

Purdue University

Fall Burndown Tank-Mix Treatments for 2004 soybean

Trial ID: 03F-PPAC-SOY
Location: PPAC

Study Dir.:
Investigator: Dr. Bill Johnson

GENERAL TRIAL INFORMATION

Investigator: Dr. Bill Johnson

TRIAL LOCATION

Unit: x

Conducted Under GLP (Y/N): N

Conducted Under GEP (Y/N): N

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1.	STEME	Chickweed, common	Stellaria media (L.) VILL./CYR.
2.	LAMPU	Deadnettle, purple	Lamium purpureum L.
3.	LAMAM	Henbit	Lamium amplexicaule L.

Crop 1: ZEAMX CORN, FIELD
Row Spacing: 30 IN

Variety: Harvest Residue

Crop 2: GLXMA SOYBEAN
Planting Date: 6/May/2004
Row Spacing: 7 IN

Planting Method: DRILLED

SITE AND DESIGN

Plot Width, Unit: 10 FT

Plot Length, Unit: 30 FT Reps: 4

Study Design: RANDOMIZED COMPLETE BLOCK

SOIL DESCRIPTION

Texture: sandy loam

Soil Name: Bourbon / Tracy sandy loams (TcB)

APPLICATION DESCRIPTION

	A	B
Application Date:	11/Nov/2003	14/Apr/2004
Time of Day:	12:45 CST	7:45 am
Application Method:	SPRAY	SPRAY
Application Timing:	FALBD	SPRBD
Applic. Placement:	BROFOL	BROFOL
Air Temp., Unit:	61 F	39 F
% Relative Humidity:	90	52
Wind Velocity, Unit:	4 MPH	1 MPH
Soil Temp., Unit:	10 C	38 F
Soil Moisture:	WET	
% Cloud Cover:	100	0

CROP STAGE AT EACH APPLICATION

	A	B
Crop 1 Code, Stage:	ZEAMX	ZEAMX
Stage Scale:	Residue	Residue
Height, Unit:	75 %	75 %
Crop 2 Code, Stage:	GLXMA	GLXMA
Stage Scale:	NA	NA

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WEED STAGE AT EACH APPLICATION

	A	B
Weed 1 Code, Stage:	STEME 4 nodes	STEME
Stage Scale:	2-4 inch	2-8"
Density, Unit:	5 FT2	1-4 FT2
Weed 2 Code, Stage:	LAMPU	LAMPU
Stage Scale:	2.5 inch	1-6"
Density, Unit:	6 FT2	1-6 FT2
Weed 3 Code, Stage:	LAMAM	LAMAM
Stage Scale:	1 inch	1-6"
Density, Unit:	25 FT2	1-6 FT2

APPLICATION EQUIPMENT

	A	B
Appl. Equipment:	CO2 Backp	CO2 Backp
Operating Pressure:	25 psi	25 psi
Nozzle Type:	VS	VS
Nozzle Size:	8002	8002
Nozzle Spacing, Unit:	20 IN	20 IN
Boom Length, Unit:	10 FT	10 FT
Ground Speed, Unit:	3 MPH	3 MPH
Carrier:	water	water
Spray Volume, Unit:	15 gpa	15 gpa

