

Sequential Herbicide Program Comparisons in Corn - II.

Project Code: 03-6A-M120 Location: Belleville Research Center

Investigator: Bryan Young, Assistant Professor, Southern Illinois University

City State Zip Country: Belleville IL 62221 USA
 Trial Status: Final Updated: 9-2-03

Objective:

Compare various sequential herbicide programs for use in conventional or Roundup Ready corn systems.

Weed Code	Common Name	Scientific Name
1. SETFA	foxtail, giant	Setaria faberi Herrm.
2. XANST	cocklebur, common	Xanthium strumarium L.
3. AMATA	waterhemp, common	Amaranthus rudis Sauer
4. ABUTH	velvetleaf	Abutilon theophrasti Medicus
5. IPOSS	morningglory, species	Ipomoea sp.

Crop 1:	ZEAMX corn, field	Variety:	DKC 60-17 RR
Planting Method:	Seeded	Planting Date:	5-23-03
Rate:	28000 S/A	Depth:	1.5 IN
Row Spacing:	30 IN		

Plot Width, Unit:	10 FT	Plot Length, Unit:	25 FT	Reps:	3
Tillage Type:	Reduced-Till	Study Design:	Randomized complete block		
Previous Crop, Year:	GLXMA, 2002				

Field Prep./Maintenance: N 150 LB/A, P205 50 LB/A, K20 150 LB/A

Soil Name:	Stoy	% OM:	2.1	pH:	5.7	CEC:	7
Texture:	Silt loam	Fert. Level:	P1: 82 LB/A, K: 266 LB/A				

APPLICATION DESCRIPTION

	A	B
Application Date:	5-24-03	6-20-03
Time of Day:	14:30	13:00
Application Method:	Spray	Spray
Application Timing:	PRE	8-12"CN
Applic. Placement:	BROSOI	BROFOL
Air Temp., Unit:	68 F	76 F
% Relative Humidity:	52	50
Wind Velocity, Unit:	0 MPH	5 MPH

CROP STAGE AT EACH APPLICATION

	A	B
Crop 1 Code, Stage:	ZEAMX NA	ZEAMX V4
Height, Unit:	NA NA	8 IN

WEED STAGE AT EACH APPLICATION

	A	B
Weed 1 Code:		SETFA
Stage(leaves):		0-1
Height(inches):		0-1
Density:		Low
Weed 2 Code:		XANST
Stage(leaves):		0-2
Height(inches):		0-2
Density:		Low
Weed 3 Code:		AMATA
Stage(leaves):		0-1
Height(inches):		0-1
Density:		Low

Weed 4 Code:	ABUTH
Stage(leaves):	0-2
Height(inches):	0-2
Density:	Low
Weed 5 Code:	IPOSS
Stage(leaves):	0-1
Height(inches):	0-1
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:	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT
Spray Volume, Unit:	20 GPA	20 GPA

NOTES:
Not harvested.

Sequential Herbicide Program Comparisons in Corn - II.

