Ohio State University
Horticulture and Crop Science

Loveland products vs competitve programs in soybeans, Sonic pre followed by Durango DMA post and Durango DMA + Firstrate early post followed by Durango DMA late post

Title No. 2:

Trial ID: 11SOYYLD3 Protocol ID: 11SOYYLD3
Location: Western Branch BIG E Study Director: Bryan Reeb
Project ID: 11SOYYLD3 Investigator: Dr. Mark M. Loux
Sponsor Contact: Philip L., Loveland; Marvin S., Dow

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 °:** -83.67026 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:** ECHCG Echinochloa crus-galli
Common Name: Common barnyardgrass

Pest 5 Type: W **Code:** SIDSP Sida spinosa
Common Name: Prickly sida

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 30 FT **Experimental Unit:** 1 PLOT plot
Plot Area, Unit: 300 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

Application Description

	A	B	C
Application Date:	6/7/11	7/7/11	7/21/11
Time of Day:	10:15 A.M	10:00 A.M	11:00 A.M
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	PRE	MPO	
Application Placement:	BROFOL	BROFOL	BROFOL
Air Temperature, Unit:	83.8 F	87 F	90 F
% Relative Humidity:		87	69
Wind Velocity, Unit:	10 MPH	1.1 MPH	6 MPH
Wind Direction:	wsw	W	W
Dew Presence (Y/N):	N no	N no	N no
Soil Temperature, Unit:	74 F	77 F	79 F
Soil Moisture:	DRY	MOIST	MOIST
% Cloud Cover:	0	20	15
Next Rain Occurred On:	6/7/11	7/8/11	7/23/11

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Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:		BBCH	BBCH
Stage Majority, Percent:		14 100	17 100
Height, Unit:		10 IN	20 IN
Height Minimum, Maximum:		8 10	20 20

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	SETFA W	SETFA W	SETFA W
Stage Majority, Percent:		15 100	
Height, Unit:		10 IN	
Height Minimum, Maximum:		8 10	
Density, Unit:	197.33 M2	197.33 M2	197.33 M2
Pest 2 Code, Type, Scale:	AMBTR W	AMBTR W	AMBTR W
Stage Majority, Percent:		16 100	18 100
Height, Unit:		12 IN	15 IN
Height Minimum, Maximum:		10 12	15 15
Density, Unit:	18.66 M2	18.66 M2	18.66 M2
Pest 3 Code, Type, Scale:	IPOHE W	IPOHE W	IPOHE W
Stage Majority, Percent:		13 100	16 100
Height, Unit:		5 IN	4 IN
Height Minimum, Maximum:		3 5	4 4
Density, Unit:	1.33 M2	1.33 M2	1.33 M2
Pest 4 Code, Type, Scale:	ECHCG W	ECHCG W	ECHCG W
Stage Majority, Percent:			13 100
Height, Unit:			4 IN
Height Minimum, Maximum:			4 4
Density, Unit:	2.66 M2	2.66 M2	2.66 M2
Pest 5 Code, Type, Scale:	SIDSP W	SIDSP W	SIDSP W
Stage Minimum, Percent:			14
Stage Maximum, Percent:			15
Height, Unit:			3 IN
Height Minimum, Maximum:			2 3
Density, Unit:	2.66 M2	2.66 M2	2.66 M2

Application Equipment

	A	B	C
Appl. Equipment:	Backpack	Backpack	Backpack
Equipment Type:	SPRBAC	SPRBAC	SPRBAC
Operating Pressure, Unit:	46 PSI	46 PSI	46 PSI
Nozzle Type:	DG	DG	DG
Nozzle Size:	110015	110015	110015
Nozzle Spacing, Unit:	18 IN	18 IN	18 IN
Boom Length, Unit:	10 FT	10 FT	10 FT
Boom Height, Unit:	18 IN	18 IN	18 IN
Ground Speed, Unit:	3 MPH	3 MPH	3 MPH
Carrier:	WATER	WATER	WATER
Spray Volume, Unit:	15 gal/ac	15 gal/ac	15 gal/ac
Mix Size, Unit:	0.5 gallons	0.5 gallons	0.5 gallons
Propellant:	COMCO2	COMCO2	COMCO2

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Sponsor Contact: Philip L., Loveland; Marvin S., Dow

