

Ohio State University Horticulture and Crop Science

BASF RR AND CONVENTIONAL CORN TREATMENTS

Trial ID: 07PRPOC3
Location: WESTERN BRANCH G-2

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

GENERAL TRIAL INFORMATION

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

TRIAL LOCATION

State/Prov.: Ohio **Trial Status:** yield
Country: USA **Initiation Date:** Apr/01/2007
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. CHEAL	Lambsquarters, common	Chenopodium album
3. AMARE	Redroot pigweed	Amaranthus retroflexus
4. AMBTR	Giant ragweed	Ambrosia trifida
5. ABUTH	Velvetleaf	Abutilon theophrasti
6. POLPY	Pennsylvania smartweed	Polygonum pensylvanicum

Crop 1: ZEAMX CORN, FIELD **Variety:** PIONEER 34D68RR
Planting Date: Apr/23/2007 **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:** 4
Tillage Type: CONVENTIONAL **Study Design:** RANDOMIZED COMPLETE BLOCK

SOIL DESCRIPTION

% OM: 3.0 **Texture:** SILTY CLAY LOAM
pH: 5.7 **Soil Name:** KOKOMO
CEC: 23.5

Overall Moisture Conditions: POOR

APPLICATION DESCRIPTION

	A	B	C
Application Date:	Apr/24/2007	May/30/2007	Jun/01/2007
Time of Day:	11:00 A.M	9:00 AM	7:30 AM
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	PRE	POST	LPO
Applic. Placement:	BROADCAST	BROADCAST	BROADCAST
Air Temp., Unit:	61 F	71 F	71 F
% Relative Humidity:	72	73	68
Wind Velocity, Unit:	7 NE	3 S	2 S
Soil Temp., Unit:	60 F	72 F	72 F
Soil Moisture:	MOIST MOI	DRY DRY	MOIST MOI
% Cloud Cover:	30	75	100

CROP STAGE AT EACH APPLICATION

	A	B	C
Crop 1 Code, Stage:	ZEAMX .	ZEAMX V5	ZEAMX V6
Stage Scale:	.	5 COLLARS	6 COLLARS
Height, Unit:	0. .	13 IN	16 IN

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WEED STAGE AT EACH APPLICATION

	A	B	C
Weed 1 Code, Stage: SETFA .	SETFA 5-6"	SETFA 6"	
Stage Scale: .	3 LVS	3 LVS	
Density, Unit: . .	26.2 M2	26.2 M2	
Weed 2 Code, Stage: CHEAL .	CHEAL 3"	CHEAL 2-4"	
Stage Scale: .	8 LVS	6-10 LVS	
Density, Unit: . .	21.7 M2	21.7 M2	
Weed 3 Code, Stage: AMARE .	AMARE 3"	AMARE .	
Stage Scale: .	6 LVS	.	
Density, Unit: . .	0.25 M2	.	
Weed 4 Code, Stage: AMBTR .	AMBTR 8-12"	AMBTR 8-12"	
Stage Scale: .	12 LVS	8-12 LVS	
Density, Unit: . .	12.2 M2	12.2 M2	
Weed 5 Code, Stage: ABUTH .	ABUTH 3-4"	ABUTH 3-4"	
Stage Scale: .	4-6 LVS	4-6 LVS	
Density, Unit: . .	0.1 M2	0.1 M2	
Weed 6 Code, Stage: POLPY .	POLPY 3"	POLPY 2-4"	
Stage Scale: .	8 LVS	3-8 LVS	
Density, Unit: . .	2 M2	2 M2	

APPLICATION EQUIPMENT

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

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Study Dir.: Anthony F. Dobbels
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Weed Code	SETFA	CHEAL	ABUTH	AMBTR	POLPY	ZEAMX
Crop Code						
Rating Data Type	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	PHYTO
Rating Unit	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT
Rating Date	Jun/01/2007	Jun/01/2007	Jun/01/2007	Jun/01/2007	Jun/01/2007	Jun/14/2007
Trt-Eval Interval	AT POST	AT POST	AT POST	AT POST	AT POST	15 DA-B
# Subsamples, Dec.	0	0	0	0	0	0

