OKLAHOMA STATE UNIVERSITY

Southwest Research and Extension Center

Extension Cotton Research & Demonstrations in Oklahoma

2002 Annual Report

in cooperation with the

OSU Integrated Pest Management Program

Oklahoma State University

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An effective cotton integrated pest management program encompasses all aspects of production. This report contains summarized data from experiments and demonstrations intended to address key production issues in the areas of fertility, plant population, tillage, variety selection, weed control and defoliation. 2002 was another interesting year for Oklahoma cotton producers. Limited winter rainfall made for challenging conditions early in the year. Fortunately, mild temperatures provided some relief to acreage in need. Limited rainfall in April through June was balanced somewhat with above average moisture received in July. In many cases, this was the turning point for much of the dryland acreage across the state. Irrigated yields were extremely high in some cases but average overall. October rainfall delayed harvest and decreased fiber quality for a significant amount of acres, which, in some cases, had a tendency to offset slightly higher cotton prices.

It should be emphasized that the data from only one year should not be used for major production decisions, and at least 2-3 year's results should be utilized before production practices should be modified. This report includes data generated from "off-label" applications or practices. Although this data is presented, OSU does not recommend the implementation of any "off-label" use of any product.

We are very appreciative of the contributions made by Pat Bolin and the OSU Integrated Pest Management Program. Without their support, much of this work would not be possible. We also appreciate the support from producers, County Extension Educators, OSU Agricultural Experiment Station and ginners. Cotton Incorporated, through the Oklahoma State Support Committee, has provided assistance through partial funding of several projects. The Oklahoma Cotton Cooperative Foundation and the Oklahoma Center for the Advancement of Science and Technology (OCAST) have made tremendous contributions to our educational programs and we are grateful for their continued support. A special thanks goes also to the following organizations, whose contributions make it possible to maintain and expand our research and demonstration programs and distribute results.

Oklahoma Cotton Cooperative Foundation		Cotton Incorporated State Support Committee		
Delta and Pine Land Company		OSU Integrated Pest Management Program		
Cotton Growers Cooperative		Stoneville Pedigreed Seed Company		
Syngenta Crop Protection		Griffin Chemical Company		
Bayer CropScience	Worrell Farms	Monsanto Company	Helena Chemical	Uniroyal
John Deere	Nichino America	Dupont Valent	FMC Corporation	BASF

We appreciate the interest, cooperation and support of all those involved in the cotton industry in Oklahoma and encourage your comments and suggestions for the improvement of our programs. This report can be accessed on the web at http://www.osu.altus.ok.us

OSU Southwest Research & Extension Staff

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County Extension Personnel

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Producers and Cooperators

Western Oklahoma State College
Humphreys Cooperative
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Mike Hogg-Granite
Larry Null, Hobart
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Wayne Winsett-Altus
Cotton Growers Cooperative
Murray, Eddie, and Rann Williams-Altus
Keeff & Natalie Felty-Altus
Brad McKinley-Frederick
Mike Johnson-Dill City
Ken Mach, Yukon
Gary Jones-Altus

Variety Performance

Weed Control

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Harvest Aids

Production & Agronomics

OSU Southwest Research & Extension Center (OSUREC)-Altus

4 inches furrow irrigation – 7/17, 7/29, 8/9, 8/19, 8/24

Western Oklahoma State College (WOSC)-Altus

4 inches furrow irrigation – 7/20; 2 inches – 8/1, 8/8, 8/15, 8/21, 8/27, 9/3

Month:	Apr-02			May-02			Jun-02		
	Air Temp.			Air Temp.			Air Temp.		
Date	Max.	Min.	Precip.	Max.	Min.	Precip.	Max.	Min.	Precip.
1	80	44	0	100	57	0	93	63	0
2	55	49	0	56	48	0	96	69	0
3	51	33	0	76	47	0	96	73	0
4	60	28	0	83	52	0	90	71	0
5	64	34	0	81	55	0.02	78	63	0.39
6	53	44	0.10	86	60	0	87	58	0
7	52	47	0.33	89	65	0	92	60	0
8	69	48	0.34	96	69	0	93	70	0
9	70	43	0.05	73	55	0	94	73	0.18
10	75	45	0	75	48	0	96	74	0
11	81	50	0	85	54	0.02	98	75	0
12	76	56	0	65	57	0	98	74	0
13	68	56	0.11	76	42	0	78	71	0
14	82	53	0.93	78	43	0	86	65	0.45
15	86	57	0	84	53	0	81	64	0
16	85	62	0	92	61	0.04	81	64	1.05
17	88	60	0	69	63	0	89	63	0
18	82	65	0	75	43	0	92	64	0
19	77	65	0	79	45	0	93	67	0
20	65	54	0.04	81	49	0	94	68	0
21	72	48	0	84	55	0	95	70	0
22	78	44	0	87	60	0	92	69	0
23	87	50	0	80	65	0	96	66	0
24	81	59	0	71	64	0.17	96	67	0
25	58	49	0	69	50	0.44	95	71	0.06
26	51	46	0.64	89	52	0	98	67	0
27	82	49	0.17	74	63	0.27	94	72	0
28	75	54	0	83	63	0.13	96	66	0
29	79	52	0	88	59	0	98	71	0
30	89	55	0	91	64	0	85	70	0
31				94	63	0			
Totals	**72**	**50**	**2.71**	**81**	**56**	**1.09**	**92**	**68**	**2.13**

Weather Information (Continued)

Month:	Jul-02			Aug-02			Sep-02		
	Air Temp.			Air Temp.			Air Temp.		
Date	Max.	Min.	Precip.	Max.	Min.	Precip.	Max.	Min.	Precip.
1	85	66	0.10	99	73	0	93	65	0
2	90	67	0.04	98	73	0	99	67	0
3	75	69	0.04	99	72	0	101	70	0
4	81	68	1.22	100	71	0	96	68	0
5	84	69	0.02	98	71	0	98	69	0
6	81	71	0.43	99	69	0	97	68	0
7	91	72	0.41	101	70	0	96	67	0
8	92	73	0.45	98	72	0	85	69	0
9	96	71	0	98	71	0	86	70	0.14
10	96	72	0	97	70	0	89	70	0
11	97	71	0	95	73	0	92	66	0.02
12	93	69	0.04	100	70	0	92	66	0
13	90	70	0	87	71	0	94	64	0
14	92	69	0	88	58	0.01	82	64	0.02
15	95	68	0	99	63	0	81	60	0.63
16	91	68	0.01	99	72	0	85	53	0
17	95	72	0	99	73	0	95	54	0
18	97	70	0	101	74	0	102	61	0
19	98	73	0	100	77	0	68	61	0.78
20	100	73	0	99	73	0	87	49	0
21	99	70	0	101	75	0	92	50	0
22	102	73	0	101	74	0	76	51	0
23	97	70	0	104	70	0	81	51	0
24	102	72	0	103	71	0	82	52	0
25	104	67	0.29	94	73	0	86	49	0
26	104	69	0	100	74	0	89	53	0
27	102	75	0	97	67	0.01	87	59	0
28	95	74	0.02	94	68	0	96	57	0
29	83	66	0.96	91	67	0.05	93	59	0
30	92	67	0.05	94	67	0.01	91	60	0
31	95	70	0	94	64	0			
Totals	**93**	**70**	**4.08**	**98**	**71**	**0.08**	**90**	**61**	**1.59**

Irrigated Variety Demonstration-1-Jackson County

Project Summary:

Seven cotton varieties were planted into a clay loam soil on the 10th of May. Twelve row by 2230' plots were seeded at a rate of 12 lbs/A and managed for optimum yield. Six of the seven varieties contained the Bollgard? gene and all seven contained the Roundup Ready? gene. Plants were mapped during the season to compare fruiting patterns and plots were harvested with a John Deere 9970 cotton picker. A commercial size boll-buggy equipped with scales weighed seed-cotton from each plot and lint samples were taken in order to perform HVI fiber analysis. Results of this demonstration are presented in the tables below.

Trial ID:	OSUVP0201	**Location:**	Williams Farm
Planting Date:	May 10	**Planting Rate:**	12 lbs/A
Row Spacing:	38 Inches	**Harvest Date:**	October 4
Plot Size:	12 r x 2230'	**Replications:**	1
Soil Type:	Clay Loam		

Yield Ranking	Variety Name	Seed Cotton	Gin %	Yield lbs/A	Fiber Mic	Fiber Length	Fiber Uniformity	Fiber Strength
1	SG 215 B/R	2784	37.5	1044	4.7	1.08	83.7	27.2
2	SG 501 B/R	2780	36.8	1023	4.8	1.10	83.4	32.4
3	ST 4892 B/R	2641	38.5	1017	4.7	1.11	85	31.6
4	DP 655 B/R	2784	36.3	1011	4.6	1.13	83.8	33.9
5	DP 458 B/R	2522	37.9	956	5.1	1.12	83.5	32
6	FM 989 B/R	2438	35.9	875	4.8	1.12	83.5	32.3
7	PM 1199 R	2195	38.6	847	5.4	1.14	85.1	32.7

Irrigated Variety Demonstration-2-Jackson County

Project Summary:

Thirty-two cotton varieties were planted into a clay loam soil on the 30th of May. Four row by 1000' plots were seeded at a rate of 12 lbs/A and managed for optimum yield. Conventional, Bollgard?, Roundup Ready? and stacked gene varieties were included in this demonstration. Plants were mapped during the season to compare fruiting patterns and plots were harvested with a John Deere 484 brush stripper. A commercial size boll-buggy equipped with scales weighed seed-cotton from each plot and lint samples were taken in order to perform HVI fiber analysis. Results of this demonstration are presented in the tables below.

Trial ID:	OSUVP0202	**Location:**	WOSC Farm
Planting Date:	May 30	**Planting Rate:**	12 lbs/A
Row Spacing:	40 Inches	**Harvest Date:**	November 18
Plot Size:	4 r x 1000'	**Replications:**	1
Soil Type:	Clay Loam		

Yield Ranking	Variety Name	Seed Cotton	Gin %	Yield lbs/A	Fiber Mic	Fiber Length	Fiber Uniformity	Fiber Strength
1	DP 555 B/R	4199	29.4	1235	4.3	1.07	82.0	29.6
2	FM 832 B	4420	26.1	1154	4.7	1.16	84.4	34.6
3	FM 989	4505	24.5	1104	4.2	1.13	83.9	34.3
4	DP 491	4148	25.7	1066	3.7	1.17	82.7	33.8
5	FM 966	4318	24.6	1062	4.4	1.14	84.3	34.9
6	DP 458 B/R	4284	23.8	1020	5.1	1.04	83.0	28.2
7	ST 4793 R	3995	25.5	1019	4.7	1.06	83.4	30.0
8	ST BXN 49 B	3995	25.5	1019	5.0	1.07	83.7	28.0
9	Deltapearl	3978	25.4	1010	3.9	1.11	81.9	29.9
10	ST 580	4199	23.4	983	4.6	1.09	83.6	30.9
11	DP 448 B	4233	23.1	978	4.5	1.10	83.5	29.9
12	FM 5017	4199	22.6	949	4.6	1.10	84.1	34.3
13	ST 4892 B/R	4199	22.5	945	4.7	1.04	82.2	30.9
14	DP 565	4352	21.5	936	4.1	1.08	82.6	29.0
15	SG 215 B/R	3995	23.3	931	5.0	1.00	82.2	27.5
16	ST 457	3910	23.8	931	4.4	1.07	83.3	30.0
17	SG 501 B/R	4080	22.6	922	4.9	1.02	83.4	30.6
18	FM 5013	4046	22.7	918	4.8	1.07	84.1	29.7

Irrigated Variety Demonstration-2-Jackson County (continued)

Yield Ranking	Variety Name	Seed Cotton	Gin %	Yield lbs/A	Fiber Mic	Fiber Length	Fiber Uniformity	Fiber Strength
19	FM 819	3825	24	918	4.1	1.17	85.0	33.4
20	FM 5015	3995	22.8	911	4.8	1.05	83.7	33.6
21	ST 4691 B	3519	25.2	887	4.5	1.11	84.4	29.2
22	SG 521 R	4063	21.8	886	4.3	1.08	83.6	28.0
23	FM 989 B/R	4080	21.6	881	4.7	1.03	82.4	29.6
24	ST BXN 47	3995	22	879	4.7	1.10	83.2	27.1
25	ST 3539 B/R	3808	23	876	4.8	0.99	81.8	29.7
26	DP 35 B	4165	20.7	862	4.2	1.05	82.6	32.5
27	FM 832	4148	19.9	825	2.9	1.19	85.5	36.4
28	DP 655 B/R	3655	22.3	815	4.2	1.07	81.6	31.1
29	ST 474	3621	22	797	4.8	1.04	83.9	28.9
30	FM 958	3723	21.2	789	3.7	1.13	84.4	33.1
31	PM 1199 R	3298	21.4	706	4.5	1.07	84.4	30.8
32	ST 2454 R	2907	22.3	648	4.2	1.04	82.6	30.5

Irrigated Variety Demonstration-3-Jackson County

Project Summary:

Thirty-three cotton varieties were planted into a clay loam soil on the 30th of May. Four row by 1000' plots were seeded at a rate of 12 lbs/A and managed for optimum yield. Conventional, Bollgard?, Roundup Ready? and stacked gene varieties were included in this demonstration. Plants were mapped during the season to compare fruiting patterns and plots were harvested with a John Deere 484 brush stripper. A commercial size boll-buggy equipped with scales weighed seed-cotton from each plot and lint samples were taken in order to perform HVI fiber analysis. Results of this demonstration are presented in the tables below.

Trial ID:	OSUVP0203	**Location:**	OSUREC Farm
Planting Date:	May 15	**Planting Rate:**	12 lbs/A
Row Spacing:	40 Inches	**Harvest Date:**	November 16
Plot Size:	4 r x 1000'	**Replications:**	1
Soil Type:	Clay Loam		

Yield Ranking	Variety Name	Seed Cotton	Gin %	Yield lbs/A	Fiber Mic	Fiber Length	Fiber Uniformity	Fiber Strength
1	DP 555 B/R	4088	30	1226	4.8	1.08	81.3	29.1
2	FM 832 B	4218	24.2	1021	4.7	1.14	83.8	33.5
3	SG 521 R	4071	23.5	957	4.7	1.06	82.6	28.8
4	SG 215 B/R	3859	24	926	4.8	0.98	82.0	27.4
5	ST 457	3662	25.2	923	4.8	1.11	83.5	31.4
6	DP 35 B	3761	24.4	918	4.5	1.08	82.2	29.8
7	ST 4691 B	3728	24.4	910	4.9	1.03	79.9	29.1
8	FM 989 B/R	4120	22	906	4.9	1.06	83.1	33.8
9	ST BXN 49 B	3777	23.7	895	4.6	1.06	81.9	27.8
10	DP 491	3221	27.3	879	4.8	1.16	83.7	33.7
11	ST BXN 47	3842	22.7	872	4.9	1.10	82.6	29.4
12	FM 5017	3188	27.3	870	5.0	1.03	83.5	33.2
13	DP 458 B/R	3728	22.7	846	5.0	1.06	82.6	30.1
14	SG 501 B/R	3695	22.8	842	5.0	1.01	82.3	32.5

Irrigated Variety Demonstration-3-Jackson County (continued)

Yield Ranking	Variety Name	Seed Cotton	Gin %	Yield lbs/A	Fiber Mic	Fiber Length	Fiber Uniformity	Fiber Strength
15	ST 580	3662	22.7	831	5.2	1.09	83.9	30.8
16	ST 4793 R	3662	22.4	820	5.1	1.10	83.1	30.3
17	ST 4892 B/R	3597	22.8	820	5.0	1.08	82.7	30.8
18	PM 1199 R	3466	23.5	815	5.0	1.11	83.7	31.6
19	FM 832	3532	23	812	4.8	1.17	83.9	33.8
20	ST 3539 B/R	3532	23	812	4.6	1.01	81.9	31.1
21	DP 448 B	3711	21.7	805	4.5	1.10	81.3	29.6
22	PM 280	3662	21.5	787	4.6	1.10	83.6	32.9
23	DP 565	3434	22.7	779	4.9	1.16	82.7	31.4
24	ST 474	3384	23	778	4.8	1.09	82.0	30.4
25	FM 958	3237	23.8	770	5.1	1.13	83.8	33.5
26	DP 655 B/R	3499	22	770	4.4	1.06	81.1	30.9
27	FM 966	3205	23.5	753	4.5	1.10	82.3	33.3
28	FM 5013	3221	21.4	689	4.9	1.08	82.6	30.5
29	Deltapearl	3025	21.7	656	5.0	1.10	81.6	30.8
30	FM 5015	2976	21.4	637	5.1	1.08	84.5	34.4
31	ST 2454 R	2829	22.4	634	4.6	1.08	83.3	31.0
32	FM 989	2976	20.4	607	4.5	1.14	84.2	33.2
33	FM 819	2829	20.4	577	4.9	1.15	84.0	35.1

Irrigated Variety Demonstration-4-Greer County

Project Summary:

Eleven cotton varieties were planted into a sandy loam soil on the 22nd of May. Four row by 1400' plots were seeded at a rate of 13 lbs/A and managed for optimum yield. Only Roundup Ready? and stacked gene varieties were included in this demonstration. Representative yield samples were harvested from within each plot, ginned and lint samples were taken in order to perform HVI fiber analysis. Results of this demonstration are presented in the tables below.

Trial ID:	OSUVP0204	**Location:**	Mike Hogg Farm
Planting Date:	May 22	**Planting Rate:**	13 lbs/A
Row Spacing:	40 Inches	**Harvest Date:**	November 18
Plot Size:	4 r x 1400'	**Replications:**	1
Soil Type:	Sandy Loam		

Yield Ranking	Variety Name	Gin %	Yield Lbs/A	Fiber Mic	Fiber Length	Fiber Uniformity	Fiber Strength
1	PM 2326 B/R	0.22	1136	4.7	1.09	84.2	33
2	ST 4892 B/R	0.23	1011	4.8	1.09	83	31.6
3	PM 2200 RR	0.19	896	3.7	1.13	84.6	31.9
4	PM 2280 B/R	0.22	884	4.2	1.15	84.1	34.1
5	PM 2167 RR	0.20	873	3.8	1.08	84.4	30.3
6	PM 2156 RR	0.20	835	3.8	1.04	83.6	29.8
7	ST 2454 RR	0.20	746	4	1.09	83	30.5
8	PM 2344 B/R	0.20	628	4.3	1.09	84.4	35.1
9	PM 2266 RR	0.21	616	5	1.10	83.2	32.4
10	ST 3539 B/R	0.22	600	3.9	1.04	82.6	32.2
11	ST 4793 RR	0.20	451	5	1.10	84.5	32.3

Dryland Variety Demonstration-1-Kiowa County

Project Summary:

Twelve cotton varieties were planted into a sandy loam soil on the 16th of May. Ten row by 700' plots were seeded at a rate of 13 lbs/A and managed for optimum yield. Only Roundup Ready? and stacked gene varieties were included in this demonstration. Representative yield samples were harvested from within each plot, ginned and lint samples were taken in order to perform HVI fiber analysis. Results of this demonstration are presented in the tables below.

Trial ID:	OSUVP0205	**Location:**	Null Farm
Planting Date:	May 16	**Planting Rate:**	13 lbs/A
Row Spacing:	30 Inches	**Harvest Date:**	November 13
Plot Size:	10 r x 700'	**Replications:**	1
Soil Type:	Sandy Loam		

Yield Ranking	Variety Name	Gin %	Yield Lbs/A	Fiber Mic	Fiber Length	Fiber Uniformity	Fiber Strength
1	ST 2454 R	0.31	533	5.1	1.05	83.3	30.1
2	All-tex Atlas RR	0.26	516	4.7	1.03	80.9	31.6
3	PM 2200 RR	0.28	513	5.1	1.01	82.5	29.7
4	ST 4793 R	0.28	485	5.4	1.02	81.9	29.4
5	PM 2280 B/R	0.27	440	4	1.09	82.9	29.5
6	PM 2326 B/R	0.27	430	4	1.02	82.5	28.2
7	PM 2344 B/R	0.26	422	4.5	1.03	83.3	32.8
8	PM 2266 RR	0.28	413	4.4	1.03	82.7	31.1
9	ST 4892 B/R	0.32	412	5.1	0.98	80.5	28.3
10	PM 2156 RR	0.29	383	5.1	0.94	80.3	27.9
11	PM 2167 RR	0.29	378	4.7	0.96	81.9	27.8
12	ST 3539 B/R	0.27	364	4.2	0.96	82.8	28.4

Dryland Variety Demonstration-2-Washita County

Project Summary:

Eleven cotton varieties were planted into a sandy loam soil on the 21st of May. Four row by 1120' plots were seeded at a rate of 9 lbs/A and managed for optimum yield. Only Roundup Ready? and stacked gene varieties were included in this demonstration. Representative yield samples were harvested from within each plot, ginned and lint samples were taken in order to perform HVI fiber analysis. Results of this demonstration are presented in the tables below.

Trial ID:	OSUVP0206	**Location:**	Johnson Farm
Planting Date:	May 21	**Planting Rate:**	9 lbs/A
Row Spacing:	40 Inches	**Harvest Date:**	October 23
Plot Size:	4 r x 1120'	**Replications:**	1
Soil Type:	Sandy Loam		

Yield Ranking	Variety Name	Gin %	Yield Lbs/A	Fiber Mic	Fiber Length	Fiber Uniformity	Fiber Strength
1	PM 2266 RR	0.25	905	4.6	1.12	82.7	33.8
2	PM 2156 RR	0.27	815	3.9	1.04	83.4	28.9
3	PM 2344 B/R	0.28	791	4.2	1.08	83.5	32
4	ST 4892 B/R	0.30	759	4	1.07	81.8	30.9
5	PM 2167 RR	0.29	747	3.9	1.03	83	28.8
6	ST 4793 R	0.31	734	4.5	1.09	82.2	28.9
7	PM 2280 B/R	0.26	716	3.7	1.09	82.4	31
8	PM 2200 RR	0.24	688	4	1.08	82.5	31
9	PM 2326 B/R	0.26	681	4	1.07	83.5	32.2
10	ST 3539 B/R	0.28	650	3.8	1.03	81.5	29.6
11	ST 2454 R	0.26	585	3.3	1.1	82.7	29.6

Dryland Variety Demonstration-3-Tillman County

Project Summary:

Six cotton varieties were planted into a sandy loam soil on the 12th of June. Four row by 1320' plots were seeded at a rate of 10 lbs/A and managed for optimum yield. Only Roundup Ready? and stacked gene varieties were included in this demonstration. Representative yield samples were harvested from within each plot, ginned and lint samples were taken in order to perform HVI fiber analysis. Results of this demonstration are presented in the tables below.

Trial ID:	OSUVP0207	**Location:**	McKinley Farm
Planting Date:	June 12	**Planting Rate:**	10 lbs/A
Row Spacing:	40 Inches	**Harvest Date:**	November 7
Plot Size:	4 r x 1320'	**Replications:**	1
Soil Type:	Sandy Loam		

Yield Ranking	Variety Name	Gin %	Yield Lbs/A	Fiber Mic	Fiber Length	Fiber Uniformity	Fiber Strength
1	PM 2280 B/R	0.24	371	3.8	1.05	82	31.6
2	PM 2344 B/R	0.22	314	4	1.04	82.6	29.7
3	ST 4793 R	0.27	284	4.9	1.05	82.2	29.3
4	PM 2156 RR	0.23	260	5.2	1.00	83.7	28.8
5	ST 3539 B/R	0.23	242	4.5	1.05	83.5	33.1
6	PM 2326 B/R	0.21	208	3.3	1.01	82.8	27.5

Dryland Variety Demonstration-4-Canadian County

Project Summary:

Nineteen cotton varieties were planted into a sandy clay loam soil on the 22nd of May. Eight row by 600' plots were seeded at a rate of 10 lbs/A and managed for optimum yield. Conventional, Bollgard®, Roundup Ready® and stacked gene varieties were included in this demonstration. Representative yield samples were harvested from within each plot, ginned and lint samples were taken in order to perform HVI fiber analysis. Results of this demonstration are presented in the tables below.

Trial ID:	OSUVP0208	**Location:**	Mach Farm
Planting Date:	May 22	**Planting Rate:**	10 lbs/A
Row Spacing:	40 Inches	**Harvest Date:**	November 22
Plot Size:	8 r x 600'	**Replications:**	1
Soil Type:	Sandy Clay Loam		

Yield Ranking	Variety Name	Gin %	Yield Lbs/A	Fiber Mic	Fiber Length	Fiber Uniformity	Fiber Strength
1	ST 4892 B/R	0.25	1131	5.1	1.11	83.9	31
2	ST 4691 B	0.24	1090	5.3	1.08	83.2	30.1
3	ST 3539 B/R	0.21	931	5	0.98	81.8	31.6
4	FM 5017	0.18	853	5	1.08	84.5	34.4
5	ST 4793 R	0.23	839	5.2	1.07	83.4	28.8
6	PM 2344 B/R	0.19	832	4.5	1.08	83.6	32.7
7	ST 474	0.23	820	5.5	1.09	84.2	31.1
8	ST 2454 R	0.22	787	5.1	1.08	82.6	30.8
9	PM 2280 B/R	0.20	767	4.4	1.09	83.1	32.1
10	DP 237 B	0.19	701	5.1	1.07	83.2	32.6
11	PM 2156 RR	0.19	700	4.8	1.05	84.3	28.9
12	PM 2167 RR	0.20	680	5.1	1.02	83.3	30.8
13	PM 2200 RR	0.19	602	4.8	1.09	84	31.9
14	PM 2379	0.18	593	5.2	1.08	84	31.8
15	PM 280	0.18	560	4.8	1.11	82.7	34
16	PM 2266 RR	0.19	532	4.9	1.06	83.7	33.1
17	FM 5013	0.19	502	5.2	1.05	85.1	33.7
18	FM 5015	0.18	494	5.2	1.04	84	33.1
19	PM 2326 B/R	0.19	480	4.3	1.08	82.6	31.6

Liberty Post-directed for Morningglory Control

Project Summary:

Liberty is a non-selective herbicide currently marketed in crops other than cotton, however, registration for cotton is expected in the future. The purpose of this trial was to evaluate the effectiveness of various rates of Liberty for control of pitted morningglory in cotton. Applications were made with with a John Deere 5420 tractor and Redball 420 layby hoods. As expected, most rates of Liberty controlled pitted morningglory very effectively 7 days after treatment. However, the lack of soil activity resulted in decreased control as the season continued.

Trial ID:	BAYWC0201	**Location:**	OSUREC-W
Planting Date:	May 8	**Variety:**	DP 458 B/R
Row Spacing:	40 Inches	**Planting Rate:**	12 lbs/A
Plot Size:	4 r x 50'	**Harvest Date:**	None
Soil Type:	Clay Loam	**Replications:**	3

Weed							PITTED MORNINGGLORY		
Rating Data Type							CONTROL		
Rating Unit							PERCENT		
Rating Date							7/9/02	7/16/02	8/6/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code			
1	UNTREATED							0 d	0 d	0 c
2	LIBERTY	1.67	SL	24	OZ/A	PD6-9LF	A	97 a	95 a	68.3 b
3	LIBERTY	1.67	SL	28	OZ/A	PD6-9LF	A	96 ab	93.7 a	70 b
4	LIBERTY	1.67	SL	32	OZ/A	PD6-9LF	A	95 ab	90 c	63.3 b
5	LIBERTY	1.67	SL	40	OZ/A	PD6-9LF	A	97 a	93.3 ab	70 b
6	LIBERTY	1.67	SL	28	OZ/A	PD6-9LF	A	91.7 c	91 bc	66.7 b
6	AMMONIUM SULFATE	100	SG	3.4	LB/A	PD6-9LF	A			

Liberty Post-directed for Morningglory Control (continued)

Weed							PITTED MORNINGGLORY		
Rating Data Type							CONTROL		
Rating Unit							PERCENT		
Rating Date							7/9/02	7/16/02	8/6/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code			
7	LIBERTY	1.67	SL	32	OZ/A	PD6-9LF	A	95.7 ab	90 c	66.7 b
7	AMMONIUM SULFATE	100	SG	3.4	LB/A	PD6-9LF	A			
8	LIBERTY	1.67	SL	28	OZ/A	PD6-9LF	A	94 bc	93.7 a	81.7 a
8	STAPLE	85	SP	0.6	OZ/A	PD6-9LF	A			
LSD (P=.05)								2.85	2.55	10.73
Standard Deviation								1.63	1.46	6.12
CV								1.95	1.8	10.07

Means followed by same letter do not significantly differ (P=.05, LSD)

APPLICATION DESCRIPTION

	A
Application Date:	7/2/02
Time of Day:	11:00 AM
Application Method:	SPRAY
Application Timing:	MIDPOST
Applic. Placement:	DIRECTED
Air Temp., Unit:	78 F
% Relative Humidity:	71
Wind Velocity, Unit:	9 MPH
Soil Temp., Unit:	76 F
Soil Moisture:	GOOD
% Cloud Cover:	100

APPLICATION EQUIPMENT

	A
Appl. Equipment:	REDBALL
Operating Pressure:	24 PSI
Nozzle Type:	TJFLATFAN
Nozzle Size:	8001/003
Nozzles/Row:	3
Ground Speed, Unit:	4 MPH
Carrier:	WATER
Spray Volume, Unit:	15 GPA
Propellant:	CO2

CROP STAGE AT APPLICATION

	A
	COTTON
Stage Scale:	10-12NODE
Height, Unit:	12 INCH

WEED STAGE AT APPLICATION

	A
	PITTEDMG
Stage Scale:	1-5 INCH

BASF Weed Control/Growth Regulator System Demonstration

Project Summary:

The purpose of this demonstration was to evaluate the effectiveness of a BASF weed control system (i.e. Prowl followed by Roundup Ultramax) in conjunction with an experimental plant growth regulator (BAS 130) expected to soon be marketed by BASF. Entireleaf morningglory was effectively controlled early-season with the application of Roundup Ultramax. Due to the dry conditions present early in the season plant growth regulator rates were reduced to only 5 oz/A and additional applications were not warranted. Plots were harvested with a John Deere 484 brush stripper and weighed by a boll-buggy equipped with scales. No statistical differences in yield or fiber quality were realized between treatments.

