Ohio State University
Horticulture and Crop Science

Compare Matador/Top Gun to standard soybean pre-emerge herbicides
Title No. 2:
Trial ID: 12 NTSYLD Protocol ID: 12 NTSYLD
Location: Western Branch Study Director: Bryan Reeb
Project ID: 39.00 Investigator: Dr. Mark M. Loux
Sponsor Contact: Philip Logsdon

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 °: 39.8586 N
State/Prov.: Ohio Longitude of LL Corner °: 83.67021 W
Postal Code: 45368
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: Pioneer 93Y51 Description: Round Up Ready
BBCH Scale: BSOY Planting Date: Apr-30-2012
Planting Method: PLANTD planted Rate, Unit: 225000 P/A
Depth, Unit: 0.5 in
Row Spacing, Unit: 15 in
Seed Bed: MEDIUM medium Soil Temperature, Unit: 63 F
Soil Moisture: SLIWET slightly wet Emergence Date: May-9-2012

Pest Description

Pest 1 Type: W Code: AMBTR Ambrosia trifida
Common Name: Giant ragweed

Pest 2 Type: W Code: ERICA Conyza canadensis
Common Name: Canada horseweed

Pest 3 Type: W Code: SETFA Setaria faberi
Common Name: Giant foxtail

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: NOTILL no-till
Replications: 3 Study Design: RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	SOYBEANS	2011

Maintenance

No.	Date	Treatment Name
1.	Apr-25-2012	7 EPP OVERLAY

Field Prep./Maintenance:
OVERLAY WITH -
Roundup Powermax @ 22oz
2,4-D @ 1pt
Sharpen @ 1oz
Ams @ 2.5% v/v
Mso @ 1% v/v

Soil Description

Description Name: F-10 East
% OM: 2.2 Texture: SICL silty clay loam
pH: 5.9 Soil Name: Kokomo Silty Clay Loam
CEC: 22 Fert. Level: G good
Soil Drainage: G good

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Application Description

	A	B
Application Date:	May-2-2012	Jun-15-2012
Time of Day:	10:00 AM	9:00AM
Application Method:	SPRAY	SPRAY
Application Timing:	ATPL	POST
Application Placement:	BROFOL	BROFOL
Applied By:	REEB	REEB
Air Temperature, Unit:	71 F	76 F
% Relative Humidity:	81	65
Wind Velocity, Unit:	7 MPH	6 MPH
Wind Direction:	SSW	SE
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	60 F	70 F
Soil Moisture:	WET	GOOD
% Cloud Cover:	0	0
Next Rain Occurred On:	May-4-2012	Jun-17-2012

Crop Stage At Each Application

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

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	AMBTR W	AMBTR W
Stage Majority, Percent:		19 100
Height, Unit:		10 IN
Height Minimum, Maximum:		10 10
Density, Unit:		8 M2
Pest 2 Code, Type, Scale:	ERICA W	ERICA W
Stage Majority, Percent:		15 100
Height, Unit:		3 IN
Height Minimum, Maximum:		2 4
Density, Unit:		0.33 M2
Pest 3 Code, Type, Scale:	SETFA W	SETFA W
Stage Majority, Percent:		17 100
Height, Unit:		7 IN
Height Minimum, Maximum:		6 8
Density, Unit:		145 M2

Application Equipment

	A	B
Appl. Equipment:	Backpack	Backpack
Equipment Type:	SPRBAC	SPRBAC
Operation Pressure, Unit:	44 PSI	44 PSI
Nozzle Type:	AIXR	AIXR
Nozzle Size:	110015	110015
Nozzle Spacing, Unit:	18 IN	18 IN
Boom Length, Unit:	10 FT	10 FT
Boom Height, Unit:	18 IN	18 IN
Ground Speed, Unit:	3 MPH	3 MPH
Carrier:	WATER	WATER
Spray Volume, Unit:	15 gal/ac	15 gal/ac
Mix Size, Unit:	2 Liters	2 Liters
Propellant:	COMCO2	COMCO2

