

Ohio State University
Horticulture and Crop Science

VALOR EARLY PREPLANT BURNDOWN IN ROUNDUP READY CORN

Trial ID: 08NTC3 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. CHEAL	Common lambsquarters	Chenopodium album
5. AMBEL	Common ragweed	Ambrosia artemisiifolia
6. AMBTR	Giant ragweed	Ambrosia trifida
7. POLPY	Pennsylvania smartweed	Polygonum pennsylvanicum

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	B
Application Date:	Apr/16/2008	May/30/2008
Time of Day:	9:00 A.M.	9:00 A.M.
Application Method:	SPRAY	SPRAY
Application Timing:	14 EPP	30 DAPL
Applic. Placement:	BROADCAST	BROADCAST
Air Temp., Unit:	54 F	68 F
% Relative Humidity:	40	49
Wind Velocity, Unit:	10 S	7 S
Soil Temp., Unit:	44 F	59 F
Soil Moisture:	DRY/MOIST	DRY/MOIST
% Cloud Cover:	2	59

CROP STAGE AT EACH APPLICATION

	A	B
Crop 1 Code, Stage:	ZEAMX ZEAMX V4	
Stage Scale:	COLLARS	
Height, Unit:	5 IN	

WEED STAGE AT EACH APPLICATION

	A	B
Weed 1 Code, Stage:	STEME 3-4"	STEME
Stage Scale:	>12 LVS	
Density, Unit:	1 M2	
Weed 2 Code, Stage:	LAMPU 2-3"	LAMPU
Stage Scale:	>12 LVS	
Density, Unit:	26 M2	
Weed 3 Code, Stage:	SETFA 6-8"	
Stage Scale:	5 LVS	
Density, Unit:	860 M2	
Weed 4 Code, Stage:	CHEAL 4"	
Stage Scale:	6 LVS	
Density, Unit:	21 M2	
Weed 5 Code, Stage:	AMBEL 4"	
Stage Scale:	6 LVS	
Density, Unit:	25 M2	
Weed 6 Code, Stage:	AMBTR 8"	
Stage Scale:	8 LVS	
Density, Unit:	8 M2	
Weed 7 Code, Stage:	POLPY 4'	
Stage Scale:	7 LVS	
Density, Unit:	21 M2	

APPLICATION EQUIPMENT

	A	B
Appl. Equipment:	BACKPACK	BACKPACK
Operating Pressure:	53	53
Nozzle Type:	DG	DG
Nozzle Size:	11002	11002
Nozzle Spacing, Unit:	18 IN	18 IN
Ground Speed, Unit:	3 MPH	3 MPH
Carrier:	WATER	WATER
Spray Volume, Unit:	20 GPA	20 GPA
Propellant:	CO2	CO2

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Location: WESTERN BRANCH F-9 E Investigator: Dr. Mark M. Loux

