

Syngenta Corn Programs.

Project Code: 04-2A-E85 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: 10-11-04

Objective:

Evaluate various herbicide programs from Syngenta in corn.

Weed Code	Common Name	Scientific Name
1. GGGAN	grasses, annual	
2. XANST	cocklebur, common	Xanthium strumarium L.
3. AMATA	waterhemp, common	Amaranthus rudis Sauer
4. ABUTH	velvetleaf	Abutilon theophrasti Medicus
5. AMBEL	ragweed, common	Ambrosia artemisiifolia L.
6. SETFA	foxtail, giant	Setaria faberi Herrm.
7. PANDI	panicum, fall	Panicum dichotomiflorum Michx.

Crop 1: ZEAMX corn, field Variety: DKC 60-17 RR
 Planting Method: Seeded Planting Date: 5-7-04
 Rate: 28000 S/A Depth: 1.5 IN
 Row Spacing: 30 IN

Plot Width, Unit: 10 FT Plot Length, Unit: 28 FT Reps: 3
 Tillage Type: Reduced-Till Study Design: Randomized complete block
 Previous Crop, Year: GLXMA, 2003

Field Prep./Maintenance: N 150 LB/A, P205 50 LB/A, K2O 100 LB/A

Soil Name: Weir % OM: 1.6 pH: 6.2 CEC: 7
 Texture: Silt loam Fert. Level: P1: 93 LB/A, K: 448 LB/A

APPLICATION DESCRIPTION

	A	B
Application Date:	5-11-04	6-1-04
Time of Day:	15:00	15:00
Application Method:	Spray	Spray
Application Timing:	PRE	12"CN
Applic. Placement:	BROFOL	BROFOL
Air Temp., Unit:	84 F	88 F
% Relative Humidity:	50	64
Wind Velocity, Unit:	8 MPH	12 MPH
Soil Moisture:	BELNOR	ABONOR

CROP STAGE AT EACH APPLICATION

	A	B
Crop 1 Code, Stage:	ZEAMX NA	ZEAMX V5
Height, Unit:	NA NA	10-12 IN

WEED STAGE AT EACH APPLICATION

	A	B
Weed 2 Code:		XANST
Stage(leaves):		2-4
Height(inches):		1-3
Density:		Low

APPLICATION EQUIPMENT

	A	B
Appl. Equipment:	CO2 sprayer	CO2 sprayer
Operating Pressure:	40 PSI	40 PSI
Nozzle Type:	Flat fan	Flat fan
Nozzle Size:	8003	8002
Boom Length, Unit:	7.5 FT	7.5 FT
Spray Volume, Unit:	20 GPA	20 GPA

NOTES:

Harvested 9-27-04, (2) 30 inch rows x 25 ft.

