

Evaluation Report for Category B, Subcategory 2.1, 2.3, 2.4, 3.1, 3.10, 3.11 Application

Application Number: 2007-2908
Application: 2.1 : New Guarantee
2.3 : New Identity of Formulants
2.4 : New Porportion of Formulants
3.1 : New Application Rate
3.10 : New Tankmixes
3.11 : New Pests
Product: 2,4-D LV-700 Herbicide
Registration Number: 29264
Active ingredients (a.i.): 2,4-D (present as low volatile esters)
PMRA Document Number: 1722511

Purpose of Application

The purpose of this application is to register a new formulation of 2,4-D (present as 2-ethylhexyl ester) called 2,4-D LV-700 Herbicide. 2,4-D LV-700 Herbicide is proposed for use on all of the crop and non-crop land uses currently on the registered products 2,4-D LV-600 (Reg. No. 9560) and Esteron 600 (Reg. No. 15981). 2,4-D LV-700 Herbicide is also proposed for application in tankmixes with Florasulam SC, Florasulam SC + Assert 300 SC, Florasulam SC + Everest Solupak 70DF, or Florasulam SC + Puma 120 Super to broaden the spectrum of weed species controlled.

Chemistry Assessment

2,4-D LV-700 Herbicide is formulated as a solution containing 2,4-D 2-ethylhexyl ester at a nominal concentration of 666.0 g/L. This end-use product has a density of 1.1402 g/cm³ and a pH of 3.91 (1% aqueous dilution). The chemistry requirements for 2,4-D LV-700 Herbicide are complete.

Health Assessments

2,4-D LV-700 Herbicide is slightly acutely toxic by the oral route (LD₅₀ = 1750 mg/kg), but is of low acute toxicity by the dermal (LD₅₀ > 5000 mg/kg), and inhalation (LC₅₀ > 5.16 mg/L) routes in rats. 2,4-D LV-700 Herbicide is minimally irritating to the eyes and moderately irritating to the skin of rabbits. It is a dermal sensitizer in mice.

To support 2,4-D LV-700 Herbicide, no new residue chemistry data were submitted. Following a comparison of the formulation of 2,4-D LV-700 Herbicide to the currently registered formulation of 2,4-D LV-600 Emulsifiable Concentrate (Reg. No. 9560; 564 g/L 2,4-D, isomer specific and present as low volatile ester), there is no indication that 2,4-D LV-700 Herbicide will have an impact on the magnitude of the residues of 2,4-D in/on treated crops when used according to the proposed label, as the use pattern for the two products is the same. Therefore, no increase in dietary exposure is anticipated.

The proposed use pattern for 2,4-D LV-700 Herbicide fits within the current use pattern of 2,4-D. The proposed tank mixes and adjuvants on the 2,4-D LV-700 Herbicide label are currently registered for use in Canada. Personal protective equipment and application equipment statements on the 2,4-D LV-700 Herbicide label were amended to reflect the recent PMRA re-evaluation of 2,4-D.

Environmental Assessment

No new environmental data were submitted to support 2,4-D LV-700 Herbicide. When comparing the formulation of 2,4-D LV-700 Herbicide to the currently registered formulation of 2,4-D LV-600 (Reg. No. 9560) and that of Esteron 600 (Reg No. 15981), no additional environmental risk is expected from the use of this product. Additional environmental data were not required to support 2,4-D LV-700 Herbicide. Environmental concerns are mitigated on the proposed label and no increase in environmental risk is anticipated.

Value Assessment

Data from 32 trials conducted in Alberta, Saskatchewan, and Manitoba during a two year period (2005 and 2006) were submitted for review. Both efficacy and crop tolerance were evaluated in 27 trials and the remaining 5 trials were dedicated crop tolerance trials. 2,4-D LV-700 Herbicide was tested side-by-side with the currently registered 2,4-D LV-600 formulations and 2,4-D Ester formulations for direct comparison.

Control of redroot pigweed, lamb's-quarters, kochia, wild buckwheat, stinkweed, volunteer canola, Canada thistle, flixweed, green foxtail, yellow foxtail, wild mustard, lady's-thumb, and wild oats was visually assessed on 1 to 3 occasions during the growing season. Mean weed control following the application of 2,4-D LV-700 Herbicide was comparable to that of the 2,4-D LV-600 formulation and 2,4-D Ester formulation.

Tolerance of spring wheat, durum wheat, and spring barley to 2,4-D LV-700 Herbicide was visually assessed on 2 to 3 occasions during the growing season. A total of 9 spring wheat varieties, 3 durum wheat varieties, and 3 spring barley varieties were tested. Crop injury to spring wheat, durum wheat, and spring barley was slight in these trials and similar among the formulations tested. Grain yield data further supported the crop tolerance claims for spring wheat, durum wheat, and spring barley.

Based on the data made available, agronomic equivalence of 2,4-D LV-700 Herbicide to 2,4-D LV-600 and 2,4-D Ester formulations can be established.

The tank mixes of 2,4-D LV-700 Herbicide + Florasulam SC, 2,4-D LV-700 Herbicide + Florasulam SC + Assert 300 SC, 2,4-D LV-700 Herbicide + Florasulam SC + Everest Solupak 70DF, and 2,4-D LV-700 Herbicide + Florasulam SC + Puma 120 Super can be supported from a value standpoint based on the following facts:

- the tank mixes of 2,4-D LV-600 + Florasulam SC, 2,4-D LV-600 + Florasulam SC + Assert 300 SC, 2,4-D LV-600 + Florasulam SC + Everest Solupak 70DF, and 2,4-D LV-600 + Florasulam SC + Puma 120 Super are presently registered on the Florasulam label, and
- the trial results indicated that 2,4-D LV-700 Herbicide is agronomically equivalent to the formulation of 2,4-D LV-600.

Conclusion

2,4-D LV-700 Herbicide is acceptable for full registration.

References

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- 1419784 5.1 Summaries; 5.2 Use Description Scenario

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