

Spring dandelion control in corn I. West Lafayette, IN, 2003. Dewell, Reece A., William G. Johnson, Jeff W. Barnes, J. Earl Creech, Vince Davis, and Eric Ott. A field study was conducted to evaluate various herbicide combinations for spring dandelion control in corn. The study was conducted at the Purdue University Agronomy Center for Research and Education, on a Chalmers silty clay loam soil with 4% organic matter. Treatments were arranged in a randomized complete block with four replications. Individual plot dimensions were 5 by 12.5 feet. Dekalb 60-09 glyphosate-resistant corn was planted 1.5 inches deep into a no-till seedbed on May 19 in 30-inch rows, at a population of 30,000 seeds/acre. Preplant burndown, early postemergence (EPOST), and late postemergence (LPOST) herbicide treatments were applied with a CO₂ backback sprayer delivering 20 gpa and equipped with XR8003 flat fan nozzles. A LPOST treatment of dicamba&San 1269H was applied over entire experimental area, including untreated checks. Application dates, weed growth stage, and weather data are listed below:

Date	May 8	June 5	June 25
Treatment	Burndown	EPOST	LPOST
Temperature			
Air (F)	75	75	81
Soil (C)	18	23	26
Soil moisture	wet	moist	dry
Wind (mph)	2	3 to 6	4 to 6
Sky cover (%)	100	30	0
Relative humidity (%)	55	35	72
Precipitation			
Prior week (inch)	3.57	1.61	0.03
Week 1 (inch)	1.67	1.03	0.26
Week 2 (inch)	0.29	2.25	4.72
Corn (inch)	na	1 to 2	12 to 14
Dandelion (rosettes)	8 to 14 inch	8 to 12 inch	10 to 18 inch

Treatments containing paraquat resulted in greater dandelion control at the 14 DAT rating due to rapid burndown activity. Dandelion control increased from 72% to 94% when paraquat was added to the premix of s-metolachlor + mesotrione + atrazine. Similar trends were observed when paraquat was added to s-metolachlor + mesotrione + atrazine + 2,4-D (58% to 95%) and s-metolachlor + atrazine + 2,4-D (39% to 90%). The difference due to adding paraquat was still apparent at 28 DAT with s-metolachlor + atrazine + 2,4-D (50% to 80%), but was not significant with the other two combinations. By June 18 (41 DAT – burndown / 13 DAT – EPOST), dandelion control with treatments containing paraquat was less than observed at the earlier ratings. The largest decrease occurred with the s-metolachlor + atrazine + paraquat + 2,4-D treatment (80% to 53%). At this rating, dandelion control was best (>85%) with treatments containing glyphosate. Very little effect was observed on July 11 (16 DAT – LPOST) in the treatments receiving the dicamba + SAN 1269H combination (except in the untreated checks where control increased from 0 to 60%), but nearly complete control with all treatments prevented a subsequent rating on July 24 (29 DAT – LPOST). At this final rating, all treatments which received EPOST applications provided >88% dandelion control and three of the four treatments containing glyphosate were still providing 90% control. The addition of 2,4-D to the s-metolachlor + atrazine + flumetsulam + clopyralid treatment significantly increased dandelion control at all rating dates. (Dept. Botany and Plant Pathology, Purdue University, West Lafayette, IN).

Table. Spring dandelion control in corn I. West Lafayette, IN, 2003. (Dewell, Johnson, Barnes, Creech, Davis, and Ott).

