

### Liberty Link Soybean Weed Management (S0940)

A field study was initiated near Clay Center, Nebraska to compare different application rates and timings of Ignite 280. The experimental design was a randomized complete block with four replications. Plots were 10 feet wide and 30 feet long and were located on a silt loam soil with an organic matter content of 2.5% and ph of 6.5. Liberty Link soybeans, 'Stine 28LA08' was planted on May 19 and emerged on May 28. Herbicides application dates and timings are listed in Table 1. Herbicides were applied with a tractor-mounted sprayer calibrated to deliver 15 gallons of water per acre at 30-PSI pressure using AIXR 110015 flat spray nozzles. The environmental conditions at the time of herbicide application are given in Table 1. Rainfall in the amount of 0.62 inch was received eleven days after PRE application. . Rainfall received 10 days before and 10 days after herbicide applications is listed in Table 2. Plots received 12.7 inches of rain and 8.25 inches of irrigation water applied by lateral-move overhead sprinklers during growing season.

Weed pressure in this trial was moderate. The dominant species was waterhemp, but there was a blend of many species in the plots. Major weeds consisted of giant foxtail (SETFA), velvetleaf (ABUTH), common waterhemp (AMATA), and common lambsquarters (CHEAL) present at 8, 1, 13, and 3 per square foot.

The preemergence herbicides generally worked very well, and controlled the species they are expected to control.

There was temporary chlorosis after all applications of Ignite 280. It manifested as a mottled chlorosis, and persisted for about a week. It appeared within 8 hours after the C application. Following the B application, there was also some mild necrosis.

Weed control was generally excellent. Where there was no preemergence herbicide applied and only one application of glufosinate, control was lower for some species 14 days after application D.

Soybean yield across all herbicide treatments averaged 54.1 bu/A. Soybean yield in the untreated plots averaged 34.2 bu/A. Soybean yield in the PRE fb EPOST fb LPOST application timing plots averaged 53.4 bu/A. Soybean yield in the two pass programs of either PRE fb MPOST or the EPOST fb LPOST application timings plots averaged 56.6 bu/A. Soybean yield in the one pass at MPost application timing plots averaged 52.4 bu/A.

Weed control ratings and soybean yields are found in Table 3A and 3B.

Table 1. Environmental conditions at the time of herbicide application.

Appl. Date	Air Temperature (F)	Humidity (%)	Wind Speed & direction (mph)	Time of day	Application Timing	Weed and Soybean heights (inches)				
						SETFA	ABUTH	AMATA	CHEAL	SOYBEAN
May 20	65	65	16 S	7:54 am	PRE	NA	NA	NA	NA	NA
June 14	70	63	8 E	5:50 pm	EPOST	3.0	2.0	2.5	3.0	5.0
June 18	77	60	5 SSE	9:16 am	MPOST	6.0	6.0	7.0	4.0	7.0
July 8	77	64	8 SE	10:58 am	LPOST	4.0	4.0	8.0	5.0	17.0

Table 2. Rainfall or Irrigation received 10 days before and after herbicide application.

Appl. Date (May 20)	Amount (in)		Appl. Date (June 14)	Amount (in)		Appl. Date (June 18)	Amount (in)		Appl. Date (July 8)	Amount (in)
May 10	0.11		June 6	0.52		June 9	0.16		July 3	0.25
May 13	0.03		June 9	0.16		June 10	0.06		July 7	1.39
May 15	0.03		June 10	0.06		June 12	0.30		July 13	1.50
May 23	0.17		June 12	0.30		June 14	0.11		July 16	0.13
May 26	0.17		June 14	0.11		June 15	2.41			
			June 15	2.41		June 19	0.14			
			June 19	0.14		June 20	0.07			
			June 20	0.07		June 14	0.11			
			June 24	0.23		June 15	2.41			
						June 19	0.14			
						June 20	0.07			
						June 24	0.23			

SETFA= Giant foxtail    ABUTH= Velvetleaf    AMATA= Common waterhemp    CHEAL= Common lambsquarters



Table 3A. (cont) Liberty Link Soybean Weed Management (S0940)

Trt No.	Treatment Name	Rate	Rate Unit	Growth Stage	SETFA	AMATA	CHEAL	ABUTH	SETFA	AMATA	ABUTH	CHEAL
					6/18/2009 CONTRO %	6/18/2009 CONTRO %	6/18/2009 CONTRO %	6/18/2009 CONTRO %	7/2/2009 CONTRO %	7/2/2009 CONTRO %	7/2/2009 CONTRO %	7/2/2009 CONTRO %
9	OPTILL	2	OZ/A	PRE	97	97	96	82	96.5	97	97	99
9	IGNITE 280	22	OZ/A	MPOST								
9	AMS	8.5	LB AI/100 GAL	MPOST								
9	IGNITE 280	22	OZ/A	LPOST								
9	AMS	8.5	LB AI/100 GAL	LPOST								
10	PREFIX	2	PT/A	PRE	97	99	99	28	99	99	93	99
10	IGNITE 280	22	OZ/A	MPOST								
10	AMS	8.5	LB AI/100 GAL	MPOST								
10	IGNITE 280	22	OZ/A	LPOST								
10	AMS	8.5	LB AI/100 GAL	LPOST								
11	VALOR XLT	3	OZ/A	PRE	74	97	99	93	97	96	97	99
11	IGNITE 280	22	OZ/A	MPOST								
11	AMS	8.5	LB AI/100 GAL	MPOST								
11	IGNITE 280	22	OZ/A	LPOST								
11	AMS	8.5	LB AI/100 GAL	LPOST								
12	CLASSIC	0.32	OZ/A	PRE	86	98	97	91	98	98	95	99
12	VALOR	2	OZ/A	PRE								
12	HARMONY SG	0.5	OZ/A	PRE								
12	IGNITE 280	22	OZ/A	MPOST								
12	AMS	8.5	LB AI/100 GAL	MPOST								
12	IGNITE 280	22	OZ/A	LPOST								
12	AMS	8.5	LB AI/100 GAL	LPOST								
13	INTRRO	2.5	QT/A	PRE	97	99	99	82	96	97	96	99
13	SENCOR	0.4	LB/A	PRE								
13	IGNITE 280	22	OZ/A	MPOST								
13	AMS	8.5	LB AI/100 GAL	MPOST								
13	IGNITE 280	22	OZ/A	LPOST								
13	AMS	8.5	LB AI/100 GAL	LPOST								
LSD (P=.05)					22.4	18.3	19.6	27.1	2.65	4.17	3.79	1.41

