

Fierce plus Dicamba Burndown for Control of Glyphosate-Resistant Marestalk - Valent.

Trial ID: 15-FagerS-Valent-MD6406 Location: Murphysboro, IL Trial Year: 2015  
Investigator: Ronald F. Krausz

**Trial Status:** F one-year/final  
**Initiation Date:** 4-16-15  
**Completion Date:** 6-25-15

**Trial Location**

**City:** Murphysboro **Country:** USA  
**State/Prov.:** Illinois IL  
**Postal Code:** 62966

**Objectives:**

To demonstrate the effect of the addition of Valor, Fierce, and/or Cobra to an Extend herbicide program for residual and/or POST control of glyphosate resistant marestalk.

**Contacts**

**Study Director:** Ronald F. Krausz **Title:** Researcher/Farm Manager  
**Organization:** Belleville Research Center - Southern Illinois Univ Carbondale  
**Address:** 2036 Charles Lane **Phone No.:** 618-566-4761  
**City+State/Prov:** Belleville, IL **E-mail:** rkrausz@siu.edu  
**Postal Code:** 62221  
**Country:** USA

**Crop Description**

**Crop 1:** NONE - Non-crop \_  
**Variety:** NA

**Planting Method:** NA**Pest Description**

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

**Site and Design**

**Treated Plot Width:** 6.67 FT **Total Plot Width:** 10 FT **Site Type:** FIELD  
**Treated Plot Length:** 30 FT **Total Plot Length:** 30 FT **Experimental Unit:** 1 PLOT  
**Tillage Type:** NOTILL no-till  
**Study Design:** RACOBL Randomized Complete Block (RCB)  
**Replications:** 4  
**Untreated Arrangement:** INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	GLXMA	2014

**Maintenance**

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A

**Soil Description**

**Description Name:** Fager\_South\_2011 - SILT\_LOAM  
**% OM:** 1.87 **Texture:** SIL silt loam  
**pH:** 5.5 **Soil Name:** Alvin  
**CEC:** 7.06

**Additional Measured Elements**

Element	Quantity	Unit
P1	172	lb/A
K	446	lb/A

**Moisture and Weather Conditions**

**Overall Moisture Conditions:** ABONOR  
**Closest Weather Station:** SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 3.4 MI

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No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-1-15					7	DAY	33	76	F
2.	4-2-15	2.72	IN	RAIN	rain	2	DAY			
3.	4-6-15	1.65	IN	RAIN	rain	4	DAY			
4.	4-8-15					7	DAY	43	78	F
5.	4-13-15	0.15	IN	RAIN	rain	4	DAY			
6.	4-15-15					7	DAY	42	79	F
7.	4-19-15	0.89	IN	RAIN	rain	3	DAY			
8.	4-22-15					7	DAY	36	77	F
9.	4-25-15	0.26	IN	RAIN	rain	1	DAY			
10.	4-29-15					7	DAY	36	84	F
11.	5-6-15					7	DAY	49	85	F
12.	5-7-15	1.59	IN	RAIN	rain	5	DAY			
13.	5-13-15					7	DAY	45	83	F
14.	5-14-15	0.49	IN	RAIN	rain	5	DAY			
15.	5-20-15					7	DAY	44	85	F
16.	5-20-15	0.46	IN	RAIN	rain	1	DAY			
17.	5-24-15	0.46	IN	RAIN	rain	1	DAY			
18.	5-25-15	0.05	IN	RAIN	rain	1	DAY			
19.	5-27-15					7	DAY	55	84	F
20.	5-27-15	0.13	IN	RAIN	rain	1	DAY			
21.	5-29-15	0.07	IN	RAIN	rain	1	DAY			
22.	5-30-15	0.62	IN	RAIN	rain	1	DAY			
23.	6-3-15					7	DAY	53	89	F
24.	6-5-15	0.1	IN	RAIN	rain	1	DAY			
25.	6-8-15	1.13	IN	RAIN	rain	1	DAY			
26.	6-10-15					7	DAY	64	91	F
27.	6-13-15	0.39	IN	RAIN	rain	2	DAY			
28.	6-16-15	1.78	IN	RAIN	rain	2	DAY			
29.	6-19-15	3.17	IN	RAIN	rain	1	DAY			

