

Ohio State University
Horticulture and Crop Science

FALL BURNDOWN IN SOYBEAN II

Trial ID: 08FALLSOY2 Study Dir.: Anthony F. Dobbels
Location: ENT W-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. CAPBP	Shepherd's purse	Capsella bursa-pastoris
4. SENGL	Cressleaf groundsel	Senecio glabellus

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: SILT LOAM
pH: 6.2 Soil Name: CROSBY
CEC: 16.8

APPLICATION DESCRIPTION

	A	B
Application Date:	Nov/19/2007	Apr/23/2008
Time of Day:	10:00 A.M.	9:00 A.M.
Application Method:	SPRAY	SPRAY
Application Timing:	FALL	PREPLA
Applic. Placement:	BROADCAST	BROADCAST
Air Temp., Unit:	43 F	59 F
% Relative Humidity:	82	71
Wind Velocity, Unit:	7 SE	1 E
Soil Temp., Unit:	42 F	52 F
Soil Moisture:	MOIST/MOI	DRY/MOIST
% Cloud Cover:	100	0

CROP STAGE AT EACH APPLICATION

A B
Crop 1 Code, Stage: GLXMA GLXMA

WEED STAGE AT EACH APPLICATION

	A	B
Weed 1 Code, Stage:	LAMPU 4-6"	LAMPU 5-6"
Stage Scale:	10-12 LVS	2-3" RE
Density, Unit:	26.6 M2	26.6 M2
Weed 2 Code, Stage:	STEME 10-12"	STEME 12-24"
Stage Scale:	>12 LVS	4-6" RE
Density, Unit:	30.6 M2	30.6 M2
Weed 3 Code, Stage:	CAPBP	CAPBP 4-6"
Stage Scale:		2-3" RE
Density, Unit:		5.3 M2
Weed 4 Code, Stage:	SENGL	SENGL 4-6"
Stage Scale:		2-3" RE
Density, Unit:		0.33 M2

APPLICATION EQUIPMENT

	A	B
Appl. Equipment:	BACKPACK	BACKPACK
Operating Pressure:	50	53
Nozzle Type:	DG	DG
Nozzle Size:	11002	11002
Nozzle Spacing, Unit:	18 IN	18 IN
Ground Speed, Unit:	3 MPH	3 MPH
Carrier:	WATER	WATER
Spray Volume, Unit:	20 GPA	20 GPA
Propellant:	CO2	CO2

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Trial ID: 08FALLSOY2 Study Dir.: Anthony F. Dobbels
Location: ENT W-4 Investigator: Dr. Mark M. Loux

