

Effect of Adjuvant on Roundup Ready Corn Control from Clethodim in Roundup Ready Soybean - Touchdown Total.

Project Code: 06-HRC-WU12-SWN120 Location: Horticulture Research Center

Investigator: Bryan Young

Investigator: Bryan Young, Associate Professor, Southern Illinois University

City State Zip Country: Carbondale IL 62901 USA
 Trial Status: Final Updated: 8-4-06

Objective:

Evaluate the effect of adjuvants on Roundup Ready Corn control from clethodim in Roundup Ready soybean.

Weed Code	Common Name	Scientific Name
1. ZEAMX	corn, volunteer	Zea mays L.
2. AMATA	waterhemp, common	Amaranthus rudis Sauer
3. IPOSS	morningglory, species	Ipomoea sp.

Crop 1: GLXMA soybean Variety: P94M80 RR
 Planting Method: Seeded Planting Date: 6-5-06
 Rate: 75 lb/A Depth: 1.0 IN
 Row Spacing: 30 IN

Plot Width, Unit: 10 FT Plot Length, Unit: 30 FT Reps: 3
 Tillage Type: Reduced-Till Study Design: Randomized complete block
 Previous Crop, Year: GLXMA, 2005

Texture: Silt loam % OM: 2.8 pH: 6.7 CEC: 10
 Fert. Level: P1: 92 LB/A, K: 334 LB/A

APPLICATION DESCRIPTION

A
 Application Date: 6-27-06
 Time of Day: 7:30
 Application Method: Spray
 Application Timing: 12"CN
 Applic. Placement: BROFOL
 Air Temp., Unit: 73 F
 % Relative Humidity: 77
 Wind Velocity, Unit: 2 MPH
 Dew Presence (Y/N): Y
 Soil Moisture: NORMAL
 % Cloud Cover: 0

CROP STAGE AT EACH APPLICATION

A
 Crop 1 Code, Stage: GLXMA V3
 Height, Unit: 7 IN

WEED STAGE AT EACH APPLICATION

A
Weed 1 Code: ZEAMX
 Stage(leaves): 5
 Height(inches): 10-12
 Density: High
Weed 2 Code: AMATA
 Stage(leaves): 5-8
 Height(inches): 4-8
 Density: High
Weed 3 Code: IPOSS
 Stage(leaves): 5-8
 Height(inches): 5-8
 Density: Low

APPLICATION EQUIPMENT

A
 Appl. Equipment: CO2 sprayer
 Operating Pressure: 40 PSI
 Nozzle Type: Flat fan
 Nozzle Size: 8002
 Boom Length, Unit: 7.5 FT
 Spray Volume, Unit: 15 GPA

NOTES:

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Weed Code						GLXMA	GLXMA	GLXMA	GLXMA	ZEAMX	ZEAMX	ZEAMX
Crop Code						Injury	Injury	Injury	Injury	Control	Control	Control
Rating Data Type						Percent	Percent	Percent	Percent	Percent	Percent	Percent
Rating Unit						6-30-06	7-4-06	7-11-06	7-25-06	7-4-06	7-11-06	7-25-06
Rating Date						3 DA-A	7 DA-A	14 DA-A	28 DA-A	7 DA-A	14 DA-A	28 DA-A
Trt-Eval Interval												
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code			
1	TOUCHDOWN TOTAL	4.17	SC	0.75	lb ae/a	23	fl oz/a	12"	CN A	0	0	0
1	ARROW	2	EC	0.094	lb ai/a	6	fl oz/a	12"	CN A	80	91	73
1	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	12"	CN A			
2	TOUCHDOWN TOTAL	4.17	SC	0.75	lb ae/a	23	fl oz/a	12"	CN A	0	0	0
2	ARROW	2	EC	0.094	lb ai/a	6	fl oz/a	12"	CN A	83	91	77
2	CHEM-SURF 80	100	LIQ	0.25	% v/v	2	pt/100 gal	12"	CN A			
2	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	12"	CN A			
3	TOUCHDOWN TOTAL	4.17	SC	0.75	lb ae/a	23	fl oz/a	12"	CN A	0	0	0
3	ARROW	2	EC	0.094	lb ai/a	6	fl oz/a	12"	CN A	82	91	73
3	TRANSLATE	100	LIQ	0.125	% v/v	1	pt/100 gal	12"	CN A			
3	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	12"	CN A			
4	TOUCHDOWN TOTAL	4.17	SC	0.75	lb ae/a	23	fl oz/a	12"	CN A	0	0	0
4	ARROW	2	EC	0.094	lb ai/a	6	fl oz/a	12"	CN A	89	93	88
4	TRANSLATE	100	LIQ	0.25	% v/v	2	pt/100 gal	12"	CN A			
4	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	12"	CN A			
5	TOUCHDOWN TOTAL	4.17	SC	0.75	lb ae/a	23	fl oz/a	12"	CN A	0	0	0
5	ARROW	2	EC	0.094	lb ai/a	6	fl oz/a	12"	CN A	90	97	98
5	BETWEEN	100	LIQ	0.5	% v/v	4	pt/100 gal	12"	CN A			
5	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	12"	CN A			
6	TOUCHDOWN TOTAL	4.17	SC	0.75	lb ae/a	23	fl oz/a	12"	CN A	0	0	0
6	ARROW	2	EC	0.094	lb ai/a	6	fl oz/a	12"	CN A	92	95	99
6	PREMIUM COC	100	LIQ	1	% v/v	8	pt/100 gal	12"	CN A			
6	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	12"	CN A			
7	TOUCHDOWN TOTAL	4.17	SC	0.75	lb ae/a	23	fl oz/a	12"	CN A	0	0	0
7	ARROW	2	EC	0.094	lb ai/a	6	fl oz/a	12"	CN A	80	89	74
7	PAYOFF PLUS	100	DRY	1.5	% w/w	12.5	lb/100 gal	12"	CN A			
8	NONTREATED									0	0	0
LSD (P=.05)										0.0	0.0	0.0
Replicate F										0.000	0.000	0.000
Replicate Prob(F)										1.0000	1.0000	1.0000
Treatment F										0.000	0.000	0.000
Treatment Prob(F)										1.0000	1.0000	1.0000
										0.0001	0.0001	0.0001
										0.551	0.275	0.574
										0.5886	0.7636	0.5762
										749.507	1629.846	76.933
										0.0001	0.0001	0.0001

