

Evaluation Report for Category B, Subcategory 3.12Application

Application Number: 2009-5141
Application: B.3.12: Add New Site or Host
Product: Prosper FX Flowable Insecticide and Fungicide Seed Treatment
Registration Number: 29159
Active ingredients (a.i.): Clothianidin, Metalaxyl, Trifloxystrobin, Carbothiin
PMRA Document Number : 2165238

Purpose of Application

The purpose of this application was to add mustard (condiment and oilseed types) to the Prosper FX Flowable Insecticide and Fungicide Seed Treatment label for the control of flea beetles on seed and seedlings up to the 4 leaf stage and the currently listed diseases.

Chemistry Assessment

Chemistry assessment was not required for this application.

Health Assessments

The addition of mustard (condiment and oilseed types) as a host on the Prosper FX Flowable Insecticide and Fungicide Seed Treatment label should not result in an increase in occupational or bystander exposure over the registered uses of clothianidin, carbothiin, trifloxystrobin or metalaxyl. No unacceptable risk is expected when workers follow label directions and wear personal protective equipment as recommended on the label.

Maximum Residue Limit(s)

Based on the registered use patterns, residues of metalaxyl and trifloxystrobin are not expected to exceed the MRLs of 0.1 ppm and 0.02 ppm, respectively, established in/on mustard seeds (condiment and oilseed types). Residue data for clothianidin indicate that residues in/on mustard seeds are not expected to exceed 0.01 ppm. Residues of carbothiin in treated mustard seeds are expected to be covered by subsection B.15.002 (1) of the FDR&A (e.g. ≤ 0.1 ppm). Based on the existing MRLs for rapeseed (canola) and mustard seeds, MRLs for clothianidin, metalaxyl, and trifloxystrobin will be established for all crops of Crop Group 20A (Rapeseed Subgroup) and mustard seeds (condiment type), at 0.01, 0.1 ppm and 0.02 ppm, respectively.

Following the review of data on file, MRLs of 0.01 ppm for clothianidin, 0.1 ppm for metalaxyl and 0.02 ppm for trifloxystrobin, in/on crops of Crop Group 20A (Rapeseed Subgroup), are recommended to cover residues of clothianidin, metalaxyl and trifloxystrobin. Residues of clothianidin, metalaxyl and trifloxystrobin in the commodities at the established MRLs will not pose an unacceptable risk to any segment of the population, including infants, children, adults and seniors.

Environmental Assessment

No environmental concerns were identified as the application rate of Prosper FX Flowable Insecticide and Fungicide Seed Treatment for use as a seed treatment on mustard (condiment and oilseed types) is the same as the application rate currently registered for use in canola and rapeseed.

Value Assessment

Insecticide

Prosper FX Flowable Insecticide and Fungicide Seed Treatment is registered for control of flea beetles and listed diseases on seed and seedlings of rapeseed and canola. The application rate of Prosper FX for mustard (condiment and oilseed types) seed treatment is the same as that used for rapeseed and canola seed treatment (1400 ml per 100kg seed; equivalent to 400, 70, 10 and 7.5 g of clothianidin, carbathiin, trifloxystrobin and metalaxyl, respectively). A single field trial conducted in Aberdeen, Saskatchewan in 2004 was submitted. Mustard (*Brassica juncea*) seeds treated with Prosper FX resulted in significantly less flea beetle feeding damage on the cotyledons than the untreated check when plants were at the 1 to 2 leaf stage. The level of flea beetle feeding damage was not significantly different than that of the commercial standard. Furthermore as the seed size, surface area and agronomic practices of these crops are similar, it is possible to extrapolate insecticidal efficacy of Prosper FX Flowable Insecticide and Fungicide Seed Treatment for control of flea beetle at the registered rate from rapeseed and canola to mustard (condiment and oilseed types).

Data obtained from 7 field trials conducted in Alberta, Saskatchewan and Manitoba in 2004 and 2009 and 10 separate laboratory studies conducted in Alberta in 2004 showed no negative phytotoxic effects on mustard (*Brassica juncea* and *Sinapis alba*) when Prosper FX was applied at a rate of 1400 ml/100 kg seed. Overall germination was not delayed and percentage germination was not reduced. Seedling vigour, time to flowering, duration of flowering and percentage of canopy closure were also not affected. Therefore the use of Prosper FX for control of flea beetles on mustard (condiment and oilseed types) is supported.

Fungicide

One growth chamber trial conducted in Calgary in 2001 was submitted for evaluation and demonstrated that metalaxyl, one of the four active ingredients of Prosper FX, provided satisfactory control of seed rot and pre-emergence damping-off caused by *Pythium ultimum* on mustard (*Brassica juncea*). Treatments with metalaxyl at the rate recommended for Prosper FX, and metalaxyl-M, a component of seed treatment products registered for use on mustard, resulted in statistically comparable stand counts at 7DAP and 10DAP. No significant phytotoxic effect

was reported from 17 dedicated crop trials on *B. juncea* and *Sinapis alba*.

Furthermore, considering the similarity between canola and mustard with respect to seasonal growth and development, cultural practices, canopy size, physical shape and target site of infection as well as their comparable susceptibility to the listed diseases, extrapolation from canola to mustard (*B. juncea* and *S. alba*) is considered acceptable. Prosper FX provides control of multiple diseases and insects on various crops. In light of all these considerations, the use of Prosper FX for control of all labelled fungal diseases on mustard (condiment and oilseed types) is supported.

Conclusion

The Agency has reviewed all of the data submitted and has determined that the addition of mustard (condiment and oilseed types) to the product label is acceptable. Residues of carbathiin in treated mustard seeds are expected to be covered by subsection B.15.002 (1) of the FDR&A (e.g. ≤ 0.1 ppm). Residues of clothianidin, metalaxyl and trifloxystrobin in the commodities at the established MRLs will not pose an unacceptable risk to any segment of the population, including infants, children, adults and seniors.

References

- 1832721 2009, Prosper FX Flowable Insecticide and Fungicide Seed Treatment-Data to Support Use on Mustard, DACO: 10.1,10.2,10.2.3,10.3.

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