

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

Application Number: 2012-2588
Application: B.2.1 (Product Chemistry – Guarantee)
B.2.3 (Product Chemistry – Identify of Formulants)
B.2.4 (Product Chemistry – Proportion of Formulants)
Product: Reglone Ion
Registration Number: 31058
Active ingredients (a.i.): Diquat
PMRA Document Number : 2234707

Background

Reglone Ion is a new end-use product based on the precedent product Reglone Desiccant, Registration Number 26396. This new product has the adjuvant incorporated into the formulation which removes the need to add an adjuvant as required with the currently registered Reglone Desiccant. The guarantee of the active ingredient (expressed as grams per Litre) is different between the new product and the registered one; however, the use pattern and the application rates (grams of active ingredients per hectare) are the same for both products with the exception that the use on potatoes is not included on the Reglone Ion label.

Purpose of Application

The purpose of this application was to register a new end-use product, Reglone Ion, a non-selective desiccant herbicide that contains the active ingredient diquat for the desiccation of pulse, oilseed and legume forage seed crops, for weed control in vegetables and field crops, for the control of corn spurry in oat and for weed control in non-crop land.

Chemistry Assessment

Reglone Ion is formulated as a solution containing diquat at nominal concentrations of 200 g/L. This end-use product has a density of 1.18 g/mL and pH of 6. With the exception of the storage stability/corrosion characteristics study that is currently in progress, the chemistry requirements for Reglone Ion have been completed.

Health Assessments

Reglone Ion is of slight acute oral toxicity and of low acute dermal toxicity and inhalation toxicity. It is moderately irritating to the eye and skin of rabbits. Reglone Ion is not a dermal sensitizer in guinea pigs.

An occupational exposure assessment was not required for this application

No new residue data were submitted to support the registration of Reglone Ion containing the active ingredient diquat for use on pulse, oilseed and legume forage seed crops, vegetable and field crops, oats and apple. Since the application rates or use pattern for diquat are the same as those currently registered for Reglone Desiccant for use on pulse, oilseed and legume forage seed crops, vegetable and field crops, oats and apple, the use of Reglone Ion is not expected to increase the magnitude of diquat residues in/on these crops. Therefore, as a result of the use of Reglone Ion, the dietary exposure is not expected to increase and will not pose an unacceptable risk to any segment of the population, including infants, children, adults and seniors.

Environmental Assessment

This product is the same as the currently registered Reglone Desiccant, however, with an adjuvant already added. The adjuvant is also registered. Therefore, the environmental risk has already been evaluated for all components of this new product.

Value Assessment

To support the application, the applicant provided reports from six (6) field trials conducted in Alberta (2 trials), Saskatchewan (3 trials) and Manitoba (1 trial) in 2011. Reglone Ion at a rate of 420 g a.i./ha was tested along with Reglone Desiccant at a rate of 420 g a.i./ha + 0.1 L/ha of Agral 90. These treatments were applied as a desiccant in field pea (3 trials) and lentil (3 trials). Yield of field pea and lentil was reported in each trial.

The level of desiccation obtained with Reglone Ion was comparable to that of Reglone Desiccant + Agral 90 when both products were applied in field pea and lentil. Yields of field pea and lentil were also similar for Reglone Ion and the registered product Reglone Desiccant + Agral 90.

There is acceptable value associated with the new end-use product Reglone Ion given that the new formulation of Reglone Ion will allow for better handling of the product by the growers and that the efficacy of Reglone Ion is not expected to be different than that of the currently registered product Reglone Desiccant, therefore, the registration of Reglone Ion is acceptable from a value standpoint.

Conclusion

The Pest Management Regulatory Agency has completed an assessment of the available information and is able to support the registration of the new end-use product Reglone Ion.

References

PMRA No.	Reference
2208939	2012, Reglone Ion Starting materials and certification of limits, DACO: 3.2.1,3.3.1 CBI
2208940	2012, Reglone Ion Manufacturing process, DACO: 3.2.2 CBI
2208942	2012, Reglone Ion Enforcement Analytical Method, DACO: 3.4.1 CBI

- 2208943 2012, Reglone Ion Chemical and 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
- 2208944 2012, Reglone Ion - Summary - Toxicology profile, DACO: 4.1
- 2208946 2008, Diquat SL (A1412H) - Acute oral toxicity in the rat - Up and Down procedure - Final report, DACO: 4.6.1
- 2208947 2009, Diquat SL (A1214H) Acute dermal toxicity in the rat - Final report, DACO: 4.6.2
- 2208949 1999, Diquat 200 g/L SL (1:100 spray strength solution)- 4-hour acute inhalation toxicity study in rats, DACO: 4.6.3
- 2208952 2008, Diquat SL (A1412H) Acute eye irritation in the rabbit Final report, DACO: 4.6.4
- 2208955 2009, Diquat SL (A1412H) Acute dermal irritation in the rabbit Final report, DACO: 4.6.5
- 2208958 2009, Diquat ion as diquat dibromide SL (A1412H) Dermal sensitization study in guinea pigs (Buehler Method). Final report amendment, DACO: 4.6.6
- 2208964 2012, Reglone Ion Efficacy Summary, DACO: 10.1, 10.2.3.1, 10.3.1

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