Health Canada Santé Canada

Evaluation Report for Category B, Subcategory 2.6 Application

Application Number: 2010-5855
Application: New combination of TGIAs
Product: Axial Xtreme
Registration Number: 30391
Active ingredients (a.i.): Fluroxypyr [FLR]
Pinoxaden [PRN]
PMRA Document Number English PDF: 2138941

Background

Pinoxaden is currently registered for use on spring wheat and barley in Canada in the end-use products Axial 100EC (Registration number 28642), Broadband (Registration number 29138), Crestivo (Registration number 28150) and Traxos (Registration number 29855).

Fluroxypyr is currently registered for use on spring wheat and barley in Canada in the end-use product Starane (Registration number 24815).

Purpose of Application

The purpose of this application was to register a new end-use product, Axial Xtreme, containing a new combination of the active ingredients fluroxypyr and pinoxaden for post-emergent control of annual grasses and suppression of broadleaved weeds in spring wheat and barley in the Prairie Provinces and Peace River of British Columbia.

Chemistry Assessment

Axial Xtreme is formulated as an emulsifiable concentrate containing pinoxaden at a nominal concentration of 50 g/L and fluroxypyr-meptyl at a nominal concentration of 87.5 g/L. This end-use product has a density of 1.01 g/mL and a pH of 6.1. With the exception of the storage stability and corrosion studies, the chemistry requirements for Axial Xtreme are complete.

Health Assessments

Axial Xtreme is of low acute toxicity by the oral, dermal, and inhalation routes in rats. It is moderately irritating to the rabbit eye and skin, and is a potential skin sensitizer in guinea pigs.

Canada

The use on spring wheat and barley should not result in an increase in potential occupational or bystander (re-entry) exposure over registered uses of either pinoxaden or fluroxypyr since the application rate, number of applications, frequency of application and method of application fall within currently registered uses.

No new residue data were submitted to support the registration of Axial Xtreme. Since there is no change proposed to the application rates or use pattern with respect to the currently registered use of pinoxaden and fluroxypyr, the use of Axial Xtreme is not expected to affect the magnitude of pinoxaden and fluroxypyr residues in/on spring wheat and barley. Therefore, 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

The use pattern (application rates, number of applications and use areas) and the method of application of the new formulation, Axial Xtreme are identical to those of currently registered products. Thus, no increase in environmental risk is expected. Environmental concerns have been mitigated through adequate statements on the product label.

Value Assessment

Data from 18 field trials conducted in Alberta, Saskatchewan, and Manitoba in 2010 were submitted to support the registration of Axial Xtreme. Efficacy and crop safety of Axial Xtreme applied alone and in combination with Infinity Herbicide (Registration number 28738), Frontline XL (Registration number 28804), and Mextrol 450 Herbicide (Registration number 26999), were directly compared to the registered treatments of Axial 100 EC (Registration number 28642; 100 g/L pinoxaden) + Adigor Adjuvant (Registration number 28151), for grass control and Starane Herbicide (Registration number 24815; 180 g/L fluroxypyr) for broadleaf weed control.

The efficacy of Axial Xtreme for control of wild oats, kochia, wild buckwheat, and green foxtail was visually assessed three times during the growing season.The level of control of wild oats, kochia, and wild buckwheat following the application of Axial Xtreme alone or in tank mix with Infinity Herbicide or Frontline XL or Mextrol 450 was acceptable and also comparable to either Axial 100 EC + Adjuvant or Starane Herbicide. A reduction in green foxtail control was observed when Axial Xtreme was tank mixed with Infinity Herbicide or Frontline XL and this is consistent with historical observations following application of tank mixtures of pinoxaden herbicide with some broadleaf herbicides.

Tolerance of seven spring wheat varieties in twelve trials and four spring barley varieties in six trials to Axial Xtreme applied alone or in combination with Infinity Herbicide or Frontline XL or Mextrol 450 was visually assessed three times during the growing season. Crop injury following the application of these herbicide treatments was either slight or not detectable, and comparable to separate treatments of Axial 100 EC + Adigor Adjuvant and Starane Herbicide.

Based on the available evidence, Axial Xtreme was concluded to be agronomically equivalent to treatments of Axial 100 EC + Adigor Adjuvant for grass control or Starane Herbicide for broadleaf weed control. Therefore, registration of Axial Xtreme for annual grass and broadleaf weed control on spring wheat and spring barley in the Prairie Provinces and Peace River region of British Columbia is supported. The labeled tank mix partners are supported based on either submitted data (Infinity, Frontline XL, Mextrol 450, and Buctril M (Registration number 26181)) or precedent registrations (Refine SG (Registration number 28285), Refine SG + MCPA (Registration number 27784), Curtail M (Registration number 22764), MCPA and Tilt 250 (Registration number 19346)).

Conclusion

Based on the available evidence, registration of Axial Xtreme for annual grass and broadleaf weed control on spring wheat and spring barley in the Prairie Provinces and Peace River region of British Columbia is supported.

References

PMRA Document Number	Reference
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1988303	2010, A17712C Herbicide formulating plant's name and address, DACO: 3.1.2 CBI
1988304	2010, A17712C Herbicide Starting Materials, DACO: 3.2.1 CBI
1988305	2010, A17712C Herbicide Identification - Description of Formulation Process, DACO: 3.2.2 CBI
1988306	2010, A17712C Herbicide Certification of Limits, DACO: 3.3.1 CBI
1988307	2010, Analytical Method [CBI REMOVED] - Determination of ASF80, NOA407855 and CGA185072 in A17712C, DACO: 3.4.1 CBI
1988308	2010, A17712C Herbicide Chemical and Physical Properties, DACO: 3.5,3.5.1,3.5.10,3.5.11,3.5.12,3.5.13,3.5.14,3.5.15,3.5.2,3.5.3,3.5.4,3.5.5,3.5.6,3.5.7,3.5.8,3.5.9 CBI
2021896	2011, SPSF CBI Information, DACO: 3.3.2 CBI
2021895	2011, Correspondence - Clarification response, DACO: 0.8
1988311	2010, Pinoxaden/Fluroxypyr EC (050/087.5) and CGA185072 (012.5) - Summary - Toxicology Profile, DACO: 4.6

1988314 2010, Pinoxaden/Fluroxypyr EC and S:CGA185072 (A17712C) - Acute Oral Toxicity Up-and-Down Procedure in Rats - Final Report, DACO: 4.6.1

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1988318 2010, Pinoxaden/Fluroxypyr EC and S:CGA185072 (A17712C) - Primary Skin Irritation in Rabbits - Final Report, DACO: 4.6.5

1988319 2010, Pinoxaden/Fluroxypyr EC and S:CGA185072 (A17712C) - Dermal Sensitization Test - Buehler Method -Final Report, DACO: 4.6.6

1988398 Trial reports – Evaluate Pinoxaden/Fluroxypyr (A17712C) Herbicide. December 1, 2010. DACO 10.2.3.3 and 10.3.2. pp 66

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