

Ohio State University Horticulture and Crop Science

2010/SOYBEAN/AUTHORITY XL/AUTHORITY ASSIST/AUTHORITY MTZ/SPLIT

Title No. 2: APPLICATIONS/FALL/SPRING PROGRAMS/
Trial ID: 11FALLSOY3 Protocol ID: 11FALLSOY3
Location: Study Director:
Project ID: Investigator: Dr. Mark M. Loux
Sponsor Contact: Joe Reed, FMC

General Trial Information

Study Director: Anthony F. Dobbels **Title:** Research Specialist
Investigator: Dr. Mark M. Loux **Title:** Professor

Trial Location

City: South Charleston **Latitude of LL Corner °:** 39.85863 N
State/Prov.: Ohio **Longitude of LL Corner °:** -83.6702 W
Postal Code: 45368
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: Seed Consultants SCS9330RR **Description:** RR
BBCH Scale: BSOY **Planting Date:** May-14-2011
Planting Method: SEEDED seeded **Rate, Unit:** 197000 S/A
Depth, Unit: 1 IN
Row Spacing, Unit: 15 IN
Seed Bed: MEDIUM medium
Soil Moisture: GOOD good
Harvested Width, Unit: 6.25 FT **Emergence Date:** May-24-2011
Harvested Length, Unit: 30 FT

Pest Description

- Pest 1 Type:** W **Code:** LAMPU *Lamium purpureum*
Common Name: Purple deadnettel
- Pest 2 Type:** W **Code:** TAROF *Taraxacum officinale*
Common Name: Common dandelion
- Pest 3 Type:** W **Code:** STEME *Stellaria media*
Common Name: Common chickweed
- Pest 4 Type:** W **Code:** CAPBP *Capsella bursa-pastoris*
Common Name: Shepherd's purse
- Pest 5 Type:** W **Code:** RANAB *Ranunculus abortivus*
Common Name: Smallflower buttercup
- Pest 6 Type:** W **Code:** AMBTR *Ambrosia trifida*
Common Name: Giant ragweed
- Pest 7 Type:** W **Code:** ERICA *Conyza canadensis*
Common Name: Canada horseweed
- Pest 8 Type:** W **Code:** SETFA *Setaria faberi*
Common Name: Giant foxtail
- Pest 9 Type:** W **Code:** AMBEL *Ambrosia artemisiifolia*
Common Name: Common ragweed

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

Soil Description

Description Name: F-9 East
% OM: 2.8 **Texture:** SICL silty clay loam
pH: 6.4 **Soil Name:** Kokomo
CEC: 19.6 **Fert. Level:** G good
Soil Drainage: G good

Ohio State University Horticulture and Crop Science

2010/SOYBEAN/AUTHORITY XL/AUTHORITY ASSIST/AUTHORITY MTZ/SPLIT

Title No. 2: APPLICATIONS/FALL/SPRING PROGRAMS/
 Trial ID: 11FALLSOY3 Protocol ID: 11FALLSOY3
 Location: Study Director:
 Project ID: Investigator: Dr. Mark M. Loux
 Sponsor Contact: Joe Reed, FMC

Application Description

	A	B	C	D
Application Date:	Oct-19-2010	Apr-21-2011	May-14-2011	Jun-15-2011
Time of Day:	11:00 A.M.	9:00 A.M.	6:00 P.M.	9:15 A.M.
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	FALL	7 EPP	PRE	POST
Application Placement:	BROFOL	BROFOL	BROFOL	BROFOL
Applied By:		McCormick	Dobbels	Dobbels
Air Temperature, Unit:	59.5 F	43 F	70 F	62 F
% Relative Humidity:	47.4	64	70	70
Wind Velocity, Unit:	2 MPH	6 MPH	0.25 MPH	8 MPH
Wind Direction:	NE	NNE	SW	ESE
Dew Presence (Y/N):	N no	N no	N no	N no
Soil Temperature, Unit:	50 F	42 F	71 F	62 F
Soil Moisture:	MOIST	WET	MOIST	SLIDRY
% Cloud Cover:	0	5	75	90
Next Rain Occurred On:	Oct-26-2010	Apr-22-2011	May-15-2011	Jul-2-2011

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
Stage Majority, Percent:				13 100
Height, Unit:				3 IN
Height Minimum, Maximum:				3 4

