

Ohio State University
Horticulture and Crop Science

Preemergence Weed Control in Corn with Full Season Rates

Title No. 2: HRDL01A4

Trial ID: 09PREC1

Protocol ID: 09PREC1

Location: Western Branch Big E

Study Director: Anthony F. Dobbels

Project ID: 09PREC1

Investigator: Dr. Mark M. Loux

Sponsor Contact: Dane Bowers, Syngenta

Crop Description

Crop 1: ZEAMX Zea mays Corn
Variety: Dekalb 63-42 **Description:** RR
BBCH Scale: BCOR **Planting Date:** Apr-26-2009
Planting Method: SEEDED seeded **Rate, Unit:** 32097 S/A
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN
Seed Bed: SMOOTH smooth
Soil Moisture: NORMAL normal

Pest Description

Pest 1 Type: W **Code:** SETFA *Setaria faberi*
Common Name: Giant foxtail

Pest 2 Type: W **Code:** AMBTR *Ambrosia trifida*
Common Name: Giant ragweed

Pest 3 Type: W **Code:** CHEAL *Chenopodium album*
Common Name: Common lambsquarters

Site and Design

Plot Width, Unit: 10 FT
Plot Length, Unit: 30 FT
Plot Area, Unit: 300 FT2 **Tillage Type:** CONTIL conventional-till
Replications: 4 **Study Design:** RACOB� Randomized Complete Block (RCB)

Application Description

	A	B
Application Date:	Apr-27-2009	Jun-5-2009
Time of Day:	7:30 AM	8:00 AM
Application Method:	SPRAY	SPRAY
Application Timing:	PRE	POST
Application Placement:	BROFOL	BROFOL
Air Temperature, Unit:	67 F	62 F
% Relative Humidity:	59	82
Wind Velocity, Unit:	7.1 MPH	5 MPH
Wind Direction:	SW	E
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	56 F	58 F
Soil Moisture:	Normal	WET
% Cloud Cover:	5	0

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	ZEAMX BCOR	ZEAMX BCOR
Stage Scale Used:		BBCH
Stage Majority, Percent:		15 100
Height, Unit:		13 IN
Height Minimum, Maximum:		12 14

Pest Stage At Each Application

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	A	B
Pest 1 Code, Type, Scale:	SETFA W	SETFA W
Stage Majority, Percent:	13	100
Height, Unit:	3	IN
Height Minimum, Maximum:	2	4
Pest 2 Code, Type, Scale:	AMBTR W	AMBTR W
Stage Majority, Percent:	14	100
Height, Unit:	4	IN
Height Minimum, Maximum:	2	6
Pest 3 Code, Type, Scale:	CHEAL W	CHEAL W
Stage Majority, Percent:	12	100
Height, Unit:	3	IN
Height Minimum, Maximum:	2	4

Application Equipment

	A	B
Appl. Equipment:	BACKPACK	BACKPACK
Equipment Type:		SPRBAC
Operating Pressure, Unit:	53 PSI	53 PSI
Nozzle Type:	TEEJET DG	TEEJET DG
Nozzle Size:	11002	11002
Nozzle Spacing, Unit:	18 IN	18 IN
Boom Length, Unit:	10 FT	10 FT
Boom Height, Unit:	20 IN	20 IN
Ground Speed, Unit:	3 MPH	3 MPH
Carrier:	WATER	WATER
Spray Volume, Unit:	20 GPA	20 GPA
Mix Size, Unit:	3 L	3 L
Propellant:	CO2	CO2

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Trt No.	Treatment Name	Form Conc	Form Type	Form Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Plot No. Rep.	1	2	3	4	Notes
1	UNTREATED CHECK									101	206	307	410		
2	Lumax	3.94	SE	2.96	lb ai/a	3	qt/a	PRE	A	102	204	306	412		
3	Lexar	3.7	SE	3.24	lb ai/a	3.5	qt/a	PRE	A	103	213	302	408		
4	Corvus Atrazine	2.63 4	EC F	0.115 1	lb ai/a lb ai/a	5.6 1	oz/a qt/a	PRE PRE	A	104	207	310	413		
5	Balance Flexx Atrazine	2 4	EC F	0.094 1.5	lb ai/a lb ai/a	6 1.5	oz/a qt/a	PRE PRE	A	105	201	308	406		
6	Integrity	5.57	SC	0.87	lb ai/a	20	oz/a	PRE	A	106	210	314	401		
7	Lumax Atrazine	3.94 4	SE F	2.96 1	lb ai/a lb ai/a	3 1	qt/a qt/a	PRE PRE	A	107	209	303	402		
8	Harness Extra 5.6 Sharpen	5.6 2.85	EC SC	4.2 0.067	lb ai/a lb ai/a	3 3	qt/a oz/a	PRE PRE	A	108	214	309	404		
9	Integrity Atrazine	5.57 4	SC F	0.875 1.5	lb ai/a lb ai/a	20 1.5	oz/a qt/a	PRE PRE	A	109	208	312	409		
10	Harness Extra 5.6 Balance Flexx	5.6 2	EC EC	4.2 0.0625	lb ai/a lb ai/a	3 4	qt/a oz/a	PRE PRE	A	110	212	313	414		
11	Keystone Hornet	5.5 68.5	SE WG	3.58 0.128	lb ai/a lb ai/a	2.6 3	qt/a oz/a	PRE PRE	A	111	205	304	405		
12	Surestart Keystone Atrazine	4.25 5.5 4	SE SE F	1.33 1.72 1	lb ai/a lb ai/a lb ai/a	2.5 2.5 2	pt/a pt/a pt/a	PRE PRE PRE	A	112	211	305	407		
13	Bicep II Magnum Touchdown Total N-PAK AMS	5.5 4.17 100	EC SL L	1.79 0.78 5	lb ai/a lb ae/a % v/v	1.3 24 4	qt/a oz/a qt/a	PRE POST POST	A B	113	202	311	403		
14	Lexar Touchdown Total N-PAK AMS	3.7 4.17 100	SE SL L	2.08 0.78 5	lb ai/a lb ae/a % v/v	2.25 24 4	qt/a oz/a qt/a	PRE POST POST	A B	114	203	301	411		

Sort Order: Replicate 1