Trial ID:	BASWC0201	**Location:**	OSUREC-D
Planting Date:	May 9	**Variety:**	ST 4892 B/R
Row Spacing:	40 Inches	**Planting Rate:**	12 lbs/A
Plot Size:	4 r x 1300'	**Harvest Date:**	October 17
Soil Type:	Clay Loam	**Replications:**	3

Weed								PIGWEED	ENTIREMG	PIGWEED
Rating Data Type								CONTROL	CONTROL	CONTROL
Rating Unit								PERCENT	PERCENT	PERCENT
Rating Date								5/28/02	5/28/02	6/14/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code			
1	ROUNDUP ULTRAMAX	3.7	SL	26	OZ/A	EP 3-4LF	B	0 b	0 a	100 a
1	ROUNDUP ULTRAMAX	3.7	SL	26	OZ/A	PD	C			
1	MEPIQUAT CHLORIDE		L	5	OZ/A	3RD SQ	D			
1	MEPIQUATE CHLORIDE		L	5	OZ/A	ASNEEDED	E			
2	PROWL	3.3	EC	2.4	PT/A	PPI	A	100 a	0 a	100 a
2	ROUNDUP ULTRAMAX	3.7	SL	26	OZ/A	EP 3-4LF	B			
2	ROUNDUP ULTRAMAX	3.7	SL	26	OZ/A	PD	C			
2	BAS 130		L	5	OZ/A	3RD SQ.	D			
2	BAS 130		L	5	OZ/A	ASNEEDED	E			

BASF Weed Control/Growth Regulator System Demonstration (continued)

Weed								ENTIREMG	SEEDCOTN	GIN
Rating Data Type								CONTROL	YIELD	TURNOUT
Rating Unit								PERCENT	LBS/ACRE	PERCENT
Rating Date								6/14/02	10/17/02	12/17/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code			
1	ROUNDUP ULTRAMAX	3.7	SL	26	OZ/A	EP 3-4LF	B	93.3 a	3154 a	37.93 a
1	ROUNDUP ULTRAMAX	3.7	SL	26	OZ/A	PD	C			
1	MEPIQUAT CHLORIDE		L	5	OZ/A	3RD SQ	D			
1	MEPIQUATE CHLORIDE		L	5	OZ/A	ASNEEDED	E			
2	PROWL	3.3	EC	2.4	PT/A	PPI	A	95 a	3283 a	38.1 a
2	ROUNDUP ULTRAMAX	3.7	SL	26	OZ/A	EP 3-4LF	B			
2	ROUNDUP ULTRAMAX	3.7	SL	26	OZ/A	PD	C			
2	BAS 130		L	5	OZ/A	3RD SQ.	D			
2	BAS 130		L	5	OZ/A	ASNEEDED	E			
LSD (P=.05)								7.17	385.8	3.851
Standard Deviation								2.04	109.8	1.096
CV								2.17	3.41	2.88

Means followed by same letter do not significantly differ (P=.05, LSD)

BASF Weed Control/Growth Regulator System Demonstration (continued)

Weed								LINT	FIBER	
Rating Data Type								YIELD	DATA	
Rating Unit								LBS/ACRE	MIC	LENGTH
Rating Date								12/17/02	1/20/02	1/20/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code			
1	ROUNDUP ULTRAMAX	3.7	SL	26	OZ/A	EP 3-4LF	B	1196 a	4.83 a	1.107 a
1	ROUNDUP ULTRAMAX	3.7	SL	26	OZ/A	PD	C			
1	MEPIQUAT CHLORIDE		L	5	OZ/A	3RD SQ	D			
1	MEPIQUATE CHLORIDE		L	5	OZ/A	ASNEEDED	E			
2	PROWL	3.3	EC	2.4	PT/A	PPI	A	1252 a	4.93 a	1.093 a
2	ROUNDUP ULTRAMAX	3.7	SL	26	OZ/A	EP 3-4LF	B			
2	ROUNDUP ULTRAMAX	3.7	SL	26	OZ/A	PD	C			
2	BAS 130		L	5	OZ/A	3RD SQ.	D			
2	BAS 130		L	5	OZ/A	ASNEEDED	E			
LSD (P=.05)								195.2	0.248	0.0626
Standard Deviation								55.6	0.071	0.0178
CV								4.54	1.45	1.62
Means followed by same letter do not significantly differ (P=.05, LSD)										

BASF Weed Control/Growth Regulator System Demonstration (continued)

Weed								FIBER	
Rating Data Type								DATA	
Rating Unit								UNIFORM	STRENGTH
Rating Date								1/20/02	1/20/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code		
1	ROUNDUP ULTRAMAX	3.7	SL	26	OZ/A	EP 3-4LF	B	83.87 a	30.33 a
1	ROUNDUP ULTRAMAX	3.7	SL	26	OZ/A	PD	C		
1	MEPIQUAT CHLORIDE		L	5	OZ/A	3RD SQ	D		
1	MEPIQUATE CHLORIDE		L	5	OZ/A	ASNEEDED	E		
2	PROWL	3.3	EC	2.4	PT/A	PPI	A	83.5 a	30.2 a
2	ROUNDUP ULTRAMAX	3.7	SL	26	OZ/A	EP 3-4LF	B		
2	ROUNDUP ULTRAMAX	3.7	SL	26	OZ/A	PD	C		
2	BAS 130		L	5	OZ/A	3RD SQ.	D		
2	BAS 130		L	5	OZ/A	ASNEEDED	E		
LSD (P=.05)								1.528	5.272
Standard Deviation								0.435	1.501
CV								0.52	4.96

Means followed by same letter do not significantly differ (P=.05, LSD)

BASF Weed Control/Growth Regulator System Demonstration (continued)

APPLICATION DESCRIPTION

	A	B	C	D
Application Date:	3/7/02	5/29/02	7/5/02	7/19/02
Time of Day:	11:00 AM	10:15 AM	2:00 PM	1:30 PM
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	PPI	3-4 LEAF	12-14 LF	BLOOM
Applic. Placement:	BROADCAST	BROADCAST	DIRECTED	BROADCAST
Air Temp., Unit:	51 F	84 F	94 F	91 F
% Relative Humidity:	30	43	40	35
Wind Velocity, Unit:	6 MPH	8 MPH	7 MPH	6 MPH
Soil Temp., Unit:	48 F	87 F	96 F	95 F
Soil Moisture:	DRY	GOOD	DRY	DRY
% Cloud Cover:	0	5	20	30

APPLICATION EQUIPMENT

	A	B	C	D
Appl. Equipment:	8-ROW	LEESPIDER	REDBALL	LEESPIDER
Operating Pressure:	35 PSI	24 PSI	25 PSI	24 PSI
Nozzle Type:	TJFLATFAN	TJFLATFAN	TJFLATFAN	TJFLATFAN
Nozzle Size:	8003 VS	8002 VS	8001/003	8002 VS
Nozzle Spacing, Unit:	20 IN	20 IN		20 IN
Nozzles/Row:	2	2	3	2
Ground Speed, Unit:	4 MPH	4 MPH	4 MPH	4 MPH
Carrier:	WATER	WATER	WATER	WATER
Spray Volume, Unit:	20 GPA	10 GPA	15 GPA	10 GPA
Propellant:		COMP. AIR		COMP. AIR

Valor Post-directed for Morningglory Control

Project Summary:

Valor herbicide is currently marketed for in season weed control in other crops. The registration for in-season use in cotton is expected in the near future. The objective of this trial was to evaluate the effectiveness of Valor herbicide both alone and when tank-mixed with either Roundup Ultramax or MSMA. Also, an experimental pre-package combination of Valor plus Glyphosate (V-10080) was also evaluated. Results of Valor applications are typically very similar to the newly released "Aim" herbicide, however, Valor is also active in the soil. Timely rainfall was received after these applications resulting in excellent herbicide activation, and subsequently, enhanced long-term morningglory control.

Trial ID:	VALWC0201	**Location:**	OSUREC-W
Planting Date:	May 9	**Variety:**	DP 458 B/R
Row Spacing:	40 Inches	**Planting Rate:**	12 lbs/A
Plot Size:	4 r x 50'	**Harvest Date:**	None
Soil Type:	Clay Loam	**Replications:**	3

Weed Code								PITTEDMG		
Rating Data Type								CONTROL		
Rating Unit								PERCENT		
Rating Date								7/9/02	7/15/02	8/6/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code			
1	UNTREATED CHECK							0 c	0 d	0 d
2	VALOR	50	WG	0.063	LB A/A	PD	A	100 a	97.7 b	93.3 ab
2	COC		L	1	QT/A	PD	A			
3	VALOR	50	WG	0.063	LB A/A	PD	A	99 b	95 c	92.5 ab
3	ROUNDUP ORIGINAL	4	SC	1	LB A/A	PD	A			
3	INDUCE		L	0.25	% V/V	PD	A			
3	AMMONIUM SULFATE (DRY)	100	SG	2.5	LB/A	PD	A			
4	VALOR	50	WG	0.063	LB A/A	PD	A	99 ab	98 a	86 c
4	MSMA	6	EC	2	LB A/A	PD	A			
4	INDUCE		L	0.25	% V/V	PD	A			

Valor Post-directed for Morningglory Control (continued)

Weed Code							PITTEDMG		
Rating Data Type							CONTROL		
Rating Unit							PERCENT		
Rating Date							7/9/02	7/15/02	8/6/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code			
5	VALOR	50	WG	0.063	LB A/A	LAYBY	B	0 c	0 d	93.7 ab
5	INDUCE		L	0.25	% V/V	LAYBY	B			
6	MSMA	6	EC	2	LB A/A	LAYBY	B	0 c	0 d	87.7 bc
6	INDUCE		L	0.25	% V/V	LAYBY	B			
7	VALOR	50	WG	0.063	LB A/A	LAYBY	B	0 c	0 d	92.7 ab
7	MSMA	6	EC	2	LB A/A	LAYBY	B			
7	INDUCE		L	0.25	% V/V	LAYBY	B			
8	ROUNDUP ORIGINAL	4	SC	1	LB A/A	LAYBY	B	0 c	0 d	87.7 bc
8	INDUCE		L	0.25	% V/V	LAYBY	B			
8	AMMONIUM SULFATE (DRY)	100	SG	2.5	LB/A	LAYBY	B			
9	VALOR	50	WG	0.063	LB A/A	LAYBY	B	0 c	0 d	98 a
9	ROUNDUP ORIGINAL	4	SC	1	LB A/A	LAYBY	B			
9	INDUCE		L	0.25	% V/V	LAYBY	B			
9	AMMONIUM SULFATE (DRY)	100	SG	2.5	LB/A	LAYBY	B			
10	V-10080	4.25	SC	1.063	LB A/A	LAYBY	B	0 c	0 d	97 a
10	INDUCE		L	0.25	% V/V	LAYBY	B			
11	CAPAROL	4	L	1	QT/A	LAYBY	B	0 c	0 d	93.7 ab
11	MSMA	6	EC	2	LB A/A	LAYBY	B			
LSD (P=.05)								0.84	0.31	6.47
Standard Deviation								0.49	0.18	3.79
CV								1.82	0.68	4.52
Means followed by same letter do not significantly differ (P=.05, LSD)										

Valor Post-directed for Morningglory Control (continued)

APPLICATION DESCRIPTION

	A	B
Application Date:	7/2/02	7/26/02
Time of Day:	2:00 PM	4:30 PM
Application Method:	SPRAY	SPRAY
Application Timing:	MIDPOST	LAYBY
Applic. Placement:	DIRECTED	DIRECTED
Air Temp., Unit:	89 F	103 F
% Relative Humidity:	41	20
Wind Velocity, Unit:	9 MPH	11 MPH
Soil Temp., Unit:	84 F	94 F
Soil Moisture:	GOOD	GOOD
% Cloud Cover:	50	0

CROP STAGE AT EACH APPLICATION

	A	B
	COTTON	COTTON
Stage Scale:	10-12NODE	18 NODES
Height, Unit:	12 INCH	22 INCH

WEED STAGE AT EACH APPLICATION

	A	B
	PITTED MG	PITTED MG
Stage Scale:	1-4 INCH	1-6 INCH

APPLICATION EQUIPMENT

	A	B
Appl. Equipment:	REDBALL	REDBALL
Operating Pressure:	24 PSI	24 PSI
Nozzle Type:	TJFLATFAN	TJFLATFAN
Nozzle Size:	8001/003	8001/003
Nozzles/Row:	3	3
Ground Speed, Unit:	4 MPH	4 MPH
Carrier:	WATER	WATER
Spray Volume, Unit:	15 GPA	15 GPA
Propellant:	CO2	CO2

Staple Systems for Managing Morningglory

Project Summary:

Staple herbicide is currently the only choice available to growers for broadcast over-the-top applications for morningglory control in conventional cotton. Likewise it has also become a valuable tool for weed control within the Roundup Ready system when cotton is past the 4-5 leaf stage but still too small for directed applications. The objective of this study was to evaluate the effectiveness of various systems including Staple applied both as a preemergence and postemergence, alone or in combination with glyphosate. Results are presented in the tables below.

Trial ID:	DUPWC0201	**Location:**	OSUREC-W
Planting Date:	May 9	**Variety:**	DP 458 B/R
Row Spacing:	40 Inches	**Planting Rate:**	12 lbs/A
Plot Size:	4 r x 50'	**Harvest Date:**	None
Soil Type:	Clay Loam	**Replications:**	3

Weed								PITTED MORNINGGLORY		
Rating Data Type								CONTROL		
Rating Unit								PERCENT		
Rating Date								5/17/02	6/7/02	7/2/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code			
1	STAPLE	85	WP	0.6	OZ/A	PRE	A	95 a	70 de	95.3 a
1	CAPAROL	4	L	3.2	PT/A	PRE	A			
1	STAPLE	85	WP	1.5	OZ/A	EP-4LF	D			
1	INDUCE		L	0.25	% V/V	EP-4LF	D			
2	STAPLE	85	WP	0.6	OZ/A	PRE	A	85 b	60 ef	92.7 ab
2	STAPLE	85	WP	0.6	OZ/A	EP-4LF	D			
2	GLYPHOSATE	3	L	1.5	PT/A	EP-4LF	D			
2	INDUCE		L	0.25	% V/V	EP-4LF	D			

Staple Systems for Managing Morningglory (continued)

Weed							PITTED MORNINGGLORY		
Rating Data Type							CONTROL		
Rating Unit							PERCENT		
Rating Date							5/17/02	6/7/02	7/2/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code			
3	STAPLE	85	WP	0.6	OZ/A	EP-3LF	C	0 c	56.7 f	85 c
3	GLYPHOSATE	3	L	1.5	PT/A	EP-3LF	C			
3	INDUCE		L	0.25	% V/V	EP-3LF	C			
4	STAPLE	85	WP	1.2	OZ/A	EP-3LF	C	0 c	78.3 bcd	85.7 c
4	GLYPHOSATE	3	L	1	QT/A	EP-3LF	C			
4	INDUCE		L	0.25	% V/V	EP-3LF	C			
5	STAPLE	85	WP	0.4	OZ/A	EP-COTLY	B	0 c	86.7 ab	94 ab
5	GLYPHOSATE	3	L	1	PT/A	EP-COTLY	B			
5	INDUCE		L	0.25	% V/V	EP-COTLY	B			
5	STAPLE	85	WP	0.4	OZ/A	EP-4LF	D			
5	GLYPHOSATE	3	L	1	PT/A	EP-4LF	D			
5	INDUCE		L	0.25	% V/V	EP-4LF	D			
6	STAPLE	85	WP	0.6	OZ/A	EP-COTLY	B	0 c	91.7 a	96.3 a
6	GLYPHOSATE	3	L	1.5	PT/A	EP-COTLY	B			
6	INDUCE		L	0.25	% V/V	EP-COTLY	B			
6	STAPLE	85	WP	0.6	OZ/A	EP-4LF	D			
6	GLYPHOSATE	3	L	1.5	PT/A	EP-4LF	D			
6	INDUCE		L	0.25	% V/V	EP-4LF	D			
7	STAPLE	85	WP	0.6	OZ/A	EP-3LF	C	0 c	83.3 abc	87.7 bc
7	ROUNDUP ULTRAMAX	3.7	L	19.2	OZ/A	EP-3LF	C			
8	STAPLE	85	WP	0.6	OZ/A	EP-3LF	C	0 c	78.3 bcd	73.3 d
8	TOUCHDOWN IQ	3	SL	1.5	PT/A	EP-3LF	C			

Staple Systems for Managing Morningglory (continued)

Weed								PITTED MORNINGGLORY		
Rating Data Type								CONTROL		
Rating Unit								PERCENT		
Rating Date								5/17/02	6/7/02	7/2/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code			
9	ROUNDUP ULTRAMAX	3.7	L	25.6	OZ/A	EP-COTYL	B	0 c	73.3 cd	97.3 a
9	ROUNDUP ULTRAMAX	3.7	L	25.6	OZ/A	EP-4LF	D			
10	UNTREATED							0 c	0 g	0 e
LSD (P=.05)								7.4	11.65	6.85
Standard Deviation								4.31	6.79	3.99
CV								23.97	10.01	4.95
Means followed by same letter do not significantly differ (P=.05, LSD)										

Staple Systems for Managing Morningglory (continued)

APPLICATION DESCRIPTION

	A	B	C	D
Application Date:	5/9/02	5/20/02	5/31/02	6/7/02
Time of Day:	7:30 PM	11:45 AM	11:30 AM	3:15 PM
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	PREEMERGE	EP-COTYL	EP-3 LEAF	EP-4 LEAF
Applic. Placement:	BROADCAST	BROADCAST	BROADCAST	BROADCAST
Air Temp., Unit:	70 F	73 F	89 F	94 F
% Relative Humidity:	25	28	40	36
Wind Velocity, Unit:	8.2 MPH	11 MPH	2.5 MPH	10 MPH
Soil Temp., Unit:	78 F	70 F	88 F	92 F
Soil Moisture:	GOOD	DRY	GOOD	FAIR
% Cloud Cover:	40	0	0	70

CROP STAGE AT EACH APPLICATION

	A	B	C	D
	COTTON	COTTON	COTTON	COTTON
Stage Scale:	N/A	COTYL-1LF	2-3 LEAF	4-5 LEAF

WEED STAGE AT EACH APPLICATION

	A	B	C	D
	PITTEDMG	PITTEDMG	PITTEDMG	PITTEDMG
Stage Scale:	N/A	1-2 INCH	1-6 INCH	1-4 INCH

APPLICATION EQUIPMENT

	A	B	C	D
Appl. Equipment:	LEESPIDER	LEESPIDER	LEESPIDER	LEESPIDER
Operating Pressure:	22 PSI	22 PSI	22 PSI	22 PSI
Nozzle Type:	TJFLATFAN	TJFLATFAN	TJFLATFAN	TJFLATFAN
Nozzle Size:	8002VS	8002VS	8002VS	8002VS
Nozzle Spacing, Unit:	20 IN	20 IN	20 IN	20 IN
Nozzles/Row:	2	2	2	2
Ground Speed, Unit:	4 MPH	4 MPH	4 MPH	4 MPH
Carrier:	WATER	WATER	WATER	WATER
Spray Volume, Unit:	10 GPA	10 GPA	10 GPA	10 GPA
Propellant:	COMP.AIR	COMP.AIR	COMP.AIR	COMP.AIR

Tank-mixing with Roundup Weathermax (Mon 78270) for Morningglory Control

Project Summary:

Glyphosate (Roundup) quickly became a valuable weed control tool soon after the introduction of the Roundup Ready system. Weed control decisions are often simplified due to its economical, broad-spectrum control of numerous weed species. The performance of an experimental formulation of Glyphosate (Mon 78270) is currently being examined across the cotton belt. The purpose of this study was to evaluate the effectiveness of this formulation when applied alone or in combination with potential tank-mix partners. Excellent pitted morningglory control was achieved early in the season. As expected, treatments including residual herbicides proved to be most effective later in the season.

Trial ID:	MONWC0201	**Location:**	OSUREC-W
Planting Date:	May 9	**Variety:**	DP 458 B/R
Row Spacing:	40 Inches	**Planting Rate:**	12 lbs/A
Plot Size:	4 r x 50'	**Harvest Date:**	None
Soil Type:	Clay Loam	**Replications:**	3

Weed							PITTED MORNINGGLORY			
Rating Data Type							CONTROL			
Rating Unit							PERCENT			
Rating Date							6/14/02	7/9/02	7/16/02	8/6/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	App Code				
1	MON 78270	4.5	SL	0.75	LB AE/A	EP-2-3LF	A	99.3 ab	93 c-f	89.7 cde	76 cd
1	MON 78270	4.5	SL	0.75	LB AE/A	PD-3-5"W	B				
1	AIM	2	EC	0.5	OZ/A	PD-3-5"W	B				
1	CROP OIL		L	1.25	% V/V	PD-3-5"W	B				
2	MON 78270	4.5	SL	0.75	LB AE/A	EP-2-3LF	A	98 ab	95 b-e	88 de	78.3 bcd
2	MON 78270	4.5	SL	0.75	LB AE/A	PD-3-5"W	B				
2	AIM	2	EC	0.75	OZ/A	PD-3-5"W	B				
2	CROP OIL		L	1.25	% V/V	PD-3-5"W	B				

Tank-mixing with Roundup Weathermax (Mon 78270) for Morningglory Control (continued)

Weed							PITTED MORNINGGLORY			
Rating Data Type							CONTROL			
Rating Unit							PERCENT			
Rating Date							6/14/02	7/9/02	7/16/02	8/6/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	App Code				
3	MON 78270	4.5	SL	0.75	LB AE/A	EP-2-3LF	A	98.3 ab	97 abc	89.7 cde	82.7 a-d
3	MON 78270	4.5	SL	0.75	LB AE/A	PD-3-5"W	B				
3	AIM	2	EC	1	OZ/A	PD-3-5"W	B				
3	CROP OIL		L	1.25	% V/V	PD-3-5"W	B				
4	MON 78270	4.5	SL	0.75	LB AE/A	EP-2-3LF	A	96.7 b	90 fgh	91.3 a-d	74 cd
4	MON 78404	4.03	SL	1	LB A/A	PD-3-5"W	B				
5	MON 78270	4.5	SL	0.75	LB AE/A	EP-2-3LF	A	99.3 ab	97 abc	95.7 a	94.3 a
5	MON 78270	4.5	SL	0.75	LB AE/A	PD-3-5"W	B				
5	AMPLIFY	84	WG	0.016	LB A/A	PD-3-5"W	B				
6	MON 78270	4.5	SL	0.75	LB AE/A	EP-2-3LF	A	99.3 ab	91.3 efg	90.3 b-e	77 bcd
6	MON 78270	4.5	SL	0.75	LB AE/A	PD-3-5"W	B				
6	VALOR	50	WG	0.032	LB A/A	PD-3-5"W	B				
7	MON 78270	4.5	SL	0.75	LB AE/A	EP-2-3LF	A	98 ab	99.3 a	94.3 abc	86 abc
7	MON 78270	4.5	SL	0.75	LB AE/A	PD-3-5"W	B				
7	VALOR	50	WG	0.063	LB A/A	PD-3-5"W	B				
8	MON 78270	4.5	SL	0.75	LB AE/A	EP-2-3LF	A	97.7 ab	95.7 a-d	92.3 a-d	81.7 a-d
8	FIREPOWER	4.25	SC	1.06	LB A/A	PD-3-5"W	B				
9	MON 78270	4.5	SL	0.75	LB AE/A	EP-2-3LF	A	98.7 ab	98 ab	95 ab	94 a
9	MON 78270	4.5	SL	0.75	LB AE/A	PD-3-5"W	B				
9	STRONGARM	84	DF	0.025	LB A/A	PD-3-5"W	B				

Tank-mixing with Roundup Weathermax (Mon 78270) for Morningglory Control (continued)

Weed							PITTED MORNINGGLORY			
Rating Data Type							CONTROL			
Rating Unit							PERCENT			
Rating Date							6/14/02	7/9/02	7/16/02	8/6/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	App Code				
10	MON 78270	4.5	SL	0.75	LB AE/A	EP-2-3LF	A	98.7 ab	80.7 i	88.3 de	71 d
10	MON 78270	4.5	SL	0.75	LB AE/A	PD-3-5"W	B				
11	MON 78270	4.5	SL	0.75	LB AE/A	EP-2-3LF	A	100 a	86.3 h	86 e	87.7 abc
11	MON 78270	4.5	SL	0.75	LB AE/A	PD-3-5"W	B				
11	MON 78839	5.4	SC	1.5	LB A/A	LAYBY	C				
11	INDUCE		L	0.5	% V/V	LAYBY	C				
12	MON 78270	4.5	SL	0.75	LB AE/A	EP-2-3LF	A	100 a	87.7 gh	89.3 cde	83.3 a-d
12	MON 78270	4.5	SL	0.75	LB AE/A	PD-3-5"W	B				
12	MON 78270	4.5	SL	0.75	LB AE/A	LAYBY	C				
13	MON 78270	4.5	SL	0.75	LB AE/A	EP-2-3LF	A	97 b	92.3 def	94.3 abc	85.3 a-d
13	MON 78270	4.5	SL	0.75	LB AE/A	PD-3-5"W	B				
13	CGA-362-622	75	WG	0.0071	LB A/A	PD-3-5"W	B				
14	MON 78270	4.5	SL	0.75	LB AE/A	EP-2-3LF	A	96.7 b	96.3 a-d	96.3 a	91 ab
14	MON 78270	4.5	SL	0.75	LB AE/A	PD-3-5"W	B				
14	CGA-362-622	75	WG	0.0118	LB A/A	PD-3-5"W	B				
15	UNTREATED							0 c	0 j	0 f	0 e
LSD (P=.05)								2.86	4.1	5.09	14.59
Standard Deviation								1.71	2.45	3.04	8.73
CV								1.86	2.83	3.57	11.26

Means followed by same letter do not significantly differ (P=.05, LSD)

Tank-mixing with Roundup Weathermax (Mon 78270) for Morningglory Control (continued)

APPLICATION DESCRIPTION

	A	B	C
Application Date:	6/7/02	7/2/02	7/26/02
Time of Day:	10:OO AM	11:00 AM	4:30 PM
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	EPOST	POST	LAYBY
Applic. Placement:	BROADCAST	DIRECTED	DIRECTED
Air Temp., Unit:	78 F	78 F	103 F
% Relative Humidity:	80	71	20
Wind Velocity, Unit:	7 MPH	9 MPH	10 MPH
Soil Temp., Unit:	80 F	76 F	86 F
Soil Moisture:	GOOD	GOOD	GOOD
% Cloud Cover:	0	100	0

CROP STAGE AT EACH APPLICATION

	A	B	C
Stage Scale:	2-3 LEAF	10-12NODE	18 NODES
Height, Unit:	3 INCH	12 INCH	22 INCH

WEED STAGE AT EACH APPLICATION

	A	B	C
	PITTEDMG	PITTEDMG	PITTED MG
Stage Scale:	1-2 INCH	1-5 INCH	1-6 INCH

APPLICATION EQUIPMENT

	A	B	C
Appl. Equipment:	SPIDER	REDBALL	REDBALL
Operating Pressure:	24 PSI	24 PSI	24 PSI
Nozzle Type:	TJ FF	TJ FF	TJ FF
Nozzle Size:	8001/003	8001/003	8001/003
Nozzles/Row:	3	3	3
Ground Speed, Unit:	4 MPH	4 MPH	4 MPH
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA
Propellant:	CO2	CO2	CO2

Tank-mixing Roundup Ultramax with Diuron for Post-directed Morningglory Control

Project Summary:

Although weed control decisions are often simplified due to the economical, broad-spectrum control provided by Roundup Ultramax, in some cases the addition of a residual herbicide may be beneficial. The purpose of this study was to evaluate the effectiveness of tank-mixed combinations of Roundup Ultramax + Diuron in comparison to commercial standards. Additionally, applications were made to pitted morningglory at different growth stages in order to realize any benefits Diuron may have when attempting to control larger morningglory. Results are presented in the tables below.

