

Valor Plus Chloroacetamides in No-Till Corn.

Project Code: 05-2B-W60 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 chloroacetamide herbicide tank-mixes applied at various intervals prior to no-till corn planting.

Weed Code	Common Name	Scientific Name
1.	HORPU barley, little	Hordeum pusillum Nutt.
2.	RANAB buttercup, smallflower	Ranunculus abortivus L.
3.	ALOCA foxtail, Carolina	Alopecurus carolinianus Walt.
4.	AMBEL ragweed, common	Ambrosia artemisiifolia L.
5.	POLPY smartweed, Pennsylvania	Polygonum pensylvanicum L.
6.	CHEAL lambsquarters, common	Chenopodium album L.
7.	AMBTR ragweed, giant	Ambrosia trifida L.
8.	SETFA foxtail, giant	Setaria faberi Herrm.

Crop 1: ZEAMX corn, field Variety: 33P65 RR
 Planting Method: Seeded Planting Date: 5-4-05
 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	C	D	E
Application Date:	04-05-05	04-10-05	04-19-05	04-26-05	05-03-05
Time of Day:	7:00	7:00	7:00	9:00	9:00
Application Method:	Spray	Spray	Spray	Spray	Spray
Application Timing:	28DBP	21DBP	14DBP	7DBP	1DBP
Applic. Placement:	BROFOL	BROFOL	BROFOL	BROFOL	BROFOL
Air Temp., Unit:	50 F	66 F	62 F	48 F	48 F
% Relative Humidity:	80	82	50	90	60
Wind Velocity, Unit:	5 MPH	3 MPH	3 MPH	3 MPH	0 MPH
Soil Moisture:	NORMAL	NORMAL	NORMAL	ABONOR	NORMAL

CROP STAGE AT EACH APPLICATION

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

WEED STAGE AT EACH APPLICATION

	A	B	C	D	E
Weed 1 Code:		HORPU	HORPU	HORPU	HORPU
Stage (leaves):		5-6	5-6	5-6	5-6
Height (inches):		2-5	4-6	6-8	6-8
Density:		Low	Low	Low	Low
Weed 2 Code:	RANAB	RANAB	RANAB	RANAB	RANAB
Stage (leaves):	10+	10+	10+	10+	10+
Height (inches):	4-8	4-8	6-12	6-12	6-12
Density:	Low	Medium	Medium	Medium	Medium
Weed 3 Code:		ALOCA	ALOCA	ALOCA	ALOCA
Stage (leaves):		5-6	5-6	5-6	5-6
Height (inches):		2-5	4-6	6-8	6-8
Density:		Low	Low	Low	Low
Weed 4 Code:			AMBEL	AMBEL	AMBEL
Stage (leaves):			3-4	5-6	5-6
Height (inches):			1-2	1-3	1-3
Density:			Low	Low	Low
Weed 6 Code:			CHEAL	CHEAL	CHEAL
Stage (leaves):			5-6	8-10	8-10
Height (inches):			1-2	1-3	1-3
Density:			Low	Low	Low
Weed 7 Code:	AMBTR	AMBTR	AMBTR	AMBTR	AMBTR
Stage (leaves):	1-2	3-4	3-4	3-4	3-4
Height (inches):	0-1	2-2	2-3	2-3	2-3
Density:	Low	Low	Low	Low	Low
Weed 8 Code:			SETFA	SETFA	SETFA
Stage (leaves):			1-2	1-3	1-3
Height (inches):			0-1	1-2	1-2
Density:			Low	Low	Low

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APPLICATION EQUIPMENT

	A	B	C	D	E
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer
Operating Pressure:	40 PSI	40 PSI	40 PSI	40 PSI	40 PSI
Nozzle Type:	Flat fan	Flat fan	Flat fan	Flat fan	Flat fan
Nozzle Size:	8002	8002	8002	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA	15 GPA	15 GPA

NOTES:

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Weed Code		Crop Code		Rating Data Type		Rating Unit		Rating Date		Trt-Eval Interval		ZEAMX	ZEAMX	ZEAMX	HORPU	HORPU	RANAB	RANAB
												Yield	Injury	Injury	Control	Control	Control	Control
												bu/A	Percent	Percent	Percent	Percent	Percent	Percent
												10-12-05	05-18-05	06-01-05	05-18-05	06-01-05	05-18-05	06-01-05
													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	VALOR	51	WG	0.064	lb ai/a	2.0	oz/a	28DBP	A	140	0	0	99	99	99	99		
1	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	28DBP	A									
1	AMS	100	DRY	2.5	lb/a	2.5	lb/a	28DBP	A									
2	VALOR	51	WG	0.064	lb ai/a	2.0	oz/a	28DBP	A	171	0	0	99	99	99	99		
2	DUAL II MAGNUM	7.64	EC	1.6	lb ai/a	1.67	pt/a	28DBP	A									
2	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	28DBP	A									
2	AMS	100	DRY	2.5	lb/a	2.5	lb/a	28DBP	A									
3	VALOR	51	WG	0.064	lb ai/a	2.0	oz/a	21DBP	B	175	0	0	99	99	99	99		
3	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	21DBP	B									
3	AMS	100	DRY	2.5	lb/a	2.5	lb/a	21DBP	B									
4	VALOR	51	WG	0.064	lb ai/a	2.0	oz/a	21DBP	B	183	0	0	99	99	99	99		
4	DUAL II MAGNUM	7.64	EC	1.6	lb ai/a	1.67	pt/a	21DBP	B									
4	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	21DBP	B									
4	AMS	100	DRY	2.5	lb/a	2.5	lb/a	21DBP	B									
5	VALOR	51	WG	0.064	lb ai/a	2.0	oz/a	14DBP	C	181	0	0	99	99	99	99		
5	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	14DBP	C									
5	AMS	100	DRY	2.5	lb/a	2.5	lb/a	14DBP	C									
6	VALOR	51	WG	0.064	lb ai/a	2.0	oz/a	14DBP	C	162	0	0	99	99	99	99		
6	DUAL II MAGNUM	7.64	EC	1.6	lb ai/a	1.67	pt/a	14DBP	C									
6	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	14DBP	C									
6	AMS	100	DRY	2.5	lb/a	2.5	lb/a	14DBP	C									
7	VALOR	51	WG	0.064	lb ai/a	2.0	oz/a	7DBP	D	181	0	0	99	99	99	99		
7	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	D									
7	AMS	100	DRY	2.5	lb/a	2.5	lb/a	7DBP	D									
8	VALOR	51	WG	0.064	lb ai/a	2.0	oz/a	7DBP	D	166	0	0	99	99	99	99		
8	DUAL II MAGNUM	7.64	EC	1.6	lb ai/a	1.67	pt/a	7DBP	D									
8	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	D									
8	AMS	100	DRY	2.5	lb/a	2.5	lb/a	7DBP	D									
9	VALOR	51	WG	0.064	lb ai/a	2.0	oz/a	1DBP	E	172	0	0	99	99	99	99		
9	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1DBP	E									
9	AMS	100	DRY	2.5	lb/a	2.5	lb/a	1DBP	E									
10	VALOR	51	WG	0.064	lb ai/a	2.0	oz/a	1DBP	E	178	0	0	99	99	99	99		
10	DUAL II MAGNUM	7.64	EC	1.6	lb ai/a	1.67	pt/a	1DBP	E									
10	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1DBP	E									
10	AMS	100	DRY	2.5	lb/a	2.5	lb/a	1DBP	E									
11	DUAL II MAGNUM	7.64	EC	1.6	lb ai/a	1.67	pt/a	1DBP	E	184	0	0	99	99	99	99		
11	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1DBP	E									
11	AMS	100	DRY	2.5	lb/a	2.5	lb/a	1DBP	E									
12	NONTREATED									0	0	0	0	0	0	0	0	0
LSD (P=.05)										43.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Replicate F										1.313	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Replicate Prob(F)										0.2894	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Treatment F										12.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Treatment Prob(F)										0.0001	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

