

Ohio State University Horticulture and Crop Science

Ability or Valor, Valor XLT and Fierce to control tough weeds

Title No. 2:
 Trial ID: 11PRES2 Protocol ID: 11PRES2
 Location: Western Branch F-7 Study Director: Bryan Reeb
 Project ID: 11PRES2 Investigator: Dr. Mark M. Loux
 Sponsor Contact: Eric Ott, Valent

General Trial Information

Study Director: Bryan Reeb **Title:** Research Technician
Investigator: Dr. Mark M. Loux **Title:** Professor

Trial Location

City: South Charleston **Latitude of LL Corner °:** 39.86013 N
State/Prov.: Ohio **Longitude of LL Corner °:** -83.67001 W
Postal Code: 45368
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: Asgrow AG 3631 **Description:** Round Up Ready
BBCH Scale: BSOY **Planting Date:** 6/6/11
Planting Method: SEEDED seeded **Rate, Unit:** 197000 S/A
Depth, Unit: 1 IN
Row Spacing, Unit: 15 IN
Seed Bed: MEDIUM medium **Soil Temperature, Unit:** 76 F
Soil Moisture: NORMAL normal **Emergence Date:** 6/13/11

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:** IPOHE Ipomoea hederacea
Common Name: Ivyleaf morningglory
- Pest 4 Type:** W **Code:** SIDSP Sida spinosa
Common Name: Prickly sida
- Pest 5 Type:** W **Code:** CHEAL Chenopodium album
Common Name: Common lambsquarters
- Pest 6 Type:** W **Code:** ABUTH Abutilon theophrasti
Common Name: Velvetleaf
- Pest 7 Type:** W **Code:** SOLPT Solanum ptycanthum
Common Name: Eastern black nightshade
- Pest 8 Type:** W **Code:** AMARE Amaranthus retroflexus
Common Name: Redroot pigweed

Site and Design

Plot Width, Unit: 6.67 FT **Site Type:** FIELD field
Plot Length, Unit: 30 FT **Experimental Unit:** 1 PLOT plot
Plot Area, Unit: 200.1 FT2 **Tillage Type:** CONTIL conventional-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Soil Description

Description Name: F-7 East
% OM: 1.8 **Texture:** SIL silt loam
pH: 5.7 **Soil Name:** Crosby Silt Loam
CEC: 16.2 **Fert. Level:** G good
Soil Drainage: G good

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Application Description

A
Application Date: 6/6/11
Time of Day: 1:45 P.M.
Application Method: SPRAY
Application Placement: BROFOL
Air Temperature, Unit: 88.6 F
% Relative Humidity: 37.5
Wind Velocity, Unit: 4.4 MPH
Wind Direction: WSW
Dew Presence (Y/N): N no
Soil Temperature, Unit: 76 F
Soil Moisture: GOOD
% Cloud Cover: 15
Next Rain Occurred On: 6/7/11

Crop Stage At Each Application

A
Crop 1 Code, BBCH Scale: GLXMA BSOY

Pest Stage At Each Application

A
Pest 1 Code, Type, Scale: SETFA W
Density, Unit: 189.33 M2
Pest 2 Code, Type, Scale: AMBTR W
Density, Unit: 38.66 M2
Pest 3 Code, Type, Scale: IPOHE W
Density, Unit: 13.33 M2
Pest 4 Code, Type, Scale: SIDSP W
Density, Unit: 25.33 M2
Pest 5 Code, Type, Scale: CHEAL W
Density, Unit: 12 M2
Pest 6 Code, Type, Scale: ABUTH W
Density, Unit: 6.66 M2
Pest 7 Code, Type, Scale: SOLPT W
Density, Unit: 2.66 M2
Pest 8 Code, Type, Scale: AMARE W
Density, Unit: 24 M2

Application Equipment

A
Appl. Equipment: Backpack
Equipment Type: SPRBAC
Operating Pressure, Unit: 46 PSI
Nozzle Type: DG
Nozzle Size: 8015
Nozzle Spacing, Unit: 18 IN
Boom Length, Unit: 6.67 FT
Boom Height, Unit: 18 IN
Ground Speed, Unit: 3 MPH
Carrier: WATER
Spray Volume, Unit: 15 gal/ac
Mix Size, Unit: 0.33 gallons
Propellant: COMCO2