				SETFA	SONAR	LAMPU	LAMAM	ZEAMX	LAMPU		
				CONTROL	CONTROL	CONTROL	CONTROL	PHYTO	CONTROL		
				PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT		
				Apr/28/2008	Apr/28/2008	Apr/28/2008	Apr/28/2008	May/28/2008	May/28/2008		
				12 DA-A	12 DA-A	12 DA-A	12 DA-A	42 DA-A	42 DA-A		
				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
1	UTC					0 b	0 b	0 d	0 c	0 a	0 b
2	ROUNDUP POWERMAX	22 oz/a		14 EPP	A	0 b	100 a	53 c	60 b	0 a	83 a
2	AMS	3 qt/a		14 EPP							
2	ROUNDUP POWERMAX	22 oz/a		POST	B						
2	AMS	3 qt/a		POST							
3	ROUNDUP POWERMAX	22 oz/a		14 EPP	A	17 ab	100 a	91 ab	90 a	0 a	100 a
3	ATRAZINE	1 qt/a		14 EPP							
3	AMS	3 qt/a		14 EPP							
3	ROUNDUP POWERMAX	22 oz/a		POST	B						
3	AMS	3 qt/a		POST							
4	ROUNDUP POWERMAX	22 oz/a		14 EPP	A	40 a	100 a	77 b	100 a	0 a	100 a
4	VALOR SX	2 oz/a		14 EPP							
4	AMS	3 qt/a		14 EPP							
4	ROUNDUP POWERMAX	22 oz/a		POST	B						
4	AMS	3 qt/a		POST							
5	ROUNDUP POWERMAX	22 oz/a		14 EPP	A	60 a	100 a	100 a	100 a	0 a	100 a
5	VALOR SX	2 oz/a		14 EPP							
5	ATRAZINE	1 qt/a		14 EPP							
5	AMS	3 qt/a		14 EPP							
5	ROUNDUP POWERMAX	22 oz/a		POST	B						
5	AMS	3 qt/a		POST							
6	ROUNDUP POWERMAX	22 oz/a		14 EPP	A	53 a	100 a	100 a	100 a	0 a	100 a
6	BICEP II MAGNUM	1.5 qt/a		14 EPP							
6	AMS	3 qt/a		14 EPP							
6	ROUNDUP POWERMAX	22 oz/a		POST	B						
6	AMS	3 qt/a		POST							
7	ROUNDUP POWERMAX	22 oz/a		14 EPP	A	53 a	100 a	100 a	100 a	0 a	100 a
7	LEXAR	1.5 qt/a		14 EPP							
7	AMS	3 qt/a		14 EPP							
7	ROUNDUP POWERMAX	22 oz/a		POST	B						
7	AMS	3 qt/a		POST							
8	ROUNDUP POWERMAX	22 oz/a		14 EPP	A	27 ab	100 a	50 c	53 b	0 a	77 a
8	BALANCE PRO	1.5 oz/a		14 EPP							
8	AMS	3 qt/a		14 EPP							
8	ROUNDUP POWERMAX	22 oz/a		POST	B						
8	AMS	3 qt/a		POST							
9	ROUNDUP POWERMAX	22 oz/a		14 EPP	A	43 a	100 a	92 ab	97 a	0 a	100 a
9	VALOR SX	2 oz/a		14 EPP							
9	SENCOR DF	4 oz/a		14 EPP							
9	AMS	3 qt/a		14 EPP							
9	ROUNDUP POWERMAX	22 oz/a		POST	B						
9	AMS	3 qt/a		POST							
10	ROUNDUP POWERMAX	22 oz/a		14 EPP	A	57 a	100 a	77 b	88 a	0 a	90 a
10	VALOR SX	2 oz/a		14 EPP							
10	AMS	3 qt/a		14 EPP							
10	ROUNDUP POWERMAX	22 oz/a		POST	B						
10	AMS	3 qt/a		POST							
LSD (P=.05)						26.8	0.0	11.2	14.6	0.0	22.3
Standard Deviation						15.6	0.0	6.5	8.5	0.0	13.0
CV						44.57	0.0	8.83	10.74	0.0	15.27
Bartlett's X2						4.411	0.0	2.369	3.25	0.0	0.487
P(Bartlett's X2)						0.731	.	0.668	0.517	.	0.784

