

## Evaluation Report for Category B, Subcategories 2.1, 2.3, 2.4, 3.1 Application

**Application Number:** 2020-1208  
**Application:** Changes to EP Product Chemistry-Guarantee; Identity of Formulants; Proportion of Formulants  
Changes to Product Labels-Application Rate Increase or Decrease  
**Product:** A22668 Herbicide  
**Registration Number:** 34235  
**Active ingredients (a.i.):** atrazine, bicyclopyrone, mesotrione, s-metolachlor and r-enantiomer  
**PMRA Document Number:** 3261044

### Purpose of application

The purpose of this application was to register a new end-use product, A22668 Herbicide, containing atrazine, bicyclopyrone, mesotrione and s-metolachlor and r-enantiomer for pre- and post-emergent control of certain grasses and broadleaf weeds on corn crops (field, seed and sweet).

### Chemistry assessment

A22668 herbicide is formulated as a suspension containing mesotrione at a concentration of 27.5 g/L, bicyclopyrone at a concentration of 6.05 g/L, s-metolachlor and r-enantiomer at a concentration of 287 g/L and atrazine at a concentration of 105 g/L. This end-use product has a density of 1.096 g/mL and pH of 5.13. The required chemistry data for A22668 Herbicide have been provided, reviewed and found to be acceptable.

### Health assessments

The acute toxicity of A22668 Herbicide was low via the oral and inhalation routes of exposure. It was mildly irritating to the eyes and moderately irritating to the skin. It caused an allergic skin reaction in mice.

The use of A22668 Herbicide to control the listed annual grass and broadleaf weeds in corn crops (field, seed and sweet) is not expected to exceed occupational (mixer, loader, applicator and postapplication entry into treated crops) and bystander exposures compared to precedent products. No health risks of concern are expected when workers wear the required personal protective equipment and follow label directions.

No new residue data for atrazine, bicyclopyrone, mesotrione or s-metolachlor and r-enantiomer in corn crops (field, seed and sweet) were submitted to support the new combination of active ingredients on the A22668 Herbicide label. Previously reviewed data were

reassessed in the framework of this application. The dietary exposure assessments on file are considered adequate to cover the residues of atrazine, bicyclopyrone, mesotrione and s-metolachlor and r-enantiomer resulting from the use of the new product. As no health risks of concern have been identified for any segment of the population including infants, children, adults and seniors, the registration of A22668 Herbicide can be supported.

### **Environmental assessment**

The environmental risks associated with the use of A22668 Herbicide on corn crops (field, seed and sweet) are acceptable when the product is used according to the label directions.

### **Value assessment**

The registration of A22668 Herbicide provides farmers a useful solution to control a broader spectrum of grasses and broadleaf weeds with soil residual activity in corn crops (field, seed and sweet). In addition, A22668 Herbicide, which is co-formulated with active ingredients from three mode of action groups (Groups 5, 15, and 27) with overlapping spectra of control, provides farmers a valuable tool that may help delay the development of resistant weed biotypes in the host crops.

Value information submitted for review consisted of precedent registrations and data from field trials conducted in Canada and the US in 2019. This information demonstrated that the application of A22668 Herbicide alone or in tank mix with glyphosate herbicide could provide acceptable control of the labelled weeds and corn crops (field, seed and sweet) exhibited adequate margins of tolerance to A22668 Herbicide applied as per the label instructions.

Rotational crops are supported since they fall within the use patterns registered on the precedent product labels.

### **Conclusion**

The Pest Management Regulatory Agency has completed an assessment of the information provided, and has found it sufficient to support the registration of A22668 Herbicide.

