2014

Result Demonstration Handbook

Nueces County

Extending Knowledge, Providing Solutions.

TEXAS A&M AGRILIFE EXTENSION

Texas A&M AgriLife Extension Service, Dr. Doug Steele, Director, The Texas A&M University System, College Station, Texas

Extension provides practical education you can trust to help people, businesses and communities solve problems, develop skills, and build a better future.

Extending Knowledge

Providing Solutions

TEXAS A&M AGRILIFE EXTENSION

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Office of Nueces County

FOREWORD

This publication was produced for Coastal Bend agricultural producers by the Nueces County Extension Office and contains results of demonstrations and applied research projects planned by the Agriculture and Natural Resources Committee with cooperating farmers and ranchers. The support provided by cooperators, Texas A&M AgriLife Extension Service specialists, staff, research scientists of Texas A&M AgriLife Research, and private industry was essential for the completion of this book and is greatly appreciated.

Weather is always a major driver of the end result in production agriculture. This year started with better soil moisture profiles than we have seen in a couple of years, but they were still marginal due to drought conditions. None the less, rains at planting allowed for good stand establishment. The emergence of Sugarcane Aphid as a pest in grain sorghum and the lack of rainfall after flowering, quickly lowered yield expectation on a good crop. Cotton yields varied widely across the county based on planting date and precipitation.

The demonstration and applied research projects were conducted to provide information to the local Ag industry on the performance of certain new agricultural technologies and management practices under Nueces County growing conditions.

Many results reported in this book are based on only one year's data. It should be remembered that different growing conditions might produce different results. Results obtained from a three to five-year period are more reliable and should be used for making a complete change from normal production or management practices.

Any references made to commercial products or trade names were made solely for educational purposes with the understanding that neither endorsement nor discrimination is implied by the Texas A&M AgriLife Extension Service or its agents.

It is my hope that information contained within this document might be put to use to enhance the performance of agricultural enterprises in the Coastal Bend of Texas.

Jason P. Ott

Jason P. Ott
County Extension Agent
Texas A&M AgriLife Extension Service
Agriculture & Natural Resources
Nueces County

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AGRICULTURAL RESULT DEMONSTRATIONS

"Planning, Implementing and Evaluating"

For over 100 years "result demonstrations" have been one of the most effective educational methods used by County Extension Agents to encourage the adoption of research based knowledge by local farmers and ranchers. The result demonstration is a well planned trial that measures the benefits derived from the use of a given practice under local conditions. Demonstration trials are an effective means of evaluating the benefits of new crop protection chemicals, improvements in planting seed genetics and other technological advancements.

Result demonstrations are not conducted without a purpose or need. They are the basis for the County Extension educational program efforts directed at local problems and providing a stronger data base for agricultural decision making.

The citizens who serve on the various Extension program area committees are largely responsible for identifying problem areas. Committees made up of individuals involved in various phases of agriculture, willingly volunteer their time and talents. These committees are responsible for giving direction to the Extension program effort and for identifying problem areas that need to be addressed through result demonstrations or other methods.

The Nueces County Agricultural Extension Agents greatly appreciate the assistance provided by the members of the Agriculture & Natural Resources Committee, Field Crops Task Force and Livestock Task Force committees. Without their support and direction and the involvement of the cooperators, the demonstration results reported in this publication would not have been possible.

AGRICULTURE & NATURAL RESOURCES COMMITTEE MEMBERS

Jimmy Dodson
Daniel Jackson
David Mayo
Scott Frazier
Jon Herrmann
Mark Miller
John Freeman
Darrell Lawhon

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Lincoln McNair
Mark Miller
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John Freeman

LIVESTOCK TASK FORCE MEMBERS

Jon Herrmann
Scott Frazier
Leon Little
Daniel Jackson

ACKNOWLEDGEMENTS

We wish to acknowledge those who contributed products or services to the success of these demonstrations. We greatly appreciate their support. Individual cooperators are acknowledged in the introduction of each demonstration report. The support provided by the members of the Extension Leadership Advisory Board, the Field Crops Task Force, Livestock Task Force and Ag & Natural Resources committee are also appreciated. Without the support of the Nueces County Commissioners Court and the County Extension Office staff, these result demonstrations and this handbook would not have been possible. Special thanks to Perry Foundation for their support in making printing of this book possible.

NUECES COUNTY COMMISSIONER'S COURT

County Judge	Loyd Neal
Commissioner Precinct 1	Mike Pusley
Commissioner Precinct 2	Joe A. Gonzalez
Commissioner Precinct 3	Oscar Ortiz
Commissioner Precinct 4	Joe McComb

NUECES COUNTY EXTENSION LEADERSHIP ADVISORY BOARD

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Jan Shannon	Harvey Buehring	Kacy Frazier	Rene Chapman
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COOPERATING SEED COMPANIES

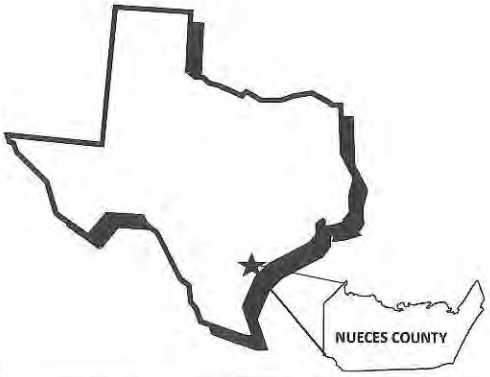
All-Tex Seed Co.	P O Box 1057	Levelland, TX 79336
Americot	105 Buck Lane	Georgetown, TX 78628
B-H Genetics	5933 FM 1157	Ganado, TX 77962
Bayer/Fibermax	13557 Carlos 5th Port	Corpus Christi, TX 78418
Cargill Specialty Canola Oils	2300 N Yellowstone Hwy, Suite 122	Idaho Falls, ID 83401
Croplan Genetics	P O 476	Taft, TX 78390
Dreamland Industries LTD.	126 Bacacita Farm. Rd.	Abilene, TX 79602
Dow Agro Sciences	317 West Alice	Kingsville, TX 78383
Delta & Pine Land Seed	4014 Northwood	Corpus Christi, TX 78410
Foundation Seed Service	TAMU	College Station, TX 77841
Gayland Ward Seeds	1900 Pease St, Ste 305	Vernon, TX 76384
Golden Acres	905 E. Trant Dr.	Kingsville, TX 78363
Monsanto	408 Vista Cove	Victoria, TX 77904
Phytogen	832 Swynford Ln.	Collierville, TX
Pioneer International	14901 Red River	Corpus Christi, TX 78410
Seed Source Genetics	5159 FM 3354	Bishop, TX 78343
Sesaco	29865 N. Abram Rd.	Edinburg, TX 78511
Sorghum Partners, LLC	P O Box 189	New Deal, TX 79350
Stoneville Pedigreed Seed Co.	13557 Carlos 5th Port	Corpus Christi, TX 78418
Terral Seed	P O Box 997	El Campo, TX 77437
Triumph Seed Company Inc.	P O Box 1050	Ralls, TX 79357

COOPERATING CHEMICAL AND FERTILIZER COMPANIES

Bayer Crop Science Division	Heath Reeves / Jon Mixson	Corpus Christi, TX 78418
Coastal Acres LLC.	John Miller	Robstown, TX 78380
Dow Agro Sciences	Benny Martinez / Trey Ramirez	Kingsville, TX 78363
Helena Chemical Co.	Dorian David	Corpus Christi, TX 78426
Monsanto	Daniel Gonzalez / Harvey Buehring	Orange Grove, TX 78372

SPECIAL ACKNOWLEDGMENTS FOR TECHNICAL SUPPORT

Mr. Rudy Alaniz	Dr. Joe Paschal	Dr. Josh McGinty
Dr. Tony Provin	Dr. Paul Baumann	Mr. James Gricher
Dr. Carlos Fernandez	Mr. Clint Livingston	Dr. Mark McFarland
Mr. Kenneth Schaefer	Mr. Jeff Nunley	Mr. Mac Young
Dr. Gaylon Morgan	Dr. Gary Odvody	Dr. Robert Bowling
Dr. Levi Russell	Dr. Tom Isakeit	Mr. Gary Schwarzlose



NUECES COUNTY
Agricultural Statistics
County Seat—Corpus Christi, TX

Population (2014)	352,107

Land Area	Acres
Cropland/Improved Pastures	311,300
Rangeland	33,800
Industrial Sites, Recreational Facilities	
Urban Areas	93,492
Total	**438,592**

