Fall and spring treatments for dandelion control in soybean. Woodburn, IN, 2003-2004. Dewell, Reece A., J. Earl Creech, William G. Johnson, and Vince Davis. A field study was conducted to evaluate various fall and spring-applied herbicide combinations for dandelion control in soybean. The study was conducted on a Hoytville-Nappanee silt loam/silty clay loam soil with 3% organic matter in a cooperator's field near Woodburn, IN, about 5 to 10 miles ENE of Fort Wayne, IN. Treatments were arranged in a randomized complete block with four replications. Individual plot dimensions were 10 by 30 feet. Beck's 323RR soybean was planted 1. 5 inches deep into a no-till seedbed on May 6 in 15-inch rows, at a population of 175,200 seeds/acre. Fall burndown (FALBD) and spring burndown (SPRBD) herbicide treatments were applied with a CO_2 backpack sprayer delivering 15 gpa and equipped with XR8002 flat fan nozzles. A late postemergence (LPOST) maintenance treatment of glyphosate(WMAX) at 0.77 lb ae/a was applied over the entire study area, including non-treated checks, using a 4-wheeler on June 4. Application dates, weed growth stage, and weather data are listed below:

Date	Nov 17, 2003	Apr 20, 2004
Treatment	FALBD	SPRBD
Temperature		
Air (F)	52	61
Soil (F)	46	54
Soil moisture	moist	dry surface
Wind (mph)	4 to 5	5 to 10
Cloud cover (%)	100	100
Relative humidity (%)	85	55
Precipitation		
Prior week (inch)	0.17	0
Week 1 (inch)	1.54	0.29
Week 2 (inch)	0.38	1.11
Corn (inch)	na	na
Dandelion (rosettes)	2 to 8 inch	3 to 12 inch
Dandelion (density)	11 to 15 / m^2	9 to 36 / m^2

FALBD treatments containing flumioxazin or chlorimuron provided 76 to 89% control of dandelion on May 20. Control was less than 64% for treatments with imazaquin. All SPRBD treatments controlled dandelion greater than 62% at the May 20 rating. Glyphosate alone controlled dandelion 70 to 71%. The addition of 2,4-D to glyphosate + flumioxazin increased control from 68% to 90% over glyphosate + flumioxazin alone. All treatments containing paraquat provided 91% dandelion control or greater with the exception of paraquat + metribuzin + 2,4-D (68%). Imazethapyr based treatments resulted in the lowest control of SPRBD treatments 30 DAT. The LPOST application of glyphosate generally increased control numerically of all FALBD and SPRBD treatments on July 1 and appeared to be of especially great benefit to those treatments with lower control on May 20. (Dept. Botany and Plant Pathology, Purdue University, West Lafayette, IN).

Table. Fall and spring treatments for dandelion control in soybean. Woodburn, IN, 2003-2004. (Dewell, Creech, Johnson, and Davis).

