

# The Ohio State University

## Valent Pre and Post treatments in Liberty Link soybean programs

Trial ID: 16 PREPOSTLL  
 Protocol ID: 16 PREPOSTLL  
 Project ID: Cobra 64.01/Fierce 64.05

Location: Western Branch Trial Year: 2016  
 Investigator: Dr. Mark M. Loux  
 Study Director: Bryan Reeb  
 Sponsor Contact: Eric Ott, Valent

### General Trial Information

**Study Director:** Bryan Reeb  
**Investigator:** Dr. Mark M. Loux

**Latitude of LL Corner °:** 39.86017 N  
**Longitude of LL Corner °:** 83.67167 W  
**Altitude of LL Corner, Unit:** 1088.00 FT

**Conducted Under GLP:** No  
**Conducted Under GEP:** No

### Contacts

**Study Director:** Bryan Reeb

**Investigator:** Dr. Mark M. Loux

### Crop Description

**Crop 1:** GLXMA Glycine max  
**Variety:** SC3325LL  
**Description:** Seed Consultants LL

**BBCH Scale:** BSOY

**Planting Rate, Unit:** 175000 S/A  
**Depth, Unit:** 1 IN  
**Row Spacing, Unit:** 15 IN  
**Soil Temperature, Unit:** 67 F  
**Soil Moisture:** DRY dry  
**Seed Bed:** MEDIUM medium

**Planting Date:** 5-25-2016  
**Planting Method:** PLANTD planted  
**Planting Equipment:** FE Field Equipment  
**Emergence Date:** 6-1-2016

### Pest Description

**Pest 1 Type:** W **Code:** SETFA *Setaria faberi*  
**Common Name:** Giant foxtail

**Pest 2 Type:** W **Code:** AMBTR *Ambrosia trifida*  
**Common Name:** Giant ragweed

**Pest 3 Type:** W **Code:** CHEAL *Chenopodium album*  
**Common Name:** Common lambsquarters

**Pest 4 Type:** W **Code:** AMARE *Amaranthus retroflexus*  
**Common Name:** Redroot pigweed

**Pest 5 Type:** W **Code:** HIBTR *Hibiscus trionum*  
**Common Name:** Venice mallow

**Pest 6 Type:** W **Code:** ECHCG *Echinochloa crus-galli*  
**Common Name:** Common barnyardgrass

**Pest 7 Type:** W **Code:** ABUTH *Abutilon theophrasti*  
**Common Name:** velvetleaf

**Pest 8 Type:** W **Code:** SIDSP *Sida spinosa*  
**Common Name:** Prickly sida

### Site and Design

**Treated Plot Width:** 6.67 FT  
**Treated Plot Length:** 30 FT  
**Treated Plot Area:** 200.1 FT<sup>2</sup> **Treatments:** 14  
**Replications:** 3

**Site Type:** FIELD field  
**Experimental Unit:** 1 PLOT plot  
**Tillage Type:** CONTIL conventional-till  
**Study Design:** RACOB� Randomized Complete Block (RCB)

### Soil Description

**Description Name:** F-8 Middle  
**% OM:** 2 **Texture:** CL clay loam  
**pH:** 7 **Soil Name:** Celina  
**CEC:** 11.5 **Fert. Level:** G good  
**Soil Drainage:** G good

