

University of Nebraska

Preemergent Weed control in soybeans

Trial ID: L0732
Location: Havelock

Study Dir.: Kevin Horky
Investigator: Dr. Mark Bernards

GENERAL TRIAL INFORMATION

Study Director: Kevin Horky **Title:** Research Technician
Affiliation: University of Nebraska Lincoln
Postal Code: 68583
Investigator: Dr. Mark Bernards **Title:** Ext. Weed Specialist
Affiliation: University of Nebraska Lincoln
Postal Code: 68583

TRIAL LOCATION

City: Lincoln
State/Prov.: NE
Postal Code: 68583

Conducted Under GLP (Y/N): N **Conducted Under GEP (Y/N):** N

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1.	ABUTH	Velvetleaf	Abutilon theophrasti
2.	AMAPA	Amaranth, Palmer	Amaranthus palmeri
3.	HELAN	Common sunflower	Helianthus annuus
4.	PESGL	Yellow foxtail	Pennisetum glaucum

Crop 1: GLXMA SOYBEAN **Variety:** Asgrow 2703
Planting Date: 22/May/2007 **Planting Method:** planted
Rate: 180000 seeds/a **Depth:** 1.25 in
Row Spacing: 30 in **Seed Bed:** medium
Soil Temperature: 10 C **Soil Moisture:** good **Emergence Date:** 28/May/2007

SITE AND DESIGN

Plot Width, Unit: 10 FT **Plot Length, Unit:** 30 FT **Reps:** 3
Site Type: field
Tillage Type: conventional **Study Design:** RANDOMIZED COMPLETE BLOCK

MAINTENANCE

Field Prep./Maintenance: Field was disked once, and field cultivated once.

SOIL DESCRIPTION

% Sand: 6 **% OM:** 3.0 **Texture:** Silty Clay Loam
% Silt: 65 **pH:** 6.7 **Soil Name:** Sharpesburg
% Clay: 29 **CEC:** 31 **Fert. Level:** good

APPLICATION DESCRIPTION

	A
Application Date:	22/May/2007
Time of Day:	9:00 am
Application Method:	Spray
Application Timing:	pre
Applic. Placement:	BROS0I
Air Temp., Unit:	69 F
% Relative Humidity:	80
Wind Velocity, Unit:	8 mph
Dew Presence (Y/N):	y
Soil Temp., Unit:	10 C
Soil Moisture:	good
% Cloud Cover:	100

CROP STAGE AT EACH APPLICATION

	A
Crop 1 Code, Stage:	GLXMA
Stage Scale:	pre

University of Nebraska

WEED STAGE AT EACH APPLICATION

	A
Weed 1 Code, Stage:	ABUTH
Stage Scale:	pre
Weed 2 Code, Stage:	AMAPA
Stage Scale:	pre
Weed 3 Code, Stage:	HELAN
Stage Scale:	pre
Weed 4 Code, Stage:	PESGL
Stage Scale:	pre

APPLICATION EQUIPMENT

	A
Appl. Equipment:	IH cub
Operating Pressure:	30
Nozzle Type:	Turbo Tee
Nozzle Size:	110015
Nozzle Spacing, Unit:	15 in
Nozzles/Row:	2
Boom Length, Unit:	10 ft
Boom Height, Unit:	15 in
Ground Speed, Unit:	3 mph
Carrier:	water
Spray Volume, Unit:	15 gpa
Propellant:	air

