

# Purdue University

## Burcucumber control in soybean

Trial ID: 04-PPAC-SOY-BURC  
 Location: PPAC

Study Dir.:  
 Investigator: Dr. Bill Johnson

### GENERAL TRIAL INFORMATION

**Investigator:** Dr. Bill Johnson

### TRIAL LOCATION

**City:** Wanatah  
**State/Prov.:** IN  
**Postal Code:** 46390  
**Country:** USA  
**E-Longitude of LL Corner °:** 273.030970      **N-Latitude of LL Corner °:** 41.448800  
**Altitude of LL Corner:** 711.00      **Unit:** feet

### COOPERATOR/LANDOWNER

**City:** Wanatah  
**State/Prov:** IN  
**Postal Code:** 46390

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

### CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1.	SIYAN	BURCUCUMBER	SICYOS ANGULATUS L.

**Crop 1:** GLXMA      SOYBEAN  
**Planting Date:** 5/Jun/2004      **Planting Method:** DRILLED  
**Row Spacing:** 7.5      IN

### SITE AND DESIGN

**Plot Width, Unit:** 10      FT      **Plot Length, Unit:** 30      FT      **Reps:** 4  
**Study Design:** RANDOMIZED COMPLETE BLOCK

### APPLICATION DESCRIPTION

	A	B
<b>Application Date:</b>	7/Jun/2004	28/Jun/2004
<b>Time of Day:</b>		1700-1730
<b>Application Method:</b>	SPRAY	SPRAY
<b>Application Timing:</b>	PREPRE	POSPOS
<b>Applic. Placement:</b>	BROSOI	BROFOL
<b>Air Temp., Unit:</b>	70      F	76      F
<b>% Relative Humidity:</b>	80	68
<b>Wind Velocity, Unit:</b>	7.5      MPH	5      MPH
<b>Soil Temp., Unit:</b>	68      F	85      F
<b>Soil Moisture:</b>	dry surf	dry surf
<b>% Cloud Cover:</b>	0	0

### CROP STAGE AT EACH APPLICATION

	A	B
<b>Crop 1 Code, Stage:</b>	GLXMA	GLXMA
<b>Stage Scale:</b>	preemerge	V2
<b>Height, Unit:</b>		6      IN

### WEED STAGE AT EACH APPLICATION

	A	B
<b>Weed 1 Code, Stage:</b>	SIYAN	SIYAN
<b>Stage Scale:</b>	preemerge	0-6"
<b>Density, Unit:</b>		0-18 PLOT

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## APPLICATION EQUIPMENT

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

Trt No	Treatment Application Comment
2	PRE treatment - spray solution started to run out on plot 409
6	PRE treatment - spray solution started to run out on plots 402 & 411

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Trial ID: 04-PPAC-SOY-BURC  
 Location: PPAC