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Pest Type								W Weed		W Weed						W Weed
Pest Code								SETFA		AMBTR						AMBTR
Pest Scientific Name								Setaria faberi		Ambrosia trifi>						Ambrosia trifi>
Pest Name								Giant foxtail		Giant ragweed						Giant ragweed
Crop Code								GLXMA						GLXMA		
BBCH Scale								BSOY						BSOY		
Crop Scientific Name								Glycine max						Glycine max		
Crop Name								Soybean						Soybean		
Rating Date								May-22-2012		May-22-2012		May-22-2012		May-29-2012		May-29-2012
Rating Type								PHYGEN		CONTRO		CONTRO		PHYGEN		CONTRO
Rating Unit								%		%		%		%		%
Number of Subsamples								1		1		1		1		1
Days After First/Last Applic.								20	20	20	20	20	20	27	27	27 27
Trt-Eval Interval								20 DA-A		20 DA-A		20 DA-A		27 DA-A		27 DA-A
Plant-Eval Interval								22 DP-1		22 DP-1		22 DP-1		29 DP-1		29 DP-1
Days After Emergence								13 DE-1		13 DE-1		13 DE-1		20 DE-1		20 DE-1
Number of Decimals								0						0		

Trt No.	Treatment Name	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	1	2	3	4	5
1	LI 6407	2.09	lb ai/a	2	pt/a	ATPL	A	0 a	100.0 a	88.3 bc	0 a	86.7 a
1	N-pak ams	2.5	% v/v	1.5	qt/a	ATPL	A					
1	Makaze	0.75	lb ae/a	32	oz/a	POST	B					
1	Weathergard Complete	0.5	% v/v	2	qt/100 gal	POST	B					
2	LI 6407	3.13	lb ai/a	3	pt/a	ATPL	A	0 a	100.0 a	88.3 bc	0 a	83.3 ab
2	N-pak ams	2.5	% v/v	1.5	qt/a	ATPL	A					
2	Makaze	0.75	lb ae/a	32	oz/a	POST	B					
2	Weathergard Complete	0.5	% v/v	2	qt/100 gal	POST	B					
3	LI 6407	2.09	lb ai/a	2	pt/a	ATPL	A	0 a	100.0 a	86.7 bc	0 a	75.0 ab
3	Sencor 75DF	0.188	lb ai/a	4	oz/a	ATPL	A					
3	N-pak ams	2.5	% v/v	1.5	qt/a	ATPL	A					
3	Makaze	0.75	lb ae/a	32	oz/a	POST	B					
3	Weathergard Complete	0.5	% v/v	2	qt/100 gal	POST	B					
4	LI 6378	2.09	lb ai/a	2	pt/a	ATPL	A	0 a	100.0 a	90.0 ab	0 a	81.7 ab
4	N-pak ams	2.5	% v/v	1.5	qt/a	ATPL	A					
4	Makaze	0.75	lb ae/a	32	oz/a	POST	B					
4	Weathergard Complete	0.5	% v/v	2	qt/100 gal	POST	B					
5	LI 6378	2.09	lb ai/a	2	pt/a	ATPL	A	0 a	98.3 ab	93.3 ab	0 a	78.3 ab
5	N-pak ams	2.5	% v/v	1.5	qt/a	ATPL	A					
5	Makaze	0.75	lb ae/a	32	oz/a	POST	B					
5	Weathergard Complete	0.5	% v/v	2	qt/100 gal	POST	B					
6	Valor XLT @ 3oz							0 a	99.3 ab	96.7 a	0 a	88.3 a
6	Valor SX	0.056	lb ai/a	1.76	oz/a	ATPL	A					
6	Classic	0.0194	lb ai/a	1.24	oz/a	ATPL	A					
6	N-pak ams	2.5	% v/v	1.5	qt/a	ATPL	A					
6	Makaze	0.75	lb ae/a	32	oz/a	POST	B					
6	Weathergard Complete	0.5	% v/v	2	qt/100 gal	POST	B					
7	Authority MTZ	0.42	lb ai/a	15	oz/a	ATPL	A	0 a	96.7 b	90.0 ab	0 a	78.3 ab
7	N-pak ams	2.5	% v/v	1.5	qt/a	ATPL	A					
7	Makaze	0.75	lb ae/a	32	oz/a	POST	B					
7	Weathergard Complete	0.5	% v/v	2	qt/100 gal	POST	B					
8	Boundary	1.22	lb ai/a	1.5	pt/a	ATPL	A	0 a	100.0 a	75.0 d	0 a	68.3 b
8	N-pak ams	2.5	% v/v	1.5	qt/a	ATPL	A					
8	Makaze	0.75	lb ae/a	32	oz/a	POST	B					
8	Weathergard Complete	0.5	% v/v	2	qt/100 gal	POST	B					
9	Prefix	1.32	lb ai/a	2	pt/a	ATPL	A	0 a	98.3 ab	81.7 cd	0 a	70.0 b
9	N-pak ams	2.5	% v/v	1.5	qt/a	ATPL	A					
9	Makaze	0.75	lb ae/a	32	oz/a	POST	B					
9	Weathergard Complete	0.5	% v/v	2	qt/100 gal	POST	B					
10	Makaze	0.75	lb ae/a	32	oz/a	POST	B	0 a	0.0 c	0.0 e	0 a	0.0 c
10	Weathergard Complete	0.5	% v/v	2	qt/100 gal	POST	B					
LSD (P=.05)								0.0	2.90	8.04	0.0	15.80
Standard Deviation								0.0	1.69	4.68	0.0	9.21
CV								0.0	1.89	5.93	0.0	12.97