Weather	Data
Average Daily High Temperature	82°F
Average Daily Low Temperature	63°F
Days above 90°F	108
Days below 32°F	6
Mean Temperature	73°F
First Freeze Date	Jan. 3
Last Freeze Date	Feb. 13
Growing Season Average Dates	303
Precipitation-Mean per Year	31.41"
Precipitation-Days/Year above 0.1"	39

2014 Agricultural Income	$1000
Grain Sorghum	43,912.3
Cotton/Cottonseed	66,297.0
Government Programs	13,113.0
Crop Insurance	5,936.9
Cattle	2,181.0
Corn	6,134.5
Hay	7,976.6
Nursery / Turf	1,175.0
Other Livestock	360.4
Other	3,501.1
Total	**150,587.9**

Major Agricultural Commodities	(2014)
Grain Sorghum Planted Acres	152,957
Cotton Planted Acres	118,703
Corn Planted Acres	16,259
Wheat Planted Acres	7,456
Sesame Planted Acres	1,802
Sunflower Planted Acres	588
Hay Acreage Planted Acres	37,984
Beef Cattle Cow #s	2,000

History - *Nueces County was formed in 1846 and was once part of San Patricio County. The county seat is Corpus Christ, and was incorporated in 1846. Nueces County is bordered by San Patricio County (north), Jim Wells County (west), Kleberg County (south) and by Corpus Christi Bay, Laguna Madre and Redfish Bay (all east). The County was named after the Nueces River which flows through the county.*

Topography - *Nueces County comprises 847 square miles of the Coastal Prairies region. The terrain is generally flat. The elevation ranges from sea level to 180 feet above sea level. In the central part of the county the soil varies from vary dark loams to gray or black cracking clayey soils. In the west the soils varies from very dark loams to gray or black cracking clayey subsoils. In the coastal region the soils are sandy; in marsh areas the soils are also very dark with clayey subsoils.*

Climate - *The climate is humid-subtropical. Temperatures range from an average high of 93°F in July to an average low of 47°in January.*

NUECES COUNTY
1929-2014
Yearly Rainfall

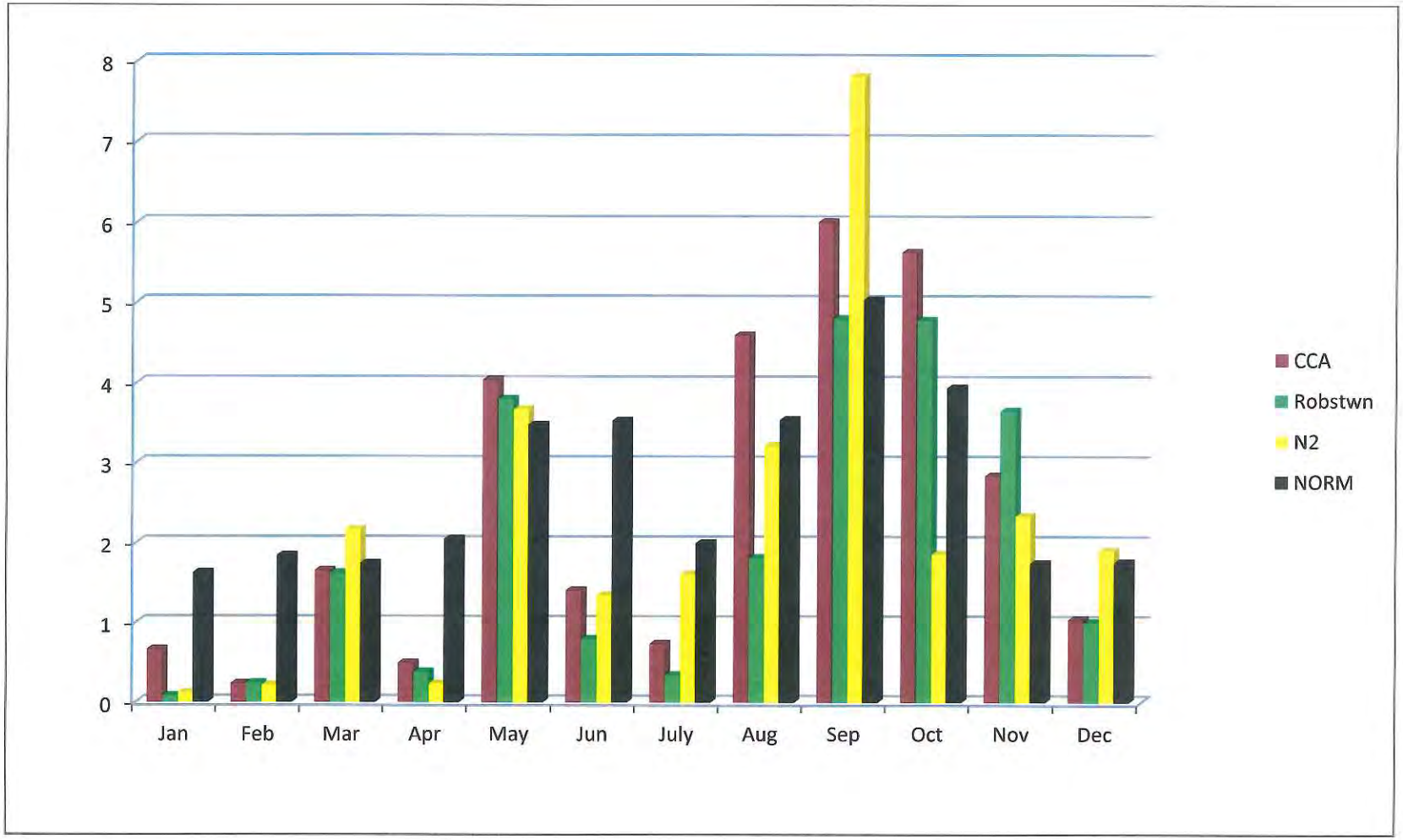
Year	Corpus Christi	Robstown	Year	Corpus Christi	Robstown	Year	Corpus Christi	Robstown
1929	25.67	26.28	1965	25.29	22.83	2001	32.25	33.52
1930	25.31	28.26	1966	29.89	28.86	2002	31.39	44.77
1931	36.86	36.66	1967	38.22	37.31	2003	28.70	35.30
1932	22.67	20.77	1968	41.53	41.45	2004	35.30	39.08
1933	23.06	27.59	1969	23.57	38.83	2005	25.31	21.72
1934	30.97	29.75	1970	39.47	36.34	2006	33.93	26.55
1935	38.99	31.97	1971	36.95	55.62	2007	40.63	49.29
1936	26.28	35.37	1972	36.41	29.23	2008	27.99	25.70
1937	24.05	23.75	1973	43.53	43.86	2009	20.61	11.78
1938	21.54	24.64	1974	24.81	28.20	2010	43.92	35.5
1939	19.74	20.33	1975	25.19	31.49	2011	12.06	6.12
1940	25.13	26.68	1976	39.39	42.37	2012	20.63	17.23
1941	42.13	48.41	1977	26.25	24.79	2013	23.42	21.4
1942	33.67	36.34	1978	39.14	34.02	2014	29.36	23.34
1943	26.87	20.05	1979	39.04	29.53	2015		
1944	26.45	27.07	1980	32.69	32.50	2016		
1945	30.14	25.20	1981	44.02	41.42	2017		
1946	34.09	N/A	1982	22.47	22.71	2018		
1947	33.26	N/A	1983	36.91	32.21	2019		
1948	22.43	24.96	1984	22.24	30.82	2020		
1949	30.28	27.19	1985	36.70	49.53	2021		
1950	15.48	8.40	1986	32.15	25.46	2022		
1951	26.91	29.82	1987	30.66	33.31	2023		
1952	21.31	12.02	1988	18.91	17.76	2024		
1953	24.14	26.69	1989	19.22	17.41	2025		
1954	16.02	18.38	1990	21.10	24.19	2026		
1955	21.87	22.85	1991	48.07	41.02	2027		
1956	21.73	16.84	1992	41.42	30.31	2028		
1957	28.00	29.91	1993	32.34	30.89	2029		
1958	42.62	44.28	1994	38.96	33.37	2030		
1959	38.44	30.96	1995	36.93	33.85	2031		
1960	44.35	43.01	1996	17.32	20.48	2032		
1961	26.44	28.19	1997	36.03	39.65	2033		
1962	15.49	14.49	1998	30.62	33.38	2034		
1963	14.66	19.29	1999	29.22	28.05	2035		
1964	21.71	20.49	2000	22.08	30.89	2036		
						AVG	*29.57*	*29.43*

Data collected from the National Oceanic and Atomonspheric Administration, National Weather Service, and Nueces County Record Star. Robstown Fire Dept. 2008-2009. Robstown reporting station was closed due to World War II in 1946 and 1947