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	Application Description			
	A	B	C	D
Application Date:	5-25-2016	6-14-2016	6-20-2016	6-28-2016
Appl. Start Time:	10:30 AM	10:00 AM	10:00 AM	8:30 AM
Appl. Stop Time:	10:45 AM	10:15 AM	10:15 AM	9:00 AM
Interval to Prev. Appl., Unit:		20 DAYS	6 DAYS	8 DAYS
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	PRE	EPO 21	EPO 2-3" WDS	MPO 35 DAP
Application Placement:	BROSOI	BROFOL	BROFOL	BROFOL
Applied By:	LAMB	REEB	LOUX	BOLTE
Air Temperature, Unit:	79 F	74 F	81 F	70 F
% Relative Humidity:	47	41	68	72
Wind Velocity, Unit:	9 MPH	5 MPH	6 MPH	5 MPH
Wind Direction:	SSW	ENE	WSW	NW
Dew Presence (Y/N):	N no	N no	N no	N no
Soil Temperature, Unit:	66 F	71 F	73 F	72 F
Soil Moisture:	DRY	DRY	DRY	MOIST
% Cloud Cover:	75	20	66	0
Next Moisture Occurred On:	5-29-2016	6-15-2016	6-23-2016	7-1-2016
Time to Next Moisture, Unit:	4 DAYS	1 DAY	3 DAYS	2 DAYS

	Crop Stage At Each Application							
	A		B		C		D	
Crop 1 Code, BBCH Scale:	GLXMA	BSOY	GLXMA	BSOY	GLXMA	BSOY	GLXMA	BSOY
Stage Scale Used:			BBCH		BBCH		BBCH	
Stage Majority, Percent:			12	100	13	100	15	100
Stage Minimum, Percent:			V3		V4			
Height, Unit:			3	IN	6	IN	9	IN
Height Minimum, Maximum:			2	4				

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### Pest Stage At Each Application

	A		B		C		D	
<b>Pest 1 Code, Type, Scale:</b>	SETFA	W	SETFA	W	SETFA	W	SETFA	W
<b>Stage Majority, Percent:</b>			18	60	15	60	13	100
<b>Stage Minimum, Percent:</b>			14	40	13	40		
<b>Stage Maximum, Percent:</b>			18	60	16	60		
<b>Height, Unit:</b>			4	IN	5	IN	2	IN
<b>Height Minimum, Maximum:</b>			2	6	3	5	2	3
<b>Density, Unit:</b>							40	m2
<b>Pest 2 Code, Type, Scale:</b>	AMBTR	W	AMBTR	W	AMBTR	W	AMBTR	W
<b>Stage Majority, Percent:</b>			14	60	16	100	14	100
<b>Stage Minimum, Percent:</b>			16	40				
<b>Stage Maximum, Percent:</b>			14	60				
<b>Height, Unit:</b>			5	IN	10	IN	2	IN
<b>Height Minimum, Maximum:</b>			4	6	8	10	2	2
<b>Density, Unit:</b>							3	m2
<b>Pest 3 Code, Type, Scale:</b>	CHEAL	W	CHEAL	W	CHEAL	W	CHEAL	W
<b>Stage Majority, Percent:</b>			15	60	18	100	14	100
<b>Stage Minimum, Percent:</b>			16	40				
<b>Stage Maximum, Percent:</b>			15	60				
<b>Height, Unit:</b>			2	IN	2	IN	0.5	IN
<b>Height Minimum, Maximum:</b>			1	2	1	2	0.5	1
<b>Density, Unit:</b>							8	m2
<b>Pest 4 Code, Type, Scale:</b>	AMARE	W	AMARE	W	AMARE	W	AMARE	W
<b>Stage Majority, Percent:</b>			14	60	15	100	14	100
<b>Stage Minimum, Percent:</b>			15	40				
<b>Stage Maximum, Percent:</b>			14	60				
<b>Height, Unit:</b>			2	IN	2	IN	2	IN
<b>Height Minimum, Maximum:</b>			1	2	1	2	2	3
<b>Density, Unit:</b>							15	m2
<b>Pest 5 Code, Type, Scale:</b>	HIBTR	W	HIBTR	W	HIBTR	W	HIBTR	W
<b>Stage Majority, Percent:</b>			12	100				
<b>Height, Unit:</b>			1	IN				
<b>Height Minimum, Maximum:</b>			1	2				
<b>Density, Unit:</b>							0.5	m2
<b>Pest 6 Code, Type, Scale:</b>	ECHCG	W	ECHCG	W	ECHCG	W	ECHCG	W
<b>Stage Majority, Percent:</b>					13	100	23	60
<b>Stage Minimum, Percent:</b>							25	40
<b>Stage Maximum, Percent:</b>							23	60
<b>Height, Unit:</b>					5	IN	5	IN
<b>Height Minimum, Maximum:</b>					4	5	3	6
<b>Density, Unit:</b>							80	m2
<b>Pest 7 Code, Type, Scale:</b>	ABUTH	W	ABUTH	W	ABUTH	W	ABUTH	W
<b>Stage Majority, Percent:</b>					14	100		
<b>Height, Unit:</b>					3	IN		
<b>Height Minimum, Maximum:</b>					2	3		
<b>Density, Unit:</b>							1	m2
<b>Pest 8 Code, Type, Scale:</b>	SIDSP	W	SIDSP	W	SIDSP	W	SIDSP	W
<b>Stage Majority, Percent:</b>					13	100		
<b>Height, Unit:</b>					2	IN		
<b>Height Minimum, Maximum:</b>					1	2		
<b>Density, Unit:</b>							5	m2