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Weed Code							GGGAN	GGGAN	GGGAN	GGGAN	GGGAN			
Crop Code		ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	Control	Control	Control	Control				
Rating Data Type		Yield	Injury	Injury	Injury	Injury	Percent	Percent	Percent	Percent				
Rating Unit		bu/A	Percent	Percent	Percent	Percent	5-28-04	6-11-04	6-29-04	7-9-04				
Rating Date		9-27-04	5-28-04	6-8-04	6-11-04	6-15-04	5-28-04	6-11-04	6-29-04	7-9-04				
Trt-Eval Interval		14 DAE	14 DAE	7 DA-B	28 DAE	14 DA-B	14 DAE	28 DAE	28 DA-B	56 DAE				
Trt No.	Treatment Name	Form Conc	Form Type	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code						
1	NONTREATED								46	0	0	0	0	0
2	BICEP II MAGNUM	5.5 L		2.9 LB A/A	2.1 QT/A	PRE A			168	7	0	99	99	98
3	LUMAX	3.94 L		2.46 LB A/A	2.5 QT/A	PRE A			153	6	0	99	99	98
4	LEXAR	3.7 L		2.78 LB A/A	3.0 QT/A	PRE A			165	7	0	99	99	98
5	LUMAX	3.94 L		2.46 LB A/A	2.5 QT/A	PRE A			184	5	0	99	99	98
5	AATREX	90 WG		1.0 LB A/A	1.11 LB/A	PRE A								
6	LEXAR	3.7 L		2.78 LB A/A	3.0 QT/A	PRE A			189	9	0	99	99	98
6	PRINCEP	90 WG		1.0 LB A/A	1.11 LB/A	PRE A								
7	BICEP II MAGNUM	5.5 L		2.9 LB A/A	2.1 QT/A	PRE A			179	10	0	99	99	99
7	CALLISTO	4 SC		0.094 LB A/A	3 FL OZ/A	12"CN B								
7	AATREX	90 WG		0.5 LB A/A	0.556 LB/A	12"CN B								
7	PRIME OIL COC	100 LIQ		1.0 % V/V	1 % V/V	12"CN B								
7	28% UAN	100 LIQ		2.5 % V/V	2.5 % V/V	12"CN B								
8	HARNESS XTRA	5.6 L		3.4 LB A/A	2.44 QT/A	PRE A			193	4	0	99	99	96
9	EPIC	58 WG		0.435 LB A/A	12 OZ/A	PRE A			111	7	0	99	98	98
10	KEYSTONE	5.25 L		3.48 LB A/A	2.65 QT/A	PRE A			173	8	0	99	99	97
11	KEYSTONE	5.25 L		3.48 LB A/A	2.65 QT/A	PRE A			181	7	0	99	99	98
11	HORNET	68.5 WG		0.128 LB A/A	3 OZ/A	PRE A								
12	KEYSTONE	5.25 L		1.7 LB A/A	1.3 QT/A	PRE A			181	8	0	99	99	96
12	BALANCE PRO	4 SC		0.07 LB A/A	2.25 FL OZ/A	PRE A								
13	USA 2005	4 SC		0.5 LB A/A	16 FL OZ/A	PRE A			182	8	0	99	99	98
14	USA 2005	4 SC		0.5 LB A/A	16 FL OZ/A	PRE A			184	11	0	99	99	98
14	AATREX	90 WG		1.0 LB A/A	1.11 LB/A	PRE A								
15	BICEP II MAGNUM	5.5 L		2.9 LB A/A	2.1 QT/A	PRE A			182	9	0	99	99	98
15	NORTHSTAR	47.4 WG		0.148 LB A/A	5 OZ/A	12"CN B								
15	ACTIVATOR 90	100 LIQ		0.25 % V/V	0.25 % V/V	12"CN B								
15	28% UAN	100 LIQ		2.0 % V/V	2 % V/V	12"CN B								
16	LEXAR	3.7 L		2.78 LB A/A	3.0 QT/A	PRE A			169	6	0	99	99	99
16	NORTHSTAR	47.4 WG		0.148 LB A/A	5 OZ/A	12"CN B								
16	ACTIVATOR 90	100 LIQ		0.25 % V/V	0.25 % V/V	12"CN B								
16	28% UAN	100 LIQ		2.0 % V/V	2 % V/V	12"CN B								
LSD (P=.05)									37.7	3.8	0.0	0.0	0.0	0.6
Replicate F									11.096	8.722	0.000	0.000	0.000	0.000
Replicate Prob(F)									0.0002	0.0010	1.0000	1.0000	1.0000	1.0000
Treatment F									8.081	3.700	0.000	0.000	0.000	16495.787
Treatment Prob(F)									0.0001	0.0011	1.0000	1.0000	1.0000	0.0001

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Weed Code	XANST	XANST	XANST	XANST	XANST	AMATA	AMATA	AMATA	AMATA	AMATA
Crop Code										
Rating Data Type	Control	Control	Control	Control	Control	Control	Control	Control	Control	Control
Rating Unit	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Rating Date	5-28-04	6-11-04	6-29-04	7-9-04	7-27-04	5-28-04	6-11-04	6-29-04	7-9-04	7-27-04
Trt-Eval Interval	14 DAE	28 DAE	28 DA-B	56 DAE	56 DA-B	14 DAE	28 DAE	28 DA-B	56 DAE	56 DA-B

