

# Ohio State University Horticulture and Crop Science

Get the most out of every soybean acre.

Title No. 2:

Trial ID: 11SOYDEMO  
Location: Western Branch F-10W  
Project ID: 11SOYDEMO

Protocol ID: 11SOYDEMO  
Study Director: Bryan Reeb  
Investigator: Dr. Mark M. Loux  
Sponsor Contact: Caren Judge, BASF

### 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 °:** 39.85872 N  
**State/Prov.:** Ohio      **Longitude of LL Corner °:** -83.67178 W  
**Postal Code:** 45368  
**Country:** USA

### Crop Description

**Crop 1:** GLXMA Glycine max      Soybean  
**Variety:** AG 3631  
**BBCH Scale:** BSOY  
**Planting Method:** PLANTD planted  
**Depth, Unit:** 1 IN  
**Row Spacing, Unit:** 15 IN  
**Seed Bed:** MEDTRA medium/trashy  
**Soil Moisture:** SLIWET slightly wet  
**Description:** Round Up Ready  
**Planting Date:** 5/14/11  
**Rate, Unit:** 197000 S/A  
**Emergence Date:** 5/24/11

### Pest Description

- Pest 1 Type:** W      **Code:** LAMPU Lamium purpureum  
**Common Name:** Purple deadnettel
- Pest 2 Type:** W      **Code:** ERYRE Erysimum repandum  
**Common Name:** Bushy wallflower
- Pest 3 Type:** W      **Code:** LEPCA Lepidium campestre  
**Common Name:** Field pepperweed
- Pest 4 Type:** W      **Code:** TAROF Taraxacum officinale  
**Common Name:** Common dandelion
- Pest 5 Type:** W      **Code:** CAPBP Capsella bursa-pastoris  
**Common Name:** Shepherd's purse
- Pest 6 Type:** W      **Code:** SETFA Setaria faberi  
**Common Name:** Giant foxtail
- Pest 7 Type:** W      **Code:** ERICA Conyza canadensis  
**Common Name:** Canada horseweed
- Pest 8 Type:** W      **Code:** AMBTR Ambrosia trifida  
**Common Name:** Giant ragweed
- Pest 9 Type:** W      **Code:** AMBEL Ambrosia artemisiifolia  
**Common Name:** Common ragweed
- Pest10 Type:** W      **Code:** VERPG Veronica peregrina  
**Common Name:** Purslane speedwell
- Pest11 Type:** W      **Code:** ECHSS Echinochloa sp.  
**Common Name:** Barnyardgrass
- Pest12 Type:** W      **Code:** SOLPT Solanum ptycanthum  
**Common Name:** Eastern black nightshade
- Pest13 Type:** W      **Code:** CHEAL Chenopodium album  
**Common Name:** Common lambsquarters

### 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:** 6      **Study Design:** RACOB� Randomized Complete Block (RCB)  
**Untreated Arrangement:** INCLUDED single control randomized in each block

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## Maintenance

No.	Date	Maintenance Treatment Name	Rate	Unit
1.	6/27/11	FIRSTRATE	0.3	oz/ac

## Soil Description

**Description Name:** F-10 West  
**% OM:** 2      **Texture:** SIL      silt loam  
**pH:** 6.3      **Soil Name:** Crosby Silt Loam  
**CEC:** 12      **Fert. Level:** G      good  
**Soil Drainage:** G      good

## Application Description

	A	B	C
<b>Application Date:</b>	4/21/11	6/6/11	7/21/11
<b>Time of Day:</b>	9:00 AM	1:45 P.M.	1:00 PM
<b>Application Method:</b>	SPRAY	SPRAY	SPRAY
<b>Application Timing:</b>	7 EPP	EPO	R3
<b>Application Placement:</b>	BROFOL	BROFOL	BROFOL
<b>Air Temperature, Unit:</b>	43 F	88.6 F	90 F
<b>% Relative Humidity:</b>	64	37.5	69
<b>Wind Velocity, Unit:</b>	6 MPH	4.4 MPH	6 MPH
<b>Wind Direction:</b>	NNE	WSW	WEST
<b>Dew Presence (Y/N):</b>	N no	N no	N no
<b>Soil Temperature, Unit:</b>	42 F		79 F
<b>Soil Moisture:</b>	VERWET	GOOD	MOIST
<b>% Cloud Cover:</b>	5	15	15
<b>Next Rain Occurred On:</b>	4/22/11	6/4/11	

