

Corn, Tilled Weed Control Studies

Southern Illinois University

BASF Corn Demonstration.

Trial ID: 10-1-W200

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: 06-05-10

Objectives: Demonstrate the performance of BASF crop protection products in corn.

Crop 1: ZEAMD Dent corn Variety: DKC 64-82 Description: RR2
Planting Method: SEEDED Planting Date: 06-05-10
Rate, Unit: 28000 S/A Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN

Pest 1 Type: W Code: PANDI Panicum dichotomiflorum Michx. panicum, fall
Pest 2 Type: W Code: AMATA Amaranthus rudis Sauer waterhemp, common
Pest 3 Type: W Code: ABUTH Abutilon theophrasti Medicus velvetleaf
Pest 4 Type: W Code: AMBTR Ambrosia trifida L. ragweed, giant

Plot Width, Unit: 15 FT Site Type: FIELD
Plot Length, Unit: 60 FT Tillage Type: REDUCED-TILL
Replications: 6 Study Design: Randomized Complete Block

Prior Crops, Year

1. GLXMA 2009

Field Prep./Maintenance: N 150 LB/A, P205 0 LB/A, K20 100 LB/A

% OM: 1.5 Texture: SILT LOAM
pH: 6.4 Soil Name: WINFIELD
CEC: 6 Fert. Level: P1: 72 LB/A, K: 313 LB/A

Application Description

	A	B	C
Application Date:	06-05-10	06-23-10	07-26-10
Time of Day:	16:30	12:30	11:00
Application Method:	Spray	Spray	Spray
Application Timing:	PRE	12-14"CN	VT
Application Placement:	BROSOI	BROFOL	BROFOL
Applied By:	DKP NVH	JW	RFK
Air Temperature, Unit:	84 F	90 F	84 F
% Relative Humidity:	92	82	60
Wind Velocity, Unit:	5 MPH	7 MPH	0 MPH
Wind Direction:	S	N	
Dew Presence (Y/N):	N	N	N
Soil Moisture:	NORMAL	NORMAL	ABONOR
% Cloud Cover:	60	10	0

	06-05-10	06-23-10	07-26-10
Crop stage at application:	NA	V5	VT 3
Height Min, Max (inch):		10 12	108 110

Pest Stage At Each Application

	06-05-10	06-23-10	07-26-10
Application Date:	06-05-10	06-23-10	07-26-10
Weed Code:	PANDI	PANDI	PANDI
Stage Majority (leaves):	NA	20	NA
Stage Min, Max:		3 25	
Height Majority:		8 IN	
Height Min, Max:		2 10	
Density, Unit:		1 FT2	
Weed Code:	AMATA	AMATA	AMATA
Stage Majority (leaves):	NA	6	NA
Stage Min, Max:		COTY 10	
Height Majority:		4 IN	
Height Min, Max:		0.5 6	
Density, Unit:		0.01 FT2	
Weed Code:	ABUTH	ABUTH	ABUTH
Stage Majority (leaves):	NA	6	NA
Stage Min, Max:		4 8	
Height Majority:		3 IN	
Height Min, Max:		1 4	
Density, Unit:		0.01 FT2	
Weed Code:	AMBTR	AMBTR	AMBTR
Stage Majority (leaves):	NA	8	NA
Stage Min, Max:		2 12	
Height Majority:		4 IN	
Height Min, Max:		0.5 8	
Density, Unit:		0.01 FT2	

Application Equipment

	CO2 sprayer	CO2 sprayer	CO2 sprayer
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:	10 FT	10 FT	10 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

BASF Corn Demonstration.