**Application Description**

	A	B
<b>Application Date:</b>	4-16-15	5-28-15
<b>Appl. Start Time:</b>	16:30	9:15
<b>Appl. Stop Time:</b>	17:00	9:30
<b>Application Method:</b>	Spray	Spray
<b>Application Timing:</b>	4"MT	42DA-A
<b>Application Placement:</b>	BROFOL	BROFOL
<b>Applied By:</b>	EAE	EAE
<b>Air Temperature, Unit:</b>	79 F	78 F
<b>% Relative Humidity:</b>	66	81
<b>Wind Velocity, Unit:</b>	1 MPH	1 MPH
<b>Wind Direction:</b>	W	S
<b>Dew Presence (Y/N):</b>	N	N
<b>Soil Temperature, Unit:</b>	63 F	69 F
<b>Soil Moisture:</b>	NORMAL	NORMAL
<b>% Cloud Cover:</b>	0	95
<b>Next Moisture Occurred On:</b>	4-19-15	5-29-15
<b>Time to Next Moisture, Unit:</b>	3 DAY	36 HR

**Crop Stage At Each Application**

	A	B
<b>Crop 1 Code, BBCH Scale:</b>	NONE	NONE
<b>Stage Scale Used:</b>	DESC	DESC
<b>Stage Majority, Percent:</b>	NA	NA

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	<b>A</b>	<b>B</b>
<b>Pest 1 Code, Type, Scale:</b>	ERICA W	ERICA W
<b>Stage Majority, Percent:</b>	15	50
<b>Stage Minimum, Percent:</b>	9	25
<b>Stage Maximum, Percent:</b>	18	60
<b>Height, Unit:</b>	3 IN	8 IN
<b>Height Minimum, Maximum:</b>	2 4	2 12
<b>Density, Unit:</b>	6 FT2	6 FT2

**Application Equipment**

	<b>A</b>	<b>B</b>
<b>Appl. Equipment:</b>	CO2 sprayer	CO2 sprayer
<b>Equipment Type:</b>	BACSPR	BACSPR
<b>Operation Pressure, Unit:</b>	30 PSI	30 PSI
<b>Nozzle Type:</b>	TTI	TTI
<b>Nozzle Size:</b>	11002	11002
<b>Boom Length, Unit:</b>	6.67 FT	6.67 FT
<b>Spray Volume, Unit:</b>	15 GPA	15 GPA

