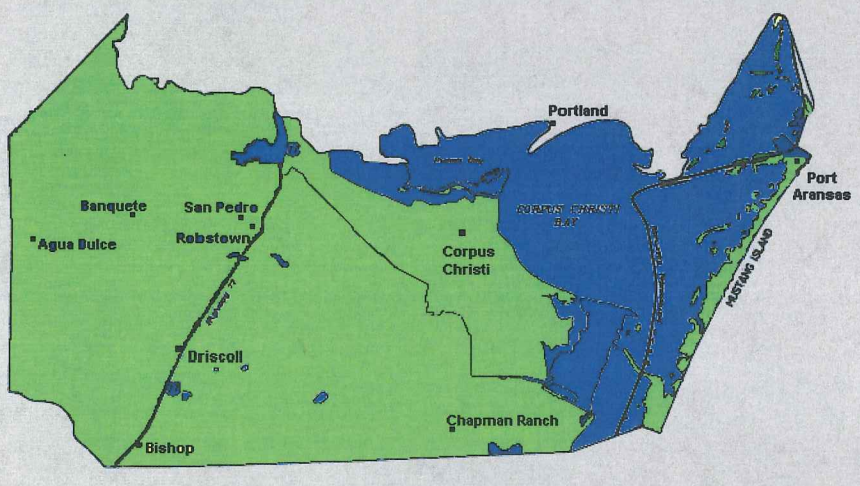
2015

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

TEXAS A&M AGRILIFE EXTENSION

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 excessively wet conditions that continued throughout the growing season. This delayed planting and in many cases prevented it all together. As a result of the excessive perception, grain sorghum yields varied widely across the county. While little cotton was planted, strong yields were observed in the fields that were able to be planted.

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 the 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

TABLE OF CONTENTS

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

FIELD CROPS TASK FORCE MEMBERS

David Mayo
Lincoln McNair
Mark Miller
Darrell Lawhon
Jimmy Dodson
Jon Gwynn
David Ocker
Scott Ordner
Russell Jungmann
Jim Massey, IV
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	Brent Chesney

NUECES COUNTY EXTENSION LEADERSHIP ADVISORY BOARD

Laura Berry	David Mayo	Joe Willie Lee	John Freeman
Jan Shannon	Harvey Buehring	Kacy Frazier	Rene Chapman
Frances Morrow	Jimmy Wright	Felipa Lopez Wilmot	

COOPERATING SEED COMPANIES

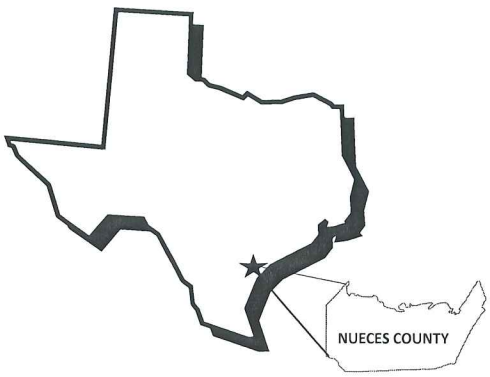
All-Tex Seed Co.	P O Box 1057	Levelland, TX 79336
Americot	105 Buck Lane	Georgetown, TX 78628
B-H Genetics	5933 FM 1157	Ganado, TX 77962
Bayer/Fibermax	13557 Carlos 5th Port	Corpus Christi, TX 78418
Cargill Specialty Canola Oils	2300 N Yellowstone Hwy, Suite 122	Idaho Falls, ID 83401
Croplan Genetics	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 / Butch Roecker	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 (2015)	356,221

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	101
Days below 32°F	7
Mean Temperature	72.3°F
First Freeze Date	Dec. 15
Last Freeze Date	Feb. 9
Growing Season Average Dates	303
Precipitation-Mean per Year	31.41"
Precipitation-Days/Year above 0.1"	39

2015 Agricultural Income	$1000
Grain Sorghum	59,405.4
Cotton/Cottonseed	19,733.2
Government Programs	2,773.9
Crop Insurance	9,621.6
Cattle	2,335.4
Corn	4,968.2
Hay	5,333.0
Nursery / Turf	2,271.9
Other Livestock	74.7
Other	6,297.3
Total	**112,814.6**

Major Agricultural Commodities	(2015)
Grain Sorghum Planted Acres	199,682
Cotton Planted Acres	28,547
Corn Planted Acres	19,715
Wheat Planted Acres	22,759
Sesame Planted Acres	2,725
Sunflower Planted Acres	1,562
Hay Acreage Planted Acres	19,752
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.*

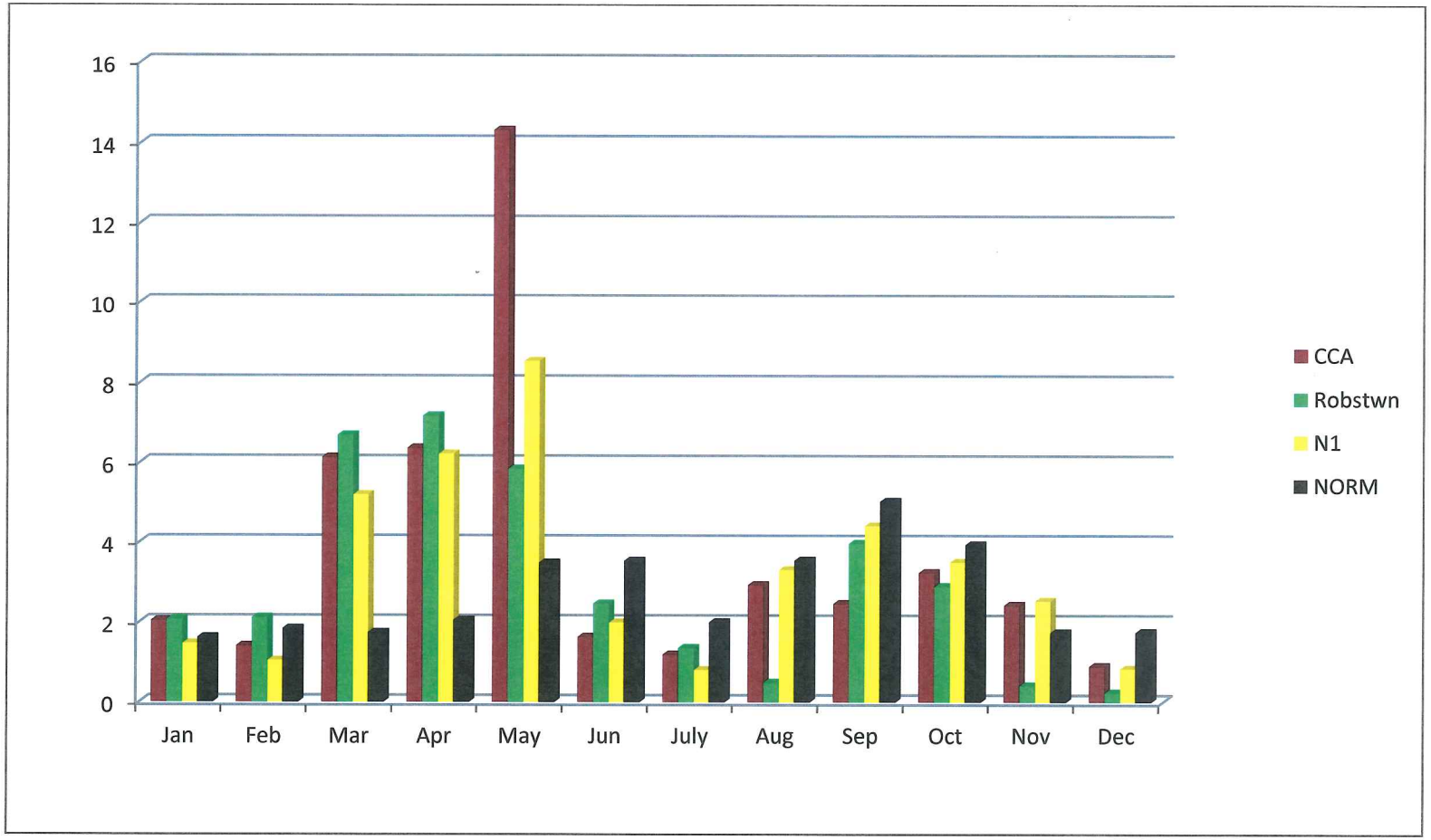
NUECES COUNTY
1929-2015
Yearly Rainfall

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	45.02	35.69
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	*29.75*	*29.50*

