

## **Alternate Herbicides For The Control Of Canada Fleabane In Soybeans**

### **(Interim Report)**

#### **Purpose:**

Glyphosate resistant Canada Fleabane is now prominent in nine American states. It is probable that in Ontario this resistant species will become a concern as well, given the increased use of glyphosate. Alternatives to glyphosate for the control of Canada Fleabane were evaluated in 2003.

#### **Methods:**

The trial was set up as a randomized complete block design with 4 replications. Herbicide treatments were applied when Canada Fleabane ranged from 1 to 10 cm in height.

The treatments were:

1. Untreated Control
2. Glyphosate (360 g/L) at 1 L/ac
3. Glyphosate (360 g/L) at 1.5 L/ac
4. Classic (25 DF) (chlorimuron-ethyl) at 14 g/ac + Agral 90 at 0.2% v/v
5. First Rate (84 DF) (cloransulam-methyl) at 4.25 g/ac + Agral 90 at 0.25% v/v + UAN at 2.5% v/v.
6. First Rate (84 DF) (cloransulam-methyl) at 8.5 g/ac + Agral 90 at 0.25% v/v + UAN at 2.5 % v/v.
7. 2,4-D Ester (600 g/L) at 0.37 L/ac
8. 2,4-D Ester (600 g/L) at 0.75 L/ac
9. MCPA Amine (500 g/L) at 0.28 L/ac
10. Pardner (280 g/L) at 0.48 L/ac
11. Amitrol 240 (231 g/L) at 1 L/ac
12. Amitrol 240 (231 g/L) at 2 L/ac
13. Sencor (75 WG) at 0.6 kg/ac
14. Broadstrike Dual Magnum (923 g/L) at 0.624 L/ac

Evaluations of % visual Canada Fleabane control were conducted at 6, 13, 22 and 27 days after application. Weed Control Ratings at 27 days after application are presented in the results section below.

**Results:****Table 1. Visual control (expressed as a percentage out of 100) of Canada Fleabane using 13 different herbicide treatments.**

<b>Herbicide Treatment</b>	<b>% Visual Control</b>
Untreated Control	0
glyphosate (1 L/ac)	98
glyphosate (2 L/ac)	99
Classic (14 g/ac)	94
First Rate (4.25 g/ac) - half rate	99
First Rate (8.5 g/ac)	99
2,4-D Ester (0.37 L/ac)	87
2,4-D Ester (0.75 L/ac)	94
MCPA Amine	36
Pardner (0.48 L/ac)	50
Amitrol 240 (1 L/ac)	83
Amitrol 240 (2 L/ac)	97
Sencor (0.6 kg/ac)	73
Broadstrike Dual Magnum (0.624 L/ac)	99

1 field trial and 1 growth room trial conducted (2002, 2003).

**Summary:**

The herbicides Classic, FirstRate, Amitrol 240, and Broadstrike Dual Magnum all provided acceptable levels of Canada Fleabane control and would be suitable options in soybeans. The most economical level of control was provided by the reduced rate of FirstRate. Due to the potential risk for soybean crop injury, and lack of legal registration, pre-plant applications of 2,4-D (a common U.S. practice) are not recommended in Ontario. There are other safer, more cost effective and efficacious products for the control of glyphosate resistant Canada Fleabane pre-plant in soybean.

**Next Steps:**

This trial will be repeated in 2004 and 2005.

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