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Lexar: New formulation with higher rates of atrazine and lower rates of S-metolachlor

Trial ID: 04-PPAC-CORN-LEXA   Study Dir.:
Location: PPAC   Investigator: Dr. Bill Johnson

GENERAL TRIAL INFORMATION
Investigator: Dr. Bill Johnson

TRIAL LOCATION
City: Wanatah
State/Prov.: IN
Postal Code: 46390
Country: USA
E-Longitude of LL Corner °: 273.076630   **N-Latitude of LL Corner °:** 41.443100
Altitude of LL Corner: 700.00   **Unit:** feet

COOPERATOR/LANDOWNER
Cooperator: Pinney Purdue Agricultural Center   **Country:** USA
                                                        Phone No: 219-733-2379
Address 1:   11402 South Co. Line Rd   **Fax No:**   call first
City: Wanatah
State/Prov: IN
Postal Code: 46390

Conducted Under GLP (Y/N): N   **Conducted Under GEP (Y/N):** N

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1.	AMBTR	RAGWEED, GIANT	AMBROSIA TRIFIDA L.
2.	PANDI	PANICUM, FALL	PANICUM DICHOTOMIFLORUM (L.) MICHX.
3.	ABUTH	VELVETLEAF	ABUTILON THEOPHRASTI MEDIK.

Crop 1: ZEAMX   CORN, FIELD
Planting Date: 20/May/2004
Row Spacing: 30   IN

Emergence Date: 26/May/2004

SITE AND DESIGN
Plot Width, Unit: 10   FT   **Plot Length, Unit:** 30   FT   **Reps:** 4
Tillage Type: Conventional   **Study Design:** RANDOMIZED COMPLETE BLOCK

SOIL DESCRIPTION
% OM: 1.4   **Texture:**   sandy loam
pH: 6.4   **Soil Name:**   Tracy sandy loam
% Clay: 15   **CEC:**   6.6   **Fert. Level:** Bray P1-41, K-174, Mg-175, Ca-800

APPLICATION DESCRIPTION

	A
Application Date:	21/May/2004
Time of Day:	11:00 am
Application Method:	SPRAY
Application Timing:	PREPRE
Applic. Placement:	BROSOI
Air Temp., Unit:	80 F
% Relative Humidity:	80
Wind Velocity, Unit:	0 calm
Soil Temp., Unit:	66 F
Soil Moisture:	moist sur
% Cloud Cover:	100

CROP STAGE AT EACH APPLICATION

	A
Crop 1 Code, Stage:	ZEAMX
Stage Scale:	na - pre

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WEED STAGE AT EACH APPLICATION

	A
Weed 1 Code, Stage:	AMBTR
Weed 2 Code, Stage:	PANDI
Weed 3 Code, Stage:	ABUTH

APPLICATION EQUIPMENT

	A
Appl. Equipment:	CO2 Backp
Operating Pressure:	25 psi
Nozzle Type:	VS
Nozzle Size:	8002
Nozzle Spacing, Unit:	20 IN
Boom Length, Unit:	10 FT
Ground Speed, Unit:	3 MPH
Carrier:	water
Spray Volume, Unit:	15 gpa
Propellant:	CO2

Trt No	Treatment Application Comment
13	Nozzle plugged in plot 403, plot 113 was not sprayed

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Trial ID: 04-PPAC-CORN-LEXA				Study Dir.:				
Location: PPAC				Investigator: Dr. Bill Johnson				

Weed Code								AMBTR
Crop Code				ZEAMX	ZEAMX	ZEAMX	ZEAMX	
Part Rated				bleach	stunt	bleach	stunt	
Rating Data Type								
Rating Unit				% bleach	% stunt	% bleach	% stunt	%control
Rating Date				2/Jun/2004	2/Jun/2004	9/Jun/2004	9/Jun/2004	9/Jun/2004
Crop Stage				V1	V1	V2-V3	V2-V3	
Crop Stage Scale				2-3 inch	2-3 inch	4-6 inch	4-6 inch	
Weed Stage								1-4"
Weed Density, Unit								1-3 M2
Assessed By				Bill & Reece	Bill & Reece	Earl & Reece	Earl & Reece	Earl & Reece
Trt-Eval Interval				7 DA-Em	7 DA-Em	14 DA-Em	14 DA-Em	14 DA-Em
# Subsamples, Dec.				0	0	0	0	0
Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg	1	2	3	4	5

Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg	1	2	3	4	5
1	Untreated Check				5 a	9 a	3 b	0 a	0 b
2	A14244 (Lexar/Lumax LMF)	2.3	lb ai/a	PREPLA	6 a	11 a	4 b	0 a	100 a
3	A14244 (Lexar/Lumax LMF)	2.77	lb ai/a	PREPLA	10 a	11 a	4 b	0 a	99 a
4	A14244 (Lexar/Lumax LMF)	3.23	lb ai/a	PREPLA	6 a	9 a	3 b	0 a	100 a
5	Bicep II Magnum	2.9	lb ai/a	PREPLA	9 a	9 a	4 b	0 a	100 a
6	Lumax	2.47	lb ai/a	PREPLA	8 a	13 a	4 b	0 a	98 a
7	A14244 (Lexar/Lumax LMF)	2.77	lb ai/a	PREPLA	8 a	10 a	4 b	0 a	99 a
	Princep	1	lb ai/a	PREPLA					
8	Guardsman Max	1.87	lb ai/a	PREPLA	6 a	9 a	3 b	0 a	100 a
9	Harness Xtra 5.6	2.8	lb ai/a	PREPLA	11 a	13 a	3 b	0 a	99 a
10	Epic	0.362	lb ai/a	PREPLA	14 a	10 a	13 a	0 a	99 a
11	Keystone	3.4	lb ai/a	PREPLA	10 a	13 a	3 b	0 a	98 a
12	Degree Xtra	3.23	lb ai/a	PREPLA	8 a	11 a	6 b	0 a	99 a
	Balance Pro	0.047	lb ai/a	PREPLA					
13	Keystone	3.4	lb ai/a	PREPLA	10 a	15 a	3 b	0 a	100 a
	Hornet WDG	0.128	lb ae/a	PREPLA					
14	Stalwart Xtra	1.79	lb ai/a	PREPLA	8 a	13 a	3 b	0 a	98 a
15	Stalwart Xtra	1.79	lb ai/a	PREPLA	10 a	13 a	4 b	0 a	97 a
	Balance Pro	0.0312	lb ai/a	PREPLA					

	1	2	3	4	5
LSD (P=.05)	5.6	5.9	4.3	0.0	2.5
Standard Deviation	3.9	4.1	3.0	0.0	1.8
CV	46.43	36.97	75.63	0.0	1.92
Grand Mean	8.5	11.08	3.98	0.0	92.26
Bartlett's X2	7.21	5.911	5.953	0.0	5.917
P(Bartlett's X2)	0.926	0.949	0.968	.	0.748
Replicate F	2.318	1.018	7.186	0.000	4.094
Replicate Prob(F)	0.0892	0.3944	0.0006	1.0000	0.0125
Treatment F	1.387	0.844	2.866	0.000	834.291
Treatment Prob(F)	0.2019	0.6202	0.0044	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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				PANDI	ZEAMX	ZEAMX
Weed Code				PANDI		
Crop Code					ZEAMX	ZEAMX
Part Rated					bleach	stunt
Rating Data Type						
Rating Unit				%control	% bleach	% stunt
Rating Date				9/Jun/2004	23/Jun/2004	23/Jun/2004
Crop Stage					V5	V5
Crop Stage Scale					16-18"	16-18"
Weed Stage				1-2"		
Weed Density, Unit				<1 M2		
Assessed By				Earl & Reece	Earl, Reece, & Vince	Earl, Reece, & Vince
Trt-Eval Interval				14 DA-Em	28 DA-Em	28 DA-Em
# Subsamples, Dec.				0	0	0

Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg	6	7	8
1	Untreated Check				0 b	0 a	0 a
2	A14244 (Lexar/Lumax LMF)	2.3	lb ai/a	PREPLA	100 a	0 a	0 a
3	A14244 (Lexar/Lumax LMF)	2.77	lb ai/a	PREPLA	100 a	0 a	0 a
4	A14244 (Lexar/Lumax LMF)	3.23	lb ai/a	PREPLA	100 a	0 a	0 a
5	Bicep II Magnum	2.9	lb ai/a	PREPLA	100 a	0 a	0 a
6	Lumax	2.47	lb ai/a	PREPLA	100 a	0 a	0 a
7	A14244 (Lexar/Lumax LMF)	2.77	lb ai/a	PREPLA	100 a	0 a	0 a
	Princep	1	lb ai/a	PREPLA			
8	Guardsman Max	1.87	lb ai/a	PREPLA	100 a	0 a	0 a
9	Harness Xtra 5.6	2.8	lb ai/a	PREPLA	100 a	0 a	0 a
10	Epic	0.362	lb ai/a	PREPLA	100 a	0 a	0 a
11	Keystone	3.4	lb ai/a	PREPLA	100 a	0 a	0 a
12	Degree Xtra	3.23	lb ai/a	PREPLA	100 a	0 a	0 a
	Balance Pro	0.047	lb ai/a	PREPLA			
13	Keystone	3.4	lb ai/a	PREPLA	100 a	0 a	0 a
	Hornet WDG	0.128	lb ae/a	PREPLA			
14	Stalwart Xtra	1.79	lb ai/a	PREPLA	100 a	0 a	0 a
15	Stalwart Xtra	1.79	lb ai/a	PREPLA	100 a	0 a	0 a
	Balance Pro	0.0312	lb ai/a	PREPLA			

				6	7	8
LSD (P=.05)				0.2	0.0	0.0
Standard Deviation				0.1	0.0	0.0
CV				0.14	0.0	0.0
Grand Mean				93.32	0.0	0.0
Bartlett's X2				0.0	0.0	0.0
P(Bartlett's X2)				.	.	.
Replicate F				0.529	0.000	0.000
Replicate Prob(F)				0.6647	1.0000	1.0000
Treatment F				150979.500	0.000	0.000
Treatment Prob(F)				0.0001	1.0000	1.0000

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	Rate		Grow	ABUTH	AMBTR	PANDI
Weed Code				ABUTH	AMBTR	PANDI
Crop Code						
Part Rated						
Rating Data Type						
Rating Unit				%control	%control	%control
Rating Date				23/Jun/2004	23/Jun/2004	23/Jun/2004
Crop Stage						
Crop Stage Scale						
Weed Stage				1-2"	1-12"	8-12"
Weed Density, Unit				1-5 M2	5 M2	<1 M2
Assessed By				Earl, Reece, & Vince	Earl, Reece, & Vince	Earl, Reece, & Vince
Trt-Eval Interval				28 DA-Em	28 DA-Em	28 DA-Em
# Subsamples, Dec.				0	0	0

Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg	9	10	11
1	Untreated Check				0 e	0 d	0 b
2	A14244 (Lexar/Lumax LMF)	2.3	lb ai/a	PREPLA	100 a	93 ab	100 a
3	A14244 (Lexar/Lumax LMF)	2.77	lb ai/a	PREPLA	100 a	95 a	100 a
4	A14244 (Lexar/Lumax LMF)	3.23	lb ai/a	PREPLA	100 a	97 a	100 a
5	Bicep II Magnum	2.9	lb ai/a	PREPLA	55 c	53 c	95 a
6	Lumax	2.47	lb ai/a	PREPLA	100 a	98 a	100 a
7	A14244 (Lexar/Lumax LMF) Princep	2.77 1	lb ai/a lb ai/a	PREPLA PREPLA	100 a	95 a	100 a
8	Guardsman Max	1.87	lb ai/a	PREPLA	79 ab	76 abc	98 a
9	Harness Xtra 5.6	2.8	lb ai/a	PREPLA	73 b	88 ab	100 a
10	Epic	0.362	lb ai/a	PREPLA	98 a	94 ab	100 a
11	Keystone	3.4	lb ai/a	PREPLA	64 bc	84 ab	100 a
12	Degree Xtra Balance Pro	3.23 0.047	lb ai/a lb ai/a	PREPLA PREPLA	100 a	94 ab	100 a
13	Keystone Hornet WDG	3.4 0.128	lb ai/a lb ae/a	PREPLA PREPLA	94 a	93 ab	99 a
14	Stalwart Xtra	1.79	lb ai/a	PREPLA	28 d	63 bc	88 a
15	Stalwart Xtra Balance Pro	1.79 0.0312	lb ai/a lb ai/a	PREPLA PREPLA	97 a	78 ab	100 a

