

Glyphosate Formulation Study - Winfield Solutions.

Trial ID: 10-21N-W90

Location: Belleville Res. Center

Investigator: Bryan Young, Professor, Southern Illinois University, bgyoung@siu.edu
 City State Zip Country: Belleville IL 62221 USA
 Trial Status: FINAL Initiation Date: 06-11-10

Objectives: Compare the efficacy of commercial and experimental glyphosate formulations applied in soybean.

Crop 1: GLXMA Soybean Variety: AG 4005 Description: RR
 Planting Method: SEEDED Planting Date: 06-11-10
 Rate, Unit: 75 LB/A Depth, Unit: 1.0 IN
 Row Spacing, Unit: 30 IN

Pest 1 Type: W Code: SETFA Setaria faberi Herrm. foxtail, giant
 Pest 2 Type: W Code: ABUTH Abutilon theophrasti Medicus velvetleaf
 Pest 3 Type: W Code: AMBTR Ambrosia trifida L. ragweed, giant
 Pest 4 Type: W Code: XANST Xanthium strumarium L. cocklebur, common

Plot Width, Unit: 10 FT Site Type: FIELD
 Plot Length, Unit: 30 FT Tillage Type: REDUCED-TILL
 Replications: 3 Study Design: Randomized Complete Block

Prior Crops, Year
 1. ZEAMD 2009

Field Prep./Maintenance: N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A

% OM: 2.1 Texture: SILT LOAM
 pH: 6 Soil Name: BETHALTO
 CEC: 12 Fert. Level: P1: 89 LB/A, K: 400 LB/A

Application Description

A
 Application Date: 07-02-10
 Time of Day: 5:30
 Application Method: Spray
 Application Timing: 6-8"W
 Application Placement: BROFOL
 Applied By: JRK
 Air Temperature, Unit: 72 F
 % Relative Humidity: 92
 Wind Velocity, Unit: 0 MPH
 Wind Direction: NA
 Dew Presence (Y/N): Y
 Soil Moisture: ABONOR
 % Cloud Cover: 0

07-02-10
 Crop stage at application: V2-V3
 Height Min, Max (inch): 4 7

Pest Stage At Each Application

06-02-10
 Weed Code: SETFA
 Stage Majority (leaves): 3
 Stage Min, Max: 1 4
 Height Majority: 4 IN
 Height Min, Max: 1 5
 Density, Unit: 0.01 FT2
 Weed Code: ABUTH
 Stage Majority (leaves): 6
 Stage Min, Max: 4 8
 Height Majority: 7 IN
 Height Min, Max: 4 9
 Density, Unit: 0.1 FT2
 Weed Code: AMBTR
 Stage Majority (leaves): 6
 Stage Min, Max: 2 8
 Height Majority: 7 IN
 Height Min, Max: 4 8
 Density, Unit: 0.01 FT2
 Weed Code: XANST
 Stage Majority (leaves): 4
 Stage Min, Max: 2 6
 Height Majority: 6 IN
 Height Min, Max: 3 8
 Density, Unit: 0.01 FT2

Application Equipment

Appl. Equipment: CO2 sprayer
 Operating Pressure: 30 PSI
 Nozzle Type: Flat fan
 Nozzle Size: TT 110Q15
 Boom Length, Unit: 6.67 FT
 Spray Volume, Unit: 10 GPA

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Pest Code													
Crop Code													
Rating Date													
Rating Data Type													
Rating Unit													
Rating Timing													
Trt-Eval Interval													

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 07-16-10 Injury Percent	GLXMA 07-30-10 Injury Percent	SETFA 07-16-10 Control Percent	SETFA 07-30-10 Control Percent	ABUTH 07-16-10 Control Percent	ABUTH 07-30-10 Control Percent
1	ROUNDUP POWERMAX	4.5	SL	0.28 lb ae/a	8 fl oz/a	6-8"W	A		0 a	0 a	91 a	94 a	29 a	30 a
2	TOUCHDOWN TOTAL	4.17	SL	0.28 lb ae/a	8.6 fl oz/a	6-8"W	A		0 a	0 a	85 c	90 c	25 ab	25 ab
3	DURANGO DMA	4	SL	0.28 lb ae/a	9 fl oz/a	6-8"W	A		0 a	0 a	85 c	90 c	15 d	14 c
4	AGH 09101	3	SL	0.28 lb ae/a	12 fl oz/a	6-8"W	A		0 a	0 a	85 c	90 c	22 bc	23 ab
5	AGH 09102	4	SL	0.28 lb ae/a	9 fl oz/a	6-8"W	A		0 a	0 a	85 c	89 c	17 cd	21 bc
6	CORNERSTONE PLUS	3	SL	0.28 lb ae/a	12 fl oz/a	6-8"W	A		0 a	0 a	84 c	89 c	20 bcd	21 bc
7	AGH 09404	4	SL	0.28 lb ae/a	9 fl oz/a	6-8"W	A		0 a	0 a	88 b	92 b	28 a	27 ab
8	NONTREATED								0 a	0 a	0 d	0 d	0 e	0 d
LSD (P=.05)									0.0	0.0	2.2	1.9	5.8	7.9
Replicate F									0.000	0.000	0.191	0.583	0.015	2.217
Replicate Prob(F)									1.0000	1.0000	0.8285	0.5710	0.9851	0.1457
Treatment F									0.000	0.000	1830.522	2705.250	23.588	12.729
Treatment Prob(F)									1.0000	1.0000	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)

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Pest Code	AMBTR	AMBTR	XANST	XANST
Crop Code				
Rating Date	07-16-10	07-30-10	07-16-10	07-30-10
Rating Data Type	Control	Control	Control	Control
Rating Unit	Percent	Percent	Percent	Percent
Rating Timing				
Trt-Eval Interval	14 DA-A	28 DA-A	14 DA-A	28 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code				
1	ROUNDUP POWERMAX	4.5	SL	0.28 lb ae/a	8 fl oz/a	6-8"W	A		27 ab	17 a	55 ab	58 a
2	TOUCHDOWN TOTAL	4.17	SL	0.28 lb ae/a	8.6 fl oz/a	6-8"W	A		22 bc	10 b	52 bc	53 ab
3	DURANGO DMA	4	SL	0.28 lb ae/a	9 fl oz/a	6-8"W	A		18 cd	12 ab	52 bc	53 ab
4	AGH 09101	3	SL	0.28 lb ae/a	12 fl oz/a	6-8"W	A		20 c	14 ab	52 bc	53 ab
5	AGH 09102	4	SL	0.28 lb ae/a	9 fl oz/a	6-8"W	A		15 d	17 a	55 ab	53 ab
6	CORNERSTONE PLUS	3	SL	0.28 lb ae/a	12 fl oz/a	6-8"W	A		14 d	12 ab	48 c	48 b
7	AGH 09404	4	SL	0.28 lb ae/a	9 fl oz/a	6-8"W	A		28 a	17 a	58 a	58 a
8	NONTREATED								0 e	0 c	0 d	0 c
LSD (P=.05)									4.5	6.1	5.5	6.4
Replicate F									1.956	1.657	1.882	3.633
Replicate Prob(F)									0.1782	0.2260	0.1889	0.0536
Treatment F									36.198	7.875	111.214	84.471
Treatment Prob(F)									0.0001	0.0006	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)

Trial Comments

1. Protocol: Winfield Solutions.
2. Ratings: CI/WC at 14 and 28 DAT.
3. Weed control was lower than expected due to the very early morning application time.
4. Not harvested.