

Fall Herbicide Comparison in Corn - Syngenta.

Project Code: 05-11A-E35 Location: Belleville Research Center
 Investigator: Bryan Young

Investigator: Bryan Young, Associate Professor, Southern Illinois University

City State Zip Country: Belleville IL 62221 USA
Trial Status: Final **Updated:** 11-14-05

Objective:

Evaluate fall applications of corn herbicides.

Weed Code	Common Name	Scientific Name
1. LAMAM	henbit	Lamium amplexicaule L.
2. STEME	chickweed, common	Stellaria media (L.) Vill.
3. ALLVI	garlic, wild	Allium vineale L.
4. RANAB	buttercup, smallflower	Ranunculus abortivus L.
5. AMBTR	ragweed, giant	Ambrosia trifida L.
6. AMBEL	ragweed, common	Ambrosia artemisiifolia L.
7. CHEAL	lambsquarters, common	Chenopodium album L.
8. SETFA	foxtail, giant	Setaria faberi Herrm.
9. PANDI	panicum, fall	Panicum dichotomiflorum Michx.
10. AMATA	waterhemp, common	Amaranthus rudis Sauer

Crop 1: ZEAMX corn, field **Variety:** 33P65 RR
Planting Method: Seeded **Planting Date:** 4-15-05
Rate: 24000 S/A **Depth:** 1.5 IN
Row Spacing: 30 IN

Plot Width, Unit: 10 FT **Plot Length, Unit:** 26 FT **Reps:** 3
Tillage Type: No-Till **Study Design:** Randomized complete block
Previous Crop, Year: GLXMA, 2004

Field Prep./Maintenance: N 150 LB/A, P205 50 LB/A, K20 100 LB/A

Soil Name: Weir **% OM:** 2 **pH:** 5.6 **CEC:** 11
Texture: Silt loam **Fert. Level:** P1: 75 LB/A, K: 348 LB/A

APPLICATION DESCRIPTION

	A	B
Application Date:	11-16-04	04-27-05
Time of Day:	15:30	8:00
Application Method:	Spray	Spray
Application Timing:	FALL	SPIKE
Applic. Placement:	BROFOL	BROFOL
Air Temp., Unit:	58 F	46 F
% Relative Humidity:	70	70
Wind Velocity, Unit:	0 MPH	3 MPH
Soil Moisture:	ABONOR	ABONOR

CROP STAGE AT EACH APPLICATION

	A	B
Crop 1 Code, Stage:	ZEAMX NA	ZEAMX Spike
Height, Unit:	NA NA	0-1 IN

WEED STAGE AT EACH APPLICATION

	A	B
Weed 1 Code:	LAMAM	
Stage (leaves):	3-4	
Height (inches):	0-1	
Density:	Medium	
Weed 2 Code:	STEME	
Stage (leaves):	5-6	
Height (inches):	0-1	
Density:	Low	
Weed 3 Code:	ALLVI	ALLVI
Stage (leaves):	3-4	3-4
Height (inches):	6-8	6-12
Density:	Medium	Low
Weed 4 Code:	RANAB	
Stage (leaves):	3-4	
Height (inches):	0-1	
Density:	Low	
Weed 5 Code:		AMBTR
Stage (leaves):		5-6
Height (inches):		2-4
Density:		Low
Weed 6 Code:		AMBEL
Stage (leaves):		5-6
Height (inches):		2-3
Density:		Low

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Weed 7 Code: CHEAL
 Stage (leaves): 5-10
 Height (inches): 2-4
 Density: Low

Weed 8 Code: SETFA
 Stage (leaves): 2-3
 Height (inches): 1-3
 Density: Low

APPLICATION EQUIPMENT

	A	B
Appl. Equipment:	CO2 sprayer	CO2 sprayer
Operating Pressure:	40 PSI	40 PSI
Nozzle Type:	Flat fan	Flat fan
Nozzle Size:	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT
Spray Volume, Unit:	20 GPA	20 GPA

NOTES:

