

## Fall Applied Herbicides in Corn.

00-WF-SWN-140

**OBJECTIVE:** Evaluate fall herbicide applications in tilled and no-till corn.

**SUMMARY:** Peak, applied in the fall, provided the greatest control of wild garlic at planting. Peak, Sencor, Basis Gold, and Princep, applied in the fall, controlled 93% or more of the henbit and mouseear chickweed at planting. Python, applied in the fall, controlled 90 to 100% of the mouseear chickweed at planting. Basis and Princep controlled carolina foxtail and annual bluegrass, 100%, at planting. Peak plus Princep, applied in the fall, controlled 100% of all winter annual weeds at planting. Peak, applied in the fall, caused 3 to 18% corn plant discoloration 28 days after planting (DAP). Peak also caused 15 to 50% height reduction 28 DAP. Discoloration and height reduction increased as rate increased. There were no plant height differences at harvest. There were no differences in plant population 28 DAP. Corn yield ranged from 145 to 178 bu/A. Peak at the highest rate, applied in the fall, reduced yield regardless of tillage.

### HERBICIDES

AATREX 90 WG  
BASIS 75 WG  
PEAK 57 WG  
PRINCEP 90 WG  
PYTHON 80 WG  
ROUNDUP ULTRA 3 SL  
SENCOR 75 WG  
WEEDONE 638 2.8 EC

### WEEDS

BLUEGRASS, ANNUAL  
CHICKWEED, MOUSEEAR  
FOXTAIL, CAROLINA  
GARLIC, WILD  
HENBIT

### CROP

CORN, FIELD

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SOUTHERN ILLINOIS UNIVERSITY

Fall Applied Herbicides in Corn.

Project Code: 00-WF-SWN-140 Location: Belleville Research Center

Investigator: Bryan Young, Assistant Professor, Southern Illinois University

Weed Code	Common Name	Scientific Name
1. ALLVI	GARLIC, WILD	ALLIUM VINEALE L.
2. LAMAM	HENBIT	LAMIUM AMPLEXICAULE L.
3. CERVU	CHICKWEED, MOUSEEAR	CERASTIUM VULGATUM L.
4. ALOCA	FOXTAIL, CAROLINA	ALOPECURUS CAROLINIANUS
5. POAAN	BLUEGRASS, ANNUAL	POA ANNUA

Crop 1:	ZEAMX CORN, FIELD	Variety:	P33G28 LL
Planting Method:	SEEDED	Planting Date:	May-11-00
Rate:	26000 S/A	Depth:	1.5 IN
Row Spacing:	30 INCH		

Plot Width, Unit:	10 FT	Plot Length, Unit:	30 FT	Reps:	4
Tillage Type:	SEE NOTE	Study Design:	SPLIT-PLOT		
Previous Crop, Year:	GLXMA, 1999	Fertilizer applied:	N 110 LB/A, APPLIED 30 LB/A FALL, AND 80 LB/A SPRING.		

Texture:	SILT LOAM	% OM:	1.8	pH:	6.5	CEC:	9
		P <sub>1</sub> :	59 LB/A,	K:	181 LB/A		

#### APPLICATION DESCRIPTION

	A	B	C
Application Date:	Nov-17-99	May-1-00	May-12-00
Time of Day:	11:00	7:00	8:00
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	FALL EPP	EPP7	PRE-BLNKT
Applic. Placement:	BROFOL	BROFOL	BROFOL
Air Temp., Unit:	50 F	76 F	80 F
% Relative Humidity:	70	50	96
Wind Velocity, Unit:	5 MPH	3 MPH	3 MPH
Soil Temp., Unit:	50 F	F	F
Soil Moisture:	DRY	DRY	NORMAL

