

## **Performance of Fierce Herbicide for weed control in Soybean at Rochester, MN, in 2010.**

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The objective of this trial was to evaluate the performance of Fierce herbicide in soybeans in southeastern Minnesota, in 2010. The research site was a Lawler loam series with a pH of 6.6, O.M of 2.3%, and soil test P and K levels of 41 ppm and 126 ppm, respectively. The field was spring chisel plowed, disked and field cultivated once prior to planting. The soybean variety, Stine 23LA08-VarS080137, was planted on May 3, 2010, at a depth of 1.5 inches in 30 inch rows at 129,000 seeds an acre. A randomized complete block design was used with four replications. Preemergence (PRE) and postemergence (POST) treatments were applied with a tractor-mounted sprayer delivering 20 gpa at 32 psi using Turbo Tee 11002 nozzles. Evaluations of the plots were taken on June 2, 9, 15, and 23. No evaluations were taken other than yield following the POST treatments. Application dates, environmental conditions, and weed stages are listed below. The center two rows of each plot were machine harvested on October 4, 2010.

**SUMMARY:** Fierce herbicide did not provide adequate giant ragweed control as demonstrated by 6/23 rating of 10% and 20% control for the 3 oz and 3.75 oz rate, respectively. Both Prefix and Authority First provided close to 90% giant ragweed control, 6/23 rating date.

All herbicide treatments provided over 90% control of common lambsquarters. The 3.75 oz rate of Fierce and the Authority First treatments provided the maximum level of lambsquarters control (99%), 6/23 rating date. The 3 oz rate of Fierce and the Prefix treatments provided statistically lower lambsquarters control (93% and 95%, respectively) on the 6/23 rating date.

All herbicide treatments provided over 90% control of common waterhemp. The 3.75 oz rate of Fierce and the Prefix treatments provided the maximum level of control (99%), 6/23 rating date. The 3 oz rate of Fierce and the Authority First treatments provided statistically lower control (92% and 93%, respectively) on the 6/23 rating date.

Giant foxtail control was more variable across treatments. Authority First provided the lowest giant foxtail control, 72% (6/23 rating date). The 3.0 oz rate of Fierce provided statistically higher giant foxtail control, 85%

(6/23 rating date) then Authority First. The 3.75 oz rate of Fierce and the Prefix treatments provided statistically better giant foxtail control 93% and 94%, respectively (6/23 rating date) then the previous two treatments.

Both rates of Fierce herbicide provided 6 weeks of residual control for all weed species evaluated except giant ragweed. The 3.0 oz rate of Fierce statistically separated from the 3.75 oz rate of Fierce after week 7. (University of Minnesota Extension Regional Office, Rochester).

<b>Date</b>	<b>5/4</b>	<b>6/24</b>
<b>Treatment</b>	PRE	POST
<b>Field Conditions</b>		
<b>Temperature</b>		
Air	83	72
Soil	59.9	68.2
<b>Relative Humidity (%)</b>	18	68
<b>Wind (mph)</b>	30	6
<b>Soil Moisture</b>	Adequate	Adequate
<b>Soybean</b>		
Stage		V6-R1
Height (inches)		7.5
<b>Giant Ragweed</b>		
Weed density (ft <sup>2</sup> )		3.3
Height (inches)		3.0
<b>Common Lambsquarters</b>		
Weed density (ft <sup>2</sup> )		2.0
Height (inches)		1.5
<b>Common Waterhemp</b>		
Weed density (ft <sup>2</sup> )		8.3
Height (inches)		2.7
<b>Giant foxtail</b>		
Weed density (ft <sup>2</sup> )		4.9
Height (inches)		21.0
<b>Rainfall after each application</b>		
Week 1	1.07	1.49
Week 2	0.66	0.27
Week 3	0.04	1.49