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code										
1	NONTREATED									0	0	0	0	0	0	0	0	0	
2	BICEP II MAGNUM	5.5 L		2.9 LB A/A		2.1 QT/A		PRE	A	99	97	94	93	86	99	99	98	97	97
3	LUMAX	3.94 L		2.46 LB A/A		2.5 QT/A		PRE	A	99	98	98	98	96	99	99	99	98	98
4	LEXAR	3.7 L		2.78 LB A/A		3.0 QT/A		PRE	A	99	98	98	98	96	99	99	98	98	98
5	LUMAX	3.94 L		2.46 LB A/A		2.5 QT/A		PRE	A	99	97	98	98	95	99	99	99	99	98
5	AATREX	90 WG		1.0 LB A/A		1.11 LB/A		PRE	A										
6	LEXAR	3.7 L		2.78 LB A/A		3.0 QT/A		PRE	A	99	97	97	98	95	99	99	99	99	98
6	PRINCEP	90 WG		1.0 LB A/A		1.11 LB/A		PRE	A										
7	BICEP II MAGNUM	5.5 L		2.9 LB A/A		2.1 QT/A		PRE	A	99	98	99	99	98	99	99	99	99	98
7	CALLISTO	4 SC		0.094 LB A/A		3 FL OZ/A		12"CN	B										
7	AATREX	90 WG		0.5 LB A/A		0.556 LB/A		12"CN	B										
7	PRIME OIL COC	100 LIQ		1.0 % V/V		1 % V/V		12"CN	B										
7	28% UAN	100 LIQ		2.5 % V/V		2.5 % V/V		12"CN	B										
8	HARNESS XTRA	5.6 L		3.4 LB A/A		2.44 QT/A		PRE	A	99	97	89	93	83	99	99	95	94	84
9	EPIC	58 WG		0.435 LB A/A		12 OZ/A		PRE	A	99	96	95	94	90	99	99	99	97	92
10	KEYSTONE	5.25 L		3.48 LB A/A		2.65 QT/A		PRE	A	99	95	83	86	75	99	99	98	97	85
11	KEYSTONE	5.25 L		3.48 LB A/A		2.65 QT/A		PRE	A	99	98	96	97	97	99	99	96	97	92
11	HORNET	68.5 WG		0.128 LB A/A		3 OZ/A		PRE	A										
12	KEYSTONE	5.25 L		1.7 LB A/A		1.3 QT/A		PRE	A	99	97	87	87	78	99	99	97	95	92
12	BALANCE PRO	4 SC		0.07 LB A/A		2.25 FL OZ/A		PRE	A										
13	USA 2005	4 SC		0.5 LB A/A		16 FL OZ/A		PRE	A	98	95	90	91	82	99	99	96	96	92
14	USA 2005	4 SC		0.5 LB A/A		16 FL OZ/A		PRE	A	99	96	89	90	83	99	99	98	98	97
14	AATREX	90 WG		1.0 LB A/A		1.11 LB/A		PRE	A										
15	BICEP II MAGNUM	5.5 L		2.9 LB A/A		2.1 QT/A		PRE	A	98	98	98	98	96	99	99	99	98	94
15	NORTHSTAR	47.4 WG		0.148 LB A/A		5 OZ/A		12"CN	B										
15	ACTIVATOR 90	100 LIQ		0.25 % V/V		0.25 % V/V		12"CN	B										
15	28% UAN	100 LIQ		2.0 % V/V		2 % V/V		12"CN	B										
16	LEXAR	3.7 L		2.78 LB A/A		3.0 QT/A		PRE	A	99	98	99	99	98	99	99	99	99	96
16	NORTHSTAR	47.4 WG		0.148 LB A/A		5 OZ/A		12"CN	B										
16	ACTIVATOR 90	100 LIQ		0.25 % V/V		0.25 % V/V		12"CN	B										
16	28% UAN	100 LIQ		2.0 % V/V		2 % V/V		12"CN	B										
LSD (P=.05)										0.7	2.3	7.2	5.7	10.3	0.0	0.0	2.0	2.4	6.7
Replicate F										4.355	6.161	2.599	3.570	6.817	0.000	0.000	6.009	3.778	5.436
Replicate Prob(F)										0.0219	0.0057	0.0910	0.0407	0.0036	1.0000	1.0000	0.0064	0.0344	0.0097
Treatment F										10642.701	936.932	93.346	148.677	44.213	0.000	0.000	1233.960	883.822	107.472
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	1.0000	1.0000	0.0001	0.0001	0.0001

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Weed Code	ABUTH	ABUTH	ABUTH	ABUTH	ABUTH	AMBEL	AMBEL	AMBEL	AMBEL	AMBEL	IPOHE	IPOHE	IPOHE
Crop Code	Control	Control	Control	Control	Control	Control	Control	Control	Control	Control	Control	Control	Control
Rating Data Type	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Rating Unit	5-28-04	6-11-04	6-29-04	7-9-04	7-27-04	5-28-04	6-11-04	6-29-04	7-9-04	7-27-04	6-29-04	7-9-04	7-27-04
Rating Date	14 DAE	28 DAE	28 DA-B	56 DAE	56 DA-B	14 DAE	28 DAE	28 DA-B	56 DAE	56 DA-B	28 DA-B	56 DAE	56 DA-B
Trt-Eval Interval													

