

Corn Response to Different Postemergence Herbicides.

Project Code: 05-WF-SE-S120 Location: Belleville Research Center
 Investigator: Bryan Young

Investigator: Bryan Young, Associate Professor, Southern Illinois University

City State Zip Country: Belleville IL 62221 USA
Trial Status: Final **Updated:** 11-14-05

Objective:

To evaluate the varying response of corn to different postemergence applied corn herbicides.

Weed Code **Common Name** **Scientific Name**
 1. NA crop tolerance only

Crop 1: ZEAMX corn, field **Variety:** DKC 60-17 RR
Planting Method: Seeded **Planting Date:** 5-7-05
Rate: 28000 S/A **Depth:** 1.5 IN
Row Spacing: 30 IN

Plot Width, Unit: 10 FT **Plot Length, Unit:** 28 FT **Reps:** 5
Tillage Type: Reduced-Till **Study Design:** Randomized complete block
Previous Crop, Year: GLXMA, 2004

Field Prep./Maintenance: N 150 LB/A, P205 100 LB/A, K20 200 LB/A

Soil Name: Ebbert **% OM:** 2.1 **pH:** 5.6 **CEC:** 10
Texture: Silt loam **Fert. Level:** P1: 54 LB/A, K: 316 LB/A

APPLICATION DESCRIPTION

	A	B
Application Date:	06-01-05	06-10-05
Time of Day:	11:00	8:15
Application Method:	Spray	Spray
Application Timing:	10"CN	20"CN
Applic. Placement:	BROFOL	BROFOL
Air Temp., Unit:	80 F	74 F
% Relative Humidity:	34	90
Wind Velocity, Unit:	5 MPH	2 MPH
Soil Moisture:	BELNOR	BELNOR

CROP STAGE AT EACH APPLICATION

	A	B
Crop 1 Code, Stage:	ZEAMX V4	ZEAMX V6-V7
Height, Unit:	9 IN	20 IN

APPLICATION EQUIPMENT

	A	B
Appl. Equipment:	CO2 sprayer	CO2 sprayer
Operating Pressure:	40 PSI	40 PSI
Nozzle Type:	Flat fan	Flat fan
Nozzle Size:	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA

NOTES:

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Weed Code
Crop Code
Rating Data Type
Rating Unit
Rating Date
Trt-Eval Interval

ZEAMX ZEAMX ZEAMX ZEAMX ZEAMX
Moisture Yield Chloro Necrosis GRORED
Percent bu/A Percent Percent Percent
10-13-05 10-13-05
5 DAT 5 DAT 10 DAT