Trt No.	Treatment Name	Rate	Product Rate	Product Unit	Appl Code	1	2	3	4	5	6
1	GUARDSMAN MAX	2.5 lb ai/a	4 pt/a		A	85 a	59 b	76 b	74 a	71 b	0 a
1	STATUS	0.175 lb ai/a	5 oz/a		C						
1	NIS	0.25 % v/v	6.4 oz/a								
1	AMS	2.5 % v/v	2 qt/a								
2	GUARDSMAN MAX	1.56 lb ai/a	2.5 pt/a		A	88 a	79 a	99 a	73 a	84 a	0 a
2	ROUNDUP WEATHERMAX	0.77 lb ae/a	22 oz/a		C						
2	AMS	2.5 % v/v	2 qt/a								
3	GUARDSMAN MAX	1.56 lb ai/a	2.5 pt/a		A	84 a	79 a	100 a	65 a	84 a	0 a
3	ROUNDUP WEATHERMAX	0.77 lb ae/a	22 oz/a		C						
3	STATUS	0.0875 lb ai/a	2.5 oz/a								
3	AMS	2.5 % v/v	2 qt/a								
4	ROUNDUP WEATHERMAX	0.77 lb ae/a	22 oz/a		B						0 a
4	AMS	2.5 % v/v	2 qt/a								
5	ROUNDUP WEATHERMAX	0.77 lb ae/a	22 oz/a		B						0 a
5	STATUS	0.0875 lb ai/a	2.5 oz/a								
5	AMS	2.5 % v/v	2 qt/a								
6	ROUNDUP WEATHERMAX	0.77 lb ae/a	22 oz/a		B						1 a
6	CALLISTO	0.047 lb ai/a	1.5 oz/a								
6	AMS	2.5 % v/v	2 qt/a								
7	BAS 756	3 pt/a	3 pt/a		B						0 a
7	NIS	0.25 % v/v	6.4 oz/a								
7	AMS	2.5 % v/v	2 qt/a								
8	BAS 756	3 pt/a	3 pt/a		B						0 a
8	ATRAZINE	1.5 lb ai/a	1.5 qt/a								
8	NIS	0.25 % v/v	6.4 oz/a								
8	AMS	2.5 % v/v	2 qt/a								
9	ROUNDUP WEATHERMAX	0.77 lb ae/a	22 oz/a		C						0 a
9	AMS	2.5 % v/v	2 qt/a								
10	UTC										0 a
LSD (P=.05)						5.2	7.6	4.3	7.8	4.1	0.7
Standard Deviation						3.0	4.4	2.5	4.5	2.4	0.5
CV						3.52	6.12	2.73	6.37	2.96	632.46
Bartlett's X2						0.72	3.552	0.0	2.486	0.0	0.0
P(Bartlett's X2)						0.698	0.169	.	0.289	.	.
Replicate F						3.308	0.679	0.000	0.379	1.375	1.000
Replicate Prob(F)						0.0990	0.5964	1.0000	0.7718	0.3376	0.4079
Treatment F						1.615	27.429	114.333	4.448	37.500	1.000
Treatment Prob(F)						0.2746	0.0010	0.0001	0.0653	0.0004	0.4635