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Weed Code						AMATA	AMATA	AMATA	IPOSS	IPOSS	IPOSS				
Crop Code						Control	Control	Control	Control	Control	Control				
Rating Data Type						Percent	Percent	Percent	Percent	Percent	Percent				
Rating Unit						7-4-06	7-11-06	7-25-06	7-4-06	7-11-06	7-25-06				
Rating Date						7 DA-A	14 DA-A	28 DA-A	7 DA-A	14 DA-A	28 DA-A				
Trt-Eval Interval															
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code						
1	TOUCHDOWN TOTAL	4.17	SC	0.75	lb ae/a	23	fl oz/a	12"CN	A	97	95	90			
1	ARROW	2	EC	0.094	lb ai/a	6	fl oz/a	12"CN	A						
1	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	12"CN	A						
2	TOUCHDOWN TOTAL	4.17	SC	0.75	lb ae/a	23	fl oz/a	12"CN	A	99	95	93			
2	ARROW	2	EC	0.094	lb ai/a	6	fl oz/a	12"CN	A						
2	CHEM-SURF 80	100	LIQ	0.25	% v/v	2	pt/100 gal	12"CN	A						
2	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	12"CN	A						
3	TOUCHDOWN TOTAL	4.17	SC	0.75	lb ae/a	23	fl oz/a	12"CN	A	98	96	89			
3	ARROW	2	EC	0.094	lb ai/a	6	fl oz/a	12"CN	A						
3	TRANSLATE	100	LIQ	0.125	% v/v	1	pt/100 gal	12"CN	A						
3	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	12"CN	A						
4	TOUCHDOWN TOTAL	4.17	SC	0.75	lb ae/a	23	fl oz/a	12"CN	A	97	95	92			
4	ARROW	2	EC	0.094	lb ai/a	6	fl oz/a	12"CN	A						
4	TRANSLATE	100	LIQ	0.25	% v/v	2	pt/100 gal	12"CN	A						
4	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	12"CN	A						
5	TOUCHDOWN TOTAL	4.17	SC	0.75	lb ae/a	23	fl oz/a	12"CN	A	95	95	88			
5	ARROW	2	EC	0.094	lb ai/a	6	fl oz/a	12"CN	A						
5	BETWEEN	100	LIQ	0.5	% v/v	4	pt/100 gal	12"CN	A						
5	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	12"CN	A						
6	TOUCHDOWN TOTAL	4.17	SC	0.75	lb ae/a	23	fl oz/a	12"CN	A	98	95	90			
6	ARROW	2	EC	0.094	lb ai/a	6	fl oz/a	12"CN	A						
6	PREMIUM COC	100	LIQ	1	% v/v	8	pt/100 gal	12"CN	A						
6	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	12"CN	A						
7	TOUCHDOWN TOTAL	4.17	SC	0.75	lb ae/a	23	fl oz/a	12"CN	A	99	95	90			
7	ARROW	2	EC	0.094	lb ai/a	6	fl oz/a	12"CN	A						
7	PAYOFF PLUS	100	DRY	1.5	% w/w	12.5	lb/100 gal	12"CN	A						
8	NONTREATED									0	0	0			
LSD (P=.05)										3.1	0.6	6.2	22.2	12.1	8.1
Replicate F										0.380	1.000	0.130	0.123	1.374	0.227
Replicate Prob(F)										0.6908	0.3927	0.8794	0.8848	0.2852	0.7996
Treatment F										1161.657	27159.430	244.393	8.167	36.383	133.412
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0005	0.0001	0.0001

Trial Comments

1. Protocol: United Suppliers.
2. Ratings: CI 3 + 7 DAT; WC 7, 14 + 28 DAT.
3. Roundup Ready corn planted in 30 inch rows perpendicular to soybean rows.
4. DA-A = Days after 12"CN application.
 IPOSS was IPOHE (ivyleaf morningglory) and IPOLA (pitted morningglory).
5. Not harvested.