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

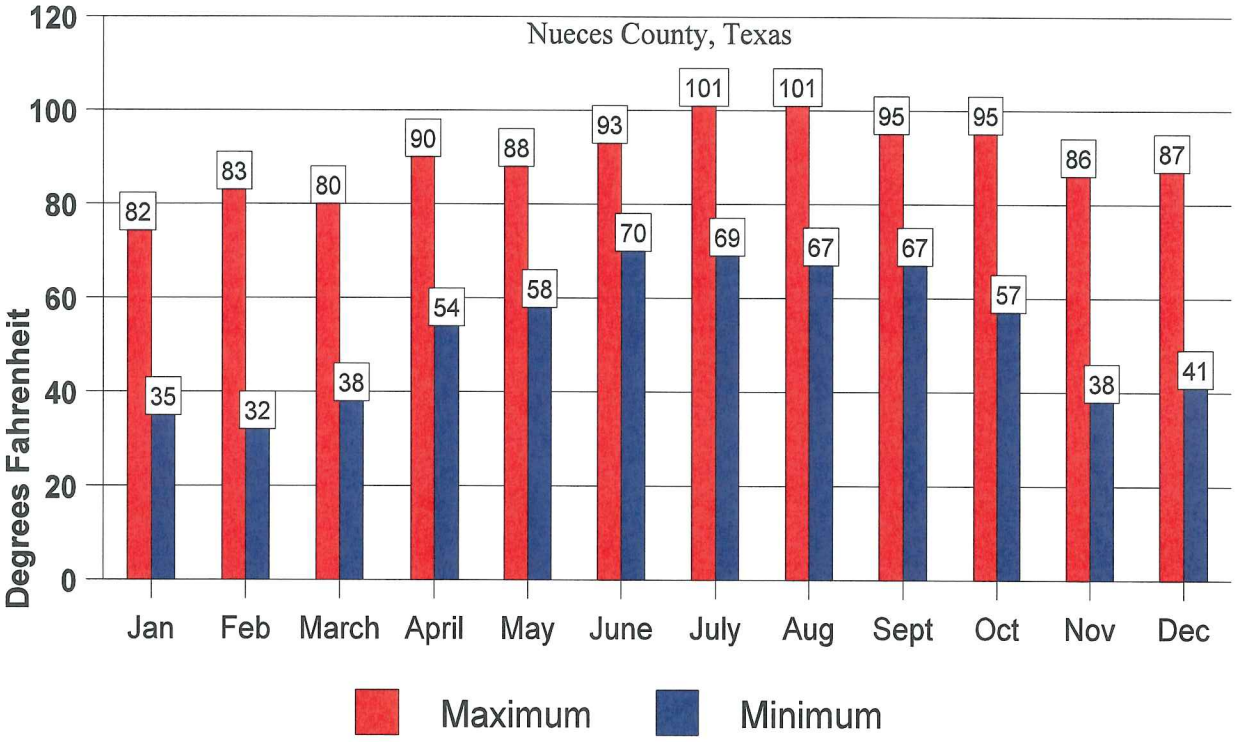
*Totals for 2004 include snowfall that has been converted into precipitation. (10" snow = 1" rain)

2015 Precipitation Data
Nueces County, Texas

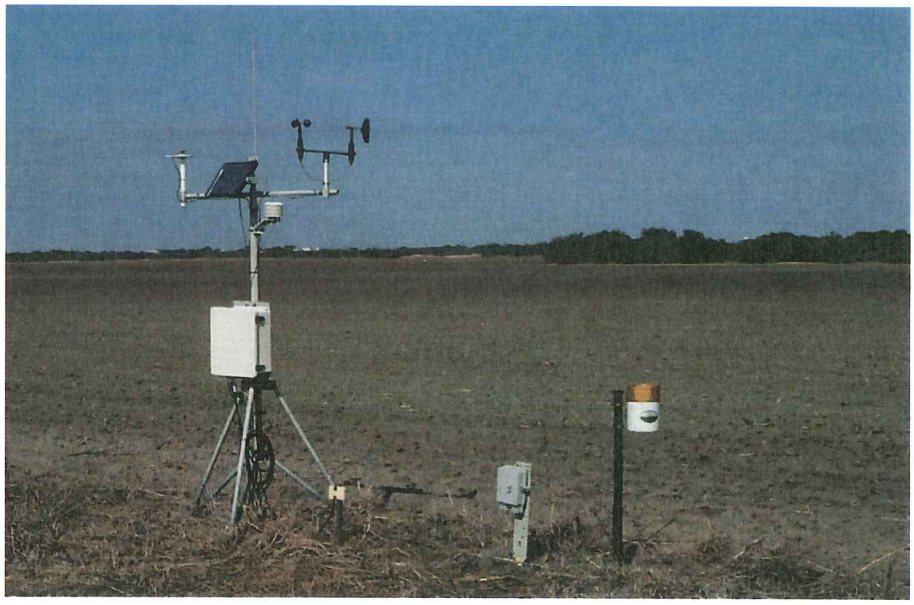


Precipitation Data Collection Site	2015 Precipitation (Inches)
N1 Nueces Station	39.85
Corpus Christi Airport	45.02
Robstown	35.69
2015 Rainfall Average	32.26
Normal*	32.26

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

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

1 ..... **Replicated Agronomic Cotton Evaluation Trial**
Cooperator: TAMU Research & Extension Center

7 ..... **Cotton Harvest Aid Performance Demonstration**
Cooperator: Otahal Farms

SORGHUM TRIALS

2 ..... **Carryover Nitrogen Management in Grain Sorghum**
Cooperator: Lawhon Farms

1 ..... **Sorghum Hybrid Performance Evaluation**
Cooperator: TAMU Research & Extension Center

3 ..... **Sorghum Hybrid Performance Evaluation (Failed)**
Cooperator: McNair Farms

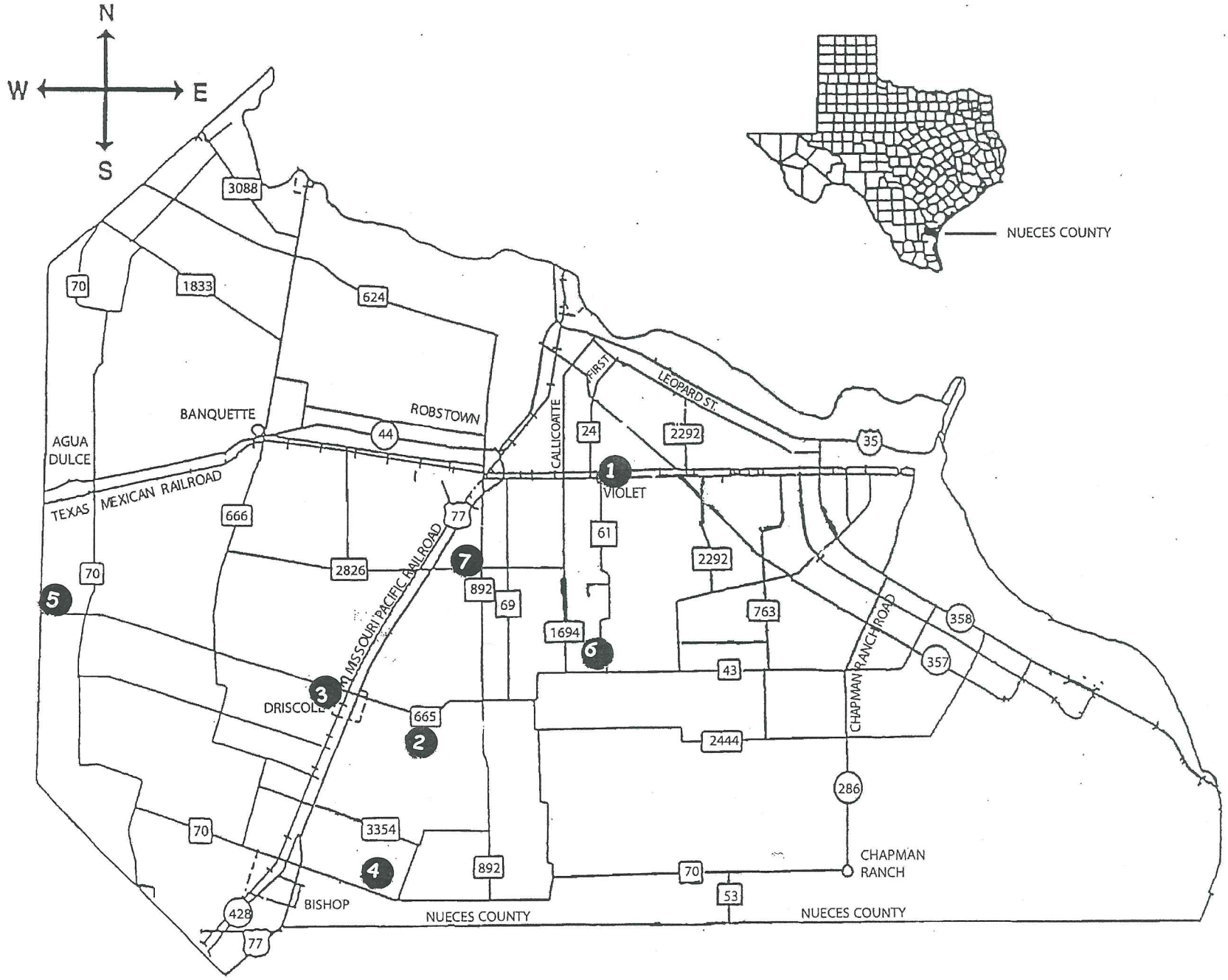
4 ..... **Sorghum Hybrid Performance Evaluation Trial(Data not shown)**
Cooperator: Faske Farms