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	ZEAMX Moisture Percent 10-13-05	ZEAMX Yield bu/A 10-13-05	ZEAMX Chloro Percent 5 DAT	ZEAMX Necrosis Percent 5 DAT	ZEAMX GRORED Percent 10 DAT
1	ROUNDUP W-MAX	4.5 SL		0.77	lb ae/a	22	fl oz/a	20"CN	B	15.0	219	0	0	0
1	AMS	100 DRY		2.0	% w/w	2	% w/w	20"CN	B					
2	STEADFAST	75 WG		0.035	lb ai/a	0.75	oz/a	20"CN	B	14.7	180	1	0	23
2	PRIME OIL COC	100 LIQ		1	% v/v	1	% v/v	20"CN	B					
2	28% UAN	100 LIQ		2.0	qt/a	2	qt/a	20"CN	B					
3	ACCENT	75 WG		0.0234	lb ai/a	0.5	oz/a	20"CN	B	14.9	192	0	0	0
3	PRIME OIL COC	100 LIQ		1	% v/v	1	% v/v	20"CN	B					
3	28% UAN	100 LIQ		2.0	qt/a	2	qt/a	20"CN	B					
4	CELEBRITY PLUS	70 WG		0.206	lb ai/a	4.7	oz/a	20"CN	B	14.8	178	0	0	5
4	ACTIVATOR 90	100 LIQ		0.25	% v/v	0.25	% v/v	20"CN	B					
4	28% UAN	100 LIQ		2.0	qt/a	2	qt/a	20"CN	B					
5	STEADFAST	75 WG		0.035	lb ai/a	0.75	oz/a	20"CN	B	14.9	182	0	0	25
5	CALLISTO	4 SC		0.094	lb ai/a	3	fl oz/a	20"CN	B					
5	PRIME OIL COC	100 LIQ		1	% v/v	1	% v/v	20"CN	B					
5	28% UAN	100 LIQ		2.5	% v/v	2.5	% v/v	20"CN	B					
6	HORNET	68.5 WG		0.171	lb ai/a	4	oz/a	20"CN	B	14.7	156	0	0	18
6	PRIME OIL COC	100 LIQ		1	% v/v	1	% v/v	20"CN	B					
6	28% UAN	100 LIQ		2.5	% v/v	2.5	% v/v	20"CN	B					
7	NONTREATED									15.2	218	0	0	0
8	ROUNDUP W-MAX	4.5 SL		0.77	lb ae/a	22	fl oz/a	10"CN	A	15.1	220	0	0	1
8	AMS	100 DRY		2.0	% w/w	2	% w/w	10"CN	A					
9	STEADFAST	75 WG		0.035	lb ai/a	0.75	oz/a	10"CN	A	15.1	226	5	0	9
9	PRIME OIL COC	100 LIQ		1	% v/v	1	% v/v	10"CN	A					
9	28% UAN	100 LIQ		2.0	qt/a	2	qt/a	10"CN	A					
10	ACCENT	75 WG		0.0234	lb ai/a	0.5	oz/a	10"CN	A	15.0	224	1	0	0
10	PRIME OIL COC	100 LIQ		1	% v/v	1	% v/v	10"CN	A					
10	28% UAN	100 LIQ		2.0	qt/a	2	qt/a	10"CN	A					
11	CELEBRITY PLUS	70 WG		0.206	lb ai/a	4.7	oz/a	10"CN	A	14.9	220	0	0	0
11	ACTIVATOR 90	100 LIQ		0.25	% v/v	0.25	% v/v	10"CN	A					
11	28% UAN	100 LIQ		2.0	qt/a	2	qt/a	10"CN	A					
12	STEADFAST	75 WG		0.035	lb ai/a	0.75	oz/a	10"CN	A	15.0	210	5	0	13
12	CALLISTO	4 SC		0.094	lb ai/a	3	fl oz/a	10"CN	A					
12	PRIME OIL COC	100 LIQ		1	% v/v	1	% v/v	10"CN	A					
12	28% UAN	100 LIQ		2.5	% v/v	2.5	% v/v	10"CN	A					
13	HORNET	68.5 WG		0.171	lb ai/a	4	oz/a	10"CN	A	15.1	207	5	0	3
13	PRIME OIL COC	100 LIQ		1	% v/v	1	% v/v	10"CN	A					
13	28% UAN	100 LIQ		2.5	% v/v	2.5	% v/v	10"CN	A					
LSD (P=.05)										0.33	15.8	0.7	0.0	4.2
Replicate F										4.990	2.764	2.300	0.000	1.455
Replicate Prob(F)										0.0019	0.0380	0.0723	1.0000	0.2306
Treatment F										1.679	16.427	71.333	0.000	40.428
Treatment Prob(F)										0.1018	0.0001	0.0001	1.0000	0.0001

Trial Comments

1. Protocol: Monsanto.
2. Ratings: Chlorosis/Necrosis 5 DAT; Growth reduction 10 DAT.
Note weed control if any differences.
Date of 100% tassel emergence with pollen shed was 7-8-05 with no observable differences between treatments.
3. Yield.
4. Blanket PRE application of Degree Xtra at 3 qt/A to all plots on 5-7-05.
5. DAT = Days after application. Chloro = Chlorosis. GRORED = Growth reduction.
Ratings at 5 DAT were on 6-6-05 and 6-15-05 for the 10"CN and 20"CN application, respectively.
Ratings at 10 DAT were on 6-11-05 and 6-20-05 for the 10"CN and 20"CN application, respectively.
6. Harvested 10-13-05, (2) 30 inch rows by 25 ft, bu/A has been adjusted to 15.5 % moisture.