

Winter annual weed control with fall and spring applied herbicides. Horky, Kevin T. and Alex R. Martin. A field study was conducted to evaluate the efficacy of herbicide programs for winter annual weeds in no-tillage systems. A randomized complete block design with three replications per treatment was utilized. The study was conducted on a Sharpsburg silty clay loam with 2.4 % organic matter and a pH of 6.9. Individual plots consisted of six 30-inch rows, each 30 feet long. Treatments were applied with a tractor-mounted sprayer traveling 3.0 mph. Application, weather and weed data are presented below:

Date	November 13	March 12
Treatment	Fall	Spring
Sprayer		
gpa	15	15
psi	30	30
Temperature (C)		
air	7	8
soil (4 inch)	6	2
Soil moisture	adequate	adequate
Wind (mph)	5	6
Sky (% cloudy)	100	0
Relative		
humidity(%)	51	25
Henbit		
height (cm)	4	7
infestation (m ²)	50	50
Shepherdspurse		
height (cm)	2	10
infestation (m ²)	5	5
Field pennycress		
height (cm)	3	8
infestation (m ²)	10	10

Summary Comments: Fall applied treatments provided significantly better winter annual weed control than spring treatments. Control of henbit, shepherdspurse, and field pennycress with fall treatments was excellent. Results of the study are summarized in the following table. (Dept of Agronomy and Horticulture, University of Nebraska- Lincoln)

Table. Winter annual weed control with fall and spring applied herbicides (Horky and Martin).

Treatment	Application		---LAMAM---	---CAPBP---	---THLAR---
	Rate	Timing	3/29	3/29	3/29
	(lb/a)		-----% Weed Control-----		
2,4-D ¹	1.0	FALL	93	92	98
2,4-D	0.5	FALL	90	88	96
2,4-D+	0.5	FALL	96	96	99
dicamba	0.25				
2,4-D+	0.5	FALL	90	92	99
dicamba	0.125				
Glyphosate ² +	0.77	FALL	98	98	99
AMS ³	2.55				
Glyphosate+	0.6	FALL	93	98	99
AMS	2.55				
Glyphosate+	0.386	FALL	96	99	99
2,4-D+	0.5				
AMS	2.55				
2,4-D	1.0	SPRING	88	87	91
2,4-D	0.5	SPRING	75	77	85
2,4-D+	0.5	SPRING	82	85	87
dicamba	0.25				
2,4-D+	0.5	SPRING	82	85	87
dicamba	0.125				
Glyphosate+	0.77	SPRING	92	92	95
AMS	2.55				
Glyphosate+	0.6	SPRING	93	95	95
AMS	2.55				
Glyphosate+	0.386	SPRING	88	92	95
2,4-D+	0.5				
AMS	2.55				
Imazethapyr&	0.064	SPRING	90	90	93
glyphosate+	0.75				
NIS ⁴	0.25% v/v				
Chlorimuron+	0.018	SPRING	83	83	82
sulfentrazone	0.088				
Chlorimuron+	0.035	SPRING	91	82	90
sulfentrazone	0.176				
LSD (P=0.05)			8	8	8

¹2,4-D = 2,4-D Ester²Glyphosate = 'Roundup Weathermax' by Monsanto³AMS = 'N- PAK' by Agrilliance⁴NIS = 'Preference' by Agrilliance