

## Evaluation Report for Category B, Subcategory 3.5, 3.7, 3.12 Application

**Application Number:** 2019-2679  
**Application:** Changes to End-Use Product Labels – Rotational Crops/Plantback Interval, Pre-Grazing Interval and New Site or Host  
**Product:** Fierce Herbicide  
**Registration Number:** 31117  
**Active ingredients (a.i.):** Flumioxazin, Pyroxasulfone  
**PMRA Document Number :** 3127044

### Purpose of Application

The purpose of this application was to amend the label of Fierce Herbicide by adding additional rotational and pre-grazing restrictions and to add winter wheat.

### Chemistry Assessment

A chemistry assessment was not required for this application.

### Health Assessments

A toxicology assessment was not required for this application.

The amendment to add the new variety winter wheat, to the label of Fierce Herbicide for the control of various broadleaf weeds and as a burndown herbicide, fits within the registered use pattern for other wheat varieties, including spring wheat, for this product. As such, exposure to pyroxasulfone and flumioxazin is not expected to exceed that of the previously registered uses. No health risks of concern are expected, provided that workers wear the appropriate personal protective equipment and follow all label directions for use.

No new residue data for pyroxasulfone or flumioxazin were submitted to support the addition of winter wheat to the label, and to support amendments to the grazing and rotational restrictions. Previously reviewed residue data were reassessed as follows:

#### Pyroxasulfone:

Previously reviewed residue data from field trials conducted in/on winter wheat (spring and winter) were reassessed in the framework of this petition. In addition, a processing study in treated wheat was also reassessed to determine the potential for concentration of residues of pyroxasulfone into processed commodities. Based on this reassessment, it was determined that the addition of winter wheat to the Fierce Herbicide label can be supported. Exposure to residues of pyroxasulfone in/on treated winter wheat commodities will be covered under the currently established MRL of 0.03 ppm for pyroxasulfone in/on wheat. It was also concluded that the amendments to the grazing and rotational restrictions can also be supported from a dietary exposure perspective based on a reassessment of the relevant residue data on

file and by comparing these amended statements to the labels of end-use products containing pyroxasulfone alone. No increase to the dietary burden to livestock is expected and residues in rotational crops should not increase as a result of these actions.

#### Flumioxazin:

A previously submitted metabolism study with flumioxazin in a cereal crop (corn) and a winter wheat field trial study with flumioxazin were reviewed under the current application. In addition, previously reviewed residue data from field trials conducted in/on wheat (spring) were reassessed in the framework of this petition, and a processing study in/on treated wheat was also reassessed to determine the potential for concentration of residues of flumioxazin into processed commodities.

The metabolism study in corn indicated little uptake of radioactive residues into the plant following a pre-emergent application. As such, no changes to the currently established residue definitions for flumioxazin in plants is required, either for enforcement or risk assessment purposes.

The results of the winter wheat field trials indicated that residues of flumioxazin were non-quantifiable in forage and hay following a single preplant application using Good Agricultural Practices and at exaggerated rates 7-14 days prior to planting.

It was determined that the addition of winter wheat to the Fierce Herbicide label can be supported. Exposure to residues of flumioxazin in/on treated winter wheat commodities will be covered under the currently established MRL of 0.4 ppm for flumioxazin in/on wheat. It was also concluded that the amendments to the grazing and rotational restrictions can also be supported from a dietary exposure perspective based on a reassessment of the relevant residue data on file and by comparing these amended statements to the labels of end-use products containing flumioxazin alone. No increase to the dietary burden to livestock is expected and residues in rotational crops should not increase as a result of these actions.

#### **Environmental Assessment**

The use on winter wheat is within the registered use pattern of Fierce Herbicide, and therefore, no additional environmental risk is expected from this use. The label includes all the required environmental precautions, hazards and directions for use statements, including buffer zone information, which adequately mitigates risks to the environment.

#### **Value Assessment**

In support of the amendments to the Fierce Herbicide label, the applicant submitted data from small-scale field trials, scientific rationales and agricultural use history. The information has been found to support the addition of winter wheat as a host crop as well as the following rotational crops: winter wheat (7 days); barley, durum, oats and alfalfa (11 months); and canola and mustard seed (12 months). These amendments to the Fierce Herbicide label will give users additional flexibility and guidance with regards to rotational cropping and as well as an effective herbicide option for use in winter wheat.

## Conclusion

The Pest Management Regulatory Agency has completed an assessment of the information provided and has found the information sufficient to support the additional rotational and pre-grazing restrictions and the addition of winter wheat on the label of Fierce Herbicide.

## References

<b>PMRA Document Number</b>	<b>References</b>
1437718	1992, 14C-S-53482: Nature of the Residue in Corn FIFRA Subdivision O, Guideline 171-4 (a)(2), DACO: 6.3
2441000	2010, Magnitude of the Residue of Flumioxazin on Wheat Following a Pre-Plant Application, DACO: 7.4.1
3002420	2019, Value Summary for Fierce Herbicide Updated Rotational Restrictions Table and Addition of Winter Wheat, DACO: 10.1, 10.2.1, 10.2.2, 10.2.3.3(B), 10.3.1, 10.3.2(A), 10.3.3, 10.5.1, 10.5.2, 10.5.3
3002421	2019, APPENDIX 1: Trial Reports for "Value Summary for Fierce Herbicide Updated Rotational Restrictions Table and Addition of Winter Wheat", DACO: 10.1, 10.2.1, 10.2.2, 10.2.3.3(B), 10.3.1, 10.3.2(A), 10.3.3, 10.5.1, 10.5.2, 10.5.3
3035214	2019, Clarification Response for Value Summary for Fierce Herbicide Updated Rotational Restrictions Table and Addition of Winter Wheat, DACO: 10.1, 10.3, 10.3.1, 10.3.2
3035215	2019, APPENDIX 1: Trial Reports for - Value Summary for Fierce Herbicide Updated Rotational Restrictions Table and Addition of Winter Wheat, DACO: 10.1, 10.3, 10.3.1, 10.3.2
3035217	2019, Agricultural Use History Fierce Herbicide for Rotational Intervals for Oats and Alfalfa, DACO: 10.2.4

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