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Compare programs containing isoxaflutol in terms of tolerance and weed control in HPPD tolerant soybeans

Trial ID: 17 BALANCE GT Location: F-7 Trial Year: 2017
 Protocol ID: 17 BALBEAN Investigator: Dr. Mark M. Loux
 Project ID: HP17USAXP4 Study Director: Bryan Reeb
 Sponsor Contact: Dave Lamore, Baye; Joe Reed, FMC

General Trial Information

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

Trial Location

City: South Charleston **Country:** USA United States
State/Prov.: Ohio
Postal Code: 45368 **Climate Zone:** USWARM US Warm Continental

Latitude of LL Corner °: 39.86024 N
Longitude of LL Corner °: 83.67131 W
Altitude of LL Corner, Unit: 1092.00 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 Soybean
Variety: Stine 34BA02_FG72
Description: Balance Tolerant
Planting Rate, Unit: 175000 P/A
Depth, Unit: 1 IN
Row Spacing, Unit: 15 IN
Soil Moisture: GOOD good
Planting Date: May-17-2017
Planting Method: PLANTD planted
Planting Equipment: FE Field Equipment
Emergence Date: May-29-2017

Pest Description

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

Pest 2 Type: W **Code:** ECHCG *Echinochloa crus-galli*
Common Name: Common barnyard grass

Pest 3 Type: W **Code:** AMBTR *Ambrosia trifida*
Common Name: Giant ragweed

Pest 4 Type: W **Code:** CHEAL *Chenopodium album*
Common Name: common lambsquarters

Pest 5 Type: W **Code:** ABUTH *Abutilon theophrasti*
Common Name: velvetleaf

Pest 6 Type: W **Code:** AMARE *Amaranthus retroflexus*
Common Name: Redroot pigweed

Pest 7 Type: W **Code:** SIDSP *Sida spinosa*
Common Name: Prickly sida

Pest 8 Type: W **Code:** POLPY *Persicaria pensylvanica*
Common Name: annual smartweed

Site and Design

Treated Plot Width: 6.67 FT
Treated Plot Length: 30 FT
Treated Plot Area: 200.1 FT² **Treatments:** 12
Replications: 3
Site Type: FIELD field
Experimental Unit: 1 PLOT plot
Tillage Type: CONTIL conventional-till
Study Design: RACOB Randomized Complete Block (RCB)

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Soil Description

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

Application Description

	A	B
Application Date:	May-19-2017	Jun-21-2017
Appl. Start Time:	10:00 AM	8:40 AM
Appl. Stop Time:	10:30 AM	9:00 AM
Application Method:	SPRAY	SPRAY
Application Placement:	BROSOL	BROFOL
Applied By:	LOUX	REEB
Air Temperature, Unit:	77 F	71 F
% Relative Humidity:	67	63
Wind Velocity, Unit:	1.5 MPH	3.5 MPH
Wind Direction:	SE	ENE
Dew Presence (Y/N):	Y yes	N no
Soil Temperature, Unit:	68 F	64 F
Soil Moisture:	VERWET	SLIWET
% Cloud Cover:	30	35
Next Moisture Occurred On:	May-19-2017	Jun-23-2017
Time to Next Moisture, Unit:	0 D	2 DAY

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:		BBCH
Stage Majority, Percent:		14 80
Height, Unit:		6 IN

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	SETFA W	SETFA W
Stage Majority, Percent:		15 100
Height, Unit:		9 IN
Density, Unit:	157 m2	
Pest 2 Code, Type, Scale:	ECHCG W	ECHCG W
Stage Majority, Percent:		15 100
Height, Unit:		10 IN
Density, Unit:	40 m2	
Pest 3 Code, Type, Scale:	AMBTR W	AMBTR W
Stage Majority, Percent:		21 100
Height, Unit:		11 IN
Density, Unit:	8 m2	
Pest 4 Code, Type, Scale:	CHEAL W	CHEAL W
Stage Majority, Percent:		21 100
Height, Unit:		6 IN
Density, Unit:	4 m2	
Pest 5 Code, Type, Scale:	ABUTH W	ABUTH W
Density, Unit:	1 m2	
Pest 6 Code, Type, Scale:	AMARE W	AMARE W
Stage Majority, Percent:		15 100
Height, Unit:		1 IN
Density, Unit:	24 m2	
Pest 7 Code, Type, Scale:	SIDSP W	SIDSP W
Stage Majority, Percent:		15 100
Height, Unit:		1 IN
Density, Unit:	11 m2	
Pest 8 Code, Type, Scale:	POLPY W	POLPY W
Stage Majority, Percent:		15 100
Height, Unit:		3 IN
Density, Unit:	6 m2	