*Totals for 2004 include snowfall that has been converted into precipitation. (10" snow = 1" rain)

2014 Precipitation Data

Nueces County, Texas

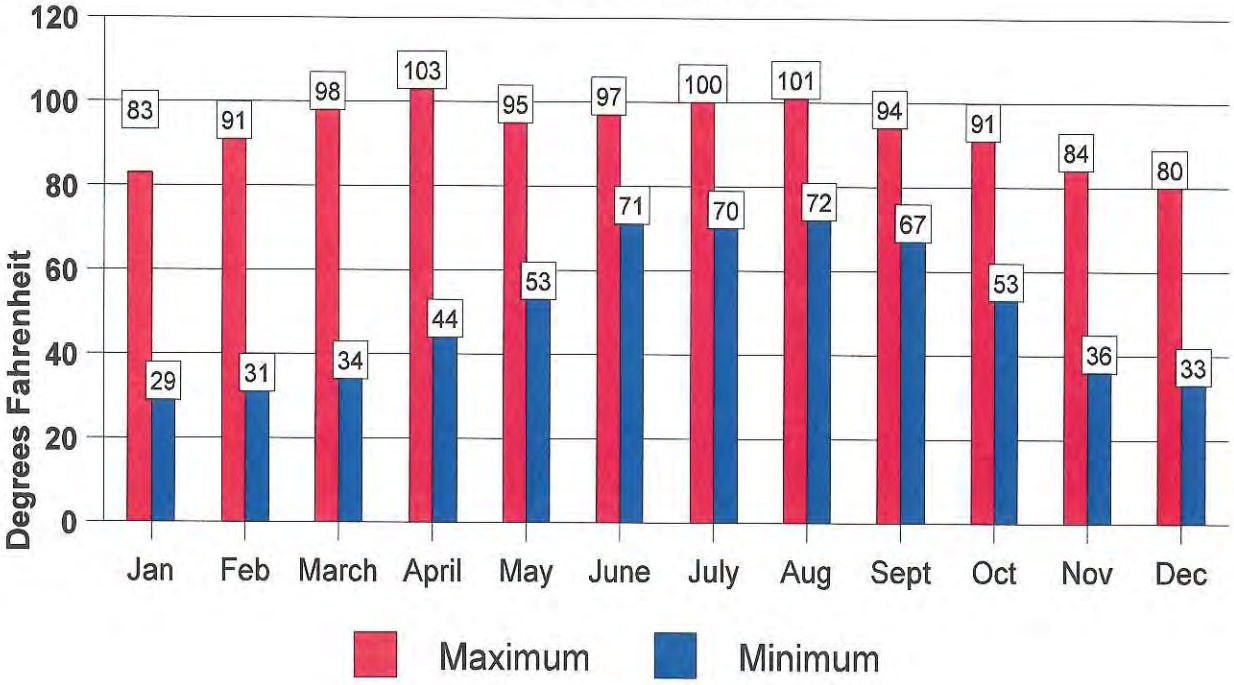


Precipitation Data Collection Site	2014 Precipitation (Inches)
N2 Perry Foundation – South of Robstown	22.48
Corpus Christi Airport	29.36
Robstown	26.5
2014 Rainfall Average	26.15
Normal*	32.26

*This normal is for the time frame 1971-2000 recorded by National Weather Service at Corpus Christi, Texas.

Temperature Extremes, 2014

Nueces County, Texas



The temperature extremes were computed from data collected at the Clarkwood Research Center, Perry Foundation-South of Robstown, and Robstown Fire Department sites in Nueces County, Texas.

THE CROP-WEATHER PROGRAM FOR SOUTH TEXAS

The Crop-Weather Program for South Texas is an easy-to-use tool that can be accessed via the Internet at http://cwp.tamu.edu.

This program provides information about weather conditions, crop growth and development, crop water use, and soil water storage and is maintained by Dr. Carlos Fernandez of the Texas A&M Agriculture Experiment Station in Corpus Christi, Texas.

MAP LEGEND

Map Number ..... Location

COTTON TRIALS

2 ..... **RACE Trial**
Cooperator: Lawhon Farms

5 ..... **RACE Trial**
Cooperator: Massey Farms

4 ..... **RACE Trial**
Cooperator: TAMU Research & Extension Center

4 ..... **Cotton Herbicide Trial**
Cooperator: TAMU Research & Extension Center

4 ..... **Monster Cotton Variety Trial**
Cooperator: TAMU Research & Extension Center

3 ..... **LibertyLink®**
Cooperator: Dodson Ag, Inc. Farms

2 ..... **LibertyLink®**
Cooperator: Lawhon Farms

6 ..... **Cotton Root Rot Trial (Failed)**
Cooperator: Massey Farms

SORGHUM TRIALS

8 ..... **Hybrid Performance Evaluation Trial**
Cooperator: Ordner Farms

1 ..... **Hybrid Performance Evaluation Trial**
Cooperator: McNair Farms

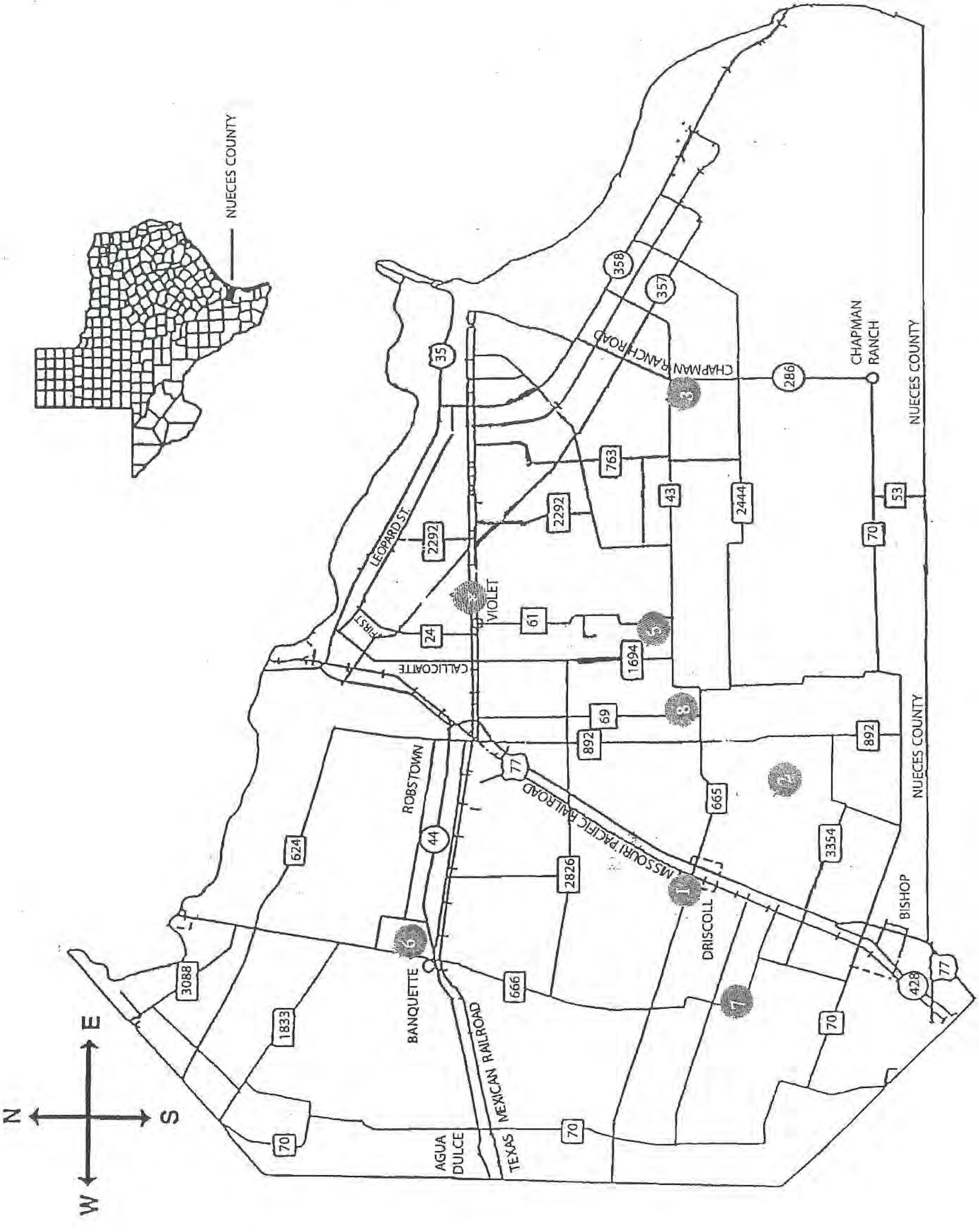
7 ..... **Hybrid Performance Evaluation Trial**
Cooperator: Faske Farms

