

## Evaluation Report for Category B, Subcategory B.2.1, B.2.3, B.2.4, B.2.6, B.3.10 Application

**Application Number:** 2007-4297  
**Application:** B.2.1 (New Product Chemistry – Guarantee)  
B.2.3 (New Product Chemistry – Identity of Formulants)  
B.2.4 (New Product Chemistry – Proportion of Formulants)  
B.2.6 (New Product Chemistry – New combination of TGAIs)  
B.3.10 (New Product Labels – Tank Mixes)  
**Product:** Stellar A Herbicide  
**Registration Number:** 29286  
**Active ingredients (a.i.):** Fluroxypyr (FLR), Florasulam (FRA)  
**PMRA Document Number:** 1730391

### Purpose of Application

Dow AgroSciences has submitted an application to register the new end-use product Stellar A Herbicide for post emergence use in the Prairie Provinces and Peace River Region of British Columbia on spring wheat (including durum) and spring barley for control of labelled weeds. Stellar A Herbicide is a formulated mixture of florasulam (2.5 g a.i./L) and fluroxypyr (100 g a.e./L). Both active ingredients are registered and formulated as Florasulam SC (Registration No. 26891) and Starane Herbicide (Registration No. 24815), respectively.

### Chemistry Assessment

Stellar A Herbicide is formulated as a suspension containing florasulam and fluroxypyr, present as the 1-methylheptyl ester at nominal concentrations of 2.5 and 100 g/L respectively. This end-use product has a density of 0.992 g/ml and pH of 5.8 (1% w/v emulsion). The chemistry requirements for Stellar A Herbicide are complete.

### Health Assessments

Stellar A Herbicide is of low acute oral ( $LD_{50}$  M/F > 2000/5000 mg/kg bw), dermal ( $LD_{50}$  M/F > 5000 mg/kg bw) and inhalation ( $LC_{50}$  > 5.52) toxicity. It is moderately irritating to the eye and mildly irritating to the skin of the rabbit, and a potential skin sensitizer in the mouse (LLNA) but not in the guinea pig (Buehler).

Both florasulam and fluroxypyr are currently registered for use on spring wheat, durum wheat and spring barley in the Prairie Provinces and Peace River Region of British Columbia at rates higher than the rates proposed for Stellar A Herbicide. Exposure to the active ingredients is not expected to increase over the currently registered use pattern for florasulam and fluroxypyr.

The use of Stellar A Herbicide label fits within the existing use pattern of products containing florasulam and fluroxypyr separately. Residues of florasulam and fluroxypyr in/on wheat and barley commodities harvested from crops treated according to the use directions on the Stellar A Herbicide label should therefore not increase. Accordingly, exposure to residues of each florasulam and fluroxypyr for each population subgroup should also not increase.

### **Environmental Assessment**

The new formulated mixture Stellar A Herbicide and its proposed use rate will not result in increased environmental exposure relative to the existing registered products Florasulam SC Herbicide (Reg. No. 26891) and Starane Herbicide (Reg. No. 24815). Therefore, negligible environmental risk is expected. Environmental concerns have been mitigated through adequate statements on the product label.

### **Value Assessment**

Value data generated from efficacy and crop tolerance field trials were submitted to establish the efficacy of Stellar A Herbicide applied alone and in tank mixtures for control or suppression of broadleaf and grass weeds listed on the Stellar A Herbicide label, and to establish the crop safety of this end use product on spring wheat, durum wheat and spring barley.

Efficacy data were submitted from 61 field trials conducted from 2004-2006 at locations throughout Alberta (AB), Saskatchewan (SK) and Manitoba (MB). The data support a claim of control for cleavers, kochia, volunteer flax and wild buckwheat with an early post emergence application of Stellar A Herbicide at a rate of 102.5 g a.i./ha.

Crop phytotoxicity data were submitted from 100 field trials from 2004-2006 at locations throughout AB, SK and MB to assess the crop tolerance of spring wheat, durum wheat, and spring barley following applications of Stellar A Herbicide. The data support a tolerance claim for spring wheat, durum wheat and spring barley to a post emergence application of Stellar A Herbicide.

Stellar A Herbicide was assessed in combination with 2,4-D, and 2,4-D + Assert or Everest. The data and rationales provided are supportive of the claims with the exception of smartweed, for which no data were provided and could not be supported by precedent tank mixes appearing on either the Starane Herbicide or Florasulam Herbicide labels.

Stellar A Herbicide was assessed in combination with MCPA and MCPA + Assert, Axial, Everest or Puma<sup>120</sup> Super. The data and precedents provided are supportive of the respective claims.

Stellar A Herbicide was assessed in tank mixture with Express Toss-N-Go DF 75% Herbicide, and Express Toss-N-Go DF 75% Herbicide + Axial 100EC Herbicide. The data provided are supportive of a control claim for lamb's-quarters and suppression of Russian thistle and redroot pigweed, while demonstrating crop tolerance on spring wheat (including durum) and spring barley.