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Weed Code						ALOCA	ALOCA	AMBEL	AMBEL	POLPY	POLPY	CHEAL	CHEAL			
Crop Code						Control	Control	Control	Control	Control	Control	Control	Control			
Rating Data Type						Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent			
Rating Unit						05-18-05	06-01-05	05-18-05	06-01-05	05-18-05	06-01-05	05-18-05	06-01-05			
Rating Date						14 DAP	28 DAP	14 DAP	28 DAP	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	VALOR	51	WG	0.064	2.0	oz/a	28DBP	A	99	99	89	76	95	93	99	98
1	ROUNDUP ORIG MAX	4.5	SL	0.77	22	fl oz/a	28DBP	A								
1	AMS	100	DRY	2.5	2.5	lb/a	28DBP	A								
2	VALOR	51	WG	0.064	2.0	oz/a	28DBP	A	99	99	90	78	95	90	99	96
2	DUAL II MAGNUM	7.64	EC	1.6	1.67	pt/a	28DBP	A								
2	ROUNDUP ORIG MAX	4.5	SL	0.77	22	fl oz/a	28DBP	A								
2	AMS	100	DRY	2.5	2.5	lb/a	28DBP	A								
3	VALOR	51	WG	0.064	2.0	oz/a	21DBP	B	99	99	99	95	99	99	99	99
3	ROUNDUP ORIG MAX	4.5	SL	0.77	22	fl oz/a	21DBP	B								
3	AMS	100	DRY	2.5	2.5	lb/a	21DBP	B								
4	VALOR	51	WG	0.064	2.0	oz/a	21DBP	B	99	99	99	98	99	99	99	99
4	DUAL II MAGNUM	7.64	EC	1.6	1.67	pt/a	21DBP	B								
4	ROUNDUP ORIG MAX	4.5	SL	0.77	22	fl oz/a	21DBP	B								
4	AMS	100	DRY	2.5	2.5	lb/a	21DBP	B								
5	VALOR	51	WG	0.064	2.0	oz/a	14DBP	C	99	99	99	97	99	99	99	97
5	ROUNDUP ORIG MAX	4.5	SL	0.77	22	fl oz/a	14DBP	C								
5	AMS	100	DRY	2.5	2.5	lb/a	14DBP	C								
6	VALOR	51	WG	0.064	2.0	oz/a	14DBP	C	99	99	98	93	99	99	99	99
6	DUAL II MAGNUM	7.64	EC	1.6	1.67	pt/a	14DBP	C								
6	ROUNDUP ORIG MAX	4.5	SL	0.77	22	fl oz/a	14DBP	C								
6	AMS	100	DRY	2.5	2.5	lb/a	14DBP	C								
7	VALOR	51	WG	0.064	2.0	oz/a	7DBP	D	99	99	98	89	99	99	99	98
7	ROUNDUP ORIG MAX	4.5	SL	0.77	22	fl oz/a	7DBP	D								
7	AMS	100	DRY	2.5	2.5	lb/a	7DBP	D								
8	VALOR	51	WG	0.064	2.0	oz/a	7DBP	D	99	99	98	96	99	99	99	98
8	DUAL II MAGNUM	7.64	EC	1.6	1.67	pt/a	7DBP	D								
8	ROUNDUP ORIG MAX	4.5	SL	0.77	22	fl oz/a	7DBP	D								
8	AMS	100	DRY	2.5	2.5	lb/a	7DBP	D								
9	VALOR	51	WG	0.064	2.0	oz/a	1DBP	E	99	99	98	93	99	98	99	99
9	ROUNDUP ORIG MAX	4.5	SL	0.77	22	fl oz/a	1DBP	E								
9	AMS	100	DRY	2.5	2.5	lb/a	1DBP	E								
10	VALOR	51	WG	0.064	2.0	oz/a	1DBP	E	99	99	99	97	99	99	99	99
10	DUAL II MAGNUM	7.64	EC	1.6	1.67	pt/a	1DBP	E								
10	ROUNDUP ORIG MAX	4.5	SL	0.77	22	fl oz/a	1DBP	E								
10	AMS	100	DRY	2.5	2.5	lb/a	1DBP	E								
11	DUAL II MAGNUM	7.64	EC	1.6	1.67	pt/a	1DBP	E	99	99	99	96	98	99	99	98
11	ROUNDUP ORIG MAX	4.5	SL	0.77	22	fl oz/a	1DBP	E								
11	AMS	100	DRY	2.5	2.5	lb/a	1DBP	E								
12	NONTREATED								0	0	0	0	0	0	0	0
LSD (P=.05)									0.0	0.0	4.7	12.8	3.3	6.1	0.4	2.8
Replicate F									0.000	0.000	0.626	0.528	0.066	0.040	2.200	2.378
Replicate Prob(F)									1.0000	1.0000	0.5442	0.5973	0.9364	0.9605	0.1346	0.1162
Treatment F									0.000	0.000	305.608	39.313	635.946	183.390	48456.556	857.337
Treatment Prob(F)									1.0000	1.0000	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

