

Fierce Evaluation in No-Till Corn.

Trial ID: 11-11A-ME50

Location: Belleville Res. Center

Investigator: Bryan Young, Professor, Southern Illinois University, bgyoung@siu.edu
 City State Zip Country: Belleville IL 62221 USA
 Trial Status: FINAL Initiation Date: 5-13-11

Objectives: Evaluate Fierce at different rates and combinations with atrazine for weed control in no-till corn.

Crop 1: ZEAMD Dent corn Variety: DKC 61-21 GENSS Description: RR2/LL
 Planting Method: SEEDD Planting Date: 6-5-11
 Rate, Unit: 28000 S/A Depth, Unit: 1.5 IN
 Row Spacing, Unit: 30 IN

Pest 1 Type: W Code: AMBTR Ambrosia trifida L. ragweed, giant
 Pest 2 Type: W Code: GGGAN grasses, annual
 Pest Description: Mixture of SETFA and PANDI
 Pest 3 Type: W Code: AMATA Amaranthus rudis Sauer waterhemp, common
 Pest 4 Type: W Code: AMBEL Ambrosia artemisiifolia L. ragweed, common
 Pest 5 Type: W Code: IPOSS morningglory, species
 Pest Description: Mixture of IPOHE and IPOLA

Plot Width, Unit: 10 FT Site Type: FIELD
 Plot Length, Unit: 25 FT Tillage Type: NO-TILL
 Replications: 3 Study Design: Randomized Complete Block

Prior Crops, Year
 1. GLXMA 2010

Field Prep./Maintenance: N 150 LB/A, P205 0 LB/A, K20 150 LB/A

% OM: 1.7 Texture: SILT LOAM
 pH: 7 Soil Name: PIERRON
 CEC: 9 Fert. Level: P1: 84 LB/A, K: 270 LB/A

Application Description

	A	B	C
Application Date:	5-13-11	5-23-11	7-5-11
Time of Day:	8:00	18:00	14:00
Application Method:	Spray	Spray	Spray
Application Timing:	7DBP	PRE	42DAP
Application Placement:	BROFOL	BROFOL	BROFOL
Applied By:	RFK	RFK	JRK
Air Temperature, Unit:	66 F	71 F	87 F
% Relative Humidity:	81	84	55
Wind Velocity, Unit:	0 MPH	0 MPH	2 MPH
Wind Direction:			E
Dew Presence (Y/N):	N	N	N
Soil Temperature, Unit:	69 F	67 F	79 F
Soil Moisture:	ABONOR	ABONOR	ABONOR
% Cloud Cover:	0	0	0
	13-5-11	23-5-11	5-7-11
Crop stage at application:	NA	NA	V5
Height Min, Max (inch):			10 11

Pest Stage At Each Application

	5-13-11	5-23-11	7-5-11
Application Date:	5-13-11	5-23-11	7-5-11
Weed Code:	AMBTR	AMBTR	AMBTR
Stage Majority (leaves):	NA	3	10
Stage Min, Max:		2 4	2 20
Height Majority:		1 IN	20 IN
Height Min, Max:		0.5 1	2 56
Density, Unit:		0.01 FT2	2 FT2
Weed Code:	GGGAN	GGGAN	GGGAN
Stage Majority (leaves):	NA	1	10
Stage Min, Max:		1 2	2 20
Height Majority:		1 IN	12 IN
Height Min, Max:		0.5 1	4 24
Density, Unit:		0.01 FT2	1 FT2
Weed Code:	AMATA	AMATA	AMATA
Stage Majority (leaves):	NA	NA	10
Stage Min, Max:			1 20
Height Majority:			10 IN
Height Min, Max:			0.5 24
Density, Unit:			0.3 FT2
Weed Code:	AMBEL	AMBEL	AMBEL
Stage Majority (leaves):	NA	NA	NA
Weed Code:	IPOSS	IPOSS	IPOSS
Stage Majority (leaves):	NA	NA	6
Stage Min, Max:			1 10
Height Majority:			5 IN
Height Min, Max:			1 7
Density, Unit:			0.01 FT2

