

PREEMERGENCE WEED CONTROL IN CORN II

Trial ID: 04PREC2 Study Dir.: Anthony F. Dobbels  
Location: WESTERN BRANCH F-7 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. AMBEL	Ragweed, common	Ambrosia artemisiifolia
3. CHEAL	Lambsquarters, common	Chenopodium album
4. ABUTH	Velvetleaf	Abutilon theophrasti
5. AMARE	Redroot pigweed	Amaranthus retroflexus
6. POLPY	Pennsylvania smartweed	Polygonum pensylvanicum

Crop 1: ZEAMX CORN, FIELD Variety: PIONEER 34M94  
Planting Date: 4-28-04 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: 10 FT Plot Length, Unit: 40 FT Reps: 4  
Tillage Type: CONVENTIONAL Study Design: RANDOMIZED COMPLETE BLOCK

SOIL DESCRIPTION

% OM: 5.2 Texture: silty clay loam  
pH: 5.6 Soil Name: Kokomo  
CEC: 25

APPLICATION DESCRIPTION

A

Application Date: 4-29-04  
Time of Day: 7:00 A.M.  
Application Method: SPRAY  
Application Timing: PRE  
Applic. Placement: BROADCAST  
Air Temp., Unit: 54 F  
% Relative Humidity: 52  
Wind Velocity, Unit: 1 S  
Soil Temp., Unit: 51 F  
Soil Moisture: DRY/MOIST  
% Cloud Cover: 0

CROP STAGE AT EACH APPLICATION

A

Crop 1 Code, Stage: ZEAMX

WEED STAGE AT EACH APPLICATION

A

Weed 1 Code, Stage: SETFA  
Density, Unit: 65.3 M2  
Weed 2 Code, Stage: AMBEL  
Density, Unit: 5 M2  
Weed 3 Code, Stage: CHEAL  
Density, Unit: 14.3 M2  
Weed 4 Code, Stage: ABUTH  
Density, Unit: 3.3 M2  
Weed 5 Code, Stage: AMARE  
Density, Unit: 12 M2  
Weed 6 Code, Stage: POLPY  
Density, Unit: 1.3 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

(04PREC2)

Ohio State University  
Horticulture and Crop Science

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Weed Code						SETFA	AMBEL	ABUTH	TR CHEAL	AMARE			
Crop Code				ZEAMX	ZEAMX	ZEAMX							
Rating Data Type				# MALFORMED	# MALFORMED	PHYTO	CONTROL	CONTROL	CONTROL	CONTROL			
Rating Unit				2 ROWS	2 ROWS	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT			
Rating Date				5-12-04	5-20-04	5-27-04	5-27-04	5-27-04	5-27-04	5-27-04			
Crop Stage				1 LEAF	2 LEAF								
Trt-Eval Interval				7 DAE	14 DAE	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
1	A14224	2.5 qt/a		PRE	A	2	2	0	94	100	100	100	100
2	A14224	3 qt/a		PRE	A	2	3	0	94	100	99	100	100
3	A14224	3.5 qt/a		PRE	A	2	1	0	99	100	100	100	100
4	A14224	3 qt/a		PRE	A	2	2	0	95	100	100	100	100
4	PRINCEP	1 qt/a		PRE									
5	LUMAX	3 qt/a		PRE	A	3	2	0	100	100	100	100	100
6	LUMAX	3 qt/a		PRE	A	1	2	0	100	100	100	100	100
6	ATRAZINE	1 qt/a		PRE									
7	BICEP II MAGNUM	2.6 qt/a		PRE	A	4	2	0	98	100	88	50	100
8	STALWART XTRA	2.6 qt/a		PRE	A	2	1	0	97	100	79	54	100
9	BALANCE PRO	2.25 oz/a		PRE	A	3	1	0	100	100	100	100	100
9	HARNESS XTRA 5.6	2.1 qt/a		PRE									
10	EPIC	12 oz/a		PRE	A	3	1	0	100	100	100	100	100
10	ATRAZINE	1.5 qt/a		PRE									
11	USA 2005	21 oz/a		PRE	A	2	1	0	99	100	100	100	100
11	ATRAZINE	1.5 qt/a		PRE									
12	USA 2005	24 oz/a		PRE	A	2	1	0	100	100	100	100	100
12	ATRAZINE	1.5 qt/a		PRE									
13	GUARDSMAN MAX	2.3 qt/a		PRE	A	1	1	0	98	99	90	79	100
14	HARNESS XTRA 5.6	2.4 qt/a		PRE	A	2	2	0	98	100	95	98	100
15	EPIC	12 oz/a		PRE	A	2	1	0	98	100	100	100	100
16	KEYSTONE	2.8 qt/a		PRE	A	2	2	0	99	100	99	100	100
17	STALWART XTRA	2.1 qt/a		PRE	A	2	1	0	100	100	100	99	100
17	BALANCE PRO	1.5 oz/a		PRE									
18	STALWART XTRA	2.6 qt/a		PRE	A	1	2	0	100	100	100	100	100
18	BALANCE PRO	1.5 oz/a		PRE									
19	STALWART XTRA	2.6 qt/a		PRE	A	2	1	0	98	100	99	55	100
19	SIM-TROL	1 qt/a		PRE									
20	BICEP II MAGNUM	2.6 qt/a		PRE	A	1	1	0	97	100	94	60	100
20	PRINCEP	1 qt/a		PRE									
21	UTC					0	0	0	0	0	0	0	0
LSD (P=.05)						2.2	2.0	0.0	3.1	0.8	12.5	14.4	0.0
Standard Deviation						1.6	1.4	0.0	2.2	0.5	8.8	10.2	0.0
CV						93.71	105.07	0.0	2.36	0.57	9.53	11.96	0.0
Replicate F						1.801	1.569	0.000	0.620	1.000	1.977	2.938	0.000
Replicate Prob(F)						0.1567	0.2063	1.0000	0.6050	0.3992	0.1271	0.0403	1.0000
Treatment F						1.159	0.909	0.000	381.168	6393.001	24.669	27.325	0.000
Treatment Prob(F)						0.3201	0.5782	1.0000	0.0001	0.0001	0.0001	0.0001	1.0000



