

PREEMERGENCE WEED CONTROL IN CORN III

Trial ID: 04PREC3 Study Dir.: Anthony F. Dobbels
Location: WESTERN BRANCH F-10 Investigator: Dr. Mark M. Loux

GENERAL TRIAL INFORMATION

Study Director: Anthony F. Dobbels
Investigator: Dr. Mark M. Loux

Conducted Under GLP (Y/N): N Conducted Under GEP (Y/N): N

CROP AND WEED DESCRIPTION

Weed Code	Common Name	Scientific Name
1. SETFA	Giant foxtail	Setaria faberi
2. ABUTH	Velvetleaf	Abutilon theophrasti
3. CHEAL	Lambsquarters, common	Chenopodium album
4. AMBTR	Ragweed, giant	Ambrosia trifida
5. AMBEL	Ragweed, common	Ambrosia artemisiifolia
6. AMARE	Redroot pigweed	Amaranthus retroflexus

Crop 1: ZEAMX CORN, FIELD Variety: PIONEER 34M94
Planting Date: 5-10-04 Planting Method: JOHN DEERE 7200
Rate: 32097 SEED/A Depth: 1.5 IN
Row Spacing: 30 IN Seed Bed: CONVENTIONAL

SITE AND DESIGN

Plot Width, Unit: 6.67 FT Plot Length, Unit: 30 FT Reps: 3
Tillage Type: CONVENTIONAL Study Design: RANDOMIZED COMPLETE BLOCK

SOIL DESCRIPTION

% OM: 2.6 Texture: silt loam
pH: 5.7 Soil Name: Crosby
CEC: 12

APPLICATION DESCRIPTION

A

Application Date: 5-11-04
Time of Day: 8:00 A.M.
Application Method: SPRAY
Application Timing: PRE
Applic. Placement: BROADCAST
Air Temp., Unit: 68 F
% Relative Humidity: 73
Wind Velocity, Unit: 2 N
Soil Temp., Unit: 61 F
Soil Moisture: DRY/MOIST
% Cloud Cover: 15

CROP STAGE AT EACH APPLICATION

A

Crop 1 Code, Stage: ZEAMX

WEED STAGE AT EACH APPLICATION

A

Weed 1 Code, Stage: SETFA
Density, Unit: 46 M2
Weed 2 Code, Stage: ABUTH
Density, Unit: 19 M2
Weed 3 Code, Stage: CHEAL
Density, Unit: 6 M2
Weed 4 Code, Stage: AMBTR
Density, Unit: 3 M2
Weed 5 Code, Stage: AMBEL
Density, Unit: 0.5 M2
Weed 6 Code, Stage: AMARE
Density, Unit: 2.3 M2

APPLICATION EQUIPMENT

A

Appl. Equipment: BACKPACK
Operating Pressure: 50
Nozzle Type: DG
Nozzle Size: 11002
Nozzle Spacing, Unit: 18 IN
Ground Speed, Unit: 3 MPH
Carrier: WATER
Spray Volume, Unit: 20 GPA
Propellant: CO2

(04PREC3)

Ohio State University
Horticulture and Crop Science

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Weed Code					SETFA	ABUTH	TR	CHEAL	AMBTR	AMBEL	AMARE
Crop Code											
Rating Data Type					CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit					PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT
Rating Date					6-1-04	6-8-04	6-8-04	6-8-04	6-8-04	6-8-04	6-8-04
Trt-Eval Interval					14 DAE	28 DA-A	28 DA-A	28 DA-A	28 DA-A	28 DA-A	28 DA-A
# Subsamples, Dec.					0	0	0	0	0	0	0