## References

### PMRA

#### Document

Number	Reference
3108197	2019, A22668C - Document J - Confidential Information, DACO: 2.2, 3.1.2, 3.2.1, 3.2.2, 3.2.3, 3.3.1, 3.3.2, 3.4.2, 4.8 CBI
3108198	2019, A22668C - Document MIII, Section 1, DACO: 10.2.1, 10.2.2, 10.2.3.1, 10.2.3.2, 10.2.3.3, 10.3.3, 10.6, 2.2, 3.1.2, 3.1.3, 3.1.4, 3.2.1, 3.2.2, 3.2.3, 3.3.1, 3.3.2, 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, 3.7, 5.11, 5.13, 5.14, 5.2, 8.4.1, 8.5.2, 8.6 CBI
3108200	2019, A22668C - Document H - Confidential Information, DACO: 3.2.1,3.3.1,3.3.2 CBI
3108201	2019, A22668C - SF-1023/1 - Determination of CGA154281, CGA77102, G30027, NOA449280, ZA1296 in A22668C by UHPLC, DACO: 3.4.1 CBI
3108204	2019, A22668C - Physico-Chemical Studies of the Formulation, DACO: 3.5.1, 3.5.10, 3.5.11, 3.5.12, 3.5.2, 3.5.3, 3.5.6, 3.5.7, 3.5.8, 3.5.9, 3.7 CBI
3199570	2021, A22668C - Physical and Chemical Properties (Addendum to EPA MRID Number: 50957502), DACO: 3.5.10, 3.5.14 CBI
3108206	2019, Mesotrione/Atrazine/S-metolachlor/Bicyclopyrone/Benoxacor ZC (A22668C) - Acute Oral Toxicity - Up-And-Down Procedure in Rats, DACO: 4.6.1
3108207	2019, Mesotrione/Atrazine/S-metolachlor/Bicyclopyrone/Benoxacor ZC (A22668C) - Acute Dermal Toxicity, DACO: 4.6.2
3108208	2019, Mesotrione/Atrazine/S-metolachlor/Bicyclopyrone/Benoxacor ZC (A22668C) - Acute Inhalation Toxicity in Rats, DACO: 4.6.3
3108209	2019, Mesotrione/Atrazine/S-metolachlor/Bicyclopyrone/Benoxacor ZC (A22668C) - Primary Eye Irritation in Rabbits, DACO: 4.6.4
3108210	2019, Mesotrione/Atrazine/S-metolachlor/Bicyclopyrone/Benoxacor ZC (A22668C) - In Vitro Eye Irritation Test in Isolated Chicken Eyes, DACO: 4.6.4
3108211	2019, Mesotrione/Atrazine/S-metolachlor/Bicyclopyrone/Benoxacor ZC (A22668C) - In Vitro Skin Corrosivity Test in the EPISKIN Model, DACO: 4.6.5
3108212	2019, Mesotrione/Atrazine/S-metolachlor/Bicyclopyrone/Benoxacor ZC (A22668C) - In Vitro Skin Irritation Test in the EPISKIN Model, DACO: 4.6.5
3108213	2019, Mesotrione/Atrazine/S-metolachlor/Bicyclopyrone/Benoxacor ZC (A22668C) - Local Lymph Node Assay (LLNA) in Mice, DACO: 4.6.6
3153905	2020, Mesotrione/Atrazine/S-Metolachlor/Bicyclopyrone/Benoxacor ZC (A22668C) - Waiver Request for an In Vivo Primary Dermal Irritation Toxicity Study Based on Results with Compositionally Similar Formulation Acuron (A19707A), DACO: 4.6.5
3108144	2020, Data and rationale, DACO: 10.1.
3108165	2019, Evaluate Acuron and Acuron Flexi in corn for control of emerged glyphosate-tolerant Canada fleabane, DACO: 10.2.3.3.
3108166	2019, Evaluate Acuron and Acuron Flexi in corn for control of emerged glyphosate-tolerant Canada fleabane, DACO: 10.2.3.3.
3108173	2019, Acuron: Evaluation of enhanced formulation (A22668C) for crop tolerance in inbred seed corn - medium/fine soils with >3% OM, DACO: 10.2.3.3.
3108174	2019, Acuron: Evaluation of enhanced formulation (A22668C) for crop tolerance

- 3108175 in inbred seed corn - medium/fine soils with >3% OM, DACO: 10.2.3.3.  
2019, Acuron: Evaluation of enhanced formulation (A22668C) for crop tolerance  
in inbred seed corn - medium/fine soils with <3% OM, DACO: 10.2.3.3.
- 3108176 2019, Acuron: Evaluation of enhanced formulation (A22668C) for crop tolerance  
in inbred seed corn - medium/fine soils with >3% OM, DACO: 10.2.3.3.
- 3108177 2019, Acuron: Enhanced formulations pre safety to sweetcorn and popcorn Part 3,  
DACO: 10.2.3.3.

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