Ohio State University Horticulture and Crop Science

2010/SOYBEAN/AUTHORITY XL/AUTHORITY ASSIST/AUTHORITY MTZ/SPLIT

Title No. 2: APPLICATIONS/FALL/SPRING PROGRAMS/
 Trial ID: 11FALLSOY3 Protocol ID: 11FALLSOY3
 Location: Study Director:
 Project ID: Investigator: Dr. Mark M. Loux
 Sponsor Contact: Joe Reed, FMC

Pest Type			
Pest Code			
Pest Scientific Name			
Pest Name			
Crop Code	GLXMA	GLXMA	GLXMA
BBCH Scale	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean
Description			
Rating Date	Oct-11-2011	Oct-11-2011	Oct-11-2011
Rating Type	WEIGHT	MOISTURE	YIELD
Rating Unit	LBS	%	BU
Number of Subsamples	1	1	1
Days After First/Last Applic.	357 118	357 118	357 118
Trt-Eval Interval	HARVEST	HARVEST	HARVEST
Plant-Eval Interval	150 DP-1	150 DP-1	150 DP-1
Days After Emergence	140 DE-1	140 DE-1	140 DE-1
ARM Action Codes			TY1
Number of Decimals	1	1	1

Trt Treatment No. Name	Rate Rate Unit	Other Other Rate Rate Unit	Appl Code	44	45	46
1 UNTREATED				15.2 a	12.3 a	37.4 a
2 AUTHORITY MTZ	14 oz/a	14 oz/a	A	18.4 a	13.3 a	45.4 a
2 RAGE D-TECH	12 oz/a	12 oz/a	A			
2 COC	1 % v/v	19.2 oz/a	A			
2 N-PAK AMS	2.5 % v/v	1.5 qt/a	A			
2 Roundup WeatherMax	22 oz/a	22 oz/a	C			
2 F9310-6	3 oz/a	3 oz/a	C			
2 SHARPEN	1 oz/a	1 oz/a	C			
2 MSO	0.5 % v/v	9.6 oz/a	C			
2 N-PAK AMS	2.5 % v/v	48 oz/a	C			
2 CADET	0.5 oz/a	0.5 oz/a	D			
2 ROUNDUP POWERMAX	22 oz/a	22 oz/a	D			
2 N-PAK AMS	2.5 % v/v	1.5 qt/a	D			
3 AUTHORITY MTZ	8 oz/a	8 oz/a	A	20.7 a	12.8 a	50.9 a
3 RAGE D-TECH	12 oz/a	12 oz/a	A			
3 COC	1 % v/v	0.6 qt/a	A			
3 N-PAK AMS	2.5 % v/v	1.5 qt/a	A			
3 AUTHORITY XL	3.2 oz/a	3.2 oz/a	B			
3 Roundup WeatherMax	0.77 lb ae/a	22 oz/a	B			
3 RAGE D-TECH	12 oz/a	12 oz/a	B			
3 COC	1 % v/v	0.6 qt/a	B			
3 CADET	0.5 oz/a	0.5 oz/a	D			
3 ROUNDUP POWERMAX	32 oz/a	32 oz/a	D			
3 N-PAK AMS	2.5 % v/v	1.5 qt/a	D			
4 AUTUMN	0.3 oz/a	0.3 oz/a	A	18.0 a	13.1 a	44.4 a
4 RAGE D-TECH	12 oz/a	12 oz/a	A			
4 COC	1 % v/v	0.6 qt/a	A			
4 AUTHORITY MTZ	10 oz/a	10 oz/a	C			
4 GRAMOXONE INTEON	24 oz/a	24 oz/a	C			
4 COC	1 % v/v	0.6 qt/a	C			
4 N-PAK AMS	2.5 % v/v	1.5 qt/a	C			
4 CADET	0.5 oz/a	0.5 oz/a	D			
4 ROUNDUP POWERMAX	32 oz/a	32 oz/a	D			
4 N-PAK AMS	2.5 % v/v	1.5 qt/a	D			
5 AUTHORITY XL	3.2 oz/a	3.2 oz/a	A	19.7 a	12.8 a	48.5 a
5 RAGE D-TECH	12 oz/a	12 oz/a	A			
5 COC	1 % v/v	0.6 qt/a	A			
5 N-PAK AMS	2.5 % v/v	1.5 qt/a	A			

Means followed by same letter do not significantly differ (P=.05, LSD)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Ohio State University Horticulture and Crop Science