6 ..... **Sorghum Hybrid Performance Evaluation Trial**
Cooperator: Massey Farms

ALTERNATIVE CROP TRIALS

5 ..... **Wheat Variety Trial (Unharvested)**
Cooperator: Jungmann Farms

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


N
W
E
S
NUECES COUNTY
3088
70
1833
624
BANQUETTE
ROBSTOWN
44
AGUA DULCE
TEXAS MEXICAN RAILROAD
666
77
CALLICOATTE
FIRST
LEOPARD ST.
24
2292
35
1
VIOLET
61
2292
70
2826
7
892
69
5
MISSOURI PACIFIC RAILROAD
1694
6
763
358
357
43
CHAPMAN RANCH ROAD
3
DRISCOLL
665
2
2444
286
70
3354
4
892
70
CHAPMAN RANCH
53
428
77
BISHOP
NUECES COUNTY
NUECES COUNTY

THIS PAGE LEFT BLANK FOR YOUR NOTES

Nueces County

Cotton Result Demonstrations

HISTORY OF COTTON PRODUTION
NUECES COUNTY 1929-2015

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	123,300	667	171,300
2015	28,547	875	49,957
2016			
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
2027			
2028			
2029			
2030			
2031			
2032			
2033			
2034			
2035			
2036			

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

Figures for the 2015 season were estimated using data obtained from the Nueces County FSA Office, and the Nueces County Extension Office

TEXAS A&M AGRILIFE EXTENSION

Replicated Agronomic Cotton Evaluation Trial

Texas A&M AgriLife Research and Extension Center
Corpus Christi, Texas
2015

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 ($/A)
PHY 333WRF	1279_{a}	39.9_{cd}	3.5_{de}	1.17_{bc}	30.8_{bc}	83.7_{ab}	53.56_{ab}	685_{a}
ST 6182GLT	1249_{ab}	43.7_{a}	3.9_{ab}	1.12_{def}	30.0_{c}	83.0_{abc}	54.20_{a}	677_{a}
ST 4946GLB2	1245_{ab}	38.3_{fg}	3.5_{de}	1.14_{cde}	32.7_{a}	83.7_{ab}	53.71_{a}	669_{a}
PHY 499WRF	1214_{ab}	40.2_{bc}	4.0_{a}	1.10_{f}	32.7_{a}	83.9_{a}	54.06_{a}	656_{ab}
PHY 444WRF	1201_{abc}	40.6_{b}	3.0_{f}	1.22_{a}	32.6_{a}	83.9_{a}	48.81_{c}	586_{cd}
FM 2007GLT	1151_{bc}	36.2_{h}	3.4_{e}	1.18_{b}	31.2_{abc}	83.1_{abc}	52.40_{b}	603_{bc}
NG 3406B2XF	1113_{c}	38.9_{ef}	3.7_{bcd}	1.12_{ef}	31.5_{abc}	83.7_{ab}	54.39_{a}	605_{bc}
NG 5007B2XF	1103_{cd}	40.1_{bc}	3.8_{abc}	1.13_{def}	30.0_{c}	82.4_{bc}	54.09_{a}	597_{cd}
DP 1219B2RF	1007_{de}	38.2_{g}	3.6_{cde}	1.15_{cd}	31.9_{ab}	82.8_{abc}	54.08_{a}	545_{de}
DP 1549B2XF	955_{e}	39.4_{de}	3.7_{bcd}	1.11_{ef}	30.7_{bc}	81.7_{c}	53.90_{a}	515_{e}
Mean	1152	39.5	3.6	1.14	31.4	83.2	53.32	614
P>F	<0.001	<0.0001	<0.0001	0.0002	0.0001	0.0619	0.0237	<0.0001
LSD (P=.05)	98.41	0.6007	0.24517	0.03229	1.7382	1.4182	1.3111	56.13
STD DEV	120.84	1.91	0.31	0.04	1.44	1.15	1.78	65.62
CV%	10.49	4.82	8.51	3.49	4.59	1.38	3.34	10.69

TEXAS A&M AGRILIFE EXTENSION

Corpus Christi Monster Cotton Variety Trial

Texas A&M AgriLife Research and Extension Center
Corpus Christi, Texas
2015

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 312WRF	1384_{a}	39.2_{f-i}	3.5_{jk}	1.17_{b-f}	32.8_{b-g}	83.6_{a-e}	53.38_{abc}	739_{a}
PHY 552WRF	1279_{ab}	40.5_{b-f}	3.6_{g-j}	1.16_{c-h}	33.8_{a-e}	84.2_{a-d}	54.34_{abc}	695_{ab}
CT15634B2RF	1250_{abc}	40.6_{b-f}	4.0_{b-h}	1.14_{e-j}	30.0_{ghi}	83.9_{a-e}	54.51_{abc}	681_{abc}
ST 4747GLB2	1212_{abc}	37.8_{i-l}	3.9_{c-j}	1.17_{b-f}	29.2_{hi}	82.3_{def}	54.16_{abc}	656_{abc}
CT15444B2XF	1211_{abc}	38.2_{g-k}	3.8_{d-j}	1.17_{b-f}	34.7_{abc}	85.1_{a}	54.90_{a}	665_{abc}
MON 15R551B2XF	1207_{abc}	42.0_{abc}	3.9_{b-i}	1.21_{ab}	31.08_{c-h}	83.9_{a-e}	54.85_{a}	662_{abc}
CT15425B2XF	1192_{abc}	37.7_{i-l}	3.5_{hij}	1.18_{a-e}	33.7_{a-e}	83.9_{a-e}	53.91_{abc}	643_{abc}
DP 1518B2XF	1183_{abc}	38.3_{g-k}	3.4_{jk}	1.17_{b-g}	30.2_{f-i}	83.5_{a-f}	53.08_{abc}	628_{a-d}
PHY 333WRF	1181_{abc}	39.4_{f-i}	3.5_{ij}	1.16_{c-h}	31.7_{c-h}	84.0_{a-e}	53.29_{abc}	630_{a-d}
UA 222	1179_{abc}	36.5_{kl}	3.6_{g-j}	1.20_{abc}	33.6_{a-e}	83.6_{a-e}	54.28_{abc}	640_{abc}
ST 4946GLB2	1179_{abc}	38.0_{h-k}	3.8_{d-j}	1.14_{e-j}	32.9_{b-g}	84.3_{a-d}	54.73_{a}	645_{abc}