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Pest Code									ERICA-HR	ERICA-HR	ERICA-HR	ERICA-HR	
Crop Code									4-30-15	5-28-15	6-11-15	6-25-15	
Rating Date									Control	Control	Control	Control	
Rating Type									Percent	Percent	Percent	Percent	
Rating Unit									14 DA-A	0 DA-B	14 DA-B	28 DA-B	
Rating Timing									42 DA-A	42 DA-A	56 DA-A	70 DA-A	
Trt-Eval Interval													
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code				
1	NONTREATED									0	0	0	0
2	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	4"MT	A	90 d	0 d	84 e	18 a
	CLARITY	4	SL	0.5	lb ae/a	1	pt/a	4"MT	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	4"MT	A				
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	42DA-A	B				
	CLARITY	4	SL	0.5	lb ae/a	1	pt/a	42DA-A	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	42DA-A	B				
3	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	4"MT	A	93 ab	24 c	89 cd	19 a
	CLARITY	4	SL	0.5	lb ae/a	1	pt/a	4"MT	A				
	VALOR SX	51	WG	0.08	lb ai/a	2.5	oz/a	4"MT	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	4"MT	A				
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	42DA-A	B				
	CLARITY	4	SL	0.5	lb ae/a	1	pt/a	42DA-A	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	42DA-A	B				
4	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	4"MT	A	91 cd	0 d	84 de	11 a
	CLARITY	4	SL	0.5	lb ae/a	1	pt/a	4"MT	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	4"MT	A				
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	42DA-A	B				
	CLARITY	4	SL	0.5	lb ae/a	1	pt/a	42DA-A	B				
	COBRA	2	EC	0.195	lb ai/a	12.5	fl oz/a	42DA-A	B				
	COC (PRIME OIL)	100	SL	1	pt/a	1	pt/a	42DA-A	B				
5	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	4"MT	A	91 bc	38 bc	92 abc	16 a
	CLARITY	4	SL	0.5	lb ae/a	1	pt/a	4"MT	A				
	VALOR SX	51	WG	0.08	lb ai/a	2.5	oz/a	4"MT	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	4"MT	A				
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	42DA-A	B				
	CLARITY	4	SL	0.5	lb ae/a	1	pt/a	42DA-A	B				
	COBRA	2	EC	0.195	lb ai/a	12.5	fl oz/a	42DA-A	B				
	COC (PRIME OIL)	100	SL	1	pt/a	1	pt/a	42DA-A	B				
6	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	4"MT	A	93 ab	77 a	90 bc	18 a
	CLARITY	4	SL	0.5	lb ae/a	1	pt/a	4"MT	A				
	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	4"MT	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	4"MT	A				
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	42DA-A	B				
	CLARITY	4	SL	0.5	lb ae/a	1	pt/a	42DA-A	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	42DA-A	B				
7	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	4"MT	A	93 ab	82 a	95 a	25 a
	CLARITY	4	SL	0.5	lb ae/a	1	pt/a	4"MT	A				
	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	4"MT	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	4"MT	A				
	ROUNDUP POWERMAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	42DA-A	B				
	CLARITY	4	SL	0.5	lb ae/a	1	pt/a	42DA-A	B				
	COBRA	2	EC	0.195	lb ai/a	12.5	fl oz/a	42DA-A	B				
	COC (PRIME OIL)	100	SL	1	pt/a	1	pt/a	42DA-A	B				

Means followed by same letter do not significantly differ (P=0.05, LSD)

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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Rating Unit								Percent	Percent	Percent	Percent		
Rating Timing								14 DA-A	0 DA-B	14 DA-B	28 DA-B		
Trt-Eval Interval								14 DA-A	42 DA-A	56 DA-A	70 DA-A		
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code				
8	ROUNDUP POWERMAX V-10404	4.5	SL	1.13 lb ae/a		32 fl oz/a		4"MT	A	94 a	44 b	93 ab	21 a
	NIS (ACTIVATOR 90)	100	SL	0.25 % v/v		0.25 % v/v		4"MT	A				
	ROUNDUP POWERMAX	4.5	SL	1.13 lb ae/a		32 fl oz/a		42DA-A	B				
	CLARITY	4	SL	0.5 lb ae/a		1 pt/a		42DA-A	B				
	NIS (ACTIVATOR 90)	100	SL	0.25 % v/v		0.25 % v/v		42DA-A	B				
LSD P=.05								1.6	17.5	4.4	14.9		
Standard Deviation								1.1	11.8	2.9	10.0		
CV								1.18	31.32	3.29	55.12		
Replicate F								12.722	0.075	0.081	1.193		
Replicate Prob(F)								0.0001	0.9728	0.9694	0.3406		
Treatment F								7.739	31.418	8.576	0.720		
Treatment Prob(F)								0.0003	0.0001	0.0002	0.6385		

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Trial Comments

1. Protocol: Valent (VUSA2015FIERCEMD64.06).
2. Ratings:  
WC at 14, 42, 56, and 70 DA-A  
Rate 4"MT (A) before 42DA-A (B) application.  
Photos at 42 and 70 DA-A.  
No CI (non-crop).
3. No yield (non-crop).
4. No blanket burndown, no blankets for grass, possible blanket after last rating.
5. Application timings;  
4"MT = 4 inch marestalk or about 14 days before a normal planting date.  
42DA-A = 42 days after application A or about 28 days after a normal planting date.  
ERICA-HR = Herbicide-resistant marestalk (glyphosate).
6. Rainfall following the 4"MT application was 0.89 inch over 3 days beginning 3 days later.  
Rainfall following the 42DA-A application was 0.69 inch over 2 days beginning 36 hours later.
7. Not harvested, non-crop.