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					LAMAM	LAMPU	STEME	LAMAM	LAMPU
					biomass	biomass	biomass	biomass	biomass
					%control	%control	%control	%control	%control
					14/Apr/2004	14/Apr/2004	14/Apr/2004	27/Apr/2004	27/Apr/2004
					NA	NA	NA	NA	NA
					1-6"	1-6"	2-8"	1-8"	1-8"
					1-6 FT2	1-6 FT2	1-4 FT2	1-3 FT2	1-3 FT2
					Jeff & Reece	Jeff & Reece	Jeff & Reece	Earl & Reece	Earl & Reece
					155 DA-A	155 DA-A	155 DA-A	13 DA-B	13 DA-B
					0	0	0	0	0
Trt	Treatment	Rate	Grow	Appl					
No.	Name	Unit	Stg	Code	1	2	3	4	5
1	Untreated Check				0 b	0 b	0 b	0 d	0 d
2	Valor	0.064 lb ai/a	FALBD	A	86 a	86 a	86 a	78 ab	78 ab
	2,4-D Ester	0.5 lb ai/a	FALBD	A					
	Express	0.0047 lb ai/a	FALBD	A					
	NIS		FALBD	A					
	AMS		FALBD	A					
3	Valor	0.064 lb ai/a	FALBD	A	96 a	96 a	98 a	89 a	89 a
	Basis	0.014 lb ai/a	FALBD	A					
	2,4-D Ester	0.5 lb ai/a	FALBD	A					
	NIS		FALBD	A					
	AMS		FALBD	A					
4	Valor	0.048 lb ai/a	FALBD	A	92 a	92 a	82 a	91 a	91 a
	FirstRate	0.0157 lb ai/a	FALBD	A					
	Express	0.0047 lb ai/a	FALBD	A					
	2,4-D Ester	0.5 lb ai/a	FALBD	A					
	NIS		FALBD	A					
	AMS		FALBD	A					
5	Valor	0.064 lb ai/a	FALBD	A	90 a	90 a	85 a	69 abc	69 abc
	Basis	0.014 lb ai/a	FALBD	A					
	2,4-D Ester	0.5 lb ai/a	FALBD	A					
	Crop Oil Conc		FALBD	A					
	AMS		FALBD	A					
6	Touchdown Total	0.586 lb ai/a	FALBD	A	94 a	94 a	96 a	71 abc	71 abc
	2,4-D Ester	0.5 lb ai/a	FALBD	A					
	AMS		FALBD	A					
7	Gramoxone Max	0.487 lb ai/a	FALBD	A	86 a	86 a	88 a	66 abc	66 abc
	Sencor 75DF	0.25 lb ai/a	FALBD	A					
	Crop Oil Conc		FALBD	A					
	AMS		FALBD	A					
8	Scepter	0.092 lb ai/a	FALBD	A	95 a	95 a	96 a	84 ab	84 ab
	2,4-D Ester	0.5 lb ai/a	FALBD	A					
	AMS		FALBD	A					
	Crop Oil Conc		FALBD	A					
9	Scepter	0.092 lb ai/a	FALBD	A	86 a	86 a	90 a	57 abc	57 abc
	Authority	0.187 lb ai/a	FALBD	A					
	2,4-D Ester	0.5 lb ai/a	FALBD	A					
	AMS		FALBD	A					
	Crop Oil Conc		FALBD	A					
10	Backdraft (imazaquin)	0.84 lb ai/a	FALBD	A	97 a	97 a	98 a	87 a	87 a
	2,4-D Ester	0.5 lb ai/a	FALBD	A					
	AMS		FALBD	A					
	Crop Oil Conc		FALBD	A					
11	Pursuit	0.0625 lb ai/a	SPRBD	B	0 b	0 b	0 b	33 c	33 c
	2,4-D Ester	0.5 lb ai/a	SPRBD	B					
	AMS		SPRBD	B					
	Crop Oil Conc		SPRBD	B					

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Weed Code					LAMAM	LAMPU	STEME	LAMAM	LAMPU	
Rating Data Type					biomass	biomass	biomass	biomass	biomass	
Rating Unit					%control	%control	%control	%control	%control	
Rating Date					14/Apr/2004	14/Apr/2004	14/Apr/2004	27/Apr/2004	27/Apr/2004	
Crop Stage					NA	NA	NA	NA	NA	
Weed Stage					1-6"	1-6"	2-8"	1-8"	1-8"	
Weed Density, Unit					1-6 FT2	1-6 FT2	1-4 FT2	1-3 FT2	1-3 FT2	
Assessed By					Jeff & Reece	Jeff & Reece	Jeff & Reece	Earl & Reece	Earl & Reece	
Trt-Eval Interval					155 DA-A	155 DA-A	155 DA-A	13 DA-B	13 DA-B	
# Subsamples, Dec.					0	0	0	0	0	
Trt	Treatment	Rate	Unit	Grow Stg	Appl Code	1	2	3	4	5
12	Pursuit	0.0625	lb ai/a	SPRBD	B	0 b	0 b	0 b	45 bc	45 bc
	Authority	0.187	lb ai/a	SPRBD	B					
	2,4-D Ester	0.5	lb ai/a	SPRBD	B					
	AMS			SPRBD	B					
	Crop Oil Conc			SPRBD	B					
13	Extreme	0.81	lb ai/a	SPRBD	B	0 b	0 b	0 b	60 abc	60 abc
	2,4-D Ester	0.5	lb ai/a	SPRBD	B					
	AMS			SPRBD	B					
	Crop Oil Conc			SPRBD	B					
14	Classic	0.0234	lb ai/a	FALBD	A	94 a	94 a	90 a	93 a	93 a
	Express	0.007	lb ai/a	FALBD	A					
	2,4-D Ester	0.5	lb ai/a	FALBD	A					
	Crop Oil Conc			FALBD	A					
	AMS			FALBD	A					
15	Canopy XL					99 a	99 a	99 a	96 a	96 a
	Classic	0.0203	lb ai/a	FALBD	A					
	Authority	0.103	lb ai/a	FALBD	A					
	Express	0.007	lb ai/a	FALBD	A					
	2,4-D Ester	0.5	lb ai/a	FALBD	A					
	Crop Oil Conc			FALBD	A					
	AMS			FALBD	A					
16	Classic	0.0156	lb ai/a	FALBD	A	99 a	99 a	98 a	94 a	94 a
	Express	0.0047	lb ai/a	FALBD	A					
	2,4-D Ester	0.5	lb ai/a	FALBD	A					
	Crop Oil Conc			FALBD	A					
	AMS			FALBD	A					
17	Canopy XL					95 a	95 a	91 a	98 a	98 a
	Classic	0.0147	lb ai/a	FALBD	A					
	Authority	0.073	lb ai/a	FALBD	A					
	Express	0.0047	lb ai/a	FALBD	A					
	2,4-D Ester	0.5	lb ai/a	FALBD	A					
	Crop Oil Conc			FALBD	A					
	AMS			FALBD	A					
LSD (P=.05)					9.3	9.3	13.7	25.1	25.1	
Standard Deviation					6.5	6.5	9.6	17.6	17.6	
CV					9.13	9.13	13.66	24.72	24.72	
Grand Mean					71.09	71.09	70.32	71.16	71.16	
Bartlett's X2					20.668	20.668	40.776	47.89	47.89	
P(Bartlett's X2)					0.055	0.055	0.001*	0.001*	0.001*	
Replicate F					0.712	0.712	1.424	0.753	0.753	
Replicate Prob(F)					0.5497	0.5497	0.2473	0.5259	0.5259	
Treatment F					158.242	158.242	71.137	8.980	8.980	
Treatment Prob(F)					0.0001	0.0001	0.0001	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.