AMDG 7824	1167_{abc}	39.5_{f-i}	3.8_{d-j}	1.08_{mn}	27.3_{i}	82.0_{ef}	52.41_{bc}	612_{a-d}
FM 2007GLT	1160_{abc}	36.5_{k-l}	3.6_{g-j}	1.19_{a-d}	32.8_{b-g}	83.2_{a-f}	54.20_{abc}	628_{a-d}
UA 103	1149_{a-d}	37.7_{i-l}	3.6_{g-j}	1.20_{abc}	36.2_{a}	84.6_{ab}	54.44_{abc}	625_{a-d}
MON 14R934B2XF	1147_{a-d}	42.4_{ab}	4.6_{a}	1.13_{f-k}	33.3_{a-f}	83.8_{a-e}	54.43_{abc}	624_{a-d}
PHY 444WRF	1128_{a-d}	40.0_{c-h}	3.0_{k}	1.22_{a}	33.8_{a-e}	83.6_{a-e}	49.75_{d}	558_{a-e}
NG 3405B2XF	1125_{a-d}	38.7_{f-j}	3.7_{f-j}	1.07_{n}	27.4_{i}	81.5_{f}	52.35_{c}	589_{a-d}
DP 1044B2RF	1122_{a-d}	36.7_{jkl}	3.6_{g-j}	1.12_{g-m}	31.1_{e-h}	82.9_{b-f}	54.09_{abc}	607_{a-d}
12WSTR307-2B2RF	1086_{a-d}	39.4_{f-i}	3.9_{c-j}	1.16_{c-h}	33.4_{a-f}	83.8_{a-e}	54.76_{a}	595_{a-d}
PHY 495W3RF	1077_{a-d}	40.3_{b-g}	3.9_{c-j}	1.08_{lmn}	33.5_{a-e}	84.2_{a-d}	53.63_{abc}	578_{a-d}
PHY 499WRF	1057_{a-d}	39.8_{d-i}	4.3_{abc}	1.10_{j-n}	34.1_{a-e}	83.8_{a-e}	54.08_{abc}	572_{a-d}
MON 15R525B2XF	1057_{a-e}	38.1_{h-k}	4.2_{a-d}	1.20_{abc}	33.2_{a-g}	84.3_{a-d}	54.88_{a}	580_{a-d}
CT15545B2XF	1054_{a-e}	41.9_{a-d}	3.8_{e-j}	1.14_{e-j}	34.4_{a-d}	83.1_{a-f}	54.64_{ab}	576_{a-d}
DP 1555B2RF	1042_{b-e}	40.5_{b-f}	4.0_{b-g}	1.16_{c-h}	35.5_{ab}	84.1_{a-d}	54.83_{a}	571_{a-d}
DP 1359B2RF	1036_{b-e}	38.6_{f-k}	3.7_{e-j}	1.14_{e-j}	32.1_{c-h}	83.0_{b-f}	54.61_{abc}	566_{a-e}
DG 3385B2XF	1012_{b-e}	38.3_{g-k}	3.9_{d-j}	1.12_{g-l}	31.7_{c-h}	84.0_{a-d}	54.63_{ab}	553_{a-e}
DP 1522B2XF	1009_{b-e}	38.1_{h-k}	4.1_{b-e}	1.12_{g-l}	33.1_{a-g}	84.2_{a-d}	54.76_{a}	553_{a-e}
NG 3406B2XF	1004_{b-e}	38.8_{f-j}	4.0_{b-i}	1.11_{h-n}	31.9_{c-h}	83.6_{a-e}	54.45_{abc}	546_{b-e}
DP 1219B2RF	991_{b-e}	37.6_{i-l}	3.8_{d-j}	1.15_{d-i}	33.3_{a-f}	83.4_{a-f}	54.69_{a}	542_{b-e}
CT15426B2XF	982_{b-e}	41.8_{a-e}	4.1_{b-f}	1.09_{k-n}	31.4_{d-h}	83.8_{a-e}	53.50_{abc}	525_{b-e}
NG 5007B2XF	966_{b-e}	39.7_{e-i}	4.1_{b-f}	1.13_{f-k}	30.2_{f-i}	82.8_{b-f}	54.15_{abc}	522_{b-e}
ST 6182GLT	931_{b-e}	42.8_{a}	4.3_{ab}	1.13_{e-h}	31.1_{e-h}	83.1_{a-f}	54.41_{abc}	507_{b-e}
DP 1549B2XF	925_{cde}	38.0_{h-k}	3.8_{d-j}	1.11_{i-n}	31.0_{e-h}	82.3_{def}	53.94_{abc}	499_{cde}
DP 1553B2XF	805_{de}	40.0_{c-h}	4.1_{b-e}	1.17_{b-g}	32.6_{b-g}	84.4_{abc}	54.81_{a}	441_{de}
HQ 210 CT	709_{e}	35.8_{l}	4.2_{a-d}	1.08_{lmn}	32.2_{c-h}	82.4_{c-f}	53.30_{abc}	378_{e}
Mean	1091	39.1	3.9	1.14	32.3	83.5	54.03	589
P>F	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
HSD (P=.05)	347.4	2.1561	0.45	0.04627	3.221	2.0515	2.2738	188.95
STD DEV	179.33	1.91	0.34	0.04	2.21	1.01	1.22	96.98
CV%	16.43	4.88	8.76	3.72	6.83	1.21	2.25	16.45

[1] Lint values were calculated using the 2015 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

TEXAS A&M AGRILIFE EXTENSION

Cotton Harvest Aid Performance Demonstration

Texas A&M AgriLife Extension Service
Nueces County, 2015

Cooperator: Claude Otahal

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

Summary

A total of six different treatments were applied to the cotton variety PHY 333 WRF to evaluate their leaf drop and harvest aid effectiveness in a strip test located at the Claude Otahal Farm on FM 2826, Southeast of Robstown. Eight day post treatment ratings were taken after the initial application. Following the second application, three and seven day post treatment ratings were taken. Treatment costs ranging from a low of $8.10/acre to a high of $17.50/acre.

Objective

To evaluate the effectiveness of selected harvest aid treatments in preparing cotton for harvest.

Materials and Methods

Treatments (Table 1) were established in a strip test of dryland cotton on 30-inch row spacing, with each plot 100 feet in length. Initial defoliation treatments (Application A) were applied on August 11 with a CO_2 backpack sprayer delivering 10 gallons per acre. Treatments were applied from 1:00 P.M. to 2:00 P.M. The broadcast application was made with XR 8002 nozzle tips on 20-inch spacing. The cotton variety was PHY 333 WRF, and had about 40% open bolls the day prior to initial treatment. Average plant height was 38 inches.

A second application of defoliation treatments (Application B) were applied on August 19 using the same equipment and sprayer configuration as in Application A. Defoliation ratings will be taken at 8 days after treatment (DAT) for Application A; and 3 and 7 DAT for Application B. A small rain event (0.32 inchs) occurred on August 13 with according to FarmLogs.com.

Table 1. Harvest aid treatments, products, rates, and applications, Otahal Farm, Nueces County.

Trt #	Product	Rate	Application	Trt #	Product	Rate	Application
1	Dropp SC	1.6 fl oz	A	5	Dropp SC	1.5 fl oz	A
	Finish 6 Pro	21 fl oz	A		Sharpen	0.5 fl oz	A
2	Ginstar EC	3.2 fl oz	A		MSO	1.0 % v/v	A
	Finish 6 Pro	21 fl oz	A		AMS	8 lb/100 gal	A
3	Folex 6	8 fl oz	A		Folex 6	8 fl oz	B
	Ethephon 6	21 fl oz	A		Sharpen	1.0 fl oz	B
4	Dropp SC	1.5 fl oz	A		MSO	1.0 % v/v	B
	Ginstar EC	1.0 fl oz	A		AMS	8 lb/100 gal	B
	Sharpen	1.0 fl oz	B	6	Dropp SC	2.0 fl oz	A
	MSO	1.0 % v/v	B		Sharpen	1.0 fl oz	B
	AMS	8 lb/100 gal	B		MSO	1.0 % v/v	B
					AMS	8 lb/100 gal	B

Results and Discussion

Crop growing conditions throughout the season were good with ample precipitation. Results are recorded in Table 2, 3, and 4.

Table 2. Comparison of percent defoliation, desiccation, green leaf and price between treatments, 8 DAT for Application A, Otahal Farm, Nueces County.

Trt #	Product and Rate	Application	Estimated Cost ($/A*)	Defoliation %	Desiccation %	Green Leaf %
1	Dropp SC @ 1.6 fl oz	A	12.80	90	5	5
	Finish 6 Pro @ 21 fl oz	A				
2	Ginstar EC @ 3.2 fl oz	A	15.50	90	5	5
	Finish 6 Pro @ 21 fl oz	A				
3	Folex 6 @ 8 fl oz	A	8.10	62	3	35
	Ethephon 6 @ 21 fl oz	A				
4	Dropp SC @ 1.5 fl oz	A	9.60	90	5	5
	Ginstar EC @ 1.0 fl oz	A				
	Sharpen @ 1.0 fl oz	B				
	MSO @ 1.0% v/v	B				
	AMS @ 8 lb/100 gal	B				
5	Dropp SC @ 1.5 fl oz	A	17.50	90	8	2
	Sharpen @ 0.5 fl oz	A				
	MSO @ 1.0% v/v	A				
	AMS @ 8 lb/100 gal	A				
	Folex 6 @ 8 fl oz	B				
	Sharpen @ 1.0 fl oz	B				
	MSO @ 1.0% v/v	B				
	AMS @ 8 lb/100 gal	B				
6	Dropp SC @ 2.0 fl oz	A	8.80	93	2	5
	Sharpen @ 1.0 fl oz	B				
	MSO @ 1.0% v/v	B				
	AMS @ 8 lb/100 gal	B				

* Estimated cost is for educational purposes only and prices listed are not actual "carry out" prices.

Table 3. Comparison of percent defoliation, desiccation, green leaf and price between treatments, 3 DAT for Application B, Otahal Farm, Nueces County.

Trt #	Product and Rate	Application	Estimated Cost ($/A*)	Defoliation %	Desiccation %	Green Leaf %
1	Dropp SC @ 1.6 fl oz	A	12.80	85	3	12
	Finish 6 Pro @ 21 fl oz	A				
2	Ginstar EC @ 3.2 fl oz	A	15.50	84	3	13
	Finish 6 Pro @ 21 fl oz	A				
3	Folex 6 @ 8 fl oz	A	8.10	57	3	40
	Ethephon 6 @ 21 fl oz	A				
4	Dropp SC @ 1.5 fl oz	A	9.60	94	5	1
	Ginstar EC @ 1.0 fl oz	A				
	Sharpen @ 1.0 fl oz	B				
	MSO @ 1.0% v/v	B				
	AMS @ 8 lb/100 gal	B				
5	Dropp SC @ 1.5 fl oz	A	17.50	94	5	1
	Sharpen @ 0.5 fl oz	A				
	MSO @ 1.0% v/v	A				
	AMS @ 8 lb/100 gal	A				
	Folex 6 @ 8 fl oz	B				
	Sharpen @ 1.0 fl oz	B				
	MSO @ 1.0% v/v	B				
	AMS @ 8 lb/100 gal	B				
6	Dropp SC @ 2.0 fl oz	A	8.80	95	3	2
	Sharpen @ 1.0 fl oz	B				
	MSO @ 1.0% v/v	B				
	AMS @ 8 lb/100 gal	B				

* Estimated cost is for educational purposes only and prices listed are not actual "carry out" prices.