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Grow Stg	Appl Code	1	2	3	4	5	6	7	8	9
1	BICEP II MAGNUM	1.3 qt/a		PRE	A	0	0	0	98	67	55	24	100	100
2	BICEP II MAGNUM	1.95 qt/a		PRE	A	0	0	0	100	82	80	34	100	100
3	BICEP II MAGNUM	2.2 qt/a		PRE	A	0	0	0	100	78	73	47	100	100
4	BICEP II MAGNUM	2.6 qt/a		PRE	A	0	0	0	100	82	75	54	100	100
5	MANA-283	0.96 qt/a		PRE	A	0	0	0	100	60	73	40	100	100
5	ATRAZINE	0.35 qt/a		PRE										
6	MANA-283	1.44 qt/a		PRE	A	0	0	0	100	75	73	24	100	100
6	ATRAZINE	0.54 qt/a		PRE										
7	MANA-283	1.63 qt/a		PRE	A	0	0	0	100	73	80	44	100	100
7	ATRAZINE	0.6 qt/a		PRE										
8	MANA-283	1.91 qt/a		PRE	A	0	0	0	100	80	60	55	100	100
8	ATRAZINE	0.7 qt/a		PRE										
9	MANA-283	2.16 qt/a		PRE	A	0	0	0	100	70	55	25	100	100
10	MANA-283	2.45 qt/a		PRE	A	0	0	0	100	82	47	40	100	100
11	MANA-283	2.87 qt/a		PRE	A	0	0	0	100	82	73	50	100	100
12	PARALLEL II	0.8 pt/a		PRE	A	0	0	0	99	70	67	35	100	100
12	ATRAZINE	1 qt/a		PRE										
13	PARALLEL II	1.2 pt/a		PRE	A	0	0	0	100	73	47	30	100	100
13	ATRAZINE	1.51 qt/a		PRE										
14	PARALLEL II	1.6 pt/a		PRE	A	0	0	0	100	87	77	60	100	100
14	ATRAZINE	2 qt/a		PRE										
15	PARALLEL II	1.8 pt/a		PRE	A	0	0	0	100	77	75	55	100	100
15	ATRAZINE	1.46 qt/a		PRE										
16	PARALLEL II	2 pt/a		PRE	A	0	0	0	100	80	70	60	100	100
16	ATRAZINE	1.66 qt/a		PRE										
17	PARALLEL II	2.4 pt/a		PRE	A	0	0	0	100	78	80	60	100	100
17	ATRAZINE	1.95 qt/a		PRE										
18	MANA-283	1.44 qt/a		PRE	A	0	0	0	100	100	100	70	100	100
18	CALLISTO	4.8 oz/a		PRE										
18	ATRAZINE	0.54 qt/a		PRE										
19	MANA-283	1.8 qt/a		PRE	A	0	0	0	100	100	100	83	100	100
19	CALLISTO	4.8 oz/a		PRE										
19	ATRAZINE	0.78 qt/a		PRE										
20	MANA-283	2.16 qt/a		PRE	A	0	0	0	100	100	100	75	100	100
20	CALLISTO	4.8 oz/a		PRE										
21	MANA-283	2.4 qt/a		PRE	A	0	0	0	100	100	100	73	100	100
21	CALLISTO	4.8 oz/a		PRE										
22	MANA-283	2.87 qt/a		PRE	A	0	0	0	100	100	100	90	100	100
22	CALLISTO	4.8 oz/a		PRE										
23	LUMAX	2.5 qt/a		PRE	A	0	0	0	100	100	100	86	100	100
24	LUMAX	3 qt/a		PRE	A	0	0	0	100	100	100	88	100	100
25	UTC					0	0	0	0	0	0	0	0	0
LSD (P=.05)						0.0	0.0	0.0	1.0	9.9	32.2	33.0	0.0	0.0
Standard Deviation						0.0	0.0	0.0	0.6	6.0	19.5	19.7	0.0	0.0
CV						0.0	0.0	0.0	0.66	7.5	26.2	37.8	0.0	0.0
Replicate F						0.000	0.000	0.000	0.931	5.814	0.790	4.288	0.000	0.000
Replicate Prob(F)						1.0000	1.0000	1.0000	0.4013	0.0055	0.4598	0.0246	1.0000	1.0000
Treatment F						0.000	0.000	0.000	2985.992	35.507	4.214	4.150	0.000	0.000
Treatment Prob(F)						1.0000	1.0000	1.0000	0.0001	0.0001	0.0001	0.0003	1.0000	1.0000

