product were applied as a foliar spray to apple trees late in the season. Four applications were made (3 are proposed) at approximately 7 day intervals at rates corresponding to 200 g boscalid plus 100 g pyraclostrobin per hectare. For the proposed Australian use pattern a spray volume of 2000 L/ha is considered typical. Spray applications at 40 g/100 L correspond to 202 g boscalid + 102 g pyraclostrobin per ha, which is equivalent to the application rate used in the European trials.

At the proposed 28 day withholding period, residues of boscalid in apples from the European trials ranged from 0.075 to 0.703 mg/kg (n = 26).

At the proposed 28 day withholding period, residues of pyraclostrobin in apples from the European trials ranged from <0.04 to 0.258 mg/kg (n = 26).

On the basis of the Australian and European trials, it is therefore appropriate to establish apple MRLs of 2 mg/kg for boscalid and 1 mg/kg for pyraclostrobin.

A study was provided in which apples from 4 trials in Germany were processed to pomace. The crops had been treated 4 times at approximately 7 day intervals with a formulation containing 200 g/L boscalid plus 100 g/L pyraclostrobin. The application rate was 3 L/ha which is 3 times that proposed for Australia.

After pressing samples of apples collected at 14 days after the last application, residues of boscalid in dried pomace were 8.18, 11.62, 18.77 and 31.01 mg/kg. Residues of pyraclostrobin in dried pomace were 4.76, 10.21, 10.25 and 12.71 mg/kg.

Based on the German study, the mean processing factor for boscalid in dry apple pomace is 18.56×. Applying this processing factor to the highest residue in apples, the expected residue for dry apple pomace is 18.74 mg/kg, with an STMR of 10.76 mg/kg. An MRL of 20 mg/kg is therefore appropriate for boscalid in apple pomace, dry.

Similarly, the mean processing factor for pyraclostrobin in dry apple pomace is 34.74×. Applying this processing factor to the highest residue in apples, the expected residue is 22.23 mg/kg, with an STMR of 1.04 mg/kg. An MRL of 25 mg/kg is therefore appropriate for pyraclostrobin in apple pomace, dry.

The 7 day export slaughter interval was recommended for boscalid in the product *Filan Fungicide* (Product no. 56362), which is registered for use in grapes. It remains appropriate for the current application as the proposed MRL for apple pomace, dry is the same as that established for grape pomace, dry and no changes to the animal commodity MRLs for boscalid are proposed. No export slaughter intervals have been established for pyraclostrobin.

Based on the anticipated dietary exposure for livestock consuming apple pomace and residue data from animal transfer studies the current animal commodity MRLs for boscalid and pyraclostrobin are acceptable with respect to the proposed use.

Overseas registration and approved label instructions

The applicant indicated that another formulation, containing 200 g/L boscalid plus 100 g/L pyraclostrobin, is intended for use on apples in Belgium, France, Italy and the Netherlands. The intended use pattern for these countries is a maximum of 4 spray applications at 8-14 day intervals at crop growth stages BBCH 54-81. The intended application rate is 0.20 kg as/ha per treatment with a pre-harvest interval of 14 days.

Codex Alimentarius Commission and overseas MRLs

Codex MRLs have not yet been established for boscalid and pyraclostrobin on apples. However, the applicant indicated that Codex MRLs have been proposed at 2 mg/kg for boscalid and 0.5 mg/kg for pyraclostrobin. Both are currently at Step 4 of the Codex process.

The following overseas residue MRLs/ tolerances have been established for boscalid:

Country/status	Commodity	Tolerance, mg/kg
Japan	Apple	3
UK	Apple	1 (temporary)

The following overseas residue MRLs/ tolerances have been established for pyraclostrobin:

Country	Commodity	Tolerance, mg/kg
Japan	Apple	1
UK	Apple	0.5 (temporary)

Proposed Australian MRLs for boscalid and pyraclostrobin:

The following Australian MRLs are proposed for boscalid and pyraclostrobin:

Table 1

Compound	Food		MRL (mg/kg)
ADD:			
Boscalid	FP 0226	Apple	2
Pyraclostrobin	FP 0226	Apple	1

Table 4

Compound	Animal feed commodity		MRL (mg/kg)
ADD:			
Boscalid	AB 0226	Apple pomace, dry	20
Pyraclostrobin	AB 0226	Apple pomace, dry	25

For full details of boscalid and pyraclostrobin MRLs, please refer to the APVMA website <http://www.apvma.gov.au> and follow the Residues link.

Potential Risk to Trade

Export of treated produce containing finite (measurable) residues of boscalid and pyraclostrobin 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 main export market for Australian apples, the UK, has established MRLs for boscalid and pyraclostrobin. However, they are lower than the MRLs required to cover the Australian use pattern. Of the other export markets only Japan has established MRLs for boscalid and pyraclostrobin in apples which are higher than or equivalent to those required for Australia.

The applicant proposes to mitigate the risk to trade by the inclusion of the following statements on the label:

Apples and apple products intended for export:
Consult your peak industry body or BASF for the recommended withholding period.

Export of treated produce:

Growers should note that Maximum Residue Limits (MRLs) or import tolerances do not exist in all export markets for apples treated with *Pristine Fungicide*. Additionally, some export markets have established MRLs different to those in Australia. If you are growing fruit for export please check with your industry spray diary, peak industry body or BASF for the latest information on MRLs and import tolerances before using *Pristine Fungicide*.

The overall risk to export trade in animal commodities is considered to be negligible. The 7 day export slaughter interval will ensure that residues of boscalid are below detectable limits. Residues of pyraclostrobin in animal commodities are also expected to be non-detectable.

Conclusions

Detectable residues of boscalid and pyraclostrobin are likely to occur in harvested apples when *Pristine Fungicide* is used as directed. Of the main export markets for Australian apples, only Japan has MRLs higher than or equivalent to those proposed for Australia. The applicant proposes to mitigate the risk to trade in apples by the inclusion of statements on the label advising growers to seek information on MRLs and import tolerances before using the product. Currently, there are pending Codex MRLs in apples for both boscalid and pyraclostrobin (2 mg/kg and 0.5 mg/kg respectively).

The overall risk to export trade in animal commodities derived from livestock fed on apple pomace is considered to be negligible. The 7 day export slaughter interval will ensure that residues of boscalid are below detectable limits. Residues of pyraclostrobin in animal commodities are also expected to be non-detectable.

Comments are sought on the potential for *Pristine fungicide* to unduly prejudice Australian export trade when it is used on apples to control black spot and powdery mildew.