Health Canada Santé Canada

Evaluation Report for Category B, Subcategory B.3.12, B.3.5 Application

Application Number: 2013-1324
Application: New Site or Host and Changes to Product Labels-Rotational Crops\Plantback Interval
Product: Valtera Herbicide
Registration Number: 29230
Active ingredients (a.i.): Flumioxazin
PMRA Document Number: 2384461

Purpose of Application

The purpose of this application was to amend the registration of their commercial end-use product, Valtera Herbicide containing the active ingredient flumioxazin. The changes were the addition of field corn as a new use site and the amendment of the rotational interval for winter wheat from 1 month to 7 days.

Chemistry and Environmental Assessments

Chemistry and environmental assessments were not required for this application.

Health Assessments

The exposure from the use of Valtera Herbicide for pre-emergent control of labeled weeds on field corn and for burndown programs is not expected to increase over the currently registered use pattern of flumioxazin. No 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 Valtera Herbicide on field corn. Flumioxazin was applied at the label rate to field corn, which was harvested according to label directions. In addition, a processing study in treated field corn was reviewed to determine the potential for concentration of residues of flumioxazin into processed commodities.

Previously reviewed data on the confined accumulation of flumioxazin in rotational crops were used to support the amendment of the rotational crop interval for winter wheat from 4 months to 7 days (only following a desiccation application in dry beans).

Canada

Maximum Residue Limit

The recommendation for the maximum residue limit (MRL) for flumioxazin on field corn was based upon the submitted field trial data, and the guidance provided in the OECD MRL Calculator. Table 1 summarizes the residue data used to calculate the proposed MRL for field corn.

Table 1 Summary of Field Trial and Processing Data Used to Support the Maximum Residue Limit (MRL) for Flumioxazin

Commodity	Application Timing/Total Application Rate (g ai/ha)	Pre harvest Interval (days)	Residues (ppm)		Experimental Processing Factors	Currently Established MRL (ppm)	Recommended MRL (ppm)
			Min.	Max.			
Corn grain (RAC)	Preplant/ 101 - 108	131-171	<0.02	<0.02	No concentration observed in processed commodities	None	0.02 (field corn)
	Preplant/ 211 - 212	148-171	<0.02	<0.02			
	Preplant/ 534	165	<0.02	<0.02			

Following the review of all available data, the MRL as proposed in Table 1 is recommended to cover residues of flumioxazin. Residues of flumioxazin in this crop commodity at the proposed MRL will not pose an unacceptable risk to any segment of the population, including infants, children, adults and seniors. The change in the rotational crop interval for winter wheat from 4 months to 7 days (only following a desiccation application in dry beans) is also acceptable.

Value Assessment

Value information submitted included data from field trials conducted in Ontario and Illinois in 1998 and 2009-2012. Crop safety of field corn on medium textured soil with < 5% organic matter (OM) content was assessed for pre-plant surface applications of Valtera Herbicide at up to 107 g a.i./ha. Herbicide treatments were applied from nine days prior to planting to up to 11 days after planning but prior to emergence.

Mean crop injury to field corn was acceptable for pre-plant surface application of Valtera Herbicide at up to 107 g a.i./ha. Grain yield data further confirmed that field corn may exhibit an adequate margin of crop safety to Valtera Herbicide applied as per label directions.

Registration of field corn on the Valtera Herbicide label will provide another option to corn growers for pre-emergent residual control of broadleaf weeds and grasses in no till and minimum tillage fields. When it is applied in tank mix with glyphosate herbicide for burndown weed management, Valtera Herbicide will provide residual control of weed populations that have already developed resistance to glyphopsate herbicide. This helps to manage the development of glyphosate resistance in weed populations in field corn.

Crop safety of winter wheat was assessed for Valtera Herbicide at up to 107 g a.i./ha in field trials. Herbicide treatments were applied to previously growing dry beans in five trials and to a field with some crop residues (not as a bean desiccant) in one trial. Winter wheat was planted from 5 to 28 days after herbicide applications.

Crop injury to winter wheat planted in fields previously treated with Valtera Herbicide at up to 71 g a.i./ha was either slight or not detectable except in one trial, in which the herbicide treatments were applied onto crop residue. Final yield data further confirmed that winter wheat as a rotational crop with a seven day re-cropping interval can be expected to exhibit an adequate margin of crop safety to Valtera Herbicide at 54 g a.i./ha as a harvest aid applied to preceding crop, i.e. dry bean.

Inclusion of winter wheat as a rotational crop with a re-cropping interval of seven days allows farmers to grow winter wheat right after harvest of dry bean in the same year. This allows growers further flexibility in terms of rotational cropping options.

Conclusion

The Pest Management Regulatory Agency has completed an assessment of the information provided in support of Valtera Herbicide, and has found the information sufficient to add field corn as a new use site and to amend the rotational interval for winter wheat (for desiccation on dry beans) from 4 months to 7 days.

References

PMRA Document Number	Reference
2276254	2013. Value summary for Flumioxazin 51 WDG Herbicide – Addition of field corn and amendment to rotational registrations for winter wheat. DACO: 10
2276257	2013. Trial reports. pp. 199. DACO:10
2276246	2007, Magnitude of the Residues of Flumioxazin on Field Corn – Vol. 1, DACO: 7.4.1, 7.4.2
2276247	2007, Magnitude of the Residues of Flumioxazin on Field Corn – Vol. 2, DACO: 7.4.1, 7.4.2

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