Trial ID:	MONWC0202	**Location:**	OSUREC-W
Planting Date:	May 9	**Variety:**	DP 458 B/R
Row Spacing:	40 Inches	**Planting Rate:**	12 lbs/A
Plot Size:	4 r x 50'	**Harvest Date:**	None
Soil Type:	Clay Loam	**Replications:**	3

Weed							PITTED MORNINGGLORY			
Rating Data Type							CONTROL			
Rating Unit							PERCENT			
Rating Date							6/14/02	7/9/02	7/16/02	8/6/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	App Code				
1	ROUNDUP ULTRAMAX	3.7	SL	0.75	LB AE/A	EP 3-4LF	A	100 a	91 e	92 abc	79 b
1	ROUNDUP ULTRAMAX	3.7	SL	0.75	LB AE/A	PD 3-4"W	B				
2	ROUNDUP ULTRAMAX	3.7	SL	0.75	LB AE/A	EP 3-4LF	A	100 a	93 cd	89 abc	80 b
2	ROUNDUP ULTRAMAX	3.7	SL	0.75	LB AE/A	PD 3-4"W	B				
2	DIURON	4	SC	0.5	LB A/A	PD 3-4"W	B				
3	ROUNDUP ULTRAMAX	3.7	SL	0.75	LB AE/A	EP 3-4LF	A	100 a	96 bc	89 abc	88 ab
3	ROUNDUP ULTRAMAX	3.7	SL	0.75	LB AE/A	PD 3-4"W	B				
3	DIURON	4	SC	0.75	LB A/A	PD 3-4"W	B				

Tank-mixing Roundup Ultramax with Diuron for Post-directed Morningglory Control (continued)

Weed								PITTED MORNINGGLORY			
Rating Data Type								CONTROL			
Rating Unit								PERCENT			
Rating Date								6/14/02	7/9/02	7/16/02	8/6/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	App Code				
4	ROUNDUP ULTRAMAX	3.7	SL	0.75	LB AE/A	EP 3-4LF	A	99.3 a	96 b	93 ab	86 ab
4	ROUNDUP ULTRAMAX	3.7	SL	0.75	LB AE/A	PD 3-4"W	B				
4	AIM	2	EC	1	OZ/A	PD 3-4"W	B				
4	CROP OIL		L	1.25	% V/V	PD 3-4"W	B				
5	ROUNDUP ULTRAMAX	3.7	SL	0.75	LB AE/A	EP 3-4LF	A	98.7 a	100 a	98 a	94 a
5	ROUNDUP ULTRAMAX	3.7	SL	0.75	LB AE/A	PD 3-4"W	B				
5	VALOR	50	WG	0.063	LB A/A	PD 3-4"W	B				
5	INDUCE		L	0.5	% V/V	PD 3-4"W	B				
6	ROUNDUP ULTRAMAX	3.7	SL	0.75	LB AE/A	EP 3-4LF	A	99.3 a	0 f	50 e	80 b
6	ROUNDUP ULTRAMAX	3.7	SL	0.75	LB AE/A	PD 6-8"W	C				
7	ROUNDUP ULTRAMAX	3.7	SL	0.75	LB AE/A	EP 3-4LF	A	99.3 a	0 f	73 d	87 ab
7	ROUNDUP ULTRAMAX	3.7	SL	0.75	LB AE/A	PD 6-8"W	C				
7	DIURON	4	SC	0.5	LB A/A	PD 6-8"W	C				
8	ROUNDUP ULTRAMAX	3.7	SL	0.75	LB AE/A	EP 3-4LF	A	98.3 a	0 f	86 bc	92 a
8	ROUNDUP ULTRAMAX	3.7	SL	0.75	LB AE/A	PD 6-8"W	C				
8	DIURON	4	SC	0.75	LB A/A	PD 6-8"W	C				
9	ROUNDUP ULTRAMAX	3.7	SL	0.75	LB AE/A	EP 3-4LF	A	99.3 a	0 f	97 a	90 ab
9	ROUNDUP ULTRAMAX	3.7	SL	0.75	LB AE/A	PD 6-8"W	C				
9	AIM	2	EC	1	OZ/A	PD 6-8"W	C				
9	CROP OIL		L	1.25	% V/V	PD 6-8"W	C				

Tank-mixing Roundup Ultramax with Diuron for Post-directed Morningglory Control (continued)

Weed								PITTED MORNINGGLORY			
Rating Data Type								CONTROL			
Rating Unit								PERCENT			
Rating Date								6/14/02	7/9/02	7/16/02	8/6/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	App Code				
10	ROUNDUP ULTRAMAX	3.7	SL	0.75	LB AE/A	EP 3-4LF	A	99.3 a	0 f	86 bc	93 a
10	ROUNDUP ULTRAMAX	3.7	SL	0.75	LB AE/A	PD 6-8"W	C				
10	VALOR	50	WG	0.063	LB A/A	PD 6-8"W	C				
10	INDUCE		L	0.5	% V/V	PD 6-8"W	C				
11	ROUNDUP ULTRAMAX	3.7	SL	0.75	LB AE/A	EP 3-4LF	A	99.3 a	92 de	81 cd	83 ab
11	CAPAROL	4	L	1	QT/A	PD3-4"W	B				
11	MSMA	6	L	2.7	PT/A	PD3-4"W	B				
12	UNTREATED							0 b	0 f	0 f	0 c
LSD (P=.05)								2	2.42	10.48	11.09
Standard Deviation								1.18	1.43	6.19	6.55
CV								1.3	3.02	7.96	8.24

Means followed by same letter do not significantly differ (P=.05, LSD)

Tank-mixing Roundup Ultramax with Diuron for Post-directed Morningglory Control (continued)

APPLICATION DESCRIPTION

	A	B	C
Application Date:	6/7/02	7/2/02	7/10/02
Time of Day:	10:OO AM	11:30 AM	9:00 AM
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	EPOST	POST	POST
Applic. Placement:	BROADCAST	DIRECTED	DIRECTED
Air Temp., Unit:	78 F	82 F	78 F
% Relative Humidity:	80	70	60
Wind Velocity, Unit:	7 MPH	8 MPH	5 MPH
Soil Temp., Unit:	80 F	80 F	82 F
Soil Moisture:	GOOD	GOOD	GOOD
% Cloud Cover:	0	90	30

CROP STAGE AT EACH APPLICATION

	A	B	C
Stage Scale:	2-3 LEAF	10-12NODE	14 NODES
Height, Unit:	5 INCH	12 INCH	15 INCH

WEED STAGE AT EACH APPLICATION

	A	B	C
	PITTEDMG	PITTEDMG	PITTEDMG
Stage Scale:	1-2 INCH	1-4 INCH	3-8 INCH

APPLICATION EQUIPMENT

	A	B	C
Appl. Equipment:	SPIDER	REDBALL	REDBALL
Operating Pressure:	24 PSI	24 PSI	24 PSI
Nozzle Type:	TJ FF	TJ FF	TJ FF
Nozzle Size:	8001/003	8001/003	8001/003
Nozzles/Row:	3	3	3
Ground Speed, Unit:	4 MPH	4 MPH	4 MPH
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA
Propellant:	CO2	CO2	CO2

Treatment Application Comment

ADDITIONAL ROUNDUP ULTRMAX EARLY POST APPLICATION AT COTLYEDON COTTON STAGE DUE TO EARLY EMERGENCE OF MORNINGGLORY.

Tank-mixing with Aim Herbicide for Post-directed Morningglory Control

Project Summary:

Despite herbicide and seed technologies currently available to cotton producers, many continue to struggle with effective, economical means of controlling late-season flushes of morningglory. The recent registration of Aim herbicide has provided cotton growers with an effective, economical option for control of morningglory. However, in most instances repeat applications are necessary. Therefore, the objective of this study was to evaluate tank-mix combinations including residual herbicides for extended control of morningglory. The standard post-directed application for morningglory (Caparol + MSMA) was used for comparison.

Trial ID:	OSUWC0201	**Location:**	OSUREC-W
Planting Date:	May 9	**Variety:**	DP 458 B/R
Row Spacing:	40 Inches	**Planting Rate:**	12 lbs/A
Plot Size:	4 r x 50'	**Harvest Date:**	None
Soil Type:	Clay Loam	**Replications:**	3

Weed								PITTED MORNINGGLORY		
Rating Data Type								CONTROL		
Rating Unit								PERCENT		
Rating Date								7/9/02	7/16/02	8/6/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	App Code			
1	AIM	2	EC	1	OZ/A	PD	A	0 d	0 d	0 d
1	COC		L	1.25	% V/V	PD	A			
2	AIM	2	EC	1	OZ/A	PD	A	91.7 abc	87.3 bc	60 b
2	MSMA	6	EC	43	OZ/A	PD	A			
2	COC		L	1.25	% V/V	PD	A			
3	AIM	2	EC	1	OZ/A	PD	A	92.3 abc	91.3 ab	82.7 a
3	CAPAROL	4	L	1	QT/A	PD	A			
3	COC		L	1.25	% V/V	PD	A			

Tank-mixing with Aim Herbicide for Post-directed Morningglory Control (continued)

Weed								PITTED MORNINGGLORY		
Rating Data Type								CONTROL		
Rating Unit								PERCENT		
Rating Date								7/9/02	7/16/02	8/6/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	App Code			
4	AIM	2	EC	1	OZ/A	PD	A	94 ab	87 bc	80 a
4	DIREX	4	L	1	QT/A	PD	A			
4	COC		L	1.25	% V/V	PD	A			
5	AIM	2	EC	1	OZ/A	PD	A	92.3 abc	88.3 bc	40 c
5	ROUNDUP ULTRAMAX	5	L	26	OZ/A	PD	A			
5	COC		L	1.25	% V/V	PD	A			
6	ROUNDUP ULTRAMAX	5	L	26	OZ/A	PD	A	86 c	84.3 c	56.7 b
7	MON 007	5.5	SL	20	OZ/A	PD	A	87.7 bc	86.7 c	65 b
8	CAPAROL	4	L	1	QT/A	PD	A	95.3 a	94 a	90 a
8	MSMA	6	EC	43	OZ/A	PD	A			
8	COC		L	1.25	% V/V	PD	A			
9	STAPLE	85	WP	1.2	OZ/A	PD	A	90.3 abc	94.3 a	91 a
10	UNTREATED							0 d	0 d	0 d
LSD (P=.05)								7.42	4.49	11.47
Standard Deviation								4.33	2.62	6.69
CV								5.93	3.67	11.83

Means followed by same letter do not significantly differ (P=.05, LSD)

Tank-mixing with Aim Herbicide (continued)

Rating Data Type								SEEDCOT	TURNOUT	YIELD
Rating Unit								LBS/ACRE	PERCENT	LBS/ACRE
Rating Date								11/20/02	12/16/02	12/16/02
No.	Name	Conc	Type	Rate	Unit	Stg	Code			
1	AIM	2	EC	1	OZ/A	PD	A	3415 abc	35.93 b	1228 abc
1	COC		L	1.25	% V/V	PD	A			
2	AIM	2	EC	1	OZ/A	PD	A	3441 abc	36.43 ab	1255 abc
2	MSMA	6	EC	43	OZ/A	PD	A			
2	COC		L	1.25	% V/V	PD	A			
3	AIM	2	EC	1	OZ/A	PD	A	3631 ab	36.03 ab	1308 abc
3	CAPAROL	4	L	1	QT/A	PD	A			
3	COC		L	1.25	% V/V	PD	A			
4	AIM	2	EC	1	OZ/A	PD	A	3549 abc	36.53 ab	1296 abc
4	DIREX	4	L	1	QT/A	PD	A			
4	COC		L	1.25	% V/V	PD	A			
5	AIM	2	EC	1	OZ/A	PD	A	3172 c	36.87 ab	1170 c
5	ROUNDUP ULTRAMAX	5	L	26	OZ/A	PD	A			
5	COC		L	1.25	% V/V	PD	A			
6	ROUNDUP ULTRAMAX	5	L	26	OZ/A	PD	A	3285 bc	37.6 ab	1234 abc
7	MON 007	5.5	SL	20	OZ/A	PD	A	3488 abc	37.3 ab	1301 abc
8	CAPAROL	4	L	1	QT/A	PD	A	3705 a	36.47 ab	1350 a
8	MSMA	6	EC	43	OZ/A	PD	A			
8	COC		L	1.25	% V/V	PD	A			
9	STAPLE	85	WP	1.2	OZ/A	PD	A	3532 abc	37.4 ab	1319 ab
10	UNTREATED							3181 c	38 a	1207 bc
LSD (P=.05)								379.3	2.001	140.7
Standard Deviation								221.1	1.166	82

Means followed by same letter do not significantly differ (P=.05, LSD)

Tank-mixing with Aim Herbicide (continued)

Rating Data Type							FIBER DATA			
Rating Unit							MIC	LENGTH UNIFORM		STRENGTH
Rating Date							1/20/03	1/20/03	1/20/03	1/20/03
No. Name	Conc	Type	Rate	Unit	Stg	Code				
1 AIM	2	EC	1	OZ/A	PD	A	4.5 a	1.11 a	83.1 a	30.13 a
1 COC		L	1.25	% V/V	PD	A				
2 AIM	2	EC	1	OZ/A	PD	A	4.5 a	1.12 a	82.5 a	30.77 a
2 MSMA	6	EC	43	OZ/A	PD	A				
2 COC		L	1.25	% V/V	PD	A				
3 AIM	2	EC	1	OZ/A	PD	A	4.3 a	1.11 a	83.63 a	29.43 a
3 CAPAROL	4	L	1	QT/A	PD	A				
3 COC		L	1.25	% V/V	PD	A				
4 AIM	2	EC	1	OZ/A	PD	A	4.6 a	1.12 a	83.07 a	30.33 a
4 DIREX	4	L	1	QT/A	PD	A				
4 COC		L	1.25	% V/V	PD	A				
5 AIM	2	EC	1	OZ/A	PD	A	4.4 a	1.1 a	82.67 a	30.43 a
5 ROUNDUP ULTRAMAX	5	L	26	OZ/A	PD	A				
5 COC		L	1.25	% V/V	PD	A				
6 ROUNDUP ULTRAMAX	5	L	26	OZ/A	PD	A	4.6 a	1.13 a	83.57 a	30.2 a
7 MON 007	5.5	SL	20	OZ/A	PD	A	4.5 a	1.13 a	83.33 a	31.2 a
8 CAPAROL	4	L	1	QT/A	PD	A	4.4 a	1.11 a	82.93 a	30.87 a
8 MSMA	6	EC	43	OZ/A	PD	A				
8 COC		L	1.25	% V/V	PD	A				
9 STAPLE	85	WP	1.2	OZ/A	PD	A	4.3 a	1.13 a	83.07 a	29.77 a
10 UNTREATED							4.4 a	1.13 a	82.93 a	30.83 a
LSD (P=.05)							0.406	0.0436	1.86	1.943
CV							5.32	2.27	1.31	3.73

Means followed by same letter do not significantly differ (P=.05, LSD)

Tank-mixing with Aim Herbicide for Post-directed Morningglory Control (continued)

APPLICATION DESCRIPTION

	A
Application Date:	7/2/02
Time of Day:	2:00 PM
Application Method:	SPRAY
Application Timing:	MIDPOST
Applic. Placement:	DIRECTED
Air Temp., Unit:	89 F
% Relative Humidity:	41
Wind Velocity, Unit:	8 MPH
Soil Temp., Unit:	84 F
Soil Moisture:	GOOD
% Cloud Cover:	50

APPLICATION EQUIPMENT

	A
Appl. Equipment:	REDBALL
Operating Pressure:	24 PSI
Nozzle Type:	TJFLATFAN
Nozzle Size:	8001/003
Nozzles/Row:	3
Ground Speed, Unit:	4 MPH
Carrier:	WATER
Spray Volume, Unit:	15 GPA
Propellant:	CO2

CROP STAGE AT EACH APPLICATION

	A
Stage Scale:	10-12NODE
Height, Unit:	12 INCH

WEED STAGE AT EACH APPLICATION

	A
Stage Scale:	PITTEDMG 1-4 INCH

Tank-mixing with Direx for Post-directed Morningglory Control

Project Summary:

Direx herbicide is an effective, economical tank-mix option for cotton producers attempting to control morningglory later in-season. This product is generally used in combination with other herbicides when targeting morningglory. Several of the treatments included in this trial are not labeled, registered, or legal applications and are not recommended for use. These treatments were included merely for observation and reference. Because crop injury is always a concern when making post-directed applications treatments 2, 4 and 6 were included. These three treatments included products with a high amount of contact activity and were applied primarily as tracers (to see exactly where spray particles travel). Of these three only treatment 2 resulted in significant (severe) crop injury. Currently, only treatments 3 and 5 are registered for use in cotton. The product ET-751 is currently being registered for use in cotton as a defoliant and has the potential to subsequently be registered for post-directed applications in cotton. Therefore, it was included in order to evaluate its effectiveness on morningglory. Results are presented in the tables below.

Trial ID:	OSUWC0202	**Location:**	OSUREC-W
Planting Date:	May 9	**Variety:**	DP 458 B/R
Row Spacing:	40 Inches	**Planting Rate:**	12 lbs/A
Plot Size:	4 r x 50'	**Harvest Date:**	None
Soil Type:	Clay Loam	**Replications:**	3

Weed Code							PITTED MORNINGGLORY		
Rating Data Type							CONTROL		
Rating Unit							PERCENT		
Rating Date							7/9/02	7/16/02	8/6/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	App Code			
1	UNTREATED CHECK							0 c	0 d	0 c
2	CYCLONEMAX	3	L	1	QT/A	PD	A	97 a	94 ab	0 c
2	DIREX	4	L	1	QT/A	PD	A			
2	INDUCE		L	0.25	% V/V	PD	A			
2	STRIKEZONE		SG	12	LB/100 GAL	PD	A			

Tank-mixing with Direx for Post-directed Morningglory Control (continued)

Weed Code								PITTED MORNINGGLORY		
Rating Data Type								CONTROL		
Rating Unit								PERCENT		
Rating Date								7/9/02	7/16/02	8/6/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	App Code			
3	AIM	40	DF	0.3	OZ/A	PD	A	94.3 ab	96 ab	85 b
3	DIREX	4	L	1	QT/A	PD	A			
3	COC		L	1.25	% V/V	PD	A			
4	BUCTRIL	4	L	1	PT/A	PD	A	95.7 ab	94.7 ab	86.7 ab
4	DIREX	4	L	1	QT/A	PD	A			
4	COC		L	1.25	% V/V	PD	A			
5	GOAL	1.6	E	1.7	PT/A	PD	A	97.7 a	97.7 a	94.3 a
5	DIREX	4	L	1	QT/A	PD	A			
5	COC		L	1.25	% V/V	PD	A			
6	SODIUM CHLORATE		L	3	QT/A	PD	A	92.3 b	82.7 c	89.3 ab
6	DIREX	4	L	1	QT/A	PD	A			
6	COC		L	1.25	% V/V	PD	A			
6	STRIKEZONE		SG	12	LB/100 GAL	PD	A			
7	ET-751	0.2	EC	1.6	G A/A	PD	A	96 a	92.7 b	91.7 ab
7	DIREX	4	L	1	QT/A	PD	A			
7	COC		L	1.25	% V/V	PD	A			
7	STRIKEZONE		SG	12	LB/100 GAL	PD	A			
LSD (P=.05)								3.55	4.82	9.2
Standard Deviation								2	2.71	5.17
CV								2.44	3.4	8.1

Means followed by same letter do not significantly differ (P=.05, LSD)

Tank-mixing with Direx for Post-directed Morningglory Control
(continued)

APPLICATION DESCRIPTION

	A
Application Date:	7/2/02
Time of Day:	2:00 PM
Application Method:	SPRAY
Application Timing:	MIDPOST
Applic. Placement:	DIRECTED
Air Temp., Unit:	89 F
% Relative Humidity:	41
Wind Velocity, Unit:	8 MPH
Soil Temp., Unit:	84 F
Soil Moisture:	GOOD
% Cloud Cover:	50

APPLICATION EQUIPMENT

	A
Appl. Equipment:	REDBALL
Operating Pressure:	24 PSI
Nozzle Type:	TJFLATFAN
Nozzle Size:	8001/003
Nozzles/Row:	3
Ground Speed, Unit:	4 MPH
Carrier:	WATER
Spray Volume, Unit:	15 GPA
Propellant:	CO2

CROP STAGE AT EACH APPLICATION

	A
Stage Scale:	10-12NODE
Height, Unit:	12 INCH

WEED STAGE AT EACH APPLICATION

	A
	PITTEDMG
Stage Scale:	1-4 INCH

Finish Harvest Aid Formulation Study

Project Summary:

Finish is currently used primarily as a boll opener on higher yielding cotton crops within Oklahoma. It's effectiveness has been proven over several years of use throughout many parts of the cotton belt. Bayer CropSciences is expected to release a new formulation of Finish in the near future. The purpose of this trial was to evaluate the performance of this new formulation (TADS 14806) in comparison to the currently available formulation. Applications were purposely made earlier than normal (at approximately 40% open bolls instead of ≥ 55%) in an attempt to maximize boll-opening differences between treatments.

Trial ID:	BAYHA0201	**Location:**	OSUREC-W
Planting Date:	May 9	**Variety:**	DP 458 B/R
Row Spacing:	40 Inches	**Planting Rate:**	12 lbs/A
Plot Size:	4 r x 50'	**Harvest Date:**	None
Soil Type:	Clay Loam	**Replications:**	3

Rating Data Type							OPEN	DEFOL.	DESICC.
Rating Unit							PERCENT	PERCENT	PERCENT
Rating Date							10/2/02	10/2/02	10/2/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code			
1	UNTREATED							62.3 d	0 e	0 a
2	FINISH 6 PRO	6	L	1	PT/A	40% OPEN	A	72.5 bc	31.3 d	0 a
3	FINISH 6 PRO	6	L	1	PT/A	40% OPEN	A	72.5 bc	78.8 a	0 a
3	GINSTAR	1.5	EC	3	OZ/A	40% OPEN	A			
4	FINISH 6 PRO	6	L	1.33	PT/A	40% OPEN	A	72.5 bc	65 bc	0 a
5	FINISH 6 PRO	6	L	1.33	PT/A	40% OPEN	A	69.5 cd	74.3 ab	0 a
5	GINSTAR	1.5	EC	5	OZ/A	40% OPEN	A			
6	FINISH 6 PRO	6	L	1	QT/A	40% OPEN	A	81.5 a	72.3 ab	0 a

Finish Harvest Aid Formulation Study (continued)

Rating Data Type								OPEN	DEFOL.	DESICC.
Rating Unit								PERCENT	PERCENT	PERCENT
Rating Date								10/2/02	10/2/02	10/2/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code			
7	TADS 14806		L	1	PT/A	40% OPEN	A	71 cd	65 bc	0 a
8	TADS 14806		L	1	PT/A	40% OPEN	A	71 cd	76.3 ab	0 a
8	GINSTAR	1.5	EC	5	OZ/A	40% OPEN	A			
9	TADS 14806	6	L	1.33	PT/A	40% OPEN	A	71 cd	75 ab	0 a
9	GINSTAR	1.5	EC	5	OZ/A	40% OPEN	A			
10	TADS 14806		L	1	QT/A	40% OPEN	A	80 ab	75.3 ab	0 a
11	GINSTAR	1.5	EC	5	OZ/A	40% OPEN	A	49.5 e	57 c	0 a
11	DYNAMIC		L	0.5	% V/V	40% OPEN	A			
12	PREP	6	L	1	PT/A	40% OPEN	A	64 cd	76.3 ab	0 a
12	DEF	6	L	1	PT/A	40% OPEN	A			
LSD (P=.05)								8.99	11.91	0
Standard Deviation								6.23	8.25	0
CV								8.93	13.26	0

Means followed by same letter do not significantly differ (P=.05, LSD)

Finish Harvest Aid Formulation Study (continued)

Rating Data Type								OPEN	DEFOL.	DESICC.
Rating Unit								PERCENT	PERCENT	PERCENT
Rating Date								10/10/02	10/10/02	10/10/02
No.	Name	Conc	Type	Rate	Unit	Stg	Code			
1	UNTREATED							70 d	0 g	0 a
2	FINISH 6 PRO	6	L	1	PT/A	40% OPEN	A	82 c	55 f	0 a
3	FINISH 6 PRO	6	L	1	PT/A	40% OPEN	A	84 bc	90 a	0 a
3	GINSTAR	1.5	EC	3	OZ/A	40% OPEN	A			
4	FINISH 6 PRO	6	L	1.33	PT/A	40% OPEN	A	83.8 bc	77.5 de	0 a
5	FINISH 6 PRO	6	L	1.33	PT/A	40% OPEN	A	81.3 c	83.3 a-d	0 a
5	GINSTAR	1.5	EC	5	OZ/A	40% OPEN	A			
6	FINISH 6 PRO	6	L	1	QT/A	40% OPEN	A	91.5 a	81.3 bcd	0 a
7	TADS 14806		L	1	PT/A	40% OPEN	A	81.3 c	78.3 cde	0 a
8	TADS 14806		L	1	PT/A	40% OPEN	A	80.5 c	85 a-d	0 a
8	GINSTAR	1.5	EC	5	OZ/A	40% OPEN	A			
9	TADS 14806	6	L	1.33	PT/A	40% OPEN	A	81.3 c	83.8 a-d	0 a
9	GINSTAR	1.5	EC	5	OZ/A	40% OPEN	A			
10	TADS 14806		L	1	QT/A	40% OPEN	A	89.5 ab	88.8 ab	0 a
11	GINSTAR	1.5	EC	5	OZ/A	40% OPEN	A	66.3 d	70 e	0 a
11	DYNAMIC		L	0.5	% V/V	40% OPEN	A			
12	PREP	6	L	1	PT/A	40% OPEN	A	80 c	86.3 abc	0 a
12	DEF	6	L	1	PT/A	40% OPEN	A			
LSD (P=.05)								7.43	8.47	0
CV								6.35	8.01	0

Means followed by same letter do not significantly differ (P=.05, LSD)

Finish Harvest Aid Formulation Study (continued)

Rating Unit								T.REGROW	B.REGROW
Rating Date								10/17/02	10/17/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code		
1	UNTREATED							12.5 ab	71.3 a
2	FINISH 6 PRO	6	L	1	PT/A	40% OPEN	A	12.5 ab	75 a
3	FINISH 6 PRO	6	L	1	PT/A	40% OPEN	A	17.5 a	71.3 a
3	GINSTAR	1.5	EC	3	OZ/A	40% OPEN	A		
4	FINISH 6 PRO	6	L	1.33	PT/A	40% OPEN	A	13.8 a	76.3 a
5	FINISH 6 PRO	6	L	1.33	PT/A	40% OPEN	A	6.3 bc	58.8 b
5	GINSTAR	1.5	EC	5	OZ/A	40% OPEN	A		
6	FINISH 6 PRO	6	L	1	QT/A	40% OPEN	A	11.3 ab	77.5 a
7	TADS 14806		L	1	PT/A	40% OPEN	A	15 a	76.3 a
8	TADS 14806		L	1	PT/A	40% OPEN	A	3.8 c	58.8 b
8	GINSTAR	1.5	EC	5	OZ/A	40% OPEN	A		
9	TADS 14806	6	L	1.33	PT/A	40% OPEN	A	0 c	57.5 b
9	GINSTAR	1.5	EC	5	OZ/A	40% OPEN	A		
10	TADS 14806		L	1	QT/A	40% OPEN	A	12.5 ab	77.5 a
11	GINSTAR	1.5	EC	5	OZ/A	40% OPEN	A	3.8 c	58.8 b
11	DYNAMIC		L	0.5	% V/V	40% OPEN	A		
12	PREP	6	L	1	PT/A	40% OPEN	A	11.3 ab	77.5 a
12	DEF	6	L	1	PT/A	40% OPEN	A		
LSD (P=.05)								7.26	7.75
CV								50.25	7.7

Means followed by same letter do not significantly differ (P=.05, LSD)

Finish Harvest Aid Formulation Study (continued)

APPLICATION DESCRIPTION		APPLICATION EQUIPMENT	
	A		A
Application Date:	9/26/02	**Appl. Equipment:**	SPIDER
Time of Day:	3:30 PM	**Operating Pressure:**	58 PSI
Application Method:	SPRAY	**Nozzle Type:**	TJFLATFAN
Application Timing:	40%OPEN	**Nozzle Size:**	8002
Applic. Placement:	BROADCAST	**Nozzle Spacing, Unit:**	20 IN
Air Temp., Unit:	89 F	**Nozzles/Row:**	2
% Relative Humidity:	26	**Ground Speed, Unit:**	4 MPH
Wind Velocity, Unit:	2 MPH	**Carrier:**	WATER
Soil Temp., Unit:	89 F	**Spray Volume, Unit:**	15 GPA
Soil Moisture:	FAIR	**Propellant:**	COMP. AIR
% Cloud Cover:	0		

Finish & Ginstar Harvest Aid Demonstration

Project Summary:

The objective of this demonstration was to display the differences between varying rates of Finish, Def and Ginstar harvest aid materials in order to provide area producers with visual and quantitative information to serve as a basis for their personal harvest aid decisions. Results are presented in the tables below.