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Weed Code	SETFA	SONAR	LAMPU	LAMAM	ZEAMX	LAMPU
Crop Code					PHYTO	
Rating Data Type	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT
Rating Date	Apr/28/2008	Apr/28/2008	Apr/28/2008	Apr/28/2008	May/28/2008	May/28/2008
Trt-Eval Interval	12 DA-A	12 DA-A	12 DA-A	12 DA-A	42 DA-A	42 DA-A
# Subsamples, Dec.	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
	Replicate F					3.740	0.000	1.600	0.221	0.000	1.484
	Replicate Prob(F)					0.0438	1.0000	0.2293	0.8040	1.0000	0.2533
	Treatment F					6.461	0.000	71.418	44.394	0.000	17.154
	Treatment Prob(F)					0.0004	1.0000	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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						SETFA	CHEAL	AMBEL	AMBTR	SETFA	AMBTR
						CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
						PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT
						May/28/2008	May/28/2008	May/28/2008	May/28/2008	Jun/26/2008	Jun/26/2008
						42 DA-A	42 DA-A	42 DA-A	42 DA-A	27 DA-B	27 DA-B
						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	UTC					0 c	0 d	0 b	0 c	43 a	90 a
2	ROUNDUP POWERMAX	22 oz/a		14 EPP	A	0 c	40 c	27 b	17 bc	38 a	90 a
2	AMS	3 qt/a		14 EPP							
2	ROUNDUP POWERMAX	22 oz/a		POST	B						
2	AMS	3 qt/a		POST							
3	ROUNDUP POWERMAX	22 oz/a		14 EPP	A	0 c	47 bc	64 ab	66 ab	43 a	100 a
3	ATRAZINE	1 qt/a		14 EPP							
3	AMS	3 qt/a		14 EPP							
3	ROUNDUP POWERMAX	22 oz/a		POST	B						
3	AMS	3 qt/a		POST							
4	ROUNDUP POWERMAX	22 oz/a		14 EPP	A	10 c	73 ab	27 b	20 bc	37 a	80 a
4	VALOR SX	2 oz/a		14 EPP							
4	AMS	3 qt/a		14 EPP							
4	ROUNDUP POWERMAX	22 oz/a		POST	B						
4	AMS	3 qt/a		POST							
5	ROUNDUP POWERMAX	22 oz/a		14 EPP	A	57 ab	90 a	93 a	63 ab	43 a	88 a
5	VALOR SX	2 oz/a		14 EPP							
5	ATRAZINE	1 qt/a		14 EPP							
5	AMS	3 qt/a		14 EPP							
5	ROUNDUP POWERMAX	22 oz/a		POST	B						
5	AMS	3 qt/a		POST							
6	ROUNDUP POWERMAX	22 oz/a		14 EPP	A	70 a	75 ab	63 ab	50 abc	28 a	80 a
6	BICEP II MAGNUM	1.5 qt/a		14 EPP							
6	AMS	3 qt/a		14 EPP							
6	ROUNDUP POWERMAX	22 oz/a		POST	B						
6	AMS	3 qt/a		POST							
7	ROUNDUP POWERMAX	22 oz/a		14 EPP	A	60 ab	95 a	100 a	88 a	32 a	93 a
7	LEXAR	1.5 qt/a		14 EPP							
7	AMS	3 qt/a		14 EPP							
7	ROUNDUP POWERMAX	22 oz/a		POST	B						
7	AMS	3 qt/a		POST							
8	ROUNDUP POWERMAX	22 oz/a		14 EPP	A	30 bc	100 a	63 ab	47 abc	40 a	80 a
8	BALANCE PRO	1.5 oz/a		14 EPP							
8	AMS	3 qt/a		14 EPP							
8	ROUNDUP POWERMAX	22 oz/a		POST	B						
8	AMS	3 qt/a		POST							
9	ROUNDUP POWERMAX	22 oz/a		14 EPP	A	10 c	100 a	33 b	20 bc	30 a	53 a
9	VALOR SX	2 oz/a		14 EPP							
9	SENCOR DF	4 oz/a		14 EPP							
9	AMS	3 qt/a		14 EPP							
9	ROUNDUP POWERMAX	22 oz/a		POST	B						
9	AMS	3 qt/a		POST							
10	ROUNDUP POWERMAX	22 oz/a		14 EPP	A	33 bc	83 a	29 b	20 bc	38 a	63 a
10	VALOR SX	2 oz/a		14 EPP							
10	AMS	3 qt/a		14 EPP							
10	ROUNDUP POWERMAX	22 oz/a		POST	B						
10	AMS	3 qt/a		POST							
LSD (P=.05)						23.5	23.7	40.5	38.1	11.8	34.2
Standard Deviation						13.7	13.8	23.4	22.1	6.9	19.9
CV						50.82	19.61	46.88	56.53	18.37	24.37
Bartlett's X2						8.025	5.517	11.702	7.52	4.365	9.017
P(Bartlett's X2)						0.236	0.479	0.069	0.482	0.823	0.341
Replicate F						0.252	0.070	1.536	1.611	10.488	0.637
Replicate Prob(F)						0.7797	0.9325	0.2454	0.2287	0.0010	0.5405
Treatment F						11.744	16.444	5.613	4.800	2.016	1.510
Treatment Prob(F)						0.0001	0.0001	0.0014	0.0027	0.0983	0.2179

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Weed Code	SETFA	CHEAL	AMBEL	AMBTR	SETFA	AMBTR					
Crop Code											
Rating Data Type	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL					
Rating Unit	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT					
Rating Date	May/28/2008	May/28/2008	May/28/2008	May/28/2008	Jun/26/2008	Jun/26/2008					
Trt-Eval Interval	42 DA-A	42 DA-A	42 DA-A	42 DA-A	27 DA-B	27 DA-B					
# 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

