

Evaluation Report for Category B, Subcategory 5.0 Application

Application Number: 2012-4576
Application: New MRL for previously assessed TGAI
Product: Glufosinate Ammonium Technical Herbicide
Registration Number: 23178
Active ingredients (a.i.): Glufosinate Ammonium
PMRA Document Number : 2285542

Purpose of Application

The purpose of this submission is to establish import maximum residue limits (MRLs) on sweet corn, citrus fruit, pome fruit, olives and potato.

Chemistry, Environment and Value Assessments

Chemistry, environment and value assessments were not required for this application.

Health Assessments

Residue data for glufosinate ammonium were submitted to support the importation of transgenic sweet corn, citrus fruit (Revised Crop Group 10), pome fruit (Crop Group 11-09), olives and potatoes into Canada. In addition, processing studies in treated apples, oranges, plums, potatoes and olives were also provided and reviewed to determine the potential for concentration of residues of glufosinate ammonium and the metabolite HOE-061517 into processed commodities.

Maximum Residue Limits

The recommendation for the MRLs for combined residues of glufosinate ammonium and HOE-061517 were based on the residues observed in commodities treated according to registered US label directions and at exaggerated rates in US field trials. MRLs to cover combined residues of glufosinate ammonium and HOE-061517 in/on imported commodities are proposed as shown in Table 1. Residues in processed commodities not listed in Table 1 are covered under the recommended MRL for the raw agricultural commodity (RAC).

TABLE 1. Summary of Field Trial and Processing Data Used to Establish the Maximum Residue Limits (MRLs).

Commodity	Application Method/Total Application Rate (kg a.i./ha)	PHI (days)	Combined Residues (ppm) ¹		Experimental Processing Factor	Currently established MRLs	Recommended MRLs (ppm)
			Min	Max			
Potatoes	Foliar / 0.437-0.471	9-10	<0.10	0.667	Chips (2.3x) Flakes (3.0x) Wet peel (0.6x)	0.4 ²	0.8 (potato tubers) 1.6 (potato chips) 2.0 (potato flakes)
Citrus Fruit (oranges, lemons, grapefruit)	Broadcast to the base of the plant / 4.91-5.16	13-14	<0.1	<0.1	Orange oil (1.0x)	-	0.1 (Australian desert limes, Australian finger limes, Australian round limes, Brown River finger limes, calamondins, citrus citrons, citrus hybrids, grapefruits, Japanese summer grapefruits, kumquats, lemons, limes, sweet limes, Mediterranean mandarins, Mount White limes, New Guinea wild limes, oranges, pummelos, Russel River limes, Satsuma mandarins, Tachibana oranges, Tahiti limes, tangelos, tangerines, tangors, trifoliate oranges, uniq fruits)
Apples	Broadcast to the base of the tree / 3.92-5.06	13-14	<0.1	<0.1	Dry pomace (1.0x) Wet pomace (1.0x) Juice (1.0x)	0.05 ³	0.2 (apples, azaroles, crabapples, loquats, mayhaws, medlars, pears, Asian pears,

Commodity	Application Method/Total Application	PHI (days)	Combined Residues (ppm) ¹		Experimental Processing	Currently established MRLs	Recommended MRLs (ppm)
Pears	Broadcast to the base of the tree / 4.99-5.12	14	<0.1	<0.131	-	-	quinces, Chinese quinces, Japanese quinces, tejocotes)
Plums	Broadcast to the base of the tree / 3.27-3.41	14	<0.1	<0.12	Prunes (2.0x)	0.2	0.25 (prunes)
Olives	Broadcast to the base of the tree / 5.05-5.07	14	<0.1	<0.1	Oil (1.0x)	-	0.1 (olives)
Transgenic sweet corn	Foliar / 0.822-0.872	30-50	<0.09	<0.21	-	0.2	0.2 (sweet corn kernels plus cob with husks removed)

¹All residues were reported as the sum of glufosinate ammonium and metabolite HOE-061517

²The established MRL of 0.4 ppm in/on potatoes will be replaced with the MRLs of 0.8 ppm for potato tubers.

³The established MRL of 0.05 ppm in/on apples will be replaced with the MRLs of 0.2 ppm for Pome Fruit (Crop Group 11-09).