Project Code: 03-6A-M120 Location: Belleville Research Center

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

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	ZEAMX Injury Percent	ZEAMX Injury Percent	SETFA Control Percent	SETFA Control Percent	SETFA Control Percent	XANST Control Percent	XANST Control Percent	XANST Control Percent	AMATA Control Percent	AMATA Control Percent	AMATA Control Percent	ABUTH Control Percent	ABUTH Control Percent	ABUTH Control Percent
1	NONTREATED									0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	DEGREE XTRA	4	L	3.2	LB A/A	3.2	QT/A	PRE	A	0	0	99	99	99	95	99	99	99	99	99	97	99	99
2	ACCENT	75	WG	0.032	LB A/A	0.68	OZ/A	8-12"	CN B														
2	YUKON	67.5	WG	0.156	LB A/A	3.7	OZ/A	8-12"	CN B														
2	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	8-12"	CN B														
2	AMS	100	DRY	2	% W/W	2	% W/W	8-12"	CN B														
3	GUARDSMAN MAX	5	L	2.5	LB A/A	2	QT/A	PRE	A	0	0	99	99	99	97	99	99	99	99	99	98	99	99
3	DISTINCT	70	WG	0.26	LB A/A	5.94	OZ/A	8-12"	CN B														
3	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	8-12"	CN B														
3	AMS	100	DRY	2	% W/W	2	% W/W	8-12"	CN B														
4	KEYSTONE	5.25	L	3.68	LB A/A	2.8	QT/A	PRE	A	0	0	99	96	96	96	99	99	99	99	99	96	99	99
4	HORNET	68.5	WG	0.161	LB A/A	3.76	OZ/A	8-12"	CN B														
4	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	8-12"	CN B														
4	AMS	100	DRY	2	% W/W	2	% W/W	8-12"	CN B														
5	LUMAX	3.94	L	2.96	LB A/A	3	QT/A	PRE	A	0	0	99	99	99	96	99	99	99	99	99	99	99	99
5	STEADFAST	75	WG	0.035	LB A/A	0.75	OZ/A	8-12"	CN B														
5	PRIME OIL COC	100	LIQ	1	% V/V	1	% V/V	8-12"	CN B														
5	28% UAN	100	LIQ	2	QT/A	2	QT/A	8-12"	CN B														
6	CINCH ATZ	5.5	L	2.9	LB A/A	2.1	QT/A	PRE	A	0	0	99	99	99	96	99	99	99	99	99	96	99	99
6	STEADFAST	75	WG	0.035	LB A/A	0.75	OZ/A	8-12"	CN B														
6	PRIME OIL COC	100	LIQ	1	% V/V	1	% V/V	8-12"	CN B														
6	28% UAN	100	LIQ	2	QT/A	2	QT/A	8-12"	CN B														
7	BICEP II MAGNUM	5.5	L	2.9	LB A/A	2.1	QT/A	PRE	A	0	0	99	99	99	95	99	99	99	99	99	93	99	99
7	NORTHSTAR	47.4	WG	0.161	LB A/A	5.43	OZ/A	8-12"	CN B														
7	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	8-12"	CN B														
8	BICEP II MAGNUM	5.5	L	2.9	LB A/A	2.1	QT/A	PRE	A	0	0	99	99	99	97	99	99	99	99	99	96	99	99
8	CALLISTO	4	SC	0.094	LB A/A	3	FL OZ/A	8-12"	CN B														
8	AATREX	90	WG	0.25	LB A/A	4.44	OZ/A	8-12"	CN B														
8	PRIME OIL COC	100	LIQ	1	% V/V	1	% V/V	8-12"	CN B														
8	AMS	100	DRY	2	% W/W	2	% W/W	8-12"	CN B														
9	BALANCE PRO	4	SC	0.094	LB A/A	3	FL OZ/A	PRE	A	0	0	99	99	99	97	99	99	99	99	99	99	99	99
9	AATREX	90	WG	0.5	LB A/A	8.9	OZ/A	PRE	A														
9	OPTION	35	WG	0.033	LB A/A	1.5	OZ/A	8-12"	CN B														
9	DESTINY MSO	100	LIQ	1	% V/V	1	% V/V	8-12"	CN B														
9	28% UAN	100	LIQ	1.5	QT/A	1.5	QT/A	8-12"	CN B														