## Crop Stage At Each Application

	A		B		C	
<b>Crop 1 Code, BBCH Scale:</b>	GLXMA	BSOY	GLXMA	BSOY	GLXMA	BSOY
<b>Stage Scale Used:</b>			BBCH		BBCH	
<b>Stage Majority, Percent:</b>			12	100	69	100
<b>Height, Unit:</b>			4	IN	27	IN
<b>Height Minimum, Maximum:</b>			2	4	25	29

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## Pest Stage At Each Application

	A	B	C
<b>Pest 1 Code, Type, Scale:</b>	LAMPU W	LAMPU W	LAMPU W
<b>Stage Majority, Percent:</b>	65	100	
<b>Diameter, Unit:</b>	4	IN	
<b>Pest 2 Code, Type, Scale:</b>	ERYRE W	ERYRE W	ERYRE W
<b>Stage Majority, Percent:</b>	65	100	
<b>Height, Unit:</b>	8	IN	
<b>Height Minimum, Maximum:</b>	5	8	
<b>Pest 3 Code, Type, Scale:</b>	LEPCA W	LEPCA W	LEPCA W
<b>Stage Majority, Percent:</b>	65	100	
<b>Height, Unit:</b>	10	IN	
<b>Height Minimum, Maximum:</b>	6	10	
<b>Pest 4 Code, Type, Scale:</b>	TAROF W	TAROF W	TAROF W
<b>Stage Majority, Percent:</b>	65	100	
<b>Diameter, Unit:</b>	5	IN	
<b>Density, Unit:</b>	0.66	M2	0.66 M2 0.66 M2
<b>Pest 5 Code, Type, Scale:</b>	CAPBP W	CAPBP W	CAPBP W
<b>Stage Majority, Percent:</b>	19	100	
<b>Height, Unit:</b>	11	IN	
<b>Height Minimum, Maximum:</b>	5	11	
<b>Pest 6 Code, Type, Scale:</b>	SETFA W	SETFA W	SETFA W
<b>Height, Unit:</b>		5	IN
<b>Height Minimum, Maximum:</b>		3	6
<b>Density, Unit:</b>	4.66	M2	4.66 M2 4.66 M2
<b>Pest 7 Code, Type, Scale:</b>	ERICA W	ERICA W	ERICA W
<b>Height, Unit:</b>		3	IN
<b>Height Minimum, Maximum:</b>		2	4
<b>Density, Unit:</b>	78.66	M2	78.66 M2 78.66 M2
<b>Pest 8 Code, Type, Scale:</b>	AMBTR W	AMBTR W	AMBTR W
<b>Height, Unit:</b>		5	IN
<b>Height Minimum, Maximum:</b>		4	6
<b>Density, Unit:</b>	5.33	M2	5.33 M2 5.33 M2
<b>Pest 9 Code, Type, Scale:</b>	AMBEL W	AMBEL W	AMBEL W
<b>Height, Unit:</b>		2	IN
<b>Height Minimum, Maximum:</b>		2	
<b>Density, Unit:</b>	2	M2	2 M2 2 M2
<b>Pest10 Code, Type, Scale:</b>	VERPG W	VERPG W	VERPG W
<b>Height, Unit:</b>		3	IN
<b>Height Minimum, Maximum:</b>		3	3
<b>Pest11 Code, Type, Scale:</b>	ECHSS W	ECHSS W	ECHSS W
<b>Density, Unit:</b>	27.33	M2	27.33 M2 27.33 M2
<b>Pest12 Code, Type, Scale:</b>	SOLPT W	SOLPT W	SOLPT W
<b>Density, Unit:</b>	4.66	M2	4.66 M2 4.66 M2
<b>Pest13 Code, Type, Scale:</b>	CHEAL W	CHEAL W	CHEAL W
<b>Density, Unit:</b>	4.66	M2	4.66 M2 4.66 M2