Table 3B. Liberty Link Soybean Weed Management (S0940)

Trt No.	Treatment Name	Rate	Rate Unit	Growth Stage	SETFA 7/21/2009 CONTRO %	ABUTH 7/21/2009 CONTRO %	AMATA 7/21/2009 CONTRO %	CHEAL 7/21/2009 CONTRO %	SOYBEAN 11/12/2009 YIELD bu/A
1	UNTREATED				0	0	0	0	34.2
2	VALOR	2	OZ/A	PRE	100	100	99	100	51.8
2	IGNITE 280	22	OZ/A	MPOST					
2	AMS	8.5	LB AI/100 GAL	MPOST					
2	IGNITE 280	22	OZ/A	LPOST					
2	AMS	8.5	LB AI/100 GAL	LPOST					
3	VALOR	2	OZ/A	PRE	99	98	96	100	54.8
3	IGNITE 280	36	OZ/A	MPOST					
3	AMS	8.5	LB AI/100 GAL	MPOST					
4	AUTHORITY FIRST	4	OZ/A	PRE	100	100	100	100	54.8
4	IGNITE 280	22	OZ/A	MPOST					
4	AMS	8.5	LB AI/100 GAL	MPOST					
4	IGNITE 280	22	OZ/A	LPOST					
4	AMS	8.5	LB AI/100 GAL	LPOST					
5	AUTHORITY FIRST	4	OZ/A	PRE	97	96	99	100	58.3
5	IGNITE 280	36	OZ/A	MPOST					
5	AMS	8.5	LB AI/100 GAL	MPOST					
6	IGNITE 280	36	OZ/A	MPOST	99	95	85	98	52.4
6	AMS	8.5	LB AI/100 GAL	MPOST					
7	IGNITE 280	22	OZ/A	EPOST	100	99	97	100	56.6
7	AMS	8.5	LB AI/100 GAL	EPOST					
7	IGNITE 280	22	OZ/A	LPOST					
7	AMS	8.5	LB AI/100 GAL	LPOST					
8	SHARPEN	1	FL OZ/A	PRE	100	99	99	100	52
8	IGNITE 280	22	OZ/A	MPOST					
8	AMS	8.5	LB AI/100 GAL	MPOST					
8	IGNITE 280	22	OZ/A	LPOST					
8	AMS	8.5	LB AI/100 GAL	LPOST					
9	OPTILL	2	OZ/A	PRE	100	100	100	100	50.7
9	IGNITE 280	22	OZ/A	MPOST					
9	AMS	8.5	LB AI/100 GAL	MPOST					
9	IGNITE 280	22	OZ/A	LPOST					
9	AMS	8.5	LB AI/100 GAL	LPOST					

Table 3B. (cont) Liberty Link Weed Management (S0940)

Trt No.	Treatment Name	Rate	Rate Unit	Growth Stage	SETFA	ABUTH	AMATA	CHEAL	SOYBEAN
					7/21/2009 CONTRO %	7/21/2009 CONTRO %	7/21/2009 CONTRO %	7/21/2009 CONTRO %	11/12/2009 YIELD bu/A
10	PREFIX	2	PT/A	PRE	100	99	100	100	52.3
10	IGNITE 280	22	OZ/A	MPOST					
10	AMS	8.5	LB AI/100 GAL	MPOST					
10	IGNITE 280	22	OZ/A	LPOST					
10	AMS	8.5	LB AI/100 GAL	LPOST					
11	VALOR XLT	3	OZ/A	PRE	100	100	99	100	55.5
11	IGNITE 280	22	OZ/A	MPOST					
11	AMS	8.5	LB AI/100 GAL	MPOST					
11	IGNITE 280	22	OZ/A	LPOST					
11	AMS	8.5	LB AI/100 GAL	LPOST					
12	CLASSIC	0.32	OZ/A	PRE	100	100	100	100	54.5
12	VALOR	2	OZ/A	PRE					
12	HARMONY SG	0.5	OZ/A	PRE					
12	IGNITE 280	22	OZ/A	MPOST					
12	AMS	8.5	LB AI/100 GAL	MPOST					
12	IGNITE 280	22	OZ/A	LPOST					
12	AMS	8.5	LB AI/100 GAL	LPOST					
13	INTRRO	2.5	QT/A	PRE	99	100	100	100	55.7
13	SENCOR	0.4	LB/A	PRE					
13	IGNITE 280	22	OZ/A	MPOST					
13	AMS	8.5	LB AI/100 GAL	MPOST					
13	IGNITE 280	22	OZ/A	LPOST					
13	AMS	8.5	LB AI/100 GAL	LPOST					
LSD (P=.05)					1.77	2.49	6.9	0.82	4.34