Study Dir.:  
 Investigator: Dr. Bill Johnson

				SIYAN	GLXMA	SIYAN	GLXMA	SIYAN	
				plants	biomas	biomas	biomas	biomas	
				counts	injury	control	injury	control	
				#	% injury	%control	% injury	%control	
				23/Jun/2004	12/Jul/2004	12/Jul/2004	27/Jul/2004	27/Jul/2004	
				VC	V5	V5	R2, 24"	R2, 24"	
				3-4"	10-14"	10-14"	6-7 node	6-7 node	
				1-6"		24"		72"	
				PLOT		1-2 M2		2-3 M2	
				Earl, Reece, & Vince	Bill & Vince	Bill & Vince	Reece & Vince	Reece & Vince	
				16 DA-A	14 DA-B	14 DA-B	29 DA-B	29 DA-B	
				0	0	0	0	0	
Trt	Treatment	Rate	Unit	Grow					
No.	Name			Stg	1	2	3	4	5
1	Untreated				6 a	0 c	0 d	0 c	0 c
2	Dual II Magnum	1.9	lb ai/a	pre	2 a	0 c	51 bc	0 c	25 bc
3	Dual II Magnum Classic	1.9 0.0078	lb ai/a lb ai/a	pre post	6 a	3 c	98 a	5 c	94 a
	Crop Oil Conc			post					
	Roundup Weathermax	0.77	lb ae/a	post					
	AMS			post					
4	Dual II Magnum Flexstar	1.9 0.305	lb ai/a lb ai/a	pre post	3 a	30 a	100 a	20 ab	99 a
	MSO			post					
	Roundup Weathermax	0.77	lb ae/a	post					
	AMS			post					
5	Dual II Magnum Roundup Weathermax	1.9 0.77	lb ai/a lb ae/a	pre post	1 a	3 c	99 a	4 c	89 a
	AMS			post					
6	Sencor 75DF	0.75	lb ai/a	pre	4 a	1 c	69 ab	0 c	35 bc
7	Sencor 75DF Classic	0.75 0.0078	lb ai/a lb ai/a	pre post	4 a	12 bc	97 a	1 c	80 a
	Crop Oil Conc			post					
	Roundup Weathermax	0.77	lb ae/a	post					
	AMS			post					
8	Sencor 75DF Flexstar	0.75 0.305	lb ai/a lb ai/a	pre post	6 a	28 a	100 a	23 a	88 a
	MSO			post					
	Roundup Weathermax	0.77	lb ae/a	post					
	AMS			post					
9	Sencor 75DF Roundup Weathermax	0.75 0.77	lb ai/a lb ae/a	pre post	3 a	0 c	98 a	1 c	86 a
	AMS			post					
10	Pursuit	0.0625	lb ae/a	pre	3 a	1 c	74 ab	3 c	48 b
11	Pursuit Classic	0.0625 0.0078	lb ae/a lb ai/a	pre post	4 a	19 ab	100 a	8 bc	90 a
	Crop Oil Conc			post					
	Roundup Weathermax	0.77	lb ae/a	post					
	AMS			post					
12	Pursuit Flexstar	0.0625 0.305	lb ae/a lb ai/a	pre post	7 a	28 a	99 a	13 abc	84 a
	MSO			post					
	Roundup Weathermax	0.77	lb ae/a	post					
	AMS			post					
13	Pursuit Roundup Weathermax	0.0625 0.77	lb ae/a lb ae/a	pre post	6 a	3 c	98 a	0 c	95 a
	AMS			post					
14	Canopy XL Classic	0.0264	lb ai/a	pre	10 a	0 c	41 c	0 c	32 bc
	Authority	0.132	lb ai/a	pre					

