

Non-AMS water conditioner rate screening with Glufosinate

Trial ID: 15 GLUFPOST	Location: G-6 WEST END	Trial Year: 2015
Protocol ID: 15 GLUFPOST	Investigator: Dr. Mark M. Loux	
Project ID: AG13063 Rate Glufosinate	Study Director: Bryan Reeb	
	Sponsor Contact: John Smith, Winfield	

General Trial Information

Study Director: Bryan Reeb
Investigator: Dr. Mark M. Loux

Latitude of LL Corner °: 39.8596 N
Longitude of LL Corner °: 83.67634 W

Conducted Under GLP: No
Conducted Under GEP: No

Contacts

Study Director: Bryan Reeb
Investigator: Dr. Mark M. Loux

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: Credenz 3841 LL
Description: Liberty Link

Planting Rate, Unit: 175000 S/A	Planting Date: 5-4-2015
Depth, Unit: 1 IN	Planting Method: PLANTD planted
Row Spacing, Unit: 15 IN	Planting Equipment: KINZE
Soil Moisture: GOOD good	Emergence Date: 5-11-2015
Seed Bed: MEDIUM medium	

Pest Description

Pest 1 Type: W **Code:** SETFA *Setaria faberi*
Common Name: Giant foxtail

Pest 2 Type: W **Code:** AMBTR *Ambrosia trifida*
Common Name: Giant ragweed

Pest 3 Type: W **Code:** AMARE *Amaranthus retroflexus*
Common Name: Redroot pigweed

Pest 4 Type: W **Code:** CHEAL *Chenopodium album*
Common Name: Common lambsquarters

Pest 5 Type: W

Site and Design

Treated Plot Width: 6.67 FT	Site Type: FIELD field
Treated Plot Length: 30 FT	Experimental Unit: 1 PLOT plot
Treated Plot Area: 200.1 FT2	Tillage Type: CONTIL conventional-till
Replications: 4	Treatments: 8
	Study Design: RACOB� Randomized Complete Block (RCB)

Soil Description

Description Name: G-6	Texture: SICL silty clay loam
% OM: 2.2	Soil Name: Crosby
pH: 6.3	Fert. Level: G good
CEC: 13.6	Soil Drainage: G good

Application Description

A

Application Date: 6-4-2015
Appl. Start Time: 10:05 AM
Appl. Stop Time: 10:15 AM
Application Method: SPRAY
Application Timing: POST 6-10"
Application Placement: BROFOL
Applied By: Bethel
Air Temperature, Unit: 70.2 F
% Relative Humidity: 73
Wind Velocity, Unit: 0.8 MPH
Wind Direction: NE
Dew Presence (Y/N): Y yes
Soil Temperature, Unit: 62 F
Soil Moisture: WET
% Cloud Cover: 10
Next Moisture Occurred On: 6-5-2015
Time to Next Moisture, Unit: 1 DAY

Crop Stage At Each Application

A

Crop 1 Code, BBCH Scale: GLXMA BSOY
Stage Scale Used: BBCH
Stage Majority, Percent: 12
Stage Minimum, Percent: 12
Stage Maximum, Percent: 13
Height, Unit: 6 IN
Height Minimum, Maximum: 5 8

Pest Stage At Each Application

A

Pest 1 Code, Type, Scale: SETFA W
Stage Majority, Percent: 13
Stage Minimum, Percent: 13
Stage Maximum, Percent: 14
Height, Unit: 8 IN
Height Minimum, Maximum: 8 10
Density, Unit: 50 m2
Pest 2 Code, Type, Scale: AMBTR W
Stage Majority, Percent: 16
Stage Minimum, Percent: 14
Stage Maximum, Percent: 18
Height, Unit: 7 IN
Height Minimum, Maximum: 6 10
Density, Unit: 2 m2
Pest 3 Code, Type, Scale: AMARE W
Stage Majority, Percent: 16
Stage Minimum, Percent: 14
Stage Maximum, Percent: 16
Height, Unit: 3 IN
Height Minimum, Maximum: 1 5
Density, Unit: 29 m2
Pest 4 Code, Type, Scale: CHEAL W
Stage Majority, Percent: 16
Stage Minimum, Percent: 14
Stage Maximum, Percent: 19
Height, Unit: 3 IN
Height Minimum, Maximum: 1 6
Density, Unit: 5 m2
Pest 5 Code, Type, Scale: W

