

Evaluation Report for Category B, Subcategory 2.1, 2.3, 2.4, 2.5, 3.10, 3.12, 3.2 and 3.5 Application

Application Number: 2016-6156
Application: B.2.1: New Guarantee
B.2.3: New Identity of Formulants
B.2.4: New Proportion of Formulants
B.2.5: New Formulation Type
B.3.10: New Tank Mixes
B.3.2: New Application Timing
B.3.5: New Rotational Crops/Plantback Interval
Product: GF-3532 Herbicide
Registration Number: 32948
Active ingredients (a.i.): Halauxifen
PMRA Document Number : 2838997

Purpose of Application

The purpose of this application was to register GF-3532 Herbicide, an end use product containing halauxifen at 68.5 g/L and formulated as a suspension concentrate.

Chemistry Assessment

GF-3532 Herbicide is formulated as a suspension containing halauxifen (present as methyl ester) at a nominal concentration of 68.5 g/L. This end-use product has a density of 1.0564-1.0596 g/mL and pH of 6.89-8.3. The required chemistry data for GF-3532 Herbicide have been provided, reviewed and found to be acceptable.

Health Assessments

GF-3532 Herbicide was of low acute toxicity in rats via the oral, dermal and inhalation routes of exposure. It was minimally irritating to the eyes and skin of rabbits. It was not a skin sensitizer in mice.

Residue data from field trials conducted in Canada and the United States were submitted to support the use of GF-3532 on field corn and soybeans. Halauxifen-methyl was applied to field corn at exaggerated rates and to soybeans at the accepted rate, and harvested at maturity. In addition, processing studies in treated field corn and soybeans were reviewed to determine the potential for concentration of residues of halauxifen-methyl into processed commodities.

Maximum Residue Limits

The recommendation for maximum residue limits (MRLs) for halauxifen-methyl was based upon the submitted field trial data, and the guidance provided in the [OECD MRL Calculator](#). MRLs to cover residues of halauxifen-methyl 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).

Commodity	Application Method/ Total Application Rate (g a.i./ha)	PHI (days)	Residues (ppm)		Experimental Processing Factor	Currently Established MRL (ppm)	Recommended MRL (ppm)
			LAF T	HAF T			
Field corn grain	Soil directed pre-plant or pre-emergent application/ 9.92-11.11	101-166	<0.01	<0.01	Not determined since residues were <0.01	--	0.01
Soybean seed	Soil directed pre-plant application/ 4.79-5.19	125-189	<0.01	<0.01	Not determined since residues were <0.01	--	0.01

LAF T = Lowest Average Field Trial; HAF T = Highest Average Field Trial

Based on the dietary burden and residue data, residues of halauxifen-methyl in/on eggs, milk, fat, meat and meat byproducts of cattle, goats, hogs, sheep, horses and poultry resulting from the new uses will be covered by subsection B.15.002 (1) of Division 15 of the Food and Drugs Act and Regulations, *i.e.*, ≤ 0.1 ppm.

Following the review of all available data, MRLs as proposed in Table 1 are recommended to cover residues of halauxifen-methyl. 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.

An occupational exposure risk assessment was conducted for the use of halauxifen-methyl as GF-3532 Herbicide on field corn and soybeans. No health risks of concern were identified when workers follow label recommendations and wear the personal protective equipment identified on the label.

Environmental Assessment

The use pattern, application rates and methods for GF-3532 Herbicide are within the registered use for the active ingredient, halauxifen-methyl. There are no unacceptable environmental risks expected associated with the product formulation. The label does contain all the applicable and required environmental hazards and buffer zones statements.

Value Assessment

The availability of GF-3532 Herbicide will provide soybean and field corn growers an additional

option for controlling or suppressing particular weeds prior to crop planting. Application of the tank mixture of GF-3532 Herbicide plus Broadstrike RC Herbicide plus glyphosate will provide broad spectrum weed control in these crops. Application of this tank mixture, which includes three modes of action, can be expected to mitigate the potential for the development of resistance for weed species that are susceptible to two or more of the component herbicides.

Value information in the form of performance data generated in small-scale field trials was submitted. The combination of data along with the registered use pattern of GF-2685 Herbicide, a different formulation containing 10% halauxifen, demonstrated that application of GF-3532 Herbicide at 5 g active/ha in combination with a methylated seed oil concentrate can be expected to provide control of Canada fleabane, common ragweed, lamb's-quarters, cleavers and volunteer flax, and suppression of hemp-nettle and redroot pigweed.

Crop injury and yield data demonstrated that soybean can be expected to exhibit a high level of tolerance to a pre-plant application of 5 g active/ha GF-3532 Herbicide when planted seven or more days after application. Similarly, crop injury data demonstrated that field corn can be expected to exhibit a high degree of tolerance to this rate of GF-3532 Herbicide when planted five or more days after application.

Conclusion

The PMRA has reviewed the information provided in support of this end use product, GF-3532 Herbicide. Based on the results of this review, the end use product, GF-3532 Herbicide, is acceptable for registration.

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ISSN: 1911-8082

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