

Ohio State University  
Horticulture and Crop Science

## FALL BURNDOWN IN SOYBEAN I

Trial ID: 08FALLSOY1      Study Dir.: Anthony F. Dobbels  
Location: ENT E-4      Investigator: Dr. Mark M. Loux

## GENERAL TRIAL INFORMATION

Study Director: Anthony F. Dobbels  
Investigator: Dr. Mark M. Loux

Conducted Under GLP (Y/N): N      Conducted Under GEP (Y/N): N

## CROP AND WEED DESCRIPTION

Weed Code	Common Name	Scientific Name
1. LAMPU	Purple deadnettel	Lamium purpureum
2. STEME	Common chickweed	Stellaria media
3. ERICA	Horseweed	Erigeron canadensis
4. SENGL	Cressleaf groundsel	Senecio glabellus
5. AMBTR	Giant ragweed	Ambrosia trifida

Crop 1: GLXMA SOYBEAN      Variety: PIONEER 93M11  
Planting Date: May/05/2008      Planting Method: KINZE 2000  
Rate: 177642 SEED/A      Depth: 0.75 IN  
Row Spacing: 15 IN      Seed Bed: NO-TILL

## SITE AND DESIGN

Plot Width, Unit: 6.67 FT      Plot Length, Unit: 30 FT      Reps: 3  
Tillage Type: NO-TILL      Study Design: RANDOMIZED COMPLETE BLOCK

## SOIL DESCRIPTION

% OM:	2.5	Texture:	SILTY CLAY LOAM
pH:	6.2	Soil Name:	CROSBY
CEC:	14	Fert. Level:	EXCELLENT

## APPLICATION DESCRIPTION

A

Application Date: Nov/19/2007  
Time of Day: 10:00 A.M  
Application Method: SPRAY  
Application Timing: FALL  
Applic. Placement: BROADCAST  
Air Temp., Unit: 43 F  
% Relative Humidity: 82  
Wind Velocity, Unit: 7 SE  
Soil Temp., Unit: 42 F  
Soil Moisture: MOIST/MOI  
% Cloud Cover: 100

## CROP STAGE AT EACH APPLICATION

A

Crop 1 Code, Stage: GLXMA

## WEED STAGE AT EACH APPLICATION

A

Weed 1 Code, Stage: LAMPU 2-3"  
Stage Scale: 8-10 LVS  
Density, Unit: 14 M2  
Weed 2 Code, Stage: STEME 4-6"  
Stage Scale: >12 LVS  
Density, Unit: 29 M2  
Weed 3 Code, Stage: ERICA  
Density, Unit: 0.33 M2  
Weed 4 Code, Stage: SENGL  
Density, Unit: 1.3 M2  
Weed 5 Code, Stage: AMBTR  
Density, Unit: 2 M2

## APPLICATION EQUIPMENT

A

Appl. Equipment: BACKPACK  
Operating Pressure: 50  
Nozzle Type: DG  
Nozzle Size: 11002  
Nozzle Spacing, Unit: 18 IN  
Ground Speed, Unit: 3 MPH  
Carrier: WATER  
Spray Volume, Unit: 20 GPA  
Propellant: CO2