Trial ID: 10-1-W200

Location: Belleville Res. Center

									ZEAMD 10-12-10 Moisture Percent	ZEAMD 10-12-10 Test wt. lb/bu	ZEAMD 10-12-10 Yield bu/A	ZEAMD 06-23-10 Injury Percent	ZEAMD 07-15-10 Injury Percent	PANDI 06-23-10 Control Percent	PANDI 07-15-10 Control Percent	
												0 DA-B	22 DA-B	0 DA-B	22 DA-B	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code							
1	CHECK									13.1 bc	61.0 ab	114 c	0 a	0 a	0 d	93 b
1	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	12-14"CN	B							
1	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	12-14"CN	B							
1	N-PAK AMS	100	SL	5	% v/v	5	% v/v	12-14"CN	B							
2	GUARDSMAN MAX	5	SE	1.88	lb ai/a	48	fl oz/a	PRE	A	13.2 bc	60.8 ab	111 c	0 a	0 a	78 bc	98 a
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	12-14"CN	B							
2	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	12-14"CN	B							
2	N-PAK AMS	100	SL	5	% v/v	5	% v/v	12-14"CN	B							
3	INTEGRITY	5.57	EC	0.566	lb ai/a	13	fl oz/a	PRE	A	13.3 b	60.7 b	120 bc	0 a	0 a	80 bc	98 a
3	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	12-14"CN	B							
3	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	12-14"CN	B							
3	N-PAK AMS	100	SL	5	% v/v	5	% v/v	12-14"CN	B							
4	INTEGRITY	5.57	EC	0.566	lb ai/a	13	fl oz/a	PRE	A	13.0 c	61.1 a	109 c	0 a	0 a	75 c	97 a
4	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	12-14"CN	B							
4	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	12-14"CN	B							
4	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	12-14"CN	B							
4	N-PAK AMS	100	SL	5	% v/v	5	% v/v	12-14"CN	B							
5	INTEGRITY	5.57	EC	0.566	lb ai/a	13	fl oz/a	PRE	A	13.2 bc	60.9 ab	107 c	0 a	0 a	77 bc	97 a
5	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	12-14"CN	B							
5	HEADLINE	2.09	EC	0.098	lb ai/a	6	fl oz/a	12-14"CN	B							
5	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	12-14"CN	B							
5	N-PAK AMS	100	SL	5	% v/v	5	% v/v	12-14"CN	B							
6	INTEGRITY	5.57	EC	0.566	lb ai/a	13	fl oz/a	PRE	A	15.0 a	59.2 c	145 a	0 a	0 a	82 ab	98 a
6	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	12-14"CN	B							
6	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	12-14"CN	B							
6	N-PAK AMS	100	SL	5	% v/v	5	% v/v	12-14"CN	B							
6	HEADLINE AMP	1.68	SC	0.131	lb ai/a	10	fl oz/a	VT	C							
6	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	VT	C							
7	INTEGRITY	5.57	EC	0.566	lb ai/a	13	fl oz/a	PRE	A	15.1 a	59.1 c	135 ab	0 a	0 a	86 a	97 a
7	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	12-14"CN	B							
7	HEADLINE	2.09	EC	0.098	lb ai/a	6	fl oz/a	12-14"CN	B							
7	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	12-14"CN	B							
7	N-PAK AMS	100	SL	5	% v/v	5	% v/v	12-14"CN	B							
7	HEADLINE AMP	1.68	SC	0.131	lb ai/a	10	fl oz/a	VT	C							
7	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	VT	C							
8	INTEGRITY	5.57	EC	0.566	lb ai/a	13	fl oz/a	PRE	A	14.9 a	59.3 c	150 a	0 a	0 a	76 bc	97 a
8	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	12-14"CN	B							
8	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	12-14"CN	B							
8	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	12-14"CN	B							
8	N-PAK AMS	100	SL	5	% v/v	5	% v/v	12-14"CN	B							
8	HEADLINE AMP	1.68	SC	0.131	lb ai/a	10	fl oz/a	VT	C							
8	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	VT	C							
LSD (P=.05)										0.30	0.28	18.6	0.0	0.0	6.3	1.8
Replicate F										3.137	4.477	1.986	0.000	0.000	9.855	4.236
Replicate Prob(F)										0.0192	0.0029	0.1050	1.0000	1.0000	0.0001	0.0041
Treatment F										81.938	84.415	7.140	0.000	0.000	168.933	6.550
Treatment Prob(F)										0.0001	0.0001	0.0001	1.0000	1.0000	0.0001	0.0001

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

BASF Corn Demonstration.