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Application Equipment

	A	B
Appl. Equipment:	6' BACKPACK	10' BACKPACK
Equipment Type:	BACCAI	BACCAI
Operation Pressure, Unit:	44 PSI	44 PSI
Nozzle Type:	AIXR	AIXR
Nozzle Size:	11015	11015
Nozzle Spacing, Unit:	18 IN	18 IN
Nozzles/Row:	4	6
Boom Length, Unit:	6.67 FT	10 FT
Boom Height, Unit:	20 IN	20 IN
Ground Speed, Unit:	3 MPH	3 MPH
Carrier:	WATER	WATER
Spray Volume, Unit:	15 gal/ac	15 gal/ac
Mix Size, Unit:	1 liters	2 liters
Propellant:	COMCO2	COMCO2

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Pest Type	O Other	W Weed	W Weed	W Weed	W Weed			
Pest Code	PHYTO	SETFA	ECHCG	AMBTR	CHEAL			
Pest Name	Giant foxtail Common barnyar> Giant ragweed common lambsqu>							
Crop Code	GLXMA							
Crop Name	Soybean							
Rating Date	Jun-12-2017	Jun-12-2017	Jun-12-2017	Jun-12-2017	Jun-12-2017			
Rating Type	PHYGEN	CONTRO	CONTRO	CONTRO	CONTRO			
Rating Unit	%	%	%	%	%			
Number of Subsamples	1	1	1	1	1			
Days After First/Last Applic.	24 24	24 24	24 24	24 24	24 24			
Trt-Eval Interval	24 DA-A	24 DA-A	24 DA-A	24 DA-A	24 DA-A			
Days After Emergence	14 DE-1	14 DE-1	14 DE-1	14 DE-1	14 DE-1			
Trt Treatment	Other	Other	Appl					
No. Name	Rate	Rate	Unit Code	1	2	3	4	5
1 UTC				0.0 a	0.0 e	0.0 e	0.0 e	0.0 b
2 Balance Bean	3 oz/a		A	1.7 a	56.7 d	56.7 d	43.3 cd	100.0 a
2 Spartan	5 oz/a		A					
2 Roundup Power Max	32 oz/a		B					
2 N-pak ams	1.5 qt/a		B					
3 Balance Bean	3 oz/a		A	0.0 a	94.3 a	94.3 a	80.0 ab	100.0 a
3 Dual II Magnum	16 oz/a		A					
3 Roundup Power Max	32 oz/a		B					
3 N-pak ams	1.5 qt/a		B					
4 Balance Bean	3 oz/a		A	0.0 a	90.0 ab	86.7 ab	56.7 bcd	100.0 a
4 Zidua WG	1.5 oz/a		A					
4 Roundup Power Max	32 oz/a		B					
4 N-pak ams	1.5 qt/a		B					
5 Fierce	3 oz/a		A	0.0 a	73.3 bcd	73.3 bcd	30.0 d	100.0 a
5 Roundup Power Max	32 oz/a		B					
5 N-pak ams	1.5 qt/a		B					
6 Balance Bean	3 oz/a		A	0.0 a	73.3 bcd	70.0 bcd	80.0 ab	100.0 a
6 Valor XLT @ 3 oz			A					
6 Valor SX	1.76 oz/a		A					
6 Classic	1.24 oz/a		A					
6 Roundup Power Max	32 oz/a		B					
6 N-pak ams	1.5 qt/a		B					
7 Balance Bean	3 oz/a		A	0.7 a	80.0 abc	78.3 abc	80.0 ab	100.0 a
7 Sencor DF	5.33 oz/a		A					
7 Roundup Power Max	32 oz/a		B					
7 N-pak ams	1.5 qt/a		B					
8 Balance Bean	3 oz/a		A	0.0 a	76.7 bc	73.3 bcd	63.3 abc	100.0 a
8 Warrant	3 pt/a		A					
8 Roundup Power Max	32 oz/a		B					
8 N-pak ams	1.5 qt/a		B					
9 Balance Bean	3 oz/a		A	0.0 a	86.7 ab	86.7 ab	63.3 abc	100.0 a
9 Command 3ME	21 oz/a		A					
9 Roundup Power Max	32 oz/a		B					
9 N-pak ams	1.5 qt/a		B					

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.
 Could not calculate LSD (% mean diff) for columns 5,6,7,8,9,14,15,18,24,27,28 because error mean square = 0.