Figure 1. Treatment 6; 8 DAT of Application A.

Table 4. Comparison of percent defoliation, desiccation, green leaf and price between treatments, 7 DAT of Application B, Otahal Farm, Nueces County.

Trt #	Product and Rate	Application	Estimated Cost ($/A*)	Defoliation %	Desiccation %	Green Leaf %
1	Dropp SC @ 1.6 fl oz	A	12.80	79	1	20
	Finish 6 Pro @ 21 fl oz	A				
2	Ginstar EC @ 3.2 fl oz	A	15.50	78	2	20
	Finish 6 Pro @ 21 fl oz	A				
3	Folex 6 @ 8 fl oz	A	8.10	39	1	60
	Ethephon 6 @ 21 fl oz	A				
4	Dropp SC @ 1.5 fl oz	A	9.60	95	3	2
	Ginstar EC @ 1.0 fl oz	A				
	Sharpen @ 1.0 fl oz	B				
	MSO @ 1.0% v/v	B				
	AMS @ 8 lb/100 gal	B				
5	Dropp SC @ 1.5 fl oz	A	17.50	95	3	2
	Sharpen @ 0.5 fl oz	A				
	MSO @ 1.0% v/v	A				
	AMS @ 8 lb/100 gal	A				
	Folex 6 @ 8 fl oz	B				
	Sharpen @ 1.0 fl oz	B				
	MSO @ 1.0% v/v	B				
	AMS @ 8 lb/100 gal	B				
6	Dropp SC @ 2.0 fl oz	A	8.80	94	3	3
	Sharpen @ 1.0 fl oz	B				
	MSO @ 1.0% v/v	B				
	AMS @ 8 lb/100 gal	B				

* Estimated cost is for educational purposes only and prices listed are not actual "carry out" prices.

Conclusions

Each year the cotton crop responds differently to harvest aids, as environmental conditions are always different, thus the need to evaluate these products on an annual basis.

Acknowledgements

The support and cooperation of Claud Otahal for cooperating in the implementation of this demonstration is appreciated, as well as, the direction and assistance of Dr. Josh McGinty in applying treatments and assisting with plot ratings.

THIS PAGE LEFT BLANK FOR YOUR NOTES

Nueces County

Corn Result Demonstrations

HISTORY OF CORN PRODUTION
NUECES COUNTY 1975-2015

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	17,000	16,600	56.6	939,000
1983	6,900	6,500	49	319,400	2015	19,715	19,715	72	1,419,480
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 2015 season were estimated using data obtained from the Nueces County FSA Office, and the Nueces County Extension Office

Nueces County

Sorghum Result Demonstrations

HISTORY OF SORGHUM PRODUTION
NUECES COUNTY 1961-2015

Year	Total Acres Harvested	CWT /Acre	Total (1000 CWT) Production	Year	Total Acres Harvested	CWT /Acre	Total (1000 CWT) Production
1961	179,000	21.28	3,809	1997	204,606	47.00	9,619
1962	141,000	14.00	1,974	1998	190,832	30.00	5,725
1963	191,000	17.02	3,255	1999	184,306	44.00	8,110
1964	296,400	21.34	4,190	2000	177,200	34.00	6,025
1965	204,200	40.21	8,251	2001	122,600	44.00	5,395
1966	223,000	28.73	6,404	2002	187,000	35.00	6,545
1967	250,000	24.53	6,132	2003	179,800	49.00	8,810
1968	223,800	28.01	6,269	2004	163,500	46.00	7,521
1969	228,700	28.56	6,530	2005	157,300	33.46	5,264
1970	238,900	32.33	7,724	2006	92,400	15.68	1,437
1971	213,900	23.86	5,104	2007	184,000	38.64	7,110
1972	188,200	30.74	5,785	2008	188,900	36.96	6,982
1973	280,000	27.50	7,700	2009	49,800	22.40	1,115
1974	299,900	31.86	9,452	2010	183,430	47.30	8,676
1975	294,400	28.00	8,243	2011	141,867	38.00	5,390
1976	275,000	28.00	7,700	2012	140,100	33.70	4,721
1977	260,000	26.88	6,978	2013	105,168	17.36	1,826
1978	227,000	27.33	6,204	2014	154,600	31.64	4,894
1979	240,300	32.24	7,747	2015	199,682	35.00	6,989
1980	243,000	28.71	6,978	2016			
1981	279,600	37.34	10,440	2017			
1982	270,000	36.43	9,837	2018			
1983	149,000	31.13	4,639	2019			
1984	267,200	31.93	8,532	2020			
1985	189,500	41.23	7,813	2021			
1986	154,400	36.05	5,566	2022			
1987	115,000	41.09	4,725	2023			
1988	114,800	32.18	3,694	2024			
1989	175,700	31.00	5,447	2025			
1990	184,622	26.00	4,987	2026			
1991	177,500	35.00	6,212	2027			
1992	185,000	32.00	5,920	2028			
1993	147,590	44.00	6,418	2029			
1994	155,654	32.00	4,981	2030			
1995	101,805	43.00	4,378	2031			
1996	175,000	17.00	2,975	2032			

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

Figures for the 2013 and 2015 season were estimated using data obtained from the Nueces County FSA Office, and the Nueces County Extension Office

TEXAS A&M AGRILIFE EXTENSION

Carryover Nitrogen Management in Grain Sorghum

Texas A&M AgriLife Extension Service
Nueces County, 2015

Cooperator: Darrell Lawhon Farms

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

Summary

Due to market volatility and increasing cost of nitrogen (N) fertilizers, Texas A&M AgriLife Extension Service and Texas A&M AgriLife Research began studying the residual-soil, nitrogen-recovery capabilities of crops at greater soil depths and found that cotton, corn and grain sorghum can efficiently recover residual, soil N to depths of up to 24 inches. Additional, evidence suggests crops have the capability to recover soil N to depths as great as 48 inches. However, the efficiency of the plant to recover residual, soil N at depths between 24 – 48 inches is reduced. Therefore, a trial was established to further demonstrate this capability in grain sorghum produced under typical growing conditions in Nueces County. Soil samples were collected in the fall across the test area to a depth of 48-inches. Following soil sampling a pre-plant treatment applications were made as follows: 22 lb N/ac, 43 lb N/, 64 lb N/ac, and 85 lb N/ac. All treatments received a base rate of 75 lb P_2O_5/ac. The test averaged 2,821 lb/ac with no statistical differences (P>(F)=0.606) among treatments. These results support conclusive evidence from other field studies throughout Texas that grain sorghum can efficiently recover and utilize residual soil nitrogen to a 24-inch and greater depth in the soil profile.

Objective

Nitrogen fertilizer expenses have become a significant input issue for most corn, cotton, and grain sorghum producers and N is needed in greater amounts compared to other nutrients. Nitrogen is often the largest contributor to the cost of production for most crops. For Texas crop producers trying to manage input costs and remain competitive, the volatile and upward trending price of N is a major concern. In addition to high input cost, excessive N can be a factor in higher insect numbers, more disease pressure, and when coupled with late irrigation or excessive rainfall can adversely impact crop maturity. Loss of N through leaching in soil, runoff in surface water and gaseous N losses represent reduced profitability to the grower and can have adverse environmental impacts.

The amount of additional N and other soil nutrients needed for a crop is determined by conducting a soil test. Traditionally, soil testing has been based upon analyses of samples taken to a depth of 6 inches to

evaluate residual carryover nitrogen available in the soil. However, in light of increasing nitrogen prices, Texas A&M AgriLife Extension Service and Texas A&M AgriLife Research began studying the residual-soil nitrogen-recovery capabilities of cotton, corn and grain sorghum at greater soil depth and found that these crops can efficiently recover residual soil NO_3-N down to 24 inches. This enables more effective use of carryover N in the soil and reduces N application rates and associated costs. Therefore, a replicated study was established to demonstrate the nitrogen-recovery capabilities of grain sorghum at soil depths greater than 6 inches under typical growing conditions in Nueces County.

Materials and Methods

The effect of residual soil nitrogen recovery by grain sorghum was evaluated during the 2015 growing season at the Darrell Lawhon Farm near Concordia in Nueces County, Texas in a conventionally-tilled field on a Victoria clay soil. In December 2014, soil samples were collected across this test site to a depth of 48-inches to determine the level of residual NO_3-N at various depths within the test area. Sample cores were separated into increments of 0 to 6, 6 to 12, 12 to 24, 24 to 36 and 36 to 48-inches and submitted to the Texas A&M AgriLife Extension Service Soil, Water, and Forage Testing Laboratory for analysis. Soil testing results indicated that residual NO_3-N was present in quantities of 24 lb/ac in the upper 6 inches of soil, 2 lb/ac in the 6 to 12 inch interval, 2 lb/ac in the 12 to 24 inch interval, 57 lb/ac in the 24 to 36 inch interval, and 108 lb/ac in the 36 to 48 inch interval.
Following soil sampling, four fertility treatments were applied prior to planting. The experimental design was a randomized complete block with three replications. Plots consisted of a 13 by 30 foot area. Fertility treatments were as follows: 22 lb N/ac, 43 lb N/, 64 lb N/ac, and 85 lb N/ac. All treatments received a base rate of 75 lb P_2O_5/ac.

