

Weed Control in Corn with MANA-283 and Tank Mixtures - 2.

Project Code: 04-21S-M120 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: 9-1-04

Objective:

To evaluate the efficacy of MANA-283 alone and tank mixed with Callisto vs Bicep II Magnum and Lumax.

Weed Code	Common Name	Scientific Name
1. SETFA	foxtail, giant	Setaria faberi Herrm.
2. XANST	cocklebur, common	Xanthium strumarium L.
3. ABUTH	velvetleaf	Abutilon theophrasti Medicus
4. AMBEL	ragweed, common	Ambrosia artemisiifolia L.
5. IPOHE	morningglory, ivyleaf	Ipomoea hederacea (L.) Jacq.

Crop 1: ZEAMX corn, field Variety: DKC 60-17 RR
 Planting Method: Seeded Planting Date: 5-11-04
 Rate: 28000 S/A Depth: 1.5 IN
 Row Spacing: 30 IN

Plot Width, Unit: 10 FT Plot Length, Unit: 30 FT Reps: 4
 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, K20 100 LB/A

Soil Name: Ebbert % OM: 2.7 pH: 6.2 CEC: 14
 Texture: Silt loam Fert. Level: P1: 115 LB/A, K: 500 LB/A

APPLICATION DESCRIPTION

A

Application Date: 5-12-04
 Time of Day: 18:00
 Application Method: Spray
 Application Timing: PRE
 Applic. Placement: BROFOL
 Air Temp., Unit: 70 F
 % Relative Humidity: 70
 Wind Velocity, Unit: 8 MPH
 Soil Moisture: NORMAL

CROP STAGE AT EACH APPLICATION

A

Crop 1 Code, Stage: ZEAMX NA
 Height, Unit: NA NA

APPLICATION EQUIPMENT

A

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

NOTES:

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Weed Code	Crop Code	Rating Data Type	Rating Unit	Rating Date	Trt-Eval Interval	ZEAMX Injury Percent 6-1-04 14 DAE	ZEAMX Injury Percent 6-15-04 28 DAE	ZEAMX Injury Percent 6-29-04 42 DAE	ZEAMX Injury Percent 7-13-04 56 DAE	SETFA Control Percent 6-1-04 14 DAE	SETFA Control Percent 6-15-04 28 DAE	SETFA Control Percent 6-29-04 42 DAE	SETFA Control Percent 7-13-04 56 DAE	XANST Control Percent 6-1-04 14 DAE	XANST Control Percent 6-15-04 28 DAE	XANST Control Percent 6-29-04 42 DAE	XANST Control Percent 7-13-04 56 DAE	ABUTH Control Percent 6-1-04 14 DAE	ABUTH Control Percent 6-15-04 28 DAE	ABUTH Control Percent 6-29-04 42 DAE	ABUTH Control Percent 7-13-04 56 DAE
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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	0	0	0			
2	BICEP II MAGNUM	5.5 L		1.79 LB A/A		1.3 QT/A		PRE	A	0	0	0	0	99	99	99	99	82	75	52	45	90	80	87	87
3	BICEP II MAGNUM	5.5 L		2.68 LB A/A		1.95 QT/A		PRE	A	0	0	0	0	99	99	99	99	85	81	59	50	91	85	86	86
4	BICEP II MAGNUM	5.5 L		3.03 LB A/A		2.2 QT/A		PRE	A	0	0	0	0	99	99	99	99	85	80	58	53	92	87	90	90
5	BICEP II MAGNUM	5.5 L		3.57 LB A/A		2.6 QT/A		PRE	A	0	0	0	0	99	99	99	99	91	88	68	68	94	88	89	89
6	MANA-283	5.97 L		1.43 LB A/A		0.96 QT/A		PRE	A	0	0	0	0	99	99	99	99	85	79	51	49	92	77	73	73
6	AATREX	90 WG		0.35 LB A/A		0.39 LB/A		PRE	A																
7	MANA-283	5.97 L		2.15 LB A/A		1.44 QT/A		PRE	A	0	0	0	0	99	99	99	99	84	80	56	63	91	83	86	86
7	AATREX	90 WG		0.54 LB A/A		0.6 LB/A		PRE	A																
8	MANA-283	5.97 L		2.43 LB A/A		1.63 QT/A		PRE	A	0	0	0	0	99	99	98	98	84	77	43	44	94	83	85	85
8	AATREX	90 WG		0.6 LB A/A		0.67 LB/A		PRE	A																
9	MANA-283	5.97 L		2.85 LB A/A		1.91 QT/A		PRE	A	0	0	0	0	99	99	99	99	88	84	58	51	94	86	79	79
9	AATREX	90 WG		0.7 LB A/A		0.78 LB/A		PRE	A																
10	MANA-283	5.97 L		3.22 LB A/A		2.16 QT/A		PRE	A	0	0	0	0	99	99	99	99	86	85	68	64	95	88	90	90
11	MANA-283	5.97 L		3.66 LB A/A		2.45 QT/A		PRE	A	0	0	0	0	99	99	99	99	87	85	56	53	96	83	84	84
12	MANA-283	5.97 L		4.3 LB A/A		2.87 QT/A		PRE	A	0	0	0	0	99	99	99	99	91	89	63	64	99	90	90	90
13	PARALLEL II	7.8 L		0.78 LB A/A		0.8 PT/A		PRE	A	0	0	0	0	99	99	99	99	86	80	61	60	91	76	85	85
13	AATREX	90 WG		1.0 LB A/A		1.11 LB/A		PRE	A																
14	PARALLEL II	7.8 L		1.17 LB A/A		1.2 PT/A		PRE	A	0	0	0	0	99	99	99	99	84	77	51	40	93	84	81	81
14	AATREX	90 WG		1.51 LB A/A		1.68 LB/A		PRE	A																
15	PARALLEL II	7.8 L		1.56 LB A/A		1.6 PT/A		PRE	A	0	0	0	0	99	99	99	99	92	89	73	80	93	81	80	80
15	AATREX	90 WG		2.0 LB A/A		2.22 LB/A		PRE	A																
16	PARALLEL II	7.8 L		1.76 LB A/A		1.8 PT/A		PRE	A	0	0	0	0	99	99	99	99	89	85	64	58	94	81	85	85
16	AATREX	90 WG		1.46 LB A/A		1.62 LB/A		PRE	A																
17	PARALLEL II	7.8 L		1.95 LB A/A		2.0 PT/A		PRE	A	0	0	0	0	99	99	99	99	91	88	70	70	91	79	80	80
17	AATREX	90 WG		1.66 LB A/A		1.84 LB/A		PRE	A																
18	PARALLEL II	7.8 L		2.34 LB A/A		2.4 PT/A		PRE	A	0	0	0	0	99	99	99	99	91	87	69	68	96	88	91	91
18	AATREX	90 WG		1.95 LB A/A		2.17 LB/A		PRE	A																
19	MANA-283	5.97 L		2.15 LB A/A		1.44 QT/A		PRE	A	0	0	0	0	99	99	98	98	93	96	86	85	99	99	99	99
19	CALLISTO	4 SC		0.15 LB A/A		4.8 FL OZ/A		PRE	A																
19	AATREX	90 WG		0.54 LB A/A		0.6 LB/A		PRE	A																