4 ..... **Hybrid Performance Evaluation Trial**
Cooperator: TAMU Research & Extension Center

ALTERNATIVE CROP TRIALS

4 ..... **Sesame Variety Evaluation Trial**
Cooperator: TAMU Research & Extension Center

4 ..... **Wheat Variety Trial (Failed)**
Cooperator: TAMU Research & Extension Center


NUECES COUNTY
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VIOLET
ROBSTOWN
BANQUETTE
AGUA DULCE
TEXAS MEXICAN RAILROAD
MISSOURI PACIFIC RAILROAD
DRISCOLL
BISHOP
CHAPMAN RANCH ROAD
CHAPMAN RANCH
NUECES COUNTY
NUECES COUNTY
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Nueces County

Cotton Result Demonstrations

HISTORY OF COTTON PRODUTION
NUECES COUNTY 1929-2014

Year	Acres Harvested	Lbs /Acre	Total Bales
1929	268,000	213	129,000
1930	250,000	295	154,000
1931	242,000	178	94,900
1932	226,900	140	66,100
1933	252,300	227	83,400
1934	173,000	159	57,400
1935	186,000	232	90,200
1936	201,000	207	87,000
1937	218,000	203	92,800
1938	166,200	232	74,900
1939	152,200	254	79,300
1940	139,200	201	54,600
1941	135,000	212	57,900
1942	136,000	276	77,245
1943	133,000	297	82,300
1944	119,000	215	53,300
1945	106,000	211	46,600
1946	90,000	235	44,000
1947	110,000	289	66,350
1948	91,000	282	53,400
1949	140,000	353	103,000
1950	95,500	235	44,200
1951	216,000	51	22,900
1952	174,000	282	102,000
1953	141,500	60	17,700
1954	122,000	432	109,000
1955	86,000	112	20,100
1956	98,000	315	64,000
1957	787,000	339	55,500
1958	95,770	434	83,040
1959	108,200	336	74,669
1960	114,600	352	80,570
1961	107,600	420	90,385
1962	116,900	267	62,480
1963	106,400	181	38,602
1964	109,200	285	62,240
1965	104,200	327	62,241
1966	71,300	455	64,955
1967	66,300	314	41,579
1968	87,900	306	53,758
1969	87,000	285	49,577
1970	60,800	193	23,404
1971	63,500	224	29,700
1972	74,700	295	44,000
1973	49,900	253	25,300
1974	54,900	481	52,769
1975	27,800	466	25,884
1976	48,000	436	43,583
1777	78,000	528	85,884
1978	77,600	447	72,422
1979	109,900	463	105,975
1980	100,200	326	68,600
1981	67,400	514	71,900
1982	53,800	523	58,900
1983	39,400	600	49,300
1984	56,100	614	72,020
1985	58,800	883	107,900
1986	59,600	754	93,600
1987	60,000	710	85,200
1988	86,900	498	90,200
1989	66,100	385	53,000
1990	86,100	326	58,400
1991	117,100	645	157,300
1992	77,100	485	77,900
1993	78,800	439	72,000
1994	87,700	560	102,400
1995	125,200	589	153,700
1996	75,700	337	53,100
1997	97,900	454	92,500
1998	85,100	446	79,000
1999	109,100	757	172,000
2000	118,300	771	190,000
2001	117,000	570	139,000
2002	110,000	598	137,000
2003	131,300	841	230,000
2004	141,600	870	246,384
2005	142,900	552	164,200
2006	54,500	562	63,800
2007	109,600	775	173,347
2008	79,800	475	78,900
2009	4,116	360	3,087
2010	104,050	866	187,721
2011	111,527	669	155,441
2012	30,200	370	23,300
2013	2,055	350	1,498
2014	110,904	750	173,288
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Data secured from U.S. Department of Agriculture Statistical Reporting Service and Texas Crop Livestock Reporting Service.

Figures for the 2013 and 2014 season were estimated using data obtained from the Nueces County FSA Office, and the Nueces County Extension Office

Replicated Agronomic Cotton Evaluation Trial

Texas A&M AgriLife Extension Service
Nueces County, 2014

Cooperator: Darrell Lawhon

Authors: J.P. Ott and J.A. McGinty

Summary

This test was located on the Darrell Lawhon Farm on County road 73B, north of Concordia. Soil moisture conditions at planting were fair and rainfall during the growing season was below normal. Ten commercial cotton uniform stacked-gene varieties were evaluated for agronomic performance. The best performing variety in this test was PHY 333 WRF at 953 pounds of lint per acre. The average lint yield for this test was 810 pounds per acre.

Objective

To evaluate commercially available cotton varieties growing under Nueces County conditions in a replicated evaluation.

Materials and Methods

The effect of cotton variety on lint yield was evaluated during the 2014 growing season at the Darrell Lawhon Farm near Concordia in Nueces County, Texas on a Victoria Clay soil. The experimental design was a randomized complete block with ten variety treatments and three replications. Plots consisted of six rows on 38-inch centers and a length of 2,979 feet.

All varieties were planted into fair moisture on April 1 into a conventional-tilled field. Treflan, at a rate of 1 qt/ac, had previously been applied and incorporated. A pre-plant fertility application of 66-22-0-8(S) was also applied to the test area. The test location was kept weed-free using cultivation and post-emergent herbicide during the growing season.

Rainfall was recorded at the field during the growing season and totaled 4.97 inches, approximately 2 inch below the 30 year average precipitation for this period. An additional 1.23 inches was received just prior to harvest. Therefore, storm ratings were taken prior to harvest.

Plots were harvested on August 19 using a John Deere 7760 Picker. A bale module was wrapped for each individual plot and weight on a platform scale. Sub-samples were collected from each bale for ginning and fiber analysis using standard HVI classing procedures.

Results and Discussion

The data tables below provide comparison of data on plant population, emergence rating, storm rating, fiber quality, lint yield, and loan value.

Table 1. Comparison of cotton plant population, emergence rating, storm rating, and seed cotton yield between varieties, Lawhon Farm, Nueces County, Texas, 2014.

Variety	Plants/A	Emergence Rating (1-9, 9=Best)	Storm Rating (1-9, 9=Best)	Seed Cotton Yield (lb/A)
PHY 333WRF	38,822	9.0	9.0	2396
ST 4946GLB2	38,058	7.0	8.7	2343
PHY 499WRF	41,420	9.0	8.0	2310
DP 1219B2F	43,866	8.0	7.3	2297
CT 13464B2F	39,128	7.0	8.3	2224
DP 1359B2F	40,656	8.0	7.0	2112
NG 1511B2RF	41,879	7.0	8.0	2045
CG 3787B2RF	37,141	7.0	7.7	1939
ST 6448GLB2	39,280	7.7	7.0	1925
FM 1944GBLB2	36,376	7.7	7.0	1912
Mean	39,663	7.7	7.8	2150
C.V.	5.17	3.43	6.39	2.50
L.S.D. 0.05	3515	0.46	0.86	92

Table 2. Comparison of cotton lint yield, lint quality, loan value, and lint quality between varieties, Lawhon Farm, Nueces County, Texas, 2014.

Variety	Lint Yield (lb/A)	Turnout (%)	Micronaire	Length (inches)	Strength (g/tex)	Uniformity	Loan Value (¢/lb)	Lint Value ($/A)
PHY 333WRF	953	39.8	4.2	1.13	30.2	84.6	54.27	517
PHY 499WRF	904	39.1	4.4	1.07	31.8	84.0	52.68	476
DP 1219B2F	850	37.0	4.1	1.07	30.3	81.8	52.00	442
ST 4946GLB2	840	35.9	4.6	1.09	31.6	84.5	53.56	450
DP 1359B2F	817	38.7	4.1	1.09	30.3	82.5	53.37	436
CT 13464B2F	807	36.3	4.1	1.15	33.5	84.0	54.52	440
NG 1511B2RF	789	38.6	4.6	1.05	30.8	83.0	50.77	401
CG 3787B2RF	753	38.8	4.5	1.06	28.7	82.4	51.60	388
ST 6448GLB2	703	36.5	4.4	1.10	28.3	82.8	53.37	375
FM 1944GBLB2	683	35.7	4.3	1.10	28.3	82.0	52.95	361
Mean	810	37.6	4.3	1.09	30.4	83.2	52.91	429
C.V.	10.43	4.38	5.09	3.67	6.12	1.70	2.86	11.36
L.S.D. 0.05	50.18	1.599	0.209	0.038	1.85	NS	2.049	31.52

Conclusions

Cotton varieties performed well, with the best performing variety in the test being PHY 333 WRF with a lint value of $517 per acre. This was $88 per acre higher than the test average and $156 per acre higher than the lowest performing variety. The significant difference between varieties illustrates the importance of variety selection on farm profitability and the importance of variety testing under local conditions.

