

Spring treatments for dandelion control in corn. Woodburn, IN, 2004. Dewell, Reece A., William G. Johnson, J. Earl Creech, and Vince Davis. A field study was conducted to evaluate various spring-applied herbicide combinations for dandelion control in corn. 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 5166 corn was planted 1.75 inches deep into a no-till seedbed on April 20 in 30-inch rows, at a population of 30,200 seeds/acre. Spring burndown (SPRBD) and postemergence (6" corn) herbicide treatments were applied with a CO₂ backpack sprayer delivering 15 gpa and equipped with XR8002 flat fan nozzles. Application dates, weed growth stage, and weather data are listed below:

Date	Apr 20, 2004	May 20, 2004
Treatment	SPRBD	POST
Temperature		
Air (F)	53	75
Soil (F)	53	70
Soil moisture	dry	moist
Wind (mph)	8 to 12	5 to 8
Cloud cover (%)	100	100
Relative humidity (%)	61	85
Precipitation		
Prior week (inch)	0.00	1.10
Week 1 (inch)	0.29	1.90
Week 2 (inch)	1.11	2.18
Corn (inch)	na	4 to 6
Dandelion (rosettes)	2 to 12 inch	8 to 16 inch
Dandelion (density)	25 to 120 / m ²	20 to 30 / m ²

The SPRBD treatments containing mesotrione or isoxaflutole provided 79 to 93% control of dandelion on June 4. The treatments that received flufenacet + atrazine SPRBD followed by a POST treatment generally provided less than 50% control on June 4, unless 2,4-D was included in the POST application. On June 18, all treatments provided greater than 80% control, although the low rate of s-metolachlor & mesotrione & atrazine & benoxacor provided lower control than the other treatments. Treatments containing POST treatments foramsulfuron & iodosulfuron and nicosulfuron & rimsulfuron & mesotrione provided 98 to 100% control. In conclusion, it appears that mesotrione based treatments provide good foliar and residual activity on dandelion when applied as SPRBD treatments. In addition, POST treatments containing foramsulfuron & iodosulfuron or nicosulfuron & rimsulfuron provided good overall control. Due to the cool and wet environmental conditions this season, 18 to 33% corn injury was still evident 29 days after post applications of foramsulfuron&iodosulfuron, foramsulfuron&iodosulfuron + dicamba&diflufenzopyr, foramsulfuron&iodosulfuron + mesotrione, and nicosulfuron&rimsulfuron + mesotrione. This injury was represented by stunting and yellow flash. (Dept. Botany and Plant Pathology, Purdue University, West Lafayette, IN).

Table. Spring treatments for dandelion control in corn. Woodburn, IN, 2004. (Dewell, Johnson, Creech, and Davis).

Treatment ^a	Rate (lb/A)	Application	TAROF -----	
			June 4 ^b	June 18 ^c
			----- % -----	
S-metolachlor&mesotrione&atrazine&benoxacor +atrazine+COC+AMS	1.68&0.168&0.626 +1.0+1.0%+2.5	SPRBD	79	82
S-metolachlor&mesotrione&atrazine&benoxacor +COC+AMS	2.0&0.2&0.75 +1.0%+2.5	SPRBD	83	91
S-metolachlor&atrazine&benoxacor + COC + AMS/ +mesotrione + atrazine + COC + UAN(28%)	1.27&1.63+1.6pt+2.5/ +0.094+0.25+1.0%+2.5%	SPRBD/ POST	84	96
S-metolachlor&mesotrione&atrazine&benoxacor(LX) +COC+AMS	1.51&0.201&1.51 +1.0%+2.5	SPRBD	93	98
Flufenacet + atrazine + isoxaflutole +2,4-D(EH) + COC + AMS	0.75+1.0+0.07 +0.5+1.0%+2.5	SPRBD	79	86
Flufenacet + atrazine + isoxaflutole +2,4-D(EH) + COC + AMS/ +foramsulfuron&iodosulfuron +MSO + UAN(28%)	0.75+1.0+0.07 +0.5+1.0%+2.5/ +0.028&0.00188 +1.5pt+1.5qt	SPRBD/ POST	85	100
Flufenacet + atrazine + COC + AMS/ +foramsulfuron&iodosulfuron +MSO + UAN(28%)	0.75+1.0+1.0%+2.5/ +0.028&0.00188 +1.5pt+1.5qt	SPRBD/ POST	47	100
Flufenacet + atrazine + COC + AMS/ +foramsulfuron&iodosulfuron +dicamba&diflufenzopyr +MSO + UAN(28%)	0.75+1.0+1.0%+2.5/ +0.028&0.00188 +0.069&0.0267 +1.5pt+1.5qt	SPRBD/ POST	50	100
Flufenacet + atrazine + COC + AMS/ +foramsulfuron&iodosulfuron + mesotrione +MSO + UAN(28%)	0.75+1.0+1.0%+2.5/ +0.028&0.00188+0.0625 +1.5pt+1.5qt	SPRBD/ POST	43	99
Flufenacet + atrazine + COC + AMS/ +nicosulfuron&rimsulfuron + mesotrione +COC + UAN(28%)	0.75+1.0+1.0%+2.5/ +0.0233&0.0117+0.047 +1.0qt+1.5qt	SPRBD/ POST	40	98
LSD (0.05)			16	9

^a Treatments: COC = Prime Oil crop oil concentrate from Agrilience, LLC. (83% paraffin base petroleum oil); AMS = S-Sul sprayable ammonium sulfate from Agrilience, LLC; S-metolachlor&mesotrione&atrazine&benoxacor(LX) = Lexar (or A14244) from Syngenta; 2,4-D(EH) = ethylhexyl ester; MSO = Destiny modified vegetable oil and nonionic surfactant blend from Agrilience, LLC. (99.6% methylated seed oil, soybean oil, alkylphenol ethoxylate).

^b Evaluation (June 4) is 45 DAT – SPRBD, and 15 DAT – POST

^c Evaluation (June 18) is 59 DAT – SPRBD, and 29 DAT – POST