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Weed Code				STEME	LAMPU	SENGL	ERICA	SETFA	STEME		
Rating Data Type				CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL		
Rating Unit				PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT		
Rating Date				Apr/29/2008	Apr/29/2008	Apr/29/2008	Apr/29/2008	Apr/29/2008	May/20/2008		
Trt-Eval Interval				AT PLANT	AT PLANT	AT PLANT	AT PLANT	AT PLANT	14DAPL		
# Subsamples, Dec.				0	0	0	0	0	0		
Trt No.	Treatment Name	Product Rate	Product Rate Unit	Grow Stg	Appl Code	1	2	3	4	5	6
1	2,4-D	1 qt/a		FALL	A	98 a	90 ab	70 a	100 a	70 a	98 a
1	EXPRESS	0.1 oz/a		FALL							
1	NIS	6.4 oz/a		FALL							
2	VALOR XLT 3 OZ					100 a	100 a	98 a	100 a	78 a	95 a
2	VALOR SX	1.76 oz/a		FALL	A						
2	CLASSIC	1.24 oz/a		FALL							
2	2,4-D	1 qt/a		FALL							
2	EXPRESS	0.1 oz/a		FALL							
2	NIS	6.4 oz/a		FALL							
3	VALOR XLT 3 OZ					90 a	100 a	95 a	100 a	72 a	67 a
3	VALOR SX	1.76 oz/a		FALL	A						
3	CLASSIC	1.24 oz/a		FALL							
3	2,4-D	1 qt/a		FALL							
3	AUTUMN	0.12 oz/a		FALL							
3	NIS	6.4 oz/a		FALL							
4	VALOR XLT 3 OZ					75 a	85 ab	98 a	100 a	80 a	45 ab
4	VALOR SX	1.76 oz/a		FALL	A						
4	CLASSIC	1.24 oz/a		FALL							
4	2,4-D	1 qt/a		FALL							
4	NIS	6.4 oz/a		FALL							
5	CANOPY EX 1.1 OZ					100 a	100 a	100 a	100 a	60 ab	100 a
5	CLASSIC	1 oz/a		FALL	A						
5	EXPRESS	0.1 oz/a		FALL							
5	2,4-D	1 qt/a		FALL							
5	NIS	6.4 oz/a		FALL							
6	VALOR XLT 4 OZ					100 a	100 a	100 a	100 a	60 ab	100 a
6	VALOR SX	2.35 oz/a		FALL	A						
6	CLASSIC	1.65 oz/a		FALL							
6	2,4-D	1 qt/a		FALL							
6	EXPRESS	0.1 oz/a		FALL							
6	NIS	6.4 oz/a		FALL							
7	VALOR XLT 5 OZ					100 a	100 a	100 a	100 a	78 a	100 a
7	VALOR SX	2.93 oz/a		FALL	A						
7	CLASSIC	2.06 oz/a		FALL							
7	2,4-D	1 qt/a		FALL							
7	EXPRESS	0.1 oz/a		FALL							
7	NIS	6.4 oz/a		FALL							
8	VALOR XLT 6 OZ					100 a	100 a	100 a	100 a	67 a	100 a
8	VALOR SX	3.516 oz/a		FALL	A						
8	CLASSIC	2.47 oz/a		FALL							
8	2,4-D	1 qt/a		FALL							
8	EXPRESS	0.1 oz/a		FALL							
8	NIS	6.4 oz/a		FALL							
9	TOUCHDOWN TOTAL	24 oz/a		FALL	A	98 a	100 a	93 a	100 a	52 ab	53 ab
9	2,4-D	1 pt/a		FALL							
9	AMS	2 qt/a		FALL							
10	TOUCHDOWN TOTAL	18 oz/a		FALL	A	100 a	100 a	98 a	100 a	50 ab	0 b
10	2,4-D	1 pt/a		FALL							
10	AMS	2 qt/a		FALL							
11	AUTUMN	0.3 oz/a		FALL	A	100 a	100 a	83 a	100 a	50 ab	100 a
11	SENCOR DF	10 oz/a		FALL							
11	COC	0.8 qt/a		FALL							
11	28%	1.5 qt/a		FALL							