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Pest Type	O Other	W Weed	W Weed	W Weed	W Weed			
Pest Code	PHYTO	SETFA	ECHCG	AMBTR	CHEAL			
Pest Name	Giant foxtail Common barnyar> Giant ragweed common lambsqu>							
Crop Code	GLXMA							
Crop Name	Soybean							
Rating Date	Jun-12-2017	Jun-12-2017	Jun-12-2017	Jun-12-2017	Jun-12-2017			
Rating Type	PHYGEN	CONTRO	CONTRO	CONTRO	CONTRO			
Rating Unit	%	%	%	%	%			
Number of Subsamples	1	1	1	1	1			
Days After First/Last Applic.	24 24	24 24	24 24	24 24	24 24			
Trt-Eval Interval	24 DA-A	24 DA-A	24 DA-A	24 DA-A	24 DA-A			
Days After Emergence	14 DE-1	14 DE-1	14 DE-1	14 DE-1	14 DE-1			
Trt Treatment	Other Rate	Other Rate	Appl Unit Code	1	2	3	4	5
10 Balance Bean	3 oz/a		A	0.7 a	83.3 abc	83.3 abc	53.3 bcd	100.0 a
10 Anthem Maxx	3 oz/a		A					
10 Roundup Power Max	32 oz/a		B					
10 N-pak ams	1.5 qt/a		B					
11 Balance Bean	2 oz/a		A	1.0 a	56.7 d	56.7 d	86.7 a	100.0 a
11 Valor XLT @ 3 oz			A					
11 Valor SX	2.05 oz/a		A					
11 Classic	1.45 oz/a		A					
11 Roundup Power Max	32 oz/a		B					
11 N-pak ams	1.5 qt/a		B					
12 Balance Bean	2 oz/a		A	1.0 a	68.3 cd	66.7 cd	66.7 abc	100.0 a
12 Canopy	4 oz/a		A					
12 Roundup Power Max	32 oz/a		B					
12 N-pak ams	1.5 qt/a		B					
LSD P=.05				1.97	16.70	17.99	27.08	.
Standard Deviation				1.16	9.86	10.62	15.99	0.00
CV				279.48	14.1	15.43	27.29	0.0
Bartlett's X2				2.299	9.557	11.096	7.545	0.0
P(Bartlett's X2)				0.681	0.387	0.35	0.581	.
Replicate F				1.536	2.190	2.661	4.376	0.000
Replicate Prob(F)				0.2374	0.1357	0.0922	0.0251	1.0000
Treatment F				0.721	19.270	16.117	7.237	0.000
Treatment Prob(F)				0.7077	0.0001	0.0001	0.0001	1.0000

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed			
Pest Code	AMARE	POLPY	SIDSP	HIBTR	PHYTO			
Pest Name	Redroot pigweed annual	smartwe>	Prickly sida	Venice mallow				
Crop Code					GLXMA			
Crop Name					Soybean			
Rating Date	Jun-12-2017	Jun-12-2017	Jun-12-2017	Jun-12-2017	Jun-26-2017			
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	PHYGEN			
Rating Unit	%	%	%	%	%			
Number of Subsamples	1	1	1	1	1			
Days After First/Last Applic.	24 24	24 24	24 24	24 24	38 5			
Trt-Eval Interval	24 DA-A	24 DA-A	24 DA-A	24 DA-A				
Days After Emergence	14 DE-1	14 DE-1	14 DE-1	14 DE-1	28 DE-1			
Trt Treatment	Other	Other	Appl					
No. Name	Rate	Rate	Unit Code	6	7	8	9	10
1 UTC				0.0 b	0.0 b	0.0 b	0.0 b	0.0 a
2 Balance Bean	3 oz/a		A	100.0 a	100.0 a	100.0 a	100.0 a	0.0 a
2 Spartan	5 oz/a		A					
2 Roundup Power Max	32 oz/a		B					
2 N-pak ams	1.5 qt/a		B					
3 Balance Bean	3 oz/a		A	100.0 a	100.0 a	100.0 a	100.0 a	0.0 a
3 Dual II Magnum	16 oz/a		A					
3 Roundup Power Max	32 oz/a		B					
3 N-pak ams	1.5 qt/a		B					
4 Balance Bean	3 oz/a		A	100.0 a	100.0 a	100.0 a	100.0 a	0.0 a
4 Zidua WG	1.5 oz/a		A					
4 Roundup Power Max	32 oz/a		B					
4 N-pak ams	1.5 qt/a		B					
5 Fierce	3 oz/a		A	100.0 a	100.0 a	100.0 a	100.0 a	0.0 a
5 Roundup Power Max	32 oz/a		B					
5 N-pak ams	1.5 qt/a		B					
6 Balance Bean	3 oz/a		A	100.0 a	100.0 a	100.0 a	100.0 a	0.0 a
6 Valor XLT @ 3 oz			A					
6 Valor SX	1.76 oz/a		A					
6 Classic	1.24 oz/a		A					
6 Roundup Power Max	32 oz/a		B					
6 N-pak ams	1.5 qt/a		B					
7 Balance Bean	3 oz/a		A	100.0 a	100.0 a	100.0 a	100.0 a	1.7 a
7 Sencor DF	5.33 oz/a		A					
7 Roundup Power Max	32 oz/a		B					
7 N-pak ams	1.5 qt/a		B					
8 Balance Bean	3 oz/a		A	100.0 a	100.0 a	100.0 a	100.0 a	0.0 a
8 Warrant	3 pt/a		A					
8 Roundup Power Max	32 oz/a		B					
8 N-pak ams	1.5 qt/a		B					
9 Balance Bean	3 oz/a		A	100.0 a	100.0 a	100.0 a	100.0 a	0.0 a
9 Command 3ME	21 oz/a		A					
9 Roundup Power Max	32 oz/a		B					
9 N-pak ams	1.5 qt/a		B					