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Weed Code					STEME	LAMAM	LAMPU	STEME	
Rating Data Type					biomass	biomass	biomass	biomass	
Rating Unit					%control	%control	%control	%control	
Rating Date					27/Apr/2004	2/Jun/2004	2/Jun/2004	2/Jun/2004	
Crop Stage					NA	NA	NA	NA	
Weed Stage					8-10"	8"	8"	6-10"	
Weed Density, Unit					1-5 FT2	1-2 M2	1-2 M2	7-10FT2	
Assessed By					Earl & Reece	Bill & Reece	Bill & Reece	Bill & Reece	
Trt-Eval Interval					13 DA-B	49 DA-B	49 DA-B	49 DA-B	
# Subsamples, Dec.					0	0	0	0	
Trt	Treatment	Rate	Unit	Grow Stg	Appl Code	6	7	8	9
1	Untreated Check					0 e	0 c	0 b	0 d
2	Valor	0.064	lb ai/a	FALBD	A	82 ab	69 ab	63 a	40 c
	2,4-D Ester	0.5	lb ai/a	FALBD	A				
	Express	0.0047	lb ai/a	FALBD	A				
	NIS			FALBD	A				
	AMS			FALBD	A				
3	Valor	0.064	lb ai/a	FALBD	A	91 ab	98 a	98 a	58 abc
	Basis	0.014	lb ai/a	FALBD	A				
	2,4-D Ester	0.5	lb ai/a	FALBD	A				
	NIS			FALBD	A				
	AMS			FALBD	A				
4	Valor	0.048	lb ai/a	FALBD	A	77 ab	99 a	99 a	53 abc
	FirstRate	0.0157	lb ai/a	FALBD	A				
	Express	0.0047	lb ai/a	FALBD	A				
	2,4-D Ester	0.5	lb ai/a	FALBD	A				
	NIS			FALBD	A				
	AMS			FALBD	A				
5	Valor	0.064	lb ai/a	FALBD	A	81 ab	98 a	94 a	44 bc
	Basis	0.014	lb ai/a	FALBD	A				
	2,4-D Ester	0.5	lb ai/a	FALBD	A				
	Crop Oil Conc			FALBD	A				
	AMS			FALBD	A				
6	Touchdown Total	0.586	lb ai/a	FALBD	A	80 ab	35 b	58 a	54 abc
	2,4-D Ester	0.5	lb ai/a	FALBD	A				
	AMS			FALBD	A				
7	Gramoxone Max	0.487	lb ai/a	FALBD	A	79 ab	48 ab	48 a	39 c
	Sencor 75DF	0.25	lb ai/a	FALBD	A				
	Crop Oil Conc			FALBD	A				
	AMS			FALBD	A				
8	Scepter	0.092	lb ai/a	FALBD	A	91 ab	69 ab	81 a	76 abc
	2,4-D Ester	0.5	lb ai/a	FALBD	A				
	AMS			FALBD	A				
	Crop Oil Conc			FALBD	A				
9	Scepter	0.092	lb ai/a	FALBD	A	81 ab	75 ab	75 a	59 abc
	Authority	0.187	lb ai/a	FALBD	A				
	2,4-D Ester	0.5	lb ai/a	FALBD	A				
	AMS			FALBD	A				
	Crop Oil Conc			FALBD	A				
10	Backdraft (imazaquin)	0.84	lb ai/a	FALBD	A	93 ab	86 a	95 a	81 abc
	2,4-D Ester	0.5	lb ai/a	FALBD	A				
	AMS			FALBD	A				
	Crop Oil Conc			FALBD	A				
11	Pursuit	0.0625	lb ai/a	SPRBD	B	33 d	78 ab	78 a	44 bc
	2,4-D Ester	0.5	lb ai/a	SPRBD	B				
	AMS			SPRBD	B				
	Crop Oil Conc			SPRBD	B				
12	Pursuit	0.0625	lb ai/a	SPRBD	B	44 cd	95 a	95 a	75 abc
	Authority	0.187	lb ai/a	SPRBD	B				
	2,4-D Ester	0.5	lb ai/a	SPRBD	B				
	AMS			SPRBD	B				
	Crop Oil Conc			SPRBD	B				