Trial Comments

Valent Protocol # md64.14

Data requested

Crop Injury 14, 28 DAT

Weed Control 28, and 56 DAT

University of Nebraska

Preemergent Weed control in soybeans

Trial ID: L0732

Study Dir.: Kevin Horky

Location: Havelock

Investigator: Dr. Mark Bernards

Weed Code		GLXMA	GLXMA	ABUTH	AMAPA	HELAN	PESGL				
Crop Code		PHYGEN	PHYGEN	GLXMA	GLXMA	GLXMA	GLXMA				
Rating Data Type				CONTROL	CONTROL	CONTROL	CONTROL				
Rating Unit		%	%	%	%	%	%				
Rating Date		5/Jun/2007	19/Jun/2007	19/Jun/2007	19/Jun/2007	19/Jun/2007	19/Jun/2007				
Trt-Eval Interval		14 DA-A	28 DA-A	28 DA-A	28 DA-A	28 DA-A	28 DA-A				
Trt	Treatment	Rate	Grow								
No.	Name	Rate	Unit	Stg	Plot	1	2	3	4	5	6
1	Check				101	0	0	0	0	0	0
					212	0	0	0	0	0	0
					310	0	0	0	0	0	0
				Mean =		0	0	0	0	0	0
2	Valor XLT	2.5 oz/a	pre		102	0	0	90	99	80	95
					203	0	0	90	99	95	70
					315	0	0	99	99	80	90
				Mean =		0	0	93	99	85	85
3	Valor XLT	2.5 oz/a	pre		103	0	0	95	99	95	90
	V -10206	0.5 oz/a	pre		215	0	0	95	99	90	95
					313	0	0	95	95	70	90
				Mean =		0	0	95	98	85	92
4	Valor XLT	2.5 oz/a	pre		104	0	0	95	99	80	95
	V -10206	1 oz/a	pre		211	0	0	90	95	60	40
					305	0	0	90	99	95	60
				Mean =		0	0	92	98	78	65
5	Valor XLT	2.5 oz/a	pre		105	0	0	95	99	80	95
	V -10206	1.5 oz/a	pre		207	0	0	95	99	90	90
					308	0	0	90	99	85	80
				Mean =		0	0	93	99	85	88
6	Valor XLT	2.5 oz/a	pre		106	0	0	90	99	90	80
	V -10206	2 oz/a	pre		205	0	0	99	99	90	60
					301	0	0	90	99	80	80
				Mean =		0	0	93	99	87	73
7	Valor XLT	2.5 oz/a	pre		107	0	0	95	99	90	90
	V -10206	2.5 oz/a	pre		201	0	0	95	99	70	90
					314	0	0	99	99	90	95
				Mean =		0	0	96	99	83	92
8	Boundary	1.5 qt/a	pre		108	0	0	75	99	70	90
					206	0	0	70	95	85	90
					307	0	0	70	95	80	60
				Mean =		0	0	72	96	78	80
9	Domain	12 oz/a	pre		109	0	0	20	20	20	30
					214	0	0	20	20	20	30
					302	0	0	70	20	20	20
				Mean =		0	0	37	20	20	27
10	Canopy EX	1.5 oz/a	pre		110	0	0	95	90	95	70
					202	0	0	75	80	70	50
					312	0	0	90	80	60	40
				Mean =		0	0	87	83	75	53

University of Nebraska

Weed Code					GLXMA	GLXMA	ABUTH	AMAPA	HELAN	PESGL	
Crop Code					PHYGEN	PHYGEN	GLXMA	GLXMA	GLXMA	GLXMA	
Rating Data Type					%	%	CONTROL	CONTROL	CONTROL	CONTROL	
Rating Unit					%	%	%	%	%	%	
Rating Date					5/Jun/2007	19/Jun/2007	19/Jun/2007	19/Jun/2007	19/Jun/2007	19/Jun/2007	
Trt-Eval Interval					14 DA-A	28 DA-A	28 DA-A	28 DA-A	28 DA-A	28 DA-A	
Trt No.	Treatment Name	Rate	Unit	Grow Stg	Plot	1	2	3	4	5	6
11	Canopy XL	2.5	oz/a	pre	111	0	0	85	80	80	20
					208	0	0	90	80	70	80
					303	0	0	70	90	85	60
					Mean =	0	0	82	83	78	53
12	Canopy XL	3.5	oz/a	pre	112	0	0	90	85	90	95
					213	0	0	95	90	80	40
					309	0	0	90	95	75	80
					Mean =	0	0	92	90	82	72
13	Gangster FR	0.3	oz/a	pre	113	0	0	95	99	95	85
					209	0	0	95	99	99	40
	Gangster V	1.5	oz/a	pre	311	0	0	95	99	90	70
					Mean =	0	0	95	99	95	65
14	Gangster FR	0.5	oz/a	pre	114	0	0	95	99	95	85
					210	0	0	90	95	99	40
	Gangster V	2.5	oz/a	pre	304	0	0	95	99	95	60
					Mean =	0	0	93	98	96	62
15	Valor XLT	3.5	oz/a	pre	115	0	0	95	99	99	90
					204	0	0	95	99	95	85
					306	0	0	99	99	95	60
					Mean =	0	0	96	99	96	78

