

MSU Weed Science Research Program

Nozzle comparison for Liberty tank-mixes with Clarity

Trial ID: C13-13 Study Dir.: Sprague, Powell
 Conducted: Campus C-28 Investigator: Christy Sprague

Date Planted: May/06/2013 **Row Spacing:** 30 IN
Variety: DKC 48-12 **No. of Reps:** 4
Population: 32,000 seeds/A **% OM:** 3.4
Soil Type: Loam **pH:** 6.5
Plot Size: 10 X 30 FT **Design:** RANDOMIZED COMPLETE BLOCK

Tillage: Fall chisel plow, spring soil finished 2x
Fertilizer: 300 lb urea broadcast, 150 lb 19-19-19 starter

Crop and Weed Description

Weed	Code	Common Name	Scientific Name
1.	ANGR	mainly foxtail species	SETARIA SP.
2.	CHEAL	LAMBSQUARTERS, COMMON	CHENOPODIUM ALBUM L.
3.	AMBEL	RAGWEED, COMMON	AMBROSIA ARTEMISIIFOLIA L.
4.	ABUTH	VELVETLEAF	ABUTILON THEOPHRASTI MEDIK.
Crop	Code	Common Name	
1.	ZEAMX	CORN, FIELD	

Application Description

A
Application Timing: POST
Date Treated: Jun/15/2013
Time Treated: 2:45 PM
% Cloud Cover: 100
Air Temp., Unit: 78 F
% Relative Humidity: 56
Wind Speed/Unit/Dir: 3 mph SW
Soil Temp., Unit: 68 F
Soil/Leaf Surface M: 2 4
Soil Moist (1=w 5=d): 2

Crop Stage at Each Application

A
Crop Name: ZEAMX
Height (In.): 18"
Stage (L): V5

Weed Stage at Each Application

A
Weed 1 Name: ANGR
Height (In.): 4"
Stage (L): 3
Weed 2 Name: CHEAL
Height (In.): 2"
Stage (L): 8
Weed 3 Name: AMBEL
Height (In.): 1.5"
Stage (L): 6
Weed 4 Name: ABUTH
Height (In.): 2"
Stage (L): 5

Weed Density (plants/sq. ft.)

Date:	1	2	3
Weed Name:	Jul/11/2013	Jul/11/2013	Jul/11/2013
CHEAL	6	2	2
AMBEL			
ABUTH			

Application Equipment

Appl	Sprayer	Speed	Nozzle	Nozzle	Nozzle	Boom			
Type	MPH	Type	Size	Height	Spacing	Width	GPA	Carrier	PSI
A	Cub	3.8	Comments	11003	29"	20"	100"	19	water 30

Comments: Blanket treatment PRE of Harness 0.9 pt/A (5/7/13)
 Two different nozzle types were used for POST application; 11003 AIXR and TTJ6011003 Twin-jet

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Weed Code	CHEAL	AMBEL	ABUTH		CHEAL							
Crop Code				ZEAMX								
Rating Data Type	control	control	control	injury	control							
Rating Unit	percent	percent	percent	percent	percent							
Rating Date	Jun/28/2013	Jun/28/2013	Jun/28/2013	Jul/19/2013	Jul/19/2013							
Trt-Eval Interval	13 DA-A	13 DA-A	13 DA-A	34 DA-A	34 DA-A							
# Subsamples, Dec.	0	0	0	0	0							
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Grow Stg	Appl Code					
1	Twin-jet Liberty AMS	2.34	L	22	fl oz/a	POST A	POST A	99	99	96	0	99
			WG	8.5	lb/100 gal	POST A	POST A					
2	AI XR Liberty AMS	2.34	L	22	fl oz/a	POST A	POST A	99	99	94	0	99
			WG	8.5	lb/100 gal	POST A	POST A					
3	Twin-jet Liberty AMS	2.34	L	29	fl oz/a	POST A	POST A	99	99	97	0	99
			WG	8.5	lb/100 gal	POST A	POST A					
4	AI XR Liberty AMS	2.34	L	29	fl oz/a	POST A	POST A	99	98	98	0	99
			WG	8.5	lb/100 gal	POST A	POST A					
5	Untreated							0	0	0	0	0
6	Twin-jet Liberty AMS	2.34	L	22	fl oz/a	POST A	POST A	99	99	98	11	99
		4	L	8	fl oz/a	POST A	POST A					
			WG	8.5	lb/100 gal	POST A	POST A					
7	AI XR Liberty AMS	2.34	L	22	fl oz/a	POST A	POST A	99	99	99	11	99
		4	L	8	fl oz/a	POST A	POST A					
			WG	8.5	lb/100 gal	POST A	POST A					
8	Twin-jet Liberty AMS	2.34	L	22	fl oz/a	POST A	POST A	99	99	99	11	99
		4	L	16	fl oz/a	POST A	POST A					
			WG	8.5	lb/100 gal	POST A	POST A					
9	AI XR Liberty AMS	2.34	L	22	fl oz/a	POST A	POST A	99	99	99	15	99
		4	L	16	fl oz/a	POST A	POST A					
			WG	8.5	lb/100 gal	POST A	POST A					
10	Twin-jet Liberty AMS	2.34	L	29	fl oz/a	POST A	POST A	99	99	99	5	99
		4	L	8	fl oz/a	POST A	POST A					
			WG	8.5	lb/100 gal	POST A	POST A					
11	AI XR Liberty AMS	2.34	L	29	fl oz/a	POST A	POST A	99	99	98	7	99
		4	L	8	fl oz/a	POST A	POST A					
			WG	8.5	lb/100 gal	POST A	POST A					
12	Twin-jet Clarity	4	L	8	fl oz/a	POST A	POST A	71	75	60	6	88
13	AI XR Clarity	4	L	8	fl oz/a	POST A	POST A	80	80	74	3	94
14	Twin-jet Clarity	4	L	16	fl oz/a	POST A	POST A	79	83	75	9	91
15	AI XR Clarity	4	L	16	fl oz/a	POST A	POST A	80	81	75	9	92
LSD (P=.05)								3.2	2.6	5.5	4.3	4.5
CV								2.61	2.1	4.54	52.06	3.48

