

Evaluate foliar activity of Aim burndown treatment concepts and their fit within current and future soybean trait systems

Trial ID: 15 NTBURN Location: F-4 Trial Year: 2015
Protocol ID: 15 NTBURN Investigator: Dr. Mark M. Loux
Project ID: SULF.SOY.15.JPR.05 Study Director: Bryan Reeb
Sponsor Contact: Joe Reed, FMC

General Trial Information

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

Conducted Under GLP: No
Conducted Under GEP: No

Contacts

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

Pest Description

Pest 1 Type: W **Code:** ERICA *Conyza canadensis*
Common Name: Canada horseweed

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

Site and Design

Treated Plot Width: 6.67 FT
Treated Plot Length: 30 FT
Treated Plot Area: 200.1 FT2 **Treatments:** 20
Replications: 3
Site Type: FIELD field
Experimental Unit: 1 PLOT plot
Tillage Type: NOTILL no-till
Study Design: RACOBL Randomized Complete Block (RCB)

Soil Description

Description Name: F-4
% OM: 2.9 **Texture:** SIC silty clay
pH: 5.7 **Soil Name:** Crosby
CEC: 15.66 **Fert. Level:** G good
Soil Drainage: G good

Application Description

A
Application Date: 4-17-2015
Appl. Start Time: 1:00 PM
Appl. Stop Time: 1:15 PM
Application Method: SPRAY
Application Timing: BRNDWN
Application Placement: BROSOI
Applied By: REEB
Air Temperature, Unit: 70 F
% Relative Humidity: 53
Wind Velocity, Unit: 8 MPH
Wind Direction: N
Dew Presence (Y/N): N no
Soil Temperature, Unit: 60 F
Soil Moisture: MOIST
% Cloud Cover: 5
Next Moisture Occurred On: 4-17-2015
Time to Next Moisture, Unit: 8 HR

Pest Stage At Each Application

A
Pest 1 Code, Type, Scale: ERICA W
Stage Majority, Percent: 16 100
Diameter, Unit: 1.5 IN
Height, Unit: 1 IN
Height Minimum, Maximum: 0.5 2
Pest 2 Code, Type, Scale: AMBTR W
Stage Majority, Percent: 12 100
Diameter, Unit: 2 IN
Height, Unit: 2 IN
Height Minimum, Maximum: 1 3