University of Nebraska

Weed Code						ABUTH	AMAPA	HELAN	PESGL
Crop Code						GLXMA	GLXMA	GLXMA	GLXMA
Rating Data Type						CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit						%	%	%	%
Rating Date						17/Jul/2007	17/Jul/2007	17/Jul/2007	17/Jul/2007
Trt-Eval Interval						56 DA-A	56 DA-A	56 DA-A	56 DA-A
Trt No.	Treatment Name	Rate	Grow Unit	Stg	Plot	7	8	9	10
1	Check				101	0	0	0	0
					212	0	0	0	0
					310	0	0	0	0
					Mean =	0	0	0	0
2	Valor XLT	2.5 oz/a	pre		102	85	99	80	95
					203	90	99	90	60
					315	99	99	80	90
					Mean =	91	99	83	82
3	Valor XLT	2.5 oz/a	pre		103	90	99	90	90
					V -10206	0.5 oz/a	pre	215	90
				313	90	90	70	90	
	Mean =	90	96	83	90				
4	Valor XLT	2.5 oz/a	pre		104	90	99	80	90
					V -10206	1 oz/a	pre	211	90
				305	90	99	90	60	
	Mean =	90	96	77	63				
5	Valor XLT	2.5 oz/a	pre		105	90	99	80	90
					V -10206	1.5 oz/a	pre	207	90
				308	90	99	80	80	
	Mean =	90	99	83	87				
6	Valor XLT	2.5 oz/a	pre		106	80	99	90	80
					V -10206	2 oz/a	pre	205	99
				301	90	99	80	80	
	Mean =	90	99	87	73				
7	Valor XLT	2.5 oz/a	pre		107	90	99	90	90
					V -10206	2.5 oz/a	pre	201	90
				314	99	99	90	90	
	Mean =	93	99	83	90				
8	Boundary	1.5 qt/a	pre		108	70	99	60	90
					206	70	90	80	90
					307	70	90	80	60
	Mean =	70	93	73	80				
9	Domain	12 oz/a	pre		109	20	20	30	30
					214	20	25	20	30
					302	70	20	20	20
	Mean =	37	22	23	27				
10	Canopy EX	1.5 oz/a	pre		110	90	90	90	60
					202	70	80	70	50
					312	90	80	60	40
	Mean =	83	83	73	50				
11	Canopy XL	2.5 oz/a	pre		111	80	80	80	20
					208	90	80	70	80
					303	70	90	80	60
	Mean =	80	83	77	53				

University of Nebraska

Weed Code					ABUTH	AMAPA	HELAN	PESGL	
Crop Code					GLXMA	GLXMA	GLXMA	GLXMA	
Rating Data Type					CONTROL	CONTROL	CONTROL	CONTROL	
Rating Unit					%	%	%	%	
Rating Date					17/Jul/2007	17/Jul/2007	17/Jul/2007	17/Jul/2007	
Trt-Eval Interval					56 DA-A	56 DA-A	56 DA-A	56 DA-A	
Trt No.	Treatment Name	Rate	Unit	Grow Stg	Plot	7	8	9	10
12	Canopy XL	3.5	oz/a	pre	112	90	80	90	90
					213	90	90	80	40
					309	90	90	70	80
					Mean =	90	87	80	70
13	Gangster FR	0.3	oz/a	pre	113	90	99	90	80
	Gangster V	1.5	oz/a	pre	209	95	99	99	40
					311	90	99	90	70
					Mean =	92	99	93	63
14	Gangster FR	0.5	oz/a	pre	114	90	99	90	80
	Gangster V	2.5	oz/a	pre	210	90	90	99	40
					304	90	99	90	60
					Mean =	90	96	93	60
15	Valor XLT	3.5	oz/a	pre	115	90	99	99	90
					204	90	99	90	80
					306	99	99	90	60
					Mean =	93	99	93	77