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	SETFA	AMBTR	CHEAL	AMARE	IPOHE
Pest Scientific Name	Setaria faberi	Ambrosia trif>	Chenopodium al>	Amaranthus ret>	Ipomoea heder>
Pest Name	Giant foxtail	Giant ragweed	Common lambsqu>	Redroot pigweed	Ivyleaf mornin>
Crop Code	GLXMA				
BBCH Scale	BSOY				
Crop Scientific Name	Glycine max				
Crop Name	Soybean				
Rating Date	7/6/11	7/6/11	7/6/11	7/6/11	7/6/11
Rating Type	PHYGEN	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Days After First/Last Applic.	30 30	30 30	30 30	30 30	30 30
Trt-Eval Interval	30 DA-A	30 DA-A	30 DA-A	30 DA-A	30 DA-A
Plant-Eval Interval	30 DP-1	30 DP-1	30 DP-1	30 DP-1	30 DP-1
Days After Emergence	23 DE-1	23 DE-1	23 DE-1	23 DE-1	23 DE-1
Number of Decimals	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Other Rate	Other Rate	Appl Unit Code	1	2	3	4	5	6
1	UTC					0	0	0	0	0	0
2	Valor SX	51	2 oz/a		A	0	33	33	100	100	77
3	Valor XLT @ 3.0 oz					0	53	57	100	100	82
3	Valor SX	51	1.76 oz/a		A						
3	Classic	25	1.24 oz/a		A						
4	Fierce	76	3 oz/a		A	2	83	43	100	100	83
5	Fierce	76	3.75 oz/a		A	5	88	47	100	100	83
6	Fierce	76	4.5 oz/a		A	13	92	60	100	100	80
7	Authority Assist	4	5 oz/a		A	0	60	37	100	100	83
8	Prefix	5.29	1 qt/a		A	0	93	70	97	100	75
9	Authority First	70	3.2 oz/a		A	0	47	53	100	100	95
10	OpTill	68	2 oz/a		A	0	82	68	98	100	92
11	V-10206	85	1 oz/a		A	1	75	72	100	100	97
11	Valor SX	51	1.75 oz/a		A						
11	Classic	25	1.25 oz/a		A						
12	OpTill	68	2 oz/a		A	0	82	47	100	100	97
12	V-10206	85	1.5 oz/a		A						
13	Authority MTZ	45	11 oz/a		A	0	53	40	100	100	95
14	Authority XL	70	4 oz/a		A	0	50	43	100	100	87
LSD (P=.05)						1.4	11.5	19.9	2.9	0.0	24.6
Standard Deviation						0.8	6.9	11.8	1.8	0.0	14.6
CV						52.25	10.8	24.73	1.89	0.0	18.21
Bartlett's X2						1.46	13.055	9.586	0.877	0.0	14.634
P(Bartlett's X2)						0.227	0.365	0.568	0.349	.	0.262
Replicate F						1.784	16.775	1.696	0.582	0.000	10.013
Replicate Prob(F)						0.1879	0.0001	0.2031	0.5658	1.0000	0.0006
Treatment F						61.773	44.458	7.354	694.045	0.000	8.256
Treatment Prob(F)						0.0001	0.0001	0.0001	0.0001	1.0000	0.0001