A pre-emergence herbicide was applied and incorporated prior to planting. "Pioneer 84P80" grain sorghum was planted on 15 inch row spacing in early April. The test location was kept weed-free using cultivation and post-emergence herbicides.
Grain yield (13.1% moisture content on average) was corrected to 14% moisture and lb/ac calculated after hand harvesting 8'-8.5" of the three center rows of each plot at maturity. Grain moisture content and bushel weigh from each plot were determined. Additionally, plant populations, days to 50% flowering, and plant height were also collected from each plot. Analysis of variance was performed to determine the effects of residual-soil nitrogen-recovery. Where F values were significant, Fisher's protected least significant difference was used to separate means at a significance level of $p < 0.05$.

Results and Discussion

A suggested application rate of 85 lb N/ac is recommended for 4,250 lb/ac grain sorghum. Only giving the crop credit for 50% of the NO_3-N found in the 24 to 36-inch interval and 25% credit for the NO_3-N found in the 36 to 48-inch interval, a total of 83 lb NO_3-N/ac were found in the soil profile from 0 to 48-inches, which essentially met the recommendation for 4,250 lb/ac grain sorghum. However, yield goals were not met in this experiment due to excessive precipitation. The test average was 2,821 lb/ac with no statistical differences (P>(F)= 0.606) among treatments. Test weights were good across all treatments averaging 52.1 lb/bu with no statistical differences (P>(F)=0.334) among treatments.

The data table (Table 1) below provides a summary of data on plant populations, days to 50% flowering, plant height, grain moisture content, bushel weight, and yield. This data indicates that there was no yield (or any other) response to N treatments ranging from 22 to 85 lb/ac.

Table 1. Response of plant population, days to 50% flowering, plant height, grain moisture content, bushel weigh, and yield to fertility treatments at Lawhon Farm, Nueces County, Texas, 2015.

Treatment	Plants/A	Days to 50% Flower	Plant Height Inches	% Moisture	Test Weight lb/bu	Yield lb/A*
22 lb N/ac	62,436	70.3	48.4	12.7	51.3	2,622.0
43 lb N/ac	56,628	68.0	49.8	13.3	53.3	2,751.3
64 lb N/ac	59,532	68.7	49.5	13.3	52.3	3,008.3
85 lb N/ac	66,792	68.7	49.2	13.2	51.5	2,903.7
Mean	61,347	68.9	49.2	13.1	52.1	2,821.3
C.V.	10.39	2.50	2.96	3.37	2.61	12.82
L.S.D. 0.05	NS	NS	NS	NS	NS	NS

* Yields corrected to 14% moisture.

Economic benefit should also be considered. Therefore, any yield increase would have to overcome the cost of nitrogen fertilizer along with labor and equipment expenses associated with the application of additional N in order to justify the application when elevated levels of residual NO_3-N can be found deeper in the soil profile as they were in this study site.

Conclusions

These results support the conclusion of other field trials that indicate that grain sorghum can efficiently recover residual soil N to 48 inches in the soil profile. Grain sorghum yields exhibited no response to increased N, likely due to uptake of residual N in the soil profile to a depth of 48 inches. Producers should not assume how much residual-soil N is available in any particular field without annually soil testing to an appropriate depth for residual NO_3-N.

Acknowledgements

The cooperation and support of Darrell Lawhon and the staff at Lawhon Farms for implementing this trial is appreciated. In addition, special thanks to J.R. Cantu, Nueces County Demonstration Assistant, for assisting with data collection. Moreover thank you to Rudy Alaniz, Clint Livingston, and Dr. Josh McGinty for assistance with soil sampling and application of fertility treatments.

TEXAS A&M AGRILIFE EXTENSION

Grain Sorghum Hybrid Performance Evaluation

Texas A&M AgriLife Extension Service
Nueces County, 2015

Cooperator: Massey Farms

Author: J.P. Ott and R. Bowling

Summary

This test was located on the Massey Farm in Petronila, Texas on FM 665. Soil moisture conditions at planting were wet. Rainfall was ample during the growing season. Twelve sorghum hybrids were evaluated for agronomic performance. The best performing hybrid numerically in this test was Terral PS425 at 5,536 pounds per acre, while the test average was 5,128 pounds per acre.

Objective

The objective of this demonstration was to evaluate and report performance of commercially available grain sorghum hybrids in a side-by-side evaluation growing under Nueces County conditions.

Materials and Methods

Yield performance of grain sorghum hybrids was evaluated in a side-by-side comparison during 2015. Our demonstration cooperator was Massey Farm in Petronila, Nueces County, Texas. The soil type was a Victoria clay and the plot size for each hybrid was 8-rows wide (30" centers)-by-1,645' long rows. Twelve sorghum hybrids were included in the test (Table 1).

This demonstration was established on May 4. The field was managed under conventional tillage and soil moisture was excellent. Outlook (BASF) was applied at 12.8 oz./acre and Peak (Syngenta) at 0.75 oz./acre for pre-emergent weed control were applied per acre. A pre-plant fertility application of 100-20-0 was also applied to the test area.

On September 1 plots were individually harvested and weighed using conventional field equipment and an electronic weight wagon. Sub-samples were collected from each plot to determine grain moisture content and bushel weight. Additionally, plant populations were also collected from each plot.

Results and Discussion

The data table below provides a comparison of plant populations, grain moisture content, bushel weight, and yield.

Table 1. Comparison of plant population, grain moisture content, bushel weight, and yield between hybrids, Massey Farm, Nueces County, Texas, 2015.

Location #	Hybrid	Plants/A	% Moisture	Test Weight lb/bu	Yield lb/A*
4	Terral PS 425	37,171	14.3	56.3	5,536
10	Sorghum Partners 7715[α]	37,752	13.9	60.9	5,439
2	Terral RV 9562	38,914	13.8	59.2	5,327
12	Richardson 2783[α]	41,818	15.1	59.2	5,209
7	TAMU 94153	43,560	14.4	60.2	5,145
9	Sorghum Partners X760	38,914	14.9	59.9	5,121
11	Terral RV 9782	36,590	14.9	58.9	5,104
6	Terral RV 9782	40,075	14.2	59.2	4,963
8	Sorghum Partners KS 585	42,398	14.6	60.1	4,960
5	Dekalb 37-07[α]	42,979	14.4	58.6	4,922
3	Terral RV 9883	45,883	13.6	58.4	4,921
1	Sorghum Partners 6929[α]	41,237	14.1	59.6	4,887
Mean		40,608	14.4	59.2	5,128

* Yields adjusted to 14% moisture.

[α] Designated as a SCA-tolerant grain sorghum hybrid identified in USDA screening.

Conclusions

Using a market price of $8.50 per hundredweight, the top yielding hybrid had a gross value of $470.56 per acre while the least productive hybrid was valued at $415.40 per acre. This difference amounts to $55.17 (13%) per acre. This performance demonstration illustrates differences in yield potential among hybrids and the importance of hybrid selection for maximizing profitability under local conditions.

Acknowledgements

The cooperation and support of Jim Massey, IV for implementing and managing this trial is appreciated. 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, Chris Cernosek, and Cord Willms for assisting with data collection. Moreover thank you to Sorghum Partners for providing a weight wagon at harvest.

TEXAS A&M AGRILIFE EXTENSION

Grain Sorghum Hybrid Performance Evaluation

Texas A&M AgriLife Research and Extension Center
Corpus Christi, Texas
2015

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

Rudy Alaniz, Technician and Clint Livingston, Technician

Table 1. Comparison of grain moisture content, bushel weight, and yield between hybrids, Texas A&M AgriLife Research and Extension Center, Nueces County, Texas, 2015.

Hybrid	% Moisture	Test Weight lb/bu	Yield lb/A*
Mycogen 1G688	13.5	53.00	5,324
Alta AG3201	13.9	53.500	4,884
DynaGro DG766B	14.0	53.88	4,871
BH Genetics 5566	14.0	52.88	4,750
Terral REV9782	13.9	55.13	4,504
DeKalb DKS53-67	14.1	57.63	4,465
Golden Acres 3637	13.2	49.13	4,448
Mean	13.80	53.59	4,749
C.V.	1.337	1.563	11.586
L.S.D. 0.05	0.27	1.24	NS

* Yields corrected to 14% moisture.

