

## Weed Control in Reduced Tillage Corn

Weed control in no-till corn. Horky, Kevin T. and Alex R. Martin. A field study was conducted to evaluate the efficacy of weed control programs in no-till corn. A randomized complete block design with three replications per treatment was utilized. The study was conducted on a Sharpsburg silty clay loam with 3.2% organic matter and a pH of 6.6. Individual plots consisted of six 30-inch rows, each 30 feet long. 'Delkalb 6019RR' corn was planted May 6 at a population of 22,000 seeds per acre. Treatments were applied with a tractor-mounted sprayer at a speed of 3.0 mph. EPP treatments were applied 22 days before planting, PP treatments were applied 12 day before planting, EPOST treatments applied 17 days after planting, and MPOST treatments were applied 31 days after planting. Application, crop, weed, and environmental data are presented below.

Date	April 15	April 25	May 23	June 7
Treatment	EPP	PP	EPOST	MPOST
Sprayer				
gpa	15	15	15	15
psi	30	30	30	30
Temperature (°C)				
air	15	17	23	26
soil (4 inch)	10	10	19	19
Soil Moisture	adequate	adequate	adequate	adequate
Wind (mph)	3	9	2	2
Sky (% cloudy)	100	10	30	100
Relative humidity (%)	54	51	34	65
Precip. After appl. (inches)				
week 1	1.08	0.15	0.15	1.25
week 2	0.15	0.01	2.59	0
Corn				
stage	--	--	V2	V6
height (cm)	--	--	8	35
Henbit				
height (cm)	10	15	--	--
infestation (m <sup>2</sup> )	30	30	--	--
Shepherds-purse				
height (cm)	30	33	--	--
infestation (m <sup>2</sup> )	5	6	--	--
Tansy mustard				
height (cm)	25	27	--	--
infestation (m <sup>2</sup> )	5	5	--	--
Field pennycress				
height (cm)	25	34	39	--
infestation (m <sup>2</sup> )	5	5	5	--
Velvetleaf				
height (cm)	--	--	5	20
infestation (m <sup>2</sup> )	--	--	5	5
Palmer amaranth				
height (cm)	--	--	2	10
infestation (m <sup>2</sup> )	--	--	4	6
Common sunflower				
height (cm)	--	--	10	25
infestation (m <sup>2</sup> )	--	--	4	4
Green foxtail				
height (cm)	--	--	10	20
infestation (m <sup>2</sup> )	--	--	6	10

Summary comments: Control of winter annuals with EPP treatments was excellent except with 2,4-D. Most treatments provided excellent control of summer annuals. Results of the study are summarized in the following table. (Dept. of Agronomy and Horticulture, University of Nebraska-Lincoln)

Table. Weed control in no-till corn (Horky and Martin).

Treatment	Application		LAMAM	CAPBP	DESPI	THLAR	----ABUTH----		----AMAPA----		----HELAN----		----SETVI----	
	Rate	Timing	5/2	5/2	5/2	5/2	6/14	6/28	6/14	6/28	6/14	6/28	6/14	6/28
	(lb/a)		-----% Weed Control-----											
2,4-D <sup>1</sup> +	0.25	EPP/	73	72	68	72	96	95	95	95	99	99	91	86
COC <sup>2</sup> /	1 % v/v													
glyphosate+	0.77	MPOST												
AMS <sup>3</sup>	2.55													
Glyphosate+	0.77	EPP/	99	99	99	99	98	96	98	98	99	99	98	98
AMS/	2.55													
glyphosate+	0.77	MPOST												
AMS	2.55													
Atrazine&	1.61	EPOST	0	0	0	0	98	98	99	99	99	99	99	99
s-metolachor&	1.31													
glyphosate	0.76													
Acetochlor&	2.1	EPOST	0	0	0	0	99	99	99	99	99	99	99	99
atrazine&	1.5													
glyphosate	0.56													
2,4-D+	0.25	PP	99	99	99	99	90	83	88	85	88	83	88	83
s-metolachor&	1.1													
atrazine&	1.63													
benoxacor+														
COC	1 % v/v													
S-metolachor&	1.5	PP	99	99	99	99	96	96	96	96	90	88	96	95
atrazine&	1.93													
benoxacor+														
isoxaflutole+	0.047													
COC	1 % v/v													
Atrazine+	1.1	PP	99	99	99	99	95	93	96	96	96	93	96	95
isoxaflutole+	0.094													
COC	1 % v/v													
Acetochlor&	2.1	PP/	99	94	96	98	98	96	98	98	99	99	96	95
atrazine&	1.5													
glyphosate+	0.56													
AMS/	2.55													
glyphosate+	0.77	MPOST												
AMS	2.55													
S-metolachor&	1.5	PP/	99	99	99	99	99	99	99	99	99	99	98	96
atrazine&	1.93													
benoxacor+														
2,4-D+	0.25													
COC/	1 % v/v													
mesotrione+	0.094	MPOST												
atrazine+	0.25													
COC	1 % v/v													
Isoxaflutole+	0.047	PP/	99	99	99	99	99	99	99	99	99	99	98	96
atrazine+	1.1													
2,4-D+	0.25													
COC/	1.65 %v/v													
glyphosate+	0.77	MPOST												
AMS	2.55													

(continued)

**Table. Weed control in no-till corn (Horky and Martin), continued.**

Treatment	Application		LAMAM	CAPBP	DESPI	THLAR	----ABUTH----		----AMAPA----		----HELAN----		----SETVI----	
	Rate	Timing	5/2	5/2	5/2	5/2	6/14	6/28	6/14	6/28	6/14	6/28	6/14	6/28
	(lb/a)		-----% Weed Control-----											
Atrazine+	1.1	PP/	99	99	99	99	98	98	99	99	99	99	98	98
2,4-D+	0.25													
COC/	1.65 %v/v													
glyphosate+	0.77	MPOST												
AMS	2.55													
LSD (P=.05)			3	4	3	2	4	6	4	4	7	7	6	8

<sup>1</sup>2,4-D = '2,4-D ester' by Agrilience<sup>2</sup>COC = 'Prime Oil' by Agrilience<sup>3</sup>AMS = 'N-PAK' by Agrilience