

Evaluation of Soybean Injury with Authority and Valor.

01-50W-S70

OBJECTIVE: Evaluation of soybean injury following preplant incorporated and preemergence applications of Authority or Valor.

SUMMARY: Authority and Valor caused no stand reduction regardless of rate or application timing. Authority and Valor caused minimal height reduction 21 days after application with height reduction ranging from 0 to 5%. Valor applied PPI caused no height reduction regardless of rate. Authority applied PPI and PRE caused height reduction with height reduction increasing as rate was increased.

Soybean yield ranged from 51 to 59 bu/A with no difference in yield due to herbicide treatment.

HERBICIDES

AUTHORITY 75 WG
ROUNDUP ULTRA MAX 3.7 SL
VALOR 50 WG

WEEDS

crop tolerance only

CROP

soybean

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PLANT, SOIL AND GENERAL AGRICULTURE DEPARTMENT

SOUTHERN ILLINOIS UNIVERSITY

Evaluation of Soybean Injury with Authority and Valor.

Project Code: 01-50W-S70 Location: Belleville Research Center

Investigator: Bryan Young, Assistant Professor, Southern Illinois University

City State Zip Country: Belleville IL 62221 USA
Trial Status: Final Initiation Date: 5-5-01

Objective:

Evaluation of soybean injury following preplant incorporated and preemergence applications of Authority or Valor.

Weed Code Common Name Scientific Name
1. NA crop tolerance onlyCrop 1: GLXMA soybean Variety: P94B01 RR
Planting Method: Seeded Planting Date: 5-16-01
Rate: 75 lb/A Depth: 1.0 IN
Row Spacing: 30 INPlot Width, Unit: 10 FT Plot Length, Unit: 27 FT Reps: 3
Tillage Type: Reduced-Till Study Design: Randomized complete block
Previous Crop, Year: ZEAMX, 2000
Field Prep./Maintenance: N 0 LB/A, P205 0 LB/A, K20 200 LB/ASoil Name: Weir % OM: 1.4 pH: 6.5 CEC: 12
Texture: Silt loam Fert. Level: P1: 77 LB/A, K: 198 LB/A

APPLICATION DESCRIPTION

	A	B	C
Application Date:	5-16-01	5-16-01	6-19-01
Time of Day:	6:00	11:00	8:00
Application Method:	Spray	Spray	Spray
Application Timing:	PPI	PRE	4-6"W
Applic. Placement:	BROSIOI	BROSIOI	BROFOL
Air Temp., Unit:	74 F	88 F	80 F
% Relative Humidity:	70	52	64
Wind Velocity, Unit:	2-3 MPH	5-10 MPH	0 MPH
Soil Moisture:	BELNOR	BELNOR	BELNOR

CROP STAGE AT EACH APPLICATION

	A	B	C
Crop 1 Code, Stage:	GLXMA NA	GLXMA NA	GLXMA v2
Height, Unit:	NA NA	NA NA	3-5 IN

WEED STAGE AT EACH APPLICATION

	A	B	C
Weed 1 Code:	NA	NA	NA

APPLICATION EQUIPMENT

	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Operating Pressure:	40 PSI	40 PSI	40 PSI
Nozzle Type:	Flat fan	Flat fan	Flat fan
Nozzle Size:	8003	8003	8002
Boom Length, Unit:	10 FT	10 FT	10 FT
Incorporation Equip.:	FC2X+CM		
Hours to Incorp.:	1		
Incorp. Depth, Unit:	2-4 IN		
Spray Volume, Unit:	20 GPA	20 GPA	20 GPA

NOTES: HARVESTED 10-20-01, 2 ROWS X 24 FT.

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 Study is weed-free.

Weed Code																		
Crop Code																		
Rating Data Type		GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA							
Rating Unit		Yield	STARED	STARED	STARED	STARED	Stunt	Stunt	Stunt	Stunt	Stunt							
Rating Date		bu/A	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent							
Tri-Eval Interval		10-20-01	5-30-01	6-6-01	6-13-01	7-11-01	5-30-01	6-6-01	6-13-01	7-11-01	7-11-01							
			14 DAT	21 DAT	28 DAT	56 DAT	14 DAT	21 DAT	28 DAT	56 DAT	56 DAT							
Tri No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code									
1	HANDWEED									59	0	0	0	0	0	0	0	0
1	NO HERBICIDE																	
2	AUTHORITY	75	WG	0.20	LB A/A	4.27	OZ/A	PPI	A	55	0	0	0	0	0	0	0	0
2	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	4-6"W	C									
3	AUTHORITY	75	WG	0.25	LB A/A	5.33	OZ/A	PPI	A	53	0	0	0	0	1	1	0	0
3	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	4-6"W	C									
4	AUTHORITY	75	WG	0.313	LB A/A	6.7	OZ/A	PPI	A	54	0	0	0	0	1	2	0	0
4	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	4-6"W	C									
5	VALOR	50	WG	0.063	LB A/A	2	OZ/A	PPI	A	58	0	0	0	0	0	0	0	0
5	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	4-6"W	C									
6	VALOR	50	WG	0.078	LB A/A	2.5	OZ/A	PPI	A	58	0	0	0	0	0	0	0	0
6	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	4-6"W	C									
7	VALOR	50	WG	0.094	LB A/A	3	OZ/A	PPI	A	55	0	0	0	0	0	0	0	0
7	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	4-6"W	C									
8	AUTHORITY	75	WG	0.20	LB A/A	4.27	OZ/A	PRE	B	56	0	0	0	0	1	1	0	0
8	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	4-6"W	C									
9	AUTHORITY	75	WG	0.25	LB A/A	5.33	OZ/A	PRE	B	54	0	0	0	0	5	4	0	0
9	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	4-6"W	C									
10	AUTHORITY	75	WG	0.313	LB A/A	6.7	OZ/A	PRE	B	51	0	0	0	0	5	8	3	0
10	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	4-6"W	C									
11	VALOR	50	WG	0.063	LB A/A	2	OZ/A	PRE	B	54	0	0	0	0	1	1	0	0
11	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	4-6"W	C									
12	VALOR	50	WG	0.078	LB A/A	2.5	OZ/A	PRE	B	54	0	0	0	0	1	0	0	0
12	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	4-6"W	C									
13	VALOR	50	WG	0.094	LB A/A	3	OZ/A	PRE	B	56	0	0	0	0	4	0	0	0
13	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	4-6"W	C									
14	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	4-6"W	C	55	0	0	0	0	0	0	0	0
LSD (P=.05)										4.8	0.0	0.0	0.0	0.0	0.0	1.4	2.1	2.6
Replicate F										2.105	0.000	0.000	0.000	0.000	0.000	1.075	0.398	1.000
Replicate Prob(F)										0.1421	1.0000	1.0000	1.0000	1.0000	1.0000	0.3561	0.6760	0.3816
Treatment F										1.420	0.000	0.000	0.000	0.000	0.000	14.912	10.238	1.000
Treatment Prob(F)										0.2157	1.0000	1.0000	1.0000	1.0000	1.0000	0.0001	0.0001	0.4786

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Trial Comments

- 1. Protocol: SIU - RFK.
- 2. Study is weed-free.
- 3. STARED = stand reduction. DAT = days after PPI or PRE application.