

University of Georgia

RR SOYBEAN TOLERANCE TO TOUGH 5EC	
Trial ID: SB-06-19	Study Dir.: DENNIS LONG
Location: PONDER FARM	Investigator: Eric P. Prostko

Reps: 4 Plots: 6 by 25 feet
 Appl. Amount: 15 GAL/AC Mix Size: 1.5 L (total for 4 plots; minimum=0.782 L)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Grow Stg	Appl Code	Amt Product to Measure	Diluent	Rep 1	Rep 2	Rep 3	Rep 4
1	ROUNDUP P-MAX	5.5	SL	32.0 oz/a	POST	A	25.0 mL/mx	1475 mL	101	203	306	402
2	ROUNDUP P-MAX TOUGH AGRIDEX	5.5	SL EC	32.0 oz/a 8.0 oz/a 1.0 % v/v	POST POST POST	A A A	25.0 mL/mx 6.249 mL/mx 15.0 mL/mx	1453.8 mL	102	204	305	407
3	ROUNDUP P-MAX TOUGH AGRIDEX	5.5	SL EC	32.0 oz/a 12.0 oz/a 1.0 % v/v	POST POST POST	A A A	25.0 mL/mx 9.374 mL/mx 15.0 mL/mx	1450.6 mL	103	201	304	406
4	ROUNDUP P-MAX TOUGH AGRIDEX	5.5	SL EC	32.0 oz/a 16.0 oz/a 1.0 % v/v	POST POST POST	A A A	25.0 mL/mx 12.5 mL/mx 15.0 mL/mx	1447.5 mL	104	202	303	405
5	ROUNDUP P-MAX COBRA AGRIDEX	5.5	SL EC	32.0 oz/a 12.5 oz/a 1.0 % v/v	POST POST POST	A A A	25.0 mL/mx 9.765 mL/mx 15.0 mL/mx	1450.2 mL	105	207	301	404
6	ROUNDUP P-MAX REFLEX AGRIDEX	5.5	SL SL	32.0 oz/a 24.0 oz/a 1.0 % v/v	POST POST POST	A A A	25.0 mL/mx 18.75 mL/mx 15.0 mL/mx	1441.3 mL	106	205	307	403
7	NO POST HERBICIDES							-	107	206	302	401

Sort Order: Treatment

Trial Comments
<p>MAINTAINED WEED-FREE</p> <p>VALOR (2.5 OZ/A) + PROWL H2O @ 32 OZ/A - MAY 15 SELECT MAX @ 16 OZ/A + NIS @ 0.25% V/V - JUNE 4 EQUUS @ 4 OZ/A + DIMILIN @ 2 OZ/A + bORON @ 32 OZ/A - JUNE 24 CULTIVATED 2X</p> <p>MISSING HEIGHT DATA IN PLOTS DUE TO DEER DAMAGE.</p> <p><u>SUMMARY:</u></p> <p>1) ADDITIONS OF TOUGH, COBRA, OR REFLEX, TO ROUNDUP P-MAX INCREASED SOYBEAN INJURY. GENERALLY, TOUGH WAS LESS INJURIOUS THAN EITHER COBRA OR REFLEX.</p> <p>2) SOYBEAN PLANT HEIGHTS WERE REDUCED WHEN TOUGH OR COBRA WERE TANK-MIXED WITH ROUNDUP P-MAX.</p> <p>3) LATER RATINGS INDICATED THAT SOYBEAN RECOVERED FROM THIS EARLY SEASON INJURY.</p> <p>4) SOYBEAN YIELD DATA WERE NOT COLLECTED DUE TO GREEN STEM AND POOR POD SET.</p>

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Trial ID: SB-06-19 Study Dir.: DENNIS LONG
 Location: PONDER FARM Investigator: Eric P. Prostko

CROP STAGE AT EACH APPLICATION							
		A	B	C	D	E	F
Crop 1	Stage: GLYMA	_____	_____	_____	_____	_____	_____
	Stage Scale:	V3: 6"	_____	_____	_____	_____	_____
	Height, Unit:	_____	_____	_____	_____	_____	_____

WEED STAGE AT EACH APPLICATION							
		A	B	C	D	E	F
Weed 1	Stage: _____	_____	_____	_____	_____	_____	_____
	Stage Scale:	_____	_____	_____	_____	_____	_____
	Density, Unit:	_____	_____	_____	_____	_____	_____

