

Evaluation Report for Category B, Subcategory 3.12 Application

Application Number: 2010-4092
Application: Changes to product label: new site or host
Product: Cilis Plus Plant Growth Regulator Solution
Registration Number: 29210
Active ingredient (a.i.): 6-Benzylaminopurine (or 6-benzyladenine)
PMRA Document Number English PDF: 2083823

Background

The active ingredient 6-benzylaminopurine was first registered in Canada as a plant growth regulator in 1980. The uses of 6-benzyladenine on lilies and apples were re-evaluated in 2005 for which continued registration was acceptable (Proposed Acceptability for Continuing Registration PACR2005-11, *Re-evaluation of 6-benzylaminopurine*; Re-evaluation Decision Document RRD2006-06, *6-Benzylaminopurine*).

Cilis Plus Plant Growth Regulator Solution containing 6-benzylaminopurine was first registered in 2009 for post-bloom thinning of apples (i.e. to reduce number of fruit) under Application Number 2006-2205. The label claims were expanded to include enhancement of fruit size of apples under Application Number 2010-1823.

Purpose of Application

The purpose of this application was to amend the label by adding claims for post-bloom thinning and enhancement of fruit size of pears.

Chemistry Assessment

A chemistry assessment was not required for this application.

Health Assessment

Cilis Plus Plant Growth Regulator Solution is expected to have low acute toxicity regardless of the route of exposure, and is minimally irritating to the eye, non-irritating to the skin and is not considered a dermal sensitizer.

The application method for pears is the same as for apples. The precautionary label statements for Cilis Plus Plant Growth Regulator Solution coupled with the low toxicity are adequate to address any potential risk due to exposure of the mixer, loader, applicator, and/or bystander to the end-use product.

As indicated in PACR2005-11, there are currently no dietary concerns related to the ingestion of 6-benzylaminopurine residues from treated food crops. No specific maximum residue limit has been established for the parent compound and its related metabolites.

There are no human or animal health incidents reported for 6-benzylaminopurine.

Environmental Assessment

Although 6-benzyladenine will partition rapidly into sediment and soil, it is not persistent and is rapidly degraded. No major degradation products are produced. Based on its low volatility (vapour pressure and Henry's law constant), 6-benzyladenine residues are not expected in the air.

6-Benzyladenine presents a low risk to freshwater invertebrates, freshwater alga, fish, birds, mammals, honeybees, and other beneficial arthropods, except for parasitoid wasps which may be temporarily suppressed. Therefore, hazards to certain beneficial insects are identified on the product label. Risks to beneficial insects such as parasitoid wasps are mitigated by minimizing spray drift to habitats next to the application site such as hedgerows and woodland.

One environmentally-related incident was reported where several pesticides, including the active ingredient 6-benzylaminopurine, flowed into a river through douse water used after a storage facility fire. It was concluded that this active ingredient did not contribute to the environmental incident as it was not detected in the water samples and that other pesticides in the douse water caused the incident.

Value Assessment

Data from eight trials were submitted in which the efficacy of Cilis Plus Plant Growth Regulator Solution was assessed for fruit thinning and/or increased fruit size. Trials were conducted in 1997, 1999, 2000, 2001, 2006 and 2007 in the United States, Argentina, Israel and Denmark. The submitted data indicated that Cilis Plus Plant Growth Regulator Solution can be expected to result in fruit-thinning when applied in accordance with label directions and at concentrations of 100-200 ppm. The efficacy data provided gave an indirection indication that this product can be expected to result in enhanced fruit size when applied according to label directions and at concentrations of 50 ppm or lower. In the same trials, several non-safety adverse effects parameters, specifically total yield, fruit quality, fruit shape, number of seeds/fruit, return bloom, and return yield were determined to be acceptable. However, total yield reductions may be observed in some pear varieties.

Conclusion

The PMRA conducted an evaluation of the subject application and concluded that use of the product in accordance with the label has value and will not pose unacceptable health or environmental risk.

References

- 1951433 2010, Use description/scenario, DACO: 5.2
- 1951447 2007, Exilis Pear NY protocol data, DACO: 10.2.3.3
- 1951448 2007, CT07 – Anderson Bartlett, DACO: 10.2.3.3
- 1951449 2007, CT07 – McDougall and Sons Bartlett, DACO: 10.2.3.3
- 2003757 2011, January 11 clarification on experimental details for submitted efficacy trials, DACO: 10.2.3.3
- 2010762 2011, January 26 clarification on experimental details for submitted efficacy trials, DACO: 10.2.3.3

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