

Valor Early Preplant Applications in Corn.

Project Code: 07-5A 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: 1-23-08

Objective:
 Evaluate the utility of Valor in early preplant applications in no-till production of Roundup Ready corn.

Weed Code	Common Name	Scientific Name
1.	ERICA horseweed	Conyza canadensis (L.) Crong.
2.	AMBEL ragweed, common	Ambrosia artemisiifolia L.
3.	AMATA waterhemp, common	Amaranthus rudis Sauer
4.	ABUTH velvetleaf	Abutilon theophrasti Medicus

Crop 1: ZEAMX corn, field Variety: 33K44
 Planting Method: Seeded Planting Date: 5-14-07
 Rate: 28000 S/A Depth: 1.5 IN
 Row Spacing: 30 IN

Plot Width, Unit: 10 FT Plot Length, Unit: 27 FT Reps: 3
 Tillage Type: No-Till Study Design: Randomized complete block
 Previous Crop, Year: TRAZW, 2006
 Field Prep./Maintenance: N 150 LB/A, P2O5 0 LB/A, K2O 100 LB/A

Soil Name: Stoy % OM: 1.9 pH: 6.3 CEC: 8
 Texture: Silt loam Fert. Level: P1: 96 LB/A, K: 342 LB/A

APPLICATION DESCRIPTION

	A	B
Application Date:	4-24-07	6-9-07
Time of Day:	10:00	11:30
Application Method:	Spray	Spray
Application Timing:	14EPP	12"CN
Applic. Placement:	BROFOL	BROFOL
Air Temp., Unit:	76 F	78 F
% Relative Humidity:	70	40
Wind Velocity, Unit:	3 MPH	1-3 MPH
Soil Moisture:	NORMAL	NORMAL

CROP STAGE AT EACH APPLICATION

	A	B
Crop 1 Code, Stage:	ZEAMX NA	ZEAMX V4-V5
Height, Unit:	NA NA	12-14 IN

WEED STAGE AT EACH APPLICATION

	A	B
Weed 1 Code:	ERICA	
Stage(leaves):	4-8	
Height(inches):	0-1	
Density:	Low	
Weed 2 Code:	AMBEL	AMBEL
Stage(leaves):	5-6	6-10
Height(inches):	1-3	4-8
Density:	Low	Low
Weed 3 Code:		AMATA
Stage(leaves):		6-20+
Height(inches):		4-20
Density:		Medium
Weed 4 Code:		ABUTH
Stage(leaves):		3-6
Height(inches):		3-6
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:	XR 8002	XR 8002
Boom Length, Unit:	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA

NOTES:

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Weed Code	ZEAMX	ZEAMX	ZEAMX	ERICA	AMBEL	AMBEL	AMBEL	AMBEL
Crop Code	Injury	Injury	Injury	Control	Control	Control	w/POST	wo/POST
Rating Data Type	Percent	Percent	Percent	Percent	Percent	Percent	Control	Control
Rating Unit	6-1-07	6-5-07	7-7-07	5-22-07	5-22-07	6-5-07	7-7-07	7-7-07
Rating Date	38 DA-A	42 DA-A	28 DA-B	28 DA-A	28 DA-A	42 DA-A	28 DA-B	28 DA-B
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 a	0 a	0 a	0 c	0 c	0 c	0 b	0
2	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	14EPP	A	0 a	0 a	0 a	99 a	80 b	70 b	99 a	50
	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	14EPP	A								
2	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	12"CN	B								
	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	12"CN	B								
3	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	14EPP	A	0 a	0 a	0 a	98 b	98 a	99 a	99 a	50
	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	14EPP	A								
	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	14EPP	A								
3	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	12"CN	B								
	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	12"CN	B								
4	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	14EPP	A	0 a	0 a	0 a	99 a	99 a	96 a	99 a	90
	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	14EPP	A								
	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	14EPP	A								
	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	14EPP	A								
4	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	12"CN	B								
	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	12"CN	B								
5	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	14EPP	A	0 a	0 a	0 a	99 a	99 a	96 a	99 a	90
	SURESTART	4.25	SE	0.93	lb ai/a	1.75	pt/a	14EPP	A								
	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	14EPP	A								
5	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	12"CN	B								
	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	12"CN	B								
6	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	14EPP	A	0 a	0 a	0 a	99 a	99 a	96 a	99 a	85
	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	14EPP	A								
	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	14EPP	A								
6	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	12"CN	B								
	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	12"CN	B								
	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	12"CN	B								
7	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	14EPP	A	0 a	0 a	0 a	99 ab	98 a	98 a	99 a	90
	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	14EPP	A								
	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	14EPP	A								
7	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	12"CN	B								
	RESOURCE	0.86	EC	0.0202	lb ai/a	3	fl oz/a	12"CN	B								
	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	12"CN	B								
8	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	14EPP	A	0 a	0 a	0 a	99 a	99 a	96 a	99 a	80
	DEGREE XTRA	4	L	2	lb ai/a	2	qt/a	14EPP	A								
	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	14EPP	A								
8	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	12"CN	B								
	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	12"CN	B								
LSD (P=.05)										0.0	0.0	0.0	0.5	6.2	13.3	0.0	
Replicate F										0.000	0.000	0.000	1.615	1.485	1.861	0.000	
Replicate Prob(F)										1.0000	1.0000	1.0000	0.2338	0.2601	0.1921	1.0000	
Treatment F										0.000	0.000	0.000	47362.466	284.483	60.533	0.000	
Treatment Prob(F)										1.0000	1.0000	1.0000	0.0001	0.0001	0.0001	1.0000	

