

Purdue University

Residual soybean herbicides and winter weed emergence

Trial ID: 03-SEPAC-SOY-WINT
Location: SEPAC

Study Dir.:
Investigator: Dr. Bill Johnson

GENERAL TRIAL INFORMATION

Investigator: Dr. Bill Johnson

Conducted Under GLP (Y/N): N

Conducted Under GEP (Y/N): N

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1.	CERVU	Chickweed, mouseear	Cerastium vulgatum
2.	STEME	Chickweed, common	Stellaria media
3.	SENGL	butterweed	Packera glabella
4.	RANAB	Buttercup, smallflower	Ranunculus abortivus
5.	LAMPU	deadnettle, purple	Lamium purpureum

SITE AND DESIGN

Plot Width, Unit: 10

FT

Plot Length, Unit: 50

FT

Reps: 4

Study Design: RANDOMIZED COMPLETE BLOCK

APPLICATION DESCRIPTION

	A	B
Application Date:	11/Jun/2003	22/Jul/2003
Application Method:	SPRAY	SPRAY
Application Timing:	2:00-3:00	1:30-2:00
Air Temp., Unit:	78 F	74 F
% Relative Humidity:	60	60
Wind Velocity, Unit:	5 MPH	1 MPH
Soil Temp., Unit:	22 C	24 C
% Cloud Cover:	100	100

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Weed Code	CERVU	STEME	SENGL	RANAB	LAMPU	CERVU				
Part Rated	PLAEME P	PLAEME P	PLAEME P	PLAEME P	PLAEME P	PLAEME P				
Rating Data Type	COUPLA	COUPLA	COUPLA	COUPLA	COUPLA	COUPLA				
Rating Unit	/sq. m	/sq. m	/sq. m	/sq. m	/sq. m	/sq. m				
Rating Date	13/Jan/2004	13/Jan/2004	13/Jan/2004	13/Jan/2004	13/Jan/2004	7/May/2004				
Weed Stage	emerge	emerge	emerge	emerge	emerge	emerge				
Assessed By	group	group	group	group	group	group				
Trt-Eval Interval	175 DA-B	175 DA-B	175 DA-B	175 DA-B	175 DA-B	290 DA-B				
# Subsamples, Dec.	2 0	2 0	2 0	2 0	2 0	2 0				
Trt No.	Treatment Name	Rate	Grow Unit	Stg	1	2	3	4	5	6
1	Canopy XL Authority Classic Roundup Weathermax AMS Roundup Weathermax AMS		PRE PRE PRE POST POST POST+3W POST+3W		110 a	10 ab	65 a	18 b	64 a	48 a
2	Gauntlet Authority FirstRate Roundup Weathermax AMS Roundup Weathermax AMS		PRE PRE PRE POST POST POST+3W POST+3W		138 a	1 b	60 a	34 ab	44 a	28 a
3	Gangster Valor FirstRate Roundup Weathermax AMS Roundup Weathermax AMS		PRE PRE PRE POST POST POST+3W POST+3W		66 a	1 b	60 a	33 ab	61 a	40 a
4	FirstRate Roundup Weathermax AMS Roundup Weathermax AMS		PRE POST POST POST+3W POST+3W		98 a	4 b	121 a	18 b	81 a	40 a
5	FirstRate Roundup Weathermax AMS Roundup Weathermax AMS		POST POST POST POST+3W POST+3W		25 a	13 ab	149 a	16 b	76 a	20 a
6	Scepter (Backdraft) Roundup Weathermax AMS Roundup Weathermax AMS		PRE POST POST POST+3W POST+3W		98 a	6 ab	156 a	30 ab	103 a	31 a
7	Scepter (Backdraft) Roundup Weathermax AMS Roundup Weathermax AMS		POST POST POST POST+3W POST+3W		40 a	8 ab	111 a	44 ab	149 a	24 a
8	Sencor 75DF Python Roundup Weathermax AMS Roundup Weathermax AMS		PRE PRE POST POST POST+3W POST+3W		69 a	6 ab	119 a	55 a	138 a	31 a