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Weed Code						SETFA	ABUTH	TR	CHEAL	AMBTR	AMBEL	AMARE	SETFA	ABUTH
Crop Code						ZEAMX								
Rating Data Type						PHYTO	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit						PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT
Rating Date						6-28-04	6-28-04	6-28-04	6-28-04	6-28-04	6-28-04	6-28-04	7-13-04	7-13-04
Trt-Eval Interval						48 DA-A	48 DA-A	48 DA-A	48 DA-A	48 DA-A	48 DA-A	48 DA-A	63 DA-A	63 DA-A
# Subsamples, Dec.						0	0	0	0	0	0	0	0	0
Trt No.	Treatment Name	Product Rate	Product Rate Unit	Grow Stg	Appl Code	10	11	12	13	14	15	16	17	18
1	BICEP II MAGNUM	1.3	qt/a	PRE	A	0	100	70	70	37	100	100	99	17
2	BICEP II MAGNUM	1.95	qt/a	PRE	A	0	100	80	78	37	100	100	100	40
3	BICEP II MAGNUM	2.2	qt/a	PRE	A	0	100	82	77	60	100	100	100	40
4	BICEP II MAGNUM	2.6	qt/a	PRE	A	0	100	83	70	64	100	100	100	70
5	MANA-283	0.96	qt/a	PRE	A	0	100	53	75	27	100	100	98	40
5	ATRAZINE	0.35	qt/a	PRE										
6	MANA-283	1.44	qt/a	PRE	A	0	100	70	78	27	100	100	98	47
6	ATRAZINE	0.54	qt/a	PRE										
7	MANA-283	1.63	qt/a	PRE	A	0	100	82	85	62	100	100	100	57
7	ATRAZINE	0.6	qt/a	PRE										
8	MANA-283	1.91	qt/a	PRE	A	0	100	73	53	65	95	100	100	57
8	ATRAZINE	0.7	qt/a	PRE										
9	MANA-283	2.16	qt/a	PRE	A	0	100	77	73	37	100	100	100	50
10	MANA-283	2.45	qt/a	PRE	A	0	100	82	65	72	100	100	100	53
11	MANA-283	2.87	qt/a	PRE	A	0	100	82	73	57	100	100	100	50
12	PARALLEL II	0.8	pt/a	PRE	A	0	100	67	70	52	100	100	99	30
12	ATRAZINE	1	qt/a	PRE										
13	PARALLEL II	1.2	pt/a	PRE	A	0	100	65	67	47	100	100	98	30
13	ATRAZINE	1.51	qt/a	PRE										
14	PARALLEL II	1.6	pt/a	PRE	A	0	100	82	77	58	100	100	100	67
14	ATRAZINE	2	qt/a	PRE										
15	PARALLEL II	1.8	pt/a	PRE	A	0	100	70	73	53	100	100	100	23
15	ATRAZINE	1.46	qt/a	PRE										
16	PARALLEL II	2	pt/a	PRE	A	0	100	80	73	53	92	100	100	57
16	ATRAZINE	1.66	qt/a	PRE										
17	PARALLEL II	2.4	pt/a	PRE	A	0	100	87	87	50	100	100	100	66
17	ATRAZINE	1.95	qt/a	PRE										
18	MANA-283	1.44	qt/a	PRE	A	0	100	100	100	78	100	100	100	100
18	CALLISTO	4.8	oz/a	PRE										
18	ATRAZINE	0.54	qt/a	PRE										
19	MANA-283	1.8	qt/a	PRE	A	0	100	100	100	83	100	100	100	100
19	CALLISTO	4.8	oz/a	PRE										
19	ATRAZINE	0.78	qt/a	PRE										
20	MANA-283	2.16	qt/a	PRE	A	0	100	100	100	73	100	100	100	100
20	CALLISTO	4.8	oz/a	PRE										
21	MANA-283	2.4	qt/a	PRE	A	0	100	100	100	83	100	100	100	100
21	CALLISTO	4.8	oz/a	PRE										
22	MANA-283	2.87	qt/a	PRE	A	0	100	100	100	85	97	100	100	100
22	CALLISTO	4.8	oz/a	PRE										
23	LUMAX	2.5	qt/a	PRE	A	0	100	100	100	83	100	100	100	100
24	LUMAX	3	qt/a	PRE	A	0	100	100	100	90	100	100	100	100
25	UTC					0	0	0	0	0	0	0	0	0
LSD (P=.05)						0.0	0.0	11.3	17.6	25.1	4.9	0.0	1.7	25.2
Standard Deviation						0.0	0.0	6.8	10.6	14.9	3.0	0.0	1.0	15.3
CV						0.0	0.0	8.6	13.67	25.98	3.14	0.0	1.07	25.55
Replicate F						0.000	0.000	2.157	2.660	16.961	0.149	0.000	2.681	2.792
Replicate Prob(F)						1.0000	1.0000	0.1267	0.0802	0.0001	0.8623	1.0000	0.0788	0.0713
Treatment F						0.000	0.000	28.830	11.923	6.435	133.204	0.000	1137.409	11.633
Treatment Prob(F)						1.0000	1.0000	0.0001	0.0001	0.0001	0.0001	1.0000	0.0001	0.0001

