

# Purdue University

## Residual corn herbicides and winter weed emergence

Trial ID: 03-SEPAC-CORN-WNT  
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 glabellus
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
Time of Day:	2:00-3:00	1:30-2:00
Application Method:	SPRAY	SPRAY
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 PLAEME P	STEME PLAEME P	SENGL PLAEME P	RANAB PLAEME P	LAMPU PLAEME P	CERVU PLAEME P				
Part Rated	COUPLA	COUPLA	COUPLA	COUPLA	COUPLA	COUPLA				
Rating Data Type										
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	Atrazine Degree Roundup Weathermax AMS		PRE PRE 12" corn 12" corn		84 a	24 a	34 a	46 a	65 a	17 ab
2	Atrazine Degree Roundup Weathermax AMS		PRE PRE 12" corn 12" corn		99 a	28 a	54 a	40 a	44 a	13 ab
3	Atrazine Degree Atrazine Roundup Weathermax AMS		PRE PRE 12" corn 12" corn 12" corn		71 a	31 a	38 a	68 a	29 a	34 a
4	Degree Atrazine Roundup Weathermax AMS		PRE 12" corn 12" corn 12" corn		56 a	29 a	73 a	41 a	49 a	17 ab
5	Degree Princep Roundup Weathermax AMS		PRE PRE 12" corn 12" corn		76 a	24 a	40 a	41 a	29 a	15 ab
6	Degree Princep Roundup Weathermax AMS		PRE PRE 12" corn 12" corn		69 a	29 a	41 a	40 a	55 a	15 ab
7	Hornet Degree Roundup Weathermax AMS		PRE PRE 12" corn 12" corn		83 a	16 a	35 a	39 a	68 a	18 ab
8	Degree Hornet Roundup Weathermax AMS		PRE 12" corn 12" corn 12" corn		64 a	30 a	19 a	35 a	83 a	17 ab
9	Callisto Degree Roundup Weathermax AMS		PRE PRE 12" corn 12" corn		56 a	30 a	45 a	29 a	54 a	9 b
10	Degree Callisto Roundup Weathermax AMS		PRE 12" corn 12" corn 12" corn		65 a	15 a	34 a	56 a	21 a	17 ab
11	Untreated Degree Roundup Weathermax AMS		PRE 12" corn 12" corn		94 a	8 a	43 a	53 a	28 a	3 b
LSD (P=.05)					51.8	38.4	37.1	28.7	53.8	13.9
Standard Deviation					35.9	26.6	25.7	19.8	37.3	9.6
CV					48.34	111.42	62.29	44.78	78.44	61.65
Grand Mean					74.2	23.86	41.25	44.32	47.5	15.64
Bartlett's X2					1.714	17.544	15.877	10.127	17.34	18.646
P(Bartlett's X2)					0.998	0.063	0.103	0.429	0.067	0.028*

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Weed Code	CERVU	STEME	SENGL	RANAB	LAMPU	CERVU
Part Rated	PLAEME P	PLAEME P				
Rating Data Type	COUPLA	COUPLA	COUPLA	COUPLA	COUPLA	COUPLA
Rating Unit	/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	290 DA-B				
# Subsamples, Dec.	2 0	2 0	2 0	2 0	2 0	2 0
Replicate F	0.335	1.227	1.952	1.098	1.823	1.427
Replicate Prob(F)	0.8002	0.3171	0.1425	0.3651	0.1642	0.2544
Treatment F	0.630	0.337	1.104	1.185	1.105	2.359
Treatment Prob(F)	0.7766	0.9636	0.3908	0.3389	0.3902	0.0339

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	Atrazine Degree Roundup Weathermax AMS		PRE PRE 12" corn 12" corn		11 a	14 a	21 a	22 a
2	Atrazine Degree Roundup Weathermax AMS		PRE PRE 12" corn 12" corn		7 a	20 a	13 a	13 a
3	Atrazine Degree Atrazine Roundup Weathermax AMS		PRE PRE 12" corn 12" corn 12" corn		5 a	5 a	20 a	7 a
4	Degree Atrazine Roundup Weathermax AMS		PRE 12" corn 12" corn 12" corn		8 a	6 a	22 a	22 a
5	Degree Princep Roundup Weathermax AMS		PRE PRE 12" corn 12" corn		11 a	29 a	17 a	10 a
6	Degree Princep Roundup Weathermax AMS		PRE PRE 12" corn 12" corn		6 a	22 a	19 a	11 a
7	Hornet Degree Roundup Weathermax AMS		PRE PRE 12" corn 12" corn		8 a	21 a	26 a	29 a
8	Degree Hornet Roundup Weathermax AMS		PRE 12" corn 12" corn 12" corn		2 a	1 a	20 a	16 a
9	Callisto Degree Roundup Weathermax AMS		PRE PRE 12" corn 12" corn		10 a	19 a	22 a	26 a
10	Degree Callisto Roundup Weathermax AMS		PRE 12" corn 12" corn 12" corn		9 a	6 a	23 a	11 a
11	Untreated Degree Roundup Weathermax AMS		PRE 12" corn 12" corn		6 a	14 a	23 a	12 a
LSD (P=.05)					9.2	16.6	16.4	24.2
Standard Deviation					6.4	11.5	11.4	16.8
CV					86.83	81.82	56.06	104.52
Grand Mean					7.32	14.05	20.27	16.05
Bartlett's X2					14.765	39.878	8.786	19.822
P(Bartlett's X2)					0.141	0.001*	0.553	0.031*

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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
Replicate F	1.449	10.595	2.764	1.409
Replicate Prob(F)	0.2482	0.0001	0.0592	0.2596
Treatment F	0.784	2.372	0.380	0.748
Treatment Prob(F)	0.6437	0.0330	0.9457	0.6747

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.