



Evaluation Report for Category B, Subcategory 3.1, 3.3 Application

Application Number: 2010-1823
Application: Changes to product label: application rate increase, application number or frequency
Product: Cilis Plant Growth Regulator Solution
Registration Number: 29210
Active ingredient (a.i.): 6-Benzylaminopurine (or: 6-Benzyladenine)
PMRA Document Number English PDF: 2041641

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 supported (PACR2005-11, *Re-evaluation of 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.

Purpose of Application

The purpose of this application was to amend the label of Cilis Plus Plant Growth Regulator Solution to include use on apples to enhance fruit size based on the precedent product, MaxCel Plant Growth Regulator (Registration Number 28851). A total of 2 to 4 applications of a spray solution containing 10-50 ppm of active ingredient are made at 3-10 day intervals with the first application at petal fall (maximum seasonal rate of 446 g a.i./ha).

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. It may be categorized minimally irritating to the eye, non-irritating to the skin, and is not considered a dermal sensitizer.

The current label statements for Cilis Plus Plant Growth Regulator Solution, coupled with the low toxicity are considered adequate to address any potential risk due to exposure of the mixer, loader, applicator, and/or bystander to the end-use product.

As per the re-evaluation document, PACR2005-11, *Re-evaluation of 6-Benzylaminopurine*, there are currently no dietary concerns related to the ingestion of 6-benzylaminopurine residues from treated food crops.

Based on a consideration of the information in PACR2005-11, *Re-evaluation of 6-Benzylaminopurine* and the current use pattern, no specific maximum residue limit (MRL) has been established for the parent compound and its related metabolites.

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. 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.

Value Assessment

Data were submitted from three trials conducted in New York and Pennsylvania in 2003 and 2004 in which the effect of Cilis Plus Plant Growth Regulator Solution applied to apple trees was compared to that of the cited precedent product. Data for fruit weight, fruit size distribution, firmness, and yield indicated that the performance of the two products was generally similar at a particular concentration of active ingredient, including at 50 ppm. Therefore, the use pertaining to fruit size enhancement that appears on the precedent product label can be extended to the Cilis Plus label.

Conclusion

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

References

PMRA

Document Number: 1901159

Reference: 2010, Use description/scenario (application and post-application), Data Numbering Code: 5.2

PMRA Document Number: 1901160

Reference: 2010, Mixer/loader/applicator - passive dosimetry data, Data Numbering Code: 5.4

PMRA Document Number: 1901162

Reference: 2010, Dermal absorption (*in vivo*), Data Numbering Code: 5.8

PMRA Document Number: 1901163

Reference: 2010, Dislodgeable residues (foilar, air and surface), Data Numbering Code: 5.9

PMRA Document Number: 1901164

Reference: 2010, Ambient air samples (indoor - outdoor), Data Numbering Code: 5.10

PMRA Document Number: 1901172

Reference: 2004, Evaluation of Exilis Plus for post bloom thinning & sizing on apples, Data Numbering Code: 10.2.3.3

PMRA Document Number: 1901173

Reference: 2005, Experiment 4: Comparison of formulations of BA (Maxcel vs Exilis Plus) with Empire, Data Numbering Code: 10.2.3.3

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