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Weed Code	TR CHEAL	ABUTH	AMARE	POLPY
Crop Code				
Rating Data Type	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit	PERCENT	PERCENT	PERCENT	PERCENT
Rating Date	7-12-04	7-12-04	7-12-04	7-12-04
Crop Stage				
Trt-Eval Interval	61 DA-A	61 DA-A	61 DA-A	61 DA-A
# Subsamples, Dec.	0	0	0	0

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Grow Stg	Appl Code	18	19	20	21
1	A14224	2.5	qt/a	PRE	A	100	99	100	100
2	A14224	3	qt/a	PRE	A	100	90	100	96
3	A14224	3.5	qt/a	PRE	A	100	100	100	100
4	A14224	3	qt/a	PRE	A	100	99	100	100
4	PRINCEP	1	qt/a	PRE					
5	LUMAX	3	qt/a	PRE	A	100	100	100	100
6	LUMAX	3	qt/a	PRE	A	100	100	100	100
6	ATRAZINE	1	qt/a	PRE					
7	BICEP II MAGNUM	2.6	qt/a	PRE	A	76	98	100	100
8	STALWART XTRA	2.6	qt/a	PRE	A	76	93	100	100
9	BALANCE PRO	2.25	oz/a	PRE	A	100	100	100	100
9	HARNESS XTRA 5.6	2.1	qt/a	PRE					
10	EPIC	12	oz/a	PRE	A	100	100	100	100
10	ATRAZINE	1.5	qt/a	PRE					
11	USA 2005	21	oz/a	PRE	A	100	100	100	100
11	ATRAZINE	1.5	qt/a	PRE					
12	USA 2005	24	oz/a	PRE	A	100	100	100	100
12	ATRAZINE	1.5	qt/a	PRE					
13	GUARDSMAN MAX	2.3	qt/a	PRE	A	89	86	100	99
14	HARNESS XTRA 5.6	2.4	qt/a	PRE	A	92	94	100	100
15	EPIC	12	oz/a	PRE	A	100	96	96	96
16	KEYSTONE	2.8	qt/a	PRE	A	96	84	100	100
17	STALWART XTRA	2.1	qt/a	PRE	A	99	100	100	100
17	BALANCE PRO	1.5	oz/a	PRE					
18	STALWART XTRA	2.6	qt/a	PRE	A	100	95	100	100
18	BALANCE PRO	1.5	oz/a	PRE					
19	STALWART XTRA	2.6	qt/a	PRE	A	84	91	100	100
19	SIM-TROL	1	qt/a	PRE					
20	BICEP II MAGNUM	2.6	qt/a	PRE	A	89	95	100	100
20	PRINCEP	1	qt/a	PRE					
21	UTC					0	0	0	0
LSD (P=.05)						9.9	12.5	1.4	2.9
Standard Deviation						7.0	8.8	1.0	2.0
CV						7.71	9.66	1.01	2.16
Replicate F						2.100	0.371	0.846	0.451
Replicate Prob(F)						0.1096	0.7742	0.4742	0.7173
Treatment F						40.393	23.687	2066.055	453.314
Treatment Prob(F)						0.0001	0.0001	0.0001	0.0001