

No-Till Corn Weed Control Studies

12-12-06 (06-11C-W80)

Southern Illinois University

Burndown with Valor and Aim in No-till Corn.

Project Code: 06-11C-W80 Location: Belleville Research Center
Investigator: Bryan Young

Investigator: Bryan Young, Associate Professor, Southern Illinois University

City State Zip Country: Belleville IL 62901 USA
Trial Status: Final Updated: 12-1-06

Objective:

To evaluate tank-mix partners with Valor and Aim for burndown in no-till corn.

Weed Code	Common Name	Scientific Name
1. HORPU	barley, little	Hordeum pusillum Nutt.
2. ALOCA	foxtail, Carolina	Alopecurus carolinianus Walt.
3. CERVU	chickweed, mouseear	Cerastium vulgatum L.
4. SETFA	foxtail, giant	Setaria faberi Herrm.
5. ERICA	horseweed	Conyza canadensis (L.) Crong.
6. AMBTR	ragweed, giant	Ambrosia trifida L.
7. AMBEL	ragweed, common	Ambrosia artemisiifolia L.

Crop 1: ZEAMX corn, field Variety: 33K44
Planting Method: Seeded Planting Date: 5-8-06
Rate: 28000 S/A Depth: 1.5 IN
Row Spacing: 30 IN

Plot Width, Unit: 10 FT Plot Length, Unit: 28 FT Reps: 3
Tillage Type: No-Till Study Design: Randomized complete block
Previous Crop, Year: GLXMA, 2005
Field Prep./Maintenance: N 150 LB/A, P205 0 LB/A, K20 0 LB/A

Soil Name: Ebbert % OM: 2.3 pH: 5.8 CEC: 13
Texture: Silt loam Fert. Level: P1: 84 LB/A, K: 456 LB/A

APPLICATION DESCRIPTION

A
Application Date: 4-26-06
Time of Day: 13:45
Application Method: Spray
Application Timing: EPP7-14
Applic. Placement: BROFOL
Air Temp., Unit: 62 F
% Relative Humidity: 72
Wind Velocity, Unit: 3-6 MPH
Soil Moisture: NORMAL

CROP STAGE AT EACH APPLICATION

A
Crop 1 Code, Stage: ZEAMX NA
Height, Unit: NA NA

WEED STAGE AT EACH APPLICATION

A
Weed 1 Code: HORPU
Stage (leaves): 3-4
Height (inches): 6-8
Density: Medium
Weed 2 Code: ALOCA
Stage (leaves): 4-6
Height (inches): 6-8
Density: Medium
Weed 3 Code: CERVU
Stage (leaves): 1-3
Height (inches): 3-4
Density: Low
Weed 5 Code: ERICA
Stage (leaves): 10-12
Height (inches): 5-6
Density: Medium
Weed 6 Code: AMBTR
Stage (leaves): 5-6
Height (inches): 4-6
Density: Low
Weed 7 Code: AMBEL
Stage (leaves): 3-4
Height (inches): 4-6
Density: Low

APPLICATION EQUIPMENT

A
Appl. Equipment: CO2 sprayer
Operating Pressure: 40 PSI
Nozzle Type: Flat fan
Nozzle Size: 8003
Boom Length, Unit: 7.5 FT
Spray Volume, Unit: 20 GPA

NOTES:

Burndown with Valor and Aim in No-till Corn.

Project Code: 06-11C-W80 Location: Belleville Research Center
 Investigator: Bryan Young