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Application Equipment

Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Operating Pressure:	30 PSI	30 PSI	30 PSI
Nozzle Type:	Flat fan	Flat fan	Flat fan
Nozzle Size:	XR 8002	XR 8002	XR 8002
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

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Pest Code	Crop Code	Rating Date	Rating Data Type	Rating Unit	Rating Timing	Trt-Eval Interval	ZEAMD 6-19-11 Injury Percent	ZEAMD 7-3-11 Injury Percent	ZEAMD 7-17-11 Injury Percent	AMBTR 6-20-11 Control Percent	AMBTR 7-4-11 Control Percent	AMBTR 7-18-11 Control Percent
							14 DAP-2	28 DAP-2	42 DAP-2	28 DAP-1	42 DAP-1	56 DAP-1

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
1	NONTREATED									0 a	0 a	0 a	0 d	0 d	0 d
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A	0 a	0 a	0 a	77 c	60 c	89 abc
2	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	7DBP	A						
2	AMS	100	SG	2.5	lb/a	2.5	lb/a	7DBP	A						
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	42DAP	C						
2	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C						
3	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A	0 a	0 a	0 a	96 a	83 ab	94 ab
3	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	7DBP	A						
3	AATREX	4	SC	1	lb ai/a	1	qt/a	7DBP	A						
3	AMS	100	SG	2.5	lb/a	2.5	lb/a	7DBP	A						
3	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	42DAP	C						
3	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C						
4	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A	0 a	0 a	0 a	85 bc	68 bc	86 c
4	FIERCE	76	WG	0.178	lb ai/a	3.75	oz/a	7DBP	A						
4	AMS	100	SG	2.5	lb/a	2.5	lb/a	7DBP	A						
4	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	42DAP	C						
4	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C						
5	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A	0 a	0 a	0 a	82 c	62 c	87 bc
5	FIERCE	76	WG	0.214	lb ai/a	4.5	oz/a	7DBP	A						
5	AMS	100	SG	2.5	lb/a	2.5	lb/a	7DBP	A						
5	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	42DAP	C						
5	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C						
6	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	B	0 a	0 a	0 a	94 ab	86 a	97 a
6	HARNESS XTRA 5.6	5.6	EC	1.96	lb ai/a	1.4	qt/a	PRE	B						
6	AMS	100	SG	2.5	lb/a	2.5	lb/a	PRE	B						
6	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	42DAP	C						
6	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C						
7	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	B	0 a	0 a	0 a	95 ab	80 ab	96 a
7	LEXAR	3.7	SC	1.85	lb ai/a	2	qt/a	PRE	B						
7	AMS	100	SG	2.5	lb/a	2.5	lb/a	PRE	B						
7	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	42DAP	C						
7	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C						
8	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	B	0 a	0 a	0 a	97 a	88 a	95 ab
8	CORVUS	2.62	SC	0.0614	lb ai/a	3	fl oz/a	PRE	B						
8	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	B						
8	AMS	100	SG	2.5	lb/a	2.5	lb/a	PRE	B						
8	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	42DAP	C						
8	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C						
9	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	B	0 a	0 a	0 a	94 ab	86 a	96 a
9	VERDICT	5.57	EC	0.566	lb ai/a	13	fl oz/a	PRE	B						
9	AMS	100	SG	2.5	lb/a	2.5	lb/a	PRE	B						
9	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	42DAP	C						
9	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C						
LSD (P=.05)										0.0	0.0	0.0	10.6	16.1	7.7
Replicate F										0.000	0.000	0.000	5.601	11.071	5.638
Replicate Prob(F)										1.0000	1.0000	1.0000	0.0143	0.0010	0.0140
Treatment F										0.000	0.000	0.000	75.696	26.537	145.791
Treatment Prob(F)										1.0000	1.0000	1.0000	0.0001	0.0001	0.0001