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Weed Code	CERVU	STEME	SENGL	RANAB	LAMPU	CERVU				
Part Rated	PLAEME P	PLAEME P	PLAEME P	PLAEME P	PLAEME P	PLAEME P				
Rating Data Type	COUPLA	COUPLA	COUPLA	COUPLA	COUPLA	COUPLA				
Rating Unit	/sq. m	/sq. m	/sq. m	/sq. m	/sq. m	/sq. m				
Rating Date	13/Jan/2004	13/Jan/2004	13/Jan/2004	13/Jan/2004	13/Jan/2004	7/May/2004				
Weed Stage	emerge	emerge	emerge	emerge	emerge	emerge				
Assessed By	group	group	group	group	group	group				
Trt-Eval Interval	175 DA-B	175 DA-B	175 DA-B	175 DA-B	175 DA-B	290 DA-B				
# Subsamples, Dec.	2 0	2 0	2 0	2 0	2 0	2 0				
Trt No.	Treatment Name	Rate	Grow Unit	Stg	1	2	3	4	5	6
9	Untreated				73 a	18 a	166 a	33 ab	113 a	37 a
	Roundup Weathermax			POST						
	AMS			POST						
	Roundup Weathermax			POST+3W						
	AMS			POST+3W						
LSD (P=.05)		96.8	8.3	123.0	21.7	97.9	36.8			
Standard Deviation		66.3	5.7	84.3	14.9	67.1	25.2			
CV		83.46	77.34	75.29	47.97	72.97	76.48			
Grand Mean		79.44	7.36	111.94	30.97	91.94	33.0			
Bartlett's X2		25.743	11.634	22.621	19.184	22.024	11.581			
P(Bartlett's X2)		0.001*	0.168	0.004*	0.014*	0.005*	0.171			
Replicate F		9.671	4.536	9.865	0.766	0.623	0.242			
Replicate Prob(F)		0.0002	0.0118	0.0002	0.5240	0.6072	0.8661			
Treatment F		1.116	3.493	0.985	3.020	1.139	0.470			
Treatment Prob(F)		0.3875	0.0082	0.4713	0.0170	0.3739	0.8650			

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	SENGL	RANAB	LAMPU				
Part Rated	PLAEME P	PLAEME P	PLAEME P	PLAEME P				
Rating Data Type	COUPLA	COUPLA	COUPLA	COUPLA				
Rating Unit	/sq. m	/sq. m	/sq. m	/sq. m				
Rating Date	7/May/2004	7/May/2004	7/May/2004	7/May/2004				
Weed Stage	emerge	emerge	emerge	emerge				
Assessed By	group	group	group	group				
Trt-Eval Interval	290 DA-B	290 DA-B	290 DA-B	290 DA-B				
# Subsamples, Dec.	2 0	2 0	2 0	2 0				
Trt No.	Treatment Name	Rate	Grow Unit	Stg	7	8	9	10
1	Canopy XL Authority Classic Roundup Weathermax AMS Roundup Weathermax AMS			PRE PRE PRE POST POST POST+3W POST+3W	7 a	1 a	30 a	16 a
2	Gauntlet Authority FirstRate Roundup Weathermax AMS Roundup Weathermax AMS			PRE PRE PRE POST POST POST+3W POST+3W	2 a	0 a	20 ab	7 a
3	Gangster Valor FirstRate Roundup Weathermax AMS Roundup Weathermax AMS			PRE PRE PRE POST POST POST+3W POST+3W	4 a	1 a	24 ab	8 a
4	FirstRate Roundup Weathermax AMS Roundup Weathermax AMS			PRE POST POST POST+3W POST+3W	1 a	1 a	17 ab	16 a
5	FirstRate Roundup Weathermax AMS Roundup Weathermax AMS			POST POST POST POST+3W POST+3W	2 a	0 a	8 b	9 a
6	Scepter (Backdraft) Roundup Weathermax AMS Roundup Weathermax AMS			PRE POST POST POST+3W POST+3W	8 a	0 a	22 ab	27 a
7	Scepter (Backdraft) Roundup Weathermax AMS Roundup Weathermax AMS			POST POST POST POST+3W POST+3W	0 a	0 a	17 ab	23 a
8	Sencor 75DF Python Roundup Weathermax AMS Roundup Weathermax AMS			PRE PRE POST POST POST+3W POST+3W	10 a	0 a	28 a	38 a

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Weed Code	STEME	SENGL	RANAB	LAMPU	
Part Rated	PLAEME P	PLAEME P	PLAEME P	PLAEME P	
Rating Data Type	COUPLA	COUPLA	COUPLA	COUPLA	
Rating Unit	/sq. m	/sq. m	/sq. m	/sq. m	
Rating Date	7/May/2004	7/May/2004	7/May/2004	7/May/2004	
Weed Stage	emerge	emerge	emerge	emerge	
Assessed By	group	group	group	group	
Trt-Eval Interval	290 DA-B	290 DA-B	290 DA-B	290 DA-B	
# Subsamples, Dec.	2 0	2 0	2 0	2 0	
Trt Treatment	Rate	Grow			
No. Name	Rate Unit	Stg			
9 Untreated		7	8	9	10
Roundup Weathermax		5 a	3 a	14 ab	38 a
AMS	POST				
Roundup Weathermax	POST				
AMS	POST+3W				
AMS	POST+3W				
LSD (P=.05)	7.4	2.5	11.1	21.2	
Standard Deviation	5.0	1.7	7.6	14.5	
CV	119.32	304.47	38.7	72.74	
Grand Mean	4.22	0.56	19.72	19.94	
Bartlett's X2	14.602	9.579	2.568	9.811	
P(Bartlett's X2)	0.041*	0.023*	0.959	0.279	
Replicate F	0.222	2.951	0.394	5.056	
Replicate Prob(F)	0.8803	0.0529	0.7588	0.0074	
Treatment F	1.794	1.000	3.240	2.723	
Treatment Prob(F)	0.1280	0.4613	0.0121	0.0274	

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

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