Application Equipment

Appl. Equipment: A
6' BACKPACK
Equipment Type: BACCAI
Operation Pressure, Unit: 44 PSI
Nozzle Type: AIXR
Nozzle Size: 11015
Nozzle Spacing, Unit: 18 IN
Nozzles/Row: 4
Boom Length, Unit: 6.67 FT
Boom Height, Unit: 20 IN
Ground Speed, Unit: 3 MPH
Carrier: WATER
Spray Volume, Unit: 15 gal/ac
Mix Size, Unit: 1 liters
Propellant: COMCO2

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Pest Type W Weed W Weed W Weed
Pest Code SETFA AMBTR CHEAL
Pest Scientific Name Setaria faberi Ambrosia trifida Chenopodium album
Pest Name Giant foxtail Giant ragweed Common lambsquarters
Crop Code GLXMA
BBCH Scale BSOY
Crop Scientific Name Glycine max
Crop Name Soybean
Crop Variety Credenz 3841 LL
Description LL
Part Rated PLANT C
Rating Date 6-9-2015 6-9-2015 6-9-2015 6-9-2015
Rating Type PHYGEN CONTRO CONTRO CONTRO
Rating Unit % % % %
Number of Subsamples 1 1 1 1
Days After First/Last Applic. 5 5 5 5
Trt-Eval Interval 5 DA-A 5 DA-A 5 DA-A 5 DA-A
Plant-Eval Interval 36 DP-1 36 DP-1 36 DP-1 36 DP-1
Days After Emergence 29 DE-1 29 DE-1 29 DE-1 29 DE-1

Table with columns: Trt No., Treatment Name, Other Rate, Other Rate, Appl Unit, Appl Code, Description, 1, 2, 3, 4. Rows include treatments 1-8 (Glufosinate and UTC) and summary statistics like LSD, Standard Deviation, CV, Grand Mean, etc.

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
Missing data estimates are included in columns: Yates=1,2,3,4,5,6,7,8,9,10,11

Trt No.	Treatment Name	Other Rate	Other Rate	Appl Unit	Appl Code	Description	5	6	7	8
	1	Glufosinate	16 oz/a	A	POST 6-10"	WDS	77.5 a	0.0 a	65.0 a	90.0 ab
	2	Glufosinate	16 oz/a	A	POST 6-10"	WDS	75.0 a	0.5 a	70.0 a	100.0 a
	2	N-pak ams	1.5 qt/a	A	POST 6-10"	WDS				
	3	Glufosinate	16 oz/a	A	POST 6-10"	WDS	75.0 a	2.0 a	61.3 a	95.0 ab
	3	Class Act NG	0.75 qt/a	A	POST 6-10"	WDS				
	4	Glufosinate	16 oz/a	A	POST 6-10"	WDS	73.8 a	1.3 a	70.0 a	100.0 a
	4	AG13063	0.15 qt/a	A	POST 6-10"	WDS				
	5	Glufosinate	16 oz/a	A	POST 6-10"	WDS	71.3 a	0.8 a	55.0 a	90.0 ab
	5	AG13063	0.3 qt/a	A	POST 6-10"	WDS				
	6	Glufosinate	16 oz/a	A	POST 6-10"	WDS	75.0 a	0.8 a	55.0 a	85.0 b
	6	AG13063	0.6 qt/a	A	POST 6-10"	WDS				
	7	Glufosinate	16 oz/a	A	POST 6-10"	WDS	66.8 a	1.7 a	57.8 a	89.0 b
	7	AG13063	0.9 qt/a	A	POST 6-10"	WDS				
	8	UTC					0.0 b	0.0 a	0.0 b	0.0 c
	LSD	P=.05					14.19	2.16	16.48	10.51
		Standard Deviation					9.62	1.46	11.17	7.13
		CV					14.96	168.19	20.59	8.78
		Grand Mean					64.29	0.87	54.26	81.13
		Bartlett's X2					11.04	3.009	6.823	0.134
		P(Bartlett's X2)					0.087	0.699	0.338	0.998
		Skewness					-1.7101*	1.4324*	-1.2032*	-2.0066*
		Kurtosis					2.2709*	0.9769	1.179	2.7284*
	Replicate F						2.264	0.500	2.147	3.909
	Replicate Prob(F)						0.1123	0.6864	0.1262	0.0239
	Treatment F						29.613	1.015	16.559	86.902
	Treatment Prob(F)						0.0001	0.4507	0.0001	0.0001