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

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		GGGAN						AMATA							
		GGGAN		GGGAN		GGGAN		AMATA		AMATA		AMATA			
		6-20-11		7-4-11		7-18-11		6-20-11		7-4-11		7-18-11			
		Control		Control		Control		Control		Control		Control			
		Percent		Percent		Percent		Percent		Percent		Percent			
		28 DAP-1		42 DAP-1		56 DAP-1		28 DAP-1		42 DAP-1		56 DAP-1			
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
1	NONTREATED									0 b	0 d	0 c	0 c	0 d	0 b
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A	96 a	90 bc	97 b	82 b	83 bc	92 a
2	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	7DBP	A						
2	AMS	100	SG	2.5	lb/a	2.5	lb/a	7DBP	A						
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	42DAP	C						
2	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C						
3	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A	97 a	94 ab	98 ab	99 a	96 a	94 a
3	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	7DBP	A						
3	AATREX	4	SC	1	lb ai/a	1	qt/a	7DBP	A						
3	AMS	100	SG	2.5	lb/a	2.5	lb/a	7DBP	A						
3	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	42DAP	C						
3	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C						
4	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A	98 a	96 a	97 b	93 a	90 abc	96 a
4	FIERCE	76	WG	0.178	lb ai/a	3.75	oz/a	7DBP	A						
4	AMS	100	SG	2.5	lb/a	2.5	lb/a	7DBP	A						
4	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	42DAP	C						
4	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C						
5	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A	96 a	95 a	98 ab	96 a	94 ab	98 a
5	FIERCE	76	WG	0.214	lb ai/a	4.5	oz/a	7DBP	A						
5	AMS	100	SG	2.5	lb/a	2.5	lb/a	7DBP	A						
5	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	42DAP	C						
5	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C						
6	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	B	95 a	88 c	98 a	93 a	88 abc	93 a
6	HARNESS XTRA 5.6	5.6	EC	1.96	lb ai/a	1.4	qt/a	PRE	B						
6	AMS	100	SG	2.5	lb/a	2.5	lb/a	PRE	B						
6	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	42DAP	C						
6	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C						
7	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	B	96 a	90 bc	99 a	99 a	93 abc	96 a
7	LEXAR	3.7	SC	1.85	lb ai/a	2	qt/a	PRE	B						
7	AMS	100	SG	2.5	lb/a	2.5	lb/a	PRE	B						
7	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	42DAP	C						
7	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C						
8	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	B	97 a	96 a	99 a	93 a	83 bc	93 a
8	CORVUS	2.62	SC	0.0614	lb ai/a	3	fl oz/a	PRE	B						
8	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	B						
8	AMS	100	SG	2.5	lb/a	2.5	lb/a	PRE	B						
8	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	42DAP	C						
8	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C						
9	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	B	96 a	90 bc	98 a	94 a	82 c	93 a
9	VERDICT	5.57	EC	0.566	lb ai/a	13	fl oz/a	PRE	B						
9	AMS	100	SG	2.5	lb/a	2.5	lb/a	PRE	B						
9	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	42DAP	C						
9	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C						
LSD (P=.05)										3.5	4.7	1.3	8.8	12.1	7.6
Replicate F										0.772	4.434	6.754	1.421	4.045	3.299
Replicate Prob(F)										0.4784	0.0294	0.0075	0.2705	0.0379	0.0632
Treatment F										771.393	394.069	5646.804	116.260	55.032	153.747
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

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

Fierce Evaluation in No-Till Corn.