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								AMBTR	AMBTR	SETFA	SETFA		
								Control	Control	Control	Control		
								Percent	Percent	Percent	Percent		
								05-18-05	06-01-05	05-18-05	06-01-05		
								14 DAP	28 DAP	14 DAP	28 DAP		
Trt	Treatment	Form	Form	Rate	Prod	Prod	Grow	Appl					
No.	Name	Conc	Type	Unit	Rate	Unit	Stg	Code					
1	VALOR	51	WG	0.064	lb ai/a	2.0	oz/a	28DBP	A	96	88	69	67
1	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	28DBP	A				
1	AMS	100	DRY	2.5	lb/a	2.5	lb/a	28DBP	A				
2	VALOR	51	WG	0.064	lb ai/a	2.0	oz/a	28DBP	A	93	88	97	93
2	DUAL II MAGNUM	7.64	EC	1.6	lb ai/a	1.67	pt/a	28DBP	A				
2	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	28DBP	A				
2	AMS	100	DRY	2.5	lb/a	2.5	lb/a	28DBP	A				
3	VALOR	51	WG	0.064	lb ai/a	2.0	oz/a	21DBP	B	94	91	98	89
3	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	21DBP	B				
3	AMS	100	DRY	2.5	lb/a	2.5	lb/a	21DBP	B				
4	VALOR	51	WG	0.064	lb ai/a	2.0	oz/a	21DBP	B	99	97	98	97
4	DUAL II MAGNUM	7.64	EC	1.6	lb ai/a	1.67	pt/a	21DBP	B				
4	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	21DBP	B				
4	AMS	100	DRY	2.5	lb/a	2.5	lb/a	21DBP	B				
5	VALOR	51	WG	0.064	lb ai/a	2.0	oz/a	14DBP	C	99	98	99	94
5	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	14DBP	C				
5	AMS	100	DRY	2.5	lb/a	2.5	lb/a	14DBP	C				
6	VALOR	51	WG	0.064	lb ai/a	2.0	oz/a	14DBP	C	98	95	99	98
6	DUAL II MAGNUM	7.64	EC	1.6	lb ai/a	1.67	pt/a	14DBP	C				
6	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	14DBP	C				
6	AMS	100	DRY	2.5	lb/a	2.5	lb/a	14DBP	C				
7	VALOR	51	WG	0.064	lb ai/a	2.0	oz/a	7DBP	D	96	90	97	80
7	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	D				
7	AMS	100	DRY	2.5	lb/a	2.5	lb/a	7DBP	D				
8	VALOR	51	WG	0.064	lb ai/a	2.0	oz/a	7DBP	D	96	87	99	97
8	DUAL II MAGNUM	7.64	EC	1.6	lb ai/a	1.67	pt/a	7DBP	D				
8	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	D				
8	AMS	100	DRY	2.5	lb/a	2.5	lb/a	7DBP	D				
9	VALOR	51	WG	0.064	lb ai/a	2.0	oz/a	1DBP	E	98	91	98	87
9	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1DBP	E				
9	AMS	100	DRY	2.5	lb/a	2.5	lb/a	1DBP	E				
10	VALOR	51	WG	0.064	lb ai/a	2.0	oz/a	1DBP	E	98	95	99	98
10	DUAL II MAGNUM	7.64	EC	1.6	lb ai/a	1.67	pt/a	1DBP	E				
10	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1DBP	E				
10	AMS	100	DRY	2.5	lb/a	2.5	lb/a	1DBP	E				
11	DUAL II MAGNUM	7.64	EC	1.6	lb ai/a	1.67	pt/a	1DBP	E	96	94	99	97
11	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1DBP	E				
11	AMS	100	DRY	2.5	lb/a	2.5	lb/a	1DBP	E				
12	NONTREATED									0	0	0	0
LSD (P=.05)								5.4	12.7	12.6	11.0		
Replicate F								0.251	0.114	0.954	2.549		
Replicate Prob(F)								0.7806	0.8932	0.4005	0.1010		
Treatment F								227.328	38.662	45.278	54.950		
Treatment Prob(F)								0.0001	0.0001	0.0001	0.0001		

Trial Comments

1. Protocol: Valent.
2. Ratings: CI/WC 14 and 28 DAP.
3. Yield.
4. Blanket application, except the nontreated plots, of Roundup OriginalMax 0.77 lbae/A applied on 6-1-05.
5. DBP = days before planned planting date. DAP = Days after planting.
6. Harvested 10-12-05, (2) 30 inch rows by 25 ft.