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		SETFA		CHEAL	ABUTH	AMBTR	POLPY	SETFA			
Crop Code		CONTROL		CONTROL	CONTROL	CONTROL	CONTROL	CONTROL			
Rating Data Type		PERCENT		PERCENT	PERCENT	PERCENT	PERCENT	PERCENT			
Rating Unit		Jun/14/2007		Jun/14/2007	Jun/14/2007	Jun/14/2007	Jun/14/2007	Jun/29/2007			
Rating Date		15 DA-B		15 DA-B	15 DA-B	15 DA-B	15 DA-B	30 DA-B			
Trt-Eval Interval		0		0	0	0	0	0			
# Subsamples, Dec.											
Trt No.	Treatment Name	Rate	Product Rate	Product Unit	Appl Code	7	8	9	10	11	12
1	GUARDSMAN MAX	2.5 lb ai/a	4 pt/a	A		81 b	88 ab	88 b	83 ab	96 a	83 b
1	STATUS	0.175 lb ai/a	5 oz/a	C							
1	NIS	0.25 % v/v	6.4 oz/a								
1	AMS	2.5 % v/v	2 qt/a								
2	GUARDSMAN MAX	1.56 lb ai/a	2.5 pt/a	A		100 a	100 a	100 a	83 ab	83 ab	99 a
2	ROUNDUP WEATHERMAX	0.77 lb ae/a	22 oz/a	C							
2	AMS	2.5 % v/v	2 qt/a								
3	GUARDSMAN MAX	1.56 lb ai/a	2.5 pt/a	A		100 a	100 a	100 a	85 a	96 a	100 a
3	ROUNDUP WEATHERMAX	0.77 lb ae/a	22 oz/a	C							
3	STATUS	0.0875 lb ai/a	2.5 oz/a								
3	AMS	2.5 % v/v	2 qt/a								
4	ROUNDUP WEATHERMAX	0.77 lb ae/a	22 oz/a	B		99 a	93 ab	100 a	81 ab	91 a	88 ab
4	AMS	2.5 % v/v	2 qt/a								
5	ROUNDUP WEATHERMAX	0.77 lb ae/a	22 oz/a	B		90 ab	90 ab	96 a	81 ab	86 ab	89 ab
5	STATUS	0.0875 lb ai/a	2.5 oz/a								
5	AMS	2.5 % v/v	2 qt/a								
6	ROUNDUP WEATHERMAX	0.77 lb ae/a	22 oz/a	B		91 ab	99 a	100 a	83 ab	83 ab	93 ab
6	CALLISTO	0.047 lb ai/a	1.5 oz/a								
6	AMS	2.5 % v/v	2 qt/a								
7	BAS 756	3 pt/a	3 pt/a	B		97 a	80 b	100 a	78 b	76 ab	93 ab
7	NIS	0.25 % v/v	6.4 oz/a								
7	AMS	2.5 % v/v	2 qt/a								
8	BAS 756	3 pt/a	3 pt/a	B		100 a	90 ab	100 a	85 a	89 ab	95 ab
8	ATRAZINE	1.5 lb ai/a	1.5 qt/a								
8	NIS	0.25 % v/v	6.4 oz/a								
8	AMS	2.5 % v/v	2 qt/a								
9	ROUNDUP WEATHERMAX	0.77 lb ae/a	22 oz/a	C		100 a	95 ab	100 a	81 ab	70 b	97 a
9	AMS	2.5 % v/v	2 qt/a								
10	UTC					0 c	0 c	0 c	0 c	0 c	0 c
LSD (P=.05)						9.5	10.8	5.1	4.3	12.7	9.3
Standard Deviation						6.6	7.4	3.5	3.0	8.8	6.4
CV						7.65	8.92	3.97	4.03	11.36	7.67
Bartlett's X2						10.392	10.975	0.061	3.257	3.214	9.172
P(Bartlett's X2)						0.034*	0.089	0.805	0.86	0.865	0.241
Replicate F						0.090	0.464	1.678	2.514	6.290	1.871
Replicate Prob(F)						0.9647	0.7099	0.1952	0.0796	0.0022	0.1584
Treatment F						88.040	64.953	318.876	306.024	41.830	86.573
Treatment Prob(F)						0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