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Trt No.	Treatment Name	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	6	7	8	9	10
	Pest Type							W Weed		W Weed	W Weed	W Weed
	Pest Code							SETFA		SETFA	AMBTR	ERICA
	Pest Scientific Name							Setaria faberi		Setaria faberi	Ambrosia trifi>	Conyza canaden>
	Pest Name							Giant foxtail		Giant foxtail	Giant ragweed	Canada horsewe>
	Crop Code								GLXMA			
	BBCH Scale								BSOY			
	Crop Scientific Name								Glycine max			
	Crop Name								Soybean			
	Rating Date							May-29-2012	Jun-28-2012	Jun-28-2012	Jun-28-2012	Jun-28-2012
	Rating Type							CONTRO	PHYGEN	CONTRO	CONTRO	CONTRO
	Rating Unit							%	%	%	%	%
	Number of Subsamples							1	1	1	1	1
	Days After First/Last Applic.							27 27	57 13	57 13	57 13	57 13
	Trt-Eval Interval							27 DA-A	13 DA-B	13 DA-B	13 DA-B	13 DA-B
	Plant-Eval Interval							29 DP-1	59 DP-1	59 DP-1	59 DP-1	59 DP-1
	Days After Emergence							20 DE-1	50 DE-1	50 DE-1	50 DE-1	50 DE-1
	Number of Decimals								0			0
1	LI 6407	2.09	lb ai/a	2	pt/a	ATPL	A	97.7 a	0 a	100.0 a	70.0 d	100 a
1	N-pak ams	2.5	% v/v	1.5	qt/a	ATPL	A					
1	Makaze	0.75	lb ae/a	32	oz/a	POST	B					
1	Weathergard Complete	0.5	% v/v	2	qt/100 gal	POST	B					
2	LI 6407	3.13	lb ai/a	3	pt/a	ATPL	A	96.7 ab	0 a	100.0 a	73.3 cd	100 a
2	N-pak ams	2.5	% v/v	1.5	qt/a	ATPL	A					
2	Makaze	0.75	lb ae/a	32	oz/a	POST	B					
2	Weathergard Complete	0.5	% v/v	2	qt/100 gal	POST	B					
3	LI 6407	2.09	lb ai/a	2	pt/a	ATPL	A	93.3 abc	0 a	100.0 a	81.7 bcd	100 a
3	Sencor 75DF	0.188	lb ai/a	4	oz/a	ATPL	A					
3	N-pak ams	2.5	% v/v	1.5	qt/a	ATPL	A					
3	Makaze	0.75	lb ae/a	32	oz/a	POST	B					
