

Syngenta Herbicide plus Quadris V5 Application Evaluation.

Trial ID: 10-T3-N130

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:** 05-31-10

Objectives: Evaluate Quadris tank-mixed with Halex GT, Callisto, or Touchdown Total applied at V5 corn for plant performance, crop safety and yield.

Crop 1: ZEAMD Dent corn **Variety:** DKC 64-83 GENSS **Description:** RR2/LL
Planting Method: SEEDED **Planting Date:** 05-31-10
Rate, Unit: 32000 S/A **Depth, Unit:** 1.5 IN
Row Spacing, Unit: 30 IN

Pest 1 Type: D **Code:** CERCZM Cercospora zeae-maydis Gray leaf spot of corn

Plot Width, Unit: 10 FT **Site Type:** FIELD
Plot Length, Unit: 35 FT **Tillage Type:** REDUCED-TILL
Replications: 4 **Study Design:** Randomized Complete Block

Prior Crops, Year
 1. ZEAMD 2009

Field Prep./Maintenance: N 200 LB/A, P205 0 LB/A, K20 0 LB/A

% OM: 1.8 **Texture:** SILT LOAM
pH: 6.2 **Soil Name:** BETHALTO
CEC: 13 **Fert. Level:** P1: 94 LB/A, K: 403 LB/A

Application Description A

Application Date: 06-18-10
Time of Day: 15:00
Application Method: Spray
Application Timing: V5
Application Placement: BROFOL
Applied By: JR
Air Temperature, Unit: 92 F
% Relative Humidity: 80
Wind Velocity, Unit: 5 MPH
Wind Direction: S
Dew Presence (Y/N): N
Soil Moisture: ABONOR
% Cloud Cover: 0

Crop stage at application: 06-18-10 V5
Height Min, Max (inch): 12 14

Pest Stage At Each Application

Application Date: 06-18-10
Weed Code: CERCZM
Stage Majority (leaves): NA

Application Equipment

Appl. Equipment: CO2 sprayer
Operating Pressure: 30 PSI
Nozzle Type: Flat fan
Nozzle Size: XR 8002
Boom Length, Unit: 5 FT
Spray Volume, Unit: 15 GPA

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Pest Code										ZEAMD	ZEAMD	ZEAMD	ZEAMD	ZEAMD	ZEAMD	ZEAMD	
Crop Code										10-14-10	10-14-10	10-14-10	06-25-10	07-02-10	07-16-10	06-25-10	
Rating Date										Moisture	Test wt.	Yield	Injury	Injury	Injury	Vigor	
Rating Data Type										Percent	lb/bu	bu/A	Percent	Percent	Percent	Percent	
Rating Unit																	
Rating Timing																	
Trt-Eval Interval													7 DA-A	14 DA-A	28 DA-A	7 DA-A	
Trt	Treatment	Form	Form		Rate	Other	Other	Growth	Appl								
No.	Name	Conc	Type	Rate	Unit	Rate	Rate	Unit	Stage	Code							
1	NONTREATED										13.5 b	61.3 a	140 a	0 c	0 b	0 a 50 a	
2	QUADRI	2.08	SC	0.0975	lb ai/a		6 fl oz/a	V5	A		13.8 ab	61.1 ab	134 a	0 c	0 b	0 a 50 a	
3	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	V5	A		13.7 ab	61.2 ab	136 a	1 bc	0 b	0 a 49 ab	
3	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	V5	A								
3	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V5	A								
4	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	V5	A		13.4 b	61.5 a	144 a	0 c	0 b	0 a 49 ab	
4	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	V5	A								
4	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V5	A								
5	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	V5	A		13.6 ab	61.2 ab	131 a	0 c	0 b	0 a 49 ab	
5	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V5	A								
6	QUADRI	2.08	SC	0.0975	lb ai/a	6	fl oz/a	V5	A		13.7 ab	61.2 ab	142 a	2 b	0 b	0 a 48 ab	
6	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	V5	A								
6	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	V5	A								
6	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V5	A								
7	QUADRI	2.08	SC	0.0975	lb ai/a	6	fl oz/a	V5	A		13.5 b	61.4 a	132 a	1 bc	0 b	0 a 49 ab	
7	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	V5	A								
7	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	V5	A								
7	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V5	A								
8	QUADRI	2.08	SC	0.0975	lb ai/a	6	fl oz/a	V5	A		13.4 b	61.4 a	129 a	3 a	1 a	0 a 47 b	
8	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	V5	A								
8	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V5	A								
9	QUADRI	2.08	SC	0.0975	lb ai/a	6	fl oz/a	V5	A		13.5 b	61.4 a	128 a	1 bc	0 b	0 a 50 a	
9	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	V5	A								
9	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	V5	A								
9	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V5	A								
10	QUADRI	2.08	SC	0.0975	lb ai/a	6	fl oz/a	V5	A		13.5 b	61.3 a	141 a	1 bc	0 b	0 a 49 ab	
10	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	V5	A								
10	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	V5	A								
10	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V5	A								
11	QUADRI	2.08	SC	0.0975	lb ai/a	6	fl oz/a	V5	A		13.4 b	61.5 a	131 a	1 bc	0 b	0 a 50 a	
11	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	V5	A								
11	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V5	A								
12	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	A		14.0 a	60.8 b	131 a	1 bc	0 b	0 a 49 ab	
12	HEADLINE	2.09	EC	0.098	lb ai/a	6	fl oz/a	V5	A								
12	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	V5	A								
12	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V5	A								
LSD (P=.05)											0.45	0.47	17.3	1.2	0.4	0.0	2.9
Replicate F											2.390	2.830	5.455	1.453	1.000	0.000	0.269
Replicate Prob(F)											0.0864	0.0534	0.0037	0.2453	0.4051	1.0000	0.8472
Treatment F											1.524	1.467	0.798	4.472	2.455	0.000	0.944
Treatment Prob(F)											0.1696	0.1909	0.6413	0.0004	0.0228	1.0000	0.5125