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Weed Code		STEME		LAMPU		SENGL		ERICA		SETFA		STEME	
Rating Data Type		CONTROL		CONTROL		CONTROL		CONTROL		CONTROL		CONTROL	
Rating Unit		PERCENT		PERCENT		PERCENT		PERCENT		PERCENT		PERCENT	
Rating Date		Apr/29/2008		Apr/29/2008		Apr/29/2008		Apr/29/2008		Apr/29/2008		May/20/2008	
Trt-Eval Interval		AT PLANT		AT PLANT		AT PLANT		AT PLANT		AT PLANT		14DAPL	
# Subsamples, Dec.		0		0		0		0		0		0	
Trt No.	Treatment Name	Product Rate	Product Rate Unit	Grow Stg	Appl Code	1	2	3	4	5	6		
12	AUTUMN	0.3 oz/a		FALL	A	98 a	72 b	82 a	100 a	30 ab	77 a		
	2,4-D	1 pt/a		FALL									
	COC	0.8 qt/a		FALL									
	28%	1.5 qt/a		FALL									
13	AUTUMN	0.3 oz/a		FALL	A	98 a	100 a	73 a	100 a	40 ab	77 a		
	ROUNDUP WEATHERMAX	12 oz/a		FALL									
	AMS	4 qt/a		FALL									
14	AUTUMN	0.3 oz/a		FALL	A	100 a	90 ab	78 a	100 a	27 ab	85 a		
	SPARTAN	3.5 oz/a		FALL									
	COC	0.8 qt/a		FALL									
	28%	1.5 qt/a		FALL									
15	UTC					0 b	0 c	0 b	0 b	0 b	0 b		
LSD (P=.05)						17.1	13.8	22.1	0.0	39.2	44.7		
Standard Deviation						10.3	8.3	13.2	0.0	23.4	26.1		
CV						11.33	9.27	15.64	0.0	43.21	35.78		
Bartlett's X2						25.327	2.008	18.279	0.0	6.535	5.987		
P(Bartlett's X2)						0.001*	0.571	0.032*	.	0.925	0.541		
Replicate F						1.754	0.033	2.918	0.000	0.481	0.254		
Replicate Prob(F)						0.1916	0.9680	0.0706	1.0000	0.6234	0.7784		
Treatment F						19.137	29.649	11.298	0.000	2.784	5.259		
Treatment Prob(F)						0.0001	0.0001	0.0001	1.0000	0.0102	0.0005		