Acknowledgements

The cooperation and support of Darrell Lawhon for implementing this trial is appreciated and the support of cooperating seed companies by providing needed seed supplies to conduct this evaluation is also appreciated. In addition, special thanks to J.R. Cantu, Nueces County Demonstration Assistant, for assisting with data collection.

Replicated Agronomic Cotton Evaluation Trial

Texas A&M AgriLife Extension Service
Nueces County, 2014

Cooperator: Jim Massey, IV

Authors: J.P. Ott and J.A. McGinty

Summary

This test was located on the Jim Massey, IV on FM 665, east of Petronila. Soil moisture conditions at planting were fair and rainfall during the growing season was below normal. Ten commercial cotton uniform stacked-gene varieties were evaluated for agronomic performance. The best performing variety in this test was PHY 499 WRF at 1117 pounds of lint per acre, although PHY 333 WRF had a slightly higher numeric lint value at $594 per acre. The average lint yield for this test was 993 pounds per acre.

Objective

To evaluate commercially available cotton varieties growing under Nueces County conditions in a replicated evaluation.

Materials and Methods

The effect of cotton variety on lint yield was evaluated during the 2014 growing season at the Jim Massey Farm near Petronila in Nueces County, Texas on a Victoria Clay soil. The experimental design was a randomized complete block with ten variety treatments and three replications. Plots consisted of eight rows on 30-inch centers and a length of 2,597 feet.

All varieties were planted into fair moisture on April 1 into a conventional-tilled field. A pre-plant fertility application of 112-32-0 was also applied to the test area. The test location was kept weed-free using cultivation and post-emergent herbicide during the growing season.

Rainfall was recorded at the field during the growing season and totaled 5.02 inches, approximately 2.25 inch below the 30 year average precipitation for this period.

Plots were harvested on August 19 using a John Deere 7760 Picker. A bale module was wrapped for each individual plot and weight on a platform scale. Sub-samples were collected from each bale for ginning and fiber analysis using standard HVI classing procedures.

Results and Discussion

The data tables below provide comparison of data on plant population, emergence rating, storm rating, fiber quality, lint yield, and loan value.

Table 1. Comparison of cotton plant population, emergence rating, storm rating, and seed cotton yield between varieties, Massey Farm, Nueces County, Texas, 2014.

Variety	Plants/A	Emergence Rating (1-9, 9=Best)	Storm Rating (1-9, 9=Best)	Seed Cotton Yield (lb/A)
PHY 499WRF	34,461	9.0	8.3	2526
PHY 333WRF	34,267	8.3	8.3	2561
ST 4946GLB2	33,880	8.0	7.7	2638
DP 1359B2F	34,848	7.3	7.0	2301
DP 1219B2F	32,525	7.7	7.7	2380
NG 1511B2RF	33,880	8.0	7.0	2247
ST 6448GLB2	32,912	8.0	8.0	2313
CG 3787B2RF	32,137	7.3	7.0	2200
CT 13464B2F	31,557	7.3	8.7	2264
FM 1944GBLB2	33,493	8.0	9.0	2272
Mean	33,396	7.9	7.9	2370
C.V.	4.99	5.45	9.12	2.12
L.S.D. 0.05	NS	0.74	1.2	86

Table 2. Comparison of cotton lint yield, lint quality, loan value, and lint quality between varieties, Massey Farm, Nueces County, Texas, 2014.

Variety	Lint Yield (lb/A)	Turnout (%)	Micronaire	Length (inches)	Strength (g/tex)	Uniformity	Loan Value (¢/lb)	Lint Value ($/A)
PHY 499WRF	1117	44.2	4.6	1.04	32.1	83.7	51.78	579
PHY 333WRF	1100	43.0	4.2	1.11	30.4	84.2	53.98	594
ST 4946GLB2	1059	40.1	4.5	1.09	33.3	83.6	53.62	568
DP 1359B2F	995	43.2	4.6	1.07	31.4	82.4	82.80	525
DP 1219B2F	990	41.6	4.4	1.07	31.8	81.9	52.83	523
NG 1511B2RF	976	43.5	4.9	1.06	31.6	83.4	51.68	504
ST 6448GLB2	959	41.5	4.6	1.09	28.6	82.4	53.00	508
CG 3787B2RF	949	43.2	4.6	1.07	30.3	83.6	52.45	498
CT 13464B2F	897	39.6	4.2	1.13	33.7	84.2	54.22	486
FM 1944GBLB2	885	38.9	4.3	1.11	29.4	82.4	53.33	472
Mean	993	41.9	4.5	1.08	31.3	83.2	52.97	526
C.V.	8.04	4.69	4.95	2.68	5.38	1.27	2.10	8.13
L.S.D. 0.05	50.72	1.795	0.192	0.033	1.311	1.442	1.537	32.307

Conclusions

Cotton varieties performed well, with the best performing variety in the test being PHY 499 WRF in terms of lint yield. However, there was no significant difference in lint value per acre between PHY 499 WRF, PHY 333 WRF, and ST 4946GLB2; with PHY 333 WRF having a slight numeric advantage. There was $68 per acre difference between the variety with the highest lint value per acre and, the test average and $122 per acre difference between it and the lowest performing variety. The significant difference between varieties illustrates the importance of variety selection on farm profitability and the importance of variety testing under local conditions.

Acknowledgements

The cooperation and support of Jim Massey, IV for implementing this trial is appreciated and the support of cooperating seed companies by providing needed seed supplies to conduct this evaluation is also appreciated. In addition, special thanks to J.R. Cantu, Nueces County Demonstration Assistant, for assisting with data collection.

Replicated Agronomic Cotton Evaluation Trial

Texas A&M AgriLife Research and Extension Center
Corpus Christi, Texas
2014

Dr. Joshua A. McGinty, Assistant Professor and Extension Agronomist

Rudy Alaniz, Technician and Clint Livingston, Technician

Variety	Yield (lbs/acre)		Turnout %		Micronaire		Length (inches)		Strength (g/tex)		Uniformity		Loan Value		Lint Value ($/Ac)	
PHY 499WRF	1130	a	43.4	ab	4.6	b	1.09	cd	33.9	b	85.2	a	52.16	b	590	a
CG 3787B2RF	1124	a	44.2	a	4.6	ab	1.11	c	31.6	cd	85.1	a	52.75	ab	593	a
ST 4946GLB2	1119	a	41.0	d	4.5	b	1.08	d	33.4	b	84.4	a	52.40	b	586	a
PHY 333WRF	1108	ab	42.8	bc	4.2	cd	1.15	ab	32.7	bc	85.3	a	53.21	a	589	a
NG 1511B2RF	1056	a-c	43.8	ab	4.8	a	1.07	d	32.8	bc	84.5	a	51.21	c	541	bc
DP 1359B2RF	1042	bc	43.6	ab	4.3	c	1.14	b	33.8	b	84.6	a	53.20	a	554	ab
ST 6448GLB2	1018	cd	42.0	cd	4.6	b	1.16	ab	30.4	d	85.0	a	53.16	a	541	bc
FM 1944GLB2	963	de	39.8	e	4.2	c	1.14	b	31.1	d	84.1	a	53.25	a	513	b-d
DP 1219B2RF	941	e	41.6	d	4.3	cd	1.15	b	33.3	b	83.8	a	53.25	a	501	cd
AT 13464B2F	933	e	39.6	e	4.0	d	1.18	a	36.3	a	84.6	a	53.33	a	498	d
Mean	1043		42.2		4.4		1.13		32.9		84.7		52.79		551	
P>F	<0.0001		0.0001		<0.000		<0.0001		<0.0001		0.1033		<0.0001		<0.0001	
LSD (P=.05)	76.12		1.02		0.224		0.027		1.35		NS		0.622		42.397	
STD DEV	87.50		1.70		0.29		0.04		1.80		0.88		0		44.65	
CV%	8.39		4.03		6.59		3.46		5.47		1.04		1		8.11	

Replicated Agronomic Cotton Evaluation Trial Summary Across Nueces County Locations

Lawhon Farm – County Road 73B, Concordia
Massey Farm – FM 665, Petronilla
Texas A&M Research and Extension Center – FM 44, Corpus Christi

Table 1. Relative yield comparison of cotton varieties across test locations in Nueces County, TX.