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

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Pest Code	Crop Code	Rating Date	Rating Data Type	Rating Unit	Rating Timing	Trt-Eval Interval	CERCZM ZEAMD 08-18-10 Incidence Percent 28 DA R1 61 DA-A	CERCZM ZEAMD 08-18-10 Severity Percent 28 DA R1 61 DA-A	CERCZM ZEAMD 09-01-10 Incidence Percent 42 DA R1 75 DA-A	CERCZM ZEAMD 09-01-10 Severity Percent 42 DA R1 75 DA-A	ZEAMD 09-13-10 Greenness Percent R5	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code			
1	NONTREATED									90 a	14 a	90 a
2	QUADRIIS	2.08	SC	0.0975	lb ai/a	6	fl oz/a	V5	A	90 a	14 a	90 a
3	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	V5	A	90 a	14 a	90 a
3	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	V5	A			19 b
3	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V5	A			5 a
4	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	V5	A	90 a	13 a	90 a
4	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	V5	A			20 ab
4	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V5	A			5 a
5	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	V5	A	90 a	13 a	90 a
5	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V5	A			20 ab
6	QUADRIIS	2.08	SC	0.0975	lb ai/a	6	fl oz/a	V5	A	90 a	14 a	90 a
6	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	V5	A			19 b
6	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	V5	A			5 a
6	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V5	A			
7	QUADRIIS	2.08	SC	0.0975	lb ai/a	6	fl oz/a	V5	A	90 a	14 a	90 a
7	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	V5	A			21 ab
7	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	V5	A			5 a
7	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V5	A			
8	QUADRIIS	2.08	SC	0.0975	lb ai/a	6	fl oz/a	V5	A	90 a	14 a	90 a
8	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	V5	A			20 ab
8	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V5	A			5 a
9	QUADRIIS	2.08	SC	0.0975	lb ai/a	6	fl oz/a	V5	A	90 a	14 a	90 a
9	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	V5	A			19 b
9	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	V5	A			5 a
9	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V5	A			
10	QUADRIIS	2.08	SC	0.0975	lb ai/a	6	fl oz/a	V5	A	90 a	13 a	90 a
10	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	V5	A			21 ab
10	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	V5	A			5 a
10	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V5	A			
11	QUADRIIS	2.08	SC	0.0975	lb ai/a	6	fl oz/a	V5	A	90 a	14 a	90 a
11	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	V5	A			20 ab
11	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V5	A			5 a
12	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5	A	90 a	15 a	90 a
12	HEADLINE	2.09	EC	0.098	lb ai/a	6	fl oz/a	V5	A			19 b
12	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	V5	A			5 a
12	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V5	A			
LSD (P=.05)										0.0	3.1	0.0
Replicate F										0.000	4.840	0.000
Replicate Prob(F)										1.0000	0.0067	1.0000
Treatment F										0.000	0.440	0.000
Treatment Prob(F)										1.0000	0.9259	1.0000

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

Trial Comments

1. Protocol: Syngenta (FDAT02A).
2. Ratings: Percent phytotoxicity 5-7, 14, and 28 DAT; Percent vigor 7-14 DAT (check = 50%).
3. Disease severity at 28 and 42 days after R1.
Rate the severity on the upper portions of the plant from 3 leaves below the ear and up.
Rate early-season disease if present.
4. Senescence: make an assessment for plant greening effects when the plants are at R5 before dry down.
5. Planting: use higher seeding rate (32,000 s/A) and nitrogen rate.

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6. Blanket preemergence application of Bicep II Magnum (2.1 to 2.4 qt/A) to all plots 10 ft wide was applied 6-2-10.
Apply Touchdown Total to all plots if necessary.
7. Apply Callisto Extra (24 oz/A) if corn is less than 12 inch at application timing A.
8. Yield.
9. CERCZM = Gray leaf spot (*Cercospora zeae-maydis*).
10. Harvested 10-14-10, (2) 30 inch rows by 32 ft.