

Application Parameters for Liberty, Does it Really Matter?

Trial ID: 12-COL-SprayDemo  
 Location: Collinsville, IL

Investigator: Bryan Young

General Trial Information	
<b>Study Director:</b> Bryan Young	<b>Investigator:</b> Bryan Young <b>Title:</b> Professor
<b>Trial Status:</b> F - one-year/final	<b>Initiation Date:</b> 7-22-12
Trial Location	
<b>City:</b> Collinsville	<b>State/Prov.:</b> IL
<b>Postal Code:</b> 62234	<b>Country:</b> USA

**Objectives:**  
 Demonstrate the differences in weed control efficacy of Liberty 280 herbicide when application parameters such as nozzles or spray additives are manipulated.

Personnel	
<b>Study Director:</b> Bryan Young	<b>Investigator:</b> Bryan Young <b>Title:</b> Professor
<b>Affiliation:</b> Southern Illinois University	<b>Address:</b> 1205 Lincoln Drive - AG 176 - MC 4415
<b>Location:</b> Carbondale IL	<b>Postal Code:</b> 62901
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Crop Description
<b>Crop 1:</b> NONE - Non-crop

Pest Description
<b>Pest 1 Type:</b> W <b>Code:</b> AMAPA - Amaranthus palmeri S.Wats. <b>Common Name:</b> amaranth, Palmer <b>Description:</b> glyphosate-resistant Palmer amaranth

Site and Design		
<b>Plot Width, Unit:</b> 10 FT	<b>Site Type:</b> FIELD field	
<b>Plot Length, Unit:</b> 100 FT	<b>Tillage Type:</b> REDTIL reduced-till	
<b>Plot Area, Unit:</b> 1000 FT <sup>2</sup>	<b>Study Design:</b> NONRAN Non-Randomized	
<b>Replications:</b> 1		

No.	Previous Crop	Year
1.	GLXMA	2011

Maintenance	
No.	Maintenance Treatment Name
1.	N 0 LB/A, P205 0 LB/A, K20 0 LB/A

Soil Description			
<b>% Sand:</b> 8.48	<b>% OM:</b> 2.08	<b>Texture:</b> SIL	SILT LOAM
<b>% Silt:</b> 79.03	<b>pH:</b> 8	<b>Soil Name:</b> Littleton / Haymond / Orion	
<b>% Clay:</b> 12.49	<b>CEC:</b> 12.61		

Additional Measured Elements		
Element	Quantity	Unit
P1	279	LB/A
K	410	LB/A

Moisture and Weather Conditions					
<b>Overall Moisture Conditions:</b> BELNOR below normal					
<b>Closest Weather Station:</b> ICN - Belleville IL <b>Distance, Unit:</b> 15 MI					

No.	Date	Amount	Unit	Type	Type Description
1.	6-11-12	0.67	IN	RAIN	rain
2.	6-16-12	0.5	IN	RAIN	rain
3.	7-6-12	1.0	IN	SPWACA	sprinkler - water cannon/traveling gun
4.	7-26-12	0.25	IN	RAIN	rain

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## Application Description

	A
Application Date:	7-22-12
Time of Day:	8:00
Application Method:	Spray
Application Timing:	3-6"W
Application Placement:	BROFOL
Applied By:	JRK
Air Temperature, Unit:	85 F
% Relative Humidity:	51
Wind Velocity, Unit:	0 MPH
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	82 F
Soil Moisture:	BELNOR
% Cloud Cover:	5
Next Rain Occurred On:	7-26-12

## Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	NONE
Stage Scale Used:	DESC
Stage Majority, Percent:	NA

## Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	AMAPA W DESC
Stage Majority, Percent:	10
Stage Minimum, Percent:	4
Stage Maximum, Percent:	20
Height, Unit:	6 IN
Height Minimum, Maximum:	2 10
Density, Unit:	1 FT2

## Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	ALTEVE
Nozzle Type:	See
Nozzle Size:	comment
Boom Length, Unit:	6.67 FT
Spray Volume, Unit:	15 GPA

