No-till weed control in corn. Horky, Kevin T. and Alex R. Martin. A field study was conducted to evaluate 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 3.0% organic matter and a pH of 6.7. Individual plots consisted of six 30-inch rows, each 30 feet long. 'Dekalb 6017RR' corn was planted June 4 at a population of 20,600 seeds per acre. Treatments were applied with a tractor-mounted sprayer traveling 3.0 mph. EPP (early preplant) treatments were applied 20 days before planting, EPOST treatments were applied 21 days after planting and POST treatments were applied 28 days after planting. Application, crop, weed, and environmental data are presented below:

Date	May 15	June 4	June 25	July 2
Treatment	EPP	PRE	EPOST	POST
Sprayer				
gpa	15	15	15	15
psi	30	30	30	30
Temperature (°F)				
Air	61	73	67	80
Soil (4 inch)	59	70	75	82
Soil Moisture	Adequate	Adequate	Adequate	Adequate
Wind (mph)	5	1	7	4
Sky (% cloudy)	100	40	100	0
Relative Humidity (%)	71	40	77	52
Precip. after appl.				
Week 1 (inch)	0.69	1.54	0.36	0.12
Week 2 (inch)	0.04	2.13	0.04	0.63
Prickly Lettuce				
Height (cm)	12	40	40 to 50	50
Infestation (m^2)	5	5	5	5
Horseweed				
Height (cm)	25	50	50	50 to 60
Infestation (m^2)	6	6	6	6
Velvetleaf				
Height (cm)	--	--	4 to 15	20 to 30
Infestation (m^2)	--	--	3	5
Common Sunflower				
Height (cm)	--	--	20	25
Infestation (m^2)	--	--	1	5

Summary comments: Precipitation was adequate until late June when conditions turned very dry. A POST application was required to achieve satisfactory control over prickly lettuce and horseweed. A preemergence glyphosate application followed by an early postemergence application of glyphosate achieved the greatest efficacy. There was no crop injury seen following any of the applications. Results of the study are summarized in the following table. (Dept. of Agronomy and Horticulture, University of Nebraska-Lincoln)

Table. No-till weed control in corn (Horky and Martin).

Treatment	Application		-------LACSE-------		----------ERICA----------			------ABUTH--------		--------HELAN-------	
	Rate	Timing	6/10	7/16	6/10	7/16	7/23	7/16	7/23	7/16	7/23
	(lb/A)		----------% weed control----------								
Rimsulfuron&	0.01	EPP/	40	93	47	93	93	99	99	94	93
thifensulfuron+	0.005										
dicamba+	0.06										
atrazine/	0.25										
nicosulfuron&	0.023	POST									
rimsulfuron+	0.012										
mesotrione+	0.047										
atrazine+	0.5										
COC[1]+	1qt										
AMS[2]	2										
S-metolachlor&	1.116	PRE	45	43	50	46	42	.	.	.	.
glyphosate&	0.648										
atrazine+	1.374										
AMS	2										
S-metolachlor&	1.395	PRE	43	40	47	44	41	.	.	.	.
glyphosate&	0.81										
atrazine+	1.718										
AMS	2										
Acetochlor&	2	PRE	40	38	43	41	40	.	.	.	.
atrazine&	1.5										
glyphosate+	0.56										
AMS	2										
Glyphosate+	0.78	PRE	50	47	60	58	55	.	.	.	.
AMS	2										
S-metolachlor&	0.93	EPOST	.	92	.	86	87	96	95	95	94
glyphosate&	0.54										
atrazine	1.145										
S-metolachlor&	1.116	EPOST	.	91	.	93	92	93	92	95	94
glyphosate&	0.648										
atrazine	1.374										
Acetochlor&	2	EPOST	.	95	.	96	96	95	94	96	95
atrazine&	1.5										
glyphosate	0.56										
Glyphosate+	0.78	EPOST	.	87	.	96	93	95	94	96	95
AMS	2										
Glyphosate+	0.78	PRE/	63	99	62	99	99	99	99	99	99
AMS/	2										
Glyphosate+	0.585	EPOST									
AMS	2										
Carfentrazone+	0.006	PRE	60	58	60	59	57	.	.	.	.
2,4-D[3]+	0.125										
S-metolachlor&CGA-154281&	1.26										
atrazine+	1.63										
COC	1qt										
Carfentrazone+	0.006	PRE	72	71	72	70	68	.	.	.	.
2,4-D+	0.125										
glyphosate+	0.78										
AMS	2										
2,4-D+	0.125	PRE	65	63	63	61	60	.	.	.	.
S-metolachlor&CGA-154281&	1.26										
atrazine+	1.63										
COC	1qt										
Glyphosate+	0.78	PRE	58	54	63	61	60	.	.	.	.
AMS	2										
S-metolachlor&CGA-154281&	1.5	PRE	40	39	53	51	50	.	.	.	.
atrazine+	1.94										
isoxaflutole+	0.047										
COC	1qt										
Atrazine+	1.1	PRE	46	43	45	43	42	.	.	.	.
isoxaflutole+	0.047										
COC	1qt										
Acetochlor&	2	PRE/	40	93	47	97	98	98	97	98	99
atrazine&	1.5										
glyphosate+	0.56										
AMS/	2										
glyphosate+	0.78	POST									
AMS	2										

(continued)

Table. No-till weed control in corn (Horky and Martin), continued.

Treatment	Application		LACSE		ERICA			ABUTH		HELAN	
	Rate	Timing	6/10	7/16	6/10	7/16	7/23	7/16	7/23	7/16	7/23
	(lb/A)		% weed control								
S-metolachlor&CGA-154281&	1.5	PRE/	67	94	70	96	96	96	96	96	95
atrazine+	1.94										
2,4-D+	0.125										
COC/	1qt										
mesotrione+	0.125	POST									
atrazine+	0.25										
COC	1qt										
2,4-D+	0.125	PRE/	57	80	57	85	85	88	88	91	92
COC+	1qt										
AMS/	2										
glyphosate+	0.78	POST									
AMS	2										
Rimsulfuron&	0.01	EPP/	60	95	75	91	91	95	94	95	96
thifensulfuron+	0.005										
dicamba+	0.063										
atrazine+	0.25										
COC+	1qt										
UAN[4]/	2qt										
nicosulfuron&	0.023	POST									
rimsulfuron+	0.012										
mesotrione+	0.047										
atrazine+	0.25										
COC+	1qt										
AMS	2										
LSD (P=.05)			9	11	16	12	12	7	7	7	7

[1]COC ='Prime Oil' by Agriliance
[2]AMS = 'N PA-K' by Agriliance
[3]2,4-D = 2,4-D Ester
[4]UAN = '28%N' by Agriliance