Trial ID:	BAYHA0202	**Location:**	Worrell Farms
Planting Date:	May 9	**Variety:**	DP 655 B/R
Row Spacing:	40 Inches	**Planting Rate:**	13 lbs/A
Plot Size:	18 r x 600'	**Harvest Date:**	None
Soil Type:	Clay Loam	**Replications:**	2

Rating Data Type								OPEN	DEFOL.	DESICC.
Rating Unit								PERCENT	PERCENT	PERCENT
Rating Date								9/27/02	9/27/02	9/27/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code			
1	FINISH	6	L	1	PT/A	50-60%OP	A	75 ab	55 b	0 a
1	DEF	6	L	1	PT/A	50-60%OP	A			
1	INDUCE		L	0.25	% V/V	50-60%OP	A			
2	FINISH	6	L	1.5	PT/A	50-60%OP	A	77.5 ab	70 a	0 a
2	DEF	6	L	1	PT/A	50-60%OP	A			
2	INDUCE		L	0.25	% V/V	50-60%OP	A			
3	FINISH	6	L	1.5	PT/A	50-60%OP	A	70 b	52.5 b	0 a
3	DEF	6	L	0.5	PT/A	50-60%OP	A			
3	INDUCE		L	0.25	% V/V	50-60%OP	A			
4	FINISH	6	L	1	QT/A	50-60%OP	A	80 a	40 c	0 a
4	INDUCE		L	0.25	% V/V	50-60%OP	A			

Finish & Ginstar Harvest Aid Demonstration (continued)

Rating Data Type								OPEN	DEFOL.	DESICC.
Rating Unit								PERCENT	PERCENT	PERCENT
Rating Date								9/27/02	9/27/02	9/27/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code			
5	FINISH	6	L	1	PT/A	50-60%OP	A	70 b	35 c	0 a
5	GINSTAR	1.5	EC	6	OZ/A	50-60%OP	A			
5	INDUCE		L	0.25	% V/V	50-60%OP	A			
5	ACCUQUEST		L	2	QT/100 GAL	50-60%OP	A			
6	FINISH	6	L	1	PT/A	50-60%OP	A	72.5 ab	40 c	0 a
6	GINSTAR	1.5	EC	8	OZ/A	50-60%OP	A			
6	INDUCE		L	0.25	% V/V	50-60%OP	A			
6	ACCUQUEST		L	2	QT/100 GAL	50-60%OP	A			
7	FINISH	6	L	1	PT/A	50-60%OP	A	72.5 ab	32.5 c	0 a
7	GINSTAR	1.5	EC	6	OZ/A	50-60%OP	A			
7	DYNAMIC		L	0.5	% V/V	50-60%OP	A			
7	ACCUQUEST		L	2	QT/100 GAL	50-60%OP	A			
LSD (P=.05)								9.63	8.65	0
Standard Deviation								3.93	3.54	0
CV								5.32	7.61	0

Means followed by same letter do not significantly differ (P=.05, LSD)

Finish & Ginstar Harvest Aid Demonstration (continued)

Rating Data Type								OPEN	DEFOL.	DESICC.
Rating Unit								PERCENT	PERCENT	PERCENT
Rating Date								9/30/02	9/30/02	9/30/02
No.	Name	Conc	Type	Rate	Unit	Stg	Code			
1	FINISH	6	L	1	PT/A	50-60%OP	A	99.5 ab	85 a	5 a
1	DEF	6	L	1	PT/A	50-60%OP	A			
1	INDUCE		L	0.25	% V/V	50-60%OP	A			
2	FINISH	6	L	1.5	PT/A	50-60%OP	A	99 ab	87.5 a	5 a
2	DEF	6	L	1	PT/A	50-60%OP	A			
2	INDUCE		L	0.25	% V/V	50-60%OP	A			
3	FINISH	6	L	1.5	PT/A	50-60%OP	A	99 ab	85 a	7.5 a
3	DEF	6	L	0.5	PT/A	50-60%OP	A			
3	INDUCE		L	0.25	% V/V	50-60%OP	A			
4	FINISH	6	L	1	QT/A	50-60%OP	A	95.5 c	82.5 ab	5 a
4	INDUCE		L	0.25	% V/V	50-60%OP	A			
5	FINISH	6	L	1	PT/A	50-60%OP	A	85.5 d	77.5 b	7.5 a
5	GINSTAR	1.5	EC	6	OZ/A	50-60%OP	A			
5	INDUCE		L	0.25	% V/V	50-60%OP	A			
5	ACCUQUEST		L	2	QT/100 GAL	50-60%OP	A			
6	FINISH	6	L	1	PT/A	50-60%OP	A	100 a	87.5 a	7.5 a
6	GINSTAR	1.5	EC	8	OZ/A	50-60%OP	A			
6	INDUCE		L	0.25	% V/V	50-60%OP	A			
6	ACCUQUEST		L	2	QT/100 GAL	50-60%OP	A			
7	FINISH	6	L	1	PT/A	50-60%OP	A	98 b	82.5 ab	7.5 a
7	GINSTAR	1.5	EC	6	OZ/A	50-60%OP	A			
7	DYNAMIC		L	0.5	% V/V	50-60%OP	A			
7	ACCUQUEST		L	2	QT/100 GAL	50-60%OP	A			
LSD (P=.05)								1.85	6.81	4.62
Standard Deviation								0.76	2.78	1.89
CV								0.78	3.31	29.4

Means followed by same letter do not significantly differ (P=.05, LSD)

Finish & Ginstar Harvest Aid Demonstration (continued)

APPLICATION DESCRIPTION

	A
Application Date:	9/23/02
Time of Day:	10:00 AM
Application Method:	SPRAY
Application Timing:	60-70%OB
Applic. Placement:	BROADCAST
Air Temp., Unit:	71 F
% Relative Humidity:	50
Wind Velocity, Unit:	6 MPH
Soil Temp., Unit:	71 F
Soil Moisture:	GOOD
% Cloud Cover:	0

APPLICATION EQUIPMENT

	A
Appl. Equipment:	JD 6500
Operating Pressure:	70 PSI
Nozzle Type:	HARDI FF
Nozzle Size:	4110-14
Nozzle Spacing, Unit:	20 IN
Nozzles/Row:	2
Ground Speed, Unit:	8.5 MPH
Carrier:	WATER
Spray Volume, Unit:	12 GPA

Finish/Def Small Plot Demonstration-1

Project Summary:

The objective of this demonstration was to provide area cotton producers with information aiding their personal harvest aid application decisions. Varying rates of Finish were applied with and without Def or Ginstar in comparison to the industry standard (Prep + Def). Little difference was observed in boll opening due to the advanced stage of the cotton at application time. The addition of Def increased defoliation compared to Finish applied alone.

Trial ID:	BAYHA0203	**Location:**	Williams Farms
Planting Date:	May 10	**Variety:**	DP 655 B/R
Row Spacing:	40 Inches	**Planting Rate:**	11 lbs/A
Plot Size:	4 r x 200'	**Harvest Date:**	None
Soil Type:	Clay Loam	**Replications:**	1

Rating Data Type							DEFOL.	DESICC.	DEFOL.	DESICC.
Rating Unit							PERCENT	PERCENT	PERCENT	PERCENT
Rating Date							10/1/02	10/1/02	10/8/02	10/8/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code				
1	FINISH	6	L	1	PT/A	70%OPEN	A	90	0	100	0
1	DEF	6	EC	1	PT/A	70%OPEN	A				
1	INDUCE		L	0.25	% V/V	70%OPEN	A				
2	FINISH	6	L	1.5	PT/A	70%OPEN	A	75	0	85	0
2	INDUCE		L	0.25	% V/V	70%OPEN	A				
3	FINISH	6	L	1.5	PT/A	70%OPEN	A	80	0	100	0
3	DEF	6	EC	1	PT/A	70%OPEN	A				
3	INDUCE		L	0.25	% V/V	70%OPEN	A				
4	FINISH	6	L	1	QT/A	70%OPEN	A	80	0	90	0
4	INDUCE		L	0.25	% V/V	70%OPEN	A				
5	UNTREATED							0	0	0	0

Finish/Def Small Plot Demonstration-1 (continued)

Rating Data Type								DEFOL.	DESICC.	DEFOL.	DESICC.
Rating Unit								PERCENT	PERCENT	PERCENT	PERCENT
Rating Date								10/1/02	10/1/02	10/8/02	10/8/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code				
6	FINISH	6	L	1	QT/A	70%OPEN	A	80	0	95	0
6	GINSTAR	1.5	EC	6	OZ/A	70%OPEN	A				
6	INDUCE		L	0.25	% V/V	70%OPEN	A				
7	FINISH	6	L	1.3	PT/A	70%OPEN	A	85	0	95	0
7	GINSTAR	1.5	EC	7	OZ/A	70%OPEN	A				
7	INDUCE		L	0.25	% V/V	70%OPEN	A				
8	PREP	6	EC	1.3	PT/A	70%OPEN	A	90	0	95	0
8	DEF	6	EC	1	PT/A	70%OPEN	A				
8	INDUCE		L	0.25	% V/V	70%OPEN	A				
9	FINISH	6	L	42	OZ/A	70%OPEN	A	70	0	85	0
9	INDUCE		L	0.25	% V/V	70%OPEN	A				

APPLICATION DESCRIPTION

	A
Application Date:	9/27/02
Time of Day:	2:00 PM
Application Method:	SPRAY
Application Timing:	60-70%OB
Applic. Placement:	BROADCAST
Air Temp., Unit:	79 F
% Relative Humidity:	40
Wind Velocity, Unit:	7 MPH
Soil Temp., Unit:	75 F
Soil Moisture:	FAIR
% Cloud Cover:	10

APPLICATION EQUIPMENT

	A
Appl. Equipment:	SPIDER
Operating Pressure:	58 PSI
Nozzle Type:	TJFLATFAN
Nozzle Size:	8002
Nozzle Spacing, Unit:	20 IN
Nozzles/Row:	2
Ground Speed, Unit:	4 MPH
Carrier:	WATER
Spray Volume, Unit:	15 GPA
Propellant:	COMP.AIR

Finish/Def Small Plot Demonstration-2

Project Summary:

The objective of this demonstration was to provide area cotton producers with information aiding their personal harvest aid application decisions. Varying rates of Finish were applied with and without Def or Ginstar in comparison to the industry standard (Prep + Def). Little difference was observed in boll opening due to the advanced stage of the cotton at application time. Similar to the first demonstration, the addition of Def increased defoliation compared to Finish applied alone.

Trial ID:	BAYHA0204	**Location:**	Jones Farms
Planting Date:	May 15	**Variety:**	DP 655 B/R
Row Spacing:	40 Inches	**Planting Rate:**	14 lbs/A
Plot Size:	4 r x 200'	**Harvest Date:**	None
Soil Type:	Clay Loam	**Replications:**	1

Rating Data Type							DEFOL.	DESICC.	DEFOL.	DESICC.
Rating Unit							PERCENT	PERCENT	PERCENT	PERCENT
Rating Date							10/1/02	10/1/02	10/8/02	10/8/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code				
1	FINISH	6	L	1	PT/A	70%OPEN	A	90	5	100	0
1	DEF	6	EC	1	PT/A	70%OPEN	A				
1	INDUCE		L	0.25	% V/V	70%OPEN	A				
2	FINISH	6	L	1.5	PT/A	70%OPEN	A	80	5	95	0
2	INDUCE		L	0.25	% V/V	70%OPEN	A				
3	FINISH	6	L	1.5	PT/A	70%OPEN	A	87	0	100	0
3	DEF	6	EC	1	PT/A	70%OPEN	A				
3	INDUCE		L	0.25	% V/V	70%OPEN	A				
4	FINISH	6	L	1	QT/A	70%OPEN	A	75	5	90	0
4	INDUCE		L	0.25	% V/V	70%OPEN	A				
5	UNTREATED							0	0	0	0

Finish/Def Small Plot Demonstration-2 (continued)

Rating Data Type							DEFOL.	DESICC.	DEFOL.	DESICC.
Rating Unit							PERCENT	PERCENT	PERCENT	PERCENT
Rating Date							10/1/02	10/1/02	10/8/02	10/8/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code			
6	FINISH	6	L	1	QT/A	70%OPEN	A	70	5	90	0
6	GINSTAR	1.5	EC	6	OZ/A	70%OPEN	A				
6	INDUCE		L	0.25	% V/V	70%OPEN	A				
7	FINISH	6	L	1.3	PT/A	70%OPEN	A	85	5	90	0
7	GINSTAR	1.5	EC	7	OZ/A	70%OPEN	A				
7	INDUCE		L	0.25	% V/V	70%OPEN	A				
8	PREP	6	EC	1.3	PT/A	70%OPEN	A	85	5	98	0
8	DEF	6	EC	1	PT/A	70%OPEN	A				
8	INDUCE		L	0.25	% V/V	70%OPEN	A				
9	FINISH	6	L	42	OZ/A	70%OPEN	A	90	0	90	0
9	INDUCE		L	0.25	% V/V	70%OPEN	A				

APPLICATION DESCRIPTION

	A
Application Date:	9/27/02
Time of Day:	2:00 PM
Application Method:	SPRAY
Application Timing:	60-70%OB
Applic. Placement:	BROADCAST
Air Temp., Unit:	79 F
% Relative Humidity:	40
Wind Velocity, Unit:	7 MPH
Soil Temp., Unit:	75 F
Soil Moisture:	FAIR
% Cloud Cover:	10

APPLICATION EQUIPMENT

	A
Appl. Equipment:	SPIDER
Operating Pressure:	58 PSI
Nozzle Type:	TJFLATFAN
Nozzle Size:	8002
Nozzle Spacing, Unit:	20 IN
Nozzles/Row:	2
Ground Speed, Unit:	4 MPH
Carrier:	WATER
Spray Volume, Unit:	15 GPA
Propellant:	COMP.AIR

Beltwide Uniform Harvest Aid Study

Project Summary:

The Beltwide Uniform Harvest Aid Project is a cooperative effort from academic researchers to evaluate a uniform set of harvest aid treatments in order to form future recommendations and marketing decisions. Commercial manufacturers of harvest aids enter products into this trial for evaluation across the cotton belt. These entries are compared to regional standards for boll opening, defoliation, desiccation, regrowth and overall performance. Treatments 1-5 are considered the standards while the remaining treatments are entries.

Trial ID:	BUHHA0201	**Location:**	OSUREC-D
Planting Date:	May 9	**Variety:**	PM 2326 B/R
Row Spacing:	40 Inches	**Planting Rate:**	12 lbs/A
Plot Size:	4 r x 50'	**Harvest Date:**	None
Soil Type:	Clay Loam	**Replications:**	4

Rating Data Type								OPEN	OPEN	DEFOL	DESICC
Rating Unit								PERCENT	PERCENT	PERCENT	PERCENT
Rating Date								9/18/02	9/25/02	9/18/02	9/18/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code				
1	UNTREATED							56.5 f	95 a-d	0 f	0 d
1	CYCLONE MAX	3	EC	21	OZ/A	7DAIT	B				
1	INDUCE		L	0.25	% V/V	7DAIT	B				
2	TRIBUFOS	6	EC	0.56	LB A/A	55%OPEN	A	75 ab	99 ab	68 ab	18.8 c
2	ETHEPHON	6	L	1	LB A/A	55%OPEN	A				
2	THIDIAZURON	50	WP	0.05	LB A/A	55%OPEN	A				
2	CYCLONE MAX	3	EC	21	OZ/A	7DAIT	B				
2	INDUCE		L	0.25	% V/V	7DAIT	B				
3	DIMETHIPIN	5	L	0.31	LB A/A	55%OPEN	A	71.5 abc	98 abc	84 a	3.8 cd
3	TRIBUFOS	6	EC	0.56	LB A/A	55%OPEN	A				
3	ETHEPHON	6	L	1	LB A/A	55%OPEN	A				
3	AGRIDEX		L	1	PT/A	55%OPEN	A				
3	CYCLONE MAX	3	EC	21	OZ/A	7DAIT	B				
3	INDUCE		L	0.25	% V/V	7DAIT	B				

Beltwide Uniform Harvest Aid Study (continued)

Rating Data Type								OPEN	OPNBO	DEFOL	DESICC
Rating Unit								PERCENT	PERCENT	PERCENT	PERCENT
Rating Date								9/18/02	9/25/02	9/18/02	9/18/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code				
4	THIDIAZURON	50	WP	0.05	LB A/A	55%OPEN	A	71.5 abc	99 ab	75 a	5 cd
4	ETHEPHON	6	L	1	LB A/A	55%OPEN	A				
4	CYCLONE MAX	3	EC	21	OZ/A	7DAIT	B				
4	INDUCE		L	0.25	% V/V	7DAIT	B				
5	TRIBUFOS	6	EC	0.56	LB A/A	55%OPEN	A	70 abc	96 a-d	69 ab	3.8 cd
5	ETHEPHON	6	L	1	LB A/A	55%OPEN	A				
5	CYCLONE MAX	3	EC	21	OZ/A	7DAIT	B				
5	INDUCE		L	0.25	% V/V	7DAIT	B				
6	LEAFLESS		L	12	OZ/A	55%OPEN	A	72.5 abc	99 ab	81 a	5 cd
6	PREP	6	L	1.33	PT/A	55%OPEN	A				
6	AGRIDEX		L	16	OZ/A	55%OPEN	A				
6	CYCLONE MAX	3	EC	21	OZ/A	7DAIT	B				
6	INDUCE		L	0.25	% V/V	7DAIT	B				
7	DEF 6	6	EC	16	OZ/A	55%OPEN	A	58.5 ef	86 e	46 cd	35 b
7	DROPP	50	WP	0.2	LB/A	55%OPEN	A				
7	CYCLONE MAX	3	EC	21	OZ/A	7DAIT	B				
7	INDUCE		L	0.25	% V/V	7DAIT	B				
8	ET-751	0.2	EC	1.6	G A/A	55%OPEN	A	77.5 a	100 a	79 a	5 cd
8	ETHEPHON	6	L	454	G A/A	55%OPEN	A				
8	AGRIDEX		L	0.5	% V/V	55%OPEN	A				
8	CYCLONE MAX	3	EC	21	OZ/A	7DAIT	B				
8	INDUCE		L	0.25	% V/V	7DAIT	B				
9	ET-751	0.2	EC	1	G A/A	55%OPEN	A	74 ab	91 de	75 a	1.3 d
9	ETHEPHON	6	L	454	G A/A	55%OPEN	A				
9	AGRIDEX		L	0.5	% V/V	55%OPEN	A				
9	ET-751	0.2	EC	1	G A/A	7DAIT	B				
9	AGRIDEX		L	0.5	% V/V	7DAIT	B				

Beltwide Uniform Harvest Aid Study (continued)

Rating Data Type								OPEN	OPNBO	DEFOL	DESICC
Rating Unit								PERCENT	PERCENT	PERCENT	PERCENT
Rating Date								9/18/02	9/25/02	9/18/02	9/18/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code				
10	AIM	2	EC	0.016	LB A/A	55%OPEN	A	64.5 c-f	91 cde	10 ef	78.8 a
10	CYCLONE MAX	3	EC	0.25	LB A/A	55%OPEN	A				
10	AGRIDEX		L	1	% V/V	55%OPEN	A				
10	AIM	2	EC	0.016	LB A/A	7DAIT	B				
10	AGRIDEX		L	1	% V/V	7DAIT	B				
11	RESOURCE	0.86	EC	8	OZ/A	55%OPEN	A	68 bcd	91 cde	80 a	1.3 d
11	FINISH	6	L	1.3	PT/A	55%OPEN	A				
11	AGRIDEX		L	1	PT/A	55%OPEN	A				
11	RESOURCE	0.86	EC	6	OZ/A	7DAIT	B				
11	AGRIDEX		L	1	PT/A	7DAIT	B				
12	FOLEX	6	L	18	OZ A/A	55%OPEN	A	56.5 f	93 a-e	44 cd	7.5 cd
12	MATRIX	25	WP	0.125	OZ A/A	55%OPEN	A				
12	80/20 NIS		L	0.25	% V/V	55%OPEN	A				
12	CYCLONE MAX	3	EC	21	OZ/A	7DAIT	B				
12	INDUCE		L	0.25	% V/V	7DAIT	B				
13	FOLEX	6	L	18	OZ A/A	55%OPEN	A	45.5 g	95 a-d	30 de	17.5 c
13	MATRIX	25	WP	0.5	OZ A/A	55%OPEN	A				
13	80/20 NIS		L	0.25	% V/V	55%OPEN	A				
13	CYCLONE MAX	3	EC	21	OZ/A	7DAIT	B				
13	INDUCE		L	0.25	% V/V	7DAIT	B				
14	FOLEX	6	L	18	OZ A/A	55%OPEN	A	65.5 cde	95 a-d	53 bc	5 cd
14	UPBEET	50	WP	0.313	OZ A/A	55%OPEN	A				
14	80/20 NIS		L	0.25	% V/V	55%OPEN	A				
14	CYCLONE MAX	3	EC	21	OZ/A	7DAIT	B				
14	INDUCE		L	0.25	% V/V	7DAIT	B				

Beltwide Uniform Harvest Aid Study (continued)

Rating Data Type							OPEN	OPNBO	DEFOL	DESICC
Rating Unit							PERCENT	PERCENT	PERCENT	PERCENT
Rating Date							9/18/02	9/25/02	9/18/02	9/18/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code				
15	FOLEX	6	L	18	OZ A/A	55%OPEN	A	61.5 def	93 b-e	50 bcd	8.8 cd
15	UPBEET	50	WP	1.25	OZ A/A	55%OPEN	A				
15	80/20 NIS		L	0.25	% V/V	55%OPEN	A				
15	CYCLONE MAX	3	EC	21	OZ/A	7DAIT	B				
15	INDUCE		L	0.25	% V/V	7DAIT	B				
LSD (P=.05)								8.12	6.9	20.85	15.41
Standard Deviation								5.68	4.8	14.59	10.79
CV								8.62	5.06	25.98	82.44
Means followed by same letter do not significantly differ (P=.05, LSD)											

Beltwide Uniform Harvest Aid Study (continued)

Rating Data Type								PERFORM	DEFOL	DESICC
Rating Unit								RATING	PERCENT	PERCENT
Rating Date								9/18/02	9/25/02	9/25/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code			
1	UNTREATED							0 f	8.8 f	90 a
1	CYCLONE MAX	3	EC	21	OZ/A	7DAIT	B			
1	INDUCE		L	0.25	% V/V	7DAIT	B			
2	TRIBUFOS	6	EC	0.56	LB A/A	55%OPEN	A	80 ab	96 a	0 f
2	ETHEPHON	6	L	1	LB A/A	55%OPEN	A			
2	THIDIAZURON	50	WP	0.05	LB A/A	55%OPEN	A			
2	CYCLONE MAX	3	EC	21	OZ/A	7DAIT	B			
2	INDUCE		L	0.25	% V/V	7DAIT	B			
3	DIMETHIPIN	5	L	0.31	LB A/A	55%OPEN	A	90 a	94 abc	2.5 ef
3	TRIBUFOS	6	EC	0.56	LB A/A	55%OPEN	A			
3	ETHEPHON	6	L	1	LB A/A	55%OPEN	A			
3	AGRIDEX		L	1	PT/A	55%OPEN	A			
3	CYCLONE MAX	3	EC	21	OZ/A	7DAIT	B			
3	INDUCE		L	0.25	% V/V	7DAIT	B			
4	THIDIAZURON	50	WP	0.05	LB A/A	55%OPEN	A	86.3 a	93 abc	6.3 c-f
4	ETHEPHON	6	L	1	LB A/A	55%OPEN	A			
4	CYCLONE MAX	3	EC	21	OZ/A	7DAIT	B			
4	INDUCE		L	0.25	% V/V	7DAIT	B			
5	TRIBUFOS	6	EC	0.56	LB A/A	55%OPEN	A	80 ab	91 a-d	8.8 cde
5	ETHEPHON	6	L	1	LB A/A	55%OPEN	A			
5	CYCLONE MAX	3	EC	21	OZ/A	7DAIT	B			
5	INDUCE		L	0.25	% V/V	7DAIT	B			
6	LEAFLESS		L	12	OZ/A	55%OPEN	A	90 a	96 a	0 f
6	PREP	6	L	1.33	PT/A	55%OPEN	A			
6	AGRIDEX		L	16	OZ/A	55%OPEN	A			
6	CYCLONE MAX	3	EC	21	OZ/A	7DAIT	B			
6	INDUCE		L	0.25	% V/V	7DAIT	B			

Beltwide Uniform Harvest Aid Study (continued)

Rating Data Type								PERFORM	DEFOL	DESICC
Rating Unit								RATING	PERCENT	PERCENT
Rating Date								9/18/02	9/25/02	9/25/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code			
7	DEF 6	6	EC	16	OZ/A	55%OPEN	A	56.3 cd	93 abc	3.8 def
7	DROPP	50	WP	0.2	LB/A	55%OPEN	A			
7	CYCLONE MAX	3	EC	21	OZ/A	7DAIT	B			
7	INDUCE		L	0.25	% V/V	7DAIT	B			
8	ET-751	0.2	EC	1.6	G A/A	55%OPEN	A	86.3 a	90 bcd	8.8 cde
8	ETHEPHON	6	L	454	G A/A	55%OPEN	A			
8	AGRIDEX		L	0.5	% V/V	55%OPEN	A			
8	CYCLONE MAX	3	EC	21	OZ/A	7DAIT	B			
8	INDUCE		L	0.25	% V/V	7DAIT	B			
9	ET-751	0.2	EC	1	G A/A	55%OPEN	A	85 a	95 ab	0 f
9	ETHEPHON	6	L	454	G A/A	55%OPEN	A			
9	AGRIDEX		L	0.5	% V/V	55%OPEN	A			
9	ET-751	0.2	EC	1	G A/A	7DAIT	B			
9	AGRIDEX		L	0.5	% V/V	7DAIT	B			
10	AIM	2	EC	0.016	LB A/A	55%OPEN	A	40 e	78 e	23 b
10	CYCLONE MAX	3	EC	0.25	LB A/A	55%OPEN	A			
10	AGRIDEX		L	1	% V/V	55%OPEN	A			
10	AIM	2	EC	0.016	LB A/A	7DAIT	B			
10	AGRIDEX		L	1	% V/V	7DAIT	B			
11	RESOURCE	0.86	EC	8	OZ/A	55%OPEN	A	86.3 a	94 abc	0 f
11	FINISH	6	L	1.3	PT/A	55%OPEN	A			
11	AGRIDEX		L	1	PT/A	55%OPEN	A			
11	RESOURCE	0.86	EC	6	OZ/A	7DAIT	B			
11	AGRIDEX		L	1	PT/A	7DAIT	B			

Beltwide Uniform Harvest Aid Study (continued)

Rating Data Type							PERFORM	DEFOL	DESICC
Rating Unit							RATING	PERCENT	PERCENT
Rating Date							9/18/02	9/25/02	9/25/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code			
12	FOLEX	6	L	18	OZ A/A	55%OPEN	A	60 cd	89 cd	10 cd
12	MATRIX	25	WP	0.125	OZ A/A	55%OPEN	A			
12	80/20 NIS		L	0.25	% V/V	55%OPEN	A			
12	CYCLONE MAX	3	EC	21	OZ/A	7DAIT	B			
12	INDUCE		L	0.25	% V/V	7DAIT	B			
13	FOLEX	6	L	18	OZ A/A	55%OPEN	A	48.8 de	86 d	11 c
13	MATRIX	25	WP	0.5	OZ A/A	55%OPEN	A			
13	80/20 NIS		L	0.25	% V/V	55%OPEN	A			
13	CYCLONE MAX	3	EC	21	OZ/A	7DAIT	B			
13	INDUCE		L	0.25	% V/V	7DAIT	B			
14	FOLEX	6	L	18	OZ A/A	55%OPEN	A	68.8 bc	94 abc	3.8 def
14	UPBEET	50	WP	0.313	OZ A/A	55%OPEN	A			
14	80/20 NIS		L	0.25	% V/V	55%OPEN	A			
14	CYCLONE MAX	3	EC	21	OZ/A	7DAIT	B			
14	INDUCE		L	0.25	% V/V	7DAIT	B			
15	FOLEX	6	L	18	OZ A/A	55%OPEN	A	58.8 cd	95 abc	4.3 c-f
15	UPBEET	50	WP	1.25	OZ A/A	55%OPEN	A			
15	80/20 NIS		L	0.25	% V/V	55%OPEN	A			
15	CYCLONE MAX	3	EC	21	OZ/A	7DAIT	B			
15	INDUCE		L	0.25	% V/V	7DAIT	B			
LSD (P=.05)								15.7	5.9	7.34
Standard Deviation								10.98	4.13	5.14
CV								16.21	4.8	45