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Weed Code					STEME	LAMAM	LAMPU	STEME	
Rating Data Type					biomass	biomass	biomass	biomass	
Rating Unit					%control	%control	%control	%control	
Rating Date					27/Apr/2004	2/Jun/2004	2/Jun/2004	2/Jun/2004	
Crop Stage					NA	NA	NA	NA	
Weed Stage					8-10"	8"	8"	6-10"	
Weed Density, Unit					1-5 FT2	1-2 M2	1-2 M2	7-10FT2	
Assessed By					Earl & Reece	Bill & Reece	Bill & Reece	Bill & Reece	
Trt-Eval Interval					13 DA-B	49 DA-B	49 DA-B	49 DA-B	
# Subsamples, Dec.					0	0	0	0	
Trt No.	Treatment Name	Rate	Unit	Grow Stg	Appl Code	6	7	8	9
13	Extreme	0.81	lb ai/a	SPRBD	B	60 bc	100 a	100 a	96 a
	2,4-D Ester	0.5	lb ai/a	SPRBD	B				
	AMS			SPRBD	B				
	Crop Oil Conc			SPRBD	B				
14	Classic	0.0234	lb ai/a	FALBD	A	88 ab	100 a	100 a	83 abc
	Express	0.007	lb ai/a	FALBD	A				
	2,4-D Ester	0.5	lb ai/a	FALBD	A				
	Crop Oil Conc			FALBD	A				
	AMS			FALBD	A				
15	Canopy XL					97 a	99 a	99 a	86 ab
	Classic	0.0203	lb ai/a	FALBD	A				
	Authority	0.103	lb ai/a	FALBD	A				
	Express	0.007	lb ai/a	FALBD	A				
	2,4-D Ester	0.5	lb ai/a	FALBD	A				
	Crop Oil Conc			FALBD	A				
	AMS			FALBD	A				
16	Classic	0.0156	lb ai/a	FALBD	A	97 a	100 a	100 a	81 abc
	Express	0.0047	lb ai/a	FALBD	A				
	2,4-D Ester	0.5	lb ai/a	FALBD	A				
	Crop Oil Conc			FALBD	A				
	AMS			FALBD	A				
17	Canopy XL					96 a	100 a	100 a	84 abc
	Classic	0.0147	lb ai/a	FALBD	A				
	Authority	0.073	lb ai/a	FALBD	A				
	Express	0.0047	lb ai/a	FALBD	A				
	2,4-D Ester	0.5	lb ai/a	FALBD	A				
	Crop Oil Conc			FALBD	A				
	AMS			FALBD	A				
LSD (P=.05)					20.2	31.4	30.3	25.8	
Standard Deviation					14.2	21.9	21.2	18.1	
CV					19.0	27.72	26.13	29.26	
Grand Mean					74.47	79.18	81.18	61.79	
Bartlett's X2					36.538	69.627	62.7	19.711	
P(Bartlett's X2)					0.001*	0.001*	0.001*	0.14	
Replicate F					1.385	0.154	0.479	1.221	
Replicate Prob(F)					0.2588	0.9264	0.6981	0.3123	
Treatment F					13.900	6.713	6.405	7.240	
Treatment Prob(F)					0.0001	0.0001	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.