

## Annual weed control in Liberty-Link soybeans at Lamberton, MN in 2008.

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The objective of this study was to evaluate weed control systems in Liberty-Link soybeans. Two trials were conducted.

Site 1 was conducted on a Normania loam soil containing 3.8% organic matter, pH 6.1 and soil test P and K levels of 64 and 296 lb/A, respectively. The site was planted to oats in 2007 and was fall chiseled. Site 2 was conducted on a Canisteo loam soil containing 8.4% organic matter, pH 7.7 and soil test P and K levels of 100 and 600 lb/A, respectively. The site was planted to corn in 2007 and was fall chiseled. A randomized complete block design with four replications and a plot size of 10 by 30 ft was used. On May 28, 2008, 'SG2077LL' glufosinate tolerant soybeans were planted in 30-inch rows at a seeding rate of 160,000 seeds/A. All treatments were applied with a tractor-mounted sprayer delivering 20 gpa at a pressure of 40 psi. The sprayer was equipped with 8002 flat-fan nozzles spaced 15 inches apart on the boom. Application dates, environmental conditions, and rainfall data are listed below:

Date	May 28	June 25	July 15
Treatment	PRE	POST I	POST II
Temperature (F)			
air	52	77	92
soil (4 inch)	56	78	86
Relative humidity (%)	62	61	41
Wind (mph)	SE 9	NW 10	N 6
Sky	cloudy	p. cloudy	clear
Soil moisture	dry	dry	dry
Rainfall after application (inch)			
1 week	0.87	0.61	1.14
2 week	1.80	0.00	1.97
3 week	1.02	0.02	0.22

Plant sizes and density at the time of herbicide application are listed below:

Date	Site 1			Site 2		
	May 28	June 25	July 15	May 28	June 25	July 15
Treatment	PRE	POST I	POST II	PRE	POST I	POST II
Soybean						
leaf no.	-	V2	R1	-	V2	R1
height (inch)	-	5	18	-	5	15
Yellow foxtail						
leaf no.	-	2 to 4	2 to 4	-	-	-
height (inch)	-	3 to 5	3 to 5	-	-	-
no./ft <sup>2</sup>	-	65	<1	-	-	-
Green foxtail						
leaf no.	-	-	-	-	2 to 4	-
height (inch)	-	-	-	-	3 to 4	-
no./ft <sup>2</sup>	-	-	-	-	2	-
Common lambsquarters						
leaf no.	-	4 to 6	-	-	4 to 6	4 to 6
height (inch)	-	2 to 4	-	-	2 to 4	2 to 4
no./ft <sup>2</sup>	-	2	-	-	21	<1
Tall waterhemp						
leaf no.	-	2 to 4	3 to 5	-	-	-
height (inch)	-	2 to 4	2 to 4	-	-	-
no./ft <sup>2</sup>	-	2	<1	-	-	-

(Southwest Research and Outreach Center, University of Minnesota, Lamberton).