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed			
Pest Code	AMARE	POLPY	SIDSP	HIBTR	PHYTO			
Pest Name	Redroot pigweed annual smartwe>		Prickly sida	Venice mallow				
Crop Code					GLXMA			
Crop Name					Soybean			
Rating Date	Jun-12-2017	Jun-12-2017	Jun-12-2017	Jun-12-2017	Jun-26-2017			
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	PHYGEN			
Rating Unit	%	%	%	%	%			
Number of Subsamples	1	1	1	1	1			
Days After First/Last Applic.	24 24	24 24	24 24	24 24	38 5			
Trt-Eval Interval	24 DA-A	24 DA-A	24 DA-A	24 DA-A				
Days After Emergence	14 DE-1	14 DE-1	14 DE-1	14 DE-1	28 DE-1			
Trt Treatment	Other Rate	Other Rate	Appl Unit Code	6	7	8	9	10
10 Balance Bean	3 oz/a		A	100.0 a	100.0 a	100.0 a	100.0 a	0.0 a
10 Anthem Maxx	3 oz/a		A					
10 Roundup Power Max	32 oz/a		B					
10 N-pak ams	1.5 qt/a		B					
11 Balance Bean	2 oz/a		A	100.0 a	100.0 a	100.0 a	100.0 a	0.0 a
11 Valor XLT @ 3 oz			A					
11 Valor SX	2.05 oz/a		A					
11 Classic	1.45 oz/a		A					
11 Roundup Power Max	32 oz/a		B					
11 N-pak ams	1.5 qt/a		B					
12 Balance Bean	2 oz/a		A	100.0 a	100.0 a	100.0 a	100.0 a	0.0 a
12 Canopy	4 oz/a		A					
12 Roundup Power Max	32 oz/a		B					
12 N-pak ams	1.5 qt/a		B					
LSD P=.05				.	.	.	.	1.41
Standard Deviation				0.00	0.00	0.00	0.00	0.83
CV				0.0	0.0	0.0	0.0	600.0
Bartlett's X2				0.0	0.0	0.0	0.0	0.0
P(Bartlett's X2)				.	.	.	.	.
Replicate F				0.000	0.000	0.000	0.000	1.000
Replicate Prob(F)				1.0000	1.0000	1.0000	1.0000	0.3840
Treatment F				0.000	0.000	0.000	0.000	1.000
Treatment Prob(F)				1.0000	1.0000	1.0000	1.0000	0.4767

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	SETFA	ECHCG	AMBTR	CHEAL	AMARE
Pest Name	Giant foxtail	Common barnyar>	Giant ragweed	common lambsqu>	Redroot pigweed
Crop Code					
Crop Name					
Rating Date	Jun-26-2017	Jun-26-2017	Jun-26-2017	Jun-26-2017	Jun-26-2017
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Days After First/Last Applic.	38 5	38 5	38 5	38 5	38 5
Trt-Eval Interval					
Days After Emergence	28 DE-1	28 DE-1	28 DE-1	28 DE-1	28 DE-1
Trt Treatment	Other Rate	Other Rate	Appl Unit	Code	
No. Name					
1 UTC					46.7 f 46.7 d 50.0 de 100.0 a 100.0 a
2 Balance Bean	3 oz/a		A		63.3 de 53.3 cd 56.7 cde 100.0 a 100.0 a
2 Spartan	5 oz/a		A		
2 Roundup Power Max	32 oz/a		B		
2 N-pak ams	1.5 qt/a		B		
3 Balance Bean	3 oz/a		A		99.3 a 80.0 a 75.0 ab 100.0 a 100.0 a
3 Dual II Magnum	16 oz/a		A		
3 Roundup Power Max	32 oz/a		B		
3 N-pak ams	1.5 qt/a		B		
4 Balance Bean	3 oz/a		A		95.7 ab 70.0 ab 63.3 bcd 100.0 a 100.0 a
4 Zidua WG	1.5 oz/a		A		
4 Roundup Power Max	32 oz/a		B		
4 N-pak ams	1.5 qt/a		B		
5 Fierce	3 oz/a		A		66.7 de 56.7 bcd 43.3 e 100.0 a 100.0 a
5 Roundup Power Max	32 oz/a		B		
5 N-pak ams	1.5 qt/a		B		
6 Balance Bean	3 oz/a		A		76.7 cd 60.0 bcd 80.0 a 100.0 a 100.0 a
6 Valor XLT @ 3 oz			A		
6 Valor SX	1.76 oz/a		A		
6 Classic	1.24 oz/a		A		
6 Roundup Power Max	32 oz/a		B		
6 N-pak ams	1.5 qt/a		B		
7 Balance Bean	3 oz/a		A		83.3 bc 70.0 ab 68.3 abc 100.0 a 100.0 a
7 Sencor DF	5.33 oz/a		A		
7 Roundup Power Max	32 oz/a		B		
7 N-pak ams	1.5 qt/a		B		
8 Balance Bean	3 oz/a		A		81.7 bc 55.0 cd 63.3 bcd 100.0 a 100.0 a
8 Warrant	3 pt/a		A		
8 Roundup Power Max	32 oz/a		B		
8 N-pak ams	1.5 qt/a		B		
9 Balance Bean	3 oz/a		A		92.7 ab 80.0 a 66.7 abc 100.0 a 100.0 a
9 Command 3ME	21 oz/a		A		
9 Roundup Power Max	32 oz/a		B		
9 N-pak ams	1.5 qt/a		B		