Nueces County

Alternative Crops Result Demonstrations

TEXAS A&M AGRILIFE EXTENSION

Uniform Wheat Variety Trial

San Patricio and Nueces County, 2015

Rank	Variety	Developer	Test Weight lb/bu	Yield bu/A
1	Expresso	Monsanto	55.3	33.4
2	WB 9518	Monsanto	53.6	30.1
3	Samson	Monsanto	53.7	29.9
4	LCS Iguacu	Limagrain	51.5	28.8
5	Rockland	Monsanto	53.2	28.4
6	WB Mayville	Monsanto	53.9	27.5
7	SY Goliade	Syngenta	53.6	24.7
8	Verde	UM/USDA	55.8	24.0
9	TX12M468*	TAMU	52.9	22.7
10	WB Digger	Monsanto	52.1	22.6
11	Dinero	---	51.2	21.8
12	Express	Monsanto	52.4	21.5
13	TX11D311*	TAMU	44.3	21.0
14	WB 9112	Monsanto	52.4	20.9
15	TX12M471*	TAMU	52.9	20.7
16	Faller	NDSU	51.7	20.6
17	LCS Albany	Limagrain	54.5	20.4
18	WB 9229	Monsanto	52.7	20.2
19	TX10D226*	TAMU	51.3	18.7
20	Vantage	Monsanto	51.9	18.4
21	Breaker	Monsanto	51.5	18.3
22	WB Joaquin Oro	Monsanto	53.3	17.2
23	TX11D303*	TAMU	47.5	16.9
24	TX12M463*	TAMU	47.0	16.9
25	TX12M469*	TAMU	46.4	16.7
26	TX11D308*	TAMU	45.8	15.8
27	WB Gunnison	Monsanto	53.8	14.1
28	TX12M461*	TAMU	51.1	11.8
29	TX99U854*	TAMU	52.0	11.6
30	AC Metcalfe**	AAFC	---	11.5
Mean			51.9	20.9
C.V.			4.2	23.4[a]
L.S.D. 0.05			3.3	6.9

* Experimental wheat breeding line.

** Barley variety used as a standard check in South Texas.

[a] Trials with a coefficient of variation (CV) > 15% contain excessive experimental error.

TEXAS A&M AGRILIFE EXTENSION

Sesame Variety Evaluation

Texas A&M AgriLife Extension Service
Nueces County, 2015

Cooperator: Texas A&M Research and Extension Center

Authors: J.P. Ott

Summary

This test was located at the Texas A&M Research and Extension Center on Highway 44. The soil moisture condition at planting was wet. Rainfall during the growing season was abundant. Ten sesame varieties were evaluated for agronomic performance.

Objective

To evaluate sesame varieties growing under Nueces County conditions in a replicated evaluation.

Materials and Methods

The effect of sesame variety was evaluated during the 2015 growing season at Clarkwood on the Texas A&M Research and Extension Center in Nueces County, Texas on a Clareville loam soil. The experimental design was a randomized complete block with ten hybrid treatments and four replications. Plots consisted of four rows on 38-inch centers and a length of 30 feet.
All varieties were planted into very good moisture on June 6 into a conventional-tilled field. Rainfall during the growing season totaled 8.53 inches during the growing season.
Plant populations, emergence ratings, plant height, and height to first capsule were collected from each plot. Plots were not harvested.

Results and Discussion

The data table below provides a comparison of data on plant populations, emergence ratings, plant height, and height to first capsule.

Table 1. Comparison of plant populations, emergence ratings, plant height, and height to first capsule between varieties, Texas A&M Research and Extension Center, Nueces County, Texas, 2015.

Variety	Plants/Foot	Emergence Rating (1-9, 9=Best)	Plant Height (Inches)	Height to 1st Capsule (Inches)
S-28	3.5	7.5	30.2	19.8
S-38	3.3	7.5	34.6	19.8
S-39	3.8	8.5	30.2	18.8
EXP #2	3.5	6.5	31.2	16.3
EXP #4	4.5	7.3	31.8	19.0
EXP #5	3.8	8.0	31.5	19.3
EXP #7	4.0	8.0	32.8	20.8
EXP #9	4.3	7.0	33.4	22.0
EXP #10	4.0	6.8	25.0	13.5
EXP #11	3.5	6.0	32.3	19.3
Mean	3.8	7.3	31.3	18.9
C.V.	15.19	17.59	11.10	12.37
L.S.D. 0.05	NS	NS	5.03	3.38

Conclusions

Difference between varieties illustrates the importance of variety selection on farm profitability and the importance of evaluating varieties under local conditions.

Acknowledgements

The support and cooperation provided by the staff Texas AgriLife Research in the implementation of this test is appreciated. The support of SESACO by providing needed seed supplies to conduct this evaluation is also appreciated. Moreover thank you to Rudy Alaniz, Clint Livingston, and Dr. Josh McGinty for assistance with the planting of this test.

Nueces County

Appendix

Nueces County Soil Testing Campaign

Texas A&M AgriLife Extension Service
Nueces County, 2015

Author: J.P. Ott

Summary

Soil fertility varies widely based on many factors such as past fertilization practices and crop yields. Soil testing helps determine the soil nutrient status of fields and pastures for area producers. With the downward trend of cotton and feed grain market prices, it is important that producers put themselves in the best position to take advantage of every bit of their land's value.

Objective

To promote the adoption of routine soil testing as a best management practice to manage input costs, maintain yield goals, and protect area water resources.

Materials and Methods

From October 1 through November 20, 2015 a Coastal Bend Soil Testing Campaign was conducted in Nueces and surrounding counties. The campaign provides growers an opportunity to submit their soil samples for testing at a reduced lab fee. As an additional service, shipping to the lab is provided by the county office. All samples are submitted to the Texas A&M AgriLife Extension Service Soil, Water, and Forage Testing Laboratory for analysis. During the 2015 campaign 92 samples were submitted from Nueces County.

Results and Discussion

The figures below provide an illustration of the distribution of samples among 6 fertility ranges for the 92 submitted samples for both primary and secondary crop nutrients.

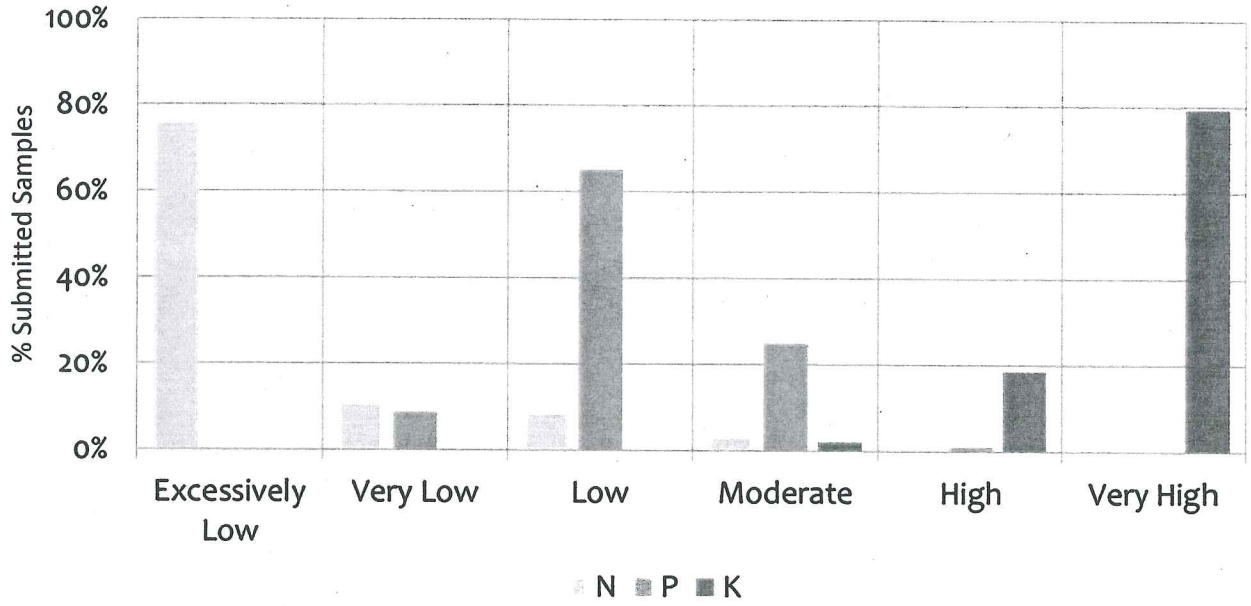


Figure 1. Distribution of submitted soil samples across 6 fertility ranges for primary nutrients.