Weed Code	IPOSS	IPOSS	IPOSS
Crop Code			
Rating Data Type	Control	Control	Control
Rating Unit	Percent	Percent	Percent
Rating Date	6-18-03	7-4-03	8-1-03
Trt-Eval Interval	-2 DA-B	14 DA-B	42 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
2	DEGREE XTRA	4	L	3.2	LB A/A	3.2	QT/A	PRE	A	97	99	99
2	ACCENT	75	WG	0.032	LB A/A	0.68	OZ/A	8-12"CN	B			
2	YUKON	67.5	WG	0.156	LB A/A	3.7	OZ/A	8-12"CN	B			
2	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	8-12"CN	B			
2	AMS	100	DRY	2	% W/W	2	% W/W	8-12"CN	B			
3	GUARDSMAN MAX	5	L	2.5	LB A/A	2	QT/A	PRE	A	99	99	99
3	DISTINCT	70	WG	0.26	LB A/A	5.94	OZ/A	8-12"CN	B			
3	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	8-12"CN	B			
3	AMS	100	DRY	2	% W/W	2	% W/W	8-12"CN	B			
4	KEYSTONE	5.25	L	3.68	LB A/A	2.8	QT/A	PRE	A	97	99	99
4	HORNET	68.5	WG	0.161	LB A/A	3.76	OZ/A	8-12"CN	B			
4	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	8-12"CN	B			
4	AMS	100	DRY	2	% W/W	2	% W/W	8-12"CN	B			
5	LUMAX	3.94	L	2.96	LB A/A	3	QT/A	PRE	A	96	99	99
5	STEADFAST	75	WG	0.035	LB A/A	0.75	OZ/A	8-12"CN	B			
5	PRIME OIL COC	100	LIQ	1	% V/V	1	% V/V	8-12"CN	B			
5	28% UAN	100	LIQ	2	QT/A	2	QT/A	8-12"CN	B			
6	CINCH ATZ	5.5	L	2.9	LB A/A	2.1	QT/A	PRE	A	98	99	99
6	STEADFAST	75	WG	0.035	LB A/A	0.75	OZ/A	8-12"CN	B			
6	PRIME OIL COC	100	LIQ	1	% V/V	1	% V/V	8-12"CN	B			
6	28% UAN	100	LIQ	2	QT/A	2	QT/A	8-12"CN	B			
7	BICEP II MAGNUM	5.5	L	2.9	LB A/A	2.1	QT/A	PRE	A	97	99	99
7	NORTHSTAR	47.4	WG	0.161	LB A/A	5.43	OZ/A	8-12"CN	B			
7	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	8-12"CN	B			
8	BICEP II MAGNUM	5.5	L	2.9	LB A/A	2.1	QT/A	PRE	A	97	99	99
8	CALLISTO	4	SC	0.094	LB A/A	3	FL OZ/A	8-12"CN	B			
8	AATREX	90	WG	0.25	LB A/A	4.44	OZ/A	8-12"CN	B			
8	PRIME OIL COC	100	LIQ	1	% V/V	1	% V/V	8-12"CN	B			
8	AMS	100	DRY	2	% W/W	2	% W/W	8-12"CN	B			
9	BALANCE PRO	4	SC	0.094	LB A/A	3	FL OZ/A	PRE	A	98	99	99
9	AATREX	90	WG	0.5	LB A/A	8.9	OZ/A	PRE	A			
9	OPTION	35	WG	0.033	LB A/A	1.5	OZ/A	8-12"CN	B			
9	DESTINY MSO	100	LIQ	1	% V/V	1	% V/V	8-12"CN	B			
9	28% UAN	100	LIQ	1.5	QT/A	1.5	QT/A	8-12"CN	B			
10	DUAL II MAGNUM	7.64	EC	1.4	LB A/A	1.47	PT/A	PRE	A	83	99	99
10	CALLISTO	4	SC	0.094	LB A/A	3	FL OZ/A	8-12"CN	B			
10	AATREX	90	WG	0.25	LB A/A	4.44	OZ/A	8-12"CN	B			
10	PRIME OIL COC	100	LIQ	1	% V/V	1	% V/V	8-12"CN	B			
10	AMS	100	DRY	2	% W/W	2	% W/W	8-12"CN	B			

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Trt-Eval Interval	-2 DA-B	14 DA-B	42 DA-B

