2009 Tackle for burndown and postemergence application in soybean (L0939).

A field study was initiated near Lincoln, Nebraska to measure crop response and weed control efficacy to formulations of glyphosate+imazethapyr applied preplant and early post. 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 April 23, preemergent herbicides on May 12, 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 April13 – June 14 is listed in Table 2.

Major weeds consisted of marestail (Conyza Canadensis), velvetleaf (Abuthilon theophrasti), sunflower (Helianthus annuus), and lambsquarter (Chenopodium album) species at average densities of 5, 10, and 5 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. Two applications of Tackle at 1 lb ai/a provided greater control of horseweed, velvetleaf, and common lambsquarters than one application. Control of sunflower was not affected. Control with two applications of tackle was equivalent to a burndown of GLYPHOS X-TRA followed by a POST of Extreme. A POST of Tackle at 2 lb ai/a was as effective as a split application, in terms of weed control.

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			
							CONCA	ABUTH	HELAN	CHEAL
April 23	80	66	45	9 S	1:00 pm	PP	3	0	0	1
May 12	63	63	72	9 S	11:30 am	PRE	6	1	0	0
June 4	70	74	26	3 S	11:30 am	EPOST	15	2	3	10

Table 2. Rainfall received April13 – June 14.

Date	Amount (in)	Date	Amount (in)
April 13	0.09	June 8	0.06
April 18	0.34	June 12	0.47
April 26	0.59		
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		

Table 3. Tackle for burndown and postemergence application in soybean.

Treatment	Rate	Unit	Application Timing	Marestl CONTROL % 5/6/09	Velvetlf CONTROL % 5/6/09	Sunflwr CONTROL % 5/6/09	Lambqtr CONTROL % 5/6/09	Marestl CONTROL % 6/4/09	Velvetlf CONTROL % 6/4/09	Sunflwr CONTROL % 6/4/09	Lambqtr CONTROL % 6/4/09	Marestl CONTROL % 6/18/09	Velvetlf CONTROL % 6/18/09	Sunflwr CONTROL % 6/18/09	Lambqtr CONTROL % 6/18/09	YIELD bu/acre
TACKLE	1.0313	lb ai/a	PP	86.7	85	97.7	99	76.7	90	95	99	66.7	60	91.7	70	27.1
AMS + NIS			PP													
TACKLE	1.0313	lb ai/a	PP	93	84.7	97.7	99	88	94.7	96.3	99	96.3	99	99	99	37.5
AMS + NIS			PP													
TACKLE	1.0313	lb ai/a	EPOST													
AMS + NIS			EPOST													
TACKLE	1.0313	lb ai/a	PP	97.7	96	99	99	97.7	99	99	99	91.7	99	93.3	99	32.4
AMS + NIS	2	% w/w	PP													
CHA-019	1.13	lb ai/a	PRE													
GLYFOS X-TRA	1	lb ai/a	PP	83.3	86.7	84.7	92.7	68.3	73.3	83.3	92.7	93.3	96	91.7	99	40.5
AMS			PP													
TACKLE	1.0313	lb ai/a	EPOST													
AMS + NIS			EPOST													
GLYFOS X-TRA	1	lb ai/a	PP	83.3	79.7	93.3	99	60	60	88.3	99	93	99	94.7	99	39.2
EXTREME	0.81	lb ai/a	EPOST													
AMS + NIS			EPOST													
TACKLE	2.026	lb ai/a	EPOST	0	0	0	0	0	0	0	0	90	99	96	99	37
AMS + NIS			EPOST													
LSD (P=.05)				9.17	17.36	15.84	8.15	22.06	32.41	16.87	8.15	9.32	3.86	5.03	0	19.95