	-----Relative Yield %*-----			
Variety	**Lawhon**	**Massey**	**TAMREC**	**AVG**
PHY 333WRF	100.0%	98.5%	98.1%	98.9%
PHY 499WRF	94.8%	100.0%	100.0%	98.3%
ST 4946GLB2	88.2%	94.8%	99.0%	94.0%
DP 1359B2F	85.7%	89.0%	92.2%	89.0%
CG 3787B2RF	79.0%	85.0%	99.5%	87.8%
NG 1511B2RF	82.8%	86.5%	93.5%	87.6%
DP 1219B2F	89.2%	88.6%	83.3%	87.0%
ST 6448GLB2	73.7%	85.8%	90.1%	83.2%
CT 13464B2F	84.7%	80.3%	82.6%	82.5%
FM 1944GBLB2	71.6%	79.2%	85.2%	78.7%

*Relative yield is presented for each variety where the highest yielding variety by location is set at 100%

Cotton Herbicide Demonstration

Texas A&M AgriLife Extension Service
Nueces County, 2014

Cooperator: Texas A&M AgriLife Research and Extension Center

Authors: J.P. Ott and G.D. Morgan

Summary

This test was located on the Texas A&M AgriLife Research and Extension Center on Highway 44, west of Corpus Christ. Three pre-emergent herbicides were compared to the effectiveness of five post emergent herbicide programs on cotton variety ST 4946 GLB2. Caparol, Staple LX and Dual Magnum were the three pre-emergent herbicides used. All three were extremely effective in reducing and in some cases practically eliminating weed competition for the first 35 days leading up to the application of early post treatments.

Objective

Herbicide resistance management continues to be a concern for many producers, specifically over the potential development of glyphosate resistant pigweed in our area. While growers can do several things to help mitigate the development of herbicide resistant weeds, the most effective step is to incorporate a pre-emergent residual herbicide into their weed control arsenal. Therefore, this trial was established to evaluate commercially available pre-emergent herbicides for weed control in cotton on an area with heavy pigweed pressure.

Materials and Methods

The effect of pre-emergent herbicides on weed pressure was evaluated during the 2014 growing season at Texas A&M AgriLife Research and Extension Center in Nueces County, Texas on a Victoria Clay soil. The experimental design was a randomized complete block replicated four times. Plots consisted of four rows on 38-inch centers and a length of 35 feet. Table 1 details the nine treatments used in this herbicide demonstration, including concentrations, rates, and application dates.
All herbicide applications were made with a ground application rig traveling 5.75 MPH and applying 12 gallons per acre at 20 PSI. The nozzles used in this study were 8003XR.
The cotton variety ST 4946 GLB2 was planted into very marginal moisture on April 22 with a John Deere 6100 Series planter. Emergence was obtained on May 14. Plots were evaluated 35, 42, 50, and 77 days post planting by visually rating percentage of weed control on each plot compared to the untreated check.

Table 1. Herbicide treatments, concentrations, rates, and application dates of cotton herbicide demonstration, Texas A&M AgriLife Research and Extension Center, Nueces County.

Treatment Name	Form Concentration	Form Type	Rate	Rate Unit	Growth Stage	App Date
Caparol	4	SC	1	PT/A	PRE	23-Apr
Staple LX	3.2	LX	1.7	FL OZ/A	PRE	23-Apr
Dual Magnum	7.62	EC	1.33	PT/A	PRE	23-Apr
Untreated Check						
Roundup PowerMax	5.5	SL	22	FL OZ/A	EPOST	28-May
Prowl H2O	3.8	CS	2	PT/A	EPOST	28-May
Roundup PowerMax	5.5	SL	22	FL OZ/A	MPOST	12-Jun
Liberty	2.34	SL	22	FL OZ/A	EPOST	28-May
Liberty			29	FL OZ/A	MPOST	12-Jun
Liberty	2.34	SL	22	FL OZ/A	EPOST	28-May
Prowl H2O	3.8	CS	2	PT/A	EPOST	28-May
Liberty			29	FL OZ/A	MPOST	12-Jun
Staple LX			3.8	FL OZ/A	EPOST	28-May
Roundup PowerMax	5.5	SL	22	FL OZ/A	MPOST	12-Jun
Roundup PowerMax	5.5	SL	22	FL OZ/A	EPOST	28-May
Roundup PowerMax	5.5	SL	32	FL OZ/A	MPOST	12-Jun

Results and Discussion

Caparol, Staple LX and Dual Magnum were extremely effective in reducing weed competition for the first 35 days leading up to the application of early post treatments. Plots were re-evaluated 7 days after this application and Dual Magnum and Staple LX both continued to perform as good as or better than any of the early post treatments. However, Caparol had begun to lose effectiveness and post treatments were providing better control at 42 days post planting.

Plots were evaluated again 50 days post planting prior to a mid-post application. At this point, Dual Magnum was still just as effective in controlling weeds as an early post treatment of Roundup PowerMax, Roundup PowerMax with Prowl H2O, Liberty, and Liberty with Prowl H2O. The pre-emergent Staple LX application was as effective as the post Liberty treatments but not the Roundup PowerMax treatments 50 days post planting. The early post application of Staple LX was not as effective in controlling weeds as any of the above post treatments or the Staple LX pre-emergent application timing. Little difference between the Caparol application and the untreated check could be ob-served at this point.

Treatments were evaluated once again 27 days after the mid-post application or 77 days post planting. At this point all pre-emergent applications had fallen below the control level of any of the post application treatments. All post treatments were providing an equally high (>90%) level of control 77 days post planting.

Dual Magnum still offered the best level (>60%) of pre-emergent control followed by Staple LX (~40%). No difference between the untreated check and Caparol could be detected 77 days post planting. For demonstration purposes post herbicide applications were not made to plots treated with pre-emergent herbicide, although logically growers would have made a post application 50 to 70 days post planting.

Conclusions

This demonstration illustrated that pre-emergent herbicides are an effective tool in delaying the need for a post herbicide application. It also showed that the post application herbicides in the study all had the same level of control 77 days after application. Therefore, opportunities for weed resistance could be further reduced by rotation of chemistries between Roundup, Liberty, and Staple LX. The inclusion of a tank mix partner like Prowl H2O can also further reduce the potential for the development of herbicide resistant weeds.

Acknowledgements

Special thanks to Rudy Alaniz and Clint Livingston for implementing this trial, applying treatments and for assisting with data collection. Their assistance is greatly appreciated.

TEXAS A&M AGRILIFE EXTENSION

Corpus Christi Monster Cotton Variety Trial

Texas A&M AgriLife Research and Extension Center
Corpus Christi, Texas
2014

Dr. Joshua A. McGinty, Assistant Professor and Extension Agronomist

Rudy Alaniz, Technician and Clint Livingston, Technician

Variety	Lint Yield (lb/A)	Turnout (%)	Micronaire	Length (inches)	Strength (g/tex)	Uniformity	Loan Value (¢/lb)	Lint Value[1] ($/A)
PHY 499 WRF	1166_{a}	44.3_{b-e}	4.7_{a-d}	1.07_{i-k}	33.2_{a-e}	85.0_{a-d}	52.99_{a-d}	618_{ab}
PX 3122b-51 WRF	1151_{ab}	43.4_{c-f}	4.4_{a-f}	1.14_{a-g}	33.3_{a-e}	85.3_{a-c}	54.49_{a}	627_{a}
ST 4946 GLB2	1144_{ab}	41.6_{g-i}	4.7_{a-d}	1.10_{d-j}	33.3_{a-e}	84.7_{a-e}	53.64_{a-d}	613_{a-c}
PHY 333 WRF	1126_{a-c}	44.0_{b-e}	4.3_{c-g}	1.12_{b-j}	32.3_{b-f}	84.2_{a-e}	54.26_{ab}	611_{a-c}
PX 499-36 W3RF	1089_{a-d}	45.1_{a-b}	4.4_{b-f}	1.03_{k}	33.4_{a-e}	84.0_{b-e}	50.59_{e}	552_{a-f}
PHY 495 W3RF	1086_{a-d}	44.3_{b-e}	4.5_{a-f}	1.06_{jk}	32.2_{b-f}	84.6_{a-e}	52.11_{c-e}	566_{a-e}
PX 5540-63 WRF	1070_{a-e}	44.7_{a-d}	4.4_{a-f}	1.10_{e-j}	32.1_{b-f}	85.0_{a-d}	54.08_{a-c}	579_{a-d}
NG 1511 B2RF	1065_{a-e}	44.0_{b-e}	5.0_{a}	1.08_{h-k}	32.9_{a-f}	83.5_{b-e}	51.70_{de}	550_{a-f}
ATX CT13442 B2RF	1035_{a-f}	41.9_{f-i}	4.2_{c-g}	1.11_{d-j}	32.3_{a-f}	84.8_{a-e}	54.10_{a-c}	560_{a-f}
DP 1454 NR B2RF	1026_{a-f}	44.7_{a-d}	4.7_{a-c}	1.08_{h-k}	32.0_{c-f}	83.5_{b-e}	53.11_{a-d}	545_{a-f}