Application Equipment

A

Appl. Equipment:	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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Trt No.	Treatment Name	Other Rate	Other Rate	Appl Unit	Appl Code	Appl Description	1	2	3
	Pest Type						W Weed	W Weed	W Weed
	Pest Code						ERICA	ERICA	ERICA
	Pest Scientific Name						Conyza canadensis	Conyza canadensis	Conyza canadensis
	Pest Name						Canada horseweed	Canada horseweed	Canada horseweed
	Rating Date						4-24-2015	5-1-2015	5-14-2015
	Rating Type						CONTRO	CONTRO	CONTRO
	Rating Unit						%	%	%
	Number of Subsamples						1	1	1
	Days After First/Last Applic.						7 7	14 14	27 27
	Trt-Eval Interval						7 DA-A	14 DA-A	27 DA-A
1	2,4-D Ester	16 oz/a		A	30	EPP	40.0 cd	90.0 abc	60.0 ef
1	Authority First	4 oz/a		A	30	EPP			
1	Exuro	19.2 oz/a		A	30	EPP			
1	N-pak ams	1.5 qt/a		A	30	EPP			
2	2,4-D Ester	16 oz/a		A	30	EPP	40.0 cd	99.3 ab	85.0 abc
2	Authority MTZ	14 oz/a		A	30	EPP			
2	Exuro	19.2 oz/a		A	30	EPP			
2	N-pak ams	1.5 qt/a		A	30	EPP			
3	Aim	1 oz/a		A	30	EPP	40.0 cd	95.0 ab	50.0 f
3	2,4-D Ester	16 oz/a		A	30	EPP			
3	Authority First	4 oz/a		A	30	EPP			
3	Exuro	19.2 oz/a		A	30	EPP			
3	N-pak ams	1.5 qt/a		A	30	EPP			
4	Aim	1 oz/a		A	30	EPP	56.7 ab	93.3 ab	83.3 bc
4	2,4-D Ester	16 oz/a		A	30	EPP			
4	Authority MTZ	14 oz/a		A	30	EPP			
4	Exuro	19.2 oz/a		A	30	EPP			
4	N-pak ams	1.5 qt/a		A	30	EPP			
5	2,4-D Ester	32 oz/a		A	30	EPP	40.0 cd	88.3 abc	66.7 de
5	Authority First	4 oz/a		A	30	EPP			
5	Exuro	19.2 oz/a		A	30	EPP			
5	N-pak ams	1.5 qt/a		A	30	EPP			
6	2,4-D Ester	32 oz/a		A	30	EPP	40.0 cd	88.3 abc	91.7 abc
6	Authority MTZ	14 oz/a		A	30	EPP			
6	Exuro	19.2 oz/a		A	30	EPP			
6	N-pak ams	1.5 qt/a		A	30	EPP			
7	Aim	1 oz/a		A	30	EPP	43.3 bcd	86.7 bc	53.3 ef
7	2,4-D Ester	32 oz/a		A	30	EPP			
7	Authority First	4 oz/a		A	30	EPP			
7	Exuro	19.2 oz/a		A	30	EPP			
7	N-pak ams	1.5 qt/a		A	30	EPP			
8	Aim	1 oz/a		A	30	EPP	36.7 d	95.0 ab	76.7 cd
8	2,4-D Ester	16 oz/a		A	30	EPP			
8	Authority MTZ	14 oz/a		A	30	EPP			
8	Exuro	19.2 oz/a		A	30	EPP			
8	N-pak ams	1.5 qt/a		A	30	EPP			

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.

Pest Type	W Weed	W Weed	W Weed			
Pest Code	ERICA	ERICA	ERICA			
Pest Scientific Name	Conyza canadens	Conyza canadens	Conyza canadens			
Pest Name	Canada horsewee	Canada horsewee	Canada horsewee			
Rating Date	4-24-2015	5-1-2015	5-14-2015			
Rating Type	CONTRO	CONTRO	CONTRO			
Rating Unit	%	%	%			
Number of Subsamples	1	1	1			
Days After First/Last Applic.	7 7	14 14	27 27			
Trt-Eval Interval	7 DA-A	14 DA-A	27 DA-A			
Trt Treatment	Other Other	Appl Appl	Appl	1	2	3
No. Name	Rate Rate	Unit Code	Description			
9 Clarity	8 oz/a	A	30 EPP	36.7 d	80.0 cd	98.3 ab
9 Authority First	4 oz/a	A	30 EPP			
9 Exuro	19.2 oz/a	A	30 EPP			
9 N-pak ams	1.5 qt/a	A	30 EPP			
10 Clarity	8 oz/a	A	30 EPP	43.3 bcd	98.3 ab	100.0 a
10 Authority MTZ	14 oz/a	A	30 EPP			
10 Exuro	19.2 oz/a	A	30 EPP			
10 N-pak ams	1.5 qt/a	A	30 EPP			
11 Aim	1 oz/a	A	30 EPP	46.7 bcd	90.0 abc	98.3 ab
11 Clarity	8 oz/a	A	30 EPP			
11 Authority First	4 oz/a	A	30 EPP			
11 Exuro	19.2 oz/a	A	30 EPP			
11 N-pak ams	1.5 qt/a	A	30 EPP			
12 Aim	1 oz/a	A	30 EPP	56.7 ab	96.7 ab	100.0 a
12 Clarity	8 oz/a	A	30 EPP			
12 Authority MTZ	14 oz/a	A	30 EPP			
12 Exuro	19.2 oz/a	A	30 EPP			
12 N-pak ams	1.5 qt/a	A	30 EPP			
13 Clarity	16 oz/a	A	30 EPP	53.3 abc	97.7 ab	100.0 a
13 Authority First	4 oz/a	A	30 EPP			
13 Exuro	19.2 oz/a	A	30 EPP			
13 N-pak ams	1.5 qt/a	A	30 EPP			
14 Clarity	16 oz/a	A	30 EPP	53.3 abc	98.3 ab	100.0 a
14 Authority MTZ	14 oz/a	A	30 EPP			
14 Exuro	19.2 oz/a	A	30 EPP			
14 N-pak ams	1.5 qt/a	A	30 EPP			
15 Aim	1 oz/a	A	30 EPP	53.3 abc	95.0 ab	100.0 a
15 Clarity	16 oz/a	A	30 EPP			
15 Authority First	4 oz/a	A	30 EPP			
15 Exuro	19.2 oz/a	A	30 EPP			
15 N-pak ams	1.5 qt/a	A	30 EPP			
16 Aim	1 oz/a	A	30 EPP	43.3 bcd	95.3 ab	100.0 a
16 Clarity	16 oz/a	A	30 EPP			
16 Authority MTZ	14 oz/a	A	30 EPP			
16 Exuro	19.2 oz/a	A	30 EPP			
16 N-pak ams	1.5 qt/a	A	30 EPP			
17 Aim	1 oz/a	A	30 EPP	36.7 d	88.3 abc	50.0 f
17 2,4-D Ester	16 oz/a	A	30 EPP			
17 Exuro	19.2 oz/a	A	30 EPP			
17 N-pak ams	1.5 qt/a	A	30 EPP			
18 Sharpen	1 oz/a	A	30 EPP	63.3 a	100.0 a	98.3 ab
18 2,4-D Ester	16 oz/a	A	30 EPP			
18 Exuro	19.2 oz/a	A	30 EPP			
18 N-pak ams	1.5 qt/a	A	30 EPP			