### Application Equipment

	A		B		C		D	
<b>Appl. Equipment:</b>	6'	BACKPACK	6'	BACKPACK	6'	BACKPACK	6'	BACKPACK
<b>Equipment Type:</b>	BACCAI		BACCAI		BACCAI		BACCAI	
<b>Operation Pressure, Unit:</b>	44	PSI	44	PSI	44	PSI	44	PSI
<b>Nozzle Type:</b>	AIXR		AIXR		AIXR		AIXR	
<b>Nozzle Size:</b>	11015		11015		11015		11015	
<b>Nozzle Spacing, Unit:</b>	18	IN	18	IN	18	IN	18	IN
<b>Nozzles/Row:</b>	4		4		4		4	
<b>Boom Length, Unit:</b>	6.67	FT	6.67	FT	6.67	FT	6.67	FT
<b>Boom Height, Unit:</b>	20	IN	20	IN	20	IN	20	IN
<b>Ground Speed, Unit:</b>	3	MPH	3	MPH	3	MPH	3	MPH
<b>Carrier:</b>	WATER		WATER		WATER		WATER	
<b>Spray Volume, Unit:</b>	15	gal/ac	15	gal/ac	15	gal/ac	15	gal/ac
<b>Mix Size, Unit:</b>	1	liters	1	liters	1	liters	1	liters
<b>Propellant:</b>	COMCO2		COMCO2		COMCO2		COMCO2	

