Health Canada Santé Canada

Evaluation Report for Category B, Subcategory B.3.12 Application

Application Number: 2015-5766
Application: Changes to Product Labels - New Site or Host
Product: Pyroxasulfone 85WG
Registration Number: 30572
Active ingredient (a.i.): Pyroxasulfone
PMRA Document Number: 2709489

Purpose of Application

The purpose of this application was to amend the use pattern of the end-use product Pyroxasulfone 85WG to add chickpeas, lentils, field peas and flax.

Chemistry Assessment

A chemistry assessment was not required for this application.

Health Assessments

The exposure from the use of Pyroxasulfone 85WG for weed control on chickpeas, lentils, field peas and flax is not expected to increase over the current registered use of pyroxasulfone. No health risks of concern were identified or are expected when workers follow the label directions and wear the personal protective equipment stated on the label.

Residue data from field trials conducted in Canada and the United States were submitted to support the use of Pyroxasulfone 85WG on chickpeas, lentils, field peas and flax. Pyroxasulfone was applied to dry peas, dry beans and flax, at the proposed rate or greater, and harvested according to label directions. In addition, a processing study in treated flax 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, including the 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 MRLs for the raw agricultural commodities (RACs).

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Table 1 Summary of Field Trial and Processing Data Used to Support Maximum Residue Limits (MRLs)

Commodity	Application Method/ Total Application Rate (g a.i./ha)	PHI (days)	Residues[1] (ppm)		Experimental Processing Factor	Currently Established MRL (ppm)	Recommended MRL
			LAFT	HAFT			
Dry peas	Soil/pre-emergence + foliar/post-emergence 298-306	74-90	<0.064	0.088	Not applicable	None	Dry shelled peas and beans (Crop Subgroup 6C): 0.15 ppm
Dry beans	Soil/pre-emergence + foliar/post-emergence 297-311	65-105	<0.064	0.081	Not applicable	None	
Flaxseed	Soil/pre-emergence + foliar/post-emergence 300-309	74-139	<0.064	<0.064	No quantifiable residues were observed at exaggerated rates.	None	Flaxseeds: 0.07 ppm

LAFT = Lowest Average Field Trial; HAFT = Highest Average Field Trial

[1] The combined residues include pyroxasulfone and metabolites M-1, M-3, M-25 and M-28 in terms of parent equivalent.

Following the review of all available data, MRLs as proposed in Table 1 are recommended to cover residues of pyroxasulfone. Residues in these crop commodities at the proposed MRLs will not pose an unacceptable risk to any segment of the population, including infants, children, adults and seniors.

Environmental Assessment

The addition of chickpeas, lentils, field peas and flax to the Pyroxasulfone 85WG label is acceptable from an environmental perspective. Environmental concerns have been mitigated through adequate statements on the product label.

Value Assessment

Pyroxasulfone is a Group 15 herbicide from the pyrazole chemical family. The registration of Pyroxasulfone 85WG on chickpeas, lentils, field peas and flax would provide users an alternative tool from a new chemical family for preplant surface and pre-emergent weed management in these crops.

The efficacy and crop tolerance of Pyroxasulfone 85WG applied alone at the lower rate range in chickpeas, lentils, field peas and flax or in tank mix with glyphosate herbicide was determined to be acceptable. The supportive value information included data from a total of 39 small plot replicated field trials conducted in various ecozones in Ontario, Manitoba, and Saskatchewan between 2011 and 2014.

Conclusion

The Pest Management Regulatory Agency has completed an assessment of the information submitted, and has found the information sufficient to support the addition of chickpeas, lentils, field peas and flax to the Pyroxasulfone 85WG label.

References

PMRA Document Number	Reference
2577625	2015, Pyroxasulfone 85WG Herbicide: Use Scenario Summary, DACO: 5.2
2577626	2014, Magnitude of the Residues of Pyroxasulfone in/on Dry Edible Beans and Peas, DACO: 7.4.1,7.4.2,7.4.5
2577628	2015, Magnitude of the Residues of Pyroxasulfone in/on Dry Edible Pea, DACO: 7.4.1,7.4.2,7.4.5
2577630	2014, Magnitude of the Residues of Pyroxasulfone in/on Flax and its Processed Commodities, DACO: 7.4.1,7.4.2,7.4.5
2577632	2015, Magnitude of the Residues of Pyroxasulfone in/on Flax, DACO: 7.4.1,7.4.2,7.4.5
2577634	2015, Value summary for Pyroxasulfone 85 WG Herbicide, containing pyroxasulfone, for control of various weeds in flax, chickpeas, lentils and field peas in the Prairie Provinces, DACO: 10.1, 10.2.1, 10.2.2, 10.2.3.1, 10.2.3.3, 10.3.1, 10.4, and 10.5
2601666	2014, Efficacy - Ref. No. 21, DACO: 10.2.3
2601668	2014, Efficacy - Ref. No. 35, DACO: 10.2.3
2601669	2014, Efficacy - Ref. No. 36, DACO: 10.2.3

ISSN: 1911-8082