#### CROP STAGE AT EACH APPLICATION

	A	B	C
Crop 1 Code, Stage:	NA	NA	NA
Height, Unit:	NA	NA	NA

#### WEED STAGE AT EACH APPLICATION

	A	B	C
Weed 1 Code:	ALLVI	ALLVI	
Stage(leaves):	3-4	3-4	
Height(inches):	6-12	10-24	
Density:	MEDIUM	MEDIUM	
Weed 2 Code:	LAMAM	LAMAM	
Stage(leaves):	5-8	10+	
Height(inches):	0-0.5	4-8	
Density:	MEDIUM	MEDIUM	
Weed 3 Code:	CERVU	CERVU	
Stage(leaves):	5-8	10+	
Height(inches):	0-0.5	4-6	
Density:	LOW	MEDIUM	
Weed 4 Code:		ALOCA	
Stage(leaves):		5-6	
Height(inches):		4-8	
Density:		LOW	
Weed 5 Code:		POAAN	
Stage(leaves):		5-6	
Height(inches):		4-8	
Density:		LOW	

#### APPLICATION EQUIPMENT

	A	B	C
Appl. Equipment:	CO, SPRAYER	CO, SPRAYER	CO, SPRAYER
Operating Pressure:	40 PSI	40 PSI	40 PSI
Nozzle Type:	FLAT FAN	FLAT FAN	FLAT FAN
Nozzle Size:	8004	8004	8004
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	24.2 GPA	24.2 GPA	24.2 GPA

#### NOTES:

Harvested Sep-21-00, (2) 30 inch rows by 20 ft.  
TILLAGES ARE NO-TILL AND SPRING-TILL, SEE TREATMENT LIST.