Treatment[a]	Rate	Application[b]	TAROF 5/20[c]	TAROF 7/1[d]	TAROF 10/7[e]
	(lb/A)		%	%	# / 75 ft^2
Flumioxazin + dicamba&2,4-D(STAR) + tribenuron +NIS + AMS	0.064+0.188&0.538+0.0047 +0.25%+2.5	FALBD	78	85	51
Flumioxazin + dicamba&2,4-D(STAR) + tribenuron +NIS + AMS	0.064+0.25&0.72+0.0047 +0.25%+2.5	FALBD	80	84	26
Flumioxazin + dicamba&2,4-D(LAW) + tribenuron +NIS + AMS	0.064+0.2&0.27+0.0047 +0.25%+2.5	FALBD	76	83	25
Glyphosate(WMAX) + AMS	0.77+2.5	SPRBD	71	80	52
Glyphosate(WMAX) + AMS	1.16+2.5	SPRBD	70	76	65
Glyphosate(WMAX) + 2,4-D(EH) + AMS	0.77+0.5+2.5	SPRBD	78	81	35
Glyphosate(WMAX) + 2,4-D(EH) + AMS	0.77+1.0+2.5	SPRBD	83	92	34
Glyphosate(WMAX) + flumioxazin + AMS	0.77+0.064+2.5	SPRBD	68	81	18
Glyphosate(WMAX) + flumioxazin + 2,4-D(EH) + AMS	0.77+0.064+0.5+2.5	SPRBD	90	93	4
Glyphosate(WMAX) + carfentrazone + AMS	0.77+0.0078+2.5	SPRBD	75	79	54
Glyphosate(WMAX) + carfentrazone + 2,4-D(EH) +AMS	0.77+0.0078+0.5 +2.5	SPRBD	68	83	48
Glyphosate(WMAX) + chlorimuron + sulfentrazone +AMS	0.77+0.021+0.102 +2.5	SPRBD	86	90	31
Glyphosate(WMAX) + chlorimuron + sulfentrazone +2,4-D(EH) + AMS	0.77+0.021+0.102 +0.5+2.5	SPRBD	85	90	22
Paraquat + chlorimuron + sulfentrazone +AMS	0.487+0.021+0.102 +2.5	SPRBD	92	91	20
Paraquat + chlorimuron + sulfentrazone +2,4-D(EH) + AMS	0.487+0.021+0.102 +0.5+2.5	SPRBD	96	95	9
Paraquat + metribuzin + 2,4-D(EH) + COC + AMS	0.487+0.375+0.5+1.0%+2.5	SPRBD	68	86	15
Paraquat + chlorimuron + sulfentrazone +metribuzin + COC + AMS	0.487+0.021+0.102 +0.187+1.0%+2.5	SPRBD	91	94	17
Paraquat + chlorimuron + sulfentrazone +metribuzin + 2,4-D(EH) + COC + AMS	0.487+0.021+0.102 +0.187+0.5+1.0%+2.5	SPRBD	95	92	12
Imazaquin + 2,4-D(EH) + COC + AMS	0.092+0.5+1.0%+2.5	FALBD	49	71	62
Imazaquin + sulfentrazone + 2,4-D(EH) + COC + AMS	0.092+0.187+0.5+1.0%+2.5	FALBD	64	80	37
Imazaquin&glyphosate + 2,4-D(EH) + COC + AMS	0.093&0.56+0.5+1.0%+2.5	FALBD	58	81	42
Imazethapyr + 2,4-D(EH) + COC + AMS	0.0625+0.5+1.0%+2.5	SPRBD	62	76	52
Imazethapyr + sulfentrazone + 2,4-D(EH) +COC + AMS	0.0625+0.187+0.5 +1.0%+2.5	SPRBD	64	81	25
Imazethapyr&glyphosate + 2,4-D(EH) + COC + AMS	0.0635&0.56+0.5+1.0%+2.5	SPRBD	66	82	39
Chlorimuron + tribenuron + 2,4-D(EH) + COC + AMS	0.0234+0.007+0.5+1.0%+2.5	FALBD	86	94	14
Chlorimuron + sulfentrazone + tribenuron +2,4-D(EH) + COC + AMS	0.0203+0.103+0.007 +0.5+1.0%+2.5	FALBD	79	89	23
Chlorimuron + tribenuron + 2,4-D(EH) + COC + AMS	0.0156+0.0047+0.5+1.0%+2.5	FALBD	89	92	8
Chlorimuron + sulfentrazone + tribenuron +2,4-D(EH) + COC + AMS	0.0147+0.073+0.0047 +0.5+1.0%+2.5	FALBD	82	91	15
Non-treated Check			--	72	127
LSD (0.05)			13	10	36

[a] Treatments: Dicamba&2,4-D(STAR) = Range Star from Albaugh; NIS = Preference nonionic surfactant from Agriliance, LLC. (90% NIS blend containing soybean based fatty acid and alcohol ethoxylates); AMS = S-Sul sprayable ammonium sulfate from Agriliance, LLC; Dicamba&2,4-D(LAW) = Outlaw from Albaugh; Glyphosate(WMAX) = Roundup Weathermax from Monsanto; 2,4-D(EH) = ethylhexyl ester; COC = Prime Oil crop oil concentrate from Agriliance, LLC. (83% paraffin base petroleum oil).

[b] Late postemergence (LPOST) maintenance application was made on 06/04/2004 to the entire study area, including nontreated checks: glyphosate(WMAX) (0.77 lb ae/a) + AMS (2.5 lb/A)

[c] Evaluation (May 20) is 185 DAT – FALBD and 30 DAT – SPRBD

[d] Evaluation (July 1) is 227 DAT – FALBD, 72 DAT – SPRBD, and 27 DAT – LPOST (maintenance)

[e] Evaluation (October 7) is 325 DAT – FALBD, 170 DAT – SPRBD, and 125 DAT – LPOST (maintenance)