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Weed Code	Crop Code	Rating Data Type	Rating Unit	Rating Date	Trt-Eval Interval	ZEAMX Injury Percent	ZEAMX Injury Percent	ZEAMX Injury Percent	ZEAMX Injury Percent	SETFA Control Percent	SETFA Control Percent	SETFA Control Percent	SETFA Control Percent	XANST Control Percent	XANST Control Percent	XANST Control Percent	XANST Control Percent	ABUTH Control Percent	ABUTH Control Percent	ABUTH Control Percent	ABUTH Control Percent					
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	14 DAE	28 DAE	42 DAE	56 DAE	14 DAE	28 DAE	42 DAE	56 DAE	14 DAE	28 DAE	42 DAE	56 DAE					
20	MANA-283	5.97	L	2.69	LB A/A	1.8	QT/A	PRE	A	0	0	0	0	99	99	99	99	90	89	71	75	98	94	91	91	
20	CALLISTO	4	SC	0.15	LB A/A	4.8	FL OZ/A	PRE	A																	
20	AATREX	90	WG	0.78	LB A/A	0.87	LB/A	PRE	A																	
21	MANA-283	5.97	L	3.22	LB A/A	2.16	QT/A	PRE	A	0	0	0	0	99	99	99	99	94	93	87	90	99	99	99	99	
21	CALLISTO	4	SC	0.15	LB A/A	4.8	FL OZ/A	PRE	A																	
22	MANA-283	5.97	L	3.58	LB A/A	2.4	QT/A	PRE	A	0	0	0	0	99	99	99	99	91	91	82	84	99	99	98	98	
22	CALLISTO	4	SC	0.15	LB A/A	4.8	FL OZ/A	PRE	A																	
23	MANA-283	5.97	L	4.3	LB A/A	2.87	QT/A	PRE	A	0	0	0	0	99	99	99	99	95	94	91	94	99	99	99	99	
23	CALLISTO	4	SC	0.15	LB A/A	4.8	FL OZ/A	PRE	A																	
24	LUMAX	3.94	L	2.46	LB A/A	2.5	QT/A	PRE	A	0	0	0	0	99	99	99	99	96	97	93	90	99	98	99	99	
25	LUMAX	3.94	L	2.96	LB A/A	3.0	QT/A	PRE	A	0	0	0	0	99	99	99	99	96	98	95	98	99	99	99	99	
26	LEXAR	3.7	L	2.78	LB A/A	3.0	QT/A	PRE	A	0	0	0	0	99	99	99	99	96	97	93	94	99	99	99	99	
27	LEXAR	3.7	L	3.24	LB A/A	3.5	QT/A	PRE	A	0	0	0	0	99	99	99	99	96	98	94	96	99	99	99	99	
LSD (P=.05)						0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	5.7	6.2	12.4	9.3	6.9	9.9	12.4	12.4					
Replicate F						0.000	0.000	0.000	0.000	0.000	0.000	1.110	1.110	0.745	0.215	1.100	0.824	3.262	3.551	5.841	5.841					
Replicate Prob(F)						1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.3507	0.3507	0.5288	0.8855	0.3545	0.4846	0.0261	0.0183	0.0012	0.0012					
Treatment F						0.000	0.000	0.000	0.000	0.000	0.000	4102.450	4102.450	77.886	67.292	21.675	45.002	58.186	28.474	18.292	18.292					
Treatment Prob(F)						1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Weed Control in Corn with MANA-283 and Tank Mixtures - 2.