Weed Code		Crop Code		Rating Data Type		Rating Unit		Rating Date		Trt-Eval Interval		ZEAMX	ZEAMX	HORPU	HORPU	HORPU	ALOCA	ALOCA	ALOCA
Trt	Treatment	Form	Form	Rate	Prod	Prod	Grow	Appl	Moisture	Yield	Control	Control	Control	Control	Control	Control	Control	Control	Control
No.	Name	Conc	Type	Unit	Rate	Unit	Stg	Code	Percent	bu/A	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
									10-12-06	10-12-06	5-3-06	5-10-06	5-24-06	5-3-06	5-10-06	5-24-06	7 DA-A	14 DA-A	28 DA-A
1	NONTREATED								14.7	20	0	0	0	0	0	0	0	0	0
2	ROUNDUP W-MAX	4.5	SL	0.77 lb ae/a	22 fl oz/a		EPP7-14 A		14.9	96		98	99				98	98	
2	AMS	100	DRY	2.5 lb ai/a	2.5 lb/a		EPP7-14 A												
3	ROUNDUP W-MAX	4.5	SL	0.77 lb ae/a	22 fl oz/a		EPP7-14 A		14.7	111		98	99				98	98	
3	VALOR SX	51	WG	0.063 lb ai/a	2 oz/a		EPP7-14 A												
3	AMS	100	DRY	2.5 lb ai/a	2.5 lb/a		EPP7-14 A												
4	ROUNDUP W-MAX	4.5	SL	0.77 lb ae/a	22 fl oz/a		EPP7-14 A		14.3	115		98	99				98	98	
4	AATREX	90	WG	1.0 lb ai/a	1.11 lb/a		EPP7-14 A												
4	AMS	100	DRY	2.5 lb ai/a	2.5 lb/a		EPP7-14 A												
5	ROUNDUP W-MAX	4.5	SL	0.77 lb ae/a	22 fl oz/a		EPP7-14 A		14.7	120		98	99				98	98	
5	AATREX	90	WG	0.5 lb ai/a	0.556 lb/a		EPP7-14 A												
5	AMS	100	DRY	2.5 lb ai/a	2.5 lb/a		EPP7-14 A												
6	ROUNDUP W-MAX	4.5	SL	0.77 lb ae/a	22 fl oz/a		EPP7-14 A		14.3	138		98	99				98	98	
6	VALOR SX	51	WG	0.063 lb ai/a	2 oz/a		EPP7-14 A												
6	AATREX	90	WG	1.0 lb ai/a	1.11 lb/a		EPP7-14 A												
6	AMS	100	DRY	2.5 lb ai/a	2.5 lb/a		EPP7-14 A												
7	ROUNDUP W-MAX	4.5	SL	0.77 lb ae/a	22 fl oz/a		EPP7-14 A		14.2	122		98	99				98	98	
7	VALOR SX	51	WG	0.063 lb ai/a	2 oz/a		EPP7-14 A												
7	AATREX	90	WG	0.5 lb ai/a	0.556 lb/a		EPP7-14 A												
7	AMS	100	DRY	2.5 lb ai/a	2.5 lb/a		EPP7-14 A												
8	ROUNDUP W-MAX	4.5	SL	0.77 lb ae/a	22 fl oz/a		EPP7-14 A		14.1	122		98	99				98	98	
8	VALOR SX	51	WG	0.063 lb ai/a	2 oz/a		EPP7-14 A												
8	PRINCEP	90	WG	1.0 lb ai/a	1.11 lb/a		EPP7-14 A												
8	AMS	100	DRY	2.5 lb ai/a	2.5 lb/a		EPP7-14 A												
9	ROUNDUP W-MAX	4.5	SL	0.77 lb ae/a	22 fl oz/a		EPP7-14 A		14.2	117		98	99				98	98	
9	VALOR SX	51	WG	0.063 lb ai/a	2 oz/a		EPP7-14 A												
9	PRINCEP	90	WG	0.5 lb ai/a	0.556 lb/a		EPP7-14 A												
9	AMS	100	DRY	2.5 lb ai/a	2.5 lb/a		EPP7-14 A												
10	ROUNDUP W-MAX	4.5	SL	0.77 lb ae/a	22 fl oz/a		EPP7-14 A		14.2	118		98	99				98	98	
10	AATREX	90	WG	0.5 lb ai/a	0.556 lb/a		EPP7-14 A												
10	BALANCE PRO	4	SC	0.0312 lb ai/a	1 fl oz/a		EPP7-14 A												
10	AMS	100	DRY	2.5 lb ai/a	2.5 lb/a		EPP7-14 A												
11	ROUNDUP W-MAX	4.5	SL	0.77 lb ae/a	22 fl oz/a		EPP7-14 A		14.6	124		98	99				98	98	
11	BICEP II MAGNUM	5.5	L	1.38 lb ai/a	1 qt/a		EPP7-14 A												
11	AMS	100	DRY	2.5 lb ai/a	2.5 lb/a		EPP7-14 A												
12	AIM	2	EW	0.0078 lb ai/a	0.5 fl oz/a		EPP7-14 A		14.2	129	25	33	50	25	33	65			
12	LUMAX	3.94	L	2.96 lb ai/a	3 qt/a		EPP7-14 A												
12	PRIME OIL COC	100	LIQ	1.0 % v/v	1 % v/v		EPP7-14 A												
13	AIM	2	EW	0.0078 lb ai/a	0.5 fl oz/a		EPP7-14 A		14.4	128	25	67	78	25	67	63			
13	BICEP II MAGNUM	5.5	L	2.75 lb ai/a	2 qt/a		EPP7-14 A												
13	2,4-D LV4	3.8	EC	0.119 lb ae/a	4 fl oz/a		EPP7-14 A												
13	PRIME OIL COC	100	LIQ	1.0 % v/v	1 % v/v		EPP7-14 A												
LSD (P=.05)									0.48	30.3	0.0	9.3	5.8	0.0	9.3	8.4			
Replicate F									1.790	2.558	0.000	1.565	1.411	0.000	1.565	0.333			
Replicate Prob(F)									0.1895	0.0984	1.0000	0.2296	0.2634	1.0000	0.2296	0.7198			
Treatment F									2.265	7.981	0.000	96.632	220.439	0.000	96.632	97.836			
Treatment Prob(F)									0.0445	0.0001	1.0000	0.0001	0.0001	1.0000	0.0001	0.0001			