	ABUTH	AMBTR	PANDI
LSD (P=.05)	14.0	19.3	9.7
Standard Deviation	9.8	13.5	6.8
CV	12.42	16.95	7.42
Grand Mean	79.07	79.87	91.9
Bartlett's X2	30.122	47.398	6.774
P(Bartlett's X2)	0.001*	0.001*	0.034*
Replicate F	0.578	10.022	2.633
Replicate Prob(F)	0.6326	0.0001	0.0627
Treatment F	39.013	14.514	56.550
Treatment Prob(F)	0.0001	0.0001	0.0001

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Weed Code				ABUTH	AMBTR	ZEAMX	ZEAMX	ZEAMX
Crop Code						GRAMAT C	GRAMAT C	GRAMAT C
Part Rated						WEIFRE	MOICON	YIELD
Rating Data Type								
Rating Unit				%control	%control	Lb	%	bu/ac
Rating Date				27/Jul/2004	27/Jul/2004	21/Oct/2004	21/Oct/2004	21/Oct/2004
Crop Stage						Harvest	Harvest	Harvest
Crop Stage Scale								
Weed Stage				6-48"	18-78"			
Weed Density, Unit				2-3 M2	4-6 M2			
Assessed By				Reece & Vince	Reece & Vince			
Trt-Eval Interval				67 DA-A	67 DA-A	153 DA-A	153 DA-A	153 DA-A
# Subsamples, Dec.				0	0	2	1	1
Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg				
				12	13	14	15	16
1	Untreated Check			0 e	0 c	28.91 a	31.6 a	141.3 a
2	A14244 (Lexar/Lumax LMF)	2.3	lb ai/a	PREPLA	100 a	92 ab	32.99 a	33.7 a	156.8 a
3	A14244 (Lexar/Lumax LMF)	2.77	lb ai/a	PREPLA	100 a	98 a	33.36 a	33.6 a	158.8 a
4	A14244 (Lexar/Lumax LMF)	3.23	lb ai/a	PREPLA	100 a	100 a	33.24 a	34.1 a	157.0 a
5	Bicep II Magnum	2.9	lb ai/a	PREPLA	51 cd	65 ab	30.41 a	34.0 a	143.9 a
6	Lumax	2.47	lb ai/a	PREPLA	100 a	99 a	34.44 a	33.7 a	163.7 a
7	A14244 (Lexar/Lumax LMF)	2.77	lb ai/a	PREPLA	100 a	98 a	33.62 a	33.9 a	159.1 a
	Princep	1	lb ai/a	PREPLA					
8	Guardsman Max	1.87	lb ai/a	PREPLA	66 bc	76 ab	31.23 a	33.9 a	147.9 a
9	Harness Xtra 5.6	2.8	lb ai/a	PREPLA	60 cd	91 ab	31.83 a	33.4 a	151.9 a
10	Epic	0.362	lb ai/a	PREPLA	96 a	94 ab	32.01 a	34.1 a	151.2 a
11	Keystone	3.4	lb ai/a	PREPLA	56 cd	72 ab	29.64 a	34.1 a	139.9 a
12	Degree Xtra	3.23	lb ai/a	PREPLA	98 a	93 ab	30.01 a	34.1 a	141.6 a
	Balance Pro	0.047	lb ai/a	PREPLA					
13	Keystone	3.4	lb ai/a	PREPLA	85 ab	91 ab	29.89 a	34.4 a	140.6 a
	Hornet WDG	0.128	lb ae/a	PREPLA					
14	Stalwart Xtra	1.79	lb ai/a	PREPLA	36 d	63 b	30.65 a	34.1 a	144.7 a
15	Stalwart Xtra	1.79	lb ai/a	PREPLA	93 a	74 ab	31.77 a	34.1 a	150.0 a
	Balance Pro	0.0312	lb ai/a	PREPLA					
LSD (P=.05)				19.7	20.4	3.547	1.90	17.11
Standard Deviation				13.8	14.3	2.482	1.33	11.97
CV				18.16	17.82	7.85	3.93	7.99
Grand Mean				75.99	80.25	31.6	33.78	149.89
Bartlett's X2				38.505	43.014	10.035	67.252	10.708
P(Bartlett's X2)				0.001*	0.001*	0.76	0.001*	0.709
Replicate F				1.964	7.728	8.420	1.911	7.759
Replicate Prob(F)				0.1344	0.0003	0.0002	0.1425	0.0003
Treatment F				19.252	12.810	1.811	0.985	1.700
Treatment Prob(F)				0.0001	0.0001	0.0693	0.4848	0.0924

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