

Ohio State University
Horticulture and Crop Science

KIH-485 EARLY PREPLANT WEED CONTROL IN NO-TILL CORN

Trial ID: 08KIHNTC Study Dir.: Anthony F. Dobbels
Location: WESTERN BRANCH F-9 E 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. STEME	Common chickweed	Stellaria media
2. LAMPU	Purple deadnettel	Lamium purpureum
3. SETFA	Giant foxtail	Setaria faberi
4. AMBTR	Giant ragweed	Ambrosia trifida
5. AMBEL	Common Ragweed	Ambrosia artemisiifolia
6. CHEAL	Common lambsquarters	Chenopodium album

Crop 1: ZEAMX CORN, FIELD Variety: DEKALB DKC 63-42
Planting Date: May/01/2008 Planting Method: JOHN DEERE 7200
Rate: 32097 SEED/A Depth: 1.5 IN
Row Spacing: 30 IN Seed Bed: NO-TILL

SITE AND DESIGN

Plot Width, Unit: 6.67 FT Plot Length, Unit: 30 FT Reps: 3
Tillage Type: NO-TILL Study Design: RANDOMIZED COMPLETE BLOCK

SOIL DESCRIPTION

% OM: 2.8 Texture: SILTY CLAY LOAM
pH: 5.7 Soil Name: KOKOMO
CEC: 20.7 Fert. Level: GOOD

APPLICATION DESCRIPTION

A

Application Date: Apr/02/2008
Time of Day: 10:00 A.M
Application Method: SPRAY
Application Timing: 30 EPP
Applic. Placement: BROADCAST
Air Temp., Unit: 38 F
% Relative Humidity: 70
Wind Velocity, Unit: 5 E
Soil Temp., Unit: 38 F
Soil Moisture: MOIST/MOI
% Cloud Cover: 3

CROP STAGE AT EACH APPLICATION

A

Crop 1 Code, Stage: ZEAMX

WEED STAGE AT EACH APPLICATION

A

Weed 1 Code, Stage: STEME 4" DIA
Stage Scale: >12 LVS
Density, Unit: 25 M2
Weed 2 Code, Stage: LAMPU 2-3" DIA
Stage Scale: >12 LVS
Density, Unit: 28 M2
Weed 3 Code, Stage: SETFA
Density, Unit: 236 M2
Weed 4 Code, Stage: AMBTR
Density, Unit: 4 M2
Weed 5 Code, Stage: AMBEL
Density, Unit: 8 M2
Weed 6 Code, Stage: CHEAL
Density, Unit: 38 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

