

Valor Plus Atrazine in No-Till Corn.

Project Code: 05-2B-MW30ncwss 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:

To evaluate Valor plus atrazine for early preemergence weed control in minimum tillage Roundup Ready field corn.

Weed Code	Common Name	Scientific Name
1. HORPU	barley, little	Hordeum pusillum Nutt.
2. POLPY	smartweed, Pennsylvania	Polygonum pensylvanicum L.
3. ALLVI	garlic, wild	Allium vineale L.
4. RANAB	buttercup, smallflower	Ranunculus abortivus L.
5. AMBEL	ragweed, common	Ambrosia artemisiifolia L.
6. CHEAL	lambsquarters, common	Chenopodium album L.
7. SETFA	foxtail, giant	Setaria faberi Herrm.
8. AMATA	waterhemp, common	Amaranthus rudis Sauer

Crop 1: ZEAMX corn, field Variety: 33P65 RR
 Planting Method: Seeded Planting Date: 5-8-05
 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, 2004

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

Soil Name: Weir % OM: 1.6 pH: 6.1 CEC: 8
 Texture: Silt loam Fert. Level: P1: 91 LB/A, K: 410 LB/A

APPLICATION DESCRIPTION

	A	B
Application Date:	04-27-05	06-06-05
Time of Day:	7:00	9:30
Application Method:	Spray	Spray
Application Timing:	14DBP	8-10"WH
Applic. Placement:	BROFOL	BROFOL
Air Temp., Unit:	46 F	82 F
% Relative Humidity:	70	59
Wind Velocity, Unit:	3 MPH	2 MPH
Soil Moisture:	ABONOR	NORMAL

CROP STAGE AT EACH APPLICATION

	A	B
Crop 1 Code, Stage:	ZEAMX NA	ZEAMX V5-V6
Height, Unit:	NA NA	12-14 IN

WEED STAGE AT EACH APPLICATION

	A	B
Weed 1 Code:	HORPU	
Stage (leaves):	5-6	
Height (inches):	6-8	
Density:	Low	
Weed 2 Code:	POLPY	
Stage (leaves):	5-6	
Height (inches):	1-3	
Density:	Low	
Weed 3 Code:	ALLVI	
Stage (leaves):	3-4	
Height (inches):	8-16	
Density:	High	
Weed 4 Code:	RANAB	
Stage (leaves):	10+	
Height (inches):	8-12	
Density:	Low	
Weed 5 Code:	AMBEL	AMBEL
Stage (leaves):	5-6	12-14
Height (inches):	1-3	11-13
Density:	Low	Low
Weed 6 Code:	CHEAL	
Stage (leaves):	5-6	
Height (inches):	1-3	
Density:	Low	
Weed 7 Code:	SETFA	SETFA
Stage (leaves):	2-3	5-6
Height (inches):	1-2	10-12
Density:	Low	High

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Weed 8 Code: AMATA
Stage (leaves): 6-10
Height (inches): 3-8
Density: Medium

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:	15 GPA	15 GPA

NOTES:

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Weed Code		Crop Code		Rating Data Type		Rating Unit		Rating Date		Trt-Eval Interval		ZEAMX	HORPU	HORPU	POLPY	POLPY	POLPY	ALLVI	RANAB
Trt	Treatment	Form	Form	Rate	Prod	Prod	Grow	Appl	Yield	Control	Control	Control	Control	Control	Control	Control	Control	Control	Control
No.	Name	Conc	Type	Unit	Rate	Unit	Stg	Code	bu/A	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
									10-14-05	05-08-05	05-22-05	05-08-05	05-22-05	06-05-05	05-08-05	05-08-05	05-08-05	05-08-05	05-08-05
									0 DAP	14 DAP	0 DAP	14 DAP	28 DAP	0 DAP	0 DAP	0 DAP	0 DAP	0 DAP	0 DAP
1	NONTREATED								0	0	0	0	0	0	0	0	0	0	0
2	ROUNDUP ORIG MAX	4.5	SL	0.77 lb ae/a	22	fl oz/a	14DBP	A	159	99	99	99	99	99	99	99	99	99	99
2	AMS	100	DRY	2.0 % w/w	17	lb/100 gal	14DBP	A											
2	ROUNDUP ORIG MAX	4.5	SL	0.77 lb ae/a	22	fl oz/a	8-10"WH	B											
2	AMS	100	DRY	2.0 % w/w	17	lb/100 gal	8-10"WH	B											
3	AATREX	90	WG	1.0 lb ai/a	1.11	lb/a	14DBP	A	168	98	99	99	99	99	99	99	99	99	99
3	ROUNDUP ORIG MAX	4.5	SL	0.77 lb ae/a	22	fl oz/a	14DBP	A											
3	AMS	100	DRY	2.0 % w/w	17	lb/100 gal	14DBP	A											
3	ROUNDUP ORIG MAX	4.5	SL	0.77 lb ae/a	22	fl oz/a	8-10"WH	B											
3	AMS	100	DRY	2.0 % w/w	17	lb/100 gal	8-10"WH	B											
4	VALOR	51	WG	0.064 lb ai/a	2.0	oz/a	14DBP	A	176	99	99	99	99	99	99	99	99	99	99
4	ROUNDUP ORIG MAX	4.5	SL	0.77 lb ae/a	22	fl oz/a	14DBP	A											
4	AMS	100	DRY	2.0 % w/w	17	lb/100 gal	14DBP	A											
4	ROUNDUP ORIG MAX	4.5	SL	0.77 lb ae/a	22	fl oz/a	8-10"WH	B											
4	AMS	100	DRY	2.0 % w/w	17	lb/100 gal	8-10"WH	B											
5	AATREX	90	WG	1.0 lb ai/a	1.11	lb/a	14DBP	A	183	99	99	99	99	99	99	99	99	99	99
5	VALOR	51	WG	0.064 lb ai/a	2.0	oz/a	14DBP	A											
5	ROUNDUP ORIG MAX	4.5	SL	0.77 lb ae/a	22	fl oz/a	14DBP	A											
5	AMS	100	DRY	2.0 % w/w	17	lb/100 gal	14DBP	A											
5	ROUNDUP ORIG MAX	4.5	SL	0.77 lb ae/a	22	fl oz/a	8-10"WH	B											
5	AMS	100	DRY	2.0 % w/w	17	lb/100 gal	8-10"WH	B											
6	AATREX	90	WG	1.0 lb ai/a	1.11	lb/a	14DBP	A	167	80	78	99	99	99	99	99	99	99	99
6	VALOR	51	WG	0.064 lb ai/a	2.0	oz/a	14DBP	A											
6	2,4-D LV4	3.8	EC	0.95 lb ai/a	1.0	qt/a	14DBP	A											
6	PRIME OIL COC	100	LIQ	1.0 qt/a	1.0	qt/a	14DBP	A											
6	ROUNDUP ORIG MAX	4.5	SL	0.77 lb ae/a	22	fl oz/a	8-10"WH	B											
6	AMS	100	DRY	2.0 % w/w	17	lb/100 gal	8-10"WH	B											
LSD (P=.05)									27.3	7.4	13.0	0.0	0.0	0.0	11.4	0.0			
Replicate F									0.063	1.121	1.000	0.000	0.000	0.000	0.319	0.000			
Replicate Prob(F)									0.9392	0.3636	0.4019	1.0000	1.0000	1.0000	0.7339	1.0000			
Treatment F									67.578	283.739	91.554	0.000	0.000	0.000	17.851	0.000			
Treatment Prob(F)									0.0001	0.0001	0.0001	1.0000	1.0000	1.0000	0.0001	1.0000			