		APPLICATION EQUIPMENT					
		A	B	C	D	E	F
Appl. Equipment:	BACKPACK	_____	_____	_____	_____	_____	_____
Operating Pressure:	40	_____	_____	_____	_____	_____	_____
Nozzle Type:	AIXR	_____	_____	_____	_____	_____	_____
Nozzle Size:	11002	_____	_____	_____	_____	_____	_____
Nozzle Spacing, Unit:	20	IN	_____	_____	_____	_____	_____
Nozzles/Row:	_____	_____	_____	_____	_____	_____	_____
Band Width, Unit:	_____	_____	_____	_____	_____	_____	_____
Boom Length, Unit:	60	IN	_____	_____	_____	_____	_____
Boom Height, Unit:	20	IN	_____	_____	_____	_____	_____
Ground Speed, Unit:	3.5	MPH	_____	_____	_____	_____	_____
Incorporation Equip.:	_____	_____	_____	_____	_____	_____	_____
Hours to Incorp.:	_____	_____	_____	_____	_____	_____	_____
Incorp. Depth, Unit:	_____	_____	_____	_____	_____	_____	_____
Carrier:	WATER	_____	_____	_____	_____	_____	_____
Spray Volume, Unit:	15	GPA	_____	_____	_____	_____	_____
Spray pH:	_____	_____	_____	_____	_____	_____	_____
Propellant:	CO2	_____	_____	_____	_____	_____	_____
Tank Mix (Y/N):	_____	_____	_____	_____	_____	_____	_____

Trt No	Treatment Application Comment
_____	_____

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RR SOYBEAN TOLERANCE TO TOUGH 5EC														
Trial ID: SB-06-19		Study Dir.: DENNIS LONG												
Location: PONDER FARM		Investigator: Eric P. Prostko												
Crop Code	Part Rated	Rating Data Type	Rating Unit	Rating Date	Trt-Eval Interval	PRM Data Type	# Subsamples, Dec.	Glyma Leaf - Burn Percent Jun-10-19 6 DA-A	Glyma Height1 Inches Jun-21-19 17 DA-A	Glyma Height2 Inches Jun-21-19 17 DA-A	Glyma Height2 Inches Jun-21-19 17 DA-A	Glyma Height4 Inches Jun-21-19 17 DA-A	Glyma Height5 Inches Jun-21-19 17 DA-A	GLYMA AVG - HEIGHT INCHES Jun-21-19 17 DA-A T1 - 1
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	1	2	3	4	5	6	7
1	ROUNDUP P-MAX	5.5	SL	32.0	oz/a	POST	A	0.0 d	13.3 a	13.5 a	13.8 a	13.0 b	13.3 a	13.4 ab
2	ROUNDUP P-MAX TOUGH AGRIDEX	5.5	SL 5 EC	32.0 8.0	oz/a oz/a	POST POST	A A	16.3 c	11.0 bc	11.0 cd	12.0 b	11.3 cd	11.3 c	11.3 de
3	ROUNDUP P-MAX TOUGH AGRIDEX	5.5	SL 5 EC	32.0 12.0	oz/a oz/a	POST POST	A A	16.3 c	10.0 c	10.7 d	11.3 b	11.0 d	10.0 d	10.6 e
4	ROUNDUP P-MAX TOUGH AGRIDEX	5.5	SL 5 EC	32.0 16.0	oz/a oz/a	POST POST	A A	17.5 c	10.7 bc	11.3 cd	11.7 b	11.7 cd	11.0 cd	11.3 de
5	ROUNDUP P-MAX COBRA AGRIDEX	5.5	SL 2 EC	32.0 12.5	oz/a oz/a	POST POST	A A	27.5 a	12.3 ab	12.0 bc	11.5 b	12.3 bc	12.0 bc	12.0 cd
6	ROUNDUP P-MAX REFLEX AGRIDEX	5.5	SL 2 SL	32.0 24.0	oz/a oz/a	POST POST	A A	23.8 b	12.0 ab	13.0 ab	12.3 b	12.3 bc	12.8 ab	12.5 bc
7	NO POST HERBICIDES							0.0 d	13.5 a	13.3 ab	14.5 a	14.8 a	13.5 a	13.9 a
LSD P=.10								3.04	1.74	1.29	1.20	1.20	1.22	0.92
Standard Deviation								2.48	1.41	1.04	0.97	0.97	0.99	0.74
CV								17.15	11.9	8.56	7.77	7.85	8.25	6.13
Grand Mean								14.46	11.81	12.11	12.43	12.32	11.98	12.13
Bartlett's X2								1.894	3.768	2.889	6.719	1.907	1.622	10.143
P(Bartlett's X2)								0.755	0.708	0.717	0.348	0.928	0.805	0.119