Means followed by same letter do not significantly differ (P=.05, LSD)

Beltwide Uniform Harvest Aid Study (continued)

Rating Data Type							PERFORM	%TERM	%BASAL
Rating Unit							RATING	REGROW	REGROW
Rating Date							9/25/02	10/2/02	10/2/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code			
1	UNTREATED							0 d	0 b	85 bcd
1	CYCLONE MAX	3	EC	21	OZ/A	7DAIT	B			
1	INDUCE		L	0.25	% V/V	7DAIT	B			
2	TRIBUFOS	6	EC	0.56	LB A/A	55%OPEN	A	100 a	0 b	94 abc
2	ETHEPHON	6	L	1	LB A/A	55%OPEN	A			
2	THIDIAZURON	50	WP	0.05	LB A/A	55%OPEN	A			
2	CYCLONE MAX	3	EC	21	OZ/A	7DAIT	B			
2	INDUCE		L	0.25	% V/V	7DAIT	B			
3	DIMETHIPIN	5	L	0.31	LB A/A	55%OPEN	A	100 a	8 ab	93 abc
3	TRIBUFOS	6	EC	0.56	LB A/A	55%OPEN	A			
3	ETHEPHON	6	L	1	LB A/A	55%OPEN	A			
3	AGRIDEX		L	1	PT/A	55%OPEN	A			
3	CYCLONE MAX	3	EC	21	OZ/A	7DAIT	B			
3	INDUCE		L	0.25	% V/V	7DAIT	B			
4	THIDIAZURON	50	WP	0.05	LB A/A	55%OPEN	A	100 a	0 b	96 ab
4	ETHEPHON	6	L	1	LB A/A	55%OPEN	A			
4	CYCLONE MAX	3	EC	21	OZ/A	7DAIT	B			
4	INDUCE		L	0.25	% V/V	7DAIT	B			
5	TRIBUFOS	6	EC	0.56	LB A/A	55%OPEN	A	100 a	11 ab	100 a
5	ETHEPHON	6	L	1	LB A/A	55%OPEN	A			
5	CYCLONE MAX	3	EC	21	OZ/A	7DAIT	B			
5	INDUCE		L	0.25	% V/V	7DAIT	B			
6	LEAFLESS		L	12	OZ/A	55%OPEN	A	100 a	0 b	96 ab
6	PREP	6	L	1.33	PT/A	55%OPEN	A			
6	AGRIDEX		L	16	OZ/A	55%OPEN	A			
6	CYCLONE MAX	3	EC	21	OZ/A	7DAIT	B			
6	INDUCE		L	0.25	% V/V	7DAIT	B			

Beltwide Uniform Harvest Aid Study (continued)

Rating Data Type							PERFORM	%TERM	%BASAL
Rating Unit							RATING	REGROW	REGROW
Rating Date							9/25/02	10/2/02	10/2/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code			
7	DEF 6	6	EC	16	OZ/A	55%OPEN	A	100 a	0 b	80 cd
7	DROPP	50	WP	0.2	LB/A	55%OPEN	A			
7	CYCLONE MAX	3	EC	21	OZ/A	7DAIT	B			
7	INDUCE		L	0.25	% V/V	7DAIT	B			
8	ET-751	0.2	EC	1.6	G A/A	55%OPEN	A	98.8 a	8 ab	100 a
8	ETHEPHON	6	L	454	G A/A	55%OPEN	A			
8	AGRIDEX		L	0.5	% V/V	55%OPEN	A			
8	CYCLONE MAX	3	EC	21	OZ/A	7DAIT	B			
8	INDUCE		L	0.25	% V/V	7DAIT	B			
9	ET-751	0.2	EC	1	G A/A	55%OPEN	A	100 a	6 ab	92 abc
9	ETHEPHON	6	L	454	G A/A	55%OPEN	A			
9	AGRIDEX		L	0.5	% V/V	55%OPEN	A			
9	ET-751	0.2	EC	1	G A/A	7DAIT	B			
9	AGRIDEX		L	0.5	% V/V	7DAIT	B			
10	AIM	2	EC	0.016	LB A/A	55%OPEN	A	88.8 c	0 b	96 ab
10	CYCLONE MAX	3	EC	0.25	LB A/A	55%OPEN	A			
10	AGRIDEX		L	1	% V/V	55%OPEN	A			
10	AIM	2	EC	0.016	LB A/A	7DAIT	B			
10	AGRIDEX		L	1	% V/V	7DAIT	B			
11	RESOURCE	0.86	EC	8	OZ/A	55%OPEN	A	100 a	14 ab	100 a
11	FINISH	6	L	1.3	PT/A	55%OPEN	A			
11	AGRIDEX		L	1	PT/A	55%OPEN	A			
11	RESOURCE	0.86	EC	6	OZ/A	7DAIT	B			
11	AGRIDEX		L	1	PT/A	7DAIT	B			

Beltwide Uniform Harvest Aid Study (continued)

Rating Data Type							PERFORM	%TERM	%BASAL
Rating Unit							RATING	REGROW	REGROW
Rating Date							9/25/02	10/2/02	10/2/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code			
12	FOLEX	6	L	18	OZ A/A	55%OPEN	A	97.5 ab	16 a	89 abc
12	MATRIX	25	WP	0.125	OZ A/A	55%OPEN	A			
12	80/20 NIS		L	0.25	% V/V	55%OPEN	A			
12	CYCLONE MAX	3	EC	21	OZ/A	7DAIT	B			
12	INDUCE		L	0.25	% V/V	7DAIT	B			
13	FOLEX	6	L	18	OZ A/A	55%OPEN	A	95 b	19 a	73 d
13	MATRIX	25	WP	0.5	OZ A/A	55%OPEN	A			
13	80/20 NIS		L	0.25	% V/V	55%OPEN	A			
13	CYCLONE MAX	3	EC	21	OZ/A	7DAIT	B			
13	INDUCE		L	0.25	% V/V	7DAIT	B			
14	FOLEX	6	L	18	OZ A/A	55%OPEN	A	100 a	6 ab	81 cd
14	UPBEET	50	WP	0.313	OZ A/A	55%OPEN	A			
14	80/20 NIS		L	0.25	% V/V	55%OPEN	A			
14	CYCLONE MAX	3	EC	21	OZ/A	7DAIT	B			
14	INDUCE		L	0.25	% V/V	7DAIT	B			
15	FOLEX	6	L	18	OZ A/A	55%OPEN	A	100 a	10 ab	88 abc
15	UPBEET	50	WP	1.25	OZ A/A	55%OPEN	A			
15	80/20 NIS		L	0.25	% V/V	55%OPEN	A			
15	CYCLONE MAX	3	EC	21	OZ/A	7DAIT	B			
15	INDUCE		L	0.25	% V/V	7DAIT	B			
LSD (P=.05)								2.72	15	14.6
Standard Deviation								1.91	10.5	10.2
CV								2.07	159.95	11.28

Means followed by same letter do not significantly differ (P=.05, LSD)

Beltwide Uniform Harvest Aid Study (continued)

APPLICATION DESCRIPTION

	A	B
Application Date:	9/11/02	9/18/02
Time of Day:	3:30 PM	9:00 AM
Application Method:	SPRAY	SPRAY
Application Timing:	PREHARVES	7DAIT
Applic. Placement:	BROADCAST	BROADCAST
Air Temp., Unit:	94 F	75 F
% Relative Humidity:	31	65
Wind Velocity, Unit:	2 MPH	10 MPH
Soil Temp., Unit:	98 F	75 F
Soil Moisture:	DAMP	FAIR
% Cloud Cover:	25	5

APPLICATION EQUIPMENT

	A	B
Appl. Equipment:	SPIDER	SPIDER
Operating Pressure:	58 PSI	58 PSI
Nozzle Type:	TJFLATFAN	TJFLATFAN
Nozzle Size:	8002 VS	8002 VS
Nozzle Spacing, Unit:	20 IN	20 IN
Nozzles/Row:	2	2
Ground Speed, Unit:	4 MPH	4 MPH
Carrier:	WATER	WATER
Spray Volume, Unit:	15 GPA	15 GPA
Propellant:	COMP. AIR	COMP. AIR

CROP STAGE AT EACH APPLICATION

	A	B
Crop Stage:	4 -6 NACB	7 DAIT
Stage Scale:	50% OPEN	60%OPEN
Height, Unit:	35 INCH	35 INCH

ADDITIONAL APPLICATION INFORMATION

Heights: R1-31 in, R2-35 in, R3-36 in, R4-40 in
Highest Harvestable Boll Node: R1-17, R2-21, R3-20, R4-18
Highest Cracked Boll Node: R1-16, R2-18, R3-16, R4-12
Accumulated Heat Units From Planting to Harvest: 2946
Accumulated Heat Units From Treatment to 7 DAT: 87
Accumulated Heat Units From Treatment to 14 DAT: 102
Accumulated Heat Units From Treatment to Harvest: 195
Rainfall 7 days prior: 0.09 in Rainfall 7 days after: 1.46 in

Aim Harvest Aid Programs for Dryland Cotton

Project Summary:

Aim is a newly registered product used for weed control and as a defoliant/desiccant. Due to differences in input levels between irrigated (higher yields) and dryland (typically lower yields) production systems, two distinctly different harvest aid strategies are necessary. The objective of this study was to evaluate the overall performance of Aim, and various strategies (treatments) for lower yielding cotton.

Trial ID:	FMCHA0201	**Location:**	OSUREC-D
Planting Date:	May 9	**Variety:**	PM 2326 B/R
Row Spacing:	40 Inches	**Planting Rate:**	12 lbs/A
Plot Size:	4 r x 50'	**Harvest Date:**	None
Soil Type:	Clay Loam	**Replications:**	4

Rating Data Type								OPENBOLL	DEFOL.	DESICC.
Rating Unit								PERCENT	PERCENT	PERCENT
Rating Date								9/25/02	9/25/02	9/25/02
No.	Name	Conc	Type	Rate	Unit	Stg	Code			
1	UNTREATED							77 d	13 d	7.5 d
2	AIM	2	EC	0.016	LB A/A	75% OPEN	A	89 a-d	33 bcd	8.8 d
2	CROP OIL CONCENTRATE		L	1	% V/V	75% OPEN	A			
3	AIM	2	EC	0.025	LB A/A	75% OPEN	A	82 cd	55 ab	10 d
3	CROP OIL CONCENTRATE		L	1	% V/V	75% OPEN	A			
4	AIM	2	EC	0.016	LB A/A	75% OPEN	A	86.5 a-d	50 ab	12.5 d
4	CROP OIL CONCENTRATE		L	1	% V/V	75% OPEN	A			
4	AIM	2	EC	0.016	LB A/A	7 DAIT	B			
4	CROP OIL CONCENTRATE		L	1	% V/V	7 DAIT	B			
5	AIM	2	EC	0.025	LB A/A	75% OPEN	A	93 abc	71 a	12.5 d
5	PREP	6	L	0.75	LB A/A	75% OPEN	A			
5	CROP OIL CONCENTRATE		L	1	% V/V	75% OPEN	A			

Aim Harvest Aid Programs for Dryland Cotton (continued)

Rating Data Type								OPENBOLL	DEFOL.	DESICC.
Rating Unit								PERCENT	PERCENT	PERCENT
Rating Date								9/25/02	9/25/02	9/25/02
No.	Name	Conc	Type	Rate	Unit	Stg	Code			
6	AIM	2	EC	0.016	LB A/A	75% OPEN	A	93.5 abc	53 ab	38.8 ab
6	CYCLONE MAX	3	EC	0.25	LB A/A	75% OPEN	A			
6	CROP OIL CONCENTRATE		L	1	% V/V	75% OPEN	A			
7	AIM	2	EC	0.016	LB A/A	75% OPEN	A	83 bcd	50 ab	16.3 cd
7	CYCLONE MAX	3	EC	0.25	LB A/A	75% OPEN	A			
7	CROP OIL CONCENTRATE		L	1	% V/V	75% OPEN	A			
7	AIM	2	EC	0.016	LB A/A	7 DAIT	B			
7	CROP OIL CONCENTRATE		L	1	% V/V	7 DAIT	B			
8	AIM	2	EC	0.016	LB A/A	75% OPEN	A	90.5 abc	53 ab	33.8 abc
8	CYCLONE MAX	3	EC	0.25	LB A/A	75% OPEN	A			
8	CROP OIL CONCENTRATE		L	1	% V/V	75% OPEN	A			
8	AIM	2	EC	0.016	LB A/A	7 DAIT	B			
8	CYCLONE MAX	3	EC	0.25	LB A/A	7 DAIT	B			
8	CROP OIL CONCENTRATE		L	1	% V/V	7 DAIT	B			
9	AIM	2	EC	0.016	LB A/A	75% OPEN	A	96 ab	45 b	47.5 a
9	CYCLONE MAX	3	EC	0.25	LB A/A	75% OPEN	A			
9	INDUCE		L	0.25	% V/V	75% OPEN	A			
9	AIM	2	EC	0.016	LB A/A	7 DAIT	B			
9	CYCLONE MAX	3	EC	0.25	LB A/A	7 DAIT	B			
9	INDUCE		L	0.25	% V/V	7 DAIT	B			
10	AIM	2	EC	0.016	LB A/A	75% OPEN	A	92.5 abc	53 ab	33.8 abc
10	CYCLONE MAX	3	EC	0.125	LB A/A	75% OPEN	A			
10	CROP OIL CONCENTRATE		L	1	% V/V	75% OPEN	A			
10	AIM	2	EC	0.016	LB A/A	7 DAIT	B			
10	CYCLONE MAX	3	EC	0.25	LB A/A	7 DAIT	B			
10	CROP OIL CONCENTRATE		L	1	% V/V	7 DAIT	B			

Aim Harvest Aid Programs for Dryland Cotton (continued)

Rating Data Type								OPENBOLL	DEFOL.	DESICC.
Rating Unit								PERCENT	PERCENT	PERCENT
Rating Date								9/25/02	9/25/02	9/25/02
No.	Name	Conc	Type	Rate	Unit	Stg	Code			
11	AIM	2	EC	0.016	LB A/A	75% OPEN	A	89.5 a-d	53 ab	23.8 bcd
11	CYCLONE MAX	3	EC	0.125	LB A/A	75% OPEN	A			
11	CROP OIL CONCENTRATE		L	1	% V/V	75% OPEN	A			
12	AIM	2	EC	0.016	LB A/A	75% OPEN	A	91 abc	41 bc	13.8 d
12	CROP OIL CONCENTRATE		L	1	% V/V	75% OPEN	A			
12	CYCLONE MAX	3	EC	0.25	LB A/A	7 DAIT	B			
12	INDUCE		L	0.25	% V/V	7 DAIT	B			
13	CYCLONE MAX	3	EC	0.25	LB A/A	75% OPEN	A	92 abc	35 bcd	47.5 a
13	INDUCE		L	0.25	% V/V	75% OPEN	A			
13	AIM	2	EC	0.016	LB A/A	7 DAIT	B			
13	CROP OIL CONCENTRATE		L	1	% V/V	7 DAIT	B			
14	CYCLONE MAX	3	EC	0.25	LB A/A	75% OPEN	A	99.5 a	20 cd	46.3 a
14	INDUCE		L	0.25	% V/V	75% OPEN	A			
14	CYCLONE MAX	3	EC	0.25	LB A/A	7 DAIT	B			
14	INDUCE		L	0.25	% V/V	7 DAIT	B			
LSD (P=.05)								13.06	23.6	17.95
Standard Deviation								9.14	16.51	12.56
CV								10.19	37.14	49.88

Means followed by same letter do not significantly differ (P=.05, LSD)

Aim Harvest Aid Programs for Dryland Cotton (continued)

Rating Data Type								OPENBOLL	DEFOL.	DESICC.
Rating Unit								PERCENT	PERCENT	PERCENT
Rating Date								10/2/02	10/2/02	10/2/02
No.	Name	Conc	Type	Rate	Unit	Stg	Code			
1	UNTREATED							97 abc	20 e	5 def
2	AIM	2	EC	0.016	LB A/A	75% OPEN	A	94 cd	65 cd	0 f
2	CROP OIL CONCENTRATE		L	1	% V/V	75% OPEN	A			
3	AIM	2	EC	0.025	LB A/A	75% OPEN	A	97.5 abc	88 abc	0 f
3	CROP OIL CONCENTRATE		L	1	% V/V	75% OPEN	A			
4	AIM	2	EC	0.016	LB A/A	75% OPEN	A	98 ab	96 a	0 f
4	CROP OIL CONCENTRATE		L	1	% V/V	75% OPEN	A			
4	AIM	2	EC	0.016	LB A/A	7 DAIT	B			
4	CROP OIL CONCENTRATE		L	1	% V/V	7 DAIT	B			
5	AIM	2	EC	0.025	LB A/A	75% OPEN	A	95.5 bcd	87 abc	0 f
5	PREP	6	L	0.75	LB A/A	75% OPEN	A			
5	CROP OIL CONCENTRATE		L	1	% V/V	75% OPEN	A			
6	AIM	2	EC	0.016	LB A/A	75% OPEN	A	95.5 bcd	81 a-d	11.8 cd
6	CYCLONE MAX	3	EC	0.25	LB A/A	75% OPEN	A			
6	CROP OIL CONCENTRATE		L	1	% V/V	75% OPEN	A			
7	AIM	2	EC	0.016	LB A/A	75% OPEN	A	97.5 abc	85 abc	11.7 d
7	CYCLONE MAX	3	EC	0.25	LB A/A	75% OPEN	A			
7	CROP OIL CONCENTRATE		L	1	% V/V	75% OPEN	A			
7	AIM	2	EC	0.016	LB A/A	7 DAIT	B			
7	CROP OIL CONCENTRATE		L	1	% V/V	7 DAIT	B			
8	AIM	2	EC	0.016	LB A/A	75% OPEN	A	96.5 a-d	91 ab	6.3 def
8	CYCLONE MAX	3	EC	0.25	LB A/A	75% OPEN	A			
8	CROP OIL CONCENTRATE		L	1	% V/V	75% OPEN	A			
8	AIM	2	EC	0.016	LB A/A	7 DAIT	B			
8	CYCLONE MAX	3	EC	0.25	LB A/A	7 DAIT	B			
8	CROP OIL CONCENTRATE		L	1	% V/V	7 DAIT	B			

Aim Harvest Aid Programs for Dryland Cotton (continued)

Rating Data Type								OPENBOLL	DEFOL.	DESICC.
Rating Unit								PERCENT	PERCENT	PERCENT
Rating Date								10/2/02	10/2/02	10/2/02
No.	Name	Conc	Type	Rate	Unit	Stg	Code			
9	AIM	2	EC	0.016	LB A/A	75% OPEN	A	98 ab	58 d	42 a
9	CYCLONE MAX	3	EC	0.25	LB A/A	75% OPEN	A			
9	INDUCE		L	0.25	% V/V	75% OPEN	A			
9	AIM	2	EC	0.016	LB A/A	7 DAIT	B			
9	CYCLONE MAX	3	EC	0.25	LB A/A	7 DAIT	B			
9	INDUCE		L	0.25	% V/V	7 DAIT	B			
10	AIM	2	EC	0.016	LB A/A	75% OPEN	A	98.5 ab	94 ab	3.8 def
10	CYCLONE MAX	3	EC	0.125	LB A/A	75% OPEN	A			
10	CROP OIL CONCENTRATE		L	1	% V/V	75% OPEN	A			
10	AIM	2	EC	0.016	LB A/A	7 DAIT	B			
10	CYCLONE MAX	3	EC	0.25	LB A/A	7 DAIT	B			
10	CROP OIL CONCENTRATE		L	1	% V/V	7 DAIT	B			
11	AIM	2	EC	0.016	LB A/A	75% OPEN	A	93 d	88 abc	2.5 ef
11	CYCLONE MAX	3	EC	0.125	LB A/A	75% OPEN	A			
11	CROP OIL CONCENTRATE		L	1	% V/V	75% OPEN	A			
12	AIM	2	EC	0.016	LB A/A	75% OPEN	A	97 abc	89 abc	8.8 de
12	CROP OIL CONCENTRATE		L	1	% V/V	75% OPEN	A			
12	CYCLONE MAX	3	EC	0.25	LB A/A	7 DAIT	B			
12	INDUCE		L	0.25	% V/V	7 DAIT	B			
13	CYCLONE MAX	3	EC	0.25	LB A/A	75% OPEN	A	100 a	70 bcd	27.5 b
13	INDUCE		L	0.25	% V/V	75% OPEN	A			
13	AIM	2	EC	0.016	LB A/A	7 DAIT	B			
13	CROP OIL CONCENTRATE		L	1	% V/V	7 DAIT	B			
14	CYCLONE MAX	3	EC	0.25	LB A/A	75% OPEN	A	99 ab	75 a-d	20 bc
14	INDUCE		L	0.25	% V/V	75% OPEN	A			
14	CYCLONE MAX	3	EC	0.25	LB A/A	7 DAIT	B			
14	INDUCE		L	0.25	% V/V	7 DAIT	B			
LSD (P=.05)								3.86	24.57	8.32
CV								2.78	22.16	58.56

Means followed by same letter do not significantly differ (P=.05, LSD)

Aim Harvest Aid Programs for Dryland Cotton (continued)

Rating Data Type								T.REGROW	B.REGROW
Rating Unit								PERCENT	PERCENT
Rating Date								10/9/02	10/9/02
No.	Name	Conc	Type	Rate	Unit	Stg	Code		
1	UNTREATED							0 c	97.5 ab
2	AIM	2	EC	0.016	LB A/A	75% OPEN	A	22.5 b	65 f
2	CROP OIL CONCENTRATE		L	1	% V/V	75% OPEN	A		
3	AIM	2	EC	0.025	LB A/A	75% OPEN	A	0 c	90 a-d
3	CROP OIL CONCENTRATE		L	1	% V/V	75% OPEN	A		
4	AIM	2	EC	0.016	LB A/A	75% OPEN	A	0 c	95 abc
4	CROP OIL CONCENTRATE		L	1	% V/V	75% OPEN	A		
4	AIM	2	EC	0.016	LB A/A	7 DAIT	B		
4	CROP OIL CONCENTRATE		L	1	% V/V	7 DAIT	B		
5	AIM	2	EC	0.025	LB A/A	75% OPEN	A	0 c	96.3 ab
5	PREP	6	L	0.75	LB A/A	75% OPEN	A		
5	CROP OIL CONCENTRATE		L	1	% V/V	75% OPEN	A		
6	AIM	2	EC	0.016	LB A/A	75% OPEN	A	22.5 b	92.5 abc
6	CYCLONE MAX	3	EC	0.25	LB A/A	75% OPEN	A		
6	CROP OIL CONCENTRATE		L	1	% V/V	75% OPEN	A		
7	AIM	2	EC	0.016	LB A/A	75% OPEN	A	0 c	100 a
7	CYCLONE MAX	3	EC	0.25	LB A/A	75% OPEN	A		
7	CROP OIL CONCENTRATE		L	1	% V/V	75% OPEN	A		
7	AIM	2	EC	0.016	LB A/A	7 DAIT	B		
7	CROP OIL CONCENTRATE		L	1	% V/V	7 DAIT	B		
8	AIM	2	EC	0.016	LB A/A	75% OPEN	A	0 c	80 c-f
8	CYCLONE MAX	3	EC	0.25	LB A/A	75% OPEN	A		
8	CROP OIL CONCENTRATE		L	1	% V/V	75% OPEN	A		
8	AIM	2	EC	0.016	LB A/A	7 DAIT	B		
8	CYCLONE MAX	3	EC	0.25	LB A/A	7 DAIT	B		
8	CROP OIL CONCENTRATE		L	1	% V/V	7 DAIT	B		

Aim Harvest Aid Programs for Dryland Cotton (continued)

Rating Data Type							T.REGROW	B.REGROW
Rating Unit							PERCENT	PERCENT
Rating Date							10/9/02	10/9/02
No. Name	Conc	Type	Rate	Unit	Stg	Code		
9 AIM	2	EC	0.016	LB A/A	75% OPEN	A	0 c	75 def
9 CYCLONE MAX	3	EC	0.25	LB A/A	75% OPEN	A		
9 INDUCE		L	0.25	% V/V	75% OPEN	A		
9 AIM	2	EC	0.016	LB A/A	7 DAIT	B		
9 CYCLONE MAX	3	EC	0.25	LB A/A	7 DAIT	B		
9 INDUCE		L	0.25	% V/V	7 DAIT	B		
10 AIM	2	EC	0.016	LB A/A	75% OPEN	A	0 c	67.5 f
10 CYCLONE MAX	3	EC	0.125	LB A/A	75% OPEN	A		
10 CROP OIL CONCENTRATE		L	1	% V/V	75% OPEN	A		
10 AIM	2	EC	0.016	LB A/A	7 DAIT	B		
10 CYCLONE MAX	3	EC	0.25	LB A/A	7 DAIT	B		
10 CROP OIL CONCENTRATE		L	1	% V/V	7 DAIT	B		
11 AIM	2	EC	0.016	LB A/A	75% OPEN	A	23.8 b	83.8 b-e
11 CYCLONE MAX	3	EC	0.125	LB A/A	75% OPEN	A		
11 CROP OIL CONCENTRATE		L	1	% V/V	75% OPEN	A		
12 AIM	2	EC	0.016	LB A/A	75% OPEN	A	0 c	73.8 ef
12 CROP OIL CONCENTRATE		L	1	% V/V	75% OPEN	A		
12 CYCLONE MAX	3	EC	0.25	LB A/A	7 DAIT	B		
12 INDUCE		L	0.25	% V/V	7 DAIT	B		
13 CYCLONE MAX	3	EC	0.25	LB A/A	75% OPEN	A	0 c	87.5 a-e
13 INDUCE		L	0.25	% V/V	75% OPEN	A		
13 AIM	2	EC	0.016	LB A/A	7 DAIT	B		
13 CROP OIL CONCENTRATE		L	1	% V/V	7 DAIT	B		
14 CYCLONE MAX	3	EC	0.25	LB A/A	75% OPEN	A	27.5 a	90 a-d
14 INDUCE		L	0.25	% V/V	75% OPEN	A		
14 CYCLONE MAX	3	EC	0.25	LB A/A	7 DAIT	B		
14 INDUCE		L	0.25	% V/V	7 DAIT	B		
LSD (P=.05)							2.59	15.61
CV							26.36	12.81

Means followed by same letter do not significantly differ (P=.05, LSD)

Aim Harvest Aid Programs for Dryland Cotton (continued)

APPLICATION DESCRIPTION

	A	B
Application Date:	9/17/02	9/25/02
Time of Day:	1:20 PM	3:30 PM
Application Method:	SPRAY	SPRAY
Application Timing:	80%OPEN	8 DAIT
Applic. Placement:	BROADCAST	BROADCAST
Air Temp., Unit:	93 F	87 F
% Relative Humidity:	32	26
Wind Velocity, Unit:	8.5 MPH	7.5 MPH
Dew Presence (Y/N):	N	N
Soil Temp., Unit:	105 F	87 F
Soil Moisture:	GOOD	DRY
% Cloud Cover:	30	0

APPLICATION EQUIPMENT

	A	B
Appl. Equipment:	SPIDER	SPIDER
Operating Pressure:	56 PSI	56 PSI
Nozzle Type:	TJFLATFAN	TJFLATFAN
Nozzle Size:	8002	8002
Nozzle Spacing, Unit:	20 IN	20 IN
Nozzles/Row:	2	2
Ground Speed, Unit:	4 MPH	4 MPH
Carrier:	WATER	WATER
Spray Volume, Unit:	15 GPA	15 GPA
Propellant:	COMP. AIR	COMP. AIR

Aim Harvest Aid Programs for Irrigated Cotton

Project Summary:

Aim is a newly registered product used for weed control and as a defoliant/desiccant. Due to differences in input levels between irrigated (higher yields) and dryland (typically lower yields) production systems, two distinctly different harvest aid strategies are necessary. The objective of this study was to evaluate the overall performance of Aim, and various strategies (treatments) for irrigated/higher yielding cotton.

