

Evaluation Report for Category B, Subcategory 2.1, 2.3, 2.4, 2.6, 3.10 and 3.11 Application

Application Number: 2013-6565
Application: New end-use product chemistry - New combination of technical grade active ingredients, guarantee, identity and proportion of formulants, tank mix, new pests.
Product: Hat Trick Three-Way Herbicide
Registration Number: 31727
Active ingredients (a.i.): Clopyralid, Fluroxypyr and MCPA
PMRA Document Number: 2450382

Purpose of Application

The purpose of this application was to register a new commercial end use product, Hat Trick Three-Way Herbicide [guarantee: 61 g/L fluroxypyr (present as the 1-methylheptyl ester), 61 g a.e./L clopyralid (present as acid), and 224 g a.e./L MCPA (present as 2-ethylhexyl ester)], for post emergence control of broadleaf weeds in spring wheat, durum wheat, and spring barley in the Prairie Provinces and Peace River Region of British Columbia.

The applicant cited Prestige Herbicide, consisting of Prestige A Herbicide (Registration Number 25465; fluroxypyr) and Prestige B Herbicide (Registration Number 25464; clopyralid and MCPA), as the precedent product for the current application.

Chemistry Assessment

Hat Trick Three-Way Herbicide is formulated as an emulsifiable concentrate containing fluroxypyr (present as 1-methylheptyl ester) at 61 g/L; clopyralid at 61 g/L; and MCPA (present as 2-ethylhexyl ester) at 224 g a.e./L. This end-use product has a density of 1.021 g/mL and a pH of 2.47. The chemistry requirements for Hat Trick Three-Way Herbicide are complete.

Health Assessments

Hat Trick Three-Way Herbicide is of low acute oral, dermal and inhalation toxicity in rats. It is moderately irritating to the skin and eyes of rabbits. It is not a dermal sensitizer in guinea pigs.

The use of the new end-use product Hat Trick Three-Way Herbicide on spring wheat, durum wheat and spring barley to control annual and perennial broadleaf weeds is not expected to result in potential occupational or bystander exposure over the registered uses of fluroxypyr, clopyralid and MCPA. No risks of concern are expected when workers follow label directions and wear personal protective equipment as stated on the label.

No new residue data were submitted for clopyralid, fluroxypyr and MCPA to support registration of the new end-use product, Hat Trick Three-Way Herbicide. Previously reviewed residue data were considered in the context of the current submission, and comparisons were made to the precedent product labels of Prestige A Herbicide and Prestige B Herbicide. Based on this assessment, the registration of Hat Trick Three-Way Herbicide will not result in an increase in dietary exposure to these active ingredients and will not pose risks of concern to any segment of the population, including infants, children, adults and seniors.

Environmental Assessment

The EAD concludes that the use of Hat Trick Three-Way Herbicide would not represent an increase in risk to non-target organisms from exposure to the active ingredients fluroxypyr , clopyralid and MCPA provided that the required environmental risk mitigation statements are followed.

Value Assessment

Value information including data from 13 combined efficacy and crop tolerance trials conducted in Alberta, Manitoba, and Saskatchewan in 2012 was submitted for review. Efficacy and crop safety of Hat Trick Three-Way Herbicide applied alone or in tank mix with Axial 100EC Herbicide (Registration Number 28642) or Simplicity (Registration Number 28887) were assessed in these trials and compared to those of Prestige Herbicide alone or in tank mix with Axial 100EC Herbicide or Simplicity.

Efficacy of these herbicide treatments was visually assessed for control of redroot pigweed, shepherd's-purse, lamb's-quarter, Canada thistle, hemp-nettle, cleavers, kochia, wild buckwheat, perennial sow-thistle, chickweed, and dandelion. The level of control of these weeds with the application of Hat Trick Three-Way Herbicide was achieved and also comparable to that of Prestige Herbicide. Therefore, efficacy claims of control of these weeds were supported for labelling. Data from these field trials also demonstrated that broadleaf weed control provided by Hat Trick Three-Way Herbicide was not compromised when applied in tank mix with Axial 100EC Herbicide or Simplicity.