## Application Equipment

	A	B	C
<b>Appl. Equipment:</b>	Backpack	Backpack	
<b>Equipment Type:</b>	SPRBAC	SPRBAC	
<b>Operating Pressure, Unit:</b>	46	PSI	46 PSI
<b>Nozzle Type:</b>	DG	DG	
<b>Nozzle Size:</b>	11002	11002	
<b>Nozzle Spacing, Unit:</b>	18	IN	18 IN
<b>Boom Length, Unit:</b>	10	FT	10 FT
<b>Boom Height, Unit:</b>	18	IN	18 IN
<b>Ground Speed, Unit:</b>	3	MPH	3 MPH
<b>Carrier:</b>	WATER	WATER	
<b>Spray Volume, Unit:</b>	15	gal/ac	15 gal/ac
<b>Mix Size, Unit:</b>	0.5	gallons	0.5 gallons
<b>Propellant:</b>	COMCO2	COMCO2	

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 Sponsor Contact: Caren Judge, BASF

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	LAMPU	LAMAM	STEME	CAPBP	ERYRE
Pest Scientific Name	Lamium purpure>	Lamium amplexi>	Stellaria media	Capsella bursa>	Erysimum repans>
Pest Name	Purple deadnet>	Henbit	Common chickwe>	Shepherd's pur>	Bushy wallflow>
Rating Date	5/5/11	5/5/11	5/5/11	5/5/11	5/5/11
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Days After First/Last Applic.	14 14	14 14	14 14	14 14	14 14
Trt-Eval Interval	14 DA-A	14 DA-A	14 DA-A	14 DA-A	14 DA-A
Plant-Eval Interval	-9 DP-1	-9 DP-1	-9 DP-1	-9 DP-1	-9 DP-1
Days After Emergence	-19 DE-1	-19 DE-1	-19 DE-1	-19 DE-1	-19 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
1	Sharpen	2.85	1 oz/a		A	33	32	38	32	32
1	Roundup Power Max	4.5	22 oz/a		A					
1	MSO	100	0.6 qt/a		A					
1	N-pak ams	100	3 qt/a		A					
1	Roundup Power Max	4.5	22 oz/a		B					
1	N-pak ams	100	3 qt/a		B					
2	2,4-D Ester	4	1 pt/a		A	22	22	17	22	22
2	Roundup Power Max	4.5	22 oz/a		A					
2	N-pak ams	100	3 qt/a		A					
2	Roundup Power Max	4.5	22 oz/a		B					
2	N-pak ams	100	3 qt/a		B					
3	OpTill	68	2 oz/a		A	37	35	38	30	32
3	Roundup Power Max	4.5	22 oz/a		A					
3	MSO	100	0.6 qt/a		A					
3	N-pak ams	100	3 qt/a		A					
3	Roundup Power Max	4.5	22 oz/a		B					
3	N-pak ams	100	3 qt/a		B					
4	OpTill	68	2 oz/a		A	33	35	25	30	32
4	Roundup Power Max	4.5	22 oz/a		A					
4	MSO	100	0.6 qt/a		A					
4	N-pak ams	100	3 qt/a		A					
4	Roundup Power Max	4.5	22 oz/a		B					
4	N-pak ams	100	3 qt/a		B					
4	Priaxor	500	4 oz/a		C					
4	NIS	100	0.15 qt/a		C					
5	OpTill	68	2 oz/a		A	35	35	40	30	32
5	Roundup Power Max	4.5	22 oz/a		A					
5	MSO	100	0.6 qt/a		A					
5	N-pak ams	100	3 qt/a		A					
5	Roundup Power Max	4.5	22 oz/a		B					
5	N-pak ams	100	3 qt/a		B					
5	Priaxor	500	4 oz/a		C					
5	Fastac	100	4 oz/a		C					
5	NIS	100	0.15 qt/a		C					
5	Firstate	84	0.3 oz/a		C					
LSD (P=.05)						5.1	5.9	11.3	3.2	3.4
Standard Deviation						4.2	4.9	9.4	2.6	2.8
CV						13.13	15.47	29.62	9.23	9.53
Bartlett's X2						2.592	0.925	1.777	0.0	7.551
P(Bartlett's X2)						0.628	0.921	0.777	.	0.109
Replicate F						5.434	1.139	0.856	0.762	16.417
Replicate Prob(F)						0.0026	0.3726	0.5277	0.5878	0.0001
Treatment F						11.981	8.333	7.310	13.571	15.000
Treatment Prob(F)						0.0001	0.0004	0.0010	0.0001	0.0001