Treatment	Rate (lb/A)	Application	May 22 (14 DAT- burndown)	June 5 (28 DAT- burndown)	June 18 (41 DAT- burndown)	July 11 (36 DAT- EPOST)
----- TAROF (% Control) -----						
Acetochlor&atrazine/ +2,4-D(EH) ^a	1.0&0.75/ +0.47	burndown/ EPOST	6	8	20 ^c	93
Acetochlor&atrazine/ +2,4-D(EH) ^a	1.0&0.75/ +0.94	burndown/ EPOST	19	5	40 ^c	94
Acetochlor&atrazine/ +flumetsulam&clopyralid+NIS	1.0&0.75/ +0.035&0.09375+0.25%	burndown/ EPOST	6	6	16 ^c	88
Acetochlor&atrazine/ +flumetsulam&clopyralid+2,4-D(EH) ^a	1.0&0.75/ +0.035&0.09375+0.47	burndown/ EPOST	6	5	30 ^c	98
Acetochlor&atrazine/ +clopyralid&2,4-D +flumetsulam&clopyralid	1.0&0.75/ +0.07125&0.375 +0.035&0.09375	burndown/ EPOST	5	5	23 ^c	96
Acetochlor&atrazine/ +clopyralid&2,4-D+2,4-D(EH) ^a	1.0&0.75/ +0.07125&0.375+0.47	burndown/ EPOST	5	6	37 ^c	98
S-metolachlor+isoxaflutole+atrazine +COC/	1.6+0.0625+1.5 +1.6PT/	burndown/ LPOST ^b	52	51	35	35 ^d
S-metolachlor+isoxaflutole+atrazine +2,4-D(EH) ^a +COC/	1.6+0.0625+1.5 +0.47+1.6PT/	burndown/ LPOST ^b	60	83	65	65 ^d
S-metolachlor&mesotrione&atrazine ^e +COC/	2.0&0.2&0.75 +1.6PT/	burndown/ LPOST ^b	72	82	63	61 ^d
S-metolachlor&mesotrione&atrazine ^e +2,4-D(EH) ^a /	2.0&0.2&0.75 +0.47/	burndown/ LPOST ^b	58	90	85	81 ^d
S-metolachlor&mesotrione&atrazine ^e +paraquat+COC/	2.0&0.2&0.75 +0.5+1.6PT/	burndown/ LPOST ^b	94	95	80	70 ^d
S-metolachlor&mesotrione&atrazine ^e +paraquat+2,4-D(EH) ^a +COC/	2.0&0.2&0.75 +0.5+0.47+1.6PT/	burndown/ LPOST ^b	95	95	84	78 ^d
S-metolachlor&atrazine ^f +2,4-D(EH) ^a +COC/	1.25&1.6275 +0.47+1.6PT/	burndown/ LPOST ^b	39	50	52	68 ^d
S-metolachlor&atrazine ^f +paraquat +COC/	1.25&1.6275 +0.5+1.6PT/	burndown/ LPOST ^b	72	65	49	45 ^d
S-metolachlor&atrazine ^f +paraquat+2,4-D(EH) ^a +COC /	1.25&1.6275 +0.5+0.47+1.6PT/	burndown/ LPOST ^b	90	80	53	41 ^d
Acetochlor&atrazine&glyphosate+AMS/	2.0&1.5&0.56+8.3/	burndown/ LPOST ^b	38	74	87	76 ^d
Acetochlor&atrazine&glyphosate +2,4-D(EH) ^a +AMS/	2.0&1.5&0.56 +0.47+8.3/	burndown/ LPOST ^b	74	91	93	90 ^d
S-metolachlor&atrazine ^f +glyphosate(WMAX) ^g +AMS/	1.25&1.6275 +0.77+8.3/	burndown/ LPOST ^b	39	82	92	90 ^d
S-metolachlor&atrazine ^f +2,4-D(EH) ^a +glyphosate(WMAX) ^g +AMS/	1.25&1.6275+0.47 +0.77+8.3/	burndown/ LPOST ^b	51	83	92	90 ^d
S-metolachlor&atrazine ^f +flumetsulam&clopyralid+COC/	1.25&1.6275 +0.035&0.09375+1.6PT/	burndown/ LPOST ^b	24	46	35	60 ^d
S-metolachlor&atrazine ^f +flumetsulam&clopyralid +2,4-D(EH) ^a +COC/	1.25&1.6275 +0.035&0.09375 +0.47+1.6PT/	burndown/ LPOST ^b	49	61	81	93 ^d
Untreated Check		LPOST ^b	0	0	0	-- ^d
LSD (0.05)			12	15	19	14

^a 2,4-D(EH) = ethylhexyl ester^b Late postemergence application (06/25/2003): dicamba&San 1269H (0.125&0.05 lb/A) + NIS (0.25% v/v) + AMS (2 lb/A)^c Evaluation (June 18) is 13 DAT – EPOST^d Evaluation (July 11) is 16 DAT – LPOST^e S-metolachlor&mesotrione&atrazine = Lumax from Syngenta^f S-metolachlor&atrazine = Bicep II Magnum from Syngenta^g Glyphosate(WMAX) = Roundup Weathermax from Monsanto