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed				
Pest Code	SETFA	AMBTR	CHEAL	AMARE	HIBTR	SETFA				
Pest Scientific Name	Setaria faberi	Ambrosia trifida	Chenopodium album	Amaranthus retrofractus	Hibiscus trionum	Setaria faberi				
Pest Name	Giant foxtail	Giant ragweed	Common lambsquarters	Redroot pigweed	Venice mallow	Giant foxtail				
Rating Date	6-14-2016	6-14-2016	6-14-2016	6-14-2016	6-14-2016	7-8-2016				
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO				
Rating Unit	%	%	%	%	%	%				
Number of Subsamples	1	1	1	1	1	1				
SE Group No.	1	2	3	4	5	6				
Days After First/Last Applic.	20 20	20 20	20 20	20 20	20 20	44 10				
Trt-Eval Interval	20 DA-A	20 DA-A	20 DA-A	20 DA-A	20 DA-A	20 DA-A				
Plant-Eval Interval	20 DP-1	20 DP-1	20 DP-1	20 DP-1	20 DP-1	44 DP-1				
Days After Emergence	13 DE-1	13 DE-1	13 DE-1	13 DE-1	13 DE-1	37 DE-1				
Trt No.	Treatment Name	Other Rate	Other Rate	Appl Unit Code	1*	2*	3*	4*	5*	6*
1	Boundary	1.5 pt/a		A	0.0 d	0.0 d	0.0 c	0.0 b	0.0 b	0.0 b
	Liberty	29 oz/a		C	90.0 c	46.7 bc	100.0 a	100.0 a	100.0 a	98.3 a
	N-pak ams	2.7 qt/a		C						
3	Boundary	1.5 pt/a		A	91.7 bc	46.7 bc	96.7 ab	100.0 a	100.0 a	96.7 a
	Liberty	29 oz/a		C						
	Cobra	8 oz/a		C						
	N-pak ams	2.7 qt/a		C						
4	Boundary	1.5 pt/a		A	98.3 ab	43.3 c	98.3 ab	100.0 a	100.0 a	100.0 a
	Liberty	29 oz/a		C						
	Cobra	10 oz/a		C						
	N-pak ams	2.7 qt/a		C						
5	Boundary	1.5 pt/a		A	93.3 abc	40.0 c	100.0 a	100.0 a	100.0 a	100.0 a
	Liberty	29 oz/a		C						
	Cobra	12.5 oz/a		C						
	N-pak ams	2.7 qt/a		C						
6	Boundary	1.5 pt/a		A	96.7 abc	43.3 c	99.3 a	100.0 a	100.0 a	100.0 a
	Liberty	29 oz/a		C						
	Cobra	8 oz/a		C						
	Crop Oil Concentrat	1 pt/a		C						
	N-pak ams	2.7 qt/a		C						
7	Boundary	1.5 pt/a		A	93.3 abc	36.7 c	96.7 ab	100.0 a	100.0 a	98.3 a
	Liberty	29 oz/a		C						
	Flexstar	16 oz/a		C						
	Crop Oil Concentrat	1 pt/a		C						
	N-pak ams	2.7 qt/a		C						
8	Boundary	1.5 pt/a		A	93.3 abc	40.0 c	97.7 ab	100.0 a	100.0 a	97.7 a
	Liberty	29 oz/a		C						
	Ultra Blazer	16 oz/a		C						
	Crop Oil Concentrat	1 pt/a		C						
	N-pak ams	2.7 qt/a		C						
9	Liberty	29 oz/a		B	0.0 d	0.0 d	0.0 c	0.0 b	0.0 b	100.0 a
	N-pak ams	2.25 qt/a		B						
	Liberty	29 oz/a		D						
	Select Max	6 oz/a		D						
	NIS	0.15 qt/a		D						
	N-pak ams	2.25 qt/a		D						
10	Authority Elite	25 oz/a		A	96.7 abc	43.3 c	98.3 ab	100.0 a	100.0 a	100.0 a
	Liberty	29 oz/a		B						
	N-pak ams	2.25 qt/a		B						
	Liberty	29 oz/a		D						
	Select Max	6 oz/a		D						
	NIS	0.15 qt/a		D						
	N-pak ams	2.25 qt/a		D						

Means followed by same letter or symbol do not significantly differ (P=.05, LSD)  
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.  
 \* Adjusted means  
 Could not calculate LSD (% mean diff) for columns 4,5,18 because error mean square = 0.