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed			
Pest Code	SETFA	ECHCG	AMBTR	CHEAL	AMARE			
Pest Name	Giant foxtail	Common barnyar>	Giant ragweed	common lambsqu>	Redroot pigweed			
Crop Code								
Crop Name								
Rating Date	Jun-26-2017	Jun-26-2017	Jun-26-2017	Jun-26-2017	Jun-26-2017			
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO			
Rating Unit	%	%	%	%	%			
Number of Subsamples	1	1	1	1	1			
Days After First/Last Applic.	38 5	38 5	38 5	38 5	38 5			
Trt-Eval Interval								
Days After Emergence	28 DE-1	28 DE-1	28 DE-1	28 DE-1	28 DE-1			
Trt Treatment	Other Rate	Other Rate	Appl Unit Code	11	12	13	14	15
10 Balance Bean	3 oz/a		A	76.7 cd	66.7 abc	63.3 bcd	100.0 a	100.0 a
10 Anthem Maxx	3 oz/a		A					
10 Roundup Power Max	32 oz/a		B					
10 N-pak ams	1.5 qt/a		B					
11 Balance Bean	2 oz/a		A	63.3 de	53.3 cd	76.7 ab	100.0 a	100.0 a
11 Valor XLT @ 3 oz			A					
11 Valor SX	2.05 oz/a		A					
11 Classic	1.45 oz/a		A					
11 Roundup Power Max	32 oz/a		B					
11 N-pak ams	1.5 qt/a		B					
12 Balance Bean	2 oz/a		A	60.0 ef	53.3 cd	73.3 ab	100.0 a	100.0 a
12 Canopy	4 oz/a		A					
12 Roundup Power Max	32 oz/a		B					
12 N-pak ams	1.5 qt/a		B					
LSD P=.05				14.93	13.96	16.63	.	.
Standard Deviation				8.82	8.25	9.82	0.00	0.00
CV				11.68	13.28	15.11	0.0	0.0
Bartlett's X2				14.723	5.36	12.561	0.0	0.0
P(Bartlett's X2)				0.196	0.802	0.249	.	.
Replicate F				7.526	11.429	4.819	0.000	0.000
Replicate Prob(F)				0.0032	0.0004	0.0184	1.0000	1.0000
Treatment F				9.880	5.373	3.725	0.000	0.000
Treatment Prob(F)				0.0001	0.0004	0.0042	1.0000	1.0000

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Pest Type	W Weed	W Weed	W Weed	O Other	W Weed			
Pest Code	POLPY	SIDSP	HIBTR	PHYTO	SETFA			
Pest Name	annual smartwe>	Prickly sida	Venice mallow		Giant foxtail			
Crop Code				GLXMA				
Crop Name				Soybean				
Rating Date	Jun-26-2017	Jun-26-2017	Jun-26-2017	Jul-11-2017	Jul-11-2017			
Rating Type	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO			
Rating Unit	%	%	%	%	%			
Number of Subsamples	1	1	1	1	1			
Days After First/Last Applic.	38 5	38 5	38 5	53 20	53 20			
Trt-Eval Interval								
Days After Emergence	28 DE-1	28 DE-1	28 DE-1	43 DE-1	43 DE-1			
Trt Treatment	Other	Other	Appl					
No. Name	Rate	Rate	Unit Code	16	17	18	19	20
1 UTC				83.3 a	46.7 b	100.0 a	3.7 a	100.0 a
2 Balance Bean	3 oz/a		A	100.0 a	100.0 a	100.0 a	0.7 b	100.0 a
2 Spartan	5 oz/a		A					
2 Roundup Power Max	32 oz/a		B					
2 N-pak ams	1.5 qt/a		B					
3 Balance Bean	3 oz/a		A	96.7 a	100.0 a	100.0 a	0.0 b	100.0 a
3 Dual II Magnum	16 oz/a		A					
3 Roundup Power Max	32 oz/a		B					
3 N-pak ams	1.5 qt/a		B					
4 Balance Bean	3 oz/a		A	100.0 a	100.0 a	100.0 a	0.0 b	100.0 a
4 Zidua WG	1.5 oz/a		A					
4 Roundup Power Max	32 oz/a		B					
4 N-pak ams	1.5 qt/a		B					
5 Fierce	3 oz/a		A	93.3 a	100.0 a	100.0 a	1.7 b	99.3 a
5 Roundup Power Max	32 oz/a		B					
5 N-pak ams	1.5 qt/a		B					
6 Balance Bean	3 oz/a		A	100.0 a	100.0 a	100.0 a	0.0 b	100.0 a
6 Valor XLT @ 3 oz			A					
6 Valor SX	1.76 oz/a		A					
6 Classic	1.24 oz/a		A					
6 Roundup Power Max	32 oz/a		B					
6 N-pak ams	1.5 qt/a		B					
7 Balance Bean	3 oz/a		A	100.0 a	100.0 a	100.0 a	1.0 b	100.0 a
7 Sencor DF	5.33 oz/a		A					
7 Roundup Power Max	32 oz/a		B					
7 N-pak ams	1.5 qt/a		B					
8 Balance Bean	3 oz/a		A	100.0 a	100.0 a	100.0 a	0.0 b	100.0 a
8 Warrant	3 pt/a		A					
8 Roundup Power Max	32 oz/a		B					
8 N-pak ams	1.5 qt/a		B					
9 Balance Bean	3 oz/a		A	100.0 a	100.0 a	100.0 a	0.0 b	100.0 a
9 Command 3ME	21 oz/a		A					
9 Roundup Power Max	32 oz/a		B					
9 N-pak ams	1.5 qt/a		B					