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Weed Code	LAMAM	LAMAM	LAMAM	STEME	STEME	STEME								
Crop Code	Control	Control	Control	Control	Control	Control								
Rating Data Type	Percent	Percent	Percent	Percent	Percent	Percent								
Rating Unit	12-07-04	04-01-05	04-15-05	12-07-04	04-01-05	04-15-05								
Rating Date	21 DA-A	136 DA-A	0 DAP	21 DA-A	136 DA-A	0 DAP								
Trt-Eval Interval														
Trt No.	Treatment Name	Form Conc	Form Type	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code						
1	NONTREATED								0	0	0	0	0	0
2	TOUCHDOWN TOTAL	4.17	SC	0.78 lb ae/a	24	fl oz/a	FALL	A	80	99	99	80	99	99
2	LEXAR	3.7	L	2.78 lb ai/a	3	qt/a	SPIKE	B						
3	GRAMOXONE MAX	3	SL	0.56 lb ai/a	1.5	pt/a	FALL	A	99	99	99	99	99	99
3	PRIME OIL COC	100	LIQ	1.0 % v/v	1	% v/v	FALL	A						
3	28% UAN	100	LIQ	2.0 % v/v	2	% v/v	FALL	A						
3	LEXAR	3.7	L	2.78 lb ai/a	3	qt/a	SPIKE	B						
4	PRINCEP	90	WG	1.0 lb ai/a	1.11	lb/a	FALL	A	0	99	99	0	99	99
4	LEXAR	3.7	L	2.78 lb ai/a	3	qt/a	SPIKE	B						
5	PRINCEP	90	WG	1.0 lb ai/a	1.11	lb/a	FALL	A	99	99	99	99	99	99
5	GRAMOXONE MAX	3	SL	0.375 lb ai/a	1	pt/a	FALL	A						
5	PRIME OIL COC	100	LIQ	1.0 % v/v	1	% v/v	FALL	A						
5	28% UAN	100	LIQ	2.0 % v/v	2	% v/v	FALL	A						
5	LEXAR	3.7	L	2.78 lb ai/a	3	qt/a	SPIKE	B						
6	PRINCEP	90	WG	1.0 lb ai/a	1.11	lb/a	FALL	A	80	99	99	80	99	99
6	TOUCHDOWN TOTAL	4.17	SC	0.78 lb ae/a	24	fl oz/a	FALL	A						
6	AMS	100	DRY	2.0 % w/w	17	lb/100 gal	FALL	A						
6	LEXAR	3.7	L	2.78 lb ai/a	3	qt/a	SPIKE	B						
LSD (P=.05)									0.0	0.0	0.0	0.0	0.0	0.0
Replicate F									0.000	0.000	0.000	0.000	0.000	0.000
Replicate Prob(F)									1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Treatment F									0.000	0.000	0.000	0.000	0.000	0.000
Treatment Prob(F)									1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

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Weed Code	ALLVI	ALLVI	ALLVI	RANAB	RANAB	RANAB	AMBTR								
Crop Code	Control	Control	Control	Control	Control	Control	Control								
Rating Data Type	Percent	Percent	Percent	Percent	Percent	Percent	Percent								
Rating Unit	12-07-04	04-01-05	04-15-05	12-07-04	04-01-05	04-15-05	04-15-05								
Rating Date	21 DA-A	136 DA-A	0 DAP	21 DA-A	136 DA-A	0 DAP	0 DAP								
Trt-Eval Interval															
Trt No.	Treatment Name	Form Conc	Form Type	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code							
1	NONTREATED								0	0	0	0	0	0	95
2	TOUCHDOWN TOTAL	4.17	SC	0.78 lb ae/a	24	fl oz/a	FALL	A	50	99	99	80	99	99	0
2	LEXAR	3.7	L	2.78 lb ai/a	3	qt/a	SPIKE	B							
3	GRAMOXONE MAX	3	SL	0.56 lb ai/a	1.5	pt/a	FALL	A	90	99	99	99	99	99	0
3	PRIME OIL COC	100	LIQ	1.0 % v/v	1	% v/v	FALL	A							
3	28% UAN	100	LIQ	2.0 % v/v	2	% v/v	FALL	A							
3	LEXAR	3.7	L	2.78 lb ai/a	3	qt/a	SPIKE	B							
4	PRINCEP	90	WG	1.0 lb ai/a	1.11	lb/a	FALL	A	0	0	0	0	93	93	90
4	LEXAR	3.7	L	2.78 lb ai/a	3	qt/a	SPIKE	B							
5	PRINCEP	90	WG	1.0 lb ai/a	1.11	lb/a	FALL	A	90	99	99	99	99	99	30
5	GRAMOXONE MAX	3	SL	0.375 lb ai/a	1	pt/a	FALL	A							
5	PRIME OIL COC	100	LIQ	1.0 % v/v	1	% v/v	FALL	A							
5	28% UAN	100	LIQ	2.0 % v/v	2	% v/v	FALL	A							
5	LEXAR	3.7	L	2.78 lb ai/a	3	qt/a	SPIKE	B							
6	PRINCEP	90	WG	1.0 lb ai/a	1.11	lb/a	FALL	A	50	99	99	80	99	99	87
6	TOUCHDOWN TOTAL	4.17	SC	0.78 lb ae/a	24	fl oz/a	FALL	A							
6	AMS	100	DRY	2.0 % w/w	17	lb/100 gal	FALL	A							
6	LEXAR	3.7	L	2.78 lb ai/a	3	qt/a	SPIKE	B							
LSD (P=.05)									0.0	0.0	0.0	0.0	3.9	3.9	38.2
Replicate F									0.000	0.000	0.000	0.000	1.000	1.000	1.232
Replicate Prob(F)									1.0000	1.0000	1.0000	1.0000	0.4019	0.4019	0.3324
Treatment F									0.000	0.000	0.000	0.000	1066.600	1066.600	14.116
Treatment Prob(F)									1.0000	1.0000	1.0000	1.0000	0.0001	0.0001	0.0003