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed				
Pest Code	SETFA	AMBTR	CHEAL	AMARE	HIBTR	SETFA				
Pest Scientific Name	Setaria Ambrosia trifidi>	Chenopodium al>	Amaranthus ret>	Hibiscus trion>	Setaria faberi					
Pest Name	Giant foxtail	Giant ragweed	Common lambsqu>	Redroot pigweed	Venice mallow	Giant foxtail				
Rating Date	6-14-2016	6-14-2016	6-14-2016	6-14-2016	6-14-2016	7-8-2016				
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO				
Rating Unit	%	%	%	%	%	%				
Number of Subsamples	1	1	1	1	1	1				
SE Group No.	1	2	3	4	5	6				
Days After First/Last Applic.	20 20	20 20	20 20	20 20	20 20	44 10				
Trt-Eval Interval	20 DA-A	20 DA-A	20 DA-A	20 DA-A	20 DA-A					
Plant-Eval Interval	20 DP-1	20 DP-1	20 DP-1	20 DP-1	20 DP-1	44 DP-1				
Days After Emergence	13 DE-1	13 DE-1	13 DE-1	13 DE-1	13 DE-1	37 DE-1				
Trt No.	Treatment Name	Other Rate	Other Rate	Appl Unit Code	1*	2*	3*	4*	5*	6*
11	Fierce	3 oz/a		A	95.0 abc	63.3 a	95.0 b	100.0 a	100.0 a	100.0 a
	Liberty	29 oz/a		B						
	N-pak ams	2.25 qt/a		B						
	Liberty	29 oz/a		D						
	Select Max	6 oz/a		D						
	NIS	0.15 qt/a		D						
	N-pak ams	2.25 qt/a		D						
12	Fierce	3.75 oz/a		A	93.3 abc	58.3 ab	98.3 ab	100.0 a	100.0 a	100.0 a
	Liberty	29 oz/a		B						
	N-pak ams	2.25 qt/a		B						
	Liberty	29 oz/a		D						
	Select Max	6 oz/a		D						
	NIS	0.15 qt/a		D						
	N-pak ams	2.25 qt/a		D						
13	Fierce XLT	4 oz/a		A	97.7 ab	63.3 a	100.0 a	100.0 a	100.0 a	100.0 a
	Liberty	29 oz/a		B						
	N-pak ams	2.25 qt/a		B						
	Liberty	29 oz/a		D						
	Select Max	6 oz/a		D						
	NIS	0.15 qt/a		D						
	N-pak ams	2.25 qt/a		D						
14	Boundary	2.0 pt/a		A	100.0 a	46.7 bc	100.0 a	100.0 a	100.0 a	100.0 a
	Liberty	29 oz/a		B						
	N-pak ams	2.25 qt/a		B						
	Liberty	29 oz/a		D						
	Select Max	6 oz/a		D						
	NIS	0.15 qt/a		D						
	N-pak ams	2.25 qt/a		D						
	LSD P=.05				7.20	11.68	3.84	.	.	3.35
	Standard Deviation				4.29	6.96	2.29	0.00	0.00	2.00
	CV				5.27	17.04	2.71	0.0	0.0	2.17
	Bartlett's X2				5.169	5.316	3.436	0.0	0.0	1.89
	P(Bartlett's X2)				0.88	0.869	0.842	.	.	0.596
	Skewness				-2.0451*	-1.0438*	-2.0971*	-2.1176*	-2.1176*	-3.4193*
	Kurtosis				2.4312*	0.4213	2.5558*	2.6063*	2.6063*	10.2596*
	Replicate F				0.471	2.669	1.236	0.000	0.000	1.129
	Replicate Prob(F)				0.6298	0.0883	0.3071	1.0000	1.0000	0.3388
	Treatment F				194.908	22.854	734.290	0.000	0.000	530.940
	Treatment Prob(F)				0.0001	0.0001	0.0001	1.0000	1.0000	0.0001