Means followed by same letter or symbol do not significantly differ (P=.05, LSD)
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 Could not calculate LSD (% mean diff) for columns 5,6,7,8,9,14,15,18,24,27,28 because error mean square = 0.

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Pest Type	W Weed	W Weed	W Weed	O Other	W Weed
Pest Code	POLPY	SIDSP	HIBTR	PHYTO	SETFA
Pest Name	annual smartwe>	Prickly sida	Venice mallow		Giant foxtail
Crop Code				GLXMA	
Crop Name				Soybean	
Rating Date	Jun-26-2017	Jun-26-2017	Jun-26-2017	Jul-11-2017	Jul-11-2017
Rating Type	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Days After First/Last Applic.	38 5	38 5	38 5	53 20	53 20
Trt-Eval Interval					
Days After Emergence	28 DE-1	28 DE-1	28 DE-1	43 DE-1	43 DE-1
Trt Treatment	Other Rate	Other Rate	Appl Unit Code		
No. Name				16	17
				18	19
				20	
10 Balance Bean	3 oz/a		A	100.0 a	100.0 a
10 Anthem Maxx	3 oz/a		A		
10 Roundup Power Max	32 oz/a		B		
10 N-pak ams	1.5 qt/a		B		
11 Balance Bean	2 oz/a		A	100.0 a	100.0 a
11 Valor XLT @ 3 oz			A		
11 Valor SX	2.05 oz/a		A		
11 Classic	1.45 oz/a		A		
11 Roundup Power Max	32 oz/a		B		
11 N-pak ams	1.5 qt/a		B		
12 Balance Bean	2 oz/a		A	100.0 a	100.0 a
12 Canopy	4 oz/a		A		
12 Roundup Power Max	32 oz/a		B		
12 N-pak ams	1.5 qt/a		B		
LSD P=.05				14.64	7.47
Standard Deviation				8.65	4.41
CV				8.84	4.61
Bartlett's X2				4.441	0.0
P(Bartlett's X2)				0.109	.
Replicate F				2.378	1.000
Replicate Prob(F)				0.1161	0.3840
Treatment F				1.000	36.571
Treatment Prob(F)				0.4767	0.0001
					0.000
					1.000
					0.3027
					2.623
					1.000
					0.0261
					0.4767