Ohio State University Horticulture and Crop Science

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed					
Pest Code	SETFA	AMBTR	IPHOE	CHEAL	AMARE	SETFA					
Pest Scientific Name	Setaria faberi	Ambrosia trifida	Ipomoea hederacea	Chenopodium album	Amaranthus retrofractus	Setaria faberi					
Pest Name	Giant foxtail	Giant ragweed	Ipomoea	Common lambsquarters	Redroot pigweed	Giant foxtail					
Crop Code											
BBCH Scale											
Crop Scientific Name											
Crop Name											
Rating Date	7/18/11	7/18/11	7/18/11	7/18/11	7/18/11	7/25/11					
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO					
Rating Unit	%	%	%	%	%	%					
Number of Subsamples	1	1	1	1	1	1					
Days After First/Last Applic.	42 42	42 42	42 42	42 42	42 42	49 49					
Trt-Eval Interval	42 DA-A	42 DA-A	42 DA-A	42 DA-A	42 DA-A	49 DA-A					
Plant-Eval Interval	42 DP-1	42 DP-1	42 DP-1	42 DP-1	42 DP-1	49 DP-1					
Days After Emergence	35 DE-1	35 DE-1	35 DE-1	35 DE-1	35 DE-1	42 DE-1					
Number of Decimals	0	0	0	0	0	0					
Trt No.	Treatment Name	Form Conc	Other Rate	Other Rate	Appl Unit Code	13	14	15	16	17	18
1	UTC					0	0	0	0	0	0
2	Valor SX	51	2 oz/a		A	27	23	67	100	100	33
3	Valor XLT @ 3.0 oz					50	47	100	100	100	37
3	Valor SX	51	1.76 oz/a		A						
3	Classic	25	1.24 oz/a		A						
4	Fierce	76	3 oz/a		A	80	43	100	100	100	75
5	Fierce	76	3.75 oz/a		A	90	43	97	100	100	70
6	Fierce	76	4.5 oz/a		A	95	50	87	100	100	85
7	Authority Assist	4	5 oz/a		A	72	33	97	100	100	67
8	Prefix	5.29	1 qt/a		A	93	63	97	100	100	97
9	Authority First	70	3.2 oz/a		A	53	50	100	100	100	47
10	OpTill	68	2 oz/a		A	93	63	100	100	100	93
11	V-10206	85	1 oz/a		A	77	62	100	100	100	78
11	Valor SX	51	1.75 oz/a		A						
11	Classic	25	1.25 oz/a		A						
12	OpTill	68	2 oz/a		A	92	43	97	100	100	93
12	V-10206	85	1.5 oz/a		A						
13	Authority MTZ	45	11 oz/a		A	57	27	100	100	100	40
14	Authority XL	70	4 oz/a		A	65	50	100	100	100	62
LSD (P=.05)						14.0	27.0	26.9	0.0	0.0	16.5
Standard Deviation						8.3	16.1	16.1	0.0	0.0	9.8
CV						12.34	37.68	18.12	0.0	0.0	15.68
Bartlett's X2						17.086	6.554	19.817	0.0	0.0	10.604
P(Bartlett's X2)						0.146	0.767	0.001*	.	.	0.477
Replicate F						13.856	0.911	2.522	0.000	0.000	14.754
Replicate Prob(F)						0.0001	0.4146	0.0997	1.0000	1.0000	0.0001
Treatment F						34.280	3.497	8.512	0.000	0.000	24.511
Treatment Prob(F)						0.0001	0.0032	0.0001	1.0000	1.0000	0.0001

Ohio State University Horticulture and Crop Science

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	AMBTR	IPOHE	AMARE	CHEAL	SETFA
Pest Scientific Name	Ambrosia trifida	Ipomoea hederifolia	Amaranthus retrofractus	Chenopodium album	Setaria faberii
Pest Name	Giant ragweed	Ivyleaf morning glory	Redroot pigweed	Common lambsquarters	Giant foxtail
Crop Code					
BBCH Scale					
Crop Scientific Name					
Crop Name					
Rating Date	7/25/11	7/25/11	7/25/11	7/25/11	8/1/11
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Days After First/Last Applic.	49 49	49 49	49 49	49 49	56 56
Trt-Eval Interval	49 DA-A	49 DA-A	49 DA-A	49 DA-A	56 DA-A
Plant-Eval Interval	49 DP-1	49 DP-1	49 DP-1	49 DP-1	56 DP-1
Days After Emergence	42 DE-1	42 DE-1	42 DE-1	42 DE-1	49 DE-1
Number of Decimals	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Other Rate	Other Rate	Appl Unit Code	19	20	21	22	23
1	UTC					0	0	0	0	0
2	Valor SX	51	2 oz/a		A	23	52	100	100	13
3	Valor XLT @ 3.0 oz					43	78	100	100	30
3	Valor SX	51	1.76 oz/a		A					
3	Classic	25	1.24 oz/a		A					
4	Fierce	76	3 oz/a		A	30	87	100	100	73
5	Fierce	76	3.75 oz/a		A	32	83	100	100	75
6	Fierce	76	4.5 oz/a		A	43	83	100	100	78
7	Authority Assist	4	5 oz/a		A	27	87	100	100	57
8	Prefix	5.29	1 qt/a		A	57	87	100	100	85
9	Authority First	70	3.2 oz/a		A	47	97	100	100	47
10	OpTill	68	2 oz/a		A	60	100	100	100	83
11	V-10206	85	1 oz/a		A	50	100	100	100	65
11	Valor SX	51	1.75 oz/a		A					
11	Classic	25	1.25 oz/a		A					
12	OpTill	68	2 oz/a		A	30	100	100	100	87
12	V-10206	85	1.5 oz/a		A					
13	Authority MTZ	45	11 oz/a		A	20	90	100	100	30
14	Authority XL	70	4 oz/a		A	40	93	100	100	47
LSD (P=.05)						23.8	26.3	0.0	0.0	21.6
Standard Deviation						14.2	15.6	0.0	0.0	12.9
CV						39.61	19.26	0.0	0.0	23.41
Bartlett's X2						8.1	11.638	0.0	0.0	8.471
P(Bartlett's X2)						0.619	0.235	.	.	0.671
Replicate F						2.184	9.072	0.000	0.000	8.657
Replicate Prob(F)						0.1328	0.0011	1.0000	1.0000	0.0013
Treatment F						3.811	8.566	0.000	0.000	14.247
Treatment Prob(F)						0.0018	0.0001	1.0000	1.0000	0.0001