Means followed by same letter do not significantly differ (P=.05, LSD)

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Weed Code	AMATA	AMATA	AMATA	AMATA	ABUTH	ABUTH	ABUTH	ABUTH
Crop Code	AMATA	AMATA	w/POST	wo/POST	ABUTH	ABUTH	w/POST	wo/POST
Rating Data Type	Control	Control	Control	Control	Control	Control	Control	Control
Rating Unit	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Rating Date	5-22-07	6-5-07	7-7-07	7-7-07	5-22-07	6-5-07	7-7-07	7-7-07
Trt-Eval Interval	28 DA-A	42 DA-A	28 DA-B	28 DA-B	28 DA-A	42 DA-A	28 DA-B	28 DA-B

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	AMATA	AMATA	AMATA	AMATA	ABUTH	ABUTH	ABUTH	ABUTH
1	NONTREATED									0 c	0 c	0 b	0	0 c	0 c	0 b	0
2	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	14EPP	A	43 b	30 b	99 a	20	73 b	63 b	99 a	50
2	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	14EPP	A								
2	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	12"CN	B								
2	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	12"CN	B								
3	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	14EPP	A	99 a	98 a	99 a	90	99 a	96 a	99 a	40
3	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	14EPP	A								
3	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	14EPP	A								
3	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	12"CN	B								
3	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	12"CN	B								
4	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	14EPP	A	99 a	99 a	99 a	85	99 a	98 a	99 a	90
4	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	14EPP	A								
4	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	14EPP	A								
4	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	14EPP	A								
4	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	12"CN	B								
4	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	12"CN	B								
5	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	14EPP	A	99 a	95 a	99 a	90	98 a	96 a	99 a	90
5	SURESTART	4.25	SE	0.93	lb ai/a	1.75	pt/a	14EPP	A								
5	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	14EPP	A								
5	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	12"CN	B								
5	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	12"CN	B								
6	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	14EPP	A	99 a	95 a	99 a	90	98 a	98 a	99 a	95
6	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	14EPP	A								
6	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	14EPP	A								
6	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	12"CN	B								
6	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	12"CN	B								
6	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	12"CN	B								
7	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	14EPP	A	99 a	93 a	99 a	95	98 a	95 a	99 a	95
7	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	14EPP	A								
7	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	14EPP	A								
7	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	12"CN	B								
7	RESOURCE	0.86	EC	0.0202	lb ai/a	3	fl oz/a	12"CN	B								
7	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	12"CN	B								
8	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	14EPP	A	99 a	99 a	99 a	90	98 a	93 a	99 a	80
8	DEGREE XTRA	4	L	2	lb ai/a	2	qt/a	14EPP	A								
8	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	14EPP	A								
8	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	12"CN	B								
8	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	12"CN	B								
LSD (P=.05)										7.2	12.1	0.0		3.6	14.5	0.0	
Replicate F										0.943	0.820	0.000		1.212	1.500	0.000	
Replicate Prob(F)										0.4127	0.4604	1.0000		0.3269	0.2569	1.0000	
Treatment F										252.058	93.496	0.000		845.060	51.262	0.000	
Treatment Prob(F)										0.0001	0.0001	1.0000		0.0001	0.0001	1.0000	

Means followed by same letter do not significantly differ (P=.05, LSD)

Trial Comments

1. Protocol: Valent (MD68.01).
2. Ratings: CI/WC 28 + 42 DA"A" plus 28 DA"B".
3. Not possible to rate crop injury at 28 DA-A as corn was just spiking.
4. DA-A and DA-B = Days after 14EPP and 12"CN application, respectively.
 w/POST and wo/POST = Plots did or did not receive the 12"CN application, respectively.