Health Canada Santé Canada

Evaluation Report for Category C, Subcategory 6.3 (URMULE) Application

Application Number: 2011-1526
Application: **Category C, subcategory 6.3 (URMULE)**
Product: Intrepid 240F Insecticide
Registration Number: 27786
Active ingredient (a.i.): Methoxyfenozide (240 g/L)
PMRA Document Number : 2147601

Background

Intrepid 240F Insecticide has been registered since October 5, 2004. Intrepid 240F Insecticide is registered for the control of listed lepidopteran larvae in apples, pears and peaches. For specific details of uses, application rates and methods, precautions, restrictions, and personal protective equipment requirements, refer to product label.

Purpose of Application

The purpose of this application was to amend the registration of Intrepid 240F Insecticide to include the claim of control of blackheaded fireworm (BHFW; *Rhopobota naevana*), Sparganothis fruitworm (SFW; *Sparganothis sulfureana*) and cranberry fruitworm (CFW: *Acrobasis vaccinii*) on cranberries. The product is intended for an application at a rate of 1.16 L product per hectare for CFW or 0.75 – 1.16 L product per hectare for BHFW and SFW as a ground treatment applied in 200 L of water per hectare. The product can also be applied at a rate of 0.75 – 1.16 L product per hectare for BHFW and SFW as a chemigation treatment applied in 3200 – 3500 L of water per hectare. For both treatments there are a maximum of 2 applications per year with a 10-18 day interval between applications and a minimum pre-harvest interval of 14 days.

Chemistry Assessment

A chemistry assessment was not required as there was no change to product chemistry.

Health Assessment

A toxicology assessment was not required since there was no change to the formulation.

The proposed use of methoxyfenozide on cranberries should not result in unacceptable risk to chemical handlers and post application re-entry workers provided the product is used in accordance with the label directions.

To support the use expansion to lowbush cranberries, residue data from supervised residue trials

conducted in the US and Canada were reviewed, in which lowbush cranberries were treated with methoxyfenozide at exaggerated rates and harvested according to label directions.

Maximum Residue Limit

The recommendation for a maximum residue limit (MRL) for methoxyfenozide in/on crops in Crop Subgroup 13-07H (Low growing berry subgroup, except strawberry) was based on guidance provided in PRO2005-04 ("Guidance for Setting Pesticide Maximum Residue Limits Based on Field Trial Data"). Based on the residue data and the MRL statistical methodology, an MRL to cover residues of methoxyfenozide in/on these crops will be established as shown in Table 1.

Table 1. Summary of Field Trial Data Used to Establish Maximum Residue Limits (MRLs) for Methoxyfenozide

Commodity	Application Method/ Total Application Rate (g a.i./ha)	PHI (days)	Residues (ppm) Min	Max	Currently Established MRL (ppm)	Recommended MRL (ppm)
Cranberries	Foliar Broadcast/ 1105.1-1345.0	13-15	0.028	0.407	None	0.5 ppm for crops in Crop Subgroup 13-07H (Low growing berry subgroup, except strawberry)

Environmental Assessment

An environmental risk assessment was not required as the proposed uses for this label expansion of Intrepid 240F Insecticide to include cranberry is not expected to increase the environmental risk from methoxyfenozide. The proposed annual maximum application rate is the same as the registered rate. The proposed method of application is not expected to produce more spray drift to off-site area. Environmental concerns were mitigated on the label.

Value Assessment

The data submitted and reviewed for the use of methoxyfenozide to control cranberry fruitworm (CFW) included a laboratory bioassay trial on spotted fireworm that could be extrapolated for use on CFW, and one trial on CFW that had moderate pest pressure. Extrapolation from the spotted fireworm to the CFW was completed since both of the 2nd generation larvae of these two pests behave similarly, and cause similar damage to cranberry fruit. Results indicated that cranberry fruit treated with methoxyfenozide sustained significantly less damage when compared to the untreated control fruit.

The data submitted and reviewed for use of methoxyfenozide to control blackheaded fireworm (BHFW) included a field trial that tested two applications of methoxyfenozide, a field trial that

examined the application of methoxyfenozide on an abandoned cranberry bed at two different water volumes, a field trial with a side-by-side comparison of boom and chemigation applications and a trial that tested application at a high water volume that simulated chemigation. Results from all of the trials supported the use of methoxyfenozide to control BHFW at a rate range of 180-278 g a.i./ha.

The data submitted and reviewed for use of methoxyfenozide to control *Sparganothis* fruitworm (SFW) included one bioassay trial which provided 97% larval mortality by 6 days after application and a rationale completed by the BC Ministry of Agriculture and Lands. The rationale was based on the similarities between BHFW and SFW and was determined to be suitable for use in this assessment.

Based on the data and rationales submitted, as well as the registered pests on the Intrepid 240F Insecticide label, control claims can be supported against cranberry fruitworm at a rate of 1.16 L product/ha (278 g a.i./ha) and against blackheaded fireworm and *Sparganothis* fruitworm at a rate range of 0.75 to 1.16 L product/ha (180-278 g a.i./ha) for use in conventional ground application. Control of blackheaded fireworm and *Sparganothis* fruitworm can be supported for use in chemigation application at a rate range of 0.75 to 1.16 L product/ha (180-278 g a.i./ha).

Conclusions

Maximum Residue Limit

Following the review of all available data, it was determined that an MRL of 0.5 ppm for residues of methoxyfenozide in/on crops in Crop Subgroup 13-07H (Low growing berry subgroup, except strawberry) is considered adequate to cover residues of methoxyfenozide in/on these commodities as a result of this new use. Residues of methoxyfenozide in these crops at the established MRLs will not pose an unacceptable risk to any segment of the population, including infants, children, adults and seniors.

Reference List

PMRA Document Number	Reference
1836419	2008, Assessing distribution, damage, life cycle of Sprganothis fruitworm in BC cranberry, DACO: 10.2.2
1836420	2005, Crop Profile-cranberries, DACO: 10.2.2,10.4,10.5.1,10.5.3
1836422	2008, Screening and testing of new reduced risk insecticides for cranberry pest management, DACO: 10.2.3,10.2.3.3,10.2.3.3(D)
1836425	2006, BHF 1 control of second generation, DACO: 10.2.3,10.2.3.3,10.2.3.3(D)
1836426	2002, BHF product comparison study 1 2002, DACO: 10.2.3,10.2.3.3,10.2.3.3(D)
1836427	2009, Cranberry Pest Management with OP alternative insecticides, DACO: 10.2.3,10.2.3.3,10.2.3.3(D)
1836429	2009, Evaluation of biorational insecticides to suppress BHF, DACO: 10.2.3,10.2.3.3,10.2.3.3(D)

1836430	2009, Evaluation of the efficacy of spinetoram (and methoxyfenozide) for control of BHF and CFW, DACO: 10.2.3,10.2.3.3,10.2.3.3(D)
1836431	2009, Summary table for: Evaluate spinetoram for control of BHF, DACO: 10.2.3.1
1836433	2009, Rationale for extrapolation of chemigation efficacy data, DACO: 10.2.3.3(D)
1836437	2009, Water Management on cranberries farms, DACO: 10.7.1,8.6,9.9
1836435	2002, Methoxyfenozide: Magnitude of the residue on cranberries, DACO: 7.4,7.4.1

ISSN: 1911-8082