Project Code: 04-21S-M120 Location: Belleville Research Center
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Weed Code	AMBEL	AMBEL	AMBEL	AMBEL	IPOHE	IPOHE	IPOHE	IPOHE
Crop Code								
Rating Data Type	Control	Control	Control	Control	Control	Control	Control	Control
Rating Unit	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Rating Date	6-1-04	6-15-04	6-29-04	7-13-04	6-1-04	6-15-04	6-29-04	7-13-04
Trt-Eval Interval	14 DAE	28 DAE	42 DAE	56 DAE	14 DAE	28 DAE	42 DAE	56 DAE

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	AMBEL 6-1-04 14 DAE	AMBEL 6-15-04 28 DAE	AMBEL 6-29-04 42 DAE	AMBEL 7-13-04 56 DAE	IPOHE 6-1-04 14 DAE	IPOHE 6-15-04 28 DAE	IPOHE 6-29-04 42 DAE	IPOHE 7-13-04 56 DAE
1	NONTREATED									0	0	0	0	0	0	0	0
2	BICEP II MAGNUM	5.5	L	1.79	LB A/A	1.3	QT/A	PRE	A	98	94	97	97	96	91	92	92
3	BICEP II MAGNUM	5.5	L	2.68	LB A/A	1.95	QT/A	PRE	A	99	95	96	96	98	93	94	94
4	BICEP II MAGNUM	5.5	L	3.03	LB A/A	2.2	QT/A	PRE	A	99	94	95	95	98	93	92	92
5	BICEP II MAGNUM	5.5	L	3.57	LB A/A	2.6	QT/A	PRE	A	99	96	96	96	99	96	95	95
6	MANA-283	5.97	L	1.43	LB A/A	0.96	QT/A	PRE	A	99	97	96	96	96	90	91	91
6	AATREX	90	WG	0.35	LB A/A	0.39	LB/A	PRE	A								
7	MANA-283	5.97	L	2.15	LB A/A	1.44	QT/A	PRE	A	99	96	97	97	97	90	94	94
7	AATREX	90	WG	0.54	LB A/A	0.6	LB/A	PRE	A								
8	MANA-283	5.97	L	2.43	LB A/A	1.63	QT/A	PRE	A	99	95	96	96	97	94	95	95
8	AATREX	90	WG	0.6	LB A/A	0.67	LB/A	PRE	A								
9	MANA-283	5.97	L	2.85	LB A/A	1.91	QT/A	PRE	A	99	97	97	97	98	91	95	95
9	AATREX	90	WG	0.7	LB A/A	0.78	LB/A	PRE	A								
10	MANA-283	5.97	L	3.22	LB A/A	2.16	QT/A	PRE	A	99	94	97	97	98	92	93	93
11	MANA-283	5.97	L	3.66	LB A/A	2.45	QT/A	PRE	A	99	95	96	96	99	92	95	95
12	MANA-283	5.97	L	4.3	LB A/A	2.87	QT/A	PRE	A	99	98	96	96	99	93	94	94
13	PARALLEL II	7.8	L	0.78	LB A/A	0.8	PT/A	PRE	A	99	96	97	97	98	90	91	91
13	AATREX	90	WG	1.0	LB A/A	1.11	LB/A	PRE	A								
14	PARALLEL II	7.8	L	1.17	LB A/A	1.2	PT/A	PRE	A	99	89	95	95	97	88	91	91
14	AATREX	90	WG	1.51	LB A/A	1.68	LB/A	PRE	A								
15	PARALLEL II	7.8	L	1.56	LB A/A	1.6	PT/A	PRE	A	99	95	97	97	98	92	93	93
15	AATREX	90	WG	2.0	LB A/A	2.22	LB/A	PRE	A								
16	PARALLEL II	7.8	L	1.76	LB A/A	1.8	PT/A	PRE	A	99	94	94	94	98	93	90	90
16	AATREX	90	WG	1.46	LB A/A	1.62	LB/A	PRE	A								
17	PARALLEL II	7.8	L	1.95	LB A/A	2.0	PT/A	PRE	A	99	95	96	96	99	94	93	93
17	AATREX	90	WG	1.66	LB A/A	1.84	LB/A	PRE	A								
18	PARALLEL II	7.8	L	2.34	LB A/A	2.4	PT/A	PRE	A	99	96	96	96	98	89	94	94
18	AATREX	90	WG	1.95	LB A/A	2.17	LB/A	PRE	A								
19	MANA-283	5.97	L	2.15	LB A/A	1.44	QT/A	PRE	A	99	99	97	97	99	96	95	95
19	CALLISTO	4	SC	0.15	LB A/A	4.8	FL OZ/A	PRE	A								
19	AATREX	90	WG	0.54	LB A/A	0.6	LB/A	PRE	A								