**Table. Site 1 - Annual weed control in Liberty-Link soybeans at Lamberton, MN in 2008 (Getting).**

Treatment <sup>a</sup>	Rate (oz/A or qt/A)	Yellow foxtail				Common lambsquarters				Tall waterhemp			
		Jun 20	Jul 2	Jul 16	Jul 28	Jun 20	Jul 2	Jul 16	Jul 28	Jun 20	Jul 2	Jul 16	Jul 28
		-----(% control)-----											
<b>Preemergence/POST I (2 to 5-inch weeds)/POST II (regrowth)</b>													
Valor /	2 oz /	80 bc	94 bc	89 c	94 bc	98 a	100 a	100 a	100 a	98 a	100 a	100 a	100 a
Ignite 280 + AMS / Ignite 280 + AMS	22 oz + 2 qt / 22 oz + 2 qt												
FirstRate /	0.75 oz /	20 d	94 c	91 bc	92 c	97 b	100 a	100 a	100 a	98 a	100 a	95 b	100 a
Ignite 280 + AMS / Ignite 280 + AMS	22 oz + 2 qt / 22 oz + 2 qt												
Gangster FR + Gangster V /	0.3 oz + 1.5 oz /	75 c	94 bc	90 c	95 ab	98 a	100 a	100 a	100 a	98 a	100 a	100 a	100 a
Ignite 280 + AMS / Ignite 280 + AMS	22 oz + 2 qt / 22 oz + 2 qt												
Valor + Sencor /	2 oz + 4.6 oz /	83 b	96 b	93 ab	95 ab	98 a	100 a	100 a	100 a	98 a	100 a	100 a	100 a
Ignite 280 + AMS / Ignite 280 + AMS	22 oz + 2 qt / 22 oz + 2 qt												
Boundary /	1.8 pt /	91 a	98 a	94 a	97 a	98 a	100 a	100 a	100 a	98 a	100 a	100 a	100 a
Ignite 280 + AMS / Ignite 280 + AMS	22 oz + 2 qt / 22 oz + 2 qt												
<b>POST I (2 to 5-inch weeds)/POST II (regrowth)</b>													
Ignite 280 + AMS / Ignite 280 + AMS	22 oz + 2 qt / 22 oz + 2 qt	O e	94 c	90 c	93 bc	0 c	98 b	100 a	100 a	0 c	85 b	96 b	99 b
<b>Check</b>													
Weedy Check	-	0 e	0 d	0 d	0 d	0 c	0 c	0 b	0 b	0 c	0 c	0 c	0 c
	LSD (0.10)	5.7	1.7	2.3	2.8	0.7	1.0	ns	ms	1.8	1.9	2.9	1.2

<sup>a</sup> AMS = liquid spray grade ammonium sulfate

**Table. Site 2 - Annual weed control in Liberty-Link soybeans at Lamberton, MN in 2008 (Getting).**

Treatment <sup>a</sup>	Rate (oz/A or qt/A)	Green foxtail				Common lambsquarters			
		Jun 20	Jul 2	Jul 16	Jul 28	Jun 20	Jul 2	Jul 16	Jul 28
		-----(% control)-----							
<b>Preemergence/POST I (2 to 5-inch weeds)/POST II (regrowth)</b>									
Valor /	2 oz /	97	100 a	100 a	100 a	92 bc	100 a	99 a	100 a
Ignite 280 + AMS / Ignite 280 + AMS	22 oz + 2 qt / 22 oz + 2 qt								
FirstRate /	0.75 oz /	95 b	100 a	100 a	100 a	95 ab	100 a	100 a	100 a
Ignite 280 + AMS / Ignite 280 + AMS	22 oz + 2 qt / 22 oz + 2 qt								
Gangster FR + Gangster V /	0.3 oz + 1.5 oz /	97 ab	100 a	100 a	100 a	97 a	100 a	100 a	100 a
Ignite 280 + AMS / Ignite 280 + AMS	22 oz + 2 qt / 22 oz + 2 qt								
Valor + Sencor /	2 oz + 4.6 oz /	98 a	100 a	100 a	100 a	97 a	100 a	100 a	100 a
Ignite 280 + AMS / Ignite 280 + AMS	22 oz + 2 qt / 22 oz + 2 qt								
Boundary /	1.8 pt /	98 a	100 a	100 a	100 a	91 c	99 a	99 a	100 a
Ignite 280 + AMS / Ignite 280 + AMS	22 oz + 2 qt / 22 oz + 2 qt								
<b>POST I (2 to 5-inch weeds)/POST II (regrowth)</b>									
Ignite 280 + AMS / Ignite 280 + AMS	22 oz + 2 qt / 22 oz + 2 qt	0 c	0 b	0 b	0 b	0 d	97 b	94 b	98 b
<b>Check</b>									
Weedy Check	-	0 c	0 b	0 b	0 b	0 d	0 c	0 c	0 c
	LSD (0.10)	1.9	ns	ns	ns	3.0	1.4	2.1	1.2

<sup>a</sup> AMS = liquid spray grade ammonium sulfate