

## Evaluation Report for Category B, Subcategory 3.2, 3.10, 3.12 Application

**Application Number:** 2010-5356  
**Application:** B.3.2: Change Application Timing  
B.3.10: Add Tank Mix  
B.3.12: Add New Site  
**Product:** Callisto 480 SC Herbicide  
**Registration Number:** 27833  
**Active ingredients (a.i.):** Mesotrione  
**PMRA Document Number English :** 2136277

### Purpose of Application

The purpose of this application was to amend the registration of Callisto 480 SC Herbicide to include control or suppression of the labelled weeds with a surface pre-plant and a post-plant pre-emergence applications of 0.3 L/ha Callisto 480 SC alone or in tank mix with 1.15-1.75 L/ha Dual II Magnum or 900 g a.e./ha glyphosate herbicide or 1.15-1.75 L/ha Dual II Magnum + 900 g a.e./ha glyphosate herbicide in mesotrione tolerant soybeans.

### Chemistry Assessment

Chemistry assessment was not required for this application.

### Health Assessments

The Callisto rate for use in mesotrione tolerant soybeans is the same as the currently registered rate for mesotrione in corn and cranberry. No increase in occupational exposure over the registered use is expected with the addition of mesotrione tolerant soybeans, the new tank-mix partners or a new pre-plant surface application timing to the label of Callisto 480SC Herbicide. No unacceptable risk is expected when workers follow label directions and wear personal protective equipment as recommended on the label.

Residue data for mesotrione in/on mesotrione tolerant soybeans were submitted to support the use expansion of this active on the Callisto 480SC Herbicide label. In addition, a processing study on treated soybeans was also submitted to determine the potential for concentration of residues of mesotrione into processed commodities.

Based on the maximum residues observed in mesotrione tolerant soybeans treated at exaggerated rates, a maximum residue limit (MRL) to cover residues of mesotrione in/on dry soybeans will be established as shown in Table 1. Residues of mesotrione in processed commodities not listed in Table 1 will be covered under the established MRL for the raw agricultural commodity (RAC).

**TABLE 1. Summary of Field Trial and Processing Data Used to Establish Maximum Residue Limit (MRL)**

Commodity	Application Method/ Total Application Rate (g a.i./ha)	DAP <sup>1</sup> (days)	Residues (ppm)		Experimenta l Processing Factor	Currently Established MRL	Recommended MRL
			Min	Max			
Soybean seed (Mesotrione tolerant)	Soil surface spray/ 211 – 220	113 – 174	<0.01	<0.01	-- <sup>2</sup>	None	0.01  (dry soybeans)

<sup>1</sup> DAP = days after planting

<sup>2</sup> Residues in soybean hulls, meal, and refined oil were all below the LOQ of 0.01 ppm when treated at rates of 213 g a.i./ha and 1066 g a.i./ha.

Following the review of all available data, a MRL of 0.01 ppm for dry soybeans is recommended to cover residues of mesotrione in/on this crop. Residues of mesotrione in/on dry soybeans at the established MRL will not pose an unacceptable risk to any segment of the population, including infants, children, adults and seniors.

### Environmental Assessment

No environmental concerns were identified as the application rate of Callisto 480SC Herbicide for the pre-plant or pre-emergent control of annual broadleaf weeds in mesotrione tolerant soybean is the same as that registered for pre-emergent and early post-emergent application to corn and cranberry.

### Value Assessment

Efficacy and crop tolerance data from 8 field trials conducted over 1 year in Ontario were submitted to support a pre-emergence (to crop) application of Callisto 480SC Herbicide in mesotrione tolerant soybean (eastern Canada only). When applied as a surface pre-plant treatment in 3 trials, Callisto 480SC Herbicide was applied in a 2-way tank mix with Touchdown Total and in a 3-way tank mix with Dual II Magnum + Touchdown Total. When applied as a post-plant pre-emergence treatment in 5 trials, Callisto 480SC Herbicide was applied alone and in tank mix with Dual II Magnum. A total of 3 mesotrione tolerant soybean varieties were assessed in the trials.

Control or suppression of the currently labeled weeds (pre-emergence and up to the 2 leaf stage) with either a pre-plant surface (up to 7 days prior to planting) or a post-plant pre-emergence application of Callisto 480SC Herbicide alone or in tank mix was determined to be acceptable from an efficacy standpoint.

Significant crop injury to mesotrione tolerant soybeans following a surface pre-plant or a post-plant pre-emergence application of treatments containing Callisto 480SC Herbicide was observed at the early rating, but diminished over time. The observed injury to mesotrione tolerant soybeans did not affect soybean maturity or yield. Based on the information submitted, the pre-emergence (to crop) application of Callisto 480 SC Herbicide in mesotrione tolerant soybeans was supported with an appropriate label statement to warn of possible early season crop injury which does not affect crop maturity or yield.

### **Conclusion**

The PMRA has reviewed all data provided and has determined that the claim of control or suppression of the labelled weeds with a surface pre-plant and a post-plant pre-emergence applications of 0.3 L/ha Callisto 480 SC alone or in tank mix with 1.15-1.75 L/ha Dual II Magnum or 900 g a.e./ha glyphosate herbicide or 1.15-1.75 L/ha Dual II Magnum + 900 g a.e./ha glyphosate herbicide in mesotrione tolerant soybeans is acceptable for full registration.

### **References**

- 1978479 Efficacy Summary TSRs H0919B-230-2010, DACO: 10.2.3.3,10.3.2
- 1978480 Efficacy Summary TSRs 10UGGLXMA09, DACO: 10.2.3.3,10.3.2
- 1978481 Efficacy Summary TSRs H0919B-227-2010, DACO: 10.2.3.3,10.3.2
- 1978482 Efficacy Summary TSRs H0919B-223-2010, DACO: 10.2.3.3,10.3.2
- 1978483 Efficacy Summary TSRs H1919B-225-2010, DACO: 10.2.3.3,10.3.2
- 1978484 Efficacy Summary TSRs 10UGGLXMA08, DACO: 10.2.3.3,10.3.2
- 1978485 Efficacy Summary TSRs SY10A10B, DACO: 10.2.3.3,10.3.2
- 1978486 Efficacy Summary TSRs 10NTS2, DACO: 10.2.3.3,10.3.2
- 1978458 2008, Mesotrione - Magnitude of the Residues in or on Soybean, DACO: 7.4.1

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