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					AMBEL	CHEAL	POLPY	AMARE	
Weed Code					CONTROL	CONTROL	CONTROL	CONTROL	
Crop Code					PERCENT	PERCENT	PERCENT	PERCENT	
Rating Data Type					Jun/26/2008	Jun/26/2008	Jun/26/2008	Jun/26/2008	
Rating Unit					27 DA-B	27 DA-B	27 DA-B	27 DA-B	
Rating Date					0	0	0	0	
Trt-Eval Interval									
# Subsamples, Dec.									
Trt No.	Treatment Name	Product Rate	Product Unit	Grow Stg	Appl Code	13	14	15	16
1	UTC					53 a	57 cd	80 a	58 a
2	ROUNDUP POWERMAX	22 oz/a		14 EPP	A	50 a	50 d	82 a	50 a
2	AMS	3 qt/a		14 EPP					
2	ROUNDUP POWERMAX	22 oz/a		POST	B				
2	AMS	3 qt/a		POST					
3	ROUNDUP POWERMAX	22 oz/a		14 EPP	A	53 a	68 bc	100 a	67 a
3	ATRAZINE	1 qt/a		14 EPP					
3	AMS	3 qt/a		14 EPP					
3	ROUNDUP POWERMAX	22 oz/a		POST	B				
3	AMS	3 qt/a		POST					
4	ROUNDUP POWERMAX	22 oz/a		14 EPP	A	72 a	100 a	87 a	77 a
4	VALOR SX	2 oz/a		14 EPP					
4	AMS	3 qt/a		14 EPP					
4	ROUNDUP POWERMAX	22 oz/a		POST	B				
4	AMS	3 qt/a		POST					
5	ROUNDUP POWERMAX	22 oz/a		14 EPP	A	90 a	100 a	100 a	83 a
5	VALOR SX	2 oz/a		14 EPP					
5	ATRAZINE	1 qt/a		14 EPP					
5	AMS	3 qt/a		14 EPP					
5	ROUNDUP POWERMAX	22 oz/a		POST	B				
5	AMS	3 qt/a		POST					
6	ROUNDUP POWERMAX	22 oz/a		14 EPP	A	77 a	90 a	100 a	95 a
6	BICEP II MAGNUM	1.5 qt/a		14 EPP					
6	AMS	3 qt/a		14 EPP					
6	ROUNDUP POWERMAX	22 oz/a		POST	B				
6	AMS	3 qt/a		POST					
7	ROUNDUP POWERMAX	22 oz/a		14 EPP	A	95 a	100 a	100 a	87 a
7	LEXAR	1.5 qt/a		14 EPP					
7	AMS	3 qt/a		14 EPP					
7	ROUNDUP POWERMAX	22 oz/a		POST	B				
7	AMS	3 qt/a		POST					
8	ROUNDUP POWERMAX	22 oz/a		14 EPP	A	83 a	80 ab	83 a	63 a
8	BALANCE PRO	1.5 oz/a		14 EPP					
8	AMS	3 qt/a		14 EPP					
8	ROUNDUP POWERMAX	22 oz/a		POST	B				
8	AMS	3 qt/a		POST					
9	ROUNDUP POWERMAX	22 oz/a		14 EPP	A	57 a	100 a	87 a	87 a
9	VALOR SX	2 oz/a		14 EPP					
9	SENCOR DF	4 oz/a		14 EPP					
9	AMS	3 qt/a		14 EPP					
9	ROUNDUP POWERMAX	22 oz/a		POST	B				
9	AMS	3 qt/a		POST					
10	ROUNDUP POWERMAX	22 oz/a		14 EPP	A	80 a	100 a	97 a	87 a
10	VALOR SX	2 oz/a		14 EPP					
10	AMS	3 qt/a		14 EPP					
10	ROUNDUP POWERMAX	22 oz/a		POST	B				
10	AMS	3 qt/a		POST					
LSD (P=.05)						27.5	15.0	19.8	30.9
Standard Deviation						16.0	8.8	11.5	18.0
CV						22.56	10.36	12.59	23.88
Bartlett's X2						7.09	2.181	2.023	5.183
P(Bartlett's X2)						0.527	0.536	0.846	0.738
Replicate F						0.156	2.644	0.735	0.319
Replicate Prob(F)						0.8568	0.0984	0.4934	0.7307
Treatment F						3.212	15.140	1.653	2.047
Treatment Prob(F)						0.0168	0.0001	0.1739	0.0936

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Weed Code	AMBEL	CHEAL	POLPY	AMARE
Crop Code				
Rating Data Type	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit	PERCENT	PERCENT	PERCENT	PERCENT
Rating Date	Jun/26/2008	Jun/26/2008	Jun/26/2008	Jun/26/2008
Trt-Eval Interval	27 DA-B	27 DA-B	27 DA-B	27 DA-B
# Subsamples, Dec.	0	0	0	0

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Grow Stg	Appl Code	13	14	15	16
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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.