

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

Application Number: 2015-5839
Application: Changes to Product Labels, New Tank Mixes and New Site/Host
Product: M1691 Herbicide
Registration Number: 31198
Active ingredients (a.i.): dicamba, present as diglycolamine salt
PMRA Document Number: 2704799

Background

M1691 Herbicide was first registered in Canada in 2013. The product is used for control of broadleaf weeds in grasses, low bush blueberry, and various field crops, including field corn.

Purpose of Application

The purpose of this application was to add a use on the M1691 Herbicide label to control weeds in the dicamba-glufosinate tolerant field corn line MON 87419, along with accompanying tank mix recommendations.

Chemistry Assessment

A chemistry assessment was not required for this submission.

Health Assessments

M1691 Herbicide for use on MON 87419 field corn to control broadleaf weeds fits within the registered use pattern for dicamba. The potential exposure for mixers, loaders, applicators and postapplication re-entry workers is not expected to exceed the current exposure to registered products. No health risks of concern are expected when workers follow the label directions and wear the personal protective equipment identified on the label.

Plant metabolism and residue data were submitted for MON 87419 corn. Residue data from field trials conducted at sites in the United States that are representative of Canadian growing regions were submitted to support the domestic use of M1691 Herbicide on MON 87419 corn. Dicamba was applied to MON 87419 corn at exaggerated rates and harvested according to label directions. A processing study in treated MON 87419 corn was reviewed to determine the potential for concentration of residues of dicamba into processed commodities.

Maximum Residue Limit (MRL)

Residues of dicamba in/on MON 87419 corn will be covered under the MRL of 0.10 ppm currently established for dicamba and the metabolite 5-OH dicamba (benzoic acid, 2,5-dichloro-3-hydroxy-6-methoxy-) in field corn. Residues in processed commodities not listed in Table 1 are covered under the MRL established for the raw agricultural commodity (RAC).

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

Commodity	Application Method/ Total Application Rate (kg a.e./ha)	PHI (days)	Residues ¹ (ppm)		Experimental Processing Factor	Currently Established MRL (ppm)	Recommended MRL (ppm)
			LAFT	HAFT			
Dicamba-glufosinate tolerant MON 87419 corn grain	Pre-and post-emergent applications/ 2.20-2.35	71-132 days	<0.03	<0.06	Could not be determined as non-quantifiable residues were observed in corn grain and all processed commodities (grits, meal, flour and oil).	0.1 (field corn)	None

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

¹Dicamba, and the metabolites 5-OH dicamba (benzoic acid, 2,5-dichloro-3-hydroxy-6-methoxy-) and DCSA (benzoic acid, 3,6-dichloro-2-hydroxy-).

No increase to the dietary burden of livestock is expected from the use of M1691 Herbicide on MON 87419 field corn when applied according to the approved label directions.

Exposure to residues of dicamba in food and drinking water following the use of M1691 Herbicide will not pose an unacceptable risk to any segment of the population, including infants, children, adults and seniors.

Environmental Assessment

For the use of M1691 Herbicide on MON 87419 corn, it was determined that spray buffer zones are required to mitigate potential spray drift to non-target habitats. Modification to the buffer zone table on the product label is required for the expanded use on MON 87419 Field Corn.

Value Assessment

The use of M1691 Herbicide on the tolerant MON 87419 corn line is expected to benefit Canadian growers by reducing or alleviating crop tolerance concerns while extending the application window and providing added flexibility in managing weeds at appropriate timings.

Field trial data generated in Ontario and Quebec on MON 87419 corn demonstrated a high degree of tolerance to M1691 Herbicide applied at exaggerated rates in multiple application scenarios. A high margin of crop safety is therefore expected for MON87419 corn treated with M1691 Herbicide at labelled rates up to a cumulative seasonal maximum rate of 2.45 L/ha.

Conclusion

The PMRA has completed a review of the information available and has found it sufficient to support registration of the new use for M1691 Herbicide on the dicamba-glufosinate tolerant field corn line MON 87419, along with tank mix recommendations.

References

PMRA Number	Document	Reference
2579083		2015, Amended from MSL0026331, Magnitude of Dicamba Residues in Corn Raw Agricultural and Processed Commodities Following Applications of a Dicamba-Based Formulation to Dicamba Glufosinate Tolerant Corn. 2013 U.S. Trials, DACO: 7.1,7.2.1,7.4.1,7.4.2
2579087		2015, Nature of ¹⁴ C-Dicamba Residues in Corn Raw Agricultural Commodities Following Preemergence or Postemergence Application to Dicamba-Glufosinate Tolerant Corn, DACO: 6.1,6.3
2579081		2015, M1691 Tolerance Date Site Description 26Oct2015, DACO: 10.1,10.3.2(A)
2579080		2015, Use Description/Scenario (Application and Post-application), DACO: 5.2

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