Burndown with Valor and Aim in No-till Corn.

Project Code: 06-11C-W80 Location: Belleville Research Center
 Investigator: Bryan Young

Weed Code				CERVU	CERVU	CERVU	ERICA	ERICA	ERICA
Crop Code				Control	Control	Control	Control	Control	Control
Rating Data Type				Percent	Percent	Percent	Percent	Percent	Percent
Rating Unit				5-3-06	5-10-06	5-24-06	5-3-06	5-10-06	5-24-06
Rating Date				7 DA-A	14 DA-A	28 DA-A	7 DA-A	14 DA-A	28 DA-A
Trt-Eval Interval									
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code
1	NONTREATED								
								0	0
2	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPP7-14	A
2	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	EPP7-14	A
								99	99
3	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPP7-14	A
3	VALOR SX	51	WG	0.063	lb ai/a	2	oz/a	EPP7-14	A
3	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	EPP7-14	A
								99	99
4	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPP7-14	A
4	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	EPP7-14	A
4	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	EPP7-14	A
								99	99
5	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPP7-14	A
5	AATREX	90	WG	0.5	lb ai/a	0.556	lb/a	EPP7-14	A
5	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	EPP7-14	A
								99	99
6	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPP7-14	A
6	VALOR SX	51	WG	0.063	lb ai/a	2	oz/a	EPP7-14	A
6	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	EPP7-14	A
6	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	EPP7-14	A
								99	99
7	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPP7-14	A
7	VALOR SX	51	WG	0.063	lb ai/a	2	oz/a	EPP7-14	A
7	AATREX	90	WG	0.5	lb ai/a	0.556	lb/a	EPP7-14	A
7	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	EPP7-14	A
								99	99
8	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPP7-14	A
8	VALOR SX	51	WG	0.063	lb ai/a	2	oz/a	EPP7-14	A
8	PRINCEP	90	WG	1.0	lb ai/a	1.11	lb/a	EPP7-14	A
8	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	EPP7-14	A
								99	99
9	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPP7-14	A
9	VALOR SX	51	WG	0.063	lb ai/a	2	oz/a	EPP7-14	A
9	PRINCEP	90	WG	0.5	lb ai/a	0.556	lb/a	EPP7-14	A
9	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	EPP7-14	A
								99	99
10	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPP7-14	A
10	AATREX	90	WG	0.5	lb ai/a	0.556	lb/a	EPP7-14	A
10	BALANCE PRO	4	SC	0.0312	lb ai/a	1	fl oz/a	EPP7-14	A
10	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	EPP7-14	A
								99	99
11	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPP7-14	A
11	BICEP II MAGNUM	5.5	L	1.38	lb ai/a	1	qt/a	EPP7-14	A
11	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	EPP7-14	A
								99	99
12	AIM	2	EW	0.0078	lb ai/a	0.5	fl oz/a	EPP7-14	A
12	LUMAX	3.94	L	2.96	lb ai/a	3	qt/a	EPP7-14	A
12	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	EPP7-14	A
								50	99
13	AIM	2	EW	0.0078	lb ai/a	0.5	fl oz/a	EPP7-14	A
13	BICEP II MAGNUM	5.5	L	2.75	lb ai/a	2	qt/a	EPP7-14	A
13	2,4-D LV4	3.8	EC	0.119	lb ae/a	4	fl oz/a	EPP7-14	A
13	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	EPP7-14	A
								50	99
LSD (P=.05)								0.0	0.0
Replicate F								0.000	0.000
Replicate Prob(F)								1.0000	1.0000
Treatment F								0.000	0.000
Treatment Prob(F)								1.0000	1.0000