Means followed by same letter or symbol do not significantly differ (P=.10, LSD).
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
 Missing data estimates are included in columns: Average=2,3,4,5,6,7,8

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Trial ID: SB-06-19		Study Dir.: DENNIS LONG					
Location: PONDER FARM		Investigator: Eric P. Prostko					
Crop Code Part Rated Rating Data Type Rating Unit Rating Date Trt-Eval Interval PRM Data Type # Subsamples, Dec.						Glyma Stunting Percent Jul-22-19 48 DA-A	
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate Unit	Grow Stg	Appl Code	
						8	
1	ROUNDUP P-MAX	5.5	SL	32.0 oz/a	POST	A	1.3 -
2	ROUNDUP P-MAX TOUGH AGRIDEX	5.5	SL 5 EC	32.0 oz/a 8.0 oz/a 1.0 % v/v	POST POST POST	A A A	2.5 -
3	ROUNDUP P-MAX TOUGH AGRIDEX	5.5	SL 5 EC	32.0 oz/a 12.0 oz/a 1.0 % v/v	POST POST POST	A A A	2.5 -
4	ROUNDUP P-MAX TOUGH AGRIDEX	5.5	SL 5 EC	32.0 oz/a 16.0 oz/a 1.0 % v/v	POST POST POST	A A A	0.0 -
5	ROUNDUP P-MAX COBRA AGRIDEX	5.5	SL 2 EC	32.0 oz/a 12.5 oz/a 1.0 % v/v	POST POST POST	A A A	1.3 -
6	ROUNDUP P-MAX REFLEX AGRIDEX	5.5	SL 2 SL	32.0 oz/a 24.0 oz/a 1.0 % v/v	POST POST POST	A A A	1.3 -
7	NO POST HERBICIDES						0.0 -
LSD P=.10						2.75	
Standard Deviation						2.18	
CV						174.57	
Grand Mean						1.25	
Bartlett's X2						0.396	
P(Bartlett's X2)						0.983	

Means followed by same letter or symbol do not significantly differ (P=.10, LSD).
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
 Missing data estimates are included in columns: Average=2,3,4,5,6,7,8

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RR SOYBEAN TOLERANCE TO TOUGH 5EC						
Trial ID: SB-06-19		Study Dir.: DENNIS LONG				
Location: PONDER FARM		Investigator: Eric P. Prostko				
Randomized Complete Block (RCB) AOV For Glyma Leaf Burn Percent Jun-10-19 6 DA-A (Data Column 1)						
Source	DF	Sum of Squares	Mean Square	F	Prob(F)	
Total	27	2916.964286				
Replicate	3	45.535714	15.178571	2.468	0.0952	
Treatment	6	2760.714286	460.119048	74.806	0.0001	
Error	18	110.714286	6.150794			
Randomized Complete Block (RCB) AOV For Glyma Height1 Inches Jun-21-19 17 DA-A (Data Column 2)						
Source	DF	Sum of Squares	Mean Square	F	Prob(F)	
Total	24	74.761905				
Replicate	3	3.523810	1.174603	0.594	0.6283	
Treatment	6	41.595238	6.932540	3.508	0.0226	
Error	15	29.642857	1.976190			
Randomized Complete Block (RCB) AOV For Glyma Height2 Inches Jun-21-19 17 DA-A (Data Column 3)						
Source	DF	Sum of Squares	Mean Square	F	Prob(F)	
Total	24	48.900794				
Replicate	3	0.964286	0.321429	0.299	0.8255	
Treatment	6	31.817460	5.302910	4.935	0.0056	
Error	15	16.119048	1.074603			
Randomized Complete Block (RCB) AOV For Glyma Height2 Inches Jun-21-19 17 DA-A (Data Column 4)						
Source	DF	Sum of Squares	Mean Square	F	Prob(F)	
Total	24	52.412698				
Replicate	3	2.857143	0.952381	1.022	0.4106	
Treatment	6	35.579365	5.929894	6.364	0.0017	
Error	15	13.976190	0.931746			
Randomized Complete Block (RCB) AOV For Glyma Height4 Inches Jun-21-19 17 DA-A (Data Column 5)						
Source	DF	Sum of Squares	Mean Square	F	Prob(F)	
Total	24	53.662698				
Replicate	3	1.535714	0.511905	0.547	0.6580	
Treatment	6	38.079365	6.346561	6.777	0.0013	
Error	15	14.047619	0.936508			
Randomized Complete Block (RCB) AOV For Glyma Height5 Inches Jun-21-19 17 DA-A (Data Column 6)						
Source	DF	Sum of Squares	Mean Square	F	Prob(F)	
Total	24	58.428571				
Replicate	3	4.523810	1.507937	1.545	0.2441	
Treatment	6	39.261905	6.543651	6.703	0.0013	
Error	15	14.642857	0.976190			
Randomized Complete Block (RCB) AOV For GLYMA AVG HEIGHT INCHES Jun-21-19 17 DA-A T1 1 (Data Column 7)						
Source	DF	Sum of Squares	Mean Square	F	Prob(F)	
Total	24	43.759365				
Replicate	3	1.628571	0.542857	0.983	0.4271	
Treatment	6	33.846032	5.641005	10.213	0.0001	
Error	15	8.284762	0.552317			
Randomized Complete Block (RCB) AOV For Glyma Stunting Percent Jul-22-19 48 DA-A (Data Column 8)						
Source	DF	Sum of Squares	Mean Square	F	Prob(F)	
Total	21	106.250000				
Replicate	3	24.107143	8.035714	1.688	0.2224	
Treatment	6	25.000000	4.166667	0.875	0.5407	
Error	12	57.142857	4.761905			
Part Rated						
Leaf = LEAF / FOLIAGE						
PRM Data Type						
T1 = ([2]+[3]+[4]+[5]+[6])/5						