DP 1359 B2RF	1015_{a-f}	42.9_{e-h}	4.4_{a-f}	1.13_{a-i}	32.5_{a-f}	83.5_{b-e}	54.03_{a-c}	549_{a-f}
ATX 12WSTR-755 B2RF	1002_{a-f}	40.9_{ij}	4.3_{c-f}	1.13_{a-i}	34.1_{a-d}	84.9_{a-e}	54.34_{ab}	544_{a-f}
PX 4444-13 WRF	1000_{a-f}	44.7_{a-d}	3.7_{g}	1.18_{a-c}	33.3_{a-e}	85.0_{a-d}	54.13_{a-c}	541_{a-f}
ATX 11-1551 B2RF	973_{a-f}	40.8_{ij}	4.0_{fg}	1.17_{a-d}	35.0_{a}	85.6_{ab}	54.69_{a}	532_{a-f}
ATX CT14515 B2RF	969_{a-f}	45.1_{ab}	4.6_{a-e}	1.11_{d-j}	31.7_{d-f}	83.2_{c-e}	54.09_{a-c}	524_{a-f}
DPX 12R249 B2RF	967_{a-f}	43.2_{c-g}	4.5_{a-f}	1.10_{e-j}	32.8_{a-f}	83.9_{b-e}	53.80_{a-c}	520_{a-f}
FM 1944 GLB2	961_{b-f}	39.3_{jk}	4.3_{c-f}	1.13_{a-i}	30.8_{ef}	83.1_{c-e}	54.24_{ab}	521_{a-f}
PHY 339 WRF	957_{b-f}	43.1_{d-h}	4.5_{a-e}	1.12_{c-j}	32.2_{b-f}	84.1_{a-e}	54.23_{ab}	519_{a-f}
NG 5315 B2RF	947_{b-f}	45.4_{ab}	4.6_{a-e}	1.11_{d-j}	30.8_{ef}	84.8_{a-e}	53.90_{a-c}	510_{b-f}
DP 1219 B2RF	934_{c-f}	41.6_{f-i}	4.4_{a-f}	1.10_{d-j}	31.7_{d-f}	82.7_{e}	53.69_{a-d}	502_{c-f}
ST 6448 GLB2	934_{c-f}	42.8_{e-h}	4.6_{a-e}	1.18_{ab}	31.2_{ef}	84.5_{a-e}	54.39_{a}	508_{b-f}
ATX CT13464 B2RF	931_{c-f}	40.3_{i-k}	4.2_{d-g}	1.14_{a-f}	34.5_{a-c}	85.0_{a-d}	54.55_{a}	508_{b-f}
DP 1252 B2RF	926_{c-f}	46.1_{a}	4.9_{ab}	1.08_{g-k}	31.1_{ef}	84.1_{a-e}	52.34_{b-e}	485_{d-f}
ATX CT13454 B2RF	923_{c-f}	39.0_{k}	4.2_{c-g}	1.19_{a}	34.8_{ab}	86.3_{a}	54.65_{a}	504_{c-f}
DPX 12R224 B2RF	910_{d-f}	40.8_{i-k}	4.3_{c-f}	1.11_{d-j}	31.3_{ef}	84.7_{a-e}	54.00_{a-c}	491_{d-f}
ATX 12WSTR-563 B2RF	907_{d-f}	41.7_{f-i}	4.4_{b-f}	1.13_{a-h}	30.4_{f}	83.9_{b-e}	54.23_{ab}	492_{d-f}
PHY 222 WRF	897_{d-f}	41.5_{hi}	4.9_{ab}	1.08_{f-k}	32.5_{a-f}	85.0_{a-d}	52.99_{a-d}	476_{d-f}
ATX 12WSTR-662 B2RF	874_{ef}	41.7_{f-i}	4.4_{b-f}	1.19_{ab}	34.6_{a-c}	84.9_{a-e}	54.55_{a}	477_{d-f}
FM 8270 GLB2	874_{ef}	39.1_{k}	4.1_{e-g}	1.15_{a-e}	32.8_{a-f}	84.9_{a-e}	54.55_{a}	477_{d-f}
FM 2334 GLT	850_{f}	44.9_{a-c}	4.5_{a-f}	1.14_{a-f}	32.8_{a-f}	84.3_{a-e}	54.40_{a}	463_{ef}
DP 1044 B2RF	838_{f}	41.0_{ij}	4.1_{e-g}	1.10_{e-k}	31.6_{d-f}	82.9_{de}	53.73_{a-d}	451_{f}
FM 1830 GLT	831_{f}	45.1_{ab}	4.6_{a-e}	1.14_{a-h}	32.8_{a-f}	84.2_{a-e}	54.21_{ab}	451_{f}
Mean	990	42.8	4.4	1.12	32.6	84.4	53.77	527
P>F	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
HSD (P=.05)	103.04	1.741	0.561	0.065	2.709	2.213	2.039	113.26
STD DEV	112.64	20.7	0.33	0.04	1.45	1.07	1.13	59.17
CV%	11.38	4.83	7.34	3.85	4.45	1.26	2.11	11.23

[1] Lint values were calculated using the 2014 Upland Cotton Loan Valuation Model from Cotton Incorporated.

AT =AllTex, ATX = AllTexExperimental, DP=DeltaPine, DPX = DeltaPine Experimental, DG= DynaGrow, FM=FiberMax, NG=NexGen, PHY=Phytogen, PX = Phytogen Experimental, SSG= Seed Source Genetics, ST= Stoneville

LibertyLink® Cotton Agronomic Performance Trial

Texas A&M AgriLife Extension Service
Nueces County, 2014

Cooperators: Jimmy Dodson and Jon Gwynn

Author: J.P. Ott

Summary

This test was located on the Dodson Ag, Inc. Farm on County Road 47 and 22, east of London. Soil moisture conditions at planting were fair and rainfall during the growing season was below normal. Eight commercial LibertyLink® cotton varieties were evaluated for agronomic performance. The best performing variety in this test was ST 6448 GLB2 at 1,160 pounds of lint per acre. The average lint yield for this test was 1,031 pounds per acre.

Objective

To evaluate commercially available LibertyLink® cotton varieties growing under Nueces County conditions in a side-by-side evaluation.

Materials and Methods

The effect of cotton variety on lint yield was evaluated during the 2014 growing season at the Dodson Ag, Inc. Farm near London in Nueces County, Texas on a Victoria Clay soil. A strip plot design with eight variety treatments was established on plots that consisted of six rows on 38-inch centers and a length of 3,680 feet.

All varieties were planted into fair moisture on March 29 into a conventional-tilled field. The test location was kept weed-free using cultivation and post-emergent herbicide during the growing season. Plots were harvested using a John Deere 7760 Picker. A bale module was wrapped for each individual plot and weight on a platform scale. Sub-samples were collected from each bale for ginning and fiber analysis using standard HVI classing procedures.

Results and Discussion

The data tables below provide comparison of data on plant population, emergence rating, storm rating, fiber quality, lint yield, and loan value.

Table 1. Comparison of cotton plant population, emergence rating, storm rating, and seed cotton yield between varieties, Dodson Ag, Inc. Farm, Nueces County, Texas, 2014.

Variety	Plants/A	Emergence Rating (1-9, 9=Best)	Storm Rating (1-9, 9=Best)	Seed Cotton Yield (lb/A)
ST 6448GLB2	45,394	8	9	2,741
ST 4946GLB2	44,019	8	9	2,719
BX 1539GLT	39,892	7	9	2,529
FM 8270GLB2	35,765	9	9	2,523
FM 1944GBLB2	44,019	9	9	2,423
BX 1436GLT	42,643	9	9	2,405
FM 2334GLT	35,765	8	8	2,293
FM 1830GLT	38,516	7	9	2,212
Mean	40,752	8	9	2,481

Table 2. Comparison of cotton lint yield, lint quality, loan value, and lint quality between varieties, Dodson Ag, Inc. Farm, Nueces County, Texas, 2014.