Pest Type	W Weed	W Weed	W Weed
Pest Code	ERICA	ERICA	ERICA
Pest Scientific Name	Conyza canadens>	Conyza canadens>	Conyza canadens>
Pest Name	Canada horsewe>	Canada horsewe>	Canada horsewe>
Rating Date	4-24-2015	5-1-2015	5-14-2015
Rating Type	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%
Number of Subsamples	1	1	1
Days After First/Last Applic.	7 7	14 14	27 27
Trt-Eval Interval	7 DA-A	14 DA-A	27 DA-A
Trt Treatment	Other Other	Appl Appl	
No. Name	Rate Rate Unit	Code Description	1 2 3
19 Roundup Power Max	32 oz/a	A 30 EPP	8.3 e 65.0 e 61.7 def
19 KaPre	1.5 qt/a	A 30 EPP	
19 Roundup Power Max	32 oz/a	A 30 EPP	
19 KaPre	3 qt/a	A 30 EPP	
20 Roundup Power Max	32 oz/a	A 30 EPP	6.7 e 68.3 de 63.3 def
20 N-pak ams	1.5 qt/a	A 30 EPP	
20 Roundup Power Max	32 oz/a	A 30 EPP	
20 N-pak ams	3 qt/a	A 30 EPP	
LSD P=.05	14.07	12.67	16.54
Standard Deviation	8.51	7.67	10.01
CV	20.31	8.47	12.23
Grand Mean	41.92	90.45	81.83
Bartlett's X2	12.26	20.589	15.458
P(Bartlett's X2)	0.834	0.301	0.162
Skewness	-0.7537*	-1.4411*	-0.6934*
Kurtosis	0.5918	1.8424*	-1.0666
Replicate F	2.731	0.981	0.553
Replicate Prob(F)	0.0780	0.3842	0.5796
Treatment F	8.245	4.713	11.394
Treatment Prob(F)	0.0001	0.0001	0.0001

Pest Type

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

Pest Code

ERICA, Conyza canadensis, = US

Rating Type

CONTRO = control / burndown or knockdown

Rating Unit

% = percent