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Pest Code	AMBTR	CHEAL	AMARE	HIBTR	ECHCG	SETFA					
Pest Scientific Name	Ambrosia trifida	Chenopodium album	Amaranthus retrofractus	Hibiscus trionum	Echinochloa crusgalli	Setaria faberii					
Pest Name	Giant ragweed	Common lambsquarters	Redroot pigweed	Venice mallow	Common barnyard	Giant foxtail					
Rating Date	7-8-2016	7-8-2016	7-8-2016	7-8-2016	7-8-2016	7-20-2016					
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO					
Rating Unit	%	%	%	%	%	%					
Number of Subsamples	1	1	1	1	1	1					
SE Group No.	7	8	9	10	11	12					
Days After First/Last Applic.	44 10	44 10	44 10	44 10	44 10	56 22					
Trt-Eval Interval											
Plant-Eval Interval	44 DP-1	44 DP-1	44 DP-1	44 DP-1	44 DP-1	56 DP-1					
Days After Emergence	37 DE-1	37 DE-1	37 DE-1	37 DE-1	37 DE-1	49 DE-1					
Trt No.	Treatment Name	Other Rate	Other Rate	Appl Unit	Code	7*	8*	9*	10*	11*	12*
1	Boundary	1.5 pt/a		A		0.0 d	0.0 f	0.0 b	0.0 b	0.0 d	0.0 d
2	Liberty	29 oz/a		C		96.7 ab	96.7 bcd	100.0 a	96.7 a	91.0 c	97.7 ab
	N-pak ams	2.7 qt/a		C							
3	Boundary	1.5 pt/a		A		96.7 ab	100.0 a	100.0 a	100.0 a	98.3 ab	96.7 ab
	Liberty	29 oz/a		C							
	Cobra	8 oz/a		C							
	N-pak ams	2.7 qt/a		C							
4	Boundary	1.5 pt/a		A		99.3 a	98.3 abc	100.0 a	100.0 a	96.0 abc	95.0 b
	Liberty	29 oz/a		C							
	Cobra	10 oz/a		C							
	N-pak ams	2.7 qt/a		C							
5	Boundary	1.5 pt/a		A		97.7 a	95.0 d	100.0 a	100.0 a	96.0 abc	95.3 b
	Liberty	29 oz/a		C							
	Cobra	12.5 oz/a		C							
	N-pak ams	2.7 qt/a		C							
6	Boundary	1.5 pt/a		A		91.7 c	96.7 bcd	100.0 a	100.0 a	93.3 bc	97.7 ab
	Liberty	29 oz/a		C							
	Cobra	8 oz/a		C							
	Crop Oil Concentrat	1 pt/a		C							
	N-pak ams	2.7 qt/a		C							
7	Boundary	1.5 pt/a		A		93.3 bc	90.0 e	99.3 a	96.7 a	93.3 bc	90.0 c
	Liberty	29 oz/a		C							
	Flexstar	16 oz/a		C							
	Crop Oil Concentrat	1 pt/a		C							
	N-pak ams	2.7 qt/a		C							
8	Boundary	1.5 pt/a		A		91.7 c	96.0 cd	100.0 a	100.0 a	97.0 ab	97.7 ab
	Liberty	29 oz/a		C							
	Ultra Blazer	16 oz/a		C							
	Crop Oil Concentrat	1 pt/a		C							
	N-pak ams	2.7 qt/a		C							
9	Liberty	29 oz/a		B		100.0 a	99.3 ab	100.0 a	100.0 a	97.7 ab	100.0 a
	N-pak ams	2.25 qt/a		B							
	Liberty	29 oz/a		D							
	Select Max	6 oz/a		D							
	NIS	0.15 qt/a		D							
	N-pak ams	2.25 qt/a		D							
10	Authority Elite	25 oz/a		A		99.3 a	100.0 a	100.0 a	100.0 a	100.0 a	100.0 a
	Liberty	29 oz/a		B							
	N-pak ams	2.25 qt/a		B							
	Liberty	29 oz/a		D							
	Select Max	6 oz/a		D							
	NIS	0.15 qt/a		D							
	N-pak ams	2.25 qt/a		D							