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

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Weed Code	LAMPU	SENGL	ERICA	SETFA	AMBTR				
Rating Data Type	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL				
Rating Unit	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT				
Rating Date	May/20/2008	May/20/2008	May/20/2008	May/20/2008	May/20/2008				
Trt-Eval Interval	14DAPL	14 DAPL	14 DAPL	14 DAPL	14 DAPL				
# Subsamples, Dec.	0	0	0	0	0				
Trt Treatment No. Name	Product Rate	Product Rate Unit	Grow Stg	Appl Code	7	8	9	10	11
1 2,4-D	1 qt/a		FALL	A	50 ab	50 abc	50	10 a	0 b
1 EXPRESS	0.1 oz/a		FALL						
1 NIS	6.4 oz/a		FALL						
2 VALOR XLT 3 OZ					93 a	75 ab	85	30 a	45 a
2 VALOR SX	1.76 oz/a		FALL	A					
2 CLASSIC	1.24 oz/a		FALL						
2 2,4-D	1 qt/a		FALL						
2 EXPRESS	0.1 oz/a		FALL						
2 NIS	6.4 oz/a		FALL						
3 VALOR XLT 3 OZ					80 ab	98 a	100	37 a	20 ab
3 VALOR SX	1.76 oz/a		FALL	A					
3 CLASSIC	1.24 oz/a		FALL						
3 2,4-D	1 qt/a		FALL						
3 AUTUMN	0.12 oz/a		FALL						
3 NIS	6.4 oz/a		FALL						
4 VALOR XLT 3 OZ					0 b	60 abc	100	0 a	10 ab
4 VALOR SX	1.76 oz/a		FALL	A					
4 CLASSIC	1.24 oz/a		FALL						
4 2,4-D	1 qt/a		FALL						
4 NIS	6.4 oz/a		FALL						
5 CANOPY EX 1.1 OZ					30 ab	90 a	30	30 a	30 ab
5 CLASSIC	1 oz/a		FALL	A					
5 EXPRESS	0.1 oz/a		FALL						
5 2,4-D	1 qt/a		FALL						
5 NIS	6.4 oz/a		FALL						
6 VALOR XLT 4 OZ					100 a	90 a		17 a	30 ab
6 VALOR SX	2.35 oz/a		FALL	A					
6 CLASSIC	1.65 oz/a		FALL						
6 2,4-D	1 qt/a		FALL						
6 EXPRESS	0.1 oz/a		FALL						
6 NIS	6.4 oz/a		FALL						
7 VALOR XLT 5 OZ					100 a	95 a	100	43 a	
7 VALOR SX	2.93 oz/a		FALL	A					
7 CLASSIC	2.06 oz/a		FALL						
7 2,4-D	1 qt/a		FALL						
7 EXPRESS	0.1 oz/a		FALL						
7 NIS	6.4 oz/a		FALL						
8 VALOR XLT 6 OZ					100 a	93 a		40 a	25 ab
8 VALOR SX	3.516 oz/a		FALL	A					
8 CLASSIC	2.47 oz/a		FALL						
8 2,4-D	1 qt/a		FALL						
8 EXPRESS	0.1 oz/a		FALL						
8 NIS	6.4 oz/a		FALL						
9 TOUCHDOWN TOTAL	24 oz/a		FALL	A	30 ab	40 bcd	60	7 a	0 b
9 2,4-D	1 pt/a		FALL						
9 AMS	2 qt/a		FALL						
10 TOUCHDOWN TOTAL	18 oz/a		FALL	A	100 a	40 bcd		10 a	10 ab
10 2,4-D	1 pt/a		FALL						
10 AMS	2 qt/a		FALL						
11 AUTUMN	0.3 oz/a		FALL	A	100 a	52 abc		0 a	0 b
11 SENCOR DF	10 oz/a		FALL						
11 COC	0.8 qt/a		FALL						
11 28%	1.5 qt/a		FALL						
12 AUTUMN	0.3 oz/a		FALL	A	10 b	58 abc	0	10 a	3 b
12 2,4-D	1 pt/a		FALL						
12 COC	0.8 qt/a		FALL						
12 28%	1.5 qt/a		FALL						

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Rating Unit	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT				
Rating Date	May/20/2008	May/20/2008	May/20/2008	May/20/2008	May/20/2008				
Trt-Eval Interval	14DAPL	14 DAPL	14 DAPL	14 DAPL	14 DAPL				
# Subsamples, Dec.	0	0	0	0	0				
Trt Treatment No. Name	Product Rate	Product Rate Unit	Grow Stg	Appl Code	7	8	9	10	11
13 AUTUMN	0.3 oz/a		FALL	A	50 ab	20 cd		7 a	7 b
13 ROUNDUP WEATHERMAX	12 oz/a		FALL						
13 AMS	4 qt/a		FALL						
14 AUTUMN	0.3 oz/a		FALL	A	25 ab	30 bcd	60	0 a	0 b
14 SPARTAN	3.5 oz/a		FALL						
14 COC	0.8 qt/a		FALL						
14 28%	1.5 qt/a		FALL						
15 UTC					0 b	0 d	0	0 a	0 b
LSD (P=.05)					47.1	28.2	.	27.1	23.3
Standard Deviation					25.9	16.2	.	16.2	13.3
CV					44.74	27.34	.	101.21	103.36
Bartlett's X2					5.911	7.567	.	3.213	5.875
P(Bartlett's X2)					0.206	0.671	.	0.976	0.319
Replicate F					0.900	1.729		0.483	1.587
Replicate Prob(F)					0.4371	0.2111		0.6221	0.2391
Treatment F					7.145	10.402		2.818	3.647
Treatment Prob(F)					0.0018	0.0001		0.0101	0.0112

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)  
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