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									ZEAMX	ZEAMX	AMBEL	AMBEL	CHEAL	CHEAL	
									Injury	Injury	Control	Control	Control	Control	
									Percent	Percent	Percent	Percent	Percent	Percent	
									05-22-05	06-05-05	05-22-05	06-05-05	05-22-05	06-05-05	
									14 DAP	28 DAP	14 DAP	28 DAP	14 DAP	28 DAP	
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	ROUNDUP ORIG MAX	4.5 SL		0.77 lb ae/a		22 fl oz/a		14DBP	A	0	0	98	94	99	94
2	AMS	100 DRY		2.0 % w/w		17 lb/100 gal		14DBP	A						
2	ROUNDUP ORIG MAX	4.5 SL		0.77 lb ae/a		22 fl oz/a		8-10"WH	B						
2	AMS	100 DRY		2.0 % w/w		17 lb/100 gal		8-10"WH	B						
3	AATREX	90 WG		1.0 lb ai/a		1.11 lb/a		14DBP	A	0	0	99	99	99	99
3	ROUNDUP ORIG MAX	4.5 SL		0.77 lb ae/a		22 fl oz/a		14DBP	A						
3	AMS	100 DRY		2.0 % w/w		17 lb/100 gal		14DBP	A						
3	ROUNDUP ORIG MAX	4.5 SL		0.77 lb ae/a		22 fl oz/a		8-10"WH	B						
3	AMS	100 DRY		2.0 % w/w		17 lb/100 gal		8-10"WH	B						
4	VALOR	51 WG		0.064 lb ai/a		2.0 oz/a		14DBP	A	0	0	98	96	98	98
4	ROUNDUP ORIG MAX	4.5 SL		0.77 lb ae/a		22 fl oz/a		14DBP	A						
4	AMS	100 DRY		2.0 % w/w		17 lb/100 gal		14DBP	A						
4	ROUNDUP ORIG MAX	4.5 SL		0.77 lb ae/a		22 fl oz/a		8-10"WH	B						
4	AMS	100 DRY		2.0 % w/w		17 lb/100 gal		8-10"WH	B						
5	AATREX	90 WG		1.0 lb ai/a		1.11 lb/a		14DBP	A	0	0	99	99	99	99
5	VALOR	51 WG		0.064 lb ai/a		2.0 oz/a		14DBP	A						
5	ROUNDUP ORIG MAX	4.5 SL		0.77 lb ae/a		22 fl oz/a		14DBP	A						
5	AMS	100 DRY		2.0 % w/w		17 lb/100 gal		14DBP	A						
5	ROUNDUP ORIG MAX	4.5 SL		0.77 lb ae/a		22 fl oz/a		8-10"WH	B						
5	AMS	100 DRY		2.0 % w/w		17 lb/100 gal		8-10"WH	B						
6	AATREX	90 WG		1.0 lb ai/a		1.11 lb/a		14DBP	A	0	0	99	99	99	99
6	VALOR	51 WG		0.064 lb ai/a		2.0 oz/a		14DBP	A						
6	2,4-D LV4	3.8 EC		0.95 lb ai/a		1.0 qt/a		14DBP	A						
6	PRIME OIL COC	100 LIQ		1.0 qt/a		1.0 qt/a		14DBP	A						
6	ROUNDUP ORIG MAX	4.5 SL		0.77 lb ae/a		22 fl oz/a		8-10"WH	B						
6	AMS	100 DRY		2.0 % w/w		17 lb/100 gal		8-10"WH	B						
LSD (P=.05)										0.0	0.0	1.1	4.7	1.0	3.3
Replicate F										0.000	0.000	1.000	0.787	0.556	1.758
Replicate Prob(F)										1.0000	1.0000	0.4019	0.4816	0.5905	0.2217
Treatment F										0.000	0.000	12517.944	721.218	16269.779	1469.884
Treatment Prob(F)										1.0000	1.0000	0.0001	0.0001	0.0001	0.0001