3	Weathergard Complete	0.5	% v/v	2	qt/100 gal	POST	B					
4	LI 6378	2.09	lb ai/a	2	pt/a	ATPL	A	88.3 abc	0 a	100.0 a	75.0 bcd	100 a
4	N-pak ams	2.5	% v/v	1.5	qt/a	ATPL	A					
4	Makaze	0.75	lb ae/a	32	oz/a	POST	B					
4	Weathergard Complete	0.5	% v/v	2	qt/100 gal	POST	B					
5	LI 6378	2.09	lb ai/a	2	pt/a	ATPL	A	86.7 bc	0 a	100.0 a	76.7 bcd	100 a
5	N-pak ams	2.5	% v/v	1.5	qt/a	ATPL	A					
5	Makaze	0.75	lb ae/a	32	oz/a	POST	B					
5	Weathergard Complete	0.5	% v/v	2	qt/100 gal	POST	B					
6	Valor XLT @ 3oz							93.3 abc	0 a	100.0 a	96.7 a	100 a
6	Valor SX	0.056	lb ai/a	1.76	oz/a	ATPL	A					
6	Classic	0.0194	lb ai/a	1.24	oz/a	ATPL	A					
6	N-pak ams	2.5	% v/v	1.5	qt/a	ATPL	A					
6	Makaze	0.75	lb ae/a	32	oz/a	POST	B					
6	Weathergard Complete	0.5	% v/v	2	qt/100 gal	POST	B					
7	Authority MTZ	0.42	lb ai/a	15	oz/a	ATPL	A	83.3 c	0 a	100.0 a	78.3 bcd	97 a
7	N-pak ams	2.5	% v/v	1.5	qt/a	ATPL	A					
7	Makaze	0.75	lb ae/a	32	oz/a	POST	B					
7	Weathergard Complete	0.5	% v/v	2	qt/100 gal	POST	B					
8	Boundary	1.22	lb ai/a	1.5	pt/a	ATPL	A	91.7 abc	0 a	100.0 a	86.7 ab	100 a
8	N-pak ams	2.5	% v/v	1.5	qt/a	ATPL	A					
8	Makaze	0.75	lb ae/a	32	oz/a	POST	B					
8	Weathergard Complete	0.5	% v/v	2	qt/100 gal	POST	B					
9	Prefix	1.32	lb ai/a	2	pt/a	ATPL	A	85.0 c	0 a	100.0 a	83.3 bc	97 a
9	N-pak ams	2.5	% v/v	1.5	qt/a	ATPL	A					
9	Makaze	0.75	lb ae/a	32	oz/a	POST	B					
9	Weathergard Complete	0.5	% v/v	2	qt/100 gal	POST	B					
10	Makaze	0.75	lb ae/a	32	oz/a	POST	B	0.0 d	0 a	100.0 a	70.0 d	90 a
10	Weathergard Complete	0.5	% v/v	2	qt/100 gal	POST	B					
	LSD (P=.05)							10.47	0.0	0.00	12.75	10.6
	Standard Deviation							6.10	0.0	0.00	7.43	6.2
	CV							7.48	0.0	0.0	9.39	6.28