Trial ID: 10-1-W200

Location: Belleville Res. Center

Pest Code	AMATA	AMATA	ABUTH	ABUTH	AMBTR	AMBTR
Crop Code						
Rating Date	06-23-10	07-15-10	06-23-10	07-15-10	06-23-10	07-15-10
Rating Data Type	Control	Control	Control	Control	Control	Control
Rating Unit	Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing						
Trt-Eval Interval	0 DA-B	22 DA-B	0 DA-B	22 DA-B	0 DA-B	22 DA-B

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
1	CHECK									0 b	94 b	0 c	97 b	0 c	99 ab
1	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	12-14"CN	B						
1	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	12-14"CN	B						
1	N-PAK AMS	100	SL	5	% v/v	5	% v/v	12-14"CN	B						
2	GUARDSMAN MAX	5	SE	1.88	lb ai/a	48	fl oz/a	PRE	A	99 a	99 a	91 a	99 a	88 a	99 ab
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	12-14"CN	B						
2	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	12-14"CN	B						
2	N-PAK AMS	100	SL	5	% v/v	5	% v/v	12-14"CN	B						
3	INTEGRITY	5.57	EC	0.566	lb ai/a	13	fl oz/a	PRE	A	99 a	99 a	80 b	99 a	77 b	99 a
3	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	12-14"CN	B						
3	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	12-14"CN	B						
3	N-PAK AMS	100	SL	5	% v/v	5	% v/v	12-14"CN	B						
4	INTEGRITY	5.57	EC	0.566	lb ai/a	13	fl oz/a	PRE	A	99 a	99 a	79 b	99 a	75 b	98 b
4	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	12-14"CN	B						
4	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	12-14"CN	B						
4	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	12-14"CN	B						
4	N-PAK AMS	100	SL	5	% v/v	5	% v/v	12-14"CN	B						
5	INTEGRITY	5.57	EC	0.566	lb ai/a	13	fl oz/a	PRE	A	99 a	99 a	85 ab	99 a	83 ab	99 ab
5	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	12-14"CN	B						
5	HEADLINE	2.09	EC	0.098	lb ai/a	6	fl oz/a	12-14"CN	B						
5	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	12-14"CN	B						
5	N-PAK AMS	100	SL	5	% v/v	5	% v/v	12-14"CN	B						
6	INTEGRITY	5.57	EC	0.566	lb ai/a	13	fl oz/a	PRE	A	99 a	99 a	83 ab	99 a	79 ab	99 ab
6	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	12-14"CN	B						
6	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	12-14"CN	B						
6	N-PAK AMS	100	SL	5	% v/v	5	% v/v	12-14"CN	B						
6	HEADLINE AMP	1.68	SC	0.131	lb ai/a	10	fl oz/a	VT	C						
6	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	VT	C						
7	INTEGRITY	5.57	EC	0.566	lb ai/a	13	fl oz/a	PRE	A	99 a	99 a	83 ab	99 a	78 ab	99 ab
7	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	12-14"CN	B						
7	HEADLINE	2.09	EC	0.098	lb ai/a	6	fl oz/a	12-14"CN	B						
7	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	12-14"CN	B						
7	N-PAK AMS	100	SL	5	% v/v	5	% v/v	12-14"CN	B						
7	HEADLINE AMP	1.68	SC	0.131	lb ai/a	10	fl oz/a	VT	C						
7	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	VT	C						
8	INTEGRITY	5.57	EC	0.566	lb ai/a	13	fl oz/a	PRE	A	99 a	99 a	81 b	99 a	79 ab	99 a
8	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	12-14"CN	B						
8	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	12-14"CN	B						
8	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	12-14"CN	B						
8	N-PAK AMS	100	SL	5	% v/v	5	% v/v	12-14"CN	B						
8	HEADLINE AMP	1.68	SC	0.131	lb ai/a	10	fl oz/a	VT	C						
8	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	VT	C						
LSD (P=.05)										0.0	1.3	9.3	1.0	10.1	1.1
Replicate F										0.000	1.077	6.083	1.630	3.787	1.282
Replicate Prob(F)										1.0000	0.3901	0.0004	0.1780	0.0081	0.2938
Treatment F										0.000	15.886	85.623	3.607	66.672	0.958
Treatment Prob(F)										1.0000	0.0001	0.0001	0.0050	0.0001	0.4764

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

BASF Corn Demonstration.