Trial ID:	FMCHA0202	**Location:**	OSUREC-D
Planting Date:	May 9	**Variety:**	DP 655 B/R
Row Spacing:	40 Inches	**Planting Rate:**	12 lbs/A
Plot Size:	4 r x 50'	**Harvest Date:**	None
Soil Type:	Clay Loam	**Replications:**	4

Rating Data Type								OPEN	DEFOL.	DESICC.
Rating Unit								PERCENT	PERCENT	PERCENT
Rating Date								9/25/02	9/25/02	9/25/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code			
1	UNTREATED							75.5 a	0 e	0 e
2	AIM	2	EC	0.025	LB A/A	70%OPEN	A	85.5 a	26.3 cd	48.8 b
2	CROP OIL CONCENTRATE		L	1	% V/V	70% OPEN	A			
3	AIM	2	EC	0.016	LB A/A	70% OPEN	A	71.5 a	12.5 de	43.8 b
3	CROP OIL CONCENTRATE		L	1	% V/V	70% OPEN	A			
3	AIM	2	EC	0.016	LB A/A	7 DAIT	B			
3	CROP OIL CONCENTRATE		L	1	% V/V	7 DAIT	B			
4	AIM	2	EC	0.016	LB A/A	70% OPEN	A	85 a	28.8 cd	61.3 a
4	CYCLONE MAX	3	EC	0.125	LB A/A	70% OPEN	A			
4	CROP OIL CONCENTRATE		L	1	% V/V	70% OPEN	A			
4	AIM	2	EC	0.016	LB A/A	7 DAIT	B			
4	CROP OIL CONCENTRATE		L	1	% V/V	7 DAIT	B			

Aim Harvest Aid Programs for Irrigated Cotton (continued)

Rating Data Type								OPEN	DEFOL.	DESICC.
Rating Unit								PERCENT	PERCENT	PERCENT
Rating Date								9/25/02	9/25/02	9/25/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code			
5	AIM	2	EC	0.016	LB A/A	70% OPEN	A	78.5 a	61.3 ab	12.5 d
5	PREP	6	L	0.75	LB A/A	70% OPEN	A			
5	CROP OIL CONCENTRATE		L	1	% V/V	70% OPEN	A			
5	AIM	2	EC	0.016	LB A/A	7 DAIT	B			
5	CROP OIL CONCENTRATE		L	1	% V/V	7 DAIT	B			
6	AIM	2	EC	0.016	LB A/A	70% OPEN	A	77 a	47.5 bc	20 c
6	COTTON QUIK	7.2	L	2	QT/A	70% OPEN	A			
6	CROP OIL CONCENTRATE		L	1	% V/V	70% OPEN	A			
6	AIM	2	EC	0.016	LB A/A	7 DAIT	B			
6	CROP OIL CONCENTRATE		L	1	% V/V	7 DAIT	B			
7	DEF	6	L	0.75	LB A/A	70% OPEN	A	78.5 a	81.3 a	6.3 de
7	PREP	6	L	1	LB A/A	70% OPEN	A			
7	CROP OIL CONCENTRATE		L	1	% V/V	70% OPEN	A			
LSD (P=.05)								19.25	21.4	7.34
Standard Deviation								12.96	14.41	4.94
CV								16.45	39.16	17.96

Means followed by same letter do not significantly differ (P=.05, LSD)

Aim Harvest Aid Programs for Irrigated Cotton (continued)

Rating Data Type								OPEN	DEFOL	DESICC.
Rating Unit								PERCENT	PERCENT	PERCENT
Rating Date								10/2/02	10/2/02	10/2/02
No.	Name	Conc	Type	Rate	Unit	Stg	Code			
1	UNTREATED							87 c	0 b	0 b
2	AIM	2	EC	0.025	LB A/A	70%OPEN	A	93.5 abc	94.3 a	0 b
2	CROP OIL CONCENTRATE		L	1	% V/V	70% OPEN	A			
3	AIM	2	EC	0.016	LB A/A	70% OPEN	A	88.5 bc	93.5 a	0 b
3	CROP OIL CONCENTRATE		L	1	% V/V	70% OPEN	A			
3	AIM	2	EC	0.016	LB A/A	7 DAIT	B			
3	CROP OIL CONCENTRATE		L	1	% V/V	7 DAIT	B			
4	AIM	2	EC	0.016	LB A/A	70% OPEN	A	96.5 a	80.8 a	18.8 a
4	CYCLONE MAX	3	EC	0.125	LB A/A	70% OPEN	A			
4	CROP OIL CONCENTRATE		L	1	% V/V	70% OPEN	A			
4	AIM	2	EC	0.016	LB A/A	7 DAIT	B			
4	CROP OIL CONCENTRATE		L	1	% V/V	7 DAIT	B			
5	AIM	2	EC	0.016	LB A/A	70% OPEN	A	96 ab	96 a	0 b
5	PREP	6	L	0.75	LB A/A	70% OPEN	A			
5	CROP OIL CONCENTRATE		L	1	% V/V	70% OPEN	A			
5	AIM	2	EC	0.016	LB A/A	7 DAIT	B			
5	CROP OIL CONCENTRATE		L	1	% V/V	7 DAIT	B			
6	AIM	2	EC	0.016	LB A/A	70% OPEN	A	92.5 abc	93.5 a	0 b
6	COTTON QUIK	7.2	L	2	QT/A	70% OPEN	A			
6	CROP OIL CONCENTRATE		L	1	% V/V	70% OPEN	A			
6	AIM	2	EC	0.016	LB A/A	7 DAIT	B			
6	CROP OIL CONCENTRATE		L	1	% V/V	7 DAIT	B			
7	DEF	6	L	0.75	LB A/A	70% OPEN	A	91.5 abc	72 a	0 b
7	PREP	6	L	1	LB A/A	70% OPEN	A			
7	CROP OIL CONCENTRATE		L	1	% V/V	70% OPEN	A			
LSD (P=.05)								7.66	27.31	7.38
CV								5.59	24.28	185.55

Means followed by same letter do not significantly differ (P=.05, LSD)

Aim Harvest Aid Programs for Irrigated Cotton (continued)

Rating Data Type							T. REGROW	B.REGROW
Rating Unit							PERCENT	PERCENT
Rating Date							10/9/02	10/9/02
No. Name	Conc	Type	Rate	Unit	Stg	Code		
1 UNTREATED							0 b	0 d
2 AIM	2	EC	0.025	LB A/A	70%OPEN	A	0 b	53.8 a
2 CROP OIL CONCENTRATE		L	1	% V/V	70% OPEN	A		
3 AIM	2	EC	0.016	LB A/A	70% OPEN	A	0 b	41.3 bc
3 CROP OIL CONCENTRATE		L	1	% V/V	70% OPEN	A		
3 AIM	2	EC	0.016	LB A/A	7 DAIT	B		
3 CROP OIL CONCENTRATE		L	1	% V/V	7 DAIT	B		
4 AIM	2	EC	0.016	LB A/A	70% OPEN	A	0 b	38.8 c
4 CYCLONE MAX	3	EC	0.125	LB A/A	70% OPEN	A		
4 CROP OIL CONCENTRATE		L	1	% V/V	70% OPEN	A		
4 AIM	2	EC	0.016	LB A/A	7 DAIT	B		
4 CROP OIL CONCENTRATE		L	1	% V/V	7 DAIT	B		
5 AIM	2	EC	0.016	LB A/A	70% OPEN	A	0 b	45 bc
5 PREP	6	L	0.75	LB A/A	70% OPEN	A		
5 CROP OIL CONCENTRATE		L	1	% V/V	70% OPEN	A		
5 AIM	2	EC	0.016	LB A/A	7 DAIT	B		
5 CROP OIL CONCENTRATE		L	1	% V/V	7 DAIT	B		
6 AIM	2	EC	0.016	LB A/A	70% OPEN	A	0 b	43.8 bc
6 COTTON QUIK	7.2	L	2	QT/A	70% OPEN	A		
6 CROP OIL CONCENTRATE		L	1	% V/V	70% OPEN	A		
6 AIM	2	EC	0.016	LB A/A	7 DAIT	B		
6 CROP OIL CONCENTRATE		L	1	% V/V	7 DAIT	B		
7 DEF	6	L	0.75	LB A/A	70% OPEN	A	15 a	46.3 b
7 PREP	6	L	1	LB A/A	70% OPEN	A		
7 CROP OIL CONCENTRATE		L	1	% V/V	70% OPEN	A		
LSD (P=.05)							2.29	6.4
CV							72.01	11.22

Means followed by same letter do not significantly differ (P=.05, LSD)

Aim Harvest Aid Programs for Irrigated Cotton (continued)

	APPLICATION DESCRIPTION			APPLICATION EQUIPMENT	
	A	**B**		**A**	**B**
Application Date:	9/18/02	9/25/02	**Appl. Equipment:**	SPIDER	SPIDER
Time of Day:	8:00 AM	4:00 PM	**Operating Pressure:**	58 PSI	58 PSI
Application Method:	SPRAY	SPRAY	**Nozzle Type:**	TJFLATFAN	TJFLATFAN
Application Timing:	70-75%OB	7 DAIT	**Nozzle Size:**	8002	8002
Applic. Placement:	BROADCAST	BROADCAST	**Nozzle Spacing, Unit:**	20 IN	20 IN
Air Temp., Unit:	72 F	88 F	**Nozzles/Row:**	2	2
% Relative Humidity:	65	26	**Ground Speed, Unit:**	4 MPH	4 MPH
Wind Velocity, Unit:	8 MPH	7.5 MPH	**Carrier:**	WATER	WATER
Soil Temp., Unit:	73 F	87 F	**Spray Volume, Unit:**	15 GPA	15 GPA
Soil Moisture:	FAIR	DRY	**Propellant:**	COMP. AIR	COMP. AIR
% Cloud Cover:	5	0			

Cotton Quik Harvest Aid Programs for Oklahoma

Project Summary:

The purpose of this project was to demonstrate the overall effectiveness of Cotton Quik harvest aid programs and compare them to local standards. Therefore a large-plot replicated demonstration was established comparing Cotton Quik + Ginstar to Finish + Def and Finish + Ginstar.

Trial ID:	GRIHA0201	**Location:**	Winsett Farm
Planting Date:	May 15	**Variety:**	DP 655 B/R
Row Spacing:	40 Inches	**Planting Rate:**	12 lbs/A
Plot Size:	18 r x 2640'	**Harvest Date:**	None
Soil Type:	Clay Loam	**Replications:**	2

Rating Data Type							DEFOL.	DESICC.	OPEN	DEFOL.	DESICC.
Rating Unit							PERCENT	PERCENT	PERCENT	PERCENT	PERCENT
Rating Date							9/30/02	9/30/02	10/4/02	10/4/02	10/4/02
No.	Name	Conc	Type	Rate	Unit	Stg	Code				
1	COTTON QUIK		L	3	PT/A	70%OP	A	70 b	5 a	97.5 a	96.5 a	0 b
1	GINSTAR	1.5	EC	4	OZ/A	70%OP	A					
1	INDUCE		L	0.25	% V/V	70%OP	A					
2	COTTON QUIK		L	4	PT/A	70%OP	A	70 b	7.5 a	100 a	90 b	10 a
2	GINSTAR	1.5	EC	5	OZ/A	70%OP	A					
2	INDUCE		L	0.25	% V/V	70%OP	A					
3	FINISH	6	L	1	PT/A	70%OP	A	85 a	5 a	100 a	97.5 a	1.5 b
3	DEF 6	6	EC	1	PT/A	70%OP	A					
3	INDUCE		L	0.25	% V/V	70%OP	A					
4	FINISH	6	L	1	PT/A	70%OP	A	70 b	5 a	97.5 a	90 b	0 b
4	GINSTAR	1.5	EC	6	OZ/A	70%OP	A					
4	INDUCE		L	0.25	% V/V	70%OP	A					
LSD (P=.05)								0	5.63	6.5	3.18	3.38
CV								0	31.43	2.07	1.07	36.89

Means followed by same letter do not significantly differ (P=.05, LSD)

Cotton Quik Harvest Aid Programs for Oklahoma (continued)

APPLICATION DESCRIPTION		APPLICATION EQUIPMENT	
	A		A
Application Date:	9/24/02	**Appl. Equipment:**	JD 6500
Time of Day:	9:30 AM	**Operating Pressure:**	70 PSI
Application Method:	SPRAY	**Nozzle Type:**	HARDI FF
Application Timing:	65-70%OB	**Nozzle Size:**	4110-14
Applic. Placement:	BROADCAST	**Nozzle Spacing, Unit:**	20 IN
Air Temp., Unit:	68 F	**Nozzles/Row:**	2
% Relative Humidity:	50	**Ground Speed, Unit:**	8 MPH
Wind Velocity, Unit:	6 MPH	**Carrier:**	WATER
Soil Temp., Unit:	65 F	**Spray Volume, Unit:**	12 GPA
Soil Moisture:	GOOD		
% Cloud Cover:	50		

Dryland Harvest Aid Strategies for Oklahoma

Project Summary:

The purpose of this project was to demonstrate the overall effectiveness of Cyclone Max and compare it to Aim in a dryland production system.

Trial ID:	OSUHA0201	**Location:**	Nichols Farm
Planting Date:	May 20	**Variety:**	PM 2326 B/R
Row Spacing:	40 Inches	**Planting Rate:**	10 lbs/A
Plot Size:	18 r x 2640'	**Harvest Date:**	None
Soil Type:	Clay Loam	**Replications:**	2

Rating Data Type								DEFOL.	DESICC.	DEFOL.	DESICC.
Rating Unit								PERCENT	PERCENT	PERCENT	PERCENT
Rating Date								9/30/02	9/30/02	10/6/02	10/6/02
No.	Name	Conc	Type	Rate	Unit	Stg	Code				
1	CYCLONE MAX	3	EC	5	OZ/A	80%OPEN	A	67.5 b	12.5 c	75 ab	10 b
1	INDUCE		L	0.3	% V/V	80%OPEN	A				
2	CYCLONE MAX	3	EC	11	OZ/A	80%OPEN	A	82.5 a	10 c	87.5 a	10 b
2	INDUCE		L	0.3	% V/V	80%OPEN	A				
3	CYCLONE MAX	3	EC	16	OZ/A	80%OPEN	A	80 a	20 bc	87.5 a	12.5 b
3	INDUCE		L	0.3	% V/V	80%OPEN	A				
4	CYCLONE MAX	3	EC	21	OZ/A	80%OPEN	A	60 c	40 a	70 b	30 a
4	INDUCE		L	0.3	% V/V	80%OPEN	A				
5	AIM	2	EC	1	OZ/A	80%OPEN	A	60 c	12.5 c	67.5 b	10 b
5	CROP OIL CONENTRATE		L	1	% V/V	80%OPEN	A				
6	CYCLONE MAX	3	EC	11	OZ/A	80%OPEN	A	55 c	35 ab	70 b	30 a
6	AIM	2	EC	1	OZ/A	80%OPEN	A				
6	CROP OIL CONCENTRATE		L	1	% V/V	80%OPEN	A				
LSD (P=.05)								7.42	15.92	15.66	16
CV								4.28	28.58	7.99	36.44

Means followed by same letter do not significantly differ (P=.05, LSD)

Dryland Harvest Aid Strategies for Oklahoma (continued)

APPLICATION DESCRIPTION		APPLICATION EQUIPMENT	
	A		A
Application Date:	9/25/02	**Appl. Equipment:**	JD 6500
Time of Day:	9:00 AM	**Operating Pressure:**	70 PSI
Application Method:	SPRAY	**Nozzle Type:**	HARDI FF
Application Timing:	90% OPEN	**Nozzle Size:**	4110-14
Applic. Placement:	BROADCAST	**Nozzle Spacing, Unit:**	20 IN
Air Temp., Unit:	61 F	**Nozzles/Row:**	2
% Relative Humidity:	45	**Ground Speed, Unit:**	9 MPH
Wind Velocity, Unit:	6 MPH	**Carrier:**	WATER
Soil Temp., Unit:	67 F	**Spray Volume, Unit:**	12 GPA
Soil Moisture:	FAIR		
% Cloud Cover:	10		

Enhancing Growth & Development with Temik Insecticide

Project Summary:

The purpose of this project was to demonstrate increased growth and development of cotton planted with Temik in-furrow insecticide compared to cotton without. Four row strips were planted through the field alternating between Temik rates of 0, 4, & 8 lbs/A. Plots were monitored and plants were mapped to compare differences in fruiting patterns or earliness. A John Deere 484 brush stripper and scale-equipped boll-buggy was used to harvest and weigh plot yields. Fiber samples were sent to ITC (International Textile Center) at Lubbock where HVI fiber analysis was performed. Plots treated with Temik numerically yielded 91-107 lb/A more than those without, however, due to variation within the test, no statistical differences were present. Results fiber testing are presented in the tables below.

Trial ID:	BAYIF0201	**Location:**	WOSC
Planting Date:	May 30	**Variety:**	SG 215 B/R
Row Spacing:	40 Inches	**Planting Rate:**	12 lbs/A
Plot Size:	4 r x 520'	**Harvest Date:**	November 18
Soil Type:	Clay Loam	**Replications:**	3

Crop Code							COTTON	SEEDCOTN	GIN
Rating Data Type							STAND CT	YIELD	TURNOUT
Rating Unit							#/METER	LBS/ACRE	PERCENT
Rating Date							6/14/02	11/18/02	12/18/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code			
1	UNTREATED							11.7 a	3728 a	0.21 b
2	TEMIK	15	G	4	LB/A	AT PLANT	A	11 a	3990 a	0.223 a
3	TEMIK	15	G	8	LB/A	AT PLANT	A	11.7 a	4032 a	0.217 ab
LSD (P=.05)								4	549.2	0.0093
Standard Deviation								1.76	242.3	0.0041
CV								15.41	6.19	1.89

Means followed by same letter do not significantly differ (P=.05, LSD)

Enhancing Growth & Development with Temik Insecticide (continued)

Crop Code							LINT	FIBER	FIBER
Rating Data Type							YIELD	DATA	DATA
Rating Unit							LBS/ACRE	MIC	LENGTH
Rating Date							12/18/02	1/20/02	1/20/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code			
1	UNTREATED							783 a	5.07 a	1.023 a
2	TEMIK	15	G	4	LB/A	AT PLANT	A	890 a	5.03 a	1.02 a
3	TEMIK	15	G	8	LB/A	AT PLANT	A	874 a	5.1 a	1.04 a
LSD (P=.05)								122.8	0.245	0.0316
Standard Deviation								54.2	0.108	0.0139
CV								6.38	2.13	1.36
Means followed by same letter do not significantly differ (P=.05, LSD)										

Crop Code							FIBER	FIBER
Rating Data Type							DATA	DATA
Rating Unit							UNIFORM	STRENGTH
Rating Date							1/20/02	1/20/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code		
1	UNTREATED							83.47 a	27 a
2	TEMIK	15	G	4	LB/A	AT PLANT	A	83.07 a	27.3 a
3	TEMIK	15	G	8	LB/A	AT PLANT	A	83.4 a	27.53 a
LSD (P=.05)								0.903	1.029
Standard Deviation								0.399	0.454
CV								0.48	1.66
Means followed by same letter do not significantly differ (P=.05, LSD)									

Enhancing Growth & Development with Temik Insecticide (continued)

APPLICATION DESCRIPTION

	A
Application Date:	5/30/02
Time of Day:	9:00 AM
Application Method:	PLANTED
Application Timing:	AT PLANT
Applic. Placement:	IN-FURROW
Air Temp., Unit:	73 F
% Relative Humidity:	65
Wind Velocity, Unit:	8 MPH
Soil Temp., Unit:	74 F
Soil Moisture:	FAIR
% Cloud Cover:	10

Cotton Tolerance to Outlook Herbicide

Project Summary:

The registration of Outlook herbicide in cotton is currently being pursued by BASF. Similar in activity to Metolachlor (Dual), Outlook controls a host of grass weeds as well as some small-seeded broadleaf weeds (pigweed) and yellow nutsedge. The objective of this trial was to evaluate crop safety after applying various rates of Outlook at various timings (preemergence and postemergence when combined with Roundup Ultramax). Plots were monitored throughout the year then harvested and sampled for fiber analysis. Results indicated for the second consecutive year that no crop injury was observed or indicated by yield or fiber analysis results.

Trial ID:	BASCT0201	**Location:**	WOSC
Planting Date:	May 30	**Variety:**	DP 655 B/R
Row Spacing:	40 Inches	**Planting Rate:**	12 lbs/A
Plot Size:	4 r x 50'	**Harvest Date:**	November 18
Soil Type:	Clay Loam	**Replications:**	3

Crop Code								COTTON	COTTON	COTTON
Rating Data Type								INJURY	INJURY	INJURY
Rating Unit								PERCENT	PERCENT	PERCENT
Rating Date								5/11/02	7/8/02	8/8/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	App Code			
1	OUTLOOK	6	EC	10	OZ/A	PRE	A	0 a	0 a	0 a
2	OUTLOOK	6	EC	16	OZ/A	PRE	A	0 a	0 a	0 a
3	OUTLOOK	6	EC	21	OZ/A	PRE	A	0 a	0 a	0 a
4	OUTLOOK	6	EC	10	OZ/A	COTYL	B	0 a	0 a	0 a
5	OUTLOOK	6	EC	10	OZ/A	COTYL	B	0 a	0 a	0 a
5	ROUNDUP ULTRAMAX	3.7	L	26	OZ/A	COTYL	B			
6	OUTLOOK	6	EC	16	OZ/A	COTYL	B	0 a	0 a	0 a

Cotton Tolerance of Outlook Herbicide (continued)

Crop Code								COTTON	COTTON	COTTON
Rating Data Type								INJURY	INJURY	INJURY
Rating Unit								PERCENT	PERCENT	PERCENT
Rating Date								5/11/02	7/8/02	8/8/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	App Code			
7	OUTLOOK	6	EC	16	OZ/A	COTYL	B	0 a	0 a	0 a
7	ROUNDUP ULTRAMAX	3.7	L	26	OZ/A	COTYL	B			
8	OUTLOOK	6	EC	21	OZ/A	COTYL	B	0 a	0 a	0 a
9	OUTLOOK	6	EC	21	OZ/A	COTYL	B	0 a	0 a	0 a
9	ROUNDUP ULTRAMAX	3.7	L	26	OZ/A	COTYL	B			
10	BAS 45521 H	3.8	L	1	LB A/A	COTYL	B	0 a	0 a	0 a
11	OUTLOOK	6	EC	10	OZ/A	EP-3-4LF	C	0 a	0 a	0 a
12	OUTLOOK	6	EC	10	OZ/A	EP-3-4LF	C	0 a	0 a	0 a
12	ROUNDUP ULTRAMAX	3.7	L	26	OZ/A	EP-3-4LF	C			
13	OUTLOOK	6	EC	16	OZ/A	EP-3-4LF	C	0 a	0 a	0 a
14	OUTLOOK	6	EC	16	OZ/A	EP-3-4LF	C	0 a	0 a	0 a
14	ROUNDUP ULTRAMAX	3.7	L	26	OZ/A	EP-3-4LF	C			
15	OUTLOOK	6	EC	21	OZ/A	EP-3-4LF	C	0 a	0 a	0 a
16	OUTLOOK	6	EC	21	OZ/A	EP-3-4LF	C	0 a	0 a	0 a
16	ROUNDUP ULTRAMAX	3.7	L	26	OZ/A	EP-3-4LF	C			
17	BAS 45521 H	3.8	L	1	LB A/A	EP-3-4LF	C	0 a	0 a	0 a

Cotton Tolerance of Outlook Herbicide (continued)

Crop Code							COTTON	COTTON	COTTON
Rating Data Type							INJURY	INJURY	INJURY
Rating Unit							PERCENT	PERCENT	PERCENT
Rating Date							5/11/02	7/8/02	8/8/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	App Code			
18	ROUNDUP ULTRAMAX	3.7	L	26	OZ/A	EP-3-4LF	C	0 a	0 a	0 a
18	STAPLE	85	WP	1.2	OZ/A	EP-3-4LF	C			
19	ROUNDUP ULTRAMAX	3.7	L	26	OZ/A	EP-3-4LF	C	0 a	0 a	0 a
19	DUAL II MAGNUM	7.6	EC	1.33	PT/A	EP-3-4LF	C			
20	UNTREATED CHECK/WEED FREE							0 a	0 a	0 a
LSD (P=.05)								0	0	0
Standard Deviation								0	0	0
CV								0	0	0

Means followed by same letter do not significantly differ (P=.05, LSD)

Cotton Tolerance of Outlook Herbicide (continued)

Crop Code								SEEDCOTN	GIN	LINT
Rating Data Type								YIELD	TURNOUT	YIELD
Rating Unit								LBS/ACRE	PERCENT	LBS/ACRE
Rating Date								11/19/02	12/18/02	12/18/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code			
1	OUTLOOK	6	EC	10	OZ/A	PRE	A	2782 abc	37.47 ab	1043 abc
2	OUTLOOK	6	EC	16	OZ/A	PRE	A	2804 abc	36.83 abc	1033 abc
3	OUTLOOK	6	EC	21	OZ/A	PRE	A	2596 bc	36.63 abc	949 bc
4	OUTLOOK	6	EC	10	OZ/A	EP-COTYL	B	2834 abc	36.97 abc	1048 ab
5	OUTLOOK	6	EC	10	OZ/A	EP-COTYL	B	2804 abc	36.63 abc	1026 abc
5	ROUNDUP ULTRAMAX	3.7	L	26	OZ/A	EP-COTYL	B			
6	OUTLOOK	6	EC	16	OZ/A	EP-COTYL	B	2834 abc	36.57 abc	1037 abc
7	OUTLOOK	6	EC	16	OZ/A	EP-COTYL	B	2873 ab	36.43 bc	1046 ab
7	ROUNDUP ULTRAMAX	3.7	L	26	OZ/A	EP-COTYL	B			
8	OUTLOOK	6	EC	21	OZ/A	EP-COTYL	B	2695 abc	36.03 c	971 abc
9	OUTLOOK	6	EC	21	OZ/A	EP-COTYL	B	2912 a	36.77 abc	1070 a
9	ROUNDUP ULTRAMAX	3.7	L	26	OZ/A	EP-COTYL	B			
10	BAS 45521 H	3.8	L	1	LB A/A	EP-COTYL	B	2552 c	36.63 abc	935 c
11	OUTLOOK	6	EC	10	OZ/A	EP-3-4LF	C	2717 abc	36.77 abc	999 abc
12	OUTLOOK	6	EC	10	OZ/A	EP-3-4LF	C	2695 abc	36.33 bc	979 abc
12	ROUNDUP ULTRAMAX	3.7	L	26	OZ/A	EP-3-4LF	C			
13	OUTLOOK	6	EC	16	OZ/A	EP-3-4LF	C	2769 abc	36.67 abc	1015 abc

Cotton Tolerance of Outlook Herbicide (continued)

Crop Code								SEEDCOTN	GIN	LINT
Rating Data Type								YIELD	TURNOUT	YIELD
Rating Unit								LBS/ACRE	PERCENT	LBS/ACRE
Rating Date								11/19/02	12/18/02	12/18/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code			
14	OUTLOOK	6	EC	16	OZ/A	EP-3-4LF	C	2661 abc	37.27 abc	991 abc
14	ROUNDUP ULTRAMAX	3.7	L	26	OZ/A	EP-3-4LF	C			
15	OUTLOOK	6	EC	21	OZ/A	EP-3-4LF	C	2882 ab	37 abc	1066 a
16	OUTLOOK	6	EC	21	OZ/A	EP-3-4LF	C	2682 abc	37.37 ab	1002 abc
16	ROUNDUP ULTRAMAX	3.7	L	26	OZ/A	EP-3-4LF	C			
17	BAS 45521 H	3.8	L	1	LB A/A	EP-3-4LF	C	2743 abc	36.37 bc	999 abc
18	ROUNDUP ULTRAMAX	3.7	L	26	OZ/A	EP-3-4LF	C	2864 ab	36.5 abc	1045 abc
18	STAPLE	85	WP	1.2	OZ/A	EP-3-4LF	C			
19	ROUNDUP ULTRAMAX	3.7	L	26	OZ/A	EP-3-4LF	C	2773 abc	37.33 ab	1034 abc
19	DUAL II MAGNUM	7.6	EC	1.33	PT/A	EP-3-4LF	C			
20	UNTREATED CHECK/WEED FREE							2695 abc	37.77 a	1019 abc
LSD (P=.05)								305.5	1.278	111.4
Standard Deviation								185.1	0.775	67.5
CV								6.71	2.1	6.65

Means followed by same letter do not significantly differ (P=.05, LSD)

Cotton Tolerance of Outlook Herbicide (continued)

