

Evaluation Report for Category B Subcategory 5.0 Application

Application Number: 2010-0632

Application: B.5.0 – New MRLs for Previously Registered Active Ingredient

Product: Ethofumesate Technical Herbicide

Registration Number: 20364

Active ingredients (a.i.): Ethofumesate

PMRA Document Number English PDF: 2036869

Purpose of Application

The purpose of this application was to establish maximum residue limits on several imported commodities.

Health Assessments

Residue data for ethofumesate on sugar beets, garden beets, dry bulb onions and carrots were submitted to support the establishment of maximum residue limits (MRLs) for ethofumesate in/on several imported commodities. In addition, processing studies on treated sugar beets were assessed to determine the potential for concentration of residues of ethofumesate into processed commodities.

Maximum Residue Limits

Recommendations for MRLs for ethofumesate in/on sugar beets, garden beets, garlic, dry bulb onions, shallot bulbs and carrots were based on guidance provided in PRO2005-04 ("Guidance for Setting Pesticide Maximum Residue Limits Based on Field Trial Data").

Based on MRL statistical methodology and residue data from field trials conducted according to label directions, maximum residue limits (MRLs) to cover residues of ethofumesate in/on sugar beet roots, sugar beet molasses, garden beet roots, garden beet tops, garlic, dry bulb onions, shallot bulbs and carrots will be established as shown in Table 1. Residues of ethofumesate in processed commodities not listed in Table 1 are covered under the MRLs for the raw agricultural commodities (RACs).



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

Commodity	Application Method/ Total Application Rate	PHI (days)	Total ETS Residues (ppm)		Experimental Processing Factor	Currently Established MRL	Recommended MRL
			Min	Max	-	(ppm)	(ppm)
Sugar beet roots	Pre- emergence + foliar spray/ 4.9-7.6 kg a.i./ha	81-276			Molasses: 1.9x; No concentration observed in sugar and dried pulp	None	0.3 (roots); 0.5 (molasses)
Garden beet roots	Pre- emergence + foliar spray/	47-52	0.16	0.31	Not required	None	0.5
	2.8-3.0 kg a.i./ha						
Garden beet tops	Pre- emergence + foliar spray/	13-15	0.93	0.16	0.25	None	5.0
	2.8-3.0 kg a.i./ha						
Dry bulb onions	Pre- emergence + foliar spray/	28-32	0.16	0.24	Not required	None	0.25 (dry bulb onions, garlic and shallot
	3.2-3.9 kg a.i./ha						bulbs)
Carrot roots	Pre- emergence + foliar spray/	35-69	3.01	6.34	Not required	None	7.0
	4.5 kg a.i./ha						

Chemistry, Environment and Value Assessments

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

Conclusion

Following the review of the data provided, MRLs are recommended to cover residues of ethofumesate in/on sugar beet roots, sugar beet molasses, garden beet roots, garden beet tops, garlic, dry bulb onions, shallot bulbs and carrot roots. Residues of ethofumesate in these commodities at the established MRLs will not pose an unacceptable risk to any segment of the population, including infants, children, adults and seniors.

References

PMRA Document Number	Reference
1683836	1999, Summary of the metabolism of ethofumesate in plants Ethofumesate AE B049913, DACO: 6.1
1683847	1993, THE UPTAKE AND METABOLISM OF Original Document: ETHOFUMESATE AND ITS SOIL METABOLITES IN A CONFINED ROTATIONAL CROP STUDY, DACO: 6.3 CBI
1683848	1992, Original Document: THE METABOLISM OF [14C]-ETHOFUMESATE IN SUGAR BEET - A GLASSHOUSE STUDY, DACO: 6.3 CBI
1683851	1992, Original Document: THE METABOLISM OF [14C]-ETHOFUMESATE IN ANNUAL RYEGRASS - A GLASSHOUSE STUDY, DACO: 6.3 CBI
1683859	2000, Validation of an analytical method for the residues of NC 20645 in sugar beet roots and whole milk, USA, 1998 Code: AE C639175 00 1B97 0001, DACO: 7.2.1 CBI
1683861	1986, ANALYTICAL METHOD FOR RESIDUES OF ETHOFUMESATE AND MAJOR METABOLITES IN GRASS AND SUGARBEET (IMPROVED METHOD), DACO: 7.2.1
1683863	2002, Ethofumesate (AE B049913):Radiovalidation of the Method of Analysis for Ethofumesate its Metabolites in Plants using Gas Chromatography equipped with Flame Photometric Detection, DACO: 7.2.1
1683865	2001, Independent laboratory Validation of Aventis CropScience Method-Analytical Method for the Determination of Ethofumesate and Its Metabolites, NC 9607, MC 8493 and NC 20645 in Sugar Beet Roots and Tops, DACO: 7.2.1
1683869	2002, Analytical Method for the Determination of Ethofumesate and Its Metabolites, NC 9607, NC 8493 and NC 20645 in Sugar Beet Roots and Tops (Method Number XB/01/01), DACO: 7.2.1
1683870	1976, ANALYTICAL METHOD FOR RESIDUES IN SUGARBEET TREATED WITH NORTRON, DACO: 7.2.1
1683871	1973, ANALYTICAL METHOD FOR RESIDUE IN SUGAR BEET TREATED WITH NORTRON, DACO: 7.2.1
1683872	1991, TESTING OF ETHOFUMESATE THROUGH US FDA MULTIRESIDUE METHODS, DACO: 7.2.1