University of Nebraska

Preemergent Weed control in soybeans

Trial ID: L0732

Study Dir.: Kevin Horky

Location: Havelock

Investigator: Dr. Mark Bernards

Weed Code				ABUTH	AMAPA	HELAN	PESGL			
Crop Code		GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA			
Rating Data Type		PHYGEN	PHYGEN	CONTROL	CONTROL	CONTROL	CONTROL			
Rating Unit		%	%	%	%	%	%			
Rating Date		5/Jun/2007	19/Jun/2007	19/Jun/2007	19/Jun/2007	19/Jun/2007	19/Jun/2007			
Trt-Eval Interval		14 DA-A	28 DA-A	28 DA-A	28 DA-A	28 DA-A	28 DA-A			
Trt	Treatment	Rate	Grow							
No.	Name	Rate	Unit	Stg	1	2	3	4	5	6
1	Check				0 a	0 a	0 c	0 e	0 c	0 c
2	Valor XLT	2.5 oz/a	pre		0 a	0 a	93 a	99 a	85 a	85 a
3	Valor XLT	2.5 oz/a	pre		0 a	0 a	95 a	98 a	85 a	92 a
	V -10206	0.5 oz/a	pre							
4	Valor XLT	2.5 oz/a	pre		0 a	0 a	92 a	98 a	78 a	65 ab
	V -10206	1 oz/a	pre							
5	Valor XLT	2.5 oz/a	pre		0 a	0 a	93 a	99 a	85 a	88 a
	V -10206	1.5 oz/a	pre							
6	Valor XLT	2.5 oz/a	pre		0 a	0 a	93 a	99 a	87 a	73 a
	V -10206	2 oz/a	pre							
7	Valor XLT	2.5 oz/a	pre		0 a	0 a	96 a	99 a	83 a	92 a
	V -10206	2.5 oz/a	pre							
8	Boundary	1.5 qt/a	pre		0 a	0 a	72 a	96 a	78 a	80 a
9	Domain	12 oz/a	pre		0 a	0 a	37 b	20 d	20 b	27 bc
10	Canopy EX	1.5 oz/a	pre		0 a	0 a	87 a	83 c	75 a	53 ab
11	Canopy XL	2.5 oz/a	pre		0 a	0 a	82 a	83 c	78 a	53 ab
12	Canopy XL	3.5 oz/a	pre		0 a	0 a	92 a	90 b	82 a	72 a
13	Gangster FR	0.3 oz/a	pre		0 a	0 a	95 a	99 a	95 a	65 ab
	Gangster V	1.5 oz/a	pre							
14	Gangster FR	0.5 oz/a	pre		0 a	0 a	93 a	98 a	96 a	62 ab
	Gangster V	2.5 oz/a	pre							
15	Valor XLT	3.5 oz/a	pre		0 a	0 a	96 a	99 a	96 a	78 a
LSD (P=.05)					0.0	0.0	14.9	4.6	15.6	28.1
Standard Deviation					0.0	0.0	8.9	2.7	9.3	16.8
CV					0.0	0.0	11.02	3.27	12.44	25.56
Grand Mean					0.0	0.0	81.02	84.0	74.93	65.67
Bartlett's X2					0.0	0.0	32.109	4.725	14.868	17.905
P(Bartlett's X2)					.	.	0.001*	0.58	0.249	0.161
Replicate F					0.000	0.000	0.499	0.962	0.737	2.893
Replicate Prob(F)					1.0000	1.0000	0.6122	0.3943	0.4876	0.0721
Treatment F					0.000	0.000	27.751	375.984	25.959	6.736
Treatment Prob(F)					1.0000	1.0000	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Nebraska

Weed Code				ABUTH	AMAPA	HELAN	PESGL
Crop Code				GLXMA	GLXMA	GLXMA	GLXMA
Rating Data Type				CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit				%	%	%	%
Rating Date				17/Jul/2007	17/Jul/2007	17/Jul/2007	17/Jul/2007
Trt-Eval Interval				56 DA-A	56 DA-A	56 DA-A	56 DA-A
Trt No.	Treatment Name	Rate	Grow Unit Stg	7	8	9	10
1	Check			0 c	0 e	0 c	0 c
2	Valor XLT	2.5 oz/a	pre	91 a	99 a	83 a	82 a
3	Valor XLT V -10206	2.5 oz/a 0.5 oz/a	pre pre	90 a	96 a	83 a	90 a
4	Valor XLT V -10206	2.5 oz/a 1 oz/a	pre pre	90 a	96 a	77 a	63 ab
5	Valor XLT V -10206	2.5 oz/a 1.5 oz/a	pre pre	90 a	99 a	83 a	87 a
6	Valor XLT V -10206	2.5 oz/a 2 oz/a	pre pre	90 a	99 a	87 a	73 a
7	Valor XLT V -10206	2.5 oz/a 2.5 oz/a	pre pre	93 a	99 a	83 a	90 a
8	Boundary	1.5 qt/a	pre	70 a	93 ab	73 a	80 a
9	Domain	12 oz/a	pre	37 b	22 d	23 b	27 bc
10	Canopy EX	1.5 oz/a	pre	83 a	83 c	73 a	50 ab
11	Canopy XL	2.5 oz/a	pre	80 a	83 c	77 a	53 ab
12	Canopy XL	3.5 oz/a	pre	90 a	87 bc	80 a	70 a
13	Gangster FR Gangster V	0.3 oz/a 1.5 oz/a	pre pre	92 a	99 a	93 a	63 ab
14	Gangster FR Gangster V	0.5 oz/a 2.5 oz/a	pre pre	90 a	96 a	93 a	60 ab
15	Valor XLT	3.5 oz/a	pre	93 a	99 a	93 a	77 a
LSD (P=.05)				15.1	6.4	15.0	26.9
Standard Deviation				9.1	3.9	9.0	16.1
CV				11.52	4.63	12.25	25.02
Grand Mean				78.58	83.33	73.49	64.33
Bartlett's X2				13.203	1.022	8.437	9.01
P(Bartlett's X2)				0.067	0.994	0.814	0.621
Replicate F				1.499	0.556	0.991	2.567
Replicate Prob(F)				0.2407	0.5796	0.3838	0.0947
Treatment F				24.993	184.640	25.613	7.058
Treatment Prob(F)				0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.