

Evaluation Report for Category B, Subcategory 3.3 Application

Application Number: 2011-0406
Application: B.3.3 (Product labels - application number or frequency)
Product: Liberty 200 SN Herbicide
Registration Number: 25337
Active ingredients (a.i.): Glufosinate ammonium (GLG)
PMRA Document Number: 2036966

Background

Glufosinate ammonium was first registered in 1993. Liberty 200 SN Herbicide (Registration number 25337) has been registered since April 7, 1998. Liberty 200 SN Herbicide is registered for post-emergence application at 1.5-2.5 L/ha (300-500 g a.i./ha) to glufosinate ammonium tolerant varieties of canola, soybean and field corn for the control of several broadleaved and grassy weeds, including the season long suppression of quackgrass (at 2.5 L/ha). Application at a labelled rate may be repeated to control weeds that emerge after the initial application, so long as the seasonal maximum rate (previously 4.5 L/ha) is not exceeded. For specific details of uses, application rates and methods, precautions, restrictions, and personal protective equipment requirements, refer to the product label.

Purpose of Application

The purpose of this application is to amend the registration of Liberty 200 SN Herbicide, containing 200 g a.i./L glufosinate ammonium, to reflect a higher allowable maximum seasonal rate, from 4.5 L/ha (900 g a.i./ha) to 5 L/ha (1000 g a.i./ha). This amendment would permit a second application of the maximum single application rate of 2.5 L/ha (500 g a.i./ha) to result in the season long suppression of quackgrass that emerges after the initial application in glufosinate ammonium tolerant varieties of canola, soybean and field corn.

Chemistry Assessment

A chemistry assessment was not required for this application.

Health Assessments

The increase in rate for the second application on field corn, canola and soybean fits within the registered use pattern for Liberty 200 SN Herbicide. Therefore, it should not result in potential occupational or bystander exposure over the registered uses of glufosinate ammonium. No unacceptable risk is expected when workers follow label directions and wear personal protective equipment as recommended on the label.

No new food residue chemistry data were submitted to support the increase in the application rate of glufosinate ammonium on the Liberty 200 SN Herbicide label. An acceptable rationale was submitted to waive the data requirement for additional crop field trials on glufosinate ammonium tolerant corn, canola and soybean. Additionally, previously reviewed data were considered in the context of the current submission. Based on this assessment, exposure to residues of glufosinate ammonium in/on glufosinate ammonium tolerant canola, corn and soybean treated according to the use directions on the Liberty 200 SN Herbicide label is expected to remain unchanged for all population subgroups.

Environmental Assessment

An environmental assessment was not required because the maximum application rate is lower than that of other registered end-use products containing glufosinate ammonium and registered for the same use pattern. Therefore, the use of the new end-use product is not expected to increase environmental exposure to glufosinate ammonium as compared to the registered use.

Value Assessment

A rationale was submitted in lieu of data to support a sequential application of 2.5 L/ha Liberty 200 SN Herbicide in glufosinate ammonium tolerant canola. It was argued that as up to three applications of 2.5 L/ha Liberty 200 SN Herbicide is registered for use in the production of glufosinate ammonium tolerant canola hybrid seed, then canola varieties that are glufosinate ammonium tolerant and grown commercially should also exhibit adequate tolerance to such a sequential application.

Phytotoxicity data from six replicated field trials conducted in Ontario and Quebec in 2010 demonstrated that glufosinate ammonium tolerant soybean was tolerant of two applications of 2.5 L/ha (500 g a.i./ha) Liberty 200 SN Herbicide with or without 6 L/ha AMS since any injury observed was slight and transient. Tolerance of glufosinate ammonium tolerant soybean to two applications of the 2x rate of Liberty 200 SN Herbicide plus + ammonium sulphate (AMS) (5 L/ha + 12 L/ha) was also demonstrated. Crop yield, assessed in five of the six trials, confirmed that glufosinate ammonium tolerant varieties of soybean can be expected to be tolerant of two applications of 2.5 L/ha Liberty 200 SN Herbicide when applied within the labelled application window of the crop cotyledon to the flowering stage.

Phytotoxicity data from ten replicated field trials conducted in Ontario, Manitoba and Quebec over five years demonstrated that glufosinate ammonium tolerant field corn was also tolerant of two applications of 2.5 L/ha (500 g a.i./ha) Liberty 200 SN Herbicide (4 trials) or a single application of the 2x rate of 5 L/ha (1000 g a.i./ha) Liberty 200SN (6 trials) since any injury observed was slight and transient. Crop yield, assessed in six trials, confirmed that glufosinate ammonium tolerant varieties of field corn are tolerant of a single application of 5 L/ha. The tolerance of glufosinate ammonium tolerant corn to two applications of 2.5 L/ha Liberty 200 SN Herbicide in combination with AMS was not evaluated. However, phytotoxicity and yield data for soybean indicated that AMS did not increase crop injury. Therefore, glufosinate ammonium tolerant varieties of field corn can be expected to be tolerant of two applications of 2.5 L/ha Liberty 200 SN Herbicide with or without AMS and when applied within the labelled application window of the crop 1- to 8-leaf stage.

Conclusion

The PMRA has completed an evaluation of the subject application and has found the information sufficient to amend the registration of Liberty 200 SN Herbicide to include the option of making two applications of 2.5 L/ha (500 g a.i./ha) Liberty 200 SN Herbicide with or without AMS to glufosinate ammonium tolerant varieties of canola, soybean and field corn for a seasonal maximum of 5 L/ha (1000 g a.i./ha).

References

- 2003369 2010, Exemption from Additional Residue Trials for LIBERTY 200 SN HERBICIDE on Field Corn, Soybean and Canola, DACO: 7.4.1,7.4.2
- 2026471 2010, Liberty 200 SN Herbicide - Data to support a seasonal maximum use-rate of 1000 g a.i./ha on glufosinate ammonium tolerant varieties or hybrids of canola, corn and soybean, DACO: 10.1,10.2.3.1,10.2.3.3(B), 10.3.1,10.3.2(A)

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