Rating Data Type	STEME CONTROL PRECENT	LAMPU CONTROL PRECENT	CAPBP CONTROL PRECENT	VERAR CONTROL PRECENT	SENGL CONTROL PRECENT	STEME CONTROL PRECENT					
Rating Unit	Apr/22/2008	Apr/22/2008	Apr/22/2008	Apr/22/2008	Apr/22/2008	Apr/29/2008					
Rating Date	7 EPP	7 EPP	7 EPP	7 EPP	7 EPP	AT PLANT					
Trt-Eval Interval	0	0	0	0	0	0					
# 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	UTC					0 c	0 c	0 b	0 b	0 b	0 c
1	ROUNDUP ORIGINAL MAX	22	oz/a		7 EPP B						
1	AMS	3	qt/a		7 EPP						
2	VALOR XLT 3 OZ										100 a
2	VALOR SX	1.76	oz/a	FALL	A						
2	CLASSIC	1.24	oz/a	FALL							
2	ROUNDUP ORIGINAL MAX	11	oz/a	FALL							
2	2,4-D	1	qt/a	FALL							
2	AMS	3	qt/a	FALL							
2	NIS	6.4	oz/a	FALL							
3	VALOR XLT 4 OZ										100 a
3	VALOR SX	2.35	oz/a	FALL	A						
3	CLASSIC	1.65	oz/a	FALL							
3	ROUNDUP ORIGINAL MAX	11	oz/a	FALL							
3	2,4-D	1	qt/a	FALL							
3	AMS	3	qt/a	FALL							
3	NIS	6.4	oz/a	FALL							
4	VALOR XLT 5 OZ										100 a
4	VALOR SX	2.93	oz/a	FALL	A						
4	CLASSIC	2.06	oz/a	FALL							
4	ROUNDUP ORIGINAL MAX	11	oz/a	FALL							
4	2,4-D	1	qt/a	FALL							
4	AMS	3	qt/a	FALL							
4	NIS	6.4	oz/a	FALL							
5	VALOR XLT 6 OZ										99 a
5	VALOR SX	3.52	oz/a	FALL	A						
5	CLASSIC	2.47	oz/a	FALL							
5	ROUNDUP ORIGINAL MAX	11	oz/a	FALL							
5	2,4-D	1	qt/a	FALL							
5	AMS	3	qt/a	FALL							
5	NIS	6.4	oz/a	FALL							
6	VALOR SX	2	oz/a	FALL	A	99 a	100 a	98 a	87 a	93 a	100 a
6	2,4-D	1	qt/a	FALL							
6	ROUNDUP ORIGINAL MAX	11	oz/a	FALL							
6	NIS	6.4	oz/a	FALL							
6	VALOR XLT 3 OZ										
6	VALOR SX	1.76	oz/a	7 EPP	B						
6	CLASSIC	1.24	oz/a	7 EPP							
6	2,4-D	1	pt/a	7 EPP							
6	NIS	6.4	oz/a	7 EPP							
7	AUTHORITY MTZ	11	oz/a	FALL	A						83 ab
7	ROUNDUP ORIGINAL MAX	10.7	oz/a	FALL							
7	2,4-D	1	pt/a	FALL							
7	AMS	2	qt/a	FALL							
8	AUTHORITY MTZ	8	oz/a	FALL	A						88 ab
8	ROUNDUP ORIGINAL MAX	10.7	oz/a	FALL							
8	2,4-D	1	pt/a	FALL							
8	AMS	2	qt/a	FALL							
9	AUTHORITY FIRST	3	oz/a	FALL	A						93 ab
9	ROUNDUP ORIGINAL MAX	10.7	oz/a	FALL							
9	2,4-D	1	pt/a	FALL							
9	AMS	2	qt/a	FALL							

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Weed Code	STEME	LAMPU	CAPBP	VERAR	SENGL	STEME				
Rating Data Type	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL				
Rating Unit	PRECENT	PRECENT	PRECENT	PRECENT	PRECENT	PRECENT				