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The Ohio State University

Pest Type							
Pest Code							
Pest Name							
Crop Code							
Crop Name							
Rating Date							
Rating Type							
Rating Unit							
Number of Subsamples							
Days After First/Last Applic.							
Trt-Eval Interval							
Days After Emergence							
Trt Treatment	Other	Other	Appl				
No. Name	Rate	Rate	Unit Code	21	22	23	24
1 UTC				96.7 b	92.7 a	99.3 a	100.0 a
2 Balance Bean	3 oz/a		A	100.0 a	96.7 a	100.0 a	100.0 a
2 Spartan	5 oz/a		A				
2 Roundup Power Max	32 oz/a		B				
2 N-pak ams	1.5 qt/a		B				
3 Balance Bean	3 oz/a		A	100.0 a	96.7 a	100.0 a	100.0 a
3 Dual II Magnum	16 oz/a		A				
3 Roundup Power Max	32 oz/a		B				
3 N-pak ams	1.5 qt/a		B				
4 Balance Bean	3 oz/a		A	100.0 a	96.7 a	100.0 a	100.0 a
4 Zidua WG	1.5 oz/a		A				
4 Roundup Power Max	32 oz/a		B				
4 N-pak ams	1.5 qt/a		B				
5 Fierce	3 oz/a		A	99.0 a	94.0 a	100.0 a	100.0 a
5 Roundup Power Max	32 oz/a		B				
5 N-pak ams	1.5 qt/a		B				
6 Balance Bean	3 oz/a		A	100.0 a	100.0 a	100.0 a	100.0 a
6 Valor XLT @ 3 oz			A				
6 Valor SX	1.76 oz/a		A				
6 Classic	1.24 oz/a		A				
6 Roundup Power Max	32 oz/a		B				
6 N-pak ams	1.5 qt/a		B				
7 Balance Bean	3 oz/a		A	100.0 a	100.0 a	100.0 a	100.0 a
7 Sencor DF	5.33 oz/a		A				
7 Roundup Power Max	32 oz/a		B				
7 N-pak ams	1.5 qt/a		B				
8 Balance Bean	3 oz/a		A	100.0 a	95.0 a	100.0 a	100.0 a
8 Warrant	3 pt/a		A				
8 Roundup Power Max	32 oz/a		B				
8 N-pak ams	1.5 qt/a		B				
9 Balance Bean	3 oz/a		A	100.0 a	100.0 a	100.0 a	100.0 a
9 Command 3ME	21 oz/a		A				
9 Roundup Power Max	32 oz/a		B				
9 N-pak ams	1.5 qt/a		B				

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Pest Type	W Weed		W Weed		W Weed		W Weed		
Pest Code	ECHCG		AMBTR		CHEAL		AMARE		
Pest Name	Common barnyar>		Giant ragweed		common lambsqu>		Redroot pigweed		
Crop Code									
Crop Name									
Rating Date	Jul-11-2017		Jul-11-2017		Jul-11-2017		Jul-11-2017		
Rating Type	CONTRO		CONTRO		CONTRO		CONTRO		
Rating Unit	%		%		%		%		
Number of Subsamples	1		1		1		1		
Days After First/Last Applic.	53	20	53	20	53	20	53	20	
Trt-Eval Interval									
Days After Emergence	43 DE-1		43 DE-1		43 DE-1		43 DE-1		
Trt Treatment	Other	Other	Appl						
No. Name	Rate	Rate	Unit Code	21	22	23	24		
10 Balance Bean	3 oz/a		A	99.3 a	92.7 a	100.0 a	100.0 a		
10 Anthem Maxx	3 oz/a		A						
10 Roundup Power Max	32 oz/a		B						
10 N-pak ams	1.5 qt/a		B						
11 Balance Bean	2 oz/a		A	100.0 a	99.0 a	100.0 a	100.0 a		
11 Valor XLT @ 3 oz			A						
11 Valor SX	2.05 oz/a		A						
11 Classic	1.45 oz/a		A						
11 Roundup Power Max	32 oz/a		B						
11 N-pak ams	1.5 qt/a		B						
12 Balance Bean	2 oz/a		A	100.0 a	95.0 a	100.0 a	100.0 a		
12 Canopy	4 oz/a		A						
12 Roundup Power Max	32 oz/a		B						
12 N-pak ams	1.5 qt/a		B						
LSD P=.05				1.66	6.72	0.56		.	
Standard Deviation				0.98	3.97	0.33		0.00	
CV				0.98	4.11	0.33		0.0	
Bartlett's X2				1.571	6.523	0.0		0.0	
P(Bartlett's X2)				0.456	0.589	.		.	
Replicate F				2.165	14.951	1.000		0.000	
Replicate Prob(F)				0.1385	0.0001	0.3840		1.0000	
Treatment F				2.969	1.441	1.000		0.000	
Treatment Prob(F)				0.0143	0.2237	0.4767		1.0000	