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Pest Type	W Weed	W Weed	W Weed	W Weed
Pest Code	AMBTR	IPOHE	AMARE	CHEAL
Pest Scientific Name	Ambrosia trifida	Ipomoea hederacea	Amaranthus retrofractus	Chenopodium album
Pest Name	Giant ragweed	Ivyleaf morningglow	Redroot pigweed	Common lambsquarters
Crop Code				
BBCH Scale				
Crop Scientific Name				
Crop Name				
Rating Date	8/1/11	8/1/11	8/1/11	8/1/11
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%
Number of Subsamples	1	1	1	1
Days After First/Last Applic.	56 56	56 56	56 56	56 56
Trt-Eval Interval	56 DA-A	56 DA-A	56 DA-A	56 DA-A
Plant-Eval Interval	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
Number of Decimals	0	0	0	0

Trt No.	Treatment Name	Form Conc	Other Rate	Other Rate	Appl Unit Code	24	25	26	27
1	UTC					0	0	0	0
2	Valor SX	51	2 oz/a		A	20	100	100	100
3	Valor XLT @ 3.0 oz					48	100	100	100
3	Valor SX	51	1.76 oz/a		A				
3	Classic	25	1.24 oz/a		A				
4	Fierce	76	3 oz/a		A	33	100	100	100
5	Fierce	76	3.75 oz/a		A	27	100	100	100
6	Fierce	76	4.5 oz/a		A	40	77	100	100
7	Authority Assist	4	5 oz/a		A	33	100	100	100
8	Prefix	5.29	1 qt/a		A	68	85	100	100
9	Authority First	70	3.2 oz/a		A	53	100	100	100
10	OpTill	68	2 oz/a		A	65	100	100	100
11	V-10206	85	1 oz/a		A	57	100	100	100
11	Valor SX	51	1.75 oz/a		A				
11	Classic	25	1.25 oz/a		A				
12	OpTill	68	2 oz/a		A	30	100	100	100
12	V-10206	85	1.5 oz/a		A				
13	Authority MTZ	45	11 oz/a		A	37	100	100	100
14	Authority XL	70	4 oz/a		A	43	100	100	100
LSD (P=.05)						26.7	19.3	0.0	0.0
Standard Deviation						15.9	11.5	0.0	0.0
CV						40.05	12.78	0.0	0.0
Bartlett's X2						12.191	1.678	0.0	0.0
P(Bartlett's X2)						0.43	0.195	.	.
Replicate F						0.985	1.000	0.000	0.000
Replicate Prob(F)						0.3870	0.3816	1.0000	1.0000
Treatment F						3.973	16.347	0.000	0.000
Treatment Prob(F)						0.0013	0.0001	1.0000	1.0000

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Ability or Valor, Valor XLT and Fierce to control tough weeds

Title No. 2:

Trial ID: 11PRES2 Protocol ID: 11PRES2
Location: Western Branch F-7 Study Director: Bryan Reeb
Project ID: 11PRES2 Investigator: Dr. Mark M. Loux
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
IPOHE, *Ipomoea hederacea*, = US

Crop Code

GLXMA, BSOY, *Glycine max*, = US

Rating Type

PHYGEN = phytotoxicity - general / injury
CONTRO = control / burndown or knockdown

Rating Unit

% = percent

Plant-Eval Interval

30 DP-1 = 1 6/6/11
35 DP-1 = 1 6/6/11
42 DP-1 = 1 6/6/11
49 DP-1 = 1 6/6/11
56 DP-1 = 1 6/6/11