## Conclusion

The PMRA has reviewed submitted data and rationales and are able to support the full registration of Stellar A Herbicide.

## References

PMRA Document Number	Reference
1427685	2007, Product Identification - GF-184, DACO: 3.1.1, 3.1.2, 3.1.3, 3.1.4 CBI
1427686	2006, Group A - Product Identity, Composition, and Analysis for GF-184, a Suspension Emulsion End-use Product Containing Florasulam and Fluroxypyr-meptyl, NAFST-06-034, DACO: 3.2.1, 3.2.2, 3.2.3, 3.3.1, 3.4.1, 3.4.2 CBI
1427687	2006, Group B: Physical and Chemical Properties of Florasulam + Fluroxypyr Methylheptyl Ester (2.5 + 144 g/L) SE, GF-184, NAFST-06-020, 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
1427688	2006, Group B: Physical/Chemical Properties for GF-184, and End-use product containing Florasulam and Fluroxypyr Methylheptyl Ester, NAFST-06-020, 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,
1427689	2000, Storage Stability Studies of GF-184 and Intermediates, GHE-P9142, DACO: 3.5.10 CBI
1427690	2000, Packaging Stability Study to Assess the Compatibility of Florasulam + Fluroxypyr-meptyl 2.5 + 100 g ae/L SE Herbicide, GF-184 with 1 L PET and 10 L F-HDPE Containers Final Report, KLP-00-006, DACO: 3.5.10,3.5.14 CBI
1639315	2008, Interference Evaluation for Analytical Methodology EU-AM-98-007 for Formulations GF-184, GF, 185, and GF-2257, NAFST-08-135, DACO: 3.4.1 CBI

- 1427691 An Acute Oral Toxicity Study in Fischer 344 Rats. Laboratory report number. 3504.91. Study report date: 12-January-2001. Applicant Report Number 000091 DACO 4.6.1.
- 1427692 An Acute Dermal Toxicity Study in Fischer 344 Rats. Laboratory report number. 3504.92. Study report date: 12-January-2001. Applicant Report Number 000092. DACO 4.6.2.
- 1631336 GF-2257: Acute Liquid Aerosol Inhalation Toxicity Study in F344/DUCRL Rats. Laboratory report number.081080 Study report date: 09-June-2008. DACO 4.6.3.
- 14276934 A Primary Eye Irritation study In New Zealand White Rabbits. Laboratory report number. 3504.94. Study report date: 12-January-2001. Applicant Report Number 000094. DACO 4.6.4.
- 1427695 A Primary Skin Irritation study In New Zealand White Rabbits. Laboratory report number. 3504.93. Study report date: 12-January-2001. Applicant Report Number 000093. DACO 4.6.5.
- 1427696 A Dermal Sensitization Study in Hartley Albino Guinea Pigs. Laboratory report number. 3504.95. Study report date: 12-January-2001. Applicant Report Number 000095. DACO 4.6.6.
- 1427697 GF-184 Local Lymph Node Assay in Balb/c Mice to Evaluate Dermal Sensitization Potential. Laboratory report number. 041064. Study report date: 27,-July-2004. DACO 4.6.6.
- 1427670 2007. Value Summary. DACO: 10.1
- 1427671 2007. Data Summary GF-184 Herbicide DACO 10.2.3.1
- 1427672 2007. Data Summary GF-184 Herbicide DACO 10.2.3.1
- 1427673 2007. Data Summary GF-184 Herbicide DACO 10.2.3.1
- 1427674 2007. Data Summary GF-184 Herbicide DACO 10.2.3.1
- 1427675 2007. Data Summary GF-184 Herbicide DACO 10.2.3.1
- 1427676 2007. Data Summary GF-184 Herbicide DACO 10.2.3.1
- 1427679 Adverse Effects of spring wheat, durum wheat and spring barley when GF-184 is applied alone and tank mixed with broadleaved partners (MCPA, Express DF) DACO 10.3.1
- 1427680 Non-Adverse Effects GF-184 + MCPA, Express DF\_SPT. DACO 10.3.1
- 1427681 Adverse Effects of spring wheat, durum wheat and spring barley when GF-184 is applied alone and tank mixed with graminicide partners (Axial, Horizon, Puma<sup>120</sup> Super) DACO 10.3.1
- 1427682 Non-Adverse Effects GF-184 + Axial, Horizon, Puma\_SPT. DACO 10.3.1
- 1427683 Adverse Effects of spring wheat, durum wheat and spring barley when GF-184 is applied alone and tank mixed with graminicide partners (Assert, Everest) DACO 10.3.1
- 1427684 Non-Adverse Effects GF-184 + Assert, Everest\_SPT. DACO 10.3.1

ISSN: 1911-8082

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