Crop Code								FIBER DATA	
Rating Data Type									
Rating Unit							MIC	LENGTH	STRENGTH
Rating Date							1/20/02	1/20/02	1/20/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code			
1	OUTLOOK	6	EC	10	OZ/A	PRE	A	5.1 abc	1.03 ab	26.83 a-d
2	OUTLOOK	6	EC	16	OZ/A	PRE	A	4.97 a-d	1.037 ab	27.43 a-d
3	OUTLOOK	6	EC	21	OZ/A	PRE	A	5.07 a-d	1.03 ab	26.7 a-d
4	OUTLOOK	6	EC	10	OZ/A	EP-COTYL	B	5.17 ab	1.047 ab	27.83 a
5	OUTLOOK	6	EC	10	OZ/A	EP-COTYL	B	5.07 a-d	1.043 ab	26.93 a-d
5	ROUNDUP ULTRAMAX	3.7	L	26	OZ/A	EP-COTYL	B			
6	OUTLOOK	6	EC	16	OZ/A	EP-COTYL	B	4.93 bcd	1.043 ab	27.23 a-d
7	OUTLOOK	6	EC	16	OZ/A	EP-COTYL	B	4.97 a-d	1.04 ab	27.73 ab
7	ROUNDUP ULTRAMAX	3.7	L	26	OZ/A	EP-COTYL	B			
8	OUTLOOK	6	EC	21	OZ/A	EP-COTYL	B	4.97 a-d	1.057 a	27.5 abc
9	OUTLOOK	6	EC	21	OZ/A	EP-COTYL	B	5.07 a-d	1.043 ab	27 a-d
9	ROUNDUP ULTRAMAX	3.7	L	26	OZ/A	EP-COTYL	B			
10	BAS 45521 H	3.8	L	1	LB A/A	EP-COTYL	B	5.2 a	1.023 b	27 a-d
11	OUTLOOK	6	EC	10	OZ/A	EP-3-4LF	C	4.97 a-d	1.053 ab	26.97 a-d
12	OUTLOOK	6	EC	10	OZ/A	EP-3-4LF	C	5 a-d	1.037 ab	26.67 bcd
12	ROUNDUP ULTRAMAX	3.7	L	26	OZ/A	EP-3-4LF	C			
13	OUTLOOK	6	EC	16	OZ/A	EP-3-4LF	C	4.9 cd	1.037 ab	26.5 cd

Cotton Tolerance of Outlook Herbicide (continued)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	MIC 1/20/02	FIBER DATA LENGTH 1/20/02	STRENGTH 1/20/02
14	OUTLOOK	6	EC	16	OZ/A	EP-3-4LF	C	5.13 abc	1.033 ab	27.13 a-d
14	ROUNDUP ULTRAMAX	3.7	L	26	OZ/A	EP-3-4LF	C			
15	OUTLOOK	6	EC	21	OZ/A	EP-3-4LF	C	5 a-d	1.027 ab	27 a-d
16	OUTLOOK	6	EC	21	OZ/A	EP-3-4LF	C	5.03 a-d	1.033 ab	27.77 ab
16	ROUNDUP ULTRAMAX	3.7	L	26	OZ/A	EP-3-4LF	C			
17	BAS 45521 H	3.8	L	1	LB A/A	EP-3-4LF	C	4.97 a-d	1.03 ab	26.33 d
18	ROUNDUP ULTRAMAX	3.7	L	26	OZ/A	EP-3-4LF	C	4.83 d	1.03 ab	27.27 a-d
18	STAPLE	85	WP	1.2	OZ/A	EP-3-4LF	C			
19	ROUNDUP ULTRAMAX	3.7	L	26	OZ/A	EP-3-4LF	C	5.03 a-d	1.03 ab	26.87 a-d
19	DUAL II MAGNUM	7.6	EC	1.33	PT/A	EP-3-4LF	C			
20	UNTREATED CHECK/WEED FREE							5.03 a-d	1.033 ab	27.23 a-d
LSD (P=.05)								0.267	0.032	1.148
Standard Deviation								0.162	0.0194	0.696
CV								3.22	1.87	2.57

Means followed by same letter do not significantly differ (P=.05, LSD)

Cotton Tolerance of Outlook Herbicide (continued)

APPLICATION DESCRIPTION

	A	B	C
Application Date:	5/16/02	6/11/02	6/24/02
Time of Day:	9:30 PM	7:00 AM	11:30 AM
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	PREEMERGE	COTYLEDON	5 LEAF
Applic. Placement:	BROADCAST	BROADCAST	BROADCAST
Air Temp., Unit:	72 F	78 F	88 F
% Relative Humidity:	52	67	29
Wind Velocity, Unit:	8 MPH	7.5 MPH	8 MPH
Soil Temp., Unit:	72 F	78 F	87 F
Soil Moisture:	GOOD	GOOD	DRY
% Cloud Cover:	40	0	40

APPLICATION EQUIPMENT

	A	B	C
Appl. Equipment:	LEESPIDER	LEESPIDER	LEESPIDER
Operating Pressure:	22 PSI	22 PSI	22 PSI
Nozzle Type:	TJFLAFFAN	TJFLAFFAN	TJFLAFFAN
Nozzle Size:	8002	8002	8002
Nozzle Spacing, Unit:	20 IN	20 IN	20 IN
Nozzles/Row:	2	2	2
Ground Speed, Unit:	4 MPH	4 MPH	4 MPH
Carrier:	WATER	WATER	WATER
Spray Volume, Unit:	10 GPA	10 GPA	10 GPA
Propellant:	COMP. AIR	COMP. AIR	COMP. AIR

Varietal Response to Foliar Nitrogen Sources

Project Summary:

In Oklahoma, nitrogen is typically applied preplant as urea or anhydrous ammonia on irrigated acres, while dryland acreage may go unfertilized or receive in-season applications of nitrogen. Often the plant's ability to utilize these forms of nitrogen in-season depends upon timeliness of rainfall or irrigation. Past research shows that peak nitrogen utilization by the cotton plant occurs from flowering through boll maturity, which often differs by variety. Picker-type varieties account for most of the irrigated acreage within Oklahoma, while the majority of dryland acres are planted to stripper varieties. Typically more determinate varieties (stripper-types) respond differently to environmental stresses than do less determinate (picker) varieties. The ability to manage nitrogen inputs more closely and on an as-needed basis could be advantageous for producers. Many times an adverse weather event early in the season will severely decrease or eliminate yield potential, which also reduces or eliminates the crop's need for nitrogen. Applying more nitrogen in-season may have the potential to reduce up-front expenses in an uncertain environment. Although substituting foliar applied sources of nitrogen for traditional applications historically has had little or no effect on cotton lint yields, their consideration as a means of adding supplemental nitrogen (when necessary) is gaining attention. One specific consideration is the reduction of traditional pre-season applications of nitrogen by 30% with the intention of supplementing the crop through foliar applications later in the season on an as-needed basis. Prior research in the area of petiole analysis by Livingston et al., 1996 shows that in-season nitrogen needs can be accurately monitored thus providing a means for prescribed supplemental applications during the peak usage period. The objectives of this research were as follows: (1) Diagnose in-season nitrogen needs through petiole analysis; (2) Apply prescribed rates of foliar nitrogen when petiole nitrate-N drops below a predetermined threshold; (3) Determine differences in fruiting pattern or yield between more or less determinant cotton varieties which received supplemental applications of foliar nitrogen; (4) Compare two supplemental foliar nitrogen regimes to a traditional fertility program.

This study was designed as a split-plot with 2 varieties as main plots and 4 fertility regimes as subplots with four replications. Each plot, consisting of 4 rows 120 feet in length, received one of the following four fertility treatments:

(1) a traditional preplant nitrogen application based on soil-test recommendations (180 lbs 46-0-0 for 2 bale yield goal), followed by 0.2 lb/A of foliar boron at pinhead square;
(2) (2) 2/3 of the traditional preplant application followed by 0.2 lb/A of foliar boron at pinhead square and foliar applications of feed grade urea on an as-needed basis;
(3) (3) 2/3 of the traditional preplant nitrogen application followed by 1 qt/A of an experimental solution of 12-0-0-0.5 (HM 9826-A) at pinhead square plus 2 qt/a of 3-23-0, with 3% calcium (HM 9870) at mid-bloom followed by 1 gal/acre of an experimental solution of 25-0-0-0.5 (HM9309) on an as-needed basis;

Varietal Response to Foliar Nitrogen Sources (continued)

(4) (4) 2/3 of the traditional preplant nitrogen application followed by 0.2 lb/A of foliar boron at pinhead square plus foliar water when any other as-needed treatment was applied.

All plots were maintained using standard irrigated cotton production practices throughout the season (insect control, tillage, weed control etc.) Five plants were mapped from each plot at the end of season to determine differences in fruiting patterns. The standard treatments at pinhead square were applied on June 26, 2002, while the mid-bloom treatment was applied on July 23, 2002. Beginning at the pinhead square cotton stage, petiole analysis was performed on each plot and continued on a weekly basis until cutout. Nitrate-N levels were recorded each week for each plot. When levels dropped below the arbitrary threshold (which cannot be disclosed for proprietary reasons) both as-needed treatments were applied.

Results of petiole analysis for Nitrate-N dictated the following applications: Treatment 2 - (Foliar N from feed grade urea @ 10 lbs ai/A) and Treatment 3 - (Foliar N from HM 9309 25-0-0-0.5 @ 1 Gal/A. The application dates for these two as-needed treatments were July 23, August 1, August 7, August 14, and August 22.

Statistical analysis indicated no significant differences between fertility regimes when observing petiole nitrate-N and K levels, fruit retention or yield. However, differences in petiole nitrate-N levels did exist between varieties on the sampling dates of June 25, July 2, July 9, and July 23 (Petiole Analysis Table.) Petiole nitrate-N was greater for DP 655 B/R compared to PM 2280 B/R on each of the four sampling dates previously mentioned. This suggests that the shorter season, more determinate variety depleted more nitrogen from the soil than the longer-season, less determinate variety at those given dates. This difference is expected since the fruiting period of the more determinate variety is generally initiated earlier in comparison to the less determinate variety.

First position fruit retention was independently affected by variety and nitrogen treatment. Nitrogen treatment 1 showed greater first position fruit retention than treatment 4. No other fruiting differences existed between nitrogen treatments. First position boll retention was greater for DP 655 B/R compared to the more determinate PM 2280 B/R. Likewise, lint yields were greater for the less determinate variety (DP 655 B/R). Nitrogen regimes (treatments) had no effect on cotton lint yield, thus the data is not presented.

In conclusion, petiole nitrate-N levels were accurately monitored throughout the growing season and did provide a basis for the diagnosis of in-season nitrogen deficiencies. Overall fruit retention from plots which received reduced (2/3 of the soil test recommendation) applications of preplant nitrogen followed by a supplemental foliar program was equal to plots which received the traditional full (according to soil test recommendations) preplant

Varietal Response to Foliar Nitrogen Sources (continued)

application of nitrogen. This suggests that foliar applications do have the potential to maintain fruit retention when nitrogen deficiencies may exist. However, since lint yields were unaffected, the basis for the recommendation of foliar treatments may depend on factors other than yield. Further research may be justified in order to establish a nitrogen deficiency threshold where foliar applications may result in increased yields.

Materials and equipment used in this study were provided by Helena Chemical Company. Their support of this project was greatly appreciated. We are also grateful for the support provided through a cooperative project with Western Oklahoma State College and the Oklahoma Center for the Advancement of Science and Technology (OCAST).

Trial ID:	HELFS0201	**Location:**	OSUREC-D
Planting Date:	May 30	**Variety:**	DP 655 B/R, PM 2280 B/R
Row Spacing:	40 Inches	**Planting Rate:**	12 lbs/A
Plot Size:	4 r x 50'	**Harvest Date:**	November 18
Soil Type:	Clay Loam	**Replications:**	3

Rating Data	**N**	**K**	**N**	**K**	**N**	**K**	**N**	**K**	**N**
Rating Unit	**PPM**	**PPM**	**PPM**	**PPM**	**PPM**	**PPM**	**PPM**	**PPM**	**PPM**
Rating Date	**6/25/02**	**6/25/02**	**7/2/02**	**7/2/02**	**7/9/02**	**7/9/02**	**7/15/02**	**7/15/02**	**7/23/02**
TABLE OF R MEANS									
Replicate 1	2225	3631.3	2406.3	5593.8	1887.5	5256.3	2200	4200	1393.8
Replicate 2	2543.8	3293.8	2706.3	5112.5	2218.8	5656.3	2425	4187.5	1476.9
Replicate 3	2412.5	3200	2837.5	4943.8	2368.8	5850	2112.5	4850	1358.8
Replicate 4	2656.3	3106.3	2937.5	4662.5	2531.3	5531.3	1525	4937.5	1555

Varietal Response to Foliar Nitrogen Sources (continued)

Rating Data	K	N	K	N	K	N	K	N	K
Rating Unit	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Rating Date	7/23/02	7/30/02	7/30/02	8/7/02	8/7/02	8/13/02	8/13/02	8/20/02	8/20/02
TABLE OF R MEANS									
Replicate 1	4056.3	983.8	4068.8	660	4343.8	392.5	4862.5	379.4	4143.8
Replicate 2	4525	1321.9	4593.8	695.6	3456.3	407.5	6687.5	373.8	3450
Replicate 3	6125	1114.4	3912.5	802.5	3168.8	441.9	7425	384.4	4737.5
Replicate 4	4993.8	1250	3950	745	2787.5	480	4225	297.5	4581.3

Rating Origin	SEEDCOTT	GIN	LINT	1 POSIT.
Rating Data	YIELD	TURNOUT	YIELD	RETEN.
Rating Unit	LBS/ACRE	PERCENT	LBS/ACRE	PERCENT
Rating Date	10/17/02	12/4/02	10/17/02	10/8/02
TABLE OF R MEANS				
Replicate 1	3179	32.3	1030	55.3
Replicate 2	3655	31.51	1152.4	51.8
Replicate 3	3332	31.65	1055.4	48.4
Replicate 4	3859	31.69	1223	45.9

Varietal Response to Foliar Nitrogen Sources (continued)

Rating Data	N	K	N	K	N	K	N
Rating Unit	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Rating Date	6/25/02	6/25/02	7/2/02	7/2/02	7/9/02	7/9/02	7/15/02
TABLE OF A MEANS							
1 PM 2280 B/R	2365.6	3378.1	2450	5034.4	2087.5	5306.3	1925
2 DP 655 B/R	2553.1	3237.5	2993.8	5121.9	2415.6	5840.6	2206.3
TABLE OF B MEANS							
1 TRAD. REC. NITROGEN APP.	2350	3268.8	2806.3	5025	2218.8	5700	2112.5
2 2/3 TRAD REC + FOLIAR UREA	2462.5	3306.3	2693.8	5112.5	2250	5643.8	1893.8
3 2/3 TRAD REC + FOLIAR CORON	2412.5	3356.3	2662.5	5131.3	2300	5281.3	2225
4 2/3 TRAD REC + FOLIAR WAT	2612.5	3300	2725	5043.8	2237.5	5668.8	2031.3
TABLE OF AB MEANS							
1 PM 2280 B/R 1 TRAD. REC. NITROGEN APP.	2200	3300	2637.5	5025	2037.5	5275	1925
2 DP 655 B/R 1 TRAD. REC. NITROGEN APP.	2500	3237.5	2975	5025	2400	6125	2300
1 PM 2280 B/R 2 2/3 TRAD REC + FOLIAR UREA	2425	3425	2400	5137.5	2075	5437.5	1787.5
2 DP 655 B/R 2 2/3 TRAD REC + FOLIAR UREA	2500	3187.5	2987.5	5087.5	2425	5850	2000
1 PM 2280 B/R 3 2/3 TRAD REC + FOLIAR CORON	2300	3437.5	2312.5	4975	2125	5112.5	2150
2 DP 655 B/R 3 2/3 TRAD REC + FOLIAR CORON	2525	3275	3012.5	5287.5	2475	5450	2300
1 PM 2280 B/R 4 2/3 TRAD REC + FOLIAR WATER	2537.5	3350	2450	5000	2112.5	5400	1837.5
2 DP 655 B/R 4 2/3 TRAD REC + FOLIAR WATER	2687.5	3250	3000	5087.5	2362.5	5937.5	2225

Varietal Response to Foliar Nitrogen Sources (continued)

Rating Data	K	N	K	N	K	N	K
Rating Unit	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Rating Date	7/15/02	7/23/02	7/23/02	7/30/02	7/30/02	8/7/02	8/7/02
TABLE OF A MEANS							
1 PM 2280 B/R	4490.6	1148.8	4890.6	938.8	4081.3	571.6	3334.4
2 DP 655 B/R	4596.9	1743.4	4959.4	1396.3	4181.3	880	3543.8
TABLE OF B MEANS							
1 TRAD. REC. NITROGEN APP.	4500	1587.5	5400	1557.5	4000	1023.8	3550
2 2/3 TRAD REC + FOLIAR UREA	4593.8	1315	4681.3	1109.4	4256.3	581.9	3493.8
3 2/3 TRAD REC + FOLIAR CORON	4456.3	1420.6	4775	1090.6	4156.3	645	3312.5
4 2/3 TRAD REC + FOLIAR WAT	4625	1461.3	4843.8	912.5	4112.5	652.5	3400
TABLE OF AB MEANS							
1 PM 2280 B/R 1 TRAD. REC. NITROGEN APP.	4437.5	1375	5237.5	1177.5	3875	730	3562.5
2 DP 655 B/R 1 TRAD. REC. NITROGEN APP.	4562.5	1800	5562.5	1937.5	4125	1317.5	3537.5
1 PM 2280 B/R 2 2/3 TRAD REC + FOLIAR UREA	4487.5	980	4575	885	4362.5	498.8	3400
2 DP 655 B/R 2 2/3 TRAD REC + FOLIAR UR	4700	1650	4787.5	1333.8	4150	665	3587.5
1 PM 2280 B/R 3 2/3 TRAD REC + FOLIAR CORON	4412.5	1166.3	4725	977.5	4075	520	3162.5
2 DP 655 B/R 3 2/3 TRAD REC + FOLIAR CORON	4500	1675	4825	1203.8	4237.5	770	3462.5
1 PM 2280 B/R 4 2/3 TRAD REC + FOLIAR WATER	4625	1073.8	5025	715	4012.5	537.5	3212.5
2 DP 655 B/R 4 2/3 TRAD REC + FOLIAR WATER	4625	1848.8	4662.5	1110	4212.5	767.5	3587.5

Varietal Response to Foliar Nitrogen Sources (continued)

Rating Data	N	K	N	K	SEEDCOTT	GIN	YIELD	1P RET.
Rating Unit	PPM	PPM	PPM	PPM	LBS/ACRE	PERCENT	LBS/ACRE	PERCENT
Rating Date	8/13/02	8/13/02	8/20/02	8/20/02	10/17/02	12/4/02	10/17/02	10/8/02
TABLE OF A MEANS								
1 PM 2280 B/R	353.1	5528.1	346.9	3862.5	3357.5	30.79	1033.6	43.8
2 DP 655 B/R	507.8	6071.9	370.6	4593.8	3655	32.78	1196.8	56.9
TABLE OF B MEANS								
1 TRAD. REC. NITROGEN APP.	548.1	6131.3	403.8	4406.3	3519	32.11	1129.1	57
2 2/3 TRAD REC + FOLIAR UREA	419.4	5650	314.4	4343.8	3519	31.29	1101.5	50
3 2/3 TRAD REC + FOLIAR CORON	387.5	5506.3	386.9	4112.5	3451	32	1105.5	50.1
4 2/3 TRAD REC + FOLIAR WAT	366.9	5912.5	330	4050	3536	31.75	1124.6	44.1
TABLE OF AB MEANS								
1 PM 2280 B/R 1 TRAD. REC. NITROGEN APP.	400	5662.5	366.3	4025	3366	31.52	1059.8	51.8
2 DP 655 B/R 1 TRAD. REC. NITROGEN APP.	696.3	6600	441.3	4787.5	3672	32.7	1198.5	62.3
1 PM 2280 B/R 2 2/3 TRAD REC + FOLIAR UREA	348.8	4825	355	3837.5	3366	29.98	1009.5	42.8
2 DP 655 B/R 2 2/3 TRAD REC + FOLIAR UR	490	6475	273.8	4850	3672	32.6	1193.5	57.3
1 PM 2280 B/R 3 2/3 TRAD REC + FOLIAR CORON	340	5725	338.8	3675	3332	31.18	1038.3	39
2 DP 655 B/R 3 2/3 TRAD REC + FOLIAR CORON	435	5287.5	435	4550	3570	32.82	1172.8	61.3
1 PM 2280 B/R 4 2/3 TRAD REC + FOLIAR WATER	323.8	5900	327.5	3912.5	3366	30.5	1026.8	41.5
2 DP 655 B/R 4 2/3 TRAD REC + FOLIAR WATER	410	5925	332.5	4187.5	3706	33	1222.5	46.8

Varietal Response to Foliar Nitrogen Sources (continued)

FACTORIAL/POOLED ERROR AOV For PETIOLE N PPM 6/25/02

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	Prob(F)	LSD (.05)
Total	31	2377187.5				
R	3	824062.5	274687.5	6.306	0.0032	217.1
A	1	281250	281250	6.457	0.019	153.5
B	3	300937.5	100312.5	2.303	0.1064	217.1
AB	3	56250	18750	0.43	0.7333	307
ERROR	21	914687.5	43556.54762			

FACTORIAL/POOLED ERROR AOV For PETIOLE K PPM 6/25/02

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	Prob(F)	LSD (.05)
Total	31	2105546.875				
R	3	1256484.375	418828.125	14.092	0.0001	179.3
A	1	158203.125	158203.125	5.323	0.0313	126.8
B	3	31484.375	10494.79167	0.353	0.7873	179.3
AB	3	35234.375	11744.79167	0.395	0.7578	253.6
ERROR	21	624140.625	29720.98214			

FACTORIAL/POOLED ERROR AOV For PETIOLE N PPM 7/2/02

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	Prob(F)	LSD (.05)
Total	31	5099687.5				
R	3	1277812.5	425937.5	7.289	0.0016	251.4
A	1	2365312.5	2365312.5	40.476	0.0001	177.8
B	3	91562.5	30520.83333	0.522	0.6716	251.4
AB	3	137812.5	45937.5	0.786	0.5151	355.5
ERROR	21	1227187.5	58437.5			

Varietal Response to Foliar Nitrogen Sources (continued)

FACTORIAL/POOLED ERROR AOV For PETIOLE K PPM 7/2/02

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	Prob(F)	LSD (.05)
Total	31	5239687.5				
R	3	3662812.5	1220937.5	19.766	0.0001	258.5
A	1	61250	61250	0.992	0.3307	182.8
B	3	64062.5	21354.16667	0.346	0.7926	258.5
AB	3	154375	51458.33333	0.833	0.4907	365.5
ERROR	21	1297187.5	61770.83333			

FACTORIAL/POOLED ERROR AOV For PETIOLE N PPM 7/9/02

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	Prob(F)	LSD (.05)
Total	31	4287421.875				
R	3	1804609.375	601536.4583	8.015	0.0009	284.9
A	1	861328.125	861328.125	11.477	0.0028	201.5
B	3	28984.375	9661.458333	0.129	0.942	284.9
AB	3	16484.375	5494.791667	0.073	0.9737	402.9
ERROR	21	1576015.625	75048.3631			

FACTORIAL/POOLED ERROR AOV For PETIOLE K PPM 7/9/02

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	Prob(F)	LSD (.05)
Total	31	9714921.875				
R	3	1485859.375	495286.4583	2.206	0.1174	492.8
A	1	2284453.125	2284453.125	10.175	0.0044	348.4
B	3	923359.375	307786.4583	1.371	0.279	492.8
AB	3	306484.375	102161.4583	0.455	0.7165	696.9
ERROR	21	4714765.625	224512.6488			

Varietal Response to Foliar Nitrogen Sources (continued)

FACTORIAL/POOLED ERROR AOV For PETIOLE N PPM 7/15/02

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	Prob(F)	LSD (.05)
Total	31	7972187.5				
R	3	3533437.5	1177812.5	7.598	0.0013	409.5
A	1	632812.5	632812.5	4.082	0.0563	289.5
B	3	466562.5	155520.8333	1.003	0.4109	409.5
AB	3	84062.5	28020.83333	0.181	0.9083	579.1
ERROR	21	3255312.5	155014.881			

FACTORIAL/POOLED ERROR AOV For PETIOLE K PPM 7/15/02

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	Prob(F)	LSD (.05)
Total	31	6968750				
R	3	3951250	1317083.333	10.127	0.0002	375.1
A	1	90312.5	90312.5	0.694	0.4141	265.2
B	3	149375	49791.66667	0.383	0.7664	375.1
AB	3	46562.5	15520.83333	0.119	0.9477	530.4
ERROR	21	2731250	130059.5238			

FACTORIAL/POOLED ERROR AOV For PETIOLE N PPM 7/23/02

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	Prob(F)	LSD (.05)
Total	31	8994636.719				
R	3	185414.8438	61804.94792	0.235	0.8711	533.5
A	1	2829225.781	2829225.781	10.75	0.0036	377.3
B	3	304477.3438	101492.4479	0.386	0.7645	533.5
AB	3	148727.3438	49575.78125	0.188	0.9031	754.5
ERROR	21	5526791.406	263180.5432			

Varietal Response to Foliar Nitrogen Sources (continued)

FACTORIAL/POOLED ERROR AOV For PETIOLE K PPM 7/23/02

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	Prob(F)	LSD (.05)
Total	31	53070000				
R	3	18875625	6291875	4.249	0.0171	1265.6
A	1	37812.5	37812.5	0.026	0.8746	894.9
B	3	2513125	837708.3333	0.566	0.6436	1265.6
AB	3	546562.5	182187.5	0.123	0.9455	1789.8
ERROR	21	31096875	1480803.571			

FACTORIAL/POOLED ERROR AOV For PETIOLE N PPM 7/30/02

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	Prob(F)	LSD (.05)
Total	31	11679400				
R	3	537793.75	179264.5833	0.512	0.6786	615.6
A	1	1674450	1674450	4.779	0.0403	435.3
B	3	1811306.25	603768.75	1.723	0.1929	615.6
AB	3	297931.25	99310.41667	0.283	0.8368	870.6
ERROR	21	7357918.75	350377.0833			

FACTORIAL/POOLED ERROR AOV For PETIOLE K PPM 7/30/02

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	Prob(F)	LSD (.05)
Total	31	11873750				
R	3	2388125	796041.6667	1.885	0.163	675.8
A	1	80000	80000	0.189	0.6678	477.9
B	3	270625	90208.33333	0.214	0.8858	675.8
AB	3	268125	89375	0.212	0.8872	955.7
ERROR	21	8866875	422232.1429			

Varietal Response to Foliar Nitrogen Sources (continued)

FACTORIAL/POOLED ERROR AOV For PETIOLE N PPM 8/7/02

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	Prob(F)	LSD (.05)
Total	31	8094005.469				
R	3	91933.59375	30644.53125	0.106	0.9555	558.4
A	1	761069.5313	761069.5313	2.64	0.1191	394.9
B	3	971121.0938	323707.0313	1.123	0.3624	558.4
AB	3	215321.0938	71773.69792	0.249	0.8612	789.7
ERROR	21	6054560.156	288312.3884			

FACTORIAL/POOLED ERROR AOV For PETIOLE K PPM 8/7/02

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	Prob(F)	LSD (.05)
Total	31	17513671.88				
R	3	10530859.38	3510286.458	11.914	0.0001	564.5
A	1	350703.125	350703.125	1.19	0.2876	399.2
B	3	262734.375	87578.125	0.297	0.827	564.5
AB	3	182109.375	60703.125	0.206	0.8911	798.3
ERROR	21	6187265.625	294631.6964			

FACTORIAL/POOLED ERROR AOV For PETIOLE N PPM 8/13/02

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	Prob(F)	LSD (.05)
Total	31	2430367.969				
R	3	36421.09375	12140.36458	0.128	0.9422	319.9
A	1	191425.7813	191425.7813	2.023	0.1696	226.2
B	3	158852.3438	52950.78125	0.56	0.6475	319.9
AB	3	56933.59375	18977.86458	0.201	0.8948	452.4
ERROR	21	1986735.156	94606.43601			

Varietal Response to Foliar Nitrogen Sources (continued)

FACTORIAL/POOLED ERROR AOV For PETIOLE K PPM 8/13/02

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	Prob(F)	LSD (.05)
Total	31	83155000				
R	3	54302500	18100833.33	19.577	0.0001	1000
A	1	2365312.5	2365312.5	2.558	0.1247	707.1
B	3	1849375	616458.3333	0.667	0.5818	1000
AB	3	5221562.5	1740520.833	1.882	0.1635	1414.2
ERROR	21	19416250	924583.3333			

FACTORIAL/POOLED ERROR AOV For PETIOLE N PPM 8/20/02

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	Prob(F)	LSD (.05)
Total	31	713800				
R	3	40468.75	13489.58333	0.484	0.697	173.6
A	1	4512.5	4512.5	0.162	0.6915	122.8
B	3	44893.75	14964.58333	0.537	0.6622	173.6
AB	3	38518.75	12839.58333	0.461	0.7128	245.6
ERROR	21	585406.25	27876.4881			