**Table 1. Performance of Fierce herbicide for giant ragweed control in soybeans at Rochester, MN, in 2010.**

Treatment	Rate	Giant Ragweed Control				Yield
		6/2	6/9	6/15	6/23	
	(rate/A)	(% Control)				(bu/A)
Untreated		0	0	0	0	5.7
<b>PRE/POST (3-4 inch weed regrowth)</b>						
Fierce / Ignite 280 + AMS	3 oz wt/a / 22 fl oz/a + 8.5 lb/100 gal	54	40	20	10	34.2
Fierce / Ignite 280 + AMS	3.75 oz wt/a / 22 fl oz/a + 8.5 lb/100 gal	55	57	29	20	35.4
Prefix / Ignite 280 + AMS	1.67 pt/a / 22 fl oz/a + 8.5 lb/100 gal	97	95	90	87	38.2
Authority First / Ignite 280 + AMS	3.2 oz wt/a / 22 fl oz/a + 8.5 lb/100 gal	97	83	92	90	40.5
	<b>LSD (P=0.10)</b>	<b>4.8</b>	<b>1.7</b>	<b>3.9</b>	<b>2.1</b>	<b>5.6</b>

**Table 2. Performance of Fierce herbicide for common lambsquarters control in soybeans at Rochester, MN, in 2010.**

Treatment	Rate	Common Lambsquarters Control				Yield
		6/2	6/9	6/15	6/23	
	(rate/A)	(% Control)				(bu/A)
Untreated		0	0	0	0	5.7
<b>PRE/POST (3-4 inch weed regrowth)</b>						
Fierce / Ignite 280 + AMS	3 oz wt/a / 22 fl oz/a + 8.5 lb/100 gal	99	98	98	93	34.2
Fierce / Ignite 280 + AMS	3.75 oz wt/a / 22 fl oz/a + 8.5 lb/100 gal	99	99	98	99	35.4
Prefix / Ignite 280 + AMS	1.67 pt/a / 22 fl oz/a + 8.5 lb/100 gal	99	99	92	95	38.2
Authority First / Ignite 280 + AMS	3.2 oz wt/a / 22 fl oz/a + 8.5 lb/100 gal	99	99	99	99	40.5
	<b>LSD (P=0.10)</b>	<b>0</b>	<b>1.3</b>	<b>5.0</b>	<b>3.5</b>	<b>5.6</b>

**Table 3. Performance of Fierce herbicide for common waterhemp control in soybeans at Rochester, MN, in 2010.**

Treatment	Rate	Common Waterhemp Control				Yield
		6/2	6/9	6/15	6/23	
	(rate/A)	(% Control)				(bu/A)
Untreated		0	0	0	0	5.7
<b>PRE/POST (3-4 inch weed regrowth)</b>						
Fierce / Ignite 280 + AMS	3 oz wt/a / 22 fl oz/a + 8.5 lb/100 gal	99	97	99	92	34.2
Fierce / Ignite 280 + AMS	3.75 oz wt/a / 22 fl oz/a + 8.5 lb/100 gal	99	98	99	99	35.4
Prefix / Ignite 280 + AMS	1.67 pt/a / 22 fl oz/a + 8.5 lb/100 gal	99	97	99	99	38.2
Authority First / Ignite 280 + AMS	3.2 oz wt/a / 22 fl oz/a + 8.5 lb/100 gal	99	98	93	93	40.5
	<b>LSD (P=0.10)</b>	<b>0.6</b>	<b>1.7</b>	<b>2.4</b>	<b>3.1</b>	<b>5.6</b>

**Table 4. Performance of Fierce herbicide for giant foxtail control in soybeans at Rochester, MN, in 2010.**

Treatment	Rate	Giant Foxtail Control				Yield
		6/2	6/9	6/15	6/23	
	(rate/A)	(% Control)				(bu/A)
Untreated		0	0	0	0	5.7
<b>PRE/POST (3-4 inch weed regrowth)</b>						
Fierce / Ignite 280 + AMS	3 oz wt/a / 22 fl oz/a + 8.5 lb/100 gal	83	87	90	85	34.2
Fierce / Ignite 280 + AMS	3.75 oz wt/a / 22 fl oz/a + 8.5 lb/100 gal	86	90	91	93	35.4
Prefix / Ignite 280 + AMS	1.67 pt/a / 22 fl oz/a + 8.5 lb/100 gal	97	96	88	94	38.2
Authority First / Ignite 280 + AMS	3.2 oz wt/a / 22 fl oz/a + 8.5 lb/100 gal	70	81	73	72	40.5
	<b>LSD (P=0.10)</b>	<b>3.1</b>	<b>1.8</b>	<b>7.1</b>	<b>3.3</b>	<b>5.6</b>