2009 Ignite 280 for burndown in RR soybean (L0940).

A field study was initiated near Lincoln, Nebraska to evaluate glufosinate for burndown of winter annual weeds, alone and with tank-mix partners. The experimental design was a randomized complete block with three replications. Plots were 10 feet wide by 30 feet long and located on a Sharpesburg silty clay loam soil with an organic matter of 3.1 % and a pH of 6.6. Asgrow '2903' soybeans were planted on May 11. Soybeans emerged on May 22. Preplant herbicides were applied on May 5, and early post herbicides on June 4. Herbicides were applied with a tractor mounted sprayer calibrated to deliver 15 gallons per acre at 40 psi with Teejet 110015 AIXR nozzles. The environmental conditions at the time of spraying are given in Table 1. Rainfall received April 28 – June 14 is listed in Table 2.

Major weeds consisted of henbit (Lamium amplexicaule), tansy mustard (Descurainia pinnata), marestail (Conyza Canadensis), velvetleaf (Abuthilon theophrasti), sunflower (Helianthus annuus), and Palmer amaranth (Amaranthus palmeri) species at average densities of 10, 5, 10, 2 and 3 plants/ft^2. Weed densities were taken at the time of spraying in the center of the plot, two ft^2 samples were taken. Plots were evaluated using visual ratings. Horseweed was the most prevalent and obvious winter annual species at the burndown application timing. Control of henbit and tansymustard was generally excellent. Control of horseweed was variable. Ignite 280 alone was less effective at controlling horseweed than Roundup alone, Gramoxone alone, or Ignite+2,4-D or Ignite+Valor XLT or Ignite+Sharpen. A tank-mix partner with Roundup did not increase horsweed control. Control of common sunflower was also least with Ignite alone compared to all other treatments tested.

Table 1. Environmental conditions at the Time of Herbicide Application.

Date	Air Temperature (F)	Soil Temperature At 4 in (F)	Humidity	Wind Speed & direction (mph)	Time of Day	Application Timing	Weed Heights inches					
							LAMAM	DESPI	CONCA	ABUTH	HELAN	AMAPA
May 5	68	63	62	10 SW	2:00 pm	PP	4	14	3	0	0	0
June 4	70	74	26	3 S	12:30 am	EPOST	NA	NA	12	4	5	2

Table 2. Rainfall received April 28 – June 14.

Date	Amount (in)
May 6	0.11
May 8	0.08
May 12	0.14
May13	0.39
May 27	0.68
June 1	0.27
June 2	0.21
June 6	1.14
June 7	0.83
June 8	0.06
June 12	0.47

Table 3. Ignite for burndown in RR soybean

Treatment	Rate	Unit	Application Timing	Henbit CONTROL % 5/19/09	T Mustrd CONTROL % 5/19/09	Marestl CONTROL % 5/19/09	Velvetlf CONTROL % 5/19/09	Marestl CONTROL % 6/4/09	Velvetlf CONTROL % 6/4/09	Sunflwr CONTROL % 6/4/09	Velvetlf CONTROL % 7/23/09	Palmr amth CONTROL % 7/23/09	Sunflwr CONTROL % 7/23/09	Marestll CONTROL % 7/23/09	YIELD bu/acre
Untreated				0	0	0	0	0	0	0	0	0	0	0	12
IGNITE + AMS	22	oz/a	PP	93.3	95	61.7	85	53.3	80	76.7	92.7	89.7	94.3	90	33.3
Roundup PowerMAX + AMS	22	oz/a	EPOST												
Roundup PowerMAX + AMS	22	oz/a	MPOST												
IGNITE + AMS	29	oz/a	PP	97.7	97.7	66.7	96	65	90	73.3	99	95	86.3	94.7	28.7
Roundup PowerMAX + AMS	22	oz/a	EPOST												
Roundup PowerMAX + AMS	22	oz/a	MPOST												
IGNITE + AMS	29	oz/a	PP	97.7	97.7	94.7	96	91.7	94.7	88	93.3	81.7	86.3	97.7	29.3
2,4-D ester	1	pt/a	PP												
Roundup PowerMAX + AMS	22	oz/a	EPOST												
Roundup PowerMAX + AMS	22	oz/a	MPOST												
IGNITE + AMS	29	oz/a	PP	99	99	97.7	99	86.3	97.7	97.7	96	97.7	99	97.7	28.7
Valor XLT	3	oz/a	PP												
Roundup PowerMAX + AMS	22	oz/a	EPOST												
Roundup PowerMAX + AMS	22	oz/a	MPOST												
IGNITE + AMS	29	oz/a	PP	91.3	99	88.3	96.3	76.7	93.3	86.7	96	90	94.7	99	27.7
Sharpen	1	oz/a	PP												
Roundup PowerMAX + AMS	22	oz/a	EPOST												
Roundup PowerMAX + AMS	22	oz/a	MPOST												
IGNITE + AMS	22	oz/a	PP	97.7	96.3	80	96.3	70	85	88.3	94.7	90	96.3	94.7	34.5
Roundup PowerMAX	22	oz/a	PP												
Roundup PowerMAX + AMS	22	oz/a	EPOST												
Roundup PowerMAX + AMS	22	oz/a	MPOST												

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Roundup PowerMAX + AMS	22	oz/a	PP	99	99	91.3	92.7	93.3	93.3	94.7	96	91.3	90	96	35
Roundup PowerMAX + AMS	22	oz/a	EPOST												
Roundup PowerMAX + AMS	22	oz/a	MPOST												
Sharpen	1	oz/a	PP	99	99	96	99	88.3	93	92.7	99	86.7	91.3	97.7	37.1
Roundup PowerMAX + AMS	22	oz/a	PP												
Roundup PowerMAX + AMS	22	oz/a	EPOST												
Roundup PowerMAX + AMS	22	oz/a	MPOST												
Roundup PowerMAX + AMS	22	oz/a	PP	99	99	99	99	95	96.3	96.3	99	99	96.3	97.7	28.2
Valor XLT	3	oz/a	PP												
Roundup PowerMAX + AMS	22	oz/a	EPOST												
Roundup PowerMAX + AMS	22	oz/a	MPOST												
Gramoxone Inteon + NIS	2.5	pt/a	PP	93	92.7	83	94.7	83.3	91.7	91.7	92.7	94.3	89.7	99	31
Roundup PowerMAX + AMS	22	oz/a	EPOST												
Roundup PowerMAX + AMS	22	oz/a	MPOST												
LSD (P=.05)				6.47	6.07	26.1	9.43	25.16	13.52	19.98	9.46	10.61	11.44	6.85	12.12