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code			
11	HARNESS XTRA	5.6	L	3.36	LB A/A	2.4	QT/A	PRE	A	98	99	99
11	ACCENT	75	WG	0.032	LB A/A	0.68	OZ/A	8-12"CN	B			
11	YUKON	67.5	WG	0.156	LB A/A	3.7	OZ/A	8-12"CN	B			
11	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	8-12"CN	B			
11	AMS	100	DRY	2	% W/W	2	% W/W	8-12"CN	B			
12	DEGREE XTRA	4	L	2.4	LB A/A	2.4	QT/A	PRE	A	98	99	99
12	ACCENT	75	WG	0.032	LB A/A	0.68	OZ/A	8-12"CN	B			
12	YUKON	67.5	WG	0.156	LB A/A	3.7	OZ/A	8-12"CN	B			
12	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	8-12"CN	B			
12	AMS	100	DRY	2	% W/W	2	% W/W	8-12"CN	B			
13	KEystone	5.25	L	2.76	LB A/A	2.1	QT/A	PRE	A	99	99	99
13	HORNET	68.5	WG	0.161	LB A/A	3.76	OZ/A	8-12"CN	B			
13	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	8-12"CN	B			
13	AMS	100	DRY	2	% W/W	2	% W/W	8-12"CN	B			
14	LUMAX	3.94	L	2.22	LB A/A	2.25	QT/A	PRE	A	99	99	99
14	STEADFAST	75	WG	0.035	LB A/A	0.75	OZ/A	8-12"CN	B			
14	PRIME OIL COC	100	LIQ	1	% V/V	1	% V/V	8-12"CN	B			
14	28% UAN	100	LIQ	2	QT/A	2	QT/A	8-12"CN	B			
15	CINCH ATZ	5.5	L	2.18	LB A/A	1.59	QT/A	PRE	A	99	99	99
15	STEADFAST	75	WG	0.035	LB A/A	0.75	OZ/A	8-12"CN	B			
15	28% UAN	100	LIQ	2	QT/A	2	QT/A	8-12"CN	B			
16	BICEP II MAGNUM	5.5	L	2.18	LB A/A	1.59	QT/A	PRE	A	94	99	99
16	CALLISTO	4	SC	0.094	LB A/A	3	FL OZ/A	8-12"CN	B			
16	AATREX	90	WG	0.25	LB A/A	4.44	OZ/A	8-12"CN	B			
16	PRIME OIL COC	100	LIQ	1	% V/V	1	% V/V	8-12"CN	B			
16	AMS	100	DRY	2	% W/W	2	% W/W	8-12"CN	B			
17	HARNESS XTRA	5.6	L	2.52	LB A/A	1.8	QT/A	PRE	A	97	99	99
17	ACCENT	75	WG	0.032	LB A/A	0.68	OZ/A	8-12"CN	B			
17	YUKON	67.5	WG	0.156	LB A/A	3.7	OZ/A	8-12"CN	B			
17	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	8-12"CN	B			
17	AMS	100	DRY	2	% W/W	2	% W/W	8-12"CN	B			
18	DEGREE XTRA	4	L	2.4	LB A/A	2.4	QT/A	PRE	A	97	99	99
18	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	OZ/A	8-12"CN	B			
18	AMS	100	DRY	2	% W/W	2	% W/W	8-12"CN	B			
19	HARNESS XTRA	5.6	L	2.52	LB A/A	1.8	QT/A	PRE	A	97	99	99
19	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	OZ/A	8-12"CN	B			
19	AMS	100	DRY	2	% W/W	2	% W/W	8-12"CN	B			

Weed Code	IPOSS	IPOSS	IPOSS
Crop Code			
Rating Data Type	Control	Control	Control
Rating Unit	Percent	Percent	Percent
Rating Date	6-18-03	7-4-03	8-1-03
Trt-Eval Interval	-2 DA-B	14 DA-B	42 DA-B

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	IPOSS	IPOSS	IPOSS
20	AATREX	90	WG	1.0	LB A/A	1.11	LB/A	PRE	A	96	99	99
20	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	OZ/A	8-12"CN	B			
20	CALLISTO	4	SC	0.094	LB A/A	3	FL OZ/A	8-12"CN	B			
20	AMS	100	DRY	2	% W/W	2	% W/W	8-12"CN	B			
LSD (P=.05)										6.0	0.0	0.0
Replicate F										0.883	0.000	0.000
Replicate Prob(F)										0.4219	1.0000	1.0000
Treatment F										110.188	0.000	0.000
Treatment Prob(F)										0.0001	1.0000	1.0000

Sequential Herbicide Program Comparisons in Corn - II.

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Trial Comments

1. Protocol: Monsanto.
2. Ratings: CI prior to POST, 7 DA POST; WC prior to POST, 14 and 42 DA POST.
3. No yield.
4. DA-B = days after 8-12"CN application. Ratings on 6-18-03 at -2 DA-B are prior to the 8-12"CN application.