

Evaluation Report for Category B, Subcategory B.2.1, B.2.3, B.2.4 Application

Application Number: 2007-5221
Application: B.2.1 (Product chemistry - Guarantee), B.2.3 (Product chemistry - Identity of Formulants), B.2.4 (Product chemistry - Proportion of Formulants)
Product: Harmony Grass 128EC Herbicide
Registration Number: 29202
Active ingredients (a.i.): Clodinafop-propargyl (CFP)
PMRA Document Number: 1693529

Purpose of Application

Syngenta Crop Protection Canada, Inc. a proposal for a new agricultural herbicide, Harmony Grass 128EC Herbicide (128 g clodinafop-propargyl/L, a Group 1 herbicide) for post-emergent control of wild and volunteer oats, green and yellow foxtail, Persian darnel and volunteer canaryseed in spring and Durum wheat at rates of 438-547 mL product/ha (56-70 g a.i/ha) to be applied once per year as a ground-based or aerial foliar spray. This proposal was for regional registration in the Prairie provinces and the Peace River, Okanagan and Creston Flats regions of British Columbia. The proposed use pattern and label is similar to that of Horizon 240EC Herbicide (Reg. No. 24067) which contains the same active ingredient.

Chemistry Assessment

Harmony Grass 128EC Herbicide is formulated as an emulsifiable concentrate containing clodinafop-propargyl at a nominal concentration of 128 g/L. This end-use product has a density of 1.01 g/mL and pH of 6-7. The chemistry requirements for Harmony Grass 128EC Herbicide are complete.

Health Assessments

Harmony Grass 128EC Herbicide was of low acute toxicity by the oral (male LD₅₀ = 2614 mg/kg, female LD₅₀ = 3162 mg/kg, combined LD₅₀ = 2933 mg/kg), dermal (LD₅₀ = > 2020 mg/kg) and inhalation (LC₅₀ = > 2.74 mg/L) routes of exposure. Harmony Grass 128EC Herbicide was slightly irritating to the skin, moderately irritating to the eyes and was not a skin sensitizer.

The new end-use product, Harmony Grass 128EC Herbicide, fits within the existing use pattern for the active ingredient clodinafop-propargyl. No unacceptable risk is expected when workers follow the label directions and wear the personal protective equipment stated on the label.

The use of Harmony Grass 128EC Herbicide will not affect residues of the active ingredient clodinafop-propargyl on wheat, as the application rate of the active ingredient, PHI and use pattern on the proposed product label are similar to those of the registered product Horizon 240EC Herbicide. Residue data for clodinafop-propargyl in wheat was submitted to support the registration of the new end use product Harmony Grass 128EC Herbicide. Based on the data, no increase in dietary exposure is anticipated.

Maximum Residue Limit

Based on the maximum residues observed in wheat treated according to label directions, a maximum residue limit (MRL) to cover residues of up to 0.1 ppm in/on wheat grain will be established as shown in Table 1. Processed commodities not listed in Table 1 are covered under the established MRL for the raw agricultural commodity (RACs).

TABLE 1. Summary of Field trial Data Used to Establish Maximum Residue Limits (MRLs)						
Commodity	Application Method/Max Application rate	PHI (days)	Residues (ppm)		Currently Established MRL	Recommended MRL (ppm)
			Min	Max		
Clodinafop-propargyl and CGA 193469						
Wheat grain	Ground application/ 70 g a.i./ha clodinafop-propargyl	51-56	<0.05 per analyte	<0.05 per analyte	None	0.1 ppm to cover residues of both clodinafop- propargyl and CGA 193469

Following the review of all available data, an MRL of 0.1 ppm for wheat grain is recommended to cover residues of up to 0.05 ppm of clodinafop-propargyl, plus residues of up to 0.05 ppm for the acid metabolite CGA 193469. Combined residues of up to 0.1 ppm in this crop commodity at the established MRL will not pose an unacceptable risk to any segment of the population, including infants, children, adults and seniors.

Environmental Assessment

As the intended use pattern and label is similar to that of Horizon 240EC Herbicide which contains the same active ingredient, the EAD does not require further information at this time. There is no potential increase in the environmental exposure and impact from that of the currently registered use of clodinafop-propargyl. Environmental concerns are mitigated with label statements.

Value Assessment

A total of 53 field trial studies conducted in Alberta, Saskatchewan and Manitoba over one year (1998) were submitted for review. Forty-two trials assessed efficacy and all 53 trials assessed crop tolerance of spring and durum wheat after post-emergence applications of Harmony Grass 128EC Herbicide.

Efficacy data collected for Harmony Grass 128EC Herbicide treatments applied alone and in tank mix were similar to Horizon 240EC Herbicide + Score adjuvant treatments. Harmony Grass 128EC Herbicide and Horizon 240EC Herbicide + Score adjuvant were shown to be agronomically equivalent. Antagonism was not observed with the proposed tank mixtures.

Crop injury was visually assessed throughout the growing season in spring and durum wheat. Data collected with Harmony Grass 128EC Herbicide alone and in tank mix were similar to Horizon 240EC Herbicide + Score adjuvant treatments and thus supported crop tolerance claims.

Yield was assessed in five dedicated crop tolerance trials for spring wheat and six dedicated crop tolerance trials for durum wheat. Crop yield from Harmony Grass 128EC Herbicide treatments applied alone at the 1x and 2 x rates were similar to Horizon 240EC Herbicide + Score adjuvant treatments applied alone at the 1x and 2x rates.

Conclusion

The PMRA has completed an assessment of the application to register Harmony Grass 128EC Herbicide and have approved the registration.

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