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

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Weed Code	AMBEL	ABUTH		
Crop Code			ZEAMX	ZEAMX
Rating Data Type	control	control	moisture	yield
Rating Unit	percent	percent	percent	bu/acre
Rating Date	Jul/19/2013	Jul/19/2013	Nov/23/2013	Nov/23/2013
Trt-Eval Interval	34 DA-A	34 DA-A	161 DA-A	at 15% M
# Subsamples, Dec.	0	0	1	1

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Grow Stg	Appl Code				
1	Twin-jet Liberty	2.34	L	22	fl oz/a	POST A		99	98	17.0	233.4
	AMS		WG	8.5	lb/100 gal	POST A					
2	AI XR Liberty	2.34	L	22	fl oz/a	POST A		98	98	17.3	218.3
	AMS		WG	8.5	lb/100 gal	POST A					
3	Twin-jet Liberty	2.34	L	29	fl oz/a	POST A		99	99	17.7	236.8
	AMS		WG	8.5	lb/100 gal	POST A					
4	AI XR Liberty	2.34	L	29	fl oz/a	POST A		99	99	17.4	248.5
	AMS		WG	8.5	lb/100 gal	POST A					
5	Untreated							0	0	17.3	219.7
6	Twin-jet Liberty	2.34	L	22	fl oz/a	POST A		99	99	17.1	209.6
	Clarity	4	L	8	fl oz/a	POST A					
	AMS		WG	8.5	lb/100 gal	POST A					
7	AI XR Liberty	2.34	L	22	fl oz/a	POST A		99	99	17.5	205.5
	Clarity	4	L	8	fl oz/a	POST A					
	AMS		WG	8.5	lb/100 gal	POST A					
8	Twin-jet Liberty	2.34	L	22	fl oz/a	POST A		99	99	17.3	210.9
	Clarity	4	L	16	fl oz/a	POST A					
	AMS		WG	8.5	lb/100 gal	POST A					
9	AI XR Liberty	2.34	L	22	fl oz/a	POST A		99	99	17.3	206.9
	Clarity	4	L	16	fl oz/a	POST A					
	AMS		WG	8.5	lb/100 gal	POST A					
10	Twin-jet Liberty	2.34	L	29	fl oz/a	POST A		99	99	17.4	198.9
	Clarity	4	L	8	fl oz/a	POST A					
	AMS		WG	8.5	lb/100 gal	POST A					
11	AI XR Liberty	2.34	L	29	fl oz/a	POST A		99	99	17.5	203.0
	Clarity	4	L	8	fl oz/a	POST A					
	AMS		WG	8.5	lb/100 gal	POST A					
12	Twin-jet Clarity	4	L	8	fl oz/a	POST A		99	86	17.4	204.8
13	AI XR Clarity	4	L	8	fl oz/a	POST A		99	92	17.4	203.0
14	Twin-jet Clarity	4	L	16	fl oz/a	POST A		99	90	17.5	209.7
15	AI XR Clarity	4	L	16	fl oz/a	POST A		99	91	17.7	197.0
LSD (P=.05)								0.7	4.6	0.58	22.13
CV								0.56	3.62	2.31	7.17

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