Rating Date	Apr/22/2008	Apr/22/2008	Apr/22/2008	Apr/22/2008	Apr/22/2008	Apr/29/2008				
Trt-Eval Interval	7 EPP	7 EPP	7 EPP	7 EPP	7 EPP	AT PLANT				
# Subsamples, Dec.	0	0	0	0	0	0				
Trt Treatment No. Name	Product Rate	Product Rate Unit	Grow Stg	Appl Code	1	2	3	4	5	6
10 AUTUMN	0.3 oz/a		FALL	A						99 a
10 SENCOR DF	10 oz/a		FALL							
10 COC	0.8 qt/a		FALL							
10 28%	1.5 qt/a		FALL							
11 AUTUMN	0.3 oz/a		FALL	A						67 b
11 SPARTAN	3.5 oz/a		FALL							
11 COC	0.8 qt/a		FALL							
11 28%	1.5 qt/a		FALL							
12 CLASSIC	1 oz/a		FALL	A						82 ab
12 EXPRESS	0.1 oz/a		FALL							
12 2,4-D	16 oz/a		FALL							
12 COC	0.8 qt/a		FALL							
13 CANOPY EX 2.2 OZ										96 ab
13 CLASSIC	2 oz/a		FALL	A						
13 EXPRESS	0.2 oz/a		FALL							
13 2,4-D	16 oz/a		FALL							
13 COC	0.8 qt/a		FALL							
14 EXPRESS	0.33 oz/a		FALL	A						87 ab
14 2,4-D	16 oz/a		FALL							
14 COC	0.8 qt/a		FALL							
15 CANOPY EX 1.1 OZ					92 b	83 b	100 a	64 a	100 a	83 ab
15 CLASSIC	1 oz/a		FALL	A						
15 EXPRESS	0.1 oz/a		FALL							
15 2,4-D	16 oz/a		FALL							
15 COC	0.8 qt/a		FALL							
15 CANOPY EX 1.1 OZ										
15 CLASSIC	1 oz/a		7 EPP	B						
15 EXPRESS	0.1 oz/a		7 EPP							
15 2,4-D	16 oz/a		7 EPP							
15 COC	0.8 qt/a		7 EPP							
16 ROUNDUP WEATHERMAX	22 oz/a		FALL	A	98 a	100 a	98 a	63 a	0 b	96 ab
16 2,4-D	1 pt/a		FALL							
16 AMS	4 qt/a		FALL							
16 CANOPY EX 2.2 OZ										
16 CLASSIC	2 oz/a		7 EPP	B						
16 EXPRESS	0.2 oz/a		7 EPP							
16 2,4-D	16 oz/a		7 EPP							
16 COC	0.8 qt/a		7 EPP							
17 ROUNDUP WEATHERMAX	22 oz/a		FALL	A	98 a	97 a	97 a	79 a	63 a	93 ab
17 2,4-D	1 pt/a		FALL							
17 AMS	4 qt/a		FALL							
17 ROUNDUP WEATHERMAX	22 oz/a		7 EPP	B						
17 2,4-D	1 pt/a		7 EPP							
17 AMS	4 qt/a		7 EPP							
18 UTC					0 c	0 c	0 b	0 b	0 b	0 c
LSD (P=.05)					4.0	5.0	5.2	31.3	33.6	18.4
Standard Deviation					2.2	2.7	2.8	16.6	17.4	11.0
CV					3.42	4.32	4.33	34.11	40.7	13.55
Bartlett's X2					4.1	0.88	1.353	1.755	4.494	47.229
P(Bartlett's X2)					0.251	0.348	0.508	0.625	0.034*	0.001*
Replicate F					0.182	0.556	1.207	0.343	0.678	0.715
Replicate Prob(F)					0.8364	0.5905	0.3392	0.7197	0.5381	0.4966
Treatment F					1541.602	977.778	960.690	16.333	23.239	23.549
Treatment Prob(F)					0.0001	0.0001	0.0001	0.0005	0.0003	0.0001