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Pest Code	AMBEL	AMBEL	AMBEL	IPOSS	IPOSS	IPOSS
Crop Code						
Rating Date	6-20-11	7-4-11	7-18-11	6-20-11	7-4-11	7-18-11
Rating Data Type	Control	Control	Control	Control	Control	Control
Rating Unit	Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing						
Trt-Eval Interval	28 DAP-1	42 DAP-1	56 DAP-1	28 DAP-1	42 DAP-1	56 DAP-1

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
1	NONTREATED										0 b	0 b	0 b	0 d	0 c 0 c
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A	99 a	99 a	99 a	53 c	53 b	74 b
2	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	7DBP	A						
2	AMS	100	SG	2.5	lb/a	2.5	lb/a	7DBP	A						
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	42DAP	C						
2	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C						
3	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A	99 a	99 a	99 a	92 ab	91 a	85 ab
3	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	7DBP	A						
3	AATREX	4	SC	1	lb ai/a	1	qt/a	7DBP	A						
3	AMS	100	SG	2.5	lb/a	2.5	lb/a	7DBP	A						
3	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	42DAP	C						
3	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C						
4	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A	98 a	98 a	99 a	94 ab	94 a	95 a
4	FIERCE	76	WG	0.178	lb ai/a	3.75	oz/a	7DBP	A						
4	AMS	100	SG	2.5	lb/a	2.5	lb/a	7DBP	A						
4	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	42DAP	C						
4	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C						
5	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A	99 a	99 a	99 a	94 ab	90 a	92 a
5	FIERCE	76	WG	0.214	lb ai/a	4.5	oz/a	7DBP	A						
5	AMS	100	SG	2.5	lb/a	2.5	lb/a	7DBP	A						
5	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	42DAP	C						
5	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C						
6	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	B	98 a	96 a	98 a	87 b	87 a	90 a
6	HARNESS XTRA 5.6	5.6	EC	1.96	lb ai/a	1.4	qt/a	PRE	B						
6	AMS	100	SG	2.5	lb/a	2.5	lb/a	PRE	B						
6	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	42DAP	C						
6	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C						
7	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	B	99 a	99 a	99 a	98 a	92 a	97 a
7	LEXAR	3.7	SC	1.85	lb ai/a	2	qt/a	PRE	B						
7	AMS	100	SG	2.5	lb/a	2.5	lb/a	PRE	B						
7	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	42DAP	C						
7	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C						
8	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	B	99 a	99 a	99 a	96 ab	94 a	94 a
8	CORVUS	2.62	SC	0.0614	lb ai/a	3	fl oz/a	PRE	B						
8	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	B						
8	AMS	100	SG	2.5	lb/a	2.5	lb/a	PRE	B						
8	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	42DAP	C						
8	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C						
9	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	B	99 a	99 a	99 a	94 ab	94 a	95 a
9	VERDICT	5.57	EC	0.566	lb ai/a	13	fl oz/a	PRE	B						
9	AMS	100	SG	2.5	lb/a	2.5	lb/a	PRE	B						
9	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	42DAP	C						
9	AMS	100	SG	2.5	lb/a	2.5	lb/a	42DAP	C						
LSD (P=.05)										1.5	3.4	0.8	10.7	11.9	14.5
Replicate F										0.571	0.601	0.571	1.423	0.722	2.284
Replicate Prob(F)										0.5758	0.5602	0.5758	0.2700	0.5012	0.1341
Treatment F										4180.072	860.411	16760.144	82.312	63.529	40.689
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

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

Trial Comments

1. Protocol: Valent (Fierce MD 68.01).
2. Ratings: CI at 14 and 28 DAP; WC at 28, 42, and 56 DAP.
3. Blanket application of Roundup PowerMax (22 fl oz/A) plus 2,4-D (1 pt/A) at 14 DBP to entire study area 10 ft wide was applied 4-29-11.

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4. Crop was planted 5-23-11 then replanted 6-5-11.

DAP = Days after planting.

For crop injury ratings DAP-2 is days after replant.

Crop injury was evaluated at 13 days after the first planting with no observable injury, crop was then replanted.

For weed control ratings DAP-1 is days after first planting.

5. GGGAN = Annual grasses including SETFA (giant foxtail) and PANDI (fall panicum).

IPOSS = Morningglory species including IPOHE (ivyleaf morningglory) and IPOLA (pitted morningglory).