Burndown with Valor and Aim in No-till Corn.

Project Code: 06-11C-W80 Location: Belleville Research Center
 Investigator: Bryan Young

Weed Code		Crop Code		Rating Data Type		Rating Unit		Rating Date		Trt-Eval Interval		SETFA	SETFA	SETFA	SETFA	AMBTR	AMBEL	ZEAMX	ZEAMX
Trt	Treatment	Form	Form	Rate	Prod	Prod	Grow	Appl	Control	Control	Control	Control	Control	Control	Control	Control	Injury	Injury	
No.	Name	Conc	Type	Unit	Rate	Unit	Stg	Code	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	
									5-3-06	5-10-06	5-24-06	6-21-06	6-21-06	6-21-06	6-21-06	6-21-06	5-24-06	6-7-06	
									7 DA-A	14 DA-A	28 DA-A	56 DA-A	56 DA-A	56 DA-A	56 DA-A	28 DA-A	42 DA-A		
1	NONTREATED								0	0	0	0	0	0	0	0	0	0	
2	ROUNDUP W-MAX	4.5	SL	0.77	lb	ae/a	22	fl oz/a	EPP7-14	A									
2	AMS	100	DRY	2.5	lb	ai/a	2.5	lb/a	EPP7-14	A	99	99	0	94	93		0	0	
3	ROUNDUP W-MAX	4.5	SL	0.77	lb	ae/a	22	fl oz/a	EPP7-14	A									
3	VALOR SX	51	WG	0.063	lb	ai/a	2	oz/a	EPP7-14	A	99	99	17	86	98		0	1	
3	AMS	100	DRY	2.5	lb	ai/a	2.5	lb/a	EPP7-14	A									
4	ROUNDUP W-MAX	4.5	SL	0.77	lb	ae/a	22	fl oz/a	EPP7-14	A									
4	AATREX	90	WG	1.0	lb	ai/a	1.11	lb/a	EPP7-14	A	99	99	22	99	99		0	0	
4	AMS	100	DRY	2.5	lb	ai/a	2.5	lb/a	EPP7-14	A									
5	ROUNDUP W-MAX	4.5	SL	0.77	lb	ae/a	22	fl oz/a	EPP7-14	A									
5	AATREX	90	WG	0.5	lb	ai/a	0.556	lb/a	EPP7-14	A	99	99	12	96	97		0	1	
5	AMS	100	DRY	2.5	lb	ai/a	2.5	lb/a	EPP7-14	A									
6	ROUNDUP W-MAX	4.5	SL	0.77	lb	ae/a	22	fl oz/a	EPP7-14	A									
6	VALOR SX	51	WG	0.063	lb	ai/a	2	oz/a	EPP7-14	A	99	99	40	99	99		0	1	
6	AATREX	90	WG	1.0	lb	ai/a	1.11	lb/a	EPP7-14	A									
6	AMS	100	DRY	2.5	lb	ai/a	2.5	lb/a	EPP7-14	A									
7	ROUNDUP W-MAX	4.5	SL	0.77	lb	ae/a	22	fl oz/a	EPP7-14	A									
7	VALOR SX	51	WG	0.063	lb	ai/a	2	oz/a	EPP7-14	A	99	99	32	99	99		0	1	
7	AATREX	90	WG	0.5	lb	ai/a	0.556	lb/a	EPP7-14	A									
7	AMS	100	DRY	2.5	lb	ai/a	2.5	lb/a	EPP7-14	A									
8	ROUNDUP W-MAX	4.5	SL	0.77	lb	ae/a	22	fl oz/a	EPP7-14	A									
8	VALOR SX	51	WG	0.063	lb	ai/a	2	oz/a	EPP7-14	A	99	99	42	96	99		0	0	