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	CAPBP	VERAR	SENGL	STEME	LAMPU
Rating Data Type	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit	PRECENT	PRECENT	PRECENT	PRECENT	PRECENT	PRECENT
Rating Date	Apr/29/2008	Apr/29/2008	Apr/29/2008	Apr/29/2008	May/26/2008	May/26/2008
Trt-Eval Interval	AT PLANT	AT PLANT	AT PLANT	AT PLANT	33 DA-B	33 DA-B
# Subsamples, Dec.	0	0	0	0	0	0

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Grow Stg	Appl Code	7	8	9	10	11	12
11	AUTUMN	0.3	oz/a	FALL	A	82 a	62 ab	63 ab	71 a	43 a	53 ab
11	SPARTAN	3.5	oz/a	FALL							
11	COC	0.8	qt/a	FALL							
11	28%	1.5	qt/a	FALL							
12	CLASSIC	1	oz/a	FALL	A	60 b	98 a	87 ab	90 a	80 a	53 ab
12	EXPRESS	0.1	oz/a	FALL							
12	2,4-D	16	oz/a	FALL							
12	COC	0.8	qt/a	FALL							
13	CANOPY EX 2.2 OZ					98 a	93 a	87 ab	97 a	95 a	97 a
13	CLASSIC	2	oz/a	FALL	A						
13	EXPRESS	0.2	oz/a	FALL							
13	2,4-D	16	oz/a	FALL							
13	COC	0.8	qt/a	FALL							
14	EXPRESS	0.33	oz/a	FALL	A	75 ab	93 a	40 b	63 a	85 a	43 b
14	2,4-D	16	oz/a	FALL							
14	COC	0.8	qt/a	FALL							
15	CANOPY EX 1.1 OZ					87 a	90 a	93 ab	93 a	100 a	100 a
15	CLASSIC	1	oz/a	FALL	A						
15	EXPRESS	0.1	oz/a	FALL							
15	2,4-D	16	oz/a	FALL							
15	COC	0.8	qt/a	FALL							
15	CANOPY EX 1.1 OZ										
15	CLASSIC	1	oz/a	7 EPP	B						
15	EXPRESS	0.1	oz/a	7 EPP							
15	2,4-D	16	oz/a	7 EPP							
15	COC	0.8	qt/a	7 EPP							
16	ROUNDUP WEATHERMAX	22	oz/a	FALL	A	100 a	95 a	87 ab	87 a	100 a	100 a
16	2,4-D	1	pt/a	FALL							
16	AMS	4	qt/a	FALL							
16	CANOPY EX 2.2 OZ										
16	CLASSIC	2	oz/a	7 EPP	B						
16	EXPRESS	0.2	oz/a	7 EPP							
16	2,4-D	16	oz/a	7 EPP							
16	COC	0.8	qt/a	7 EPP							
17	ROUNDUP WEATHERMAX	22	oz/a	FALL	A	97 a	100 a	70 ab	82 a	82 a	87 ab
17	2,4-D	1	pt/a	FALL							
17	AMS	4	qt/a	FALL							
17	ROUNDUP WEATHERMAX	22	oz/a	7 EPP	B						
17	2,4-D	1	pt/a	7 EPP							
17	AMS	4	qt/a	7 EPP							
18	UTC					0 c	0 c	0 c	0 b	0 b	0 c
LSD (P=.05)						16.1	22.1	32.7	27.7	36.2	30.9
Standard Deviation						9.7	13.2	19.6	16.6	21.7	18.5
CV						11.88	17.06	26.59	21.65	27.3	23.81
Bartlett's X2						13.671	19.002	6.753	32.984	12.916	12.684
P(Bartlett's X2)						0.135	0.04*	0.749	0.002*	0.166	0.123
Replicate F						0.509	4.640	0.772	0.583	0.434	0.113
Replicate Prob(F)						0.6059	0.0165	0.4704	0.5637	0.6514	0.8931
Treatment F						31.775	17.475	7.942	10.155	4.888	7.825
Treatment Prob(F)						0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
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Weed Code	CAPBP	VERAR
Rating Data Type	CONTROL	CONTROL
Rating Unit	PRECENT	PRECENT
Rating Date	May/26/2008	May/26/2008
Trt-Eval Interval	33 DA-B	33 DA-B
# Subsamples, Dec.	0	0

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Grow Stg	Appl Code	13	14
1	UTC					100 a	100 a
1	ROUNDUP ORIGINAL MAX	22 oz/a		7 EPP	B		
1	AMS	3 qt/a		7 EPP			
2	VALOR XLT 3 OZ					93 a	95 ab
2	VALOR SX	1.76 oz/a		FALL	A		
2	CLASSIC	1.24 oz/a		FALL			
2	ROUNDUP ORIGINAL MAX	11 oz/a		FALL			
2	2,4-D	1 qt/a		FALL			
2	AMS	3 qt/a		FALL			
2	NIS	6.4 oz/a		FALL			
3	VALOR XLT 4 OZ					100 a	100 a
3	VALOR SX	2.35 oz/a		FALL	A		
3	CLASSIC	1.65 oz/a		FALL			
3	ROUNDUP ORIGINAL MAX	11 oz/a		FALL			
3	2,4-D	1 qt/a		FALL			
3	AMS	3 qt/a		FALL			
3	NIS	6.4 oz/a		FALL			
4	VALOR XLT 5 OZ					100 a	100 a
4	VALOR SX	2.93 oz/a		FALL	A		
4	CLASSIC	2.06 oz/a		FALL			
4	ROUNDUP ORIGINAL MAX	11 oz/a		FALL			
4	2,4-D	1 qt/a		FALL			
4	AMS	3 qt/a		FALL			
4	NIS	6.4 oz/a		FALL			
5	VALOR XLT 6 OZ					100 a	95 ab
5	VALOR SX	3.52 oz/a		FALL	A		
5	CLASSIC	2.47 oz/a		FALL			
5	ROUNDUP ORIGINAL MAX	11 oz/a		FALL			
5	2,4-D	1 qt/a		FALL			
5	AMS	3 qt/a		FALL			
5	NIS	6.4 oz/a		FALL			
6	VALOR SX	2 oz/a		FALL	A	100 a	100 a
6	2,4-D	1 qt/a		FALL			
6	ROUNDUP ORIGINAL MAX	11 oz/a		FALL			
6	NIS	6.4 oz/a		FALL			
6	VALOR XLT 3 OZ						
6	VALOR SX	1.76 oz/a		7 EPP	B		
6	CLASSIC	1.24 oz/a		7 EPP			
6	2,4-D	1 pt/a		7 EPP			
6	NIS	6.4 oz/a		7 EPP			
7	AUTHORITY MTZ	11 oz/a		FALL	A	0 b	23 bc
7	ROUNDUP ORIGINAL MAX	10.7 oz/a		FALL			
7	2,4-D	1 pt/a		FALL			
7	AMS	2 qt/a		FALL			
8	AUTHORITY MTZ	8 oz/a		FALL	A	0 b	0 c
8	ROUNDUP ORIGINAL MAX	10.7 oz/a		FALL			
8	2,4-D	1 pt/a		FALL			
8	AMS	2 qt/a		FALL			
9	AUTHORITY FIRST	3 oz/a		FALL	A	20 b	27 abc
9	ROUNDUP ORIGINAL MAX	10.7 oz/a		FALL			
9	2,4-D	1 pt/a		FALL			
9	AMS	2 qt/a		FALL			
10	AUTUMN	0.3 oz/a		FALL	A	27 b	33 abc
10	SENCOR DF	10 oz/a		FALL			
10	COC	0.8 qt/a		FALL			
10	28%	1.5 qt/a		FALL			

