

Evaluation Report for Category B, Subcategory 3.10, 3.11, 3.12 Application

Application Number: 2015-6966
Application: New Product Labels – Tank Mixes, New Pests and New Site or Host
Product: STZ Herbicide
Registration Number: 32621
Active ingredients (a.i.): Sulfentrazone
PMRA Document Number: 2718122

Purpose of Application

The purpose of this application was to register STZ Herbicide, containing the active ingredient sulfentrazone, for pre-emergent treatment of potatoes. STZ Herbicide is to be used in tank mix with Sencor 75DF Herbicide, Reg. No. 17242, and will have the revised plantback interval of winter wheat from 16 to 4 months.

Chemistry Assessment

A chemistry assessment was not required for this application.

Health Assessments

STZ Herbicide was determined to be identical to the precedent product. Therefore, no additional toxicology data are required at this time.

The use of STZ Herbicide on potatoes is not expected to result in potential occupational or bystander exposure over the registered use of sulfentrazone. No health risks of concern are expected when workers follow label directions and wear the personal protective equipment as stated on the label.

Residue data from field trials conducted with sulfentrazone in the United States, including growing regions representative of Canada, were submitted to support the domestic use of STZ Herbicide on potatoes. Sulfentrazone was applied to potatoes at exaggerated rates, 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 sulfentrazone into processed commodities.

Maximum Residue Limit

The recommendation for maximum residue limits (MRLs) for sulfentrazone was based upon the submitted field trial data, and the guidance provided in the [OECD MRL Calculator](#). MRLs to cover residues of sulfentrazone, *N*-[2,4-dichloro-5-[4-(difluoromethyl)-4,5-dihydro-5-oxo-1*H*-1,2,4-triazol-1-yl]phenyl]methanesulfonamide (DMS), and *N*-[2,4-dichloro-5-[4-(difluoromethyl)-4,5-dihydro-3-hydroxymethyl-5-oxo-1*H*-1,2,4-triazol-1-yl]phenyl]methanesulfonamide (HMS) 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).

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

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			
Potato	Pre-emergent soil / 408-441	68-158	<0.15	<0.15	No quantifiable residues were observed at exaggerated rates. Hence, concentration of residues in potato flakes, chips, and wet peel is not expected.	None	0.15 (Crop Subgroup 1C)

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

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

Proposed rates were within current registered rates for similar products. No additional environmental risk is expected from the use of this product. Therefore, additional environmental data were not required to support the use of STZ Herbicide on this crop. Environmental concerns are mitigated on the existing label.

Value Assessment

Control of broadleaf weeds and grasses in potato is identified as a priority in the Canadian Grower Priority Database. The application of STZ Herbicide in tank mix with Sencor 75DF Herbicide provides control of both grasses and broadleaf weeds, including certain triazine resistant weeds such as redroot pigweed and lamb's-quarters, in potato which would satisfy the needs of growers.

The inclusion of potato as a rotational crop and revision of recropping interval for winter wheat provides growers a greater flexibility to employ STZ Herbicide for early season weed control as well as to arrange sequential crops.

Value information demonstrated that the treatment of STZ Herbicide at 157-219 mL/ha in tank mix with Sencor 75DF Herbicide at 600-800 g/ha provided acceptable control of weeds labelled for Sencor 75DF Herbicide, including triazine resistant redroot pigweed and lamb's-quarters, and control of kochia when STZ Herbicide was applied at the high rate. The value information also indicated that potato as a host crop as well as a rotational crop that can be seeded any time after herbicide treatment and winter wheat as a rotational crop with a four month recropping interval exhibited an adequate margin of crop tolerance to the treatment of STZ Herbicide as well as the tank mix of STZ Herbicide + Sencor 75DF.

The value information available included data from a total of 27 field trials, use history information from one source, and sound scientific rationales.

Conclusion

The Pest Management Regulatory Agency has completed an assessment of the available information and has found it sufficient to support the full registration of STZ Herbicide.

References

PMRA Document Number	References
2495778	2001, Sulfentrazone: Magnitude of the Residue on Potato, DACO: 7.4,7.4.1,7.4.2,7.4.5
2593363	2015, Determine the tolerance of cereal crops to sulfentrazone, DACO: 10.2.3 and 10.3.2.
2593364	2015, Determine the tolerance of cereal crops to sulfentrazone, DACO: 10.2.3 and 10.3.2.
2593365	2015, Determine the tolerance of cereal crops to sulfentrazone, DACO: 10.2.3 and 10.3.2.
2593366	2015, Determine the tolerance of cereal crops to sulfentrazone, Strip trial, DACO: 10.2.3 and 10.3.2.
2593367	2015, Determine the tolerance of spring wheat varieties to sulfentrazone, DACO: 10.2.3 and 10.3.2.
2593368	2015, Determine the tolerance of spring wheat varieties to sulfentrazone, DACO: 10.2.3 and 10.3.2.
2593369	2015, Determine the tolerance of spring wheat varieties to sulfentrazone, DACO: 10.2.3 and 10.3.2.
2593370	2015, Tolerance of cereals (wheat, durum wheat, 2 row barley, 6 row barley and canary seed) to sulfentrazone applied pre-emergence, DACO: 10.2.3 and 10.3.2.
2593371	2015, Tolerance of cereals (wheat, durum wheat, 2 row barley, 6 row barley and canary seed) to sulfentrazone applied pre-emergence, DACO: 10.2.3 and 10.3.2.
2593372	2015, Authority winter wheat recrop use history, DACO: 10.2.4.

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