

Evaluation Report for Category B, Subcategory 3.1, 3.11, 3.12, 3.4 Application

Application Number: 2008-6105
Application: New or changes to product labels (application rate increase, new pests, new site/host, application method)
Product: DuPont Coragen Insecticide
Registration Number: 28982
Active ingredients (a.i.): Chlorantraniliprole
PMRA Document Number English PDF: 2097590

Background

Currently, Dupont Coragen Insecticide is approved for use on potatoes, leafy vegetables, and fruiting vegetables at 250 to 375 mL EP/ha (50 to 75 g a.i./ha) with a maximum of four applications per season, a minimum of three-day interval between applications.

Purpose of Application

The purpose of this application is to add new crops, pests, an application method and to increase the application rate on the label for Dupont Coragen Insecticide (Registration Number 28982).

Chemistry Assessment

A chemistry review was not required for this application.

Health Assessments

The proposed changes to the uses of this product do not impact on its toxicological profile.

A health assessment has been conducted for Dupont Coragen Insecticide. Exposure to workers and chemical handlers is expected to be within safe limits due to the low toxicity of the end use product. Risk to bystanders is considered to be less than for handlers and re-entry workers, and therefore is also considered acceptable.

Only residue data for chlorantraniliprole in mint, field corn, and alfalfa that were submitted to support the use expansion of the Dupont Coragen Insecticide label were suitable. In addition residue data for potatoes were reassessed to support a use expansion to Tuberous and Corm Vegetables Subgroup 1C.

Maximum Residue Limits

Based on the maximum residues observed in crops treated according to label directions, maximum residue limits (MRLs) to cover residues of chlorantraniliprole in/on crops will be proposed as shown in Table 1. Residues of chlorantraniliprole in processed commodities not listed in Table 1 are covered under proposed MRLs for the raw agricultural commodities (RACs).

TABLE 1. Summary of Field Trial Data Used to Establish Maximum Residue Limit(s) (MRLs)

| Commodity | Application Method/ Total Application Rate (g a.i./ha) | PHI (days) | Residues (ppm) | | Experimental Processing Factor | Currently Established MRL | Recommended MRL |
|------------|--|------------|----------------|-------|--------------------------------|---------------------------|---|
| | | | Min | Max | | | |
| Potato | Foliar / 225 g a.i./ha | 1 | <0.01 | <0.01 | - | 0.01 (potatoes) | 0.01 (Tuberous and Corm Vegetables Subgroup 1C) |
| Field Corn | Foliar / 228 g a.i./ha | 13-15 | <0.01 | <0.01 | - | - | 0.02 (Field corn) |
| | | | | | | | 0.02 (Popcorn grain) |
| Mint | Foliar/224 g a.i./ha | 3 | 2.15 | 6.24 | - | - | 9.0 (Mint) |

Based on the calculated dietary burden and residue data for non-grass animal feeds and feed items derived from the proposed food commodities, as described in this Evaluation Report and the Evaluation Report for submission number 2009-0132, the following MRLs for livestock commodities will be proposed to cover residues of chlorantraniliprole. An MRL of 0.01 ppm will be proposed for fat, meat, and meat byproducts of hogs and poultry, as well as for eggs. An MRL of 0.05 ppm will be proposed for meat byproducts and fat of cattle, sheep, horse, and goat.

Environmental Assessment

An environmental risk assessment was not required for the proposed use expansion because the proposed maximum application rates do not exceed the currently registered rates. An increase in environmental risk from chlorantraniliprole when the subject product is applied according to the product label and the prescribed mitigation measures is not expected.

Value Assessment

Data were submitted from 28 efficacy studies, including 4 laboratory bioassays and 24 field trials conducted in the United States and Canada between 2002 and 2008 (but excluding field trials for corn earworm and European corn borer on sweet corn, which were evaluated separately; see below). No new efficacy data were submitted for black cutworm, cabbage looper, imported cabbageworm, or diamondback moth, but the registered use pattern for these pests can be extended to additional crops. Field trials against corn earworm / tomato fruitworm on sweet corn indicated that application rates of 250-375 mL/ha were effective against this pest, and additional field trials on bean and tomato indicated that the same application rates were suitable for other crops. Field trials against beet armyworm on broccoli, sugar beet, cotton, and peanut and fall armyworm on sweet corn and cotton demonstrated efficacy against these pests at the same application rates as for the related corn earworm / tomato fruitworm. Laboratory bioassays with variegated cutworm and armyworm confirmed the activity of chlorantraniliprole against these pests; application rates for field use were selected to be consistent with those for the similar pests noted above. Field trials against European corn borer on sweet corn and pepper indicated that the same application rates would be effective against this pest as well. Efficacy data for tobacco hornworm supported label claims for this pest and for the closely related and very similar tomato hornworm. Efficacy data for certain leafminers (*Liriomyza* species) demonstrated control of these pests at the same application rates as for the pests listed above. Field trials against alfalfa weevil, however, showed that higher application rates are required and still provide only suppression of this pest.

Conclusion

The PMRA has conducted a review of the available information for this application and has concluded that the expansion of Dupont Coragen Insecticide to include mint, field corn and alfalfa is acceptable.

References

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- 1701297 2008, Chlorantraniliprole registration plan (residues) - Collaboration between DuPont Crop Protection and the IR-4 project , DACO: 7.4.1
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- 1693498 2008, Request and justification for a waiver of poultry feeding study with chlorantraniliprole, DACO: 7.5
- 1693472 2008. Biological Assessment of DUPONT™ CORAGEN™ insecticide for Expansion into Additional Crops and Crop Groups. E. I. du Pont Canada Company, Mississauga, Ontario. DuPont-27573, unpublished. DACO 10.1, 10.2, 10.2.1, 10.2.2, 10.2.3, 10.2.3.1, 10.2.3.3, 10.3.1, 10.3.2

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