2010/SOYBEAN/AUTHORITY XL/AUTHORITY ASSIST/AUTHORITY MTZ/SPLIT

Title No. 2: APPLICATIONS/FALL/SPRING PROGRAMS/
 Trial ID: 11FALLSOY3 Protocol ID: 11FALLSOY3
 Location: Study Director:
 Project ID: Investigator: Dr. Mark M. Loux
 Sponsor Contact: Joe Reed, FMC

Pest Type			
Pest Code			
Pest Scientific Name			
Pest Name			
Crop Code	GLXMA	GLXMA	GLXMA
BBCH Scale	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean
Description			
Rating Date	Oct-11-2011	Oct-11-2011	Oct-11-2011
Rating Type	WEIGHT	MOISTURE	YIELD
Rating Unit	LBS	%	BU
Number of Subsamples	1	1	1
Days After First/Last Applic.	357 118	357 118	357 118
Trt-Eval Interval	HARVEST	HARVEST	HARVEST
Plant-Eval Interval	150 DP-1	150 DP-1	150 DP-1
Days After Emergence	140 DE-1	140 DE-1	140 DE-1
ARM Action Codes			TY1
Number of Decimals	1	1	1

Trt Treatment No. Name	Rate Rate Unit	Other Other Rate Rate Unit	Appl Code	44	45	46
5 AUTHORITY MTZ	8 oz/a	8 oz/a	B			
5 ROUNDUP POWERMAX	32 oz/a	32 oz/a	B			
5 RAGE D-TECH	12 oz/a	12 oz/a	B			
5 COC	1 % v/v	0.6 qt/a	B			
5 N-PAK AMS	2.5 % v/v	1.5 qt/a	B			
5 CADET	0.5 oz/a	0.5 oz/a	D			
5 ROUNDUP POWERMAX	32 oz/a	32 oz/a	D			
5 N-PAK AMS	2.5 % v/v	1.5 qt/a	D			
6 AUTHORITY XL	4 oz/a	4 oz/a	A	17.7 a	12.1 a	43.5 a
6 RAGE D-TECH	12 oz/a	12 oz/a	A			
6 COC	1 % v/v	0.6 qt/a	A			
6 N-PAK AMS	2.5 % v/v	1.5 qt/a	A			
6 ROUNDUP POWERMAX	32 oz/a	32 oz/a	C			
6 AUTHORITY ASSIST	5 oz/a	5 oz/a	C			
6 SHARPEN	1 oz/a	1 oz/a	C			
6 MSO	0.5 % v/v	0.3 qt/a	C			
6 CADET	0.5 oz/a	0.5 oz/a	D			
6 ROUNDUP POWERMAX	32 oz/a	32 oz/a	D			
6 N-PAK AMS	2.5 % v/v	1.5 qt/a	D			
7 VALOR XLT	3.5 oz/a	3.5 oz/a	A	20.4 a	12.4 a	50.2 a
7 RAGE D-TECH	12 oz/a	12 oz/a	A			
7 COC	1 % v/v	0.6 qt/a	A			
7 N-PAK AMS	2.5 % v/v	1.5 qt/a	A			
7 AUTHORITY XL	3.2 oz/a	3.2 oz/a	B			
7 ROUNDUP POWERMAX	32 oz/a	32 oz/a	B			
7 RAGE D-TECH	12 oz/a	12 oz/a	B			
7 COC	1 % v/v	0.6 qt/a	B			
7 CADET	0.5 oz/a	0.5 oz/a	D			
7 ROUNDUP POWERMAX	32 oz/a	32 oz/a	D			
7 N-PAK AMS	2.5 % v/v	1.5 qt/a	D			
8 CANOPY EX	2.2 oz/a	2.2 oz/a	A	19.7 a	13.8 a	48.4 a
8 Classic	0.55 oz ai/a	2.2 oz/a	A			
8 Express	0.165 oz ai/a	0.33 oz/a	A			
8 RAGE D-TECH	12 oz/a	12 oz/a	A			
8 COC	1 % v/v	0.6 qt/a	A			
8 N-PAK AMS	2.5 % v/v	1.5 qt/a	A			
8 ROUNDUP POWERMAX	32 oz/a	32 oz/a	C			
8 AUTHORITY ASSIST	5 oz/a	5 oz/a	C			
8 SHARPEN	1 oz/a	1 oz/a	C			
8 MSO	0.5 % v/v	0.3 qt/a	C			
8 CADET	0.5 oz/a	0.5 oz/a	D			