Pest Type	W Weed	W Weed	W Weed
Pest Code	CHEAL	AMARE	ECHCG
Pest Scientific Name	Chenopodium al>	Amaranthus ret>	Echinochloa cr>
Pest Name	Common lambsqu>	Redroot pigweed	Common barnyar>
Crop Code			
BBCH Scale			
Crop Scientific Name			
Crop Name			
Crop Variety			
Description			
Part Rated			
Rating Date	6-18-2015	6-18-2015	6-18-2015
Rating Type	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%
Number of Subsamples	1	1	1
Days After First/Last Applic.	14 14	14 14	14 14
Trt-Eval Interval	14 DA-A	14 DA-A	14 DA-A
Plant-Eval Interval	45 DP-1	45 DP-1	45 DP-1
Days After Emergence	38 DE-1	38 DE-1	38 DE-1

Trt No.	Treatment Name	Other Rate	Other Rate	Appl Unit	Appl Code	Description	9	10	11
1	Glufosinate	16 oz/a		A		POST 6-10" WDS	85.0 ab	45.0 a	32.5 a
2	Glufosinate	16 oz/a		A		POST 6-10" WDS	91.3 ab	50.0 a	30.0 a
2	N-pak ams	1.5 qt/a		A		POST 6-10" WDS			
3	Glufosinate	16 oz/a		A		POST 6-10" WDS	83.8 ab	55.0 a	32.5 a
3	Class Act NG	0.75 qt/a		A		POST 6-10" WDS			
4	Glufosinate	16 oz/a		A		POST 6-10" WDS	77.5 b	52.5 a	36.3 a
4	AG13063	0.15 qt/a		A		POST 6-10" WDS			
5	Glufosinate	16 oz/a		A		POST 6-10" WDS	82.5 ab	52.5 a	27.5 a
5	AG13063	0.3 qt/a		A		POST 6-10" WDS			
6	Glufosinate	16 oz/a		A		POST 6-10" WDS	87.5 ab	55.0 a	32.5 a
6	AG13063	0.6 qt/a		A		POST 6-10" WDS			
7	Glufosinate	16 oz/a		A		POST 6-10" WDS	99.4 a	47.1 a	32.6 a
7	AG13063	0.9 qt/a		A		POST 6-10" WDS			
8	UTC						0.0 c	0.0 b	0.0 b
LSD P=.05							19.77	12.07	16.85
Standard Deviation							13.40	8.18	11.42
CV							17.67	18.33	40.83
Grand Mean							75.86	44.64	27.98
Bartlett's X2							1.608	6.684	9.836
P(Bartlett's X2)							0.90	0.351	0.132
Skewness							-1.6038*	-1.6488*	0.3974
Kurtosis							1.563	1.6497*	1.8476*
Replicate F							1.714	0.897	3.160
Replicate Prob(F)							0.1964	0.4602	0.0472
Treatment F							21.864	20.190	4.106
Treatment Prob(F)							0.0001	0.0001	0.0060

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Pest Type

W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop

Pest Code

SETFA, *Setaria faberi*, = US
 AMBTR, *Ambrosia trifida*, = US
 CHEAL, *Chenopodium album*, = US
 AMARE, *Amaranthus retroflexus*, = US
 ECHCG, *Echinochloa crus-galli*, = US

Crop Code

GLXMA, BSOY, *Glycine max*, = US

Part Rated

PLANT = plant
 C = Crop is Part Rated

Rating Type

PHYGEN = phytotoxicity - general / injury
 CONTRO = control / burndown or knockdown

Rating Unit

% = percent

Plant-Eval Interval

36 DP-1 = 1 GLXMA 5-4-2015
 45 DP-1 = 1 GLXMA 5-4-2015