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Weed Code	CHEAL	ABUTH	AMBTR	POLPY	IPOHE	SETFA
Crop Code						
Rating Data Type	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT
Rating Date	Jun/29/2007	Jun/29/2007	Jun/29/2007	Jun/29/2007	Jun/29/2007	Jul/27/2007
Trt-Eval Interval	30 DA-B	30 DA-B	30 DA-B	30 DA-B	30 DA-B	58 DA-B
# Subsamples, Dec.	0	0	0	0	0	0

Trt No.	Treatment Name	Rate	Product Rate	Product Unit	Appl Code	13	14	15	16	17	18
1	GUARDSMAN MAX	2.5 lb ai/a	4 pt/a		A	100 a	96 a	98 a	93 a	91 a	90 a
1	STATUS	0.175 lb ai/a	5 oz/a		C						
1	NIS	0.25 % v/v	6.4 oz/a								
1	AMS	2.5 % v/v	2 qt/a								
2	GUARDSMAN MAX	1.56 lb ai/a	2.5 pt/a		A	100 a	99 a	79 ab	93 a	69 a	99 a
2	ROUNDUP WEATHERMAX	0.77 lb ae/a	22 oz/a		C						
2	AMS	2.5 % v/v	2 qt/a								
3	GUARDSMAN MAX	1.56 lb ai/a	2.5 pt/a		A	100 a	100 a	95 a	96 a	89 a	100 a
3	ROUNDUP WEATHERMAX	0.77 lb ae/a	22 oz/a		C						
3	STATUS	0.0875 lb ai/a	2.5 oz/a								
3	AMS	2.5 % v/v	2 qt/a								
4	ROUNDUP WEATHERMAX	0.77 lb ae/a	22 oz/a		B	87 ab	100 a	83 ab	84 a	76 a	92 a
4	AMS	2.5 % v/v	2 qt/a								
5	ROUNDUP WEATHERMAX	0.77 lb ae/a	22 oz/a		B	98 a	100 a	94 a	91 a	81 a	94 a
5	STATUS	0.0875 lb ai/a	2.5 oz/a								
5	AMS	2.5 % v/v	2 qt/a								
6	ROUNDUP WEATHERMAX	0.77 lb ae/a	22 oz/a		B	98 a	100 a	83 ab	90 a	65 a	95 a
6	CALLISTO	0.047 lb ai/a	1.5 oz/a								
6	AMS	2.5 % v/v	2 qt/a								
7	BAS 756	3 pt/a	3 pt/a		B	76 b	100 a	66 b	83 a	66 a	97 a
7	NIS	0.25 % v/v	6.4 oz/a								
7	AMS	2.5 % v/v	2 qt/a								
8	BAS 756	3 pt/a	3 pt/a		B	84 ab	100 a	81 ab	85 a	88 a	98 a
8	ATRAZINE	1.5 lb ai/a	1.5 qt/a								
8	NIS	0.25 % v/v	6.4 oz/a								
8	AMS	2.5 % v/v	2 qt/a								
9	ROUNDUP WEATHERMAX	0.77 lb ae/a	22 oz/a		C	96 a	100 a	74 b	80 a	70 a	96 a
9	AMS	2.5 % v/v	2 qt/a								
10	UTC					0 c	0 b	0 c	0 b	0 b	0 b
LSD (P=.05)						14.4	3.4	12.8	20.9	23.0	7.1
Standard Deviation						10.0	2.3	8.8	14.4	15.8	4.9
CV						11.87	2.61	11.73	18.14	22.8	5.72
Bartlett's X2						30.187	2.842	8.28	8.498	8.361	14.027
P(Bartlett's X2)						0.001*	0.092	0.407	0.386	0.399	0.051
Replicate F						0.510	1.730	0.493	2.543	4.063	0.103
Replicate Prob(F)						0.6786	0.1844	0.6900	0.0772	0.0166	0.9575
Treatment F						37.773	726.082	40.846	15.526	11.001	152.682
Treatment Prob(F)						0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

