

## Sharpen Application Methods - Winfield Solutions.

Trial ID: 11-FagerS-WSsharpAppli Location: Fager South

**Investigator:** Bryan Young, Professor, Southern Illinois University, bgyoung@siu.edu  
**City State Zip Country:** Murphysboro IL 62966 USA  
**Trial Status:** FINAL **Initiation Date:** 5-20-11

**Objectives:** Determine the influence of nozzles and adjuvants on the efficacy of Sharpen for control of glyphosate-resistant marestail.

**Crop 1:** YACKR Arable land **Variety:** NON-CROP

**Pest 1 Type:** W **Code:** ERICA Conyza canadensis (L.) Crong. horseweed  
**Pest Description:** glyphosate-resistant marestail

**Plot Width, Unit:** 10 FT **Site Type:** FIELD  
**Plot Length, Unit:** 50 FT **Tillage Type:** NO-TILL  
**Replications:** 3 **Study Design:** Randomized Complete Block

**Prior Crops, Year**

1. GLXMA 2010

**Field Prep./Maintenance:** N 0 LB/A, P205 0 LB/A, K20 0 LB/A

**Application Description**

**Application Date:** 5-20-11  
**Time of Day:** 9:00  
**Application Method:** Spray  
**Application Timing:** 6-8"MT  
**Application Placement:** BROFOL  
**Applied By:** JRK  
**Air Temperature, Unit:** 76 F  
**% Relative Humidity:** 60  
**Wind Velocity, Unit:** 3 MPH  
**Wind Direction:** SE  
**Dew Presence (Y/N):** N  
**Soil Temperature, Unit:** 67 F  
**Soil Moisture:** ABONOR  
**% Cloud Cover:** 15

20-5-11

**Crop stage at application:** NA

**Pest Stage At Each Application**

**Application Date:** 5-20-11  
**Weed Code:** ERICA  
**Stage Majority (leaves):** 30  
**Stage Min, Max:** 4 70  
**Height Majority:** 7 IN  
**Height Min, Max:** 2 13  
**Density, Unit:** 2.5 FT2

**Application Equipment**

**Appl. Equipment:** CO2 sprayer  
**Nozzle Type:** See  
**Nozzle Size:** comments  
**Boom Length, Unit:** 6.67 FT

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								ERICA-HR	ERICA-HR	ERICA-HR		
								5-25-11	6-3-11	6-10-11		
								Control	Control	Control		
								Percent	Percent	Percent		
								5 DA-A	14 DA-A	21 DA-A		
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code			
1	10 GPA									96 bc	97 a-d	98 a
1	XR 11003 - 30 PSI - 7.7 MPH											
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8"MT	A			
1	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"MT	A			
1	MSO (NOBLE)	100	SL	1	pt/a	1	pt/a	6-8"MT	A			
1	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8"MT	A			
2	10 GPA									97 abc	97 a-d	97 ab
2	TT 11002 - 40 PSI - 5.94 MPH											
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8"MT	A			
2	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"MT	A			
2	MSO (NOBLE)	100	SL	1	pt/a	1	pt/a	6-8"MT	A			
2	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8"MT	A			
3	10 GPA									95 bc	95 b-e	95 ab
3	AIXR 11002 - 40 PSI - 5.94 MPH											
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8"MT	A			
3	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"MT	A			
3	MSO (NOBLE)	100	SL	1	pt/a	1	pt/a	6-8"MT	A			
3	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8"MT	A			
4	10 GPA									95 c	95 cde	96 ab
4	AI 11003 - 50 PSI - 10.1 MPH											
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8"MT	A			
4	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"MT	A			
4	MSO (NOBLE)	100	SL	1	pt/a	1	pt/a	6-8"MT	A			
4	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8"MT	A			
5	10 GPA									95 bc	96 a-e	96 ab
5	TTI 11002 - 40 PSI - 5.94 MPH											
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8"MT	A			
5	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"MT	A			
5	MSO (NOBLE)	100	SL	1	pt/a	1	pt/a	6-8"MT	A			
5	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8"MT	A			
6	10 GPA									96 abc	97 a-d	97 a
6	XR 11003 - 30 PSI - 7.7 MPH											
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8"MT	A			
6	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"MT	A			
6	DESTINY HC	100	SL	1	pt/a	1	pt/a	6-8"MT	A			
6	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8"MT	A			
7	10 GPA									96 bc	96 a-e	96 ab
7	TT 11002 - 40 PSI - 5.94 MPH											
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8"MT	A			
7	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"MT	A			
7	DESTINY HC	100	SL	1	pt/a	1	pt/a	6-8"MT	A			
7	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8"MT	A			
8	10 GPA									96 abc	95 de	92 c
8	AIXR 11002 - 40 PSI - 5.94 MPH											
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8"MT	A			
8	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"MT	A			
8	DESTINY HC	100	SL	1	pt/a	1	pt/a	6-8"MT	A			
8	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8"MT	A			
9	10 GPA									97 ab	97 a-d	97 a
9	AI 11003 - 50 PSI - 10.1 MPH											
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8"MT	A			
9	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"MT	A			
9	DESTINY HC	100	SL	1	pt/a	1	pt/a	6-8"MT	A			
9	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8"MT	A			
10	10 GPA									96 abc	96 a-e	94 bc
10	TTI 11002 - 40 PSI - 5.94 MPH											
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8"MT	A			
10	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"MT	A			
10	DESTINY HC	100	SL	1	pt/a	1	pt/a	6-8"MT	A			
10	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8"MT	A			