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The Ohio State University

Pest Type	W Weed	W Weed	W Weed
Pest Code	POLPY	SIDSP	HIBTR
Pest Name	annual smartwe>	Prickly sida	Venice mallow
Crop Code			
Crop Name			
Rating Date	Jul-11-2017	Jul-11-2017	Jul-11-2017
Rating Type	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%
Number of Subsamples	1	1	1
Days After First/Last Applic.	53 20	53 20	53 20
Trt-Eval Interval			
Days After Emergence	43 DE-1	43 DE-1	43 DE-1
Trt Treatment	Other	Other	Appl
No. Name	Rate	Rate	Unit Code
	25	26	27 28
1 UTC			96.7 a 93.3 b 100.0 a
2 Balance Bean	3 oz/a	A	100.0 a
2 Spartan	5 oz/a	A	100.0 a
2 Roundup Power Max	32 oz/a	B	100.0 a
2 N-pak ams	1.5 qt/a	B	100.0 a
3 Balance Bean	3 oz/a	A	100.0 a
3 Dual II Magnum	16 oz/a	A	100.0 a
3 Roundup Power Max	32 oz/a	B	100.0 a
3 N-pak ams	1.5 qt/a	B	100.0 a
4 Balance Bean	3 oz/a	A	100.0 a
4 Zidua WG	1.5 oz/a	A	100.0 a
4 Roundup Power Max	32 oz/a	B	100.0 a
4 N-pak ams	1.5 qt/a	B	100.0 a
5 Fierce	3 oz/a	A	100.0 a
5 Roundup Power Max	32 oz/a	B	100.0 a
5 N-pak ams	1.5 qt/a	B	100.0 a
6 Balance Bean	3 oz/a	A	100.0 a
6 Valor XLT @ 3 oz		A	100.0 a
6 Valor SX	1.76 oz/a	A	100.0 a
6 Classic	1.24 oz/a	A	100.0 a
6 Roundup Power Max	32 oz/a	B	100.0 a
6 N-pak ams	1.5 qt/a	B	100.0 a
7 Balance Bean	3 oz/a	A	100.0 a
7 Sencor DF	5.33 oz/a	A	100.0 a
7 Roundup Power Max	32 oz/a	B	100.0 a
7 N-pak ams	1.5 qt/a	B	100.0 a
8 Balance Bean	3 oz/a	A	100.0 a
8 Warrant	3 pt/a	A	100.0 a
8 Roundup Power Max	32 oz/a	B	100.0 a
8 N-pak ams	1.5 qt/a	B	100.0 a
9 Balance Bean	3 oz/a	A	100.0 a
9 Command 3ME	21 oz/a	A	100.0 a
9 Roundup Power Max	32 oz/a	B	100.0 a
9 N-pak ams	1.5 qt/a	B	100.0 a

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Pest Type	W Weed	W Weed	W Weed				
Pest Code	POLPY	SIDSP	HIBTR				
Pest Name	annual smartwe> Prickly sida Venice mallow						
Crop Code							
Crop Name							
Rating Date	Jul-11-2017	Jul-11-2017	Jul-11-2017				
Rating Type	CONTRO	CONTRO	CONTRO				
Rating Unit	%	%	%				
Number of Subsamples	1	1	1 1				
Days After First/Last Applic.	53 20	53 20	53 20				
Trt-Eval Interval							
Days After Emergence	43 DE-1	43 DE-1	43 DE-1				
Trt Treatment	Other Rate	Other Rate	Appl Unit Code	25	26	27	28
10 Balance Bean	3 oz/a		A	100.0 a	99.3 a	100.0 a	
10 Anthem Maxx	3 oz/a		A				
10 Roundup Power Max	32 oz/a		B				
10 N-pak ams	1.5 qt/a		B				
11 Balance Bean	2 oz/a		A	100.0 a	100.0 a	100.0 a	
11 Valor XLT @ 3 oz			A				
11 Valor SX	2.05 oz/a		A				
11 Classic	1.45 oz/a		A				
11 Roundup Power Max	32 oz/a		B				
11 N-pak ams	1.5 qt/a		B				
12 Balance Bean	2 oz/a		A	100.0 a	100.0 a	100.0 a	
12 Canopy	4 oz/a		A				
12 Roundup Power Max	32 oz/a		B				
12 N-pak ams	1.5 qt/a		B				
LSD P=.05				2.82	2.93	.	.
Standard Deviation				1.67	1.73	0.00	.
CV				1.67	1.74	0.0	.
Bartlett's X2				0.0	3.744	0.0	.
P(Bartlett's X2)				.	0.053	.	.
Replicate F				1.000	0.595	0.000	
Replicate Prob(F)				0.3840	0.5604	1.0000	
Treatment F				1.000	3.686	0.000	
Treatment Prob(F)				0.4767	0.0045	1.0000	

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The Ohio State University

Compare programs containing isoxaflutol in terms of tolerance and weed control in HPPD tolerant soybeans

Trial ID: 17 BALANCE GT	Location: F-7	Trial Year: 2017
Protocol ID: 17 BALBEAN	Investigator: Dr. Mark M. Loux	
Project ID: HP17USAXP4	Study Director: Bryan Reeb	
Sponsor Contact: Dave Lamore, Baye; Joe Reed, FMC		

Pest Type

O, Other, G-BYRO7, G-OthStg = Other animal or nematode
W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop

Pest Code

PHYTO, , = PHYTO, ,
SETFA, Setaria faberi, Giant foxtail = US
ECHCG, Echinochloa crus-galli, Common barnyard grass = US
AMBTR, Ambrosia trifida, Giant ragweed = US
CHEAL, Chenopodium album, common lambsquarters = US
AMARE, Amaranthus retroflexus, Redroot pigweed = US
POLPY, Persicaria pensylvanica, annual smartweed = US
SIDSP, Sida spinosa, Prickly sida = US
HIBTR, Hibiscus trionum, Venice mallow = US

Crop Code

GLXMA, BSOY, Glycine max, Soybean = US

Rating Type

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

Rating Unit

% = percent