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Weed Code	CAPBP	VERAR
Rating Data Type	CONTROL	CONTROL
Rating Unit	PRECENT	PRECENT
Rating Date	May/26/2008	May/26/2008
Trt-Eval Interval	33 DA-B	33 DA-B
# Subsamples, Dec.	0	0

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Grow Stg	Appl Code	13	14
11	AUTUMN	0.3 oz/a		FALL	A	17 b	30 abc
11	SPARTAN	3.5 oz/a		FALL			
11	COC	0.8 qt/a		FALL			
11	28%	1.5 qt/a		FALL			
12	CLASSIC	1 oz/a		FALL	A	72 a	68 abc
12	EXPRESS	0.1 oz/a		FALL			
12	2,4-D	16 oz/a		FALL			
12	COC	0.8 qt/a		FALL			
13	CANOPY EX 2.2 OZ					92 a	87 ab
13	CLASSIC	2 oz/a		FALL	A		
13	EXPRESS	0.2 oz/a		FALL			
13	2,4-D	16 oz/a		FALL			
13	COC	0.8 qt/a		FALL			
14	EXPRESS	0.33 oz/a		FALL	A	10 b	13 c
14	2,4-D	16 oz/a		FALL			
14	COC	0.8 qt/a		FALL			
15	CANOPY EX 1.1 OZ					100 a	93 ab
15	CLASSIC	1 oz/a		FALL	A		
15	EXPRESS	0.1 oz/a		FALL			
15	2,4-D	16 oz/a		FALL			
15	COC	0.8 qt/a		FALL			
15	CANOPY EX 1.1 OZ						
15	CLASSIC	1 oz/a		7 EPP	B		
15	EXPRESS	0.1 oz/a		7 EPP			
15	2,4-D	16 oz/a		7 EPP			
15	COC	0.8 qt/a		7 EPP			
16	ROUNDUP WEATHERMAX	22 oz/a		FALL	A	100 a	82 ab
16	2,4-D	1 pt/a		FALL			
16	AMS	4 qt/a		FALL			
16	CANOPY EX 2.2 OZ						
16	CLASSIC	2 oz/a		7 EPP	B		
16	EXPRESS	0.2 oz/a		7 EPP			
16	2,4-D	16 oz/a		7 EPP			
16	COC	0.8 qt/a		7 EPP			
17	ROUNDUP WEATHERMAX	22 oz/a		FALL	A	100 a	57 abc
17	2,4-D	1 pt/a		FALL			
17	AMS	4 qt/a		FALL			
17	ROUNDUP WEATHERMAX	22 oz/a		7 EPP	B		
17	2,4-D	1 pt/a		7 EPP			
17	AMS	4 qt/a		7 EPP			
18	UTC					0 b	0 c
LSD (P=.05)						25.9	42.7
Standard Deviation						15.5	25.6
CV						24.71	41.74
Bartlett's X2						5.913	15.559
P(Bartlett's X2)						0.433	0.158
Replicate F						1.772	0.107
Replicate Prob(F)						0.1853	0.8990
Treatment F						24.057	6.640
Treatment Prob(F)						0.0001	0.0001

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.