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	SETFA	AMBTR	ERICA	VERAG	SETFA	AMBTR
Pest Scientific Name	Setaria faberi	Ambrosia trifi>	Conyza canaden>	Veronica agres>	Setaria faberi	Ambrosia trifi>
Pest Name	Giant foxtail	Giant ragweed	Canada horsewe>	Field speedwell	Giant foxtail	Giant ragweed
Rating Date	6/7/11	6/7/11	6/7/11	6/7/11	6/27/11	6/27/11
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%	%
Number of Subsamples	1	1	1	1	1	1
Days After First/Last Applic.	47 1	47 1	47 1	47 1	67 21	67 21
Trt-Eval Interval	1 DA-B	1 DA-B	1 DA-B	1 DA-B	21 DA-B	21 DA-B
Plant-Eval Interval	24 DP-1	24 DP-1	24 DP-1	24 DP-1	44 DP-1	44 DP-1
Days After Emergence	14 DE-1	14 DE-1	14 DE-1	14 DE-1	34 DE-1	34 DE-1
Number of Decimals	0	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Other Rate	Other Rate	Appl Unit Code	6	7	8	9	10	11
1	Sharpen	2.85	1 oz/a		A	27	32	22	0	100	100
1	Roundup Power Max	4.5	22 oz/a		A						
1	MSO	100	0.6 qt/a		A						
1	N-pak ams	100	3 qt/a		A						
1	Roundup Power Max	4.5	22 oz/a		B						
1	N-pak ams	100	3 qt/a		B						
2	2,4-D Ester	4	1 pt/a		A	28	42	12	0	100	100
2	Roundup Power Max	4.5	22 oz/a		A						
2	N-pak ams	100	3 qt/a		A						
2	Roundup Power Max	4.5	22 oz/a		B						
2	N-pak ams	100	3 qt/a		B						
3	OpTill	68	2 oz/a		A	42	37	22	0	100	100
3	Roundup Power Max	4.5	22 oz/a		A						
3	MSO	100	0.6 qt/a		A						
3	N-pak ams	100	3 qt/a		A						
3	Roundup Power Max	4.5	22 oz/a		B						
3	N-pak ams	100	3 qt/a		B						
4	OpTill	68	2 oz/a		A	40	33	22	0	100	100
4	Roundup Power Max	4.5	22 oz/a		A						
4	MSO	100	0.6 qt/a		A						
4	N-pak ams	100	3 qt/a		A						
4	Roundup Power Max	4.5	22 oz/a		B						
4	N-pak ams	100	3 qt/a		B						
4	Priaxor	500	4 oz/a		C						
4	NIS	100	0.15 qt/a		C						
5	OpTill	68	2 oz/a		A	45	37	25	0	100	100
5	Roundup Power Max	4.5	22 oz/a		A						
5	MSO	100	0.6 qt/a		A						
5	N-pak ams	100	3 qt/a		A						
5	Roundup Power Max	4.5	22 oz/a		B						
5	N-pak ams	100	3 qt/a		B						
5	Priaxor	500	4 oz/a		C						
5	Fastac	100	4 oz/a		C						
5	NIS	100	0.15 qt/a		C						
5	Firstrate	84	0.3 oz/a								
LSD (P=.05)						17.0	14.2	13.3	0.0	0.0	0.0
Standard Deviation						14.1	11.8	11.0	0.0	0.0	0.0
CV						38.89	32.67	54.17	0.0	0.0	0.0
Bartlett's X2						4.457	0.939	2.514	0.0	0.0	0.0
P(Bartlett's X2)						0.348	0.919	0.642	.	.	.
Replicate F						0.858	0.867	3.390	0.000	0.000	0.000
Replicate Prob(F)						0.5258	0.5200	0.0222	1.0000	1.0000	1.0000
Treatment F						2.062	0.639	1.264	0.000	0.000	0.000
Treatment Prob(F)						0.1241	0.6411	0.3170	1.0000	1.0000	1.0000