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Pest Code	Crop Code	Rating Date	Rating Data Type	Rating Unit	Rating Timing	Trt-Eval Interval	ERICA-HR					
							5-25-11 Control Percent	6-3-11 Control Percent	6-10-11 Control Percent			
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	5 DA-A	14 DA-A	21 DA-A
11	10 GPA									96 bc	97 a-d	97 ab
11	XR 11003 - 30 PSI - 7.7 MPH											
11	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8"	MT A			
11	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"	MT A			
11	DESTINY HC	100	SL	1	pt/a	1	pt/a	6-8"	MT A			
11	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	6-8"	MT A			
11	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8"	MT A			
12	10 GPA									98 a	98 a	98 a
12	TT 11002 - 40 PSI - 5.94 MPH											
12	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8"	MT A			
12	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"	MT A			
12	DESTINY HC	100	SL	1	pt/a	1	pt/a	6-8"	MT A			
12	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	6-8"	MT A			
12	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8"	MT A			
13	10 GPA									96 abc	94 e	91 c
13	AIXR 11002 - 40 PSI - 5.94 MPH											
13	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8"	MT A			
13	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"	MT A			
13	DESTINY HC	100	SL	1	pt/a	1	pt/a	6-8"	MT A			
13	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	6-8"	MT A			
13	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8"	MT A			
14	10 GPA									95 c	95 b-e	95 ab
14	AI 11003 - 50 PSI - 10.1 MPH											
14	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8"	MT A			
14	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"	MT A			
14	DESTINY HC	100	SL	1	pt/a	1	pt/a	6-8"	MT A			
14	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	6-8"	MT A			
14	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8"	MT A			
15	10 GPA									96 bc	95 b-e	95 ab
15	TT1 11002 - 40 PSI - 5.94 MPH											
15	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8"	MT A			
15	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"	MT A			
15	DESTINY HC	100	SL	1	pt/a	1	pt/a	6-8"	MT A			
15	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	6-8"	MT A			
15	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8"	MT A			
16	15 GPA									96 abc	98 ab	98 a
16	XR 11004 - 38 PSI - 7.7 MPH											
16	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8"	MT A			
16	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"	MT A			
16	MSO (NOBLE)	100	SL	1	pt/a	1	pt/a	6-8"	MT A			
16	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8"	MT A			
17	20 GPA									96 abc	97 abc	96 ab
17	XR 11006 - 30 PSI - 7.7 MPH											
17	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8"	MT A			
17	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"	MT A			
17	MSO (NOBLE)	100	SL	1	pt/a	1	pt/a	6-8"	MT A			
17	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8"	MT A			
18	15 GPA									96 abc	97 a-d	97 ab
18	AIXR 11003 - 40 PSI - 5.94 MPH											
18	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8"	MT A			
18	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"	MT A			
18	MSO (NOBLE)	100	SL	1	pt/a	1	pt/a	6-8"	MT A			
18	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8"	MT A			
19	20 GPA									98 a	98 a	97 a
19	AIXR 11004 - 40 PSI - 5.94 MPH											
19	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8"	MT A			
19	SHARPEN	2.85	SC	0.0111	lb ai/a	0.5	fl oz/a	6-8"	MT A			
19	MSO (NOBLE)	100	SL	1	pt/a	1	pt/a	6-8"	MT A			
19	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8"	MT A			
20	NONTREATED									0 d	0 f	0 d
LSD (P=.05)										1.7	2.4	2.7

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Trial ID: 11-FagerS-WSsharpAppli Location: Fager South

Pest Code										ERICA-HR	ERICA-HR	ERICA-HR
Crop Code												
Rating Date										5-25-11	6-3-11	6-10-11
Rating Data Type										Control	Control	Control
Rating Unit										Percent	Percent	Percent
Rating Timing												
Trt-Eval Interval										5 DA-A	14 DA-A	21 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Form Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code
	Replicate F								
	Replicate Prob(F)								
	Treatment F								
	Treatment Prob(F)								

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

Trial Comments

1. Protocol: Winfield Solutions.
2. Ratings: WC at 7, 14, and 21-28 DAT.
3. Soybeans can be planted after 14 DAT evaluation.
4. Application equipment details (spray volume, nozzle, PSI, speed) are per treatment, see treatment list.
5. Mixing; Treatments 1-5, 6-10, 11-15, 16+18, and 17+19 can be bulk mixed, allow for enough overage.
6. ERICA-HR = Herbicide-resistant marestail (glyphosate).