FACTORIAL/POOLED ERROR AOV For PETIOLE K PPM 8/20/02

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	Prob(F)	LSD (.05)
Total	31	23744687.5				
R	3	7974062.5	2658020.833	5.497	0.006	723.2
A	1	4277812.5	4277812.5	8.848	0.0072	511.3
B	3	721562.5	240520.8333	0.497	0.688	723.2
AB	3	617812.5	205937.5	0.426	0.7364	1022.7
ERROR	21	10153437.5	483497.0238			

Varietal Response to Foliar Nitrogen Sources (continued)

FACTORIAL/POOLED ERROR AOV For SEEDCOTT PLOT WT. LBS/PLOT 10/17/02

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	Prob(F)	LSD (.05)
Total	31	6986.71875				
R	3	3071.09375	1023.697917	7.419	0.0014	12.2
A	1	957.03125	957.03125	6.936	0.0155	8.6
B	3	46.09375	15.364583	0.111	0.9525	12.2
AB	3	14.84375	4.947917	0.036	0.9906	17.3
ERROR	21	2897.65625	137.983631			

FACTORIAL/POOLED ERROR AOV For SEEDCOTT YIELD LBS/ACRE 10/17/02

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	Prob(F)	LSD (.05)
Total	31	5169054				
R	3	2272118	757372.6667	7.419	0.0014	332.3
A	1	708050	708050	6.936	0.0155	235
B	3	34102	11367.33333	0.111	0.9525	332.3
AB	3	10982	3660.666667	0.036	0.9906	469.9
ERROR	21	2143802	102085.8095			

FACTORIAL/POOLED ERROR AOV For GIN TURNOUT PERCENT 12/4/02

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	Prob(F)	LSD (.05)
Total	31	50.894955				
R	3	2.937501	0.979167	2.006	0.144	0.73
A	1	31.60118	31.60118	64.728	0.0001	0.51
B	3	3.217508	1.072503	2.197	0.1185	0.73
AB	3	2.886259	0.962086	1.971	0.1493	1.03
ERROR	21	10.252506	0.488215			

Varietal Response to Foliar Nitrogen Sources (continued)

FACTORIAL/POOLED ERROR AOV For LINT YIELD LBS/ACRE 10/17/02

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	Prob(F)	LSD (.05)
Total	31	628694.875				
R	3	190727.125	63575.70833	6.227	0.0034	105.1
A	1	213204.5	213204.5	20.881	0.0002	74.3
B	3	4516.125	1505.375	0.147	0.9302	105.1
AB	3	5827.25	1942.416667	0.19	0.9019	148.6
ERROR	21	214419.875	10210.47024			

FACTORIAL/POOLED ERROR AOV For 1 POSIT. RETEN. PERCENT 10/8/02

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	Prob(F)	LSD (.05)
Total	31	4184.875				
R	3	399.125	133.041667	1.948	0.1528	8.6
A	1	1378.125	1378.125	20.176	0.0002	6.1
B	3	665.125	221.708333	3.246	0.0424	8.6
AB	3	308.125	102.708333	1.504	0.2426	12.2
ERROR	21	1434.375	68.303571			

Varietal Response to Foliar Nitrogen Sources (continued)

APPLICATION DESCRIPTION

	A	B	C	D	E	F
Application Date:	6/26/02	7/23/02	8/5/02	8/7/02	8/14/02	8/22/02
Time of Day:	8:45 AM	3:15 PM	10:00 AM	10:30 AM	11:00 AM	10:00 AM
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	PINHEAD	MIDBLOOM	MIDBLOOM	LATEBLOOM	LATEBLOOM	CUTOUT
Applic. Placement:	BROADCAST	BROADCAST	BROADCAST	BROADCAST	BROADCAST	BROADCAST
Air Temp., Unit:	80 F	95 F	88 F	94 F	81 F	84 F
% Relative Humidity:	62	20	44	44	28	52
Wind Velocity, Unit:	3 MPH	3 MPH	3 MPH	6 MPH	5 MPH	5 MPH
Soil Temp., Unit:	80 F	89 F	88 F	90 F	81 F	88 F
Soil Moisture:	DRY	GOOD	GOOD	GOOD	GOOD	GOOD
% Cloud Cover:	40	80	0	0	0	30

APPLICATION EQUIPMENT

	A	B	C	D	E	F
Appl. Equipment:	LEESPIDER	LEESPIDER	LEESPIDER	LEESPIDER	LEESPIDER	LEESPIDER
Operating Pressure:	22 PSI	22 PSI	22 PSI	22 PSI	22 PSI	22 PSI
Nozzle Type:	TJFLATFAN	TJFLATFAN	TJFLATFAN	TJFLATFAN	TJFLATFAN	TJFLATFAN
Nozzle Size:	8002 VS	8002 VS	8002 VS	8002 VS	8002 VS	8002 VS
Nozzle Spacing, Unit:	20 IN	20 IN	20 IN	20 IN	20 IN	20 IN
Nozzles/Row:	2	2	2	2	2	2
Ground Speed, Unit:	4 MPH	4 MPH	4 MPH	4 MPH	4 MPH	4 MPH
Carrier:	WATER	WATER	WATER	WATER	WATER	WATER
Spray Volume, Unit:	10 GPA	10 GPA	10 GPA	10 GPA	10 GPA	10 GPA
Propellant:	COMP. AIR	COMP. AIR	COMP. AIR	COMP. AIR	COMP. AIR	COMP. AIR

Effects of Simulated Glyphosate Drift on Conventional Cotton

Project Summary:

Although a large percentage of cotton planted contains the Roundup Ready gene, a significant portion of the acreage is still planted to non-tolerant varieties. Therefore, the opportunity for crop injury from drift remains an issue for Oklahoma's cotton producers. The information presented within this trial consists of second year data of an ongoing cooperative project between OSU and Texas A&M researchers in hopes of generating data which aids in the determination of a cotton crops ability to recover from Glyphosate drift. Although much of this determination depends upon environment, the ability to correlate visual observations with quantitative values for yield reduction could be of value. Therefore, five different rates were applied simulating glyphosate drift at 4 different timings during the growing season. Visual observations of injury were taken following each application and plants from each plot were mapped in order to monitor fruit development and retention. Plots were harvested and lint samples were analyzed by HVI for fiber property comparison. Results of crop injury, fruit retention, yield and fiber quality analysis represented in the tables below.

Trial ID:	OSUCT0201	**Location:**	WOSC
Planting Date:	May 9	**Variety:**	DP 237 B
Row Spacing:	40 Inches	**Planting Rate:**	12 lbs/A
Plot Size:	4 r x 50'	**Harvest Date:**	November 18
Soil Type:	Clay Loam	**Replications:**	3

Crop Code							COTTON	COTTON	COTTON
Rating Data Type							INJURY	INJURY	INJURY
Rating Unit							PERCENT	PERCENT	PERCENT
Rating Date							6/14/02	6/21/02	7/8/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code			
1	UNTREATED							0 f	0 h	0 e
2	GLYPHOSATE	5	SL	0.0313	LB A/A	C-I LF	A	0 f	2.5 h	0 e
3	GLYPHOSATE	5	SL	0.0625	LB A/A	C-I LF	A	11.3 e	3.8 h	0 e

Effects of Simulated Glyphosate Drift on Conventional Cotton
(continued)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	COTTON INJURY PERCENT 6/14/02	COTTON INJURY PERCENT 6/21/02	COTTON INJURY PERCENT 7/8/02
4	GLYPHOSATE	5	SL	0.125	LB A/A	C-l LF	A	35 d	11.3 g	0 e
5	GLYPHOSATE	5	SL	0.25	LB A/A	C-l LF	A	66.3 b	65 d	27.5 c
6	GLYPHOSATE	5	SL	0.5	LB A/A	C-l LF	A	93.8 a	93.8 a	42.5 a
7	GLYPHOSATE	5	SL	0.0313	LB A/A	4LF	B	37.5 d	27.5 e	0 e
8	GLYPHOSATE	5	SL	0.0625	LB A/A	4LF	B	6.3 ef	2.5 h	0 e
9	GLYPHOSATE	5	SL	0.125	LB A/A	4LF	B	11.3 e	20 f	0 e
10	GLYPHOSATE	5	SL	0.25	LB A/A	4LF	B	56.3 c	75 c	36.3 b
11	GLYPHOSATE	5	SL	0.5	LB A/A	4LF	B	67.5 b	88.8 b	42.5 a
12	GLYPHOSATE	5	SL	0.0313	LB A/A	PIN SQ	C	0 f	0 h	10 d
13	GLYPHOSATE	5	SL	0.0625	LB A/A	PIN SQ	C	0 f	0 h	13.8 d
14	GLYPHOSATE	5	SL	0.125	LB A/A	PIN SQ	C	0 f	0 h	26.3 c
15	GLYPHOSATE	5	SL	0.25	LB A/A	PIN SQ	C	0 f	0 h	26.3 c
16	GLYPHOSATE	5	SL	0.5	LB A/A	PIN SQ	C	0 f	0 h	40 ab
17	GLYPHOSATE	5	SL	0.0313	LB A/A	EARL BLM	D	0 f	0 h	0 e

Effects of Simulated Glyphosate Drift on Conventional Cotton
(continued)

Crop Code								COTTON	COTTON	COTTON
Rating Data Type								INJURY	INJURY	INJURY
Rating Unit								PERCENT	PERCENT	PERCENT
Rating Date								6/14/02	6/21/02	7/8/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code			
17	GLYPHOSATE	5	SL	0.0313	LB A/A	EARL BLM	D	0 f	0 h	0 e
18	GLYPHOSATE	5	SL	0.0625	LB A/A	EARL BLM	D	0 f	0 h	0 e
19	GLYPHOSATE	5	SL	0.125	LB A/A	EARL BLM	D	0 f	0 h	0 e
20	GLYPHOSATE	5	SL	0.25	LB A/A	EARL BLM	D	0 f	0 h	0 e
21	GLYPHOSATE	5	SL	0.5	LB A/A	EARL BLM	D	0 f	0 h	0 e
LSD (P=.05)								9.64	4.61	5.35
Standard Deviation								6.82	3.26	3.78
CV								37.19	17.56	29.99

Means followed by same letter do not significantly differ (P=.05, LSD)

Effects of Simulated Glyphosate Drift on Conventional Cotton
(continued)

Crop Code								COTTON	SEEDCOTN	GIN
Rating Data Type								INJURY	YIELD	TURNOUT
Rating Unit								PERCENT	LBS/ACRE	PERCENT
Rating Date								8/5/02	11/14/02	12/18/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code			
1	UNTREATED							0 c	2828 abc	37.55 a
2	GLYPHOSATE	5	SL	0.0313	LB A/A	C-l LF	A	0 c	2831 abc	36.75 ab
3	GLYPHOSATE	5	SL	0.0625	LB A/A	C-l LF	A	0 c	2688 b-f	36.28 abc
4	GLYPHOSATE	5	SL	0.125	LB A/A	C-l LF	A	0 c	2636 c-g	36.7 ab
5	GLYPHOSATE	5	SL	0.25	LB A/A	C-l LF	A	0 c	2538 d-h	36.88 ab
6	GLYPHOSATE	5	SL	0.5	LB A/A	C-l LF	A	21.3 a	2028 j	36.53 ab
7	GLYPHOSATE	5	SL	0.0313	LB A/A	4LF	B	0 c	2772 a-d	35.85 bc
8	GLYPHOSATE	5	SL	0.0625	LB A/A	4LF	B	0 c	2776 a-d	36.5 ab
9	GLYPHOSATE	5	SL	0.125	LB A/A	4LF	B	5 bc	2490 fgh	36.75 ab
10	GLYPHOSATE	5	SL	0.25	LB A/A	4LF	B	3.8 bc	2516 e-h	36.3 abc
11	GLYPHOSATE	5	SL	0.5	LB A/A	4LF	B	27.5 a	2161 ij	36.35 ab
12	GLYPHOSATE	5	SL	0.0313	LB A/A	PIN SQ	C	0 c	2681 b-f	36.97 ab
13	GLYPHOSATE	5	SL	0.0625	LB A/A	PIN SQ	C	0 c	2743 a-e	36.33 ab
14	GLYPHOSATE	5	SL	0.125	LB A/A	PIN SQ	C	0 c	2772 a-d	35.9 bc
15	GLYPHOSATE	5	SL	0.25	LB A/A	PIN SQ	C	0 c	2607 c-g	36.85 ab

Effects of Simulated Glyphosate Drift on Conventional Cotton
(continued)

Crop Code								COTTON	SEEDCOTN	GIN
Rating Data Type								INJURY	YIELD	TURNOUT
Rating Unit								PERCENT	LBS/ACRE	PERCENT
Rating Date								8/5/02	11/14/02	12/18/02
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code			
16	GLYPHOSATE	5	SL	0.5	LB A/A	PIN SQ	C	7.5 bc	2415 gh	37.07 ab
17	GLYPHOSATE	5	SL	0.0313	LB A/A	EARL BLM	D	0 c	2912 ab	37.55 a
18	GLYPHOSATE	5	SL	0.0625	LB A/A	EARL BLM	D	0 c	2984 a	36.3 abc
19	GLYPHOSATE	5	SL	0.125	LB A/A	EARL BLM	D	0 c	2974 a	36.38 ab
20	GLYPHOSATE	5	SL	0.25	LB A/A	EARL BLM	D	11.3 b	2545 d-g	36.23 abc
21	GLYPHOSATE	5	SL	0.5	LB A/A	EARL BLM	D	7.5 bc	2288 hi	34.83 c
LSD (P=.05)								8.22	252.7	1.478
Standard Deviation								5.81	178.7	1.045
CV								145.78	6.8	2.86

Means followed by same letter do not significantly differ (P=.05, LSD)

Effects of Simulated Glyphosate Drift on Conventional Cotton
(continued)

Crop Code								LINT	FIBER	FIBER
Rating Data Type								YIELD	DATA	DATA
Rating Unit								LBS/ACRE	MIC	LENGTH
Rating Date								12/18/02	1/20/03	1/20/03
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code			
1	UNTREATED							1062 abc	5.03 abc	1.08 a-d
2	GLYPHOSATE	5	SL	0.0313	LB A/A	C-l LF	A	1040 a-d	4.98 a-d	1.065 cd
3	GLYPHOSATE	5	SL	0.0625	LB A/A	C-l LF	A	974 c-g	5.1 ab	1.077 a-d
4	GLYPHOSATE	5	SL	0.125	LB A/A	C-l LF	A	969 c-g	5 abc	1.07 bcd
5	GLYPHOSATE	5	SL	0.25	LB A/A	C-l LF	A	936 efg	5 abc	1.06 d
6	GLYPHOSATE	5	SL	0.5	LB A/A	C-l LF	A	742 i	4.7 de	1.077 a-d
7	GLYPHOSATE	5	SL	0.0313	LB A/A	4LF	B	993 b-g	4.82 b-e	1.075 a-d
8	GLYPHOSATE	5	SL	0.0625	LB A/A	4LF	B	1012 a-e	5.1 ab	1.075 a-d
9	GLYPHOSATE	5	SL	0.125	LB A/A	4LF	B	915 efg	4.8 cde	1.075 a-d
10	GLYPHOSATE	5	SL	0.25	LB A/A	4LF	B	912 fg	4.67 e	1.06 d
11	GLYPHOSATE	5	SL	0.5	LB A/A	4LF	B	786 i	4.63 e	1.065 cd
12	GLYPHOSATE	5	SL	0.0313	LB A/A	PIN SQ	C	991 b-g	5.03 abc	1.085 abc
13	GLYPHOSATE	5	SL	0.0625	LB A/A	PIN SQ	C	996 a-f	5 abc	1.065 cd
14	GLYPHOSATE	5	SL	0.125	LB A/A	PIN SQ	C	994 b-f	4.85 a-e	1.085 abc
15	GLYPHOSATE	5	SL	0.25	LB A/A	PIN SQ	C	961 d-g	4.82 b-e	1.095 a

Effects of Simulated Glyphosate Drift on Conventional Cotton
(continued)

Crop Code								LINT	FIBER	FIBER
Rating Data Type								YIELD	DATA	DATA
Rating Unit								LBS/ACRE	MIC	LENGTH
Rating Date								12/18/02	1/20/03	1/20/03
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code			
16	GLYPHOSATE	5	SL	0.5	LB A/A	PIN SQ	C	895 gh	5 abc	1.077 a-d
17	GLYPHOSATE	5	SL	0.0313	LB A/A	EARL BLM	D	1094 a	5.13 a	1.09 ab
18	GLYPHOSATE	5	SL	0.0625	LB A/A	EARL BLM	D	1083 ab	5.07 abc	1.077 a-d
19	GLYPHOSATE	5	SL	0.125	LB A/A	EARL BLM	D	1081 ab	5 abc	1.068 bcd
20	GLYPHOSATE	5	SL	0.25	LB A/A	EARL BLM	D	922 efg	4.88 a-e	1.08 a-d
21	GLYPHOSATE	5	SL	0.5	LB A/A	EARL BLM	D	798 hi	4.68 e	1.087 abc
LSD (P=.05)								98.3	0.296	0.0239
Standard Deviation								69.5	0.209	0.0169
CV								7.24	4.26	1.57

Means followed by same letter do not significantly differ (P=.05, LSD)

Effects of Simulated Glyphosate Drift on Conventional Cotton
(continued)

Crop Code								FIBER	FIBER
Rating Data Type								DATA	DATA
Rating Unit								UNIFORM	STRENGTH
Rating Date								1/20/03	1/20/03
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code		
1	UNTREATED							84.32 abc	30.33 abc
2	GLYPHOSATE	5	SL	0.0313	LB A/A	C-I LF	A	83.73 bc	30.38 abc
3	GLYPHOSATE	5	SL	0.0625	LB A/A	C-I LF	A	84.55 abc	31.03 ab
4	GLYPHOSATE	5	SL	0.125	LB A/A	C-I LF	A	84.25 abc	30.67 abc
5	GLYPHOSATE	5	SL	0.25	LB A/A	C-I LF	A	83.55 c	30.42 abc
6	GLYPHOSATE	5	SL	0.5	LB A/A	C-I LF	A	84.18 abc	30.22 bc
7	GLYPHOSATE	5	SL	0.0313	LB A/A	4LF	B	84.52 abc	30.55 abc
8	GLYPHOSATE	5	SL	0.0625	LB A/A	4LF	B	84.38 abc	30.48 abc
9	GLYPHOSATE	5	SL	0.125	LB A/A	4LF	B	84.72 ab	30.85 abc
10	GLYPHOSATE	5	SL	0.25	LB A/A	4LF	B	84.15 abc	30.5 abc
11	GLYPHOSATE	5	SL	0.5	LB A/A	4LF	B	84.6 ab	29.52 c
12	GLYPHOSATE	5	SL	0.0313	LB A/A	PIN SQ	C	84.73 ab	29.73 bc
13	GLYPHOSATE	5	SL	0.0625	LB A/A	PIN SQ	C	84.63 ab	30.18 bc
14	GLYPHOSATE	5	SL	0.125	LB A/A	PIN SQ	C	83.57 c	30.45 abc
15	GLYPHOSATE	5	SL	0.25	LB A/A	PIN SQ	C	84.55 abc	30.2 bc

Effects of Simulated Glyphosate Drift on Conventional Cotton
(continued)

Crop Code								FIBER	FIBER
Rating Data Type								DATA	DATA
Rating Unit								UNIFORM	STRENGTH
Rating Date								1/20/03	1/20/03
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code		
16	GLYPHOSATE	5	SL	0.5	LB A/A	PIN SQ	C	84.75 a	30.9 ab
17	GLYPHOSATE	5	SL	0.0313	LB A/A	EARL BLM	D	84.28 abc	30.1 bc
18	GLYPHOSATE	5	SL	0.0625	LB A/A	EARL BLM	D	83.83 abc	30.3 abc
19	GLYPHOSATE	5	SL	0.125	LB A/A	EARL BLM	D	84.65 ab	30.97 ab
20	GLYPHOSATE	5	SL	0.25	LB A/A	EARL BLM	D	84.25 abc	31.6 a
21	GLYPHOSATE	5	SL	0.5	LB A/A	EARL BLM	D	84.5 abc	30.47 abc
LSD (P=.05)								1.024	1.374
Standard Deviation								0.724	0.972
CV								0.86	3.19

Means followed by same letter do not significantly differ (P=.05, LSD)

Effects of Simulated Glyphosate Drift on Conventional Cotton
(continued)

APPLICATION DESCRIPTION

	A	B	C	D
Application Date:	5/29/02	6/7/02	6/24/02	7/15/02
Time of Day:	11:40 AM	2:00 PM	9:30 AM	1:30 PM
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	COT-1LEAF	4 LEAF	PINHEAD	EARLYBLM
Applic. Placement:	BROADCAST	BROADCAST	BROADCAST	BROADCAST
Air Temp., Unit:	85 F	89 F	83 F	91 F
% Relative Humidity:	30	42	40	18
Wind Velocity, Unit:	2.5 MPH	8.6 MPH	6 MPH	2.6 MPH
Soil Temp., Unit:	80 F	90 F	83 F	90 F
Soil Moisture:	GOOD	FAIR	DRY	FAIR
% Cloud Cover:	5	70	40	50

APPLICATION EQUIPMENT

	A	B	C	D
Appl. Equipment:	LEESPIDER	LEESPIDER	LEESPIDER	LEESPIDER
Operating Pressure:	22 PSI	22 PSI	22 PSI	22 PSI
Nozzle Type:	TJFLATFAN	TJFLATFAN	TJFLATFAN	TJFLATFAN
Nozzle Size:	8002 VS	8002 VS	8002 VS	8002 VS
Nozzle Spacing, Unit:	20 IN	20 IN	20 IN	20 IN
Nozzles/Row:	2	2	2	2
Ground Speed, Unit:	4 MPH	4 MPH	4 MPH	4 MPH
Carrier:	WATER	WATER	WATER	WATER
Spray Volume, Unit:	10 GPA	10 GPA	10 GPA	10 GPA
Propellant:	COMP. AIR	COMP. AIR	COMP. AIR	COMP. AIR

No-Till Plant Population in Dryland Cotton-1

Project Summary:

Since the introduction of the Roundup Ready system, reduced tillage farming has continued to gain attention across the cotton belt. Rising costs coupled with environmental uncertainty often presents Oklahoma's dryland cotton producer quite a challenge. In most cotton production systems (dryland included), efficiency is typically maximized by reducing inputs whenever possible. Plant population or seeding rate is one area that varies across the state. Rising costs of transgenic cotton have forced many producers to consider reducing their seeding rates. The question often asked is "How low can I go?" In an attempt to address this question, two locations were established in 2002 where 3 or 4 different seeding rates were used. This location (Washita County) compared seeding rates of 5, 7, 9, and 11 lbs/A. Plots were established in the later part of May in good residue with a John Deere 1700 vaccum planter equipped with John Deere down pressure springs, residue fingers, and 25 wave coulters. All plots were fertilized with 40 lbs of Nitrogen early in the season and were harvested in late October with a John Deere 7445 brush stripper equipped with a burr extractor. Lint samples were taken for ginning and HVI fiber analysis.

Trial ID:	OSUTC0201	**Location:**	Washita County
Planting Date:	May 21	**Variety:**	PM 2280 B/R
Row Spacing:	40 Inches	**Planting Rates:**	5,7,9 & 11 lbs/A
Plot Size:	4 r x 1120'	**Harvest Date:**	October 23

Seeding Rate	Gin % Percent	Yield Lbs/A	Fiber Mic	Fiber Length	Fiber Uniformity	Fiber Strength
11 lb/A	0.25	597	3.9	1.07	82.3	31.9
9 lb/A	0.26	583	4	1.06	83.3	32
7 lb/A	0.25	556	3.8	1.06	82.2	29
5 lb/A	0.26	516	4.1	1.05	83.3	29.6

No-Till Plant Population in Dryland Cotton-2

Project Summary:

This location (Custer County) compared seeding rates of 7, 9, and 11 lbs/A. Plots were established in the mid-May in good residue with a John Deere 1700 vaccum planter equipped with John Deere down pressure springs, residue fingers, and 25 wave coulters. Plots were harvested in mid-November due to rainy weather throughout October. Lint samples were taken for ginning and HVI fiber analysis.

Trial ID:	OSUTC0202	**Location:**	Custer County
Planting Date:	May 15	**Variety:**	PM 2280 B/R
Row Spacing:	40 Inches	**Planting Rates:**	7,9 & 11 lbs/A
Plot Size:	4 r x 1320'	**Harvest Date:**	November 15

Seeding Rate	Gin % Percent	Yield Lbs/A	Fiber Mic	Fiber Length	Fiber Uniformity	Fiber Strength
7 lb/A	0.21	493	4.7	1.04	83	32.3
9 lb/A	0.20	570	4.2	1.04	82	31.6
11 lb/A	0.20	427	4.5	1.04	81.9	30.7

Agronomic Systems Comparison
Conventional vs. Roundup Ready vs. Stacked Gene Dryland Cotton Production

Project Summary:

An agronomic demonstration was established in Custer County comparing three cotton production systems: A conventional tillage/variety, a No-Till Roundup Ready system, and a No-Till Stacked Gene System. Plots were established in mid-May with a conventional John Deere 7100 Maxemerge planter in the conventional plot and in wheat residue with a John Deere 1700 vacuum planter equipped with John Deere down pressure springs, residue fingers, and 25 wave coulters. Plots were harvested in mid-November due to rainy weather throughout October. Lint samples were taken for ginning and HVI fiber analysis. The tables below present all pertinent production information and a brief comparison of net returns to partial expenses.

Trial ID:	OSUTC0203	**Location:**	Custer County
Planting Date:	May 15	**Varieties:**	PM 280, 2200 RR, 2280 B/R
Row Spacing:	40 Inches	**Planting Rates:**	14 & 9 lbs/A
Plot Size:	16r x 1320'	**Harvest Date:**	November 15

Production Economics

	Conventional PM 280			Red. Till-PM 2200 RR			Red. Till-PM 2280 B/R		
Off-Season Land Preparation	**Qty**	**Date**	**Total $**	**Qty**	**Date**	**Total $**	**Qty.**	**Date**	**Total$**
Stalk Shredding	1	11/15/01	7.00	1	11/15/01	7.00	1	11/15/01	7.00
Disk	1	11/15/01	7.00						
Chisel	1	11/18/01	7.00						
Springtooth Harrow	1	11/20/01,4/5/02	12.00	1	11/21/01	6.00	1	11/20/01	6.00
Air seeding of wheat				1	11/20/01	7.00	1	11/20/01	7.00
Total			**33.00**			**20.00**			**20.00**

Agronomic Systems Comparison (continued)

Weed Control	Conventional PM 280 Qty	Date	Total $	Red. Till-PM 2200 RR Qty	Date	Total $	Red. Till-PM 2280 B/R Qty.	Date	Total$
Cultivation	2	6/7, 7/12/02	12.00						
Trilin (1 qt/A)	1	4/5/02	7.75						
Staple (1.2 oz/A)	1	6/10/02	30.00						
Roundup Ultramax (spot sprays)	1	7/25/02	1.50						
Roundup U. (Burndown - 26 oz/A)				1	4/15/02	13.00	1	4/15/02	13.00
Roundup U. (5 leaf - 26/oz/A)				1	6/10/02	13.00	1	6/10/02	13.00
Roundup U. (Redball Hood-26/oz/A)				1	7/25/02	13.00	1	7/25/02	13.00
Dual Mag. (Redball Hood - 16 oz/A)				1	7/25/02	12.00	1	7/25/02	12.00
Total			**51.25**			**51.00**			**51.00**
Insect Control									
none									
Temik (at planting 2.0 lb/A)				1	5/15/02	7.00	1	5/15/02	7.00
Total			**0.00**			**7.00**			**7.00**
Growth Regulators									
Mepiquat Chloride (3 oz/A)	2	6/10, 7/15/02	10.40	2	6/10, 7/15/02	10.40	2	6/10, 7/15/02	10.40
Total			**10.40**			**10.40**			**10.40**
Fertility									
120 lbs/A of 34-34-0	1		7.50	1		7.50	1		7.50
Total			**7.50**			**7.50**			**7.50**
Seed & Planting Cost									
PM 280 (14 lbs/A)	1	5/15/02	11.20						
Conventional Planting	1	5/15/02	7.00						
PM 2200 RR (9 lbs/A)				1	5/15/02	12.60			
No-Till Planting				1	5/15/02	9.00	1	5/15/02	9.00
PM 2280 B/R (9 lbs/A)							1	5/15/02	25.00
Total			**11.20**			**21.60**			**34.00**
Yield & Fiber Quality									
Gin%			17			18			2
Yield lbs/A			453			712			976
Mic			3.5			3.4			3.5
Length			1.08			1.04			1.05
Uniformity			81.9			82.4			82.6
Strength			32			30.2			32.5
Net Returns									
Gross Income (cotton price of $0.50/lb)			226.50			356.00			488.00
Total (Partial Expense)			113.35			117.50			129.90
Net Return/Acre			**113.15**			**238.50**			**358.10**