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Pest Type	W Weed	W Weed
Pest Code	ERICA	VERAG
Pest Scientific Name	Conyza canadensis	Veronica agrestis
Pest Name	Canada horseweed	Field speedwell
Rating Date	6/27/11	6/27/11
Rating Type	CONTRO	CONTRO
Rating Unit	%	%
Number of Subsamples	1	1
Days After First/Last Applic.	67 21	67 21
Trt-Eval Interval	21 DA-B	21 DA-B
Plant-Eval Interval	44 DP-1	44 DP-1
Days After Emergence	34 DE-1	34 DE-1
Number of Decimals	0	0

Trt No.	Treatment Name	Form Conc	Other Rate	Other Rate	Appl Unit Code	12	13	14
1	Sharpen	2.85	1 oz/a		A	0		100
1	Roundup Power Max	4.5	22 oz/a		A			
1	MSO	100	0.6 qt/a		A			
1	N-pak ams	100	3 qt/a		A			
1	Roundup Power Max	4.5	22 oz/a		B			
1	N-pak ams	100	3 qt/a		B			
2	2,4-D Ester	4	1 pt/a		A	0		100
2	Roundup Power Max	4.5	22 oz/a		A			
2	N-pak ams	100	3 qt/a		A			
2	Roundup Power Max	4.5	22 oz/a		B			
2	N-pak ams	100	3 qt/a		B			
3	OpTill	68	2 oz/a		A	0		100
3	Roundup Power Max	4.5	22 oz/a		A			
3	MSO	100	0.6 qt/a		A			
3	N-pak ams	100	3 qt/a		A			
3	Roundup Power Max	4.5	22 oz/a		B			
3	N-pak ams	100	3 qt/a		B			
4	OpTill	68	2 oz/a		A	0		100
4	Roundup Power Max	4.5	22 oz/a		A			
4	MSO	100	0.6 qt/a		A			
4	N-pak ams	100	3 qt/a		A			
4	Roundup Power Max	4.5	22 oz/a		B			
4	N-pak ams	100	3 qt/a		B			
4	Priaxor	500	4 oz/a		C			
4	NIS	100	0.15 qt/a		C			
5	OpTill	68	2 oz/a		A	0		100
5	Roundup Power Max	4.5	22 oz/a		A			
5	MSO	100	0.6 qt/a		A			
5	N-pak ams	100	3 qt/a		A			
5	Roundup Power Max	4.5	22 oz/a		B			
5	N-pak ams	100	3 qt/a		B			
5	Priaxor	500	4 oz/a		C			
5	Fastac	100	4 oz/a		C			
5	NIS	100	0.15 qt/a		C			
5	Firstate	84	0.3 oz/a					
LSD (P=.05)						0.0	0.0	.
Standard Deviation						0.0	0.0	.
CV						0.0	0.0	.
Bartlett's X2						0.0	0.0	.
P(Bartlett's X2)						.	.	.
Replicate F						0.000	0.000	
Replicate Prob(F)						1.0000	1.0000	
Treatment F						0.000	0.000	
Treatment Prob(F)						1.0000	1.0000	

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Protocol ID: 11SOYDEMO  
Study Director: Bryan Reeb  
Investigator: Dr. Mark M. Loux  
Sponsor Contact: Caren Judge, BASF

Pest Type

W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop

Pest Code

LAMPU, Lamium purpureum, = US  
LAMAM, Lamium amplexicaule, = US  
STEME, Stellaria media, = US  
CAPBP, Capsella bursa-pastoris, = US  
ERYRE, Erysimum repandum, = US  
SETFA, Setaria faberi, = US  
AMBTR, Ambrosia trifida, = US  
ERICA, Conyza canadensis, = US  
VERAG, Veronica agrestis, = US

Rating Type

CONTRO = control / burndown or knockdown

Rating Unit

% = percent

Plant-Eval Interval

-9 DP-1 = 1 5/14/11  
24 DP-1 = 1 5/14/11  
44 DP-1 = 1 5/14/11