1683877 1980, RESIDUES IN MATURE SUGAR BEET TREATED POST-EMERGENCE WITH MIXTURES OF ETHOFUMESATE AND/OR PHENMEDIPHAM AND DESMEDIPHAM (COMMERCIAL EC FORMULATIONS) IN USA 1979, DACO: 7.2.1,7.4.1 1683878 1995, AT HARVEST ETHOFUMESATE-DERIVED RESIDUES IN OR ON SUGAR BEET ROOTS AND TOPS FOLLOWING SEQUENTIAL APPLICATIONS OF NORTRON SC AND BETAMIX AT THE HIGHEST RECOMMENDED PRE-EMERGENCE PLUS POST-EMERGENCE RATE COMBINATION USA 1993, DACO: 7.2.1,7.4.1,7.4.6 1683882 2002, At-Harvest Ethofumesate-Derived Residues in or on Sugar Beet Roots and Processed Sugar Beet Commodities Following a Single Application of NORTRON SC at Exaggerated Rates, USA, 1993, DACO: 7.2.1,7.4.5,7.4.6 1683885 2000, Stability of ethofumesate, NC 9607 and NC 8493 in spinach during frozen storage, USA, 1993: ethofumesate, DACO: 7.3 1995, ETHOFUMESATE: STABILITY OF ETHOFUMESATE, NC 9607 AND 1683886 NC 8493 IN GRASS DURING FROZEN STORAGE, USA, 1993, DACO: 7.3 1683888 2000, Stability of ethofumesate, NC 9607 and NC 8493 in sorghum straw during frozen storage, USA, 1993: ethofumesate, DACO: 7.3 1683889 2000, Stability of ethofumesate, NC 9607 and NC 8493 in carrots during frozen storage, USA, 1993, DACO: 7.3 1683890 2000, Stability of ethofumesate, NC 9607 and NC 8493 in barley grain during frozen storage, USA, 1993, DACO: 7.3 1990, STABILITY OF ETHOFUMESATE AND METABOLITE RESIDUES IN 1683892 SUGAR BEET (ROOTS AND TOPS) DURING DEEP FREEZE STORAGE, **DACO: 7.3** 1990, STABILITY OF ETHOFUMESATE AND METABOLITE RESIDUES IN 1683893 SUGARBEET (ROOTS AND TOPS) DURING DEEP FREEZE STORAGE, **DACO:** 7.3 1683894 1975, STABILITY OF RESIDUES DURING STORAGE OF CROP AND SOIL SAMPLES FROM TRIALS WITH NORTRON, DACO: 7.3 1976, COMPARISON OF RESIDUES IN MATURE SUGAR BEET TREATED 1683895 WITH AN SC OR AN EC FORMULATION OF NORTRON IN UK, 1975, DACO: 7.4.1

1683899	1976, COMPARISON OF RESIDUES IN MATURE SUGAR BEET TREATED PRE-EMERGENCE WITH NORTRON OR PYRAMIN OR A TANK MIX OR BOTH COMPONENTS IN THE USA IN 1975, DACO: 7.4.1
1683900	1976, COMPARISON OF RESIDUES IN MATURE SUGAR BEET TREATED PRE-EMERGENCE WITH NORTRON 20 EC OR TCA OR A TANK MIX OF BOTH COMPONENTS IN THE USA, DACO: 7.4.1
1683901	1974, NORTRON RESIDUE IN HARVEST SUGAR BEET FROM NINE REGIONS OF THE USA IN 1972, DACO: 7.4.1
1683903	1980, RESIDUES IN MATURE SUGAR BEET FOLLOWING PRE AND POST-EMERGENCE APPLICATION OF ETHOFUMESATE (20 EC) IN CALIFORNIA 1977, DACO: 7.4.1
1683904	1974, RESIDUE DECLINE STUDIES IN MICHIGAN (USA) WITH SUGAR BEET TREATED PRE-EMERGENCE WITH NORTRON IN 1972, DACO: 7.4.2
1683905	1973, RESIDUE DECLINE STUDIES WITH SUGAR BEET TREATED WITH NORTRON, DACO: 7.4.2
1860880	1975, SUMMARY OF NC 8438 RESIDUE DATA (SUGARBEET, PROCESSED BEET FRACTIONS AND CATTLE TISSUES), DACO: 7.1
1860882	2002, Ethofumesate: Magnitude of the Residue on Beet, Garden, DACO: 7.2.1,7.4.1
1860883	1977, RESIDUES IN ONIONS FROM 1976 TRIALS WITH TRAMAT IN AUSTRALIA, DACO: 7.2.1
1860884	1977, ANALYTICAL METHOD FOR RESIDUES IN ONIONS TREATED WITH NORTRON, DACO: 7.2.1
1860887	2002, Ethofumesate: Magnitude of the Residue on Carrot, DACO: 7.4.1
1860888	1978, HARVEST RESIDUES IN RED BEET FROM NORTRON TRIALS IN THE USA (NEW YORK, TEXAS AND WISCONSIN) IN 1976/77, DACO: 7.4.1
1860889	1978, HARVEST RESIDUES IN RED BEET FROM A NORTRON TRIAL IN CANADA IN 1977, DACO: 7.4.1
1860890	2004, Ethofumesate: Magnitude of the Residue on Onion (Dry Bulb) - Volume 2 of 2, DACO: 7.4.1
1860891	1978, RESIDUES IN ONIONS FROM 1976 TRIALS WITH NORTRON IN MICHIGAN AND CALIFORNIA USA, DACO: 7.4.1

1976, THE METABOLISM OF 14C-ETHOPUMESATE IN THE ONION., 2005543 **DACO: 6.3** ISSN: 1911-8082 [®] Her Majesty the Queen in Right of Canada, represented by the Minister of Public Works and Government Services Canada 2011

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