Southern Illinois University

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Pest Code								AMAPA-HR	AMAPA-HR
Crop Code								8-5-12	8-19-12
Rating Date								Control	Control
Rating Type								Percent	Percent
Rating Unit									
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 Unit	Growth Stage	Appl Code
1	NONTREATED								
2	XR 11004 LIBERTY 280 AMS	2.34 100	EC SG	0.53 lb ai/a 3 lb ai/a		29 fl oz/a 3 lb/a		3-6"W 3-6"W	A A
3	AI 11004 LIBERTY 280 AMS	2.34 100	EC SG	0.53 lb ai/a 3 lb ai/a		29 fl oz/a 3 lb/a		3-6"W 3-6"W	A A
4	XR 11004 LIBERTY 280 CHOICE WEATHER MASTER	2.34 100	EC SL	0.53 lb ai/a 0.25 % v/v		29 fl oz/a 0.25 % v/v		3-6"W 3-6"W	A A
5	AI 11004 LIBERTY 280 CHOICE WEATHER MASTER	2.34 100	EC SL	0.53 lb ai/a 0.25 % v/v		29 fl oz/a 0.25 % v/v		3-6"W 3-6"W	A A
6	XR 11004 LIBERTY 280 AMS DIRECT	2.34 100 30	EC SG SL	0.53 lb ai/a 3 lb ai/a 0.0234 % v/v		29 fl oz/a 3 lb/a 3 oz/100 gal		3-6"W 3-6"W 3-6"W	A A A
7	AI 11004 LIBERTY 280 AMS DIRECT	2.34 100 30	EC SG SL	0.53 lb ai/a 3 lb ai/a 0.0234 % v/v		29 fl oz/a 3 lb/a 3 oz/100 gal		3-6"W 3-6"W 3-6"W	A A A
8	XR 11004 LIBERTY 280 AMS BORDER EG 250	2.34 100 100	EC SG SG	0.53 lb ai/a 3 lb ai/a 0.06 % w/w		29 fl oz/a 3 lb/a 8 oz/100 gal		3-6"W 3-6"W 3-6"W	A A A
9	AI 11004 LIBERTY 280 AMS BORDER EG 250	2.34 100 100	EC SG SG	0.53 lb ai/a 3 lb ai/a 0.06 % w/w		29 fl oz/a 3 lb/a 8 oz/100 gal		3-6"W 3-6"W 3-6"W	A A A
10	XR 11004 LIBERTY 280 AMS INTERLOCK	2.34 100 100	EC SG SL	0.53 lb ai/a 3 lb ai/a 0.208 % v/v		29 fl oz/a 3 lb/a 4 fl oz/a		3-6"W 3-6"W 3-6"W	A A A
11	AI 11004 LIBERTY 280 AMS INTERLOCK	2.34 100 100	EC SG SL	0.53 lb ai/a 3 lb ai/a 0.208 % v/v		29 fl oz/a 3 lb/a 4 fl oz/a		3-6"W 3-6"W 3-6"W	A A A
12	XR 11004 LIBERTY 280 DIRECT CHOICE WEATHER MASTER	2.34 30 100	EC SL SL	0.53 lb ai/a 0.0234 % v/v 0.25 % v/v		29 fl oz/a 3 oz/100 gal 0.25 % v/v		3-6"W 3-6"W 3-6"W	A A A
13	AI 11004 LIBERTY 280 DIRECT CHOICE WEATHER MASTER	2.34 30 100	EC SL SL	0.53 lb ai/a 0.0234 % v/v 0.25 % v/v		29 fl oz/a 3 oz/100 gal 0.25 % v/v		3-6"W 3-6"W 3-6"W	A A A
LSD (P=.05)								.	.
Standard Deviation								.	.
CV								.	.

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.

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Trial Comments

1. Protocol: SIU.
2. Ratings: WC at 14 and 28 DAT.
3. Spray nozzles are per treatment, see treatment list.
4. AMAPA-HR = Herbicide-resistant Palmer amaranth (glyphosate).
5. Not harvested (non-crop).