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code													
1	NONTREATED									0	0	0	0	0	0	0	0	0	0			
2	BICEP II MAGNUM	5.5 L		2.9 LB A/A	2.1 QT/A	PRE	A			99	99	97	97	96	99	99	98	97	97	99	99	99
3	LUMAX	3.94 L		2.46 LB A/A	2.5 QT/A	PRE	A			99	99	99	99	99	99	99	99	99	94	99	99	99
4	LEXAR	3.7 L		2.78 LB A/A	3.0 QT/A	PRE	A			99	99	98	98	96	99	99	99	99	97	99	99	99
5	LUMAX	3.94 L		2.46 LB A/A	2.5 QT/A	PRE	A			99	99	99	99	98	99	99	99	98	98	99	99	99
5	AATREX	90 WG		1.0 LB A/A	1.11 LB/A	PRE	A															
6	LEXAR	3.7 L		2.78 LB A/A	3.0 QT/A	PRE	A			99	99	99	99	99	99	99	99	99	99	99	99	99
6	PRINCEP	90 WG		1.0 LB A/A	1.11 LB/A	PRE	A															
7	BICEP II MAGNUM	5.5 L		2.9 LB A/A	2.1 QT/A	PRE	A			99	99	99	99	98	99	99	99	99	99	99	99	98
7	CALLISTO	4 SC		0.094 LB A/A	3 FL OZ/A	12"CN	B															
7	AATREX	90 WG		0.5 LB A/A	0.556 LB/A	12"CN	B															
7	PRIME OIL COC	100 LIQ		1.0 % V/V	1 % V/V	12"CN	B															
7	28% UAN	100 LIQ		2.5 % V/V	2.5 % V/V	12"CN	B															
8	HARNESS XTRA	5.6 L		3.4 LB A/A	2.44 QT/A	PRE	A			99	99	96	96	90	99	99	95	95	89	99	99	99
9	EPIC	58 WG		0.435 LB A/A	12 OZ/A	PRE	A			99	99	98	98	98	99	99	99	98	98	99	98	96
10	KEYSTONE	5.25 L		3.48 LB A/A	2.65 QT/A	PRE	A			99	99	99	99	92	99	98	94	96	93	99	99	96
11	KEYSTONE	5.25 L		3.48 LB A/A	2.65 QT/A	PRE	A			99	99	98	98	97	99	99	98	98	97	99	99	98
11	HORNET	68.5 WG		0.128 LB A/A	3 OZ/A	PRE	A															
12	KEYSTONE	5.25 L		1.7 LB A/A	1.3 QT/A	PRE	A			99	99	99	99	98	99	99	99	99	93	99	99	96
12	BALANCE PRO	4 SC		0.07 LB A/A	2.25 FL OZ/A	PRE	A															
13	USA 2005	4 SC		0.5 LB A/A	16 FL OZ/A	PRE	A			99	99	98	96	97	99	99	96	98	92	99	99	98
14	USA 2005	4 SC		0.5 LB A/A	16 FL OZ/A	PRE	A			99	99	99	99	98	99	99	98	98	97	99	99	98
14	AATREX	90 WG		1.0 LB A/A	1.11 LB/A	PRE	A															
15	BICEP II MAGNUM	5.5 L		2.9 LB A/A	2.1 QT/A	PRE	A			99	99	99	99	98	99	99	99	99	99	99	99	96
15	NORTHSTAR	47.4 WG		0.148 LB A/A	5 OZ/A	12"CN	B															
15	ACTIVATOR 90	100 LIQ		0.25 % V/V	0.25 % V/V	12"CN	B															
15	28% UAN	100 LIQ		2.0 % V/V	2 % V/V	12"CN	B															
16	LEXAR	3.7 L		2.78 LB A/A	3.0 QT/A	PRE	A			99	99	99	99	99	99	99	99	99	99	99	99	99
16	NORTHSTAR	47.4 WG		0.148 LB A/A	5 OZ/A	12"CN	B															
16	ACTIVATOR 90	100 LIQ		0.25 % V/V	0.25 % V/V	12"CN	B															
16	28% UAN	100 LIQ		2.0 % V/V	2 % V/V	12"CN	B															
LSD (P=.05)										0.0	0.5	2.5	2.5	4.6	0.0	0.6	4.6	3.4	5.6	0.3	1.5	4.2
Replicate F										0.000	1.000	6.088	4.952	3.275	0.000	0.158	1.432	1.617	1.020	0.484	0.568	0.715
Replicate Prob(F)										1.0000	0.3798	0.0060	0.0138	0.0517	1.0000	0.8546	0.2546	0.2154	0.3729	0.6211	0.5729	0.4975
Treatment F										0.000	22013.449	781.597	775.714	230.214	0.000	13884.969	237.256	442.487	155.234	42644.355	2371.962	281.906
Treatment Prob(F)										1.0000	0.0001	0.0001	0.0001	0.0001	1.0000	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

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Trial Comments

1. Protocol: Syngenta.
2. Ratings: CI 7, 14 and 28 DAE; CI 7 and 14 DA POST. WC 14, 28 and 56 DAE; WC 28 and 56 DA POST.
3. Yield.
4. DAE= Days after emergence. DA-B = Days after 12"CN application.
5. Crop injury ratings planned for 7 DAE were not possible due to standing water and/or very wet conditions in general.
6. GGGAN= Annual grasses including SETFA and PANDI.
7. Harvested 9-27-04, (2) 30 inch rows x 25 ft.