8	PRINCEP	90	WG	1.0	lb	ai/a	1.11	lb/a	EPP7-14	A									
8	AMS	100	DRY	2.5	lb	ai/a	2.5	lb/a	EPP7-14	A									
9	ROUNDUP W-MAX	4.5	SL	0.77	lb	ae/a	22	fl oz/a	EPP7-14	A									
9	VALOR SX	51	WG	0.063	lb	ai/a	2	oz/a	EPP7-14	A	99	99	20	94	99		0	0	
9	PRINCEP	90	WG	0.5	lb	ai/a	0.556	lb/a	EPP7-14	A									
9	AMS	100	DRY	2.5	lb	ai/a	2.5	lb/a	EPP7-14	A									
10	ROUNDUP W-MAX	4.5	SL	0.77	lb	ae/a	22	fl oz/a	EPP7-14	A									
10	AATREX	90	WG	0.5	lb	ai/a	0.556	lb/a	EPP7-14	A	99	99	33	99	99		0	0	
10	BALANCE PRO	4	SC	0.0312	lb	ai/a	1	fl oz/a	EPP7-14	A									
10	AMS	100	DRY	2.5	lb	ai/a	2.5	lb/a	EPP7-14	A									
11	ROUNDUP W-MAX	4.5	SL	0.77	lb	ae/a	22	fl oz/a	EPP7-14	A									
11	BICEP II MAGNUM	5.5	L	1.38	lb	ai/a	1	qt/a	EPP7-14	A	99	99	42	99	99		0	0	
11	AMS	100	DRY	2.5	lb	ai/a	2.5	lb/a	EPP7-14	A									
12	AIM	2	EW	0.0078	lb	ai/a	0.5	fl oz/a	EPP7-14	A	25	99	99	55	97	99		0	1
12	LUMAX	3.94	L	2.96	lb	ai/a	3	qt/a	EPP7-14	A									
12	PRIME OIL COC	100	LIQ	1.0	%	v/v	1	% v/v	EPP7-14	A									
13	AIM	2	EW	0.0078	lb	ai/a	0.5	fl oz/a	EPP7-14	A	25	99	99	45	99	99		0	0
13	BICEP II MAGNUM	5.5	L	2.75	lb	ai/a	2	qt/a	EPP7-14	A									
13	2,4-D LV4	3.8	EC	0.119	lb	ae/a	4	fl oz/a	EPP7-14	A									
13	PRIME OIL COC	100	LIQ	1.0	%	v/v	1	% v/v	EPP7-14	A									
LSD (P=05)									0.0	0.0	0.0	22.2	7.4	3.0	0.0	1.2			
Replicate F									0.000	0.000	0.000	2.543	7.143	2.230	0.000	1.448			
Replicate Prob(F)									1.0000	1.0000	1.0000	0.0996	0.0037	0.1293	1.0000	0.2548			
Treatment F									0.000	0.000	0.000	5.227	114.114	717.407	0.000	2.034			
Treatment Prob(F)									1.0000	1.0000	1.0000	0.0003	0.0001	0.0001	1.0000	0.0670			

Trial Comments

1. Protocol: Valent (68.01), FMC.
2. Ratings: WC 7 DAT (trts 12 and 13 only), WC 14, 28, and 56 DAT; CI 28 and 42 DAT.
3. Yield.
4. DA-A = Days after EPP7-14 application.
5. Blanket application of Roundup WeatherMax at 44 fl oz/A was applied to all plots except the nontreated, 7.5 ft wide, on 6-15-06.
6. Harvested 10-12-06, (2) 30 inch rows by 25 ft.