TABLE. FALL APPLIED HERBICIDES IN CORN. PROJECT CODE:00-WF-SWN-140

TREATMENT	FORM.	RATE	UNIT	PROD RATE	APPL TIME	APPL CODE	YIELD	CONTROL								ZEAMX, DAYS AFTER PLANTING						ZEAMX HEIGHT				
								ALLVI			LAMAM			CERVU		ALOCA AT	POAAN AT	HEIGHT			PLANTS 28					
								DA FALL	EPP	AT	DA FALL	EPP	AT	DA FALL	EPP			AT	DISCOLORATION	REDUCTION						
								14	28	PLANT	14	28	PLANT	14	28	PLANT	PLANT	PLANT	14	28	42		28			
1 NO-TILL							170	0	50	38	0	80	100	0	80	98	100	100	0	0	0	0	0	0	26.5	115
1 BASIS	75 WG	0.0234	LB A/A	0.5 OZ/A	FALL EPP	A																				
1 PRIME OIL COC	100 LIQ	1.0	% V/V	1.0 % V/V	FALL EPP	A																				
1 28% UAN	100 LIQ	2.5	% V/V	2.5 % V/V	FALL EPP	A																				
2 NO-TILL							169	0	50	0	0	50	83	0	50	90	0	0	0	0	0	0	0	0	26.0	115
2 PYTHON	80 WG	0.05	LB A/A	1.0 OZ/A	FALL EPP	A																				
2 PRIME OIL COC	100 LIQ	1.0	% V/V	1.0 % V/V	FALL EPP	A																				
2 28% UAN	100 LIQ	2.5	% V/V	2.5 % V/V	FALL EPP	A																				
3 NO-TILL							170	0	0	0	0	50	93	0	50	100	25	25	0	0	0	0	0	0	26.5	115
3 SENCOR	75 WG	0.187	LB A/A	4.0 OZ/A	FALL EPP	A																				
3 PRIME OIL COC	100 LIQ	1.0	% V/V	1.0 % V/V	FALL EPP	A																				
3 28% UAN	100 LIQ	2.5	% V/V	2.5 % V/V	FALL EPP	A																				
4 NO-TILL							177	0	75	0	0	80	100	0	80	99	38	38	0	0	0	0	0	0	26.5	115
4 SENCOR	75 WG	0.187	LB A/A	4.0 OZ/A	FALL EPP	A																				
4 WEEDONE 638	2.8 EC	0.5	LB A/A	1.43 PT/A	FALL EPP	A																				
4 PRIME OIL COC	100 LIQ	1.0	% V/V	1.0 % V/V	FALL EPP	A																				
4 28% UAN	100 LIQ	2.5	% V/V	2.5 % V/V	FALL EPP	A																				
5 NO-TILL							174	0	0	0	0	0	88	0	0	100	100	100	0	0	0	0	0	0	26.8	115
5 PRINCEP	90 WG	1.0	LB A/A	1.11 LB/A	FALL EPP	A																				
6 NO-TILL							166	0	50	100	0	50	95	0	50	98	25	25	0	0	0	0	0	6	26.2	114
6 PEAK	57 WG	0.013	LB A/A	0.365 OZ/A	FALL EPP	A																				
6 PRIME OIL COC	100 LIQ	1.0	% V/V	1.0 % V/V	FALL EPP	A																				
6 28% UAN	100 LIQ	2.5	% V/V	2.5 % V/V	FALL EPP	A																				
7 NO-TILL							153	0	50	100	0	75	99	0	75	100	0	0	0	3	0	0	18	28	25.8	114
7 PEAK	57 WG	0.027	LB A/A	0.76 OZ/A	FALL EPP	A																				
7 PRIME OIL COC	100 LIQ	1.0	% V/V	1.0 % V/V	FALL EPP	A																				
7 28% UAN	100 LIQ	2.5	% V/V	2.5 % V/V	FALL EPP	A																				
8 NO-TILL							145	0	50	100	0	75	100	0	75	100	58	58	0	9	0	0	25	28	26.7	115
8 PEAK	57 WG	0.054	LB A/A	1.52 OZ/A	FALL EPP	A																				
8 PRIME OIL COC	100 LIQ	1.0	% V/V	1.0 % V/V	FALL EPP	A																				
8 28% UAN	100 LIQ	2.5	% V/V	2.5 % V/V	FALL EPP	A																				
9 NO-TILL							176	0	0	0	0	50	100	0	50	100	59	59	0	0	0	0	0	0	26.1	114
9 SENCOR	75 WG	0.187	LB A/A	4.0 OZ/A	FALL EPP	A																				
9 PYTHON	80 WG	0.05	LB A/A	1.0 OZ/A	FALL EPP	A																				
9 PRIME OIL COC	100 LIQ	1.0	% V/V	1.0 % V/V	FALL EPP	A																				
9 28% UAN	100 LIQ	2.5	% V/V	2.5 % V/V	FALL EPP	A																				
10 NO-TILL							166	0	50	99	0	50	100	0	50	100	100	100	0	0	0	0	0	0	27.8	115
10 PEAK	57 WG	0.013	LB A/A	0.365 OZ/A	FALL EPP	A																				
10 PRINCEP	90 WG	1.0	LB A/A	1.11 LB/A	FALL EPP	A																				
10 PRIME OIL COC	100 LIQ	1.0	% V/V	1.0 % V/V	FALL EPP	A																				
10 28% UAN	100 LIQ	2.5	% V/V	2.5 % V/V	FALL EPP	A																				
11 NO-TILL							173	0	0	0	0	50	100	0	80	100	100	100	0	0	0	0	0	0	27.0	115
11 AATREX	90 WG	1.0	LB A/A	1.11 LB/A	FALL EPP	A																				
11 PRIME OIL COC	100 LIQ	1.0	% V/V	1.0 % V/V	FALL EPP	A																				
11 28% UAN	100 LIQ	2.5	% V/V	2.5 % V/V	FALL EPP	A																				
12 NO-TILL							174			50			50			50	50	50	0	0	0	0	0	0	27.0	115
12 ROUNDUP ULTRA	3 SL	0.38	LB AE/A	1.0 PT/A	EPP7	B																				
12 WEEDONE 638	2.8 EC	0.5	LB A/A	1.43 PT/A	EPP7	B																				
13 NO-TILL							168	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27.2	114
13 NONTREATED																										
14 NO-TILL							171	100	100	100	100	100	100	100	100	100	100	100	0	0	0	0	0	0	28.0	116
14 HANDWEEDED																										
15 SPRING TILLAGE							168	0	50	50	0	80	100	0	80	98	100	100	0	0	0	0	0	0	24.8	115
15 BASIS	75 WG	0.0234	LB A/A	0.5 OZ/A	FALL EPP	A																				
15 PRIME OIL COC	100 LIQ	1.0	% V/V	1.0 % V/V	FALL EPP	A																				
15 28% UAN	100 LIQ	2.5	% V/V	2.5 % V/V	FALL EPP	A																				

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