

Experimental 2,4-D and Glyphosate Combinations - Winfield Solutions.

Trial ID: 10-ARC-3-E-WS24-D Location: Young Res. Center

Investigator: Bryan Young, Professor, Southern Illinois University, bgyoung@siu.edu
 City State Zip Country: Carbondale IL 62901 USA
 Trial Status: FINAL Initiation Date: 07-08-10

Objectives: Evaluate the efficacy of experimental 2,4-D formulations
 with commercial glyphosate formulations.

Crop 1: YACKR Arable land Variety: NON-CROP

Pest 1 Type: W	Code: AMARE	Amaranthus retroflexus L.	pigweed, redroot
Pest 2 Type: W	Code: ABUTH	Abutilon theophrasti Medicus	velvetleaf
Pest 3 Type: W	Code: CHEAL	Chenopodium album L.	lambsquarters, common
Pest 4 Type: W	Code: IPOSS		morningglory, species

Plot Width, Unit: 10	FT	Site Type: FIELD
Plot Length, Unit: 25	FT	Tillage Type: NO-TILL
Replications: 3		Study Design: Randomized Complete Block

Prior Crops, Year

1. ZEAMD 2009

Field Prep./Maintenance: N 168 LB/A, P205 46 LB/A, K20 100 LB/A

% OM: 1.1	Texture: SILT LOAM
pH: 6.7	Soil Name: WEIR
CEC: 9.1	Fert. Level: P1: 65 LB/A, K: 277 LB/A

Application Description

A

Application Date: 07-08-10
 Time of Day: 9:15
 Application Method: Spray
 Application Timing: 6-36"W
 Application Placement: BROFOL
 Applied By: JRK
 Air Temperature, Unit: 82 F
 % Relative Humidity: 88
 Wind Velocity, Unit: 2 MPH
 Wind Direction: SW
 Dew Presence (Y/N): N
 Soil Temperature, Unit: 80 F
 Soil Moisture: NORMAL
 % Cloud Cover: 95

07-08-10

Crop stage at application: NA

Pest Stage At Each Application

Application Date: 07-08-10
 Weed Code: AMARE
 Stage Majority (leaves): 14
 Stage Min, Max: 4 24
 Height Majority: 10 IN
 Height Min, Max: 4 16
 Density, Unit: 3 FT2
 Weed Code: ABUTH
 Stage Majority (leaves): 12
 Stage Min, Max: 10 16
 Height Majority: 13 IN
 Height Min, Max: 11 16
 Density, Unit: 0.01 FT2
 Weed Code: CHEAL
 Stage Majority (leaves): 20
 Stage Min, Max: 6 42
 Height Majority: 12 IN
 Height Min, Max: 4 18
 Density, Unit: 3 FT2
 Weed Code: IPOSS
 Stage Majority (leaves): 8
 Stage Min, Max: 4 16
 Height Majority: 4 IN
 Height Min, Max: 2 9
 Density, Unit: 1 FT2

Application Equipment

Appl. Equipment: CO2 sprayer
 Operating Pressure: 30 PSI
 Nozzle Type: Flat fan
 Nozzle Size: XR 8002
 Boom Length, Unit: 6.67 FT
 Spray Volume, Unit: 15 GPA

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Pest Code	AMARE	AMARE	ABUTH	ABUTH	CHEAL	CHEAL
Crop Code						
Rating Date	07-22-10	08-05-10	07-22-10	08-05-10	07-22-10	08-05-10
Rating Data Type	Control	Control	Control	Control	Control	Control
Rating Unit	Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing						
Trt-Eval Interval	14 DA-A	28 DA-A	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	AGH 09008	3.5	SL	0.875	lb ae/a	1	qt/a	6-36"W	A	96	ab	95	a	98	a
1	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-36"W	A						
2	AGH 09008	3.5	SL	0.875	lb ae/a	1	qt/a	6-36"W	A	97	ab	94	a	98	a
2	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	6-36"W	A						
3	AGH 09008	3.5	SL	0.875	lb ae/a	1	qt/a	6-36"W	A	96	ab	93	a	98	a
3	DURANGO DMA	4	SL	0.75	lb ae/a	24	fl oz/a	6-36"W	A						
4	AGH 09008	3.5	SL	0.875	lb ae/a	1	qt/a	6-36"W	A	97	a	95	a	99	a
4	CORNERSTONE PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-36"W	A						
5	AGH 09008	3.5	SL	0.875	lb ae/a	1	qt/a	6-36"W	A	97	ab	95	a	98	a
5	CORNERSTONE 5 PLUS	4	SL	0.75	lb ae/a	24	fl oz/a	6-36"W	A						
6	AGH 09008	3.5	SL	0.875	lb ae/a	1	qt/a	6-36"W	A	96	b	96	a	98	a
6	AGH 09404	4	SL	0.75	lb ae/a	24	fl oz/a	6-36"W	A						
7	NONTREATED									0	c	0	b	0	b
LSD (P=.05)										1.0		2.9		1.4	
Replicate F										1.000		0.213		2.182	
Replicate Prob(F)										0.3966		0.8111		0.1555	
Treatment F										11947.144		1437.503		6751.040	
Treatment Prob(F)										0.0001		0.0001		0.0001	

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

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Trial ID: 10-ARC-3-E-WS24-D Location: Young Res. Center

Pest Code	IPOSS	IPOSS
Crop Code		
Rating Date	07-22-10	08-05-10
Rating Data Type	Control	Control
Rating Unit	Percent	Percent
Rating Timing		
Trt-Eval Interval	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	AGH 09008	3.5	SL	0.875	lb ae/a	1	qt/a	6-36"W	A	95	ab
1	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-36"W	A	91	a
2	AGH 09008	3.5	SL	0.875	lb ae/a	1	qt/a	6-36"W	A	91	b
2	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	6-36"W	A	88	ab
3	AGH 09008	3.5	SL	0.875	lb ae/a	1	qt/a	6-36"W	A	96	a
3	DURANGO DMA	4	SL	0.75	lb ae/a	24	fl oz/a	6-36"W	A	89	ab
4	AGH 09008	3.5	SL	0.875	lb ae/a	1	qt/a	6-36"W	A	92	ab
4	CORNERSTONE PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-36"W	A	88	ab
5	AGH 09008	3.5	SL	0.875	lb ae/a	1	qt/a	6-36"W	A	95	ab
5	CORNERSTONE 5 PLUS	4	SL	0.75	lb ae/a	24	fl oz/a	6-36"W	A	86	b
6	AGH 09008	3.5	SL	0.875	lb ae/a	1	qt/a	6-36"W	A	95	ab
6	AGH 09404	4	SL	0.75	lb ae/a	24	fl oz/a	6-36"W	A	90	ab
7	NONTREATED									0	c
LSD (P=.05)										4.1	4.7
Replicate F										0.117	2.799
Replicate Prob(F)										0.8905	0.1006
Treatment F										719.054	491.146
Treatment Prob(F)										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. IPOSS = Morningglory species including IPOHE (ivyleaf morningglory) and IPOLA (pitted morningglory).
4. Not harvested.