

Evaluation Report for Category B, Subcategory 3.11, 3.12 Application

Application Number: 2017-7838
Application: Changes to Product Labels – New Pests, New Site or Host
Product: Pyroxasulfone 85 WG
Registration Number: 30572
Active ingredient (a.i.): pyroxasulfone
PMRA Document Number: 2953243

Purpose of Application

The purpose of this application was to amend the label of the end-use product, Pyroxasulfone 85 WG, to add use on potato and to control additional broadleaf weeds.

Chemistry Assessment

A chemistry assessment was not required for this application.

Health Assessments

A toxicology assessment was not required for this application.

An updated health risk assessment was conducted for chemical handlers, post application workers and bystanders. With revised precautions, no health risks of concern were identified for the use of Pyroxasulfone 85 WG on potato. No risks of concern are expected when workers follow the label directions, and wear the personal protective equipment identified on the label.

Residue data from field trials conducted in Canada and the United States were submitted to support the domestic use of Pyroxasulfone 85 WG on potatoes. Pyroxasulfone was applied to potatoes at a target rate of 250 g a.i./ha, and harvested according to label directions. In addition, a processing study in treated potatoes was reviewed to determine the potential for concentration of residues of pyroxasulfone into processed commodities.

Maximum Residue Limits

The recommendation for maximum residue limits (MRLs) for pyroxasulfone was based upon the submitted field trial data, and the guidance provided in the [OECD MRL Calculator](#). MRLs to cover residues of pyroxasulfone and metabolites M-1, M-3, M-25, and M-28 in/on crops and processed commodities are proposed as shown in Table 1. Residues in processed commodities not listed in Table 1 are covered under the proposed MRL for the raw agricultural commodity (RAC).

TABLE 1 Summary of Field Trial Used to Support Maximum Residue Limit (MRL) of Pyroxasulfone							
Commodity	Application Method/ Total Application Rate (g a.i./ha)	PHI (days)	Residues (ppm)		Experimental Processing Factor	Currently Established MRL (ppm)	Recommended MRL (ppm)
			LAFT	HAFT			
Potatoes	Pre-emergent soil application / 241-258	63-117	<0.05	<0.05	Flakes: 1.4x Chips: 1.1x	None	All commodities in CSG1C: 0.08 Potato flakes: 0.20 Potato granules: 0.20

LAFT = Lowest Average Field Trial; HAFT = Highest Average Field Trial; CSG1C = Crop subgroup 1C (Tuberous and Corm Vegetables)

Following the review of all available data, the MRL as proposed in Table 1 is recommended to cover residues of pyroxasulfone. Residues in potato commodities at the proposed MRL will not pose unacceptable health risks to any segment of the population, including infants, children, adults and seniors.

Environmental Assessment

As the maximum application rate for potatoes is identical the registered application rate for field corn, soybean, sunflower and safflower, it is not anticipated that this use expansion will pose any additional risk to the environment. Statements on the label are sufficient to mitigate against any environmental concerns when Proxasulfone 85 WG is used in accordance with label directions.

Value Assessment

Pyroxasulfone is a Group 15 herbicide from the pyrazole chemical family. The amendments to the registration of Pyroxasulfone 85WG provide farmers with an alternative tool from a new chemical family for pre-emergent weed management in potato, as well as greater flexibility to arrange rotational crops.

The efficacy and crop tolerance information submitted was determined to be acceptable to support the amendments to the Pyroxasulfone 85 WG label. The value information included scientific rationales and data from replicated field trials conducted in various ecozones in the US between 2009 and 2014.

Conclusion

The Pest Management Regulatory Agency has completed an assessment of the information provided, and has found the information sufficient to support the addition of use on potatoes and control of additional broadleaf weeds to the label of Pyroxasulfone 85 WG.

References

PMRA Document Number	References
1913109	2009, Agricultural Handler Exposure Scenario Monograph: Open Cab Groundboom Application of Liquid Sprays, DACO: 5.3, 5.4
2572744	2015, Agricultural Handler Exposure Scenario Monograph: Open Pour Mixing and Loading Dry Flowable Formulations, DACO: 5.3, 5.4
2834372	2016, Magnitude of the Residue of Pyroxasulfone and Its Metabolites in Potato Raw Agricultural and Processed Commodities, DACO: 7.4.1, 7.4.2, 7.4.5
2834375	2017, Value summary for Pyroxasulfone 85WG Herbicide, containing pyroxasulfone, for control of various weeds in potato, DACO: 10.1, 10.2.1, 10.2.2, 10.2.3, 10.2.3.1, 10.2.3.3, 10.2.3.4, 10.2.4, 10.3, 10.3.1, 10.3.2, 10.3.3, 10.4, 10.5, 10.5.1, 10.5.2, 10.5.3, and 10.5.4.
2851784	2014, Potato herbicide evaluations - Arlington - 2014, DACO: 10.2.3.4(B).
2851785	2014, Potato herbicide efficacy evaluation - Hancock - 2014, DACO: 10.2.3.4(B).
2851786	2014, Muck potato herbicide evaluation - Endeavor - 2014, DACO: 10.2.3.4(B).
2851787	2012, Potato herbicide efficacy evaluation - Hancock - 2012, DACO: 10.2.3.4(B).
2851788	2013, Potato herbicide evaluation - Arlington - 2013, DACO: 10.2.3.4(B).
2851789	2013, Potato herbicide efficacy evaluation - Hancock - 2013, DACO: 10.2.3.4(B).
2851790	2014, Evaluating Zidua Herbicide for use in potato production, DACO: 10.2.3.4(B).
2851791	2012, 2012 research progress report, DACO: 10.2.3.4(B).
2851792	2012, Pre-emergence herbicides for potential use in potato production, DACO: 10.2.3.4(B).

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