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Weed Code		SETFA	AMBTR	AMBEL	CHEAL	SETFA					
Crop Code											
Rating Data Type		CONTROL	CONTROL	CONTROL	CONTROL	GLYM PHYTO					
Rating Unit		PERCENT	PERCENT	PERCENT	PERCENT	PERCENT					
Rating Date		Apr/28/2008	Apr/28/2008	Apr/28/2008	Apr/28/2008	Jun/02/2008					
Trt-Eval Interval		26 DA-A	26 DA-A	26 DA-A	26 DA-A	61 DA-A					
# Subsamples, Dec.		0	0	0	0	0					
Trt No.	Treatment Name	Product Rate	Product Rate Unit	Grow Stg	Appl Code	1	2	3	4	5	6
1	ROUNDUP POWERMAX	22 oz/a		30 EPP	A	35 b	37 ab	37 b	23 b	0 a	0 d
1	AMS	4 qt/a		30 EPP							
2	KIH-485	2.77 oz/a		30 EPP	A	72 a	33 ab	57 b	97 a	0 a	67 b
2	ROUNDUP POWERMAX	22 oz/a		30 EPP	A						
2	AMS	4 qt/a		30 EPP							
3	KIH-485	3.5 oz/a		30 EPP	A	85 a	40 ab	60 b	95 a	0 a	63 b
3	ROUNDUP POWERMAX	22 oz/a		30 EPP	A						
3	AMS	4 qt/a		30 EPP							
4	KIH-485	4.2 oz/a		30 EPP	A	78 a	30 ab	50 b	98 a	0 a	70 b
4	ROUNDUP POWERMAX	22 oz/a		30 EPP	A						
4	AMS	4 qt/a		30 EPP							
5	KIH-485	7 oz/a		30 EPP	A	91 a	70 a	93 a	100 a	0 a	93 a
5	ROUNDUP POWERMAX	22 oz/a		30 EPP	A						
5	AMS	4 qt/a		30 EPP							
6	DUAL II MAGNUM	1.68 pt/a		30 EPP	A	88 a	37 ab	52 b	83 a	0 a	50 b
6	ROUNDUP POWERMAX	22 oz/a		30 EPP	A						
6	AMS	4 qt/a		30 EPP							
7	HARNESS	2.77 pt/a		30 EPP	A	87 a	30 ab	68 b	96 a	0 a	23 c
7	ROUNDUP POWERMAX	22 oz/a		30 EPP	A						
7	AMS	4 qt/a		30 EPP							
8	UTC					0 c	0 b	0 c	0 c	0 a	0 d
LSD (P=.05)						16.7	30.2	20.8	17.8	0.0	16.9
Standard Deviation						9.5	17.3	11.9	10.2	0.0	9.7
CV						14.23	49.88	22.8	13.72	0.0	21.11
Bartlett's X2						9.738	6.804	3.631	9.206	0.0	4.094
P(Bartlett's X2)						0.136	0.236	0.726	0.101	.	0.393
Replicate F						2.154	4.088	4.814	2.985	0.000	1.807
Replicate Prob(F)						0.1529	0.0400	0.0256	0.0832	1.0000	0.2004
Treatment F						34.869	3.646	15.203	44.964	0.000	37.878
Treatment Prob(F)						0.0001	0.0188	0.0001	0.0001	1.0000	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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Weed Code				AMBTR	AMBEL	CHEAL	SETFA	AMBTR	AMBEL		
Crop Code				CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL		
Rating Data Type				PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT		
Rating Unit				Jun/02/2008	Jun/02/2008	Jun/02/2008	Jun/16/2008	Jun/16/2008	Jun/16/2008		
Rating Date				61 DA-A	61 DA-A	61 DA-A	75 DA-A	75 DA-A	75 DA-A		
Trt-Eval Interval				0	0	0	0	0	0		
# Subsamples, Dec.				0	0	0	0	0	0		
Trt No.	Treatment Name	Product Rate	Product Rate Unit	Grow Stg	Appl Code	7	8	9	10	11	12
1	ROUNDUP POWERMAX	22	oz/a	30	EPP A	30 a	10 bc	10 c	10 bc	7 a	7 b
1	AMS	4	qt/a	30	EPP						
2	KIH-485	2.77	oz/a	30	EPP A	30 a	27 b	43 b	33 b	7 a	7 b
2	ROUNDUP POWERMAX	22	oz/a	30	EPP A						
2	AMS	4	qt/a	30	EPP						
3	KIH-485	3.5	oz/a	30	EPP A	30 a	27 b	40 b	23 bc	17 a	7 b
3	ROUNDUP POWERMAX	22	oz/a	30	EPP A						
3	AMS	4	qt/a	30	EPP						
4	KIH-485	4.2	oz/a	30	EPP A	17 a	23 b	43 b	37 b	0 a	0 b
4	ROUNDUP POWERMAX	22	oz/a	30	EPP A						
4	AMS	4	qt/a	30	EPP						
5	KIH-485	7	oz/a	30	EPP A	63 a	57 a	73 a	66 a	40 a	37 a
5	ROUNDUP POWERMAX	22	oz/a	30	EPP A						
5	AMS	4	qt/a	30	EPP						
6	DUAL II MAGNUM	1.68	pt/a	30	EPP A	17 a	0 c	10 c	37 b	10 a	0 b
6	ROUNDUP POWERMAX	22	oz/a	30	EPP A						
6	AMS	4	qt/a	30	EPP						
7	HARNESS	2.77	pt/a	30	EPP A	27 a	27 b	40 b	17 bc	7 a	13 b
7	ROUNDUP POWERMAX	22	oz/a	30	EPP A						
7	AMS	4	qt/a	30	EPP						
8	UTC					0 a	0 c	0 c	0 c	0 a	0 b
LSD (P=.05)						34.4	16.4	21.3	20.8	27.4	17.9
Standard Deviation						19.7	9.4	12.2	11.9	15.7	10.2
CV						73.71	44.17	37.46	42.81	144.55	116.64
Bartlett's X2						4.429	4.517	1.25	3.37	3.314	0.253
P(Bartlett's X2)						0.619	0.478	0.974	0.761	0.652	0.993
Replicate F						4.735	1.703	5.145	0.509	2.107	0.360
Replicate Prob(F)						0.0269	0.2178	0.0211	0.6119	0.1585	0.7039
Treatment F						2.539	11.561	11.807	8.644	2.049	4.291
Treatment Prob(F)						0.0653	0.0001	0.0001	0.0004	0.1201	0.0099

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Weed Code CHEAL
 Crop Code
 Rating Data Type CONTROL
 Rating Unit PERCENT
 Rating Date Jun/16/2008
 Trt-Eval Interval 75 DA-A
 # Subsamples, Dec. 0

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Grow Stg	Appl Code	13
1	ROUNDUP POWERMAX	22	oz/a	30	EPP A	7 b
1	AMS	4	qt/a	30	EPP	
2	KIH-485	2.77	oz/a	30	EPP A	30 b
2	ROUNDUP POWERMAX	22	oz/a	30	EPP A	
2	AMS	4	qt/a	30	EPP	
3	KIH-485	3.5	oz/a	30	EPP A	17 b
3	ROUNDUP POWERMAX	22	oz/a	30	EPP A	
3	AMS	4	qt/a	30	EPP	
4	KIH-485	4.2	oz/a	30	EPP A	10 b
4	ROUNDUP POWERMAX	22	oz/a	30	EPP A	
4	AMS	4	qt/a	30	EPP	
5	KIH-485	7	oz/a	30	EPP A	57 a
5	ROUNDUP POWERMAX	22	oz/a	30	EPP A	
5	AMS	4	qt/a	30	EPP	
6	DUAL II MAGNUM	1.68	pt/a	30	EPP A	0 b
6	ROUNDUP POWERMAX	22	oz/a	30	EPP A	
6	AMS	4	qt/a	30	EPP	
7	HARNESS	2.77	pt/a	30	EPP A	20 b
7	ROUNDUP POWERMAX	22	oz/a	30	EPP A	
7	AMS	4	qt/a	30	EPP	
8	UTC					0 b
LSD (P=.05)						22.8
Standard Deviation						13.0
CV						74.43
Bartlett's X2						0.961
P(Bartlett's X2)						0.966
Replicate F						0.074
Replicate Prob(F)						0.9293
Treatment F						6.274
Treatment Prob(F)						0.0018

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