

Glufosinate Tank-mixes With Adjuvants (S0918)

A field study was initiated near Clay Center, Nebraska to evaluate performance of Ignite 280 in tank-mixtures with adjuvants. 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. Corn, Pioneer '34F97' RR2/LL was planted at 29,600 seeds/A on May 6 and emerged on May 18. Herbicides were applied MPOST on June 3. Herbicides were applied with a tractor-mounted sprayer calibrated to deliver 15 gallons of water per acre at 30 PSI using AIXR 110015 flat spray nozzles. The environmental conditions, at the time of herbicide application are given in Table 1. Rainfall received 10 days before and 10 days after herbicide applications is listed in Table 2. Plots received 13.97 inches of rain and 8.25 inches of irrigation water applied by lateral-move overhead sprinklers during growing season.

There was slight crop response from the POST treatments. (data not shown)

Weed species consisted of giant foxtail (SETFA), common waterhemp (AMATA), velvetleaf (ABUTH) and common lambsquarters (CHEAL), at average densities of 2, 4, 3, and 2 plants per square foot.

At 16 DAT, the combination of Laudis + Ignite 280 appeared to increase control of SETFA, AMATA, and CHEAL over that of Ignite 280 or Laudis alone. By 35 DAT, the difference was less evident.

The adjuvants tested did not increase nor decrease control of the broadleaf species at 16 or 35 DAT when both Laudis and Ignite were included in the spray solution. There was greater variability for SETFA, and less control seemed evident from combinations with Destiny HC (16 DAT) and Doubledown (35 DAT).

Overall average corn yield across treatments was 235.7 bu/A. Corn yield in the untreated plots averaged 150.4 bu/A.

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 Corn heights (inches)				
						SETFA	AMATA	ABUTH	CHEAL	CORN
June 3	69	33	10 N	2:13 pm	MPOST	3.0	6.0	3.0	5.0	8.0

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

Appl. Date (June 3)	Amount (in)
May 26	0.17
June 1	0.62
June 2	0.22
June 5	0.16
June 6	0.52
June 9	0.16
June 10	0.06
June 12	0.30

Table 3. Glufosinate tank-mixes with adjuvants (S0918)

Trt No.	Treatment Name	Rate	Rate Unit	Appl Timing	SETFA	AMATA	CHEAL	SETFA	ABUTH	AMATA	CHEAL	ZEAMX
					6/19/2009	6/19/2009	6/19/2009	7/8/2009	7/8/2009	7/8/2009	7/8/2009	11/10/2009
					CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	YIELD
					%	%	%	%	%	%	%	bu/A
					16DAT	16DAT	16DAT	35 DA-A	35 DA-A	35 DA-A	35 DA-A	160 DA-A
7	IGNITE 280	450	g AI/ha	MPOST	89	95	99	84	97	94	94	248.5
7	LAUDIS	92.1	g AI/ha	MPOST								
7	GARDIAN PLUS	1300	g AI/ha	MPOST								
8	IGNITE 280	450	g AI/ha	MPOST	93	98	100	91	98	98	100	238.7
8	LAUDIS	92.1	g AI/ha	MPOST								
8	HEL-FIRE	316	g AI/ha	MPOST								
8	GROUNDED	1400	g AI/ha	MPOST								
9	IGNITE 280	450	g AI/ha	MPOST	77	96	99	74	97	96	98	232.9
9	LAUDIS	92.1	g AI/ha	MPOST								
9	DOUBLEDOWN	350	g AI/ha	MPOST								
10	IGNITE 280	450	g AI/ha	MPOST	93	98	100	91	98	98	100	237.2
10	LAUDIS	92.1	g AI/ha	MPOST								
10	REQUEST	240	g AI/100 L	MPOST								
10	GROUNDED	1400	g AI/ha	MPOST								
11	UNTREATED				0	0	0	0	0	0	0	150.4
12	IGNITE 280	450	g AI/ha	MPOST	71	97	99	85	99	96	98	239.8
12	LAUDIS	92.1	g AI/ha	MPOST								
12	DESTINY HC	0.5	% V/V	MPOST								
12	AMS	1680	g AI/ha	MPOST								
LSD (P=.05)					19.7	9	8.8	14.7	2.7	2.9	5.8	23.08