Trial ID: 10-1-W200

Location: Belleville Res. Center

Pest Code	CERCZM	CERCZM	CERCZM	CERCZM
Crop Code	ZEAMD	ZEAMD	ZEAMD	ZEAMD
Rating Date	08-23-10	08-23-10	09-08-10	09-08-10
Rating Data Type	Incidence	Severity	Incidence	Severity
Rating Unit	Percent	Percent	Percent	Percent
Rating Timing			R5	R5
Trt-Eval Interval	28 DA-C	28 DA-C	44 DA-C	44 DA-C

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code				
1	CHECK									90 a	13 ab	90 a	32 a
1	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	12-14"CN	B				
1	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	12-14"CN	B				
1	N-PAK AMS	100	SL	5	% v/v	5	% v/v	12-14"CN	B				
2	GUARDSMAN MAX	5	SE	1.88	lb ai/a	48	fl oz/a	PRE	A	90 a	14 a	90 a	33 a
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	12-14"CN	B				
2	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	12-14"CN	B				
2	N-PAK AMS	100	SL	5	% v/v	5	% v/v	12-14"CN	B				
3	INTEGRITY	5.57	EC	0.566	lb ai/a	13	fl oz/a	PRE	A	90 a	13 ab	90 a	32 a
3	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	12-14"CN	B				
3	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	12-14"CN	B				
3	N-PAK AMS	100	SL	5	% v/v	5	% v/v	12-14"CN	B				
4	INTEGRITY	5.57	EC	0.566	lb ai/a	13	fl oz/a	PRE	A	90 a	14 a	90 a	32 a
4	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	12-14"CN	B				
4	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	12-14"CN	B				
4	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	12-14"CN	B				
4	N-PAK AMS	100	SL	5	% v/v	5	% v/v	12-14"CN	B				
5	INTEGRITY	5.57	EC	0.566	lb ai/a	13	fl oz/a	PRE	A	90 a	12 b	90 a	32 a
5	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	12-14"CN	B				
5	HEADLINE	2.09	EC	0.098	lb ai/a	6	fl oz/a	12-14"CN	B				
5	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	12-14"CN	B				
5	N-PAK AMS	100	SL	5	% v/v	5	% v/v	12-14"CN	B				
6	INTEGRITY	5.57	EC	0.566	lb ai/a	13	fl oz/a	PRE	A	2 b	3 c	2 b	7 b
6	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	12-14"CN	B				
6	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	12-14"CN	B				
6	N-PAK AMS	100	SL	5	% v/v	5	% v/v	12-14"CN	B				
6	HEADLINE AMP	1.68	SC	0.131	lb ai/a	10	fl oz/a	VT	C				
6	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	VT	C				
7	INTEGRITY	5.57	EC	0.566	lb ai/a	13	fl oz/a	PRE	A	2 b	3 c	2 b	7 b
7	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	12-14"CN	B				
7	HEADLINE	2.09	EC	0.098	lb ai/a	6	fl oz/a	12-14"CN	B				
7	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	12-14"CN	B				
7	N-PAK AMS	100	SL	5	% v/v	5	% v/v	12-14"CN	B				
7	HEADLINE AMP	1.68	SC	0.131	lb ai/a	10	fl oz/a	VT	C				
7	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	VT	C				
8	INTEGRITY	5.57	EC	0.566	lb ai/a	13	fl oz/a	PRE	A	2 b	3 c	2 b	6 b
8	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	12-14"CN	B				
8	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	12-14"CN	B				
8	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	12-14"CN	B				
8	N-PAK AMS	100	SL	5	% v/v	5	% v/v	12-14"CN	B				
8	HEADLINE AMP	1.68	SC	0.131	lb ai/a	10	fl oz/a	VT	C				
8	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	VT	C				
LSD (P=.05)										0.0	2.5	0.0	4.7
Replicate F										0.000	0.908	0.000	1.837
Replicate Prob(F)										1.0000	0.4867	1.0000	0.1311
Treatment F										0.000	41.497	0.000	66.289
Treatment Prob(F)										1.0000	0.0001	1.0000	0.0001

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

Trial Comments

1. Protocol: BASF (C9F-H-01).
2. CI/WC at 0 and 21-28 DA-B; DI/DS at 21-28 DA-C and again prior to crop senescence.
3. Yield, trim to 50 ft plot length at harvest (5 ft from front and back).
4. CERCZM = Gray leaf spot (*Cercospora zeae-maydis*). R5 = Corn reproductive stage 5 (dent).
5. Harvested 10-12-10, (2) 30 inch rows by 50 ft.