

## Evaluation Report for Category B, Subcategory 3.12 Application

**Application Number:** 2012-1463  
**Application:** Changes to Product Labels-New Site or Host  
**Product:** Prowl H<sub>2</sub>O Herbicide  
**Registration Number:** 29542  
**Active ingredients (a.i.):** Pendimethalin (PEN)  
**PMRA Document Number :** 2345236

### Background

Prowl H<sub>2</sub>O Herbicide (Registration Number 29542; guarantee 455 g pendimethalin/L) was first registered for use in Canada in 2010.

### Purpose of Application

The purpose of this application was to amend the label of Prowl H<sub>2</sub>O Herbicide to include a pre-plant incorporated (PPI) application for control of barnyard grass, green foxtail, lamb's-quarters (suppression only), and redroot pigweed on white beans and kidney beans.

### Chemistry Assessment

A chemistry assessment was not required for this application.

### Health Assessments

A toxicology assessment was not required for this application.

No new residue data were submitted for pendimethalin to support the addition of white beans and kidney beans to the registered label of Prowl H<sub>2</sub>O Herbicide. The new use pattern, including application timing, rate and restrictions, are identical to those currently registered for adzuki beans, snap beans and succulent-shelled lima beans, and the longest PHI (pre-harvest interval) for beans was recommended. Previously reviewed residue data from field trials conducted in/on pinto beans, dry white beans, kidney beans, snap beans and succulent-shelled lima beans were reassessed in the framework of this petition. Residues of pendimethalin in white beans and kidney beans at the proposed MRL (maximum residue limit) will not pose an unacceptable risk to any segment of the population, including infants, children, adults and seniors.

The new use on white beans and kidney beans represents an expansion of use for pendimethalin. A risk assessment was performed for chemical handlers who mix, load and apply Prowl H<sub>2</sub>O Herbicide while wearing long pants, long sleeved shirt, shoes plus socks and gloves during mixing and loading, and while wearing long pants, long sleeved shirt and shoes plus socks during application. No risks of concern are expected when workers follow the label directions

and wear the personal protection equipment identified on the label.

### **Environmental Assessment**

No environmental concerns were identified as the proposed application of Prowl H<sub>2</sub>O Herbicide for the pre-plant control of labeled weeds on white beans and kidney beans falls within the existing use pattern registered for other crops (e.g. adzuki beans, snap and lima beans, and green onions and transplanted leeks).

### **Value Assessment**

There are very few herbicide options available to white bean and kidney bean growers. Currently Group II herbicide Pursuit Herbicide (Registration Number 21537; guarantee 240 g imazethapyr/L), and Group 15 herbicides Frontier Max Herbicide (Registration Number 29194; guarantee 720 g dimethenamid-P/L) and Dual II Magnum Herbicide (Registration Number 25729; guarantee 915 g s-metolachlor/L) are the main soil applied herbicides used in white bean and kidney bean production for season long weed control. The treatment of Prowl H<sub>2</sub>O Herbicide is another pre-plant incorporated (PPI) application that provides an additional weed control option with a different mode of action (Group 3 herbicide) in white bean and kidney bean production systems.

Data from one efficacy trial and 13 dedicated crop tolerance trials conducted in Ontario at Exeter over a five year period (from 2007 to 2011) were submitted. Efficacy of PPI application of Prowl H<sub>2</sub>O Herbicide at 2.37 L/ha (i.e. 1.08 kg a.i./ha) was evaluated for barnyard grass in the efficacy trial. A 92.5% barnyard grass control was reported once at 66 days after treatment. In addition to the trial data, early season residual control of barnyard grass is labeled for the PPI application of Prowl H<sub>2</sub>O Herbicide at 2.2 L/ha (i.e. 1.0 kg a.i./ha) in tank mix with glyphosate herbicide in soybeans. Therefore, a control claim for barnyard grass with a PPI application of Prowl H<sub>2</sub>O Herbicide at 2.37 L/ha is supported from an efficacy standpoint.

Tolerance of kidney beans in nine trials and white beans in 13 trials to Prowl H<sub>2</sub>O Herbicide was evaluated and reported. Crop injury to kidney beans and white beans following the application of Prowl H<sub>2</sub>O Herbicide at either the requested 1 x rate of 2.37 L/ha or the exaggerated 2 x rate of 4.74 L/ha was either slight or not detectable. Yield data collected confirmed that kidney beans and white beans exhibited an adequate margin of crop safety to Prowl H<sub>2</sub>O Herbicide applied in accordance with the label.

### **Conclusion**

The PMRA has reviewed the available information for Prowl H<sub>2</sub>O Herbicide and found it sufficient to support the addition of a pre-plant incorporated (PPI) application for control of barnyard grass, green foxtail, lamb's-quarters (suppression only), and redroot pigweed on white beans and kidney beans.

### **References**

**PMRA  
Document**

**Reference**

**Identification**

- 2181851 2012, Prowl H<sub>2</sub>O Herbicide on white and kidney beans: Application to register Prowl H<sub>2</sub>O Herbicide on white and kidney beans, DACO: 10.1, 10.2, 10.2.1, 10.2.2, 10.2.3, 10.2.3.1, 10.2.3.3, 10.3, 10.3.1, 10.3.2, 10.4, 10.5, 10.5.2, 10.5.3
- 2181854 2012, 5.2 - Use Description/ Scenario (Application and Post Application) - Prowl H<sub>2</sub>O, DACO: 5.2
- 2242045 2012, DACO 5- Exposure (Occupational and/ or Bystander) Use Site Description, Prowl H<sub>2</sub>O Herbicide - Preplant Incorporated Application to White and Kidney Beans, DACO: 5.2
- 2242046 2002, 14C-BAS 455 H - Study of the dermal absorption in rats, DACO: 5.8

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