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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed				
Pest Code	AMBTR	CHEAL	AMARE	HIBTR	ECHCG				
Pest Scientific Name	Ambrosia trifi>	Chenopodium al>	Amaranthus ret>	Hibiscus trion>	Echinochloa cr>				
Pest Name	Giant ragweed	Common lambsqu>	Redroot pigweed	Venice mallow	Common barnyar>				
Rating Date	7-20-2016	7-20-2016	7-20-2016	7-20-2016	7-20-2016				
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO				
Rating Unit	%	%	%	%	%				
Number of Subsamples	1	1	1	1	1				
SE Group No.	13	14	15	16	17 19				
Days After First/Last Applic.	56 22	56 22	56 22	56 22	56 22				
Trt-Eval Interval									
Plant-Eval Interval	56 DP-1	56 DP-1	56 DP-1	56 DP-1	56 DP-1				
Days After Emergence	49 DE-1	49 DE-1	49 DE-1	49 DE-1	49 DE-1				
Trt Treatment No. Name	Other Rate	Other Rate	Appl Unit Code	13*	14*	15*	16*	17*	18
1				0.0 c	0.0 c	0.0 c	0.0 c	0.0 c	
2 Boundary	1.5 pt/a		A	86.7 b	93.3 ab	93.3 b	93.3 b	81.7 b	
Liberty	29 oz/a		C						
N-pak ams	2.7 qt/a		C						
3 Boundary	1.5 pt/a		A	90.0 ab	100.0 a	100.0 a	100.0 a	94.0 ab	
Liberty	29 oz/a		C						
Cobra	8 oz/a		C						
N-pak ams	2.7 qt/a		C						
4 Boundary	1.5 pt/a		A	95.0 ab	93.3 ab	100.0 a	100.0 a	91.7 ab	
Liberty	29 oz/a		C						
Cobra	10 oz/a		C						
N-pak ams	2.7 qt/a		C						
5 Boundary	1.5 pt/a		A	96.7 ab	96.0 ab	100.0 a	100.0 a	95.3 ab	
Liberty	29 oz/a		C						
Cobra	12.5 oz/a		C						
N-pak ams	2.7 qt/a		C						
6 Boundary	1.5 pt/a		A	86.7 b	98.3 a	100.0 a	100.0 a	94.3 ab	
Liberty	29 oz/a		C						
Cobra	8 oz/a		C						
Crop Oil Concentrat	1 pt/a		C						
N-pak ams	2.7 qt/a		C						
7 Boundary	1.5 pt/a		A	90.0 ab	86.7 b	100.0 a	100.0 a	83.3 b	
Liberty	29 oz/a		C						
Flexstar	16 oz/a		C						
Crop Oil Concentrat	1 pt/a		C						
N-pak ams	2.7 qt/a		C						
8 Boundary	1.5 pt/a		A	90.0 ab	90.0 ab	100.0 a	100.0 a	91.7 ab	
Liberty	29 oz/a		C						
Ultra Blazer	16 oz/a		C						
Crop Oil Concentrat	1 pt/a		C						
N-pak ams	2.7 qt/a		C						
9 Liberty	29 oz/a		B	100.0 a	100.0 a	100.0 a	100.0 a	91.7 ab	
N-pak ams	2.25 qt/a		B						
Liberty	29 oz/a		D						
Select Max	6 oz/a		D						
NIS	0.15 qt/a		D						
N-pak ams	2.25 qt/a		D						
10 Authority Elite	25 oz/a		A	100.0 a	100.0 a	100.0 a	100.0 a	100.0 a	
Liberty	29 oz/a		B						
N-pak ams	2.25 qt/a		B						
Liberty	29 oz/a		D						
Select Max	6 oz/a		D						
NIS	0.15 qt/a		D						
N-pak ams	2.25 qt/a		D						



# The Ohio State University

## Valent Pre and Post treatments in Liberty Link soybean programs

Trial ID: 16 PREPOSTLL  
 Protocol ID: 16 PREPOSTLL  
 Project ID: Cobra 64.01/Fierce 64.05

Location: Western Branch Trial Year: 2016  
 Investigator: Dr. Mark M. Loux  
 Study Director: Bryan Reeb  
 Sponsor Contact: Eric Ott, Valent