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Trial ID: SB-06-19		Study Dir.: DENNIS LONG											
Location: PONDER FARM		Investigator: Eric P. Prostko											
Crop Code Part Rated Rating Data Type Rating Unit Rating Date Trt-Eval Interval PRM Data Type # Subsamples, Dec.													
	Glyma Leaf - Burn Percent Jun-10-19 6 DA-A	Glyma Height1 Inches Jun-21-19 17 DA-A	Glyma Height2 Inches Jun-21-19 17 DA-A	Glyma Height2 Inches Jun-21-19 17 DA-A	Glyma Height4 Inches Jun-21-19 17 DA-A	Glyma Height5 Inches Jun-21-19 17 DA-A							
Trt Treatment No. Name	Form Conc	Form Type	Rate Rate	Grow Unit	Appl Stg	Code	Plot	1	2	3	4	5	6
1 ROUNDUP P-MAX	5.5	SL	32.0 oz/a	POST	A		101	0.0	16.0	15.0	15.0	14.0	15.0
							203	0.0	11.0	13.0	14.0	13.0	12.0
							306	0.0	13.0	13.0	13.0	12.0	13.0
							402	0.0	13.0	13.0	13.0	13.0	13.0
							Mean =	0.0	13.3	13.5	13.8	13.0	13.3
2 ROUNDUP P-MAX TOUGH AGRIDEX	5.5	SL	32.0 oz/a	POST	A		102	15.0	12.0	11.0	13.0	11.0	11.0
	5	EC	8.0 oz/a	POST	A		204	15.0	11.0	11.0	11.0	11.0	12.0
			1.0 % v/v	POST	A		305	20.0	10.0	11.0	12.0	12.0	11.0
							407	15.0	.	.	.	.	.
							Mean =	16.3	11.0	11.0	12.0	11.3	11.3
3 ROUNDUP P-MAX TOUGH AGRIDEX	5.5	SL	32.0 oz/a	POST	A		103	15.0	11.0	11.0	12.0	10.0	10.0
	5	EC	12.0 oz/a	POST	A		201	15.0	9.0	11.0	11.0	12.0	10.0
			1.0 % v/v	POST	A		304	20.0	10.0	10.0	11.0	11.0	10.0
							406	15.0	.	.	.	.	.
							Mean =	16.3	10.0	10.7	11.3	11.0	10.0
4 ROUNDUP P-MAX TOUGH AGRIDEX	5.5	SL	32.0 oz/a	POST	A		104	15.0	10.0	11.0	12.0	11.0	11.0
	5	EC	16.0 oz/a	POST	A		202	20.0	12.0	12.0	12.0	12.0	11.0
			1.0 % v/v	POST	A		303	20.0	10.0	11.0	11.0	12.0	11.0
							405	15.0	.	.	.	.	.
							Mean =	17.5	10.7	11.3	11.7	11.7	11.0
5 ROUNDUP P-MAX COBRA AGRIDEX	5.5	SL	32.0 oz/a	POST	A		105	25.0	12.0	12.0	11.0	13.0	13.0
	2	EC	12.5 oz/a	POST	A		207	30.0	13.0	12.0	11.0	13.0	13.0
			1.0 % v/v	POST	A		301	25.0	13.0	13.0	12.0	12.0	10.0
							404	30.0	11.0	11.0	12.0	11.0	12.0
							Mean =	27.5	12.3	12.0	11.5	12.3	12.0
6 ROUNDUP P-MAX REFLEX AGRIDEX	5.5	SL	32.0 oz/a	POST	A		106	20.0	11.0	11.0	12.0	13.0	13.0
	2	SL	24.0 oz/a	POST	A		205	20.0	13.0	14.0	12.0	13.0	14.0
			1.0 % v/v	POST	A		307	30.0	12.0	13.0	13.0	11.0	11.0
							403	25.0	12.0	14.0	12.0	12.0	13.0
							Mean =	23.8	12.0	13.0	12.3	12.3	12.8
7 NO POST HERBICIDES							107	0.0	14.0	13.0	15.0	13.0	13.0
							206	0.0	14.0	13.0	15.0	15.0	13.0
							302	0.0	11.0	12.0	12.0	15.0	13.0
							401	0.0	15.0	15.0	16.0	16.0	15.0
							Mean =	0.0	13.5	13.3	14.5	14.8	13.5