Trt No.	Treatment Name	Form Conc	Other Rate	Other Rate Unit	Appl Code	1	2	3	4	5	6
	Pest Type						W Weed	W Weed		W Weed	W Weed
	Pest Code						SETFA	AMBTR		SETFA	AMBTR
	Pest Scientific Name						Setaria faberi	Ambrosia trifi>		Setaria faberi	Ambrosia trifi>
	Pest Name						Giant foxtail	Giant ragweed		Giant foxtail	Giant ragweed
	Crop Code					GLXMA			GLXMA		
	BBCH Scale					BSOY			BSOY		
	Crop Scientific Name					Glycine max			Glycine max		
	Crop Name					Soybean			Soybean		
	Rating Date					6/20/11	6/20/11	6/20/11	7/6/11	7/6/11	7/6/11
	Rating Type					PHYGEN	CONTRO	CONTRO	PHYGEN	CONTRO	CONTRO
	Rating Unit					%	%	%	%	%	%
	Number of Subsamples					1	1	1	1	1	1
	Rating Timing								AT POST	AT POST	AT POST
	Days After First/Last Applic.					13 13	13 13	13 13	29 29	29 29	29 29
	Trt-Eval Interval					13 DA-A	13 DA-A	13 DA-A	-1 DA-B	-1 DA-B	-1 DA-B
	Plant-Eval Interval					14 DP-1	14 DP-1	14 DP-1	30 DP-1	30 DP-1	30 DP-1
	Days After Emergence					7 DE-1	7 DE-1	7 DE-1	23 DE-1	23 DE-1	23 DE-1
	Number of Decimals					0	0	0	0	0	0
1	Matador	4.7	2	pt/a	A	0	83	23	1	88	20
1	Makaze Yield Pro	4	32	oz/a	B						
1	Weather Gaurd Complete	100	2	qt/100 gal	B						
2	Matador	4.7	4	pt/a	A	0	92	30	0	96	40
2	Makaze Yield Pro	4	32	oz/a	B						
2	Weather Gaurd Complete	100	2	qt/100 gal	B						
3	Authority MTZ	45	15	oz/a	A	0	70	13	1	77	10
3	Roundup Power Max	4.5	22	oz/a	B						
3	Weather Gaurd Complete	100	2	qt/100 gal	B						
4	Prefix	5.29	2	pt/a	A	0	85	40	0	83	53
4	Roundup Power Max	4.5	22	oz/a	B						
4	Weather Gaurd Complete	100	2	qt/100 gal	B						
5	Valor SX	51	3	oz/a	A	10	60	40	2	37	30
5	Roundup Power Max	4.5	22	oz/a	B						
5	Weather Gaurd Complete	100	2	qt/100 gal	B						
6	Sonic	70	3	oz/a	A	0	55	33	1	23	52
6	Durango DMA	4	24	oz/a	B						
6	N-pak ams	100	1.5	qt/a	B						
7	Sonic	70	4.5	oz/a	A	0	57	33	0	50	43
7	Durango DMA	4	24	oz/a	B						
7	N-pak ams	100	1.5	qt/a	B						
8	Durango DMA	4	24	oz/a	B	0	0	0	0	0	0
8	Firstrate	84	0.3	oz/a	B						
8	N-pak ams	100	1.5	qt/a	B						
8	Durango DMA	4	24	oz/a	C						
8	N-pak ams	100	1.5	qt/a	C						
	LSD (P=.05)					0.0	24.9	24.0	1.8	19.5	33.7
	Standard Deviation					0.0	14.2	13.7	1.0	11.2	19.3
	CV					0.0	22.64	51.43	192.68	19.68	62.07
	Bartlett's X2					0.0	8.197	5.991	0.366	4.203	7.048
	P(Bartlett's X2)					.	0.224	0.307	0.947	0.649	0.217
	Replicate F					0.000	9.242	1.152	1.874	12.919	1.282
	Replicate Prob(F)					1.0000	0.0028	0.3443	0.1900	0.0007	0.3081
	Treatment F					0.000	12.433	3.089	1.131	28.869	3.097
	Treatment Prob(F)					1.0000	0.0001	0.0345	0.3980	0.0001	0.0341