Variety	Lint Yield (lb/A)	Turnout (%)	Micronaire	Length (inches)	Strength (g/tex)	Uniformity	Loan Value (¢/lb)	Lint Value ($/A)
ST 6448GLB2	1,160	0.423	4.95	1.11	27.90	82.40	56.35	654
ST 4946GLB2	1,120	0.412	4.70	1.11	32.20	84.60	56.95	638
BX 1539GLT	1,059	0.419	3.96	1.10	30.00	82.10	56.75	601
FM 8270GLB2	994	0.394	4.17	1.14	31.60	84.50	58.35	580
FM 1830GLT	983	0.445	4.60	1.17	32.70	85.20	58.30	573
BX 1436GLT	961	0.400	4.02	1.20	35.40	84.50	58.45	562
FM 2334GLT	1,013	0.442	5.03	1.14	32.90	83.40	55.30	560
FM 1944GBLB2	957	0.395	4.33	1.10	29.90	82.00	56.45	540
Mean	1,031	0.416	4.47	1.13	31.58	83.59	57.11	589

Conclusions

Cotton varieties performed well, with the best performing variety in the test being ST 6448GLB2 with a lint value of $654 per acre. This was $66 per acre higher than the test average and $114 per acre higher than the lowest performing variety. The significant difference between varieties illustrates the importance of variety selection on farm profitability and the importance of variety testing under local conditions.

Acknowledgements

The cooperation and support of Jimmy Dodson and Jon Gwynn for implementing this trial is appreciated and the support of Bayer Crop Science for providing needed seed supplies to conduct this evaluation is also appreciated. Gratitude is also extended to Heath Reeves for coordinating the planting and harvest of this trial. In addition, special thanks to J.R. Cantu, Nueces County Demonstration Assistant, for assisting with data collection.

LibertyLink® Cotton Agronomic Performance Trial

Texas A&M AgriLife Extension Service
Nueces County, 2014

Cooperator: Darrell Lawhon

Author: J.P. Ott

Summary

This test was located on the Darrell Lawhon Farm on County road 73B, north of Concordia. Soil moisture conditions at planting were fair and rainfall during the growing season was below normal. Eight commercial LibertyLink® cotton varieties were evaluated for agronomic performance. The best performing variety in this test was ST 4747 GLB2 at 998 pounds of lint per acre. The average lint yield for this test was 865 pounds per acre.

Objective

To evaluate commercially available LibertyLink® cotton varieties growing under Nueces County conditions in a side-by-side evaluation.

Materials and Methods

The effect of cotton variety on lint yield was evaluated during the 2014 growing season at the Darrell Lawhon Farm near Concordia in Nueces County, Texas on a Victoria Clay soil. A strip plot design with eight variety treatments was established on plots that consisted of six rows on 38-inch centers and a length of 2,979 feet.

All varieties were planted into fair moisture on April 1 into a conventional-tilled field. Treflan, at a rate of 1 qt/ac, had previously been applied and incorporated. A pre-plant fertility application of 66-22-0-8(S) was also applied to the test area. The test location was kept weed-free using cultivation and post-emergent herbicide during the growing season.

Rainfall was recorded at the field during the growing season and totaled 4.97 inches, approximately 2 inch below the 30 year average precipitation for this period. An additional 1.23 inches was received just prior to harvest. Therefore, storm ratings were taken prior to harvest.

Plots were harvested on August 19 using a John Deere 7760 Picker. A bale module was wrapped for each individual plot and weight on a platform scale. Sub-samples were collected from each bale for ginning and fiber analysis using standard HVI classing procedures.

Results and Discussion

The data tables below provide comparison of data on plant population, emergence rating, storm rating, fiber quality, lint yield, and loan value.

Table 1. Comparison of cotton plant population, emergence rating, storm rating, and seed cotton yield between varieties, Lawhon Farm, Nueces County, Texas, 2014.

Variety	Plants/A	Emergence Rating (1-9, 9=Best)	Storm Rating (1-9, 9=Best)	Seed Cotton Yield (lb/A)
ST 4747GLB2	35,765	9	9	2,509
ST 4946GLB2	33,014	7	8	2,336
BX 1539GLT	38,516	8	9	2,246
FM 8270GLB2	37,141	9	7	2,122
FM 1830GLT	34,389	8	8	2,113
ST 6448GLB2	34,389	9	7	2,029
FM 2334GLT	34,389	7	7	1,924
FM 1944GBLB2	35,765	7	6	1,885
Mean	35,421	8	8	2,146

Table 2. Comparison of cotton lint yield, lint quality, loan value, and lint quality between varieties, Lawhon Farm, Nueces County, Texas, 2014.

Variety	Lint Yield (lb/A)	Turnout (%)	Micronaire	Length (inches)	Strength (g/tex)	Uniformity	Loan Value (¢/lb)	Lint Value ($/A)
ST 4747GLB2	998	0.398	4.42	1.17	29.80	83.60	57.80	577
ST 4946GLB2	947	0.406	4.58	1.12	32.90	84.70	57.95	549
FM 1830GLT	910	0.431	4.49	1.18	32.90	83.80	58.25	530
BX 1539GLT	896	0.399	4.10	1.14	30.40	81.80	57.65	517
FM 2334GLT	827	0.430	4.52	1.18	32.30	84.70	58.30	482
ST 6448GLB2	824	0.406	4.38	1.12	27.20	81.50	57.25	472
FM 8270GLB2	779	0.367	3.97	1.16	33.60	84.10	58.35	454
FM 1944GBLB2	737	0.391	4.22	1.15	29.30	83.20	57.95	427
Mean	865	0.404	4.34	1.15	31.05	83.43	57.94	501

Conclusions

Cotton varieties performed well, with the best performing variety in the test being ST 4747GLB2 with a lint value of $577 per acre. This was $76 per acre higher than the test average and $150 per acre higher than the lowest performing variety. The significant difference between varieties illustrates the importance of variety selection on farm profitability and the importance of variety testing under local conditions.

Acknowledgements

The cooperation and support of Darrell Lawhon for implementing this trial is appreciated and the support of Bayer Crop Science for providing needed seed supplies to conduct this evaluation is also appreciated. In addition, special thanks to J.R. Cantu, Nueces County Demonstration Assistant, for assisting with data collection.

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Nueces County

Corn Result Demonstrations

HISTORY OF CORN PRODUTION
NUECES COUNTY 1975-2014

Year	Total Acres Planted	Total Acres Harvested	Bushels /Acre	Total Production (Bushels)	Year	Total Acres Planted	Total Acres Harvested	Bushels /Acre	Total Production (Bushels)
1975	1,600	1,200	28	34,000	2007	10,300	10,000	86	855,000
1976	900	800	53	42,200	2008	5,500	5,400	41	220,000
1977	500	400	53	21,000	2009	9,309	2,312	25	57,800
1978	1,300	1,200	63	75,800	2010	9,866	9,866	97	957,022
1979	6,000	5,800	71	409,700	2011	12,500	10,000	45	448,000
1980	8,200	7,700	42	322,000	2012	3,167	1,529	30	45,870
1981	8,300	8,200	90	735,900	2013	12,300	3,100	35.5	110,000
1982	10,200	10,100	60	607,500	2014	16,259	16,259	98	1,593,382
1983	6,900	6,500	49	319,400	2015				
1984	52,200	50,200	43	2,163,900	2016				
1985	42,500	41,600	81	3,355,500	2017				
1986	31,500	30,200	73	2,200,000	2018				
1987	64,800	63,800	84	5,330,100	2019				
1988	69,900	66,400	40	2,656,000	2020				
1989	43,400	33,400	32	1,068,800	2021				
1990	25,000	21,500	24	517,200	2022				
1991	13,200	12,900	70	903,000	2023				
1992	20,000	19,500	80	1,560,000	2024				
1993	41,400	40,900	96	3,926,400	2025				
1994	44,603	44,584	73	3,254,632	2026				
1995	52,818	25,548	55	1,405,140	2027				
1996	17,334	11,000	22	242,000	2028				
1997	18,965	18,695	98	1,862,363	2029				
1998	55,000	45,000	40	1,800,000	2030				
1999	28,997	28,845	81	1,615,000	2031				
2000	29,400	28,000	54	1,497,000	2032				
2001	2,500	19,400	57	1,109,000	2033				
2002	3,200	25,100	42	1,042,000	2034				
2003	1,500	1,300	60	681,000	2035				
2004	8,000	7,800	91	708,000	2036				
2005	7,700	7,600	51	385,000	2037				
2006	3,700	1,700	69	17,000	2038				

Data secured from U.S. Department of Agriculture Statistical Reporting Service and Texas Crop Livestock Reporting Service.

Figures for the 2013 and 2014 season were estimated using data obtained from the Nueces County FSA Office, and the Nueces County Extension Office