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Weed Code		SIYAN		SIYAN		SIYAN		
Crop Code			GLXMA		GLXMA			
Part Rated		plants	biomas	biomas	biomas	biomas		
Rating Data Type		counts	injury	control	injury	control		
Rating Unit		#	% injury	%control	% injury	%control		
Rating Date		23/Jun/2004	12/Jul/2004	12/Jul/2004	27/Jul/2004	27/Jul/2004		
Crop Stage		VC	V5	V5	R2, 24"	R2, 24"		
Crop Stage Scale		3-4"	10-14"	10-14"	6-7 node	6-7 node		
Weed Stage		1-6"		24"		72"		
Weed Density, Unit		PLOT		1-2 M2		2-3 M2		
Assessed By		Earl, Reece, & Vince	Bill & Vince	Bill & Vince	Reece & Vince	Reece & Vince		
Trt-Eval Interval		16 DA-A	14 DA-B	14 DA-B	29 DA-B	29 DA-B		
# Subsamples, Dec.		0	0	0	0	0		
Trt Treatment	Rate	Grow						
No. Name	Rate	Unit	Stg					
15 Untreated				1	2	3	4	5
				6 a	0 c	0 d	0 c	0 c
LSD (P=.05)				5.4	10.2	22.5	10.6	25.8
Standard Deviation				3.8	7.1	15.8	7.4	18.1
CV				78.65	84.91	21.07	145.84	28.75
Grand Mean				4.8	8.42	74.8	5.08	62.88
Bartlett's X2				22.036	19.746	45.905	19.069	25.141
P(Bartlett's X2)				0.078	0.02*	0.001*	0.014*	0.014*
Replicate F				1.893	0.160	1.240	0.938	1.006
Replicate Prob(F)				0.1455	0.9229	0.3073	0.4309	0.4000
Treatment F				1.384	10.436	20.709	4.057	15.626
Treatment Prob(F)				0.2036	0.0001	0.0001	0.0002	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				SIYAN
Crop Code				
Part Rated				biomas
Rating Data Type				control
Rating Unit				%control
Rating Date				19/Aug/2004
Crop Stage				
Crop Stage Scale				
Weed Stage				6-10'
Weed Density, Unit				2-3 M2
Assessed By				Bill & Reece
Trt-Eval Interval				52 DA-B
# Subsamples, Dec.				0
Trt No.	Treatment Name	Rate	Unit	Grow Stg
				6
1	Untreated			0 d
2	Dual II Magnum	1.9	lb ai/a	pre 31 cd
3	Dual II Magnum	1.9	lb ai/a	pre 90 a
	Classic	0.0078	lb ai/a	post
	Crop Oil Conc			post
	Roundup Weathermax	0.77	lb ae/a	post
	AMS			post
4	Dual II Magnum	1.9	lb ai/a	pre 90 a
	Flexstar	0.305	lb ai/a	post
	MSO			post
	Roundup Weathermax	0.77	lb ae/a	post
	AMS			post
5	Dual II Magnum	1.9	lb ai/a	pre 74 ab
	Roundup Weathermax	0.77	lb ae/a	post
	AMS			post
6	Sencor 75DF	0.75	lb ai/a	pre 25 cd
7	Sencor 75DF	0.75	lb ai/a	pre 66 ab
	Classic	0.0078	lb ai/a	post
	Crop Oil Conc			post
	Roundup Weathermax	0.77	lb ae/a	post
	AMS			post
8	Sencor 75DF	0.75	lb ai/a	pre 66 ab
	Flexstar	0.305	lb ai/a	post
	MSO			post
	Roundup Weathermax	0.77	lb ae/a	post
	AMS			post
9	Sencor 75DF	0.75	lb ai/a	pre 70 ab
	Roundup Weathermax	0.77	lb ae/a	post
	AMS			post
10	Pursuit	0.0625	lb ae/a	pre 43 bc
11	Pursuit	0.0625	lb ae/a	pre 75 ab
	Classic	0.0078	lb ai/a	post
	Crop Oil Conc			post
	Roundup Weathermax	0.77	lb ae/a	post
	AMS			post
12	Pursuit	0.0625	lb ae/a	pre 70 ab
	Flexstar	0.305	lb ai/a	post
	MSO			post
	Roundup Weathermax	0.77	lb ae/a	post
	AMS			post
13	Pursuit	0.0625	lb ae/a	pre 90 a
	Roundup Weathermax	0.77	lb ae/a	post
	AMS			post
14	Canopy XL			pre 24 cd
	Classic	0.0264	lb ai/a	pre
	Authority	0.132	lb ai/a	pre

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Weed Code	SIYAN		
Crop Code			
Part Rated	biomas		
Rating Data Type	control		
Rating Unit	%control		
Rating Date	19/Aug/2004		
Crop Stage			
Crop Stage Scale			
Weed Stage	6-10'		
Weed Density, Unit	2-3 M2		
Assessed By	Bill & Reece		
Trt-Eval Interval	52 DA-B		
# Subsamples, Dec.	0		
Trt Treatment	Rate	Grow	
No. Name	Rate	Unit	Stg
15 Untreated			6
			0 d
LSD (P=.05)	26.1		
Standard Deviation	18.3		
CV	33.64		
Grand Mean	54.28		
Bartlett's X2	24.059		
P(Bartlett's X2)	0.02*		
Replicate F	0.420		
Replicate Prob(F)	0.7398		
Treatment F	11.828		
Treatment Prob(F)	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.