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Trt No.	Treatment Name	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	11	12	13
	Pest Type							W Weed	W Weed	W Weed
	Pest Code							SETFA	AMBTR	ERICA
	Pest Scientific Name							Setaria faberi	Ambrosia trifi>	Conyza canaden>
	Pest Name							Giant foxtail	Giant ragweed	Canada horsewe>
	Crop Code									
	BBCH Scale									
	Crop Scientific Name									
	Crop Name									
	Rating Date							Jul-12-2012	Jul-12-2012	Jul-12-2012
	Rating Type							CONTRO	CONTRO	CONTRO
	Rating Unit							%	%	%
	Number of Subsamples							1	1	1
	Days After First/Last Applic.							71 27	71 27	71 27
	Trt-Eval Interval							27 DA-B	27 DA-B	27 DA-B
	Plant-Eval Interval							73 DP-1	73 DP-1	73 DP-1
	Days After Emergence							64 DE-1	64 DE-1	64 DE-1
	Number of Decimals									0
1	LI 6407	2.09	lb ai/a	2	pt/a	ATPL	A	100.0 a	73.3 a	100 a
1	N-pak ams	2.5	% v/v	1.5	qt/a	ATPL	A			
1	Makaze	0.75	lb ae/a	32	oz/a	POST	B			
1	Weathergard Complete	0.5	% v/v	2	qt/100 gal	POST	B			
2	LI 6407	3.13	lb ai/a	3	pt/a	ATPL	A	100.0 a	73.3 a	100 a
2	N-pak ams	2.5	% v/v	1.5	qt/a	ATPL	A			
2	Makaze	0.75	lb ae/a	32	oz/a	POST	B			
2	Weathergard Complete	0.5	% v/v	2	qt/100 gal	POST	B			
3	LI 6407	2.09	lb ai/a	2	pt/a	ATPL	A	99.0 a	80.0 a	100 a
3	Sencor 75DF	0.188	lb ai/a	4	oz/a	ATPL	A			
3	N-pak ams	2.5	% v/v	1.5	qt/a	ATPL	A			
3	Makaze	0.75	lb ae/a	32	oz/a	POST	B			
3	Weathergard Complete	0.5	% v/v	2	qt/100 gal	POST	B			
4	LI 6378	2.09	lb ai/a	2	pt/a	ATPL	A	100.0 a	73.3 a	100 a
4	N-pak ams	2.5	% v/v	1.5	qt/a	ATPL	A			
4	Makaze	0.75	lb ae/a	32	oz/a	POST	B			
4	Weathergard Complete	0.5	% v/v	2	qt/100 gal	POST	B			
5	LI 6378	2.09	lb ai/a	2	pt/a	ATPL	A	100.0 a	73.3 a	100 a
5	N-pak ams	2.5	% v/v	1.5	qt/a	ATPL	A			
5	Makaze	0.75	lb ae/a	32	oz/a	POST	B			
5	Weathergard Complete	0.5	% v/v	2	qt/100 gal	POST	B			
6	Valor XLT @ 3oz							99.3 a	90.0 a	100 a
6	Valor SX	0.056	lb ai/a	1.76	oz/a	ATPL	A			
6	Classic	0.0194	lb ai/a	1.24	oz/a	ATPL	A			
6	N-pak ams	2.5	% v/v	1.5	qt/a	ATPL	A			
6	Makaze	0.75	lb ae/a	32	oz/a	POST	B			
6	Weathergard Complete	0.5	% v/v	2	qt/100 gal	POST	B			
7	Authority MTZ	0.42	lb ai/a	15	oz/a	ATPL	A	95.0 b	73.3 a	100 a
7	N-pak ams	2.5	% v/v	1.5	qt/a	ATPL	A			
7	Makaze	0.75	lb ae/a	32	oz/a	POST	B			
7	Weathergard Complete	0.5	% v/v	2	qt/100 gal	POST	B			
8	Boundary	1.22	lb ai/a	1.5	pt/a	ATPL	A	100.0 a	93.3 a	100 a
8	N-pak ams	2.5	% v/v	1.5	qt/a	ATPL	A			
8	Makaze	0.75	lb ae/a	32	oz/a	POST	B			
8	Weathergard Complete	0.5	% v/v	2	qt/100 gal	POST	B			
9	Prefix	1.32	lb ai/a	2	pt/a	ATPL	A	100.0 a	83.3 a	100 a
9	N-pak ams	2.5	% v/v	1.5	qt/a	ATPL	A			
9	Makaze	0.75	lb ae/a	32	oz/a	POST	B			
9	Weathergard Complete	0.5	% v/v	2	qt/100 gal	POST	B			
10	Makaze	0.75	lb ae/a	32	oz/a	POST	B	100.0 a	75.0 a	100 a
10	Weathergard Complete	0.5	% v/v	2	qt/100 gal	POST	B			
	LSD (P=.05)							2.86	24.88	0.0
	Standard Deviation							1.67	14.50	0.0
	CV							1.68	18.39	0.0