

## Evaluation Report for Category B, Subcategory 3.12 Application

**Application Number:** 2008-5909  
**Application:** Changes to Product Labels – New Host  
**Product:** Equinox EC Herbicide  
**Registration Number:** 27603  
**Active ingredients (a.i.):** Tepraloxydim (TPA)  
**PMRA Document Number :** 1846097

### Purpose of Application

The purpose of this application was to amend the registration of the end-use product Equinox EC Herbicide (Reg. No. 27603) to add four new host crops to the product label, including dry common bean, chickpea, mustard (Brown, Oriental and Yellow) and sunflower (all types including imazethapyr and imazamox tolerant sunflower with the Clearfield trait). In addition to the dry common bean and chickpea, the registrant requested the addition of the entire Crop Subgroup 6C (dried shelled peas and beans (except soybeans)) to the product label.

### Chemistry Assessment

A chemistry assessment was not required for this application.

### Health Assessments

The use of Equinox EC Herbicide on dry beans, chickpeas, mustard and sunflower falls within the registered use pattern for the active ingredient tepraloxydim. No unacceptable risk is expected when workers follow the label directions and wear the personal protective equipment identified on the label.

Residue data for tepraloxydim in dry beans and sunflower and processing data in sunflower were submitted to support the use expansion of this active on the Equinox EC Herbicide label. Previously reviewed residue data from field trials conducted in/on dry peas and canola were taken into consideration in the framework of this petition. In addition, a processing study in treated canola was also reassessed to determine the potential for concentration of residues of tepraloxydim into processed commodities.

Based on the maximum residues observed in crops commodities treated according to label directions, maximum residue limits (MRLs) to cover residues of tepraloxydim in/on crops will be established as shown in Table 1. Residues of tepraloxydim in processed commodities not listed in Table 1 are covered under established MRLs for the raw agricultural commodities (RACs).

<b>TABLE 1. Summary of Field Trial and Processing Data Used to Establish Maximum Residue Limit(s) (MRLs)</b>							
<b>Commodity</b>	<b>Application Method/ Total Application Rate (g a.i./ha)</b>	<b>PHI (days)</b>	<b>Residues (ppm)</b>		<b>Experimental Processing Factor</b>	<b>Currently Established MRL</b>	<b>Recommended MRL</b>
			<b>Min</b>	<b>Max</b>			
Sunflower	Broadcast foliar application/ 49-52	60	<0.1	0.18	No concentration in oil	None	<b>0.2 ppm</b> for all commodities of Crop Subgroup 20B.
Canola	Broadcast foliar application/ 30-34	58-61	<0.1	0.26	No concentration in oil	0.3 ppm	<b>0.3 ppm</b> for all commodities of Crop Subgroup 20A.
Dry peas	Broadcast foliar application/ 100	60	All <0.1		Not applicable	0.1 ppm	<b>0.1 ppm</b> for all commodities of Crop Subgroup 6C.
Dry beans	Broadcast foliar application/ 50-52	53-63	All <0.1		Not applicable	None	

### **Environmental Assessment**

The use of Equinox EC Herbicide on dry beans, chickpeas, mustard and sunflower is not expected to present new environmental effects or exposure scenarios.

Tepraloxymidim is toxic to non-target terrestrial plants. Re-analysis of the risk quotients for non-target terrestrial plants resulted in the addition of a 1 metre terrestrial buffer zone to the label, where there had been none previously.

### **Value Assessment**

Crop phytotoxicity and yield data were submitted from a total of 8 field trials conducted on dry common bean, 6 field trials conducted on chickpea, 11 field trials conducted on sunflower and 20 field trials conducted on mustard (Brown, Oriental and Yellow market classes) throughout Alberta, Saskatchewan and/or Manitoba in 1996, 1997, 1998, 1999, 2006 and/or 2007. These data indicate that Equinox EC Herbicide does not cause unacceptable injury to sunflower or mustard when applied at the maximum rate of 0.2 L/ha (40 g a.i./ha) or to dry common bean or chickpea when applied at the maximum rate of 0.25 L/ha (50 g a.i./ha). From a value perspective, addition of the four host crops, i.e., dry common bean,

chickpea, mustard (Brown, Oriental and Yellow) and sunflower (all types including imazethapyr and imazamox tolerant sunflower with the Clearfield trait), can be supported. However, the registrant's request to include the entire Crop Subgroup 6C (dried shelled peas and beans (except soybeans)) on the Equinox EC Herbicide label cannot be supported for the reason that the Crop Subgroup 6C was compiled for MRL determination purposes, not for grouping crops according to their herbicide tolerance similarities.

## **Conclusion**

The PMRA has completed an evaluation of the subject application and is able to support the addition of the following host crops to the product label: dry common bean, chickpea, mustard (Brown, Oriental and Yellow) and sunflower (all types including imazethapyr and imazamox tolerant sunflower with the Clearfield trait). The addition of the entire Crop Subgroup 6C (dried shelled peas and beans (except soybeans)) on the Equinox EC Herbicide label is not supported.

An MRL of 0.1 ppm for crop subgroup 6C, 0.2 ppm for crop subgroup 20B and 0.3 ppm for crop subgroup 20A are recommended to cover residues of tepraloxym. Residues of tepraloxym in these crop commodities at the recommended MRLs are not anticipated to pose an unacceptable risk to any segment of the population, including infants, children, adults and seniors.

## **References**

- 1688404      2008, Application for EQUINOX EC (BAS 620 00H) Herbicide for use on Sunflower, Dry Bean, Chickpea, and Mustard, DACO's 10.1, 10.2, 10.2.1, 10.2.2, 10.2.3, 10.3.1, 10.3.2, 10.3.3, 10.4, 10.5, 10.5.2, 10.5.3 and 10.5.4.
- 1765366      Updated Value Summary; Trial Reports.
- 1688429      2008, Magnitude of BAS 620 H Residues in Dry Beans Following Applications of BAS 620 00H, DACO: 7.4.1, 7.4.2
- 1688430      2008, Magnitude of BAS 620 H Residues in Sunflower RAC and Processed Fractions Following Applications of BAS 620 00H, DACO: 7.4.1, 7.4.2, 7.4.5

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