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Weed Code	AMBEL	AMBEL	AMBEL	AMBEL	IPOHE	IPOHE	IPOHE	IPOHE
Crop Code	Control	Control	Control	Control	Control	Control	Control	Control
Rating Data Type	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Rating Unit	6-1-04	6-15-04	6-29-04	7-13-04	6-1-04	6-15-04	6-29-04	7-13-04
Rating Date	14 DAE	28 DAE	42 DAE	56 DAE	14 DAE	28 DAE	42 DAE	56 DAE
Trt-Eval Interval								

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code								
20	MANA-283	5.97	L	2.69	LB A/A	1.8	QT/A	PRE	A	99	97	98	98	98	94	94	
20	CALLISTO	4	SC	0.15	LB A/A	4.8	FL OZ/A	PRE	A								
20	AATREX	90	WG	0.78	LB A/A	0.87	LB/A	PRE	A								
21	MANA-283	5.97	L	3.22	LB A/A	2.16	QT/A	PRE	A	99	99	97	97	99	96	94	
21	CALLISTO	4	SC	0.15	LB A/A	4.8	FL OZ/A	PRE	A								
22	MANA-283	5.97	L	3.58	LB A/A	2.4	QT/A	PRE	A	99	99	98	98	97	94	94	
22	CALLISTO	4	SC	0.15	LB A/A	4.8	FL OZ/A	PRE	A								
23	MANA-283	5.97	L	4.3	LB A/A	2.87	QT/A	PRE	A	99	99	99	99	99	97	95	
23	CALLISTO	4	SC	0.15	LB A/A	4.8	FL OZ/A	PRE	A								
24	LUMAX	3.94	L	2.46	LB A/A	2.5	QT/A	PRE	A	99	99	98	98	98	98	96	
25	LUMAX	3.94	L	2.96	LB A/A	3.0	QT/A	PRE	A	99	99	99	99	99	98	97	
26	LEXAR	3.7	L	2.78	LB A/A	3.0	QT/A	PRE	A	99	98	97	97	99	97	96	
27	LEXAR	3.7	L	3.24	LB A/A	3.5	QT/A	PRE	A	99	99	99	99	99	97	95	
LSD (P=.05)										0.6	4.6	3.6	3.6	2.1	5.2	3.3	3.3
Replicate F										0.325	6.131	7.986	7.986	0.564	7.087	0.824	0.824
Replicate Prob(F)										0.8075	0.0009	0.0001	0.0001	0.6407	0.0003	0.4848	0.4848
Treatment F										7505.683	133.106	210.475	210.475	635.854	98.303	242.980	242.980
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Trial Comments

1. Protocol: Makhteshim-Agan.
2. Ratings: CI and WC 14, 28, 42 and 56 DAE.
3. DAE = Days after emergence.