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Weed Code		TR CHEAL		AMBTR	AMBEL	AMARE			
Crop Code		CONTROL		CONTROL	CONTROL	CONTROL			
Rating Data Type		PERCENT		PERCENT	PERCENT	PERCENT			
Rating Unit		7-13-04		7-13-04	7-13-04	7-13-04			
Rating Date		63 DA-A		63 DA-A	63 DA-A	63 DA-A			
Trt-Eval Interval		0		0	0	0			
# Subsamples, Dec.		0		0	0	0			
Trt No.	Treatment Name	Product Rate	Product Rate Unit	Grow Stg	Appl Code	19	20	21	22
1	BICEP II MAGNUM	1.3	qt/a	PRE	A	40	24	100	100
2	BICEP II MAGNUM	1.95	qt/a	PRE	A	57	24	100	100
3	BICEP II MAGNUM	2.2	qt/a	PRE	A	47	30	100	100
4	BICEP II MAGNUM	2.6	qt/a	PRE	A	70	10	100	100
5	MANA-283	0.96	qt/a	PRE	A	70	0	87	100
5	ATRAZINE	0.35	qt/a	PRE					
6	MANA-283	1.44	qt/a	PRE	A	60	0	100	100
6	ATRAZINE	0.54	qt/a	PRE					
7	MANA-283	1.63	qt/a	PRE	A	53	29	100	100
7	ATRAZINE	0.6	qt/a	PRE					
8	MANA-283	1.91	qt/a	PRE	A	33	10	90	100
8	ATRAZINE	0.7	qt/a	PRE					
9	MANA-283	2.16	qt/a	PRE	A	60	0	100	100
10	MANA-283	2.45	qt/a	PRE	A	47	10	100	100
11	MANA-283	2.87	qt/a	PRE	A	57	10	100	100
12	PARALLEL II	0.8	pt/a	PRE	A	27	10	100	100
12	ATRAZINE	1	qt/a	PRE					
13	PARALLEL II	1.2	pt/a	PRE	A	37	10	100	100
13	ATRAZINE	1.51	qt/a	PRE					
14	PARALLEL II	1.6	pt/a	PRE	A	63	25	100	100
14	ATRAZINE	2	qt/a	PRE					
15	PARALLEL II	1.8	pt/a	PRE	A	63	20	100	100
15	ATRAZINE	1.46	qt/a	PRE					
16	PARALLEL II	2	pt/a	PRE	A	63	10	100	100
16	ATRAZINE	1.66	qt/a	PRE					
17	PARALLEL II	2.4	pt/a	PRE	A	79	20	100	100
17	ATRAZINE	1.95	qt/a	PRE					
18	MANA-283	1.44	qt/a	PRE	A	100	65	100	100
18	CALLISTO	4.8	oz/a	PRE					
18	ATRAZINE	0.54	qt/a	PRE					
19	MANA-283	1.8	qt/a	PRE	A	100	70	100	100
19	CALLISTO	4.8	oz/a	PRE					
19	ATRAZINE	0.78	qt/a	PRE					
20	MANA-283	2.16	qt/a	PRE	A	100	80	100	100
20	CALLISTO	4.8	oz/a	PRE					
21	MANA-283	2.4	qt/a	PRE	A	100	85	100	100
21	CALLISTO	4.8	oz/a	PRE					
22	MANA-283	2.87	qt/a	PRE	A	100	90	100	100
22	CALLISTO	4.8	oz/a	PRE					
23	LUMAX	2.5	qt/a	PRE	A	100	85	100	100
24	LUMAX	3	qt/a	PRE	A	100	95	100	100
25	UTC					0	0	0	0
LSD (P=.05)						28.2	29.8	6.8	0.0
Standard Deviation						17.1	17.7	4.1	0.0
CV						26.32	54.79	4.34	0.0
Replicate F						0.670	6.553	1.490	0.000
Replicate Prob(F)						0.5164	0.0051	0.2356	1.0000
Treatment F						7.663	10.180	71.098	0.000
Treatment Prob(F)						0.0001	0.0001	0.0001	1.0000