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed				
Pest Code	AMBTR	CHEAL	AMARE	HIBTR	ECHCG				
Pest Scientific Name	Ambrosia trifida	Chenopodium album	Amaranthus retrofractus	Hibiscus trionum	Echinochloa crusgalli				
Pest Name	Giant ragweed	Common lambsquarters	Redroot pigweed	Venice mallow	Common barnyardgrass				
Rating Date	7-20-2016	7-20-2016	7-20-2016	7-20-2016	7-20-2016				
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO				
Rating Unit	%	%	%	%	%				
Number of Subsamples	1	1	1	1	1				
SE Group No.	13	14	15	16	17				
Days After First/Last Applic.	56 22	56 22	56 22	56 22	56 22				
Trt-Eval Interval									
Plant-Eval Interval	56 DP-1	56 DP-1	56 DP-1	56 DP-1	56 DP-1				
Days After Emergence	49 DE-1	49 DE-1	49 DE-1	49 DE-1	49 DE-1				
Trt Treatment No. Name	Other Rate	Other Rate	Appl Unit Code	13*	14*	15*	16*	17*	18
11 Fierce	3 oz/a		A	100.0 a	100.0 a	100.0 a	100.0 a	100.0 a	
Liberty	29 oz/a		B						
N-pak ams	2.25 qt/a		B						
Liberty	29 oz/a		D						
Select Max	6 oz/a		D						
NIS	0.15 qt/a		D						
N-pak ams	2.25 qt/a		D						
12 Fierce	3.75 oz/a		A	100.0 a	100.0 a	100.0 a	100.0 a	100.0 a	
Liberty	29 oz/a		B						
N-pak ams	2.25 qt/a		B						
Liberty	29 oz/a		D						
Select Max	6 oz/a		D						
NIS	0.15 qt/a		D						
N-pak ams	2.25 qt/a		D						
13 Fierce XLT	4 oz/a		A	100.0 a	100.0 a	100.0 a	100.0 a	100.0 a	
Liberty	29 oz/a		B						
N-pak ams	2.25 qt/a		B						
Liberty	29 oz/a		D						
Select Max	6 oz/a		D						
NIS	0.15 qt/a		D						
N-pak ams	2.25 qt/a		D						
14 Boundary	2.0 pt/a		A	100.0 a	100.0 a	100.0 a	100.0 a	99.3 a	
Liberty	29 oz/a		B						
N-pak ams	2.25 qt/a		B						
Liberty	29 oz/a		D						
Select Max	6 oz/a		D						
NIS	0.15 qt/a		D						
N-pak ams	2.25 qt/a		D						
LSD P=.05				10.35	10.50	5.18	5.18	14.22	.
Standard Deviation				6.17	6.26	3.09	3.09	8.47	.
CV				6.99	6.96	3.34	3.34	9.7	.
Bartlett's X2				4.567	4.155	0.0	0.0	23.233	.
P(Bartlett's X2)				0.471	0.527	.	.	0.003*	.
Skewness				-2.9889*	-3.1001*	-3.3795*	-3.3795*	-2.876*	.
Kurtosis				8.2154*	8.7139*	10.0411*	10.0411*	7.447*	.
Replicate F				3.426	0.705	1.000	1.000	1.199	
Replicate Prob(F)				0.0478	0.5032	0.3816	0.3816	0.3177	
Treatment F				53.051	52.709	223.692	223.692	27.903	
Treatment Prob(F)				0.0001	0.0001	0.0001	0.0001	0.0001	

# The Ohio State University

## Valent Pre and Post treatments in Liberty Link soybean programs

Trial ID: 16 PREPOSTLL  
Protocol ID: 16 PREPOSTLL  
Project ID: Cobra 64.01/Fierce 64.05

Location: Western Branch Trial Year: 2016  
Investigator: Dr. Mark M. Loux  
Study Director: Bryan Reeb  
Sponsor Contact: Eric Ott, Valent

Pest Type

W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop

Pest Code

SETFA, Setaria faberi, = US  
AMBTR, Ambrosia trifida, = US  
CHEAL, Chenopodium album, = US  
AMARE, Amaranthus retroflexus, = US  
HIBTR, Hibiscus trionum, = US  
ECHCG, Echinochloa crus-galli, = US

Rating Type

CONTRO = control / burndown or knockdown

Rating Unit

% = percent

Plant-Eval Interval

20 DP-1 = 1 GLXMA 5-25-2016  
44 DP-1 = 1 GLXMA 5-25-2016  
56 DP-1 = 1 GLXMA 5-25-2016