Efficacy of Hat Trick Three-Way Herbicide in tank mix with Simplicity or Axial 100EC Herbicide was acceptable for wild oat control and comparable to Simplicity or Axial 100EC Herbicide alone at the same rate for pinoxaden or pyroxsulam. Grass control provided by Axial 100EC Herbicide and Simplicity was not compromised when applied in tank mix with Hat Trick Three-Way Herbicide. Therefore, inclusion of Axial 100EC Herbicide and Simplicity as tank mix partners for additional grass control was supported.

Achieve Liquid Herbicide (Registration Number 27011) and Liquid Achieve SC Herbicide (Registration Number 28555), containing the technical grade active ingredient tralkoxydim, as a tank mix partner was also supported since it is labelled for use with Prestige Herbicide and compatibility of tralkoxydim, fluroxypyr, clopyralid, and MCPA has been demonstrated.

Crop safety (visually assessed as a percentage relative to an untreated check) following the same herbicide treatments was reported for six spring wheat varieties in 11 trials and two spring barley varieties in four trials. Crop injury was either slight or not detectable for all herbicide treatments. Therefore, inclusion of spring wheat and spring barley on the Hat Trick Three-Way Herbicide label was supported.

While the tolerance of durum wheat to Hat Trick Three-Way Herbicide was not assessed, it is expected that it would be adequately tolerant to Hat Trick Three-Way Herbicide since submitted data demonstrated that spring wheat and spring barley exhibit a similar level of tolerance to Hat Trick Three-Way Herbicide as to Prestige Herbicide and all these crops are labelled for Prestige Herbicide. In addition, all three active ingredients included in Hat Trick Three-Way Herbicide are broadleaf herbicides.

Rotational crop tolerance claims for Prestige Herbicide was used as supportive information for Hat Trick Three-Way Herbicide. Based on the weight of evidence (e.g., use history information), small grain cereals and canola and flax were expected to have an adequate margin of crop safety to Hat Trick Three-Way Herbicide when applied in accordance with the label directions.

Registration of three active ingredients in a single formulation will be easily handled and applied by farmers.

Conclusion

The PMRA has completed a review of all available information for Hat Trick Three-Way Herbicide and concludes that the information is sufficient to support full registration.

References

PMRA Document Number	References
2366145	2013, Hat Trick report 1, DACO: 10.2.3.3(B)
2366146	2012, Report 3, DACO: 10.2.3.3(B)
2366147	2013, Hat Trick report 4, DACO: 10.2.3.3(B)
2366148	2012, Report 2, DACO: 10.2.3.3(B)
2366149	2013, Chemical Physical Properties , DACO: 3.1.1, 3.1.2, 3.1.3, 3.1.4
2366150	2013, Formulation Process, DACO: 3.2.1,3.2.2 CBI
2366151	2006, Product Chemistry Data, DACO: 3.2.1 CBI
2366154	2013, Chemical Physical Properties, DACO: 3.5.1, 3.5.10, 3.5.11, 3.5.12, 3.5.13, 3.5.14, 3.5.15, 3.5.2, 3.5.3, 3.5.4, 3.5.5, 3.5.6, 3.5.7,3.5.8,3.5.9 CBI
2366155	2007, Storage Stability, DACO: 3.5.10 CBI
2366156	2006, Chemical Physical Properties, DACO: 3.5 CBI
2475747	2014, Clarification, DACO: 3.4.1 CBI
2475754	2014, Clarification , DACO: 3.2.2 CBI
2478180	2014, DACO 3.5-1.2 LPI6425 Herbicide, DACO: 3.5 CBI
2478181	2014, DACO 3.5.8 Waiver, DACO: 3.5.8 CBI
2366157	2013, Acute Oral, DACO: 4.6.1
2366158	2006, Acute Oral Report, DACO: 4.6.1
2366159	2013, Acute Dermal Summary, DACO: 4.6.2
2366160	2006, Acute Dermal Report, DACO: 4.6.2
2366161	2013, Acute Inhalation Summary, DACO: 4.6.3
2366162	2006, Acute Inhalation Report, DACO: 4.6.3
2366163	2013, Primary Eye Irritation Summary, DACO: 4.6.4
2366164	2006, Primary Eye Irritation, DACO: 4.6.4
2366165	2013, Primary Dermal Irritation - Summary, DACO: 4.6.5
2366168	2006, Primary Dermal Irritation, DACO: 4.6.5
2366169	2013, Dermal sensitization Summary, DACO: 4.6.6
2366170	2006, Dermal Sensitization, DACO: 4.6.6

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