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Trt No.	Treatment Name	Form Conc	Other Rate	Other Rate Unit	Appl Code	7	8	9	10	11	12
	Pest Type						W Weed	W Weed	W Weed	W Weed	W Weed
	Pest Code						SETFA	AMBTR	SETFA	AMBTR	SETFA
	Pest Scientific Name						Setaria faberi	Ambrosia trifi>	Setaria faberi	Ambrosia trifi>	Setaria faberi
	Pest Name						Giant foxtail	Giant ragweed	Giant foxtail	Giant ragweed	Giant foxtail
	Crop Code					GLXMA					
	BBCH Scale					BSOY					
	Crop Scientific Name					Glycine max					
	Crop Name					Soybean					
	Rating Date					7/15/11	7/15/11	7/15/11	7/22/11	7/22/11	8/5/11
	Rating Type					PHYGEN	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
	Rating Unit					%	%	%	%	%	%
	Number of Subsamples					1	1	1	1	1	1
	Rating Timing										
	Days After First/Last Applic.					38 8	38 8	38 8	45 1	45 1	59 15
	Trt-Eval Interval					8 DA-B	8 DA-B	8 DA-B	15 DA-B	15 DA-B	29 DA-B
	Plant-Eval Interval					39 DP-1	39 DP-1	39 DP-1	46 DP-1	46 DP-1	60 DP-1
	Days After Emergence					32 DE-1	32 DE-1	32 DE-1	39 DE-1	39 DE-1	53 DE-1
	Number of Decimals					0	0	0	0	0	0
1	Matador	4.7	2	pt/a	A	0	82	63	97	72	100
1	Makaze Yield Pro	4	32	oz/a	B						
1	Weather Gaurd Complete	100	2	qt/100 gal	B						
2	Matador	4.7	4	pt/a	A	0	91	65	98	73	100
2	Makaze Yield Pro	4	32	oz/a	B						
2	Weather Gaurd Complete	100	2	qt/100 gal	B						
3	Authority MTZ	45	15	oz/a	A	0	78	57	95	57	100
3	Roundup Power Max	4.5	22	oz/a	B						
3	Weather Gaurd Complete	100	2	qt/100 gal	B						
4	Prefix	5.29	2	pt/a	A	0	85	72	97	92	100
4	Roundup Power Max	4.5	22	oz/a	B						
4	Weather Gaurd Complete	100	2	qt/100 gal	B						
5	Valor SX	51	3	oz/a	A	0	70	57	94	87	100
5	Roundup Power Max	4.5	22	oz/a	B						
5	Weather Gaurd Complete	100	2	qt/100 gal	B						
6	Sonic	70	3	oz/a	A	0	88	80	99	93	100
6	Durango DMA	4	24	oz/a	B						
6	N-pak ams	100	1.5	qt/a	B						
7	Sonic	70	4.5	oz/a	A	0	90	73	100	90	100
7	Durango DMA	4	24	oz/a	B						
7	N-pak ams	100	1.5	qt/a	B						
8	Durango DMA	4	24	oz/a	B	1	75	60	94	88	100
8	Firstrate	84	0.3	oz/a	B						
8	N-pak ams	100	1.5	qt/a	B						
8	Durango DMA	4	24	oz/a	C						
8	N-pak ams	100	1.5	qt/a	C						
	LSD (P=.05)					0.5	22.3	16.7	8.2	10.9	0.0
	Standard Deviation					0.3	12.8	9.5	4.7	6.2	0.0
	CV					222.54	15.48	14.5	4.84	7.62	0.0
	Bartlett's X2					0.0	4.908	3.289	5.697	7.833	0.0
	P(Bartlett's X2)					.	0.556	0.772	0.458	0.348	.
	Replicate F					1.615	1.402	3.340	1.366	3.595	0.000
	Replicate Prob(F)					0.2338	0.2786	0.0652	0.2871	0.0550	1.0000
	Treatment F					2.385	1.051	2.353	0.671	13.000	0.000
	Treatment Prob(F)					0.0788	0.4412	0.0820	0.6936	0.0001	1.0000

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Pest Type	W Weed
Pest Code	AMBTR
Pest Scientific Name	Ambrosia trifi>
Pest Name	Giant ragweed
Crop Code	
BBCH Scale	
Crop Scientific Name	
Crop Name	
Rating Date	8/5/11
Rating Type	CONTRO
Rating Unit	%
Number of Subsamples	1
Rating Timing	
Days After First/Last Applic.	59 15
Trt-Eval Interval	29 DA-B
Plant-Eval Interval	60 DP-1
Days After Emergence	53 DE-1
Number of Decimals	0

Trt No.	Treatment Name	Form Conc	Other Rate	Other Rate Unit	Appl Code	13
1	Matador	4.7	2	pt/a	A	82
1	Makaze Yield Pro	4	32	oz/a	B	
1	Weather Gaurd Complete	100	2	qt/100 gal	B	
2	Matador	4.7	4	pt/a	A	85
2	Makaze Yield Pro	4	32	oz/a	B	
2	Weather Gaurd Complete	100	2	qt/100 gal	B	
3	Authority MTZ	45	15	oz/a	A	63
3	Roundup Power Max	4.5	22	oz/a	B	
3	Weather Gaurd Complete	100	2	qt/100 gal	B	
4	Prefix	5.29	2	pt/a	A	100
4	Roundup Power Max	4.5	22	oz/a	B	
4	Weather Gaurd Complete	100	2	qt/100 gal	B	
5	Valor SX	51	3	oz/a	A	100
5	Roundup Power Max	4.5	22	oz/a	B	
5	Weather Gaurd Complete	100	2	qt/100 gal	B	
6	Sonic	70	3	oz/a	A	100
6	Durango DMA	4	24	oz/a	B	
6	N-pak ams	100	1.5	qt/a	B	
7	Sonic	70	4.5	oz/a	A	98
7	Durango DMA	4	24	oz/a	B	
7	N-pak ams	100	1.5	qt/a	B	
8	Durango DMA	4	24	oz/a	B	100
8	Firstrate	84	0.3	oz/a	B	
8	N-pak ams	100	1.5	qt/a	B	
8	Durango DMA	4	24	oz/a	C	
8	N-pak ams	100	1.5	qt/a	C	

LSD (P=.05)	8.7
Standard Deviation	4.9
CV	5.43
Bartlett's X2	3.012
P(Bartlett's X2)	0.39
Replicate F	3.244
Replicate Prob(F)	0.0696
Treatment F	22.238
Treatment Prob(F)	0.0001

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Sponsor Contact: Philip L., Loveland; Marvin S., Dow

Pest Type
W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop
Pest Code
SETFA, Setaria faberi, = US
AMBTR, Ambrosia trifida, = 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
14 DP-1 = 1 6/6/11
30 DP-1 = 1 6/6/11
39 DP-1 = 1 6/6/11
46 DP-1 = 1 6/6/11
60 DP-1 = 1 6/6/11