Conclusion

Following the review of all available data, MRLs are recommended to cover residues of glufosinate ammonium and HOE-061517 in/on transgenic sweet corn, citrus fruit (Revised Crop Group 10), pome fruit (Crop Group 11-09), prunes, olives and potatoes. Residues of glufosinate ammonium and HOE-061517 in these commodities at the proposed MRLs will not pose an unacceptable risk to any segment of the population, including infants, children, adults and seniors.

References

PMRA Document Number	Reference
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2243501	1998, Magnitude of glufosinate ammonium residues in or on potatoes resulting from a single application of Rely(R) herbicide, USA, 1997, DACO: 7.2.5,7.4.1,7.4.6
2243466	1997, Residues in potatoes and processed potato commodities following vine dessication with Ignite at the minimum recommended PHI - USA, 1996 Glufosinate-ammonium, DACO: 7.2.1,7.4.5

PMRA Document Number	Reference
2243506	2012, EPA DER for Rely 200 - Magnitude of the residue in/on citrus (crop group 10), DACO: 12.5.7,7.4.1,7.4.2,7.4.6
2243504	2009, Rely 200 - Magnitude of the residue in/on citrus (crop group 10), DACO: 7.4.1,7.4.2,7.4.6
2243512	2010, EPA DER for Rely 200 - Magnitude of the residue in/on orange processed commodities, DACO: 12.5.7,7.4.5
2243509	2009, Rely 200 - Magnitude of the residue in/on orange processed commodities, DACO: 7.4.5
1896604	2007, Bayer Method GL-001-P07-01 An Analytical Method for the Determination of Residues of Glufosinate in Crop Matrices Using LC/MS/MS, DACO: 7.2.1
1142643	(GLUFOSINATE AMMONIUM/IGNITE): GAS CHROMATOGRAPHIC DETERMINATION OF HOE 039866 [AMMONIUM-D1-HOMOALANIN-4-YL(METHYL)PHOSPHINATE] AND ITS METABOLITE HOE 061517 [3-METHYLPHOSPHINICO-PROPIONIC ACID] IN APPLES, GRAPES, SOYBEANS,CORN AND TREE NUTS (171-4;HRAV-
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2243489	2010, EPA DER for Rely 200 SL - Magnitude of the residue in/on pear, DACO: 12.5.7,7.4.1,7.4.2
2243487	2009, Rely 200 SL - Magnitude of the residue in/on pear, DACO: 7.4.1,7.4.2
1896609	2009, Glufosinate: Magnitude of the residue on peach, DACO: 7.3,7.4.1
2246793	DACO: 7.4.1_DOC
1953402	DACO: 7.4.1_DOC
2243488	2010, EPA DER for Rely 200 - Magnitude of the residue in/on stone fruit, DACO: 12.5.7,7.4.1,7.4.2
1818358	2009, Rely 200- Magnitude of the residue in/on Stone fruit, DACO: 7.1,7.2,7.2.1,7.2.2,7.2.3,7.2.4,7.2.5,7.4,7.4.1,7.4.2
2243514	2010, EPA DER for Rely 200 - Magnitude of the residue in/on plum processed commodities, DACO: 12.5.7,7.4.5
2243510	2009, Rely 200 - Magnitude of the residue in/on plum processed commodities, DACO: 7.4.5
2243485	2010, EPA DER for Rely 200 - Magnitude of the residue in/on olive, DACO: 12.5.7,7.4.1
2243483	2009, Rely 200 - Magnitude of the residue in/on olive, DACO: 7.4.1
2243511	2010, EPA DER for Rely 200 - Magnitude of the residue in/on olive processed commodities, DACO: 12.5.7,7.4.5
2243507	2009, Rely 200 - Magnitude of the residue in/on olive processed commodities, DACO: 7.4.5
2243500	2010, EPA DER for glufosinate: Magnitude of the residue on corn (sweet) - Amended report, DACO: 12.5.7,7.4.1,7.4.6

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2243482	2005, Glufosinate: Magnitude of the residue on sweet corn - Amended report, DACO: 7.3,7.4.1,7.4.6
2243497	2005, Glufosinate: Magnitude of the residue on corn (sweet) - Amended report, DACO: 7.4.1,7.4.6
1896606	2002, Frozen Storage Stability of AE F039866 (Glufosinate-Arnmonium) and its Metabolites, AE F099730 and AE F061517 in Tolerant Sugar Beet Processed Fractions (Pulp, Molasses, Refined Sugar), DACO: 7.3

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