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Weed Code		CHEAL		ABUTH		AMBTR		POLPY		IPOHE	
Crop Code		CONTROL		CONTROL		CONTROL		CONTROL		CONTROL	
Rating Data Type		PERCENT		PERCENT		PERCENT		PERCENT		PERCENT	
Rating Unit		Jul/27/2007		Jul/27/2007		Jul/27/2007		Jul/27/2007		Jul/27/2007	
Rating Date		58 DA-B		58 DA-B		58 DA-B		58 DA-B		58 DA-B	
Trt-Eval Interval		0		0		0		0		0	
# Subsamples, Dec.		0		0		0		0		0	
Trt No.	Treatment Name	Rate	Product Rate	Product Unit	Appl Code	19	20	21	22	23	
1	GUARDSMAN MAX	2.5 lb ai/a	4 pt/a	A		100 a	98 a	100 a	99 a	89 a	
1	STATUS	0.175 lb ai/a	5 oz/a	C							
1	NIS	0.25 % v/v	6.4 oz/a								
1	AMS	2.5 % v/v	2 qt/a								
2	GUARDSMAN MAX	1.56 lb ai/a	2.5 pt/a	A		98 abc	100 a	89 bcd	100 a	75 a	
2	ROUNDUP WEATHERMAX	0.77 lb ae/a	22 oz/a	C							
2	AMS	2.5 % v/v	2 qt/a								
3	GUARDSMAN MAX	1.56 lb ai/a	2.5 pt/a	A		100 a	100 a	99 ab	100 a	93 a	
3	ROUNDUP WEATHERMAX	0.77 lb ae/a	22 oz/a	C							
3	STATUS	0.0875 lb ai/a	2.5 oz/a								
3	AMS	2.5 % v/v	2 qt/a								
4	ROUNDUP WEATHERMAX	0.77 lb ae/a	22 oz/a	B		86 cd	98 a	85 d	100 a	83 a	
4	AMS	2.5 % v/v	2 qt/a								
5	ROUNDUP WEATHERMAX	0.77 lb ae/a	22 oz/a	B		96 abc	100 a	96 abc	95 a	84 a	
5	STATUS	0.0875 lb ai/a	2.5 oz/a								
5	AMS	2.5 % v/v	2 qt/a								
6	ROUNDUP WEATHERMAX	0.77 lb ae/a	22 oz/a	B		95 abc	100 a	90 a-d	95 a	73 a	
6	CALLISTO	0.047 lb ai/a	1.5 oz/a								
6	AMS	2.5 % v/v	2 qt/a								
7	BAS 756	3 pt/a	3 pt/a	B		81 d	100 a	84 d	99 a	93 a	
7	NIS	0.25 % v/v	6.4 oz/a								
7	AMS	2.5 % v/v	2 qt/a								
8	BAS 756	3 pt/a	3 pt/a	B		87 bcd	100 a	88 cd	91 a	91 a	
8	ATRAZINE	1.5 lb ai/a	1.5 qt/a								
8	NIS	0.25 % v/v	6.4 oz/a								
8	AMS	2.5 % v/v	2 qt/a								
9	ROUNDUP WEATHERMAX	0.77 lb ae/a	22 oz/a	C		98 ab	100 a	85 d	100 a	74 a	
9	AMS	2.5 % v/v	2 qt/a								
10	UTC					0 e	0 b	0 e	0 b	0 b	
LSD (P=.05)						8.0	2.6	7.5	9.4	14.9	
Standard Deviation						5.5	1.8	5.2	6.5	10.3	
CV						6.53	2.01	6.34	7.34	13.67	
Bartlett's X2						7.277	5.75	26.785	11.206	7.703	
P(Bartlett's X2)						0.201	0.056	0.001*	0.024*	0.463	
Replicate F						0.560	1.570	0.402	1.056	5.567	
Replicate Prob(F)						0.6461	0.2195	0.7530	0.3842	0.0042	
Treatment F						121.474	1217.750	128.217	92.420	28.685	
Treatment Prob(F)						0.0001	0.0001	0.0001	0.0001	0.0001	

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