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Trial ID: SB-06-19		Study Dir.: DENNIS LONG								
Location: PONDER FARM		Investigator: Eric P. Prostko								
Crop Code						GLYMA	Glyma			
Part Rated						AVG -				
Rating Data Type						HEIGHT	Stunting			
Rating Unit						INCHES	Percent			
Rating Date						Jun-21-19	Jul-22-19			
Trt-Eval Interval						17 DA-A	48 DA-A			
PRM Data Type						T1				
# Subsamples, Dec.						- 1				
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	Plot		
								7	8	
1	ROUNDUP P-MAX	5.5 SL		32.0 oz/a		POST A		101	15.0	0.0
								203	12.6	5.0
								306	12.8	0.0
								402	13.0	0.0
								Mean =	13.4	1.3
2	ROUNDUP P-MAX	5.5 SL		32.0 oz/a		POST A		102	11.6	.
	TOUGH	5 EC		8.0 oz/a		POST A		204	11.2	5.0
	AGRIDEX			1.0 % v/v		POST A		305	11.2	0.0
								407	.	.
								Mean =	11.3	2.5
3	ROUNDUP P-MAX	5.5 SL		32.0 oz/a		POST A		103	10.8	.
	TOUGH	5 EC		12.0 oz/a		POST A		201	10.6	5.0
	AGRIDEX			1.0 % v/v		POST A		304	10.4	0.0
								406	.	.
								Mean =	10.6	2.5
4	ROUNDUP P-MAX	5.5 SL		32.0 oz/a		POST A		104	11.0	.
	TOUGH	5 EC		16.0 oz/a		POST A		202	11.8	0.0
	AGRIDEX			1.0 % v/v		POST A		303	11.0	0.0
								405	.	.
								Mean =	11.3	0.0
5	ROUNDUP P-MAX	5.5 SL		32.0 oz/a		POST A		105	12.2	0.0
	COBRA	2 EC		12.5 oz/a		POST A		207	12.4	5.0
	AGRIDEX			1.0 % v/v		POST A		301	12.0	0.0
								404	11.4	0.0
								Mean =	12.0	1.3
6	ROUNDUP P-MAX	5.5 SL		32.0 oz/a		POST A		106	12.0	0.0
	REFLEX	2 SL		24.0 oz/a		POST A		205	13.2	0.0
	AGRIDEX			1.0 % v/v		POST A		307	12.0	5.0
								403	12.6	0.0
								Mean =	12.5	1.3
7	NO POST HERBICIDES							107	13.6	0.0
								206	14.0	0.0
								302	12.6	0.0
								401	15.4	0.0
								Mean =	13.9	0.0

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Location: PONDER FARM Investigator: Eric P. Prostko

Part Rated

Leaf = LEAF / FOLIAGE

PRM Data Type

T1 = ([2]+[3]+[4]+[5]+[6])/5