Health Canada Santé Canada

Evaluation Report for Category B, Subcategory 3.1, 3.3, 3.12 Application

Application number: 2020-1081
Application: Changes to Product Labels - Application Rate Decrease; Application Number or Frequency; New Site or Host
Product: Allegro 500F Agricultural Fungicide
Registration number: 27517
Active ingredient (a.i.): Fluazinam
PMRA document number: 3239337

Purpose of application

The purpose of this application is to expand the uses of Allegro 500F Agricultural Fungicide to Cucurbit Vegetables (Crop Group 9), and to lower the number of applications and seasonal rates on apples, cucurbit vegetables, bushberries and field peppers.

Chemistry assessment

A chemistry assessment was not required for this application.

Health assessments

A toxicology assessment was not required for this application.

The use of Allegro 500F Agricultural Fungicide on Crop Group 9 (Cucurbit Vegetables), various berry crops, apples, and field peppers represents a change in the use pattern which required updated quantitative chemical handler, post-application worker, residential, and aggregate risk assessments. No health risks of concern were identified provided that workers wear the appropriate personal protective equipment and follow all label directions.

Residue data for fluazinam from summer squash and cucumber field trials conducted in the United States, including growing regions representative of Canada, were reviewed to support the use expansion of Allegro 500F Agricultural Fungicide from cantaloupe, which is the representative commodity for Crop Subgroup 9A, to the entire Cucurbit Vegetable Crop Group (CG) 9. Fluazinam was applied by ground equipment as a postemergence treatment to summer squash and cucumbers at a total seasonal rate equivalent to ~2.3 – 3.6X the proposed application rate in Canada. Samples were harvested at preharvest intervals (PHIs) shorter than that proposed (i.e., 6-7 days rather than 30 days); however, this scenario is conservative since residue decline data demonstrate that fluazinam residues decrease with increasing PHIs (i.e., PHIs from 6-7 days to 34-35 days). Previously reviewed residue data were also re-assessed to support the reduction in the number of applications per season on apples, cantaloupes (including all of CG 9), bushberries and field peppers.

Canada

Maximum Residue Limit (MRL)

The recommendation of an MRL for fluazinam is based upon submitted field trial studies conducted on summer squash and cucumbers, which were reviewed as part of the current submission, as well as the guidance provided in the OECD MRL Calculator. As per the residue definition for enforcement purposes in plant matrices, an MRL of 0.07 ppm to cover residues of fluazinam (parent molecule only) in/on all commodities of Crop Subgroup 9B (Squash/Cucumbers) is recommended as shown in Table 1.

Table 1 Summary of field trial data used to support the maximum residue limit (MRL) for fluazinam

Commodity	Application Method/Total Application Rate (kg a.i./ha)	PHI[1] (days)	Fluazinam Residues (ppm)		Currently Established MRL (ppm)	Recommended MRL (ppm)
			LAFT[2]	HAFT[2]		
Summer squash	1 soil directed + 4 foliar applications by ground equipment/ 4.37 – 4.44	6 – 7	<0.01	0.0267	None[3]	0.07 for all commodities of CSG 9B
Cucumber	1 soil directed + 4 foliar applications by ground equipment/ 4.06 – 4.43	6 – 7	<0.01	<0.0132	None[3]	

[1] PHI = Preharvest Interval
[2] LAFT = Lowest Average Field Trial; HAFT = Highest Average Field Trial.
[3] An MRL of 0.07 ppm in/on commodities of CSG 9A is currently established in Canada and is aligned with the American tolerance for CG 9.

Following the review of all available data, an MRL as proposed in Table 1 is recommended to cover residues of fluazinam in/on all commodities of Crop Subgroup 9B (Squash/Cucumbers). Residues in these food commodities at the proposed MRL will not pose any health risks of concern to any segment of the population, including infants, children, adults and seniors.

Environmental assessment

The new uses are within the currently registered use pattern of the active ingredient, fluazinam, and therefore, no increase in exposure to the environment is expected when Allegro 500F Agricultural Fungicide is used according to label directions. The label includes the required environmental precautions and hazards statements.

Value assessment

The results of nine cucurbit field efficacy trials conducted in USA and Canada, and scientific rationales were submitted to support claims for Allegro 500F Agricultural Fungicide against downy mildew and gummy stem blight on Crop Group 9 (Cucurbit vegetables) at an application rate range of 0.875 - 1.75 L product/hectare. Suppression at 0.875 L product/hectare and control at 1.75 L product/hectare of the incidence and/or severity of downy mildew and gummy stem blight were demonstrated. A claim to control alternaria leaf spot on Crop Group 9 at the same rate range was supported based on extrapolations from previously registered claims and rationales. Reductions of the maximum number of yearly applications of Allegro 500F Agricultural Fungicide on field pepper, apple, several bushberry crops and Crop Group 9 were supported based on principles of resistance management.

Damage to cucurbit vegetables from downy mildew, gummy stem blight and alternaria leaf spot diseases reduces crop yields by weakening plants and increasing the susceptibility of fruit to sunscald damage. Expansion of the registration of Allegro 500F Agricultural Fungicide to include claims against these diseases on Crop Group 9 will provide growers with an additional product to manage these diseases and prevent the development of fungicide resistance in the pathogen populations.

Conclusion

The Pest Management Regulatory Agency has completed an assessment of the information provided, and has found the information sufficient to support the amendments for the product label of Allegro 500F Agricultural Fungicide.

References

PMRA Document Number	Reference
2686706	2012, Evaluation of fungicides for control of downy mildew on cucumber, DACO: 10.2.3.3(D)
2686707	2013, Evaluation of fungicides for control of downy mildew on cucurbits, DACO: 10.2.3.3(D)
2686708	2013, Evaluation of fungicides for control of downy mildew on cucumbers, DACO: 10.2.3.3(D)
2686709	2013, Evaluation of conventional and organic-approved fungicides for control of downy mildew on zucchini, DACO: 10.2.3.3(D)
2686710	2013, Evaluation of fluazinam for the management of downy mildew in zucchini, DACO: 10.2.3.3(D)
2686711	2001, Evaluation of fungicides and biological materials for the control of downy mildew and Microdochium blight of pumpkin, 2001, DACO: 10.2.3.3(D)
3103829	2020, Efficacy Rationale, DACO: 10.2.1, 10.2.2, 10.2.3.1, 10.3, 10.4, 10.5.1, 10.5.2, 10.5.3, 10.5.4
3167547	2020, Efficacy Rationale, DACO: 10.2.3.1
2686701	2014, Fluazinam: Magnitude of the Residue on Squash (Summer), DACO: 7.2.1,7.4.1,7.4.2
2686702	2014, Fluazinam: Magnitude of the Residue on Cucumber, DACO: 7.2.1,7.4.1,7.4.2