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Weed Code	Crop Code	Rating Data Type	Rating Unit	Rating Date	Trt-Eval Interval	AMBEL	AMBEL	CHEAL	SETFA	ZEAMX	PANDI	AMATA
						Control	Control	Control	Control	Injury	Control	Control
						Percent	Percent	Percent	Percent	Percent	Percent	Percent
						04-15-05	06-01-05	04-15-05	04-15-05	06-01-05	06-01-05	06-01-05
						0 DAP	35 DA-B	0 DAP	0 DAP	35 DA-B	35 DA-B	35 DA-B
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code			
1	NONTREATED											
										89	0	98
										93	0	0
2	TOUCHDOWN TOTAL	4.17	SC	0.78	lb ae/a	24	fl oz/a	FALL	A	0	99	0
2	LEXAR	3.7	L	2.78	lb ai/a	3	qt/a	SPIKE	B	0	99	0
										0	90	99
3	GRAMOXONE MAX	3	SL	0.56	lb ai/a	1.5	pt/a	FALL	A	0	99	0
3	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	FALL	A	0	92	99
3	28% UAN	100	LIQ	2.0	% v/v	2	% v/v	FALL	A			
3	LEXAR	3.7	L	2.78	lb ai/a	3	qt/a	SPIKE	B			
4	PRINCEP	90	WG	1.0	lb ai/a	1.11	lb/a	FALL	A	87	99	99
4	LEXAR	3.7	L	2.78	lb ai/a	3	qt/a	SPIKE	B	83	0	93
										83	0	93
5	PRINCEP	90	WG	1.0	lb ai/a	1.11	lb/a	FALL	A	90	99	99
5	GRAMOXONE MAX	3	SL	0.375	lb ai/a	1	pt/a	FALL	A	90	99	99
5	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	FALL	A	77	0	93
5	28% UAN	100	LIQ	2.0	% v/v	2	% v/v	FALL	A			
5	LEXAR	3.7	L	2.78	lb ai/a	3	qt/a	SPIKE	B			
6	PRINCEP	90	WG	1.0	lb ai/a	1.11	lb/a	FALL	A	78	99	99
6	TOUCHDOWN TOTAL	4.17	SC	0.78	lb ae/a	24	fl oz/a	FALL	A	78	99	99
6	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	FALL	A			
6	LEXAR	3.7	L	2.78	lb ai/a	3	qt/a	SPIKE	B			
										88	0	95
										88	0	95
	LSD (P=.05)									17.8	0.0	0.0
										20.2	0.0	4.4
										0.0	4.4	0.0
	Replicate F									2.579	0.000	0.000
	Replicate Prob(F)									0.1249	1.0000	1.0000
	Treatment F									62.691	0.000	0.000
	Treatment Prob(F)									0.0001	1.0000	1.0000

Trial Comments

1. Protocol: Syngenta.
2. Ratings: WC 21 DA FALL application, April 1, and at planting (after planting TBA).
3. SPIKE timing can be from PRE to 5 inch corn.
4. DA-A = Days after FALL application. 0 DAP = At planting. DA-B = Days after SPIKE application.
5. Non-zero ratings in the nontreated plots are a reflection of competition between weeds.