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Weed Code				SETFA	SETFA	AMATA	AMATA					
Crop Code				Control	Control	Control	Control					
Rating Data Type				Percent	Percent	Percent	Percent					
Rating Unit				05-22-05	06-05-05	05-22-05	06-05-05					
Rating Date				14 DAP	28 DAP	14 DAP	28 DAP					
Trt-Eval Interval												
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Prod Rate	Prod Unit	Grow Stg	Appl Code				
1	NONTREATED								0	0	0	0
2	ROUNDUP ORIG MAX	4.5 SL		0.77 lb ae/a	22 fl oz/a		14DBP	A	83	43	70	37
2	AMS	100 DRY		2.0 % w/w	17 lb/100 gal		14DBP	A				
2	ROUNDUP ORIG MAX	4.5 SL		0.77 lb ae/a	22 fl oz/a		8-10"WH	B				
2	AMS	100 DRY		2.0 % w/w	17 lb/100 gal		8-10"WH	B				
3	AATREX	90 WG		1.0 lb ai/a	1.11 lb/a		14DBP	A	96	80	98	84
3	ROUNDUP ORIG MAX	4.5 SL		0.77 lb ae/a	22 fl oz/a		14DBP	A				
3	AMS	100 DRY		2.0 % w/w	17 lb/100 gal		14DBP	A				
3	ROUNDUP ORIG MAX	4.5 SL		0.77 lb ae/a	22 fl oz/a		8-10"WH	B				
3	AMS	100 DRY		2.0 % w/w	17 lb/100 gal		8-10"WH	B				
4	VALOR	51 WG		0.064 lb ai/a	2.0 oz/a		14DBP	A	92	78	97	86
4	ROUNDUP ORIG MAX	4.5 SL		0.77 lb ae/a	22 fl oz/a		14DBP	A				
4	AMS	100 DRY		2.0 % w/w	17 lb/100 gal		14DBP	A				
4	ROUNDUP ORIG MAX	4.5 SL		0.77 lb ae/a	22 fl oz/a		8-10"WH	B				
4	AMS	100 DRY		2.0 % w/w	17 lb/100 gal		8-10"WH	B				
5	AATREX	90 WG		1.0 lb ai/a	1.11 lb/a		14DBP	A	97	88	99	99
5	VALOR	51 WG		0.064 lb ai/a	2.0 oz/a		14DBP	A				
5	ROUNDUP ORIG MAX	4.5 SL		0.77 lb ae/a	22 fl oz/a		14DBP	A				
5	AMS	100 DRY		2.0 % w/w	17 lb/100 gal		14DBP	A				
5	ROUNDUP ORIG MAX	4.5 SL		0.77 lb ae/a	22 fl oz/a		8-10"WH	B				
5	AMS	100 DRY		2.0 % w/w	17 lb/100 gal		8-10"WH	B				
6	AATREX	90 WG		1.0 lb ai/a	1.11 lb/a		14DBP	A	95	83	99	96
6	VALOR	51 WG		0.064 lb ai/a	2.0 oz/a		14DBP	A				
6	2,4-D LV4	3.8 EC		0.95 lb ai/a	1.0 qt/a		14DBP	A				
6	PRIME OIL COC	100 LIQ		1.0 qt/a	1.0 qt/a		14DBP	A				
6	ROUNDUP ORIG MAX	4.5 SL		0.77 lb ae/a	22 fl oz/a		8-10"WH	B				
6	AMS	100 DRY		2.0 % w/w	17 lb/100 gal		8-10"WH	B				
LSD (P=.05)									9.9	12.6	12.9	12.0
Replicate F									0.608	0.144	1.152	1.270
Replicate Prob(F)									0.5636	0.8678	0.3546	0.3224
Treatment F									146.546	73.968	93.359	109.618
Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001

Trial Comments

1. Protocol: Valent.
2. Ratings: CI 14 and 28 DAP; WC 0, 14 and 28 DAP and prior to glyphosate application B.
3. Yield.
4. Application codes; DBP = days before planned planting date, 8-10"WH = 8 to 10 inch waterhemp.
5. DAP = Days after planting. Ratings at 0 DAP = At planting.
 Ratings at 28 DAP were 1 day prior to 8-10"WH application.
6. Harvested 10-14-05, (2) 30 inch rows by 25 ft..