Means followed by same letter do not significantly differ (P=.05, LSD)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Ohio State University Horticulture and Crop Science

2010/SOYBEAN/AUTHORITY XL/AUTHORITY ASSIST/AUTHORITY MTZ/SPLIT

Title No. 2: APPLICATIONS/FALL/SPRING PROGRAMS/
 Trial ID: 11FALLSOY3 Protocol ID: 11FALLSOY3
 Location: Study Director:
 Project ID: Investigator: Dr. Mark M. Loux
 Sponsor Contact: Joe Reed, FMC

Pest Type			
Pest Code			
Pest Scientific Name			
Pest Name			
Crop Code	GLXMA	GLXMA	GLXMA
BBCH Scale	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean
Description			
Rating Date	Oct-11-2011	Oct-11-2011	Oct-11-2011
Rating Type	WEIGHT	MOISTURE	YIELD
Rating Unit	LBS	%	BU
Number of Subsamples	1	1	1
Days After First/Last Applic.	357 118	357 118	357 118
Trt-Eval Interval	HARVEST	HARVEST	HARVEST
Plant-Eval Interval	150 DP-1	150 DP-1	150 DP-1
Days After Emergence	140 DE-1	140 DE-1	140 DE-1
ARM Action Codes			TY1
Number of Decimals	1	1	1

Trt Treatment No. Name	Rate Rate Unit	Other Other Rate Rate Unit	Appl Unit Code	44	45	46
8 ROUNDUP POWERMAX	32 oz/a	32 oz/a	D			
8 N-PAK AMS	2.5 % v/v	1.5 qt/a	D			
9 CANOPY	2.2 oz/a	2.2 oz/a	A	18.8 a	13.5 a	46.4 a
9 RAGE D-TECH	12 oz/a	12 oz/a	A			
9 COC	1 % v/v	0.6 qt/a	A			
9 AUTHORITY XL	3.2 oz/a	3.2 oz/a	B			
9 ROUNDUP POWERMAX	32 oz/a	32 oz/a	B			
9 RAGE D-TECH	12 oz/a	12 oz/a	B			
9 COC	1 % v/v	0.6 qt/a	B			
9 CADET	0.5 oz/a	0.5 oz/a	D			
9 ROUNDUP POWERMAX	32 oz/a	32 oz/a	D			
9 N-PAK AMS	2.5 % v/v	1.5 qt/a	D			
10 AUTHORITY XL	3.2 oz/a	3.2 oz/a	B	18.8 a	12.3 a	46.3 a
10 ROUNDUP POWERMAX	32 oz/a	32 oz/a	B			
10 RAGE D-TECH	12 oz/a	12 oz/a	B			
10 COC	1 % v/v	0.6 qt/a	B			
10 CADET	0.5 oz/a	0.5 oz/a	D			
10 ROUNDUP POWERMAX	32 oz/a	32 oz/a	D			
10 N-PAK AMS	2.5 % v/v	1.5 qt/a	D			
LSD (P=.05)				3.38	1.43	8.31
Standard Deviation				1.97	0.84	4.85
CV				10.5	6.51	10.5
Bartlett's X2				15.78	4.734	15.78
P(Bartlett's X2)				0.072	0.857	0.072
Replicate F				3.914	2.193	3.914
Replicate Prob(F)				0.0388	0.1405	0.0388
Treatment F				1.947	1.429	1.947
Treatment Prob(F)				0.1095	0.2476	0.1095

Crop Code
 GLXMA, BSOY, Glycine max, = US
Rating Type
 WEIGHT = weight
 YIELD = yield
Rating Unit
 % = percent
 BU = bushel
Plant-Eval Interval
 150 DP-1 = 1 May-14-2011
ARM Action Codes

Means followed by same letter do not significantly differ (P=.05, LSD)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Ohio State University Horticulture and Crop Science

2010/SOYBEAN/AUTHORITY XL/AUTHORITY ASSIST/AUTHORITY MTZ/SPLIT

Title No. 2: APPLICATIONS/FALL/SPRING PROGRAMS/
Trial ID: 11FALLSOY3 Protocol ID: 11FALLSOY3
Location: Study Director:
Project ID: Investigator: Dr. Mark M. Loux
Sponsor Contact: Joe Reed, FMC

TY1 = 2.461965*[44]