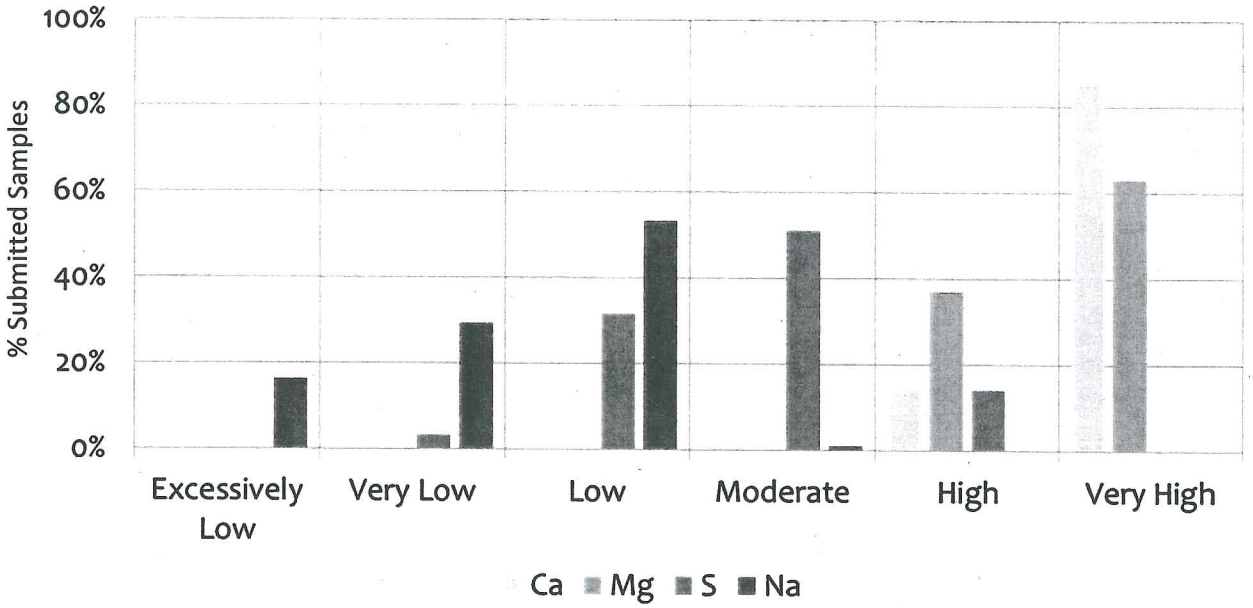
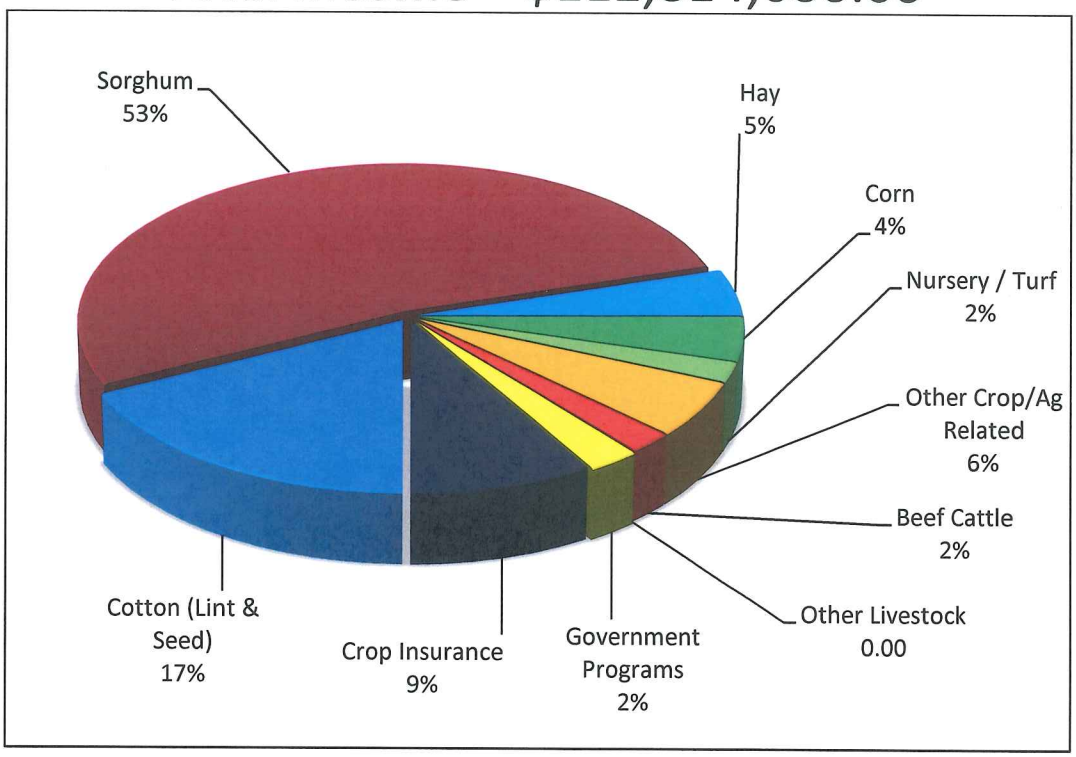


Figure 2. Distribution of submitted soil samples across 6 fertility ranges for secondary nutrients.

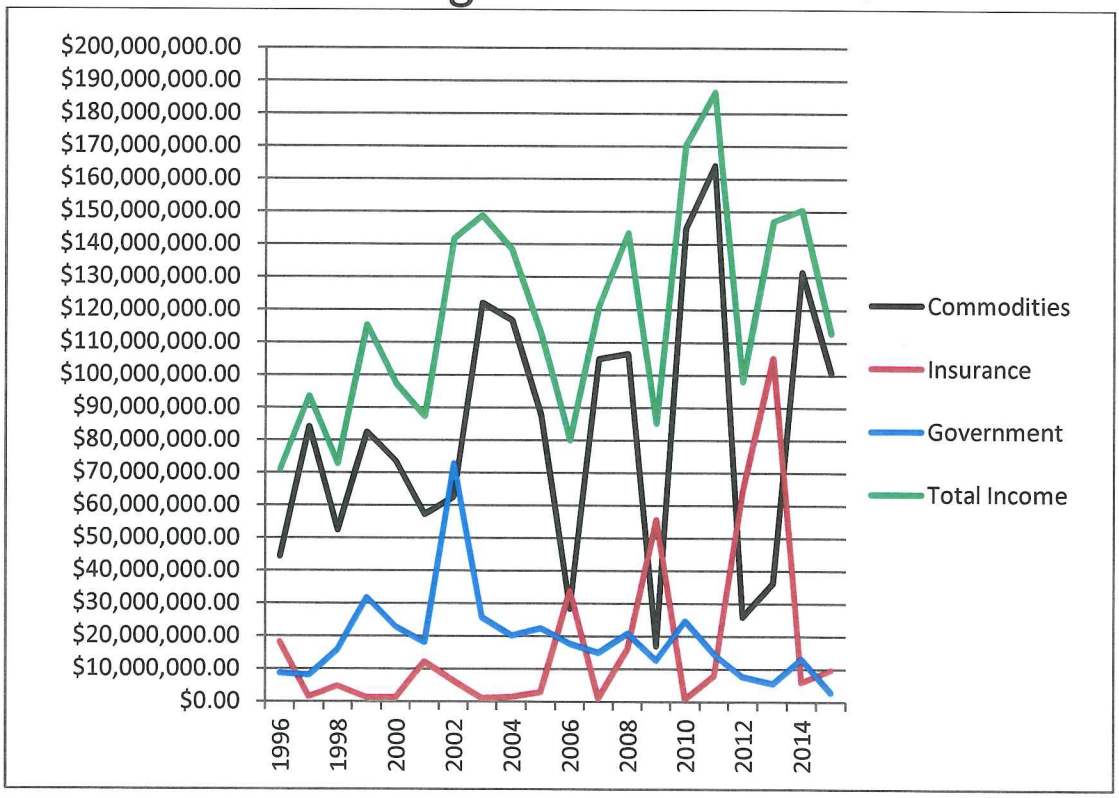
Conclusions

Soil fertility varies widely. Soil testing allows growers to credit themselves for any residual fertility in their soils allowing them to apply only what is needed to meet their realistic yield goal.

2015 Nueces County Agricultural Income
Total Income = $112,814,600.00



Historic Agricultural Income*



*This estimated income includes commodity sales, government subsidies and crop insurance.

NUECES COUNTY
ANNUAL AGRICULTURAL INCREMENT REPORT

Compiled By:

Jason P. Ott - County Extension Agent-Ag/NR

{Estimated County Cash Receipts in $1,000's}

Commodity	2010	2011	2012	2013	2014	2015
Wheat	1366.70	494.20	194.60	656.00	2479.12	4608.70
Corn	3828.40	4444.60	321.00	1234.10	6134.52	4968.20
Hay	6875.00	1960.00	2520.00	2417.00	7976.64	5333.00
Oats	0.00	0.00	0.00	6.20	0.00	0.00
Sorghum	48181.70	54125.10	11264.00	19398.20	43912.34	59405.40
Cotton	66679.40	76103.70	3386.00	503.50	48243.24	15486.70
Cottonseed	11507.90	16193.70	1335.00	187.20	18053.78	4246.50
Sesame	269.00	73.90	146.00	936.00	396.44	708.20
Sunflowers	223.10	460.00	271.00	216.50	84.67	295.00
Guar				340.80	62.40	0.00
Vegetables	5.00	5.00	5.00	5.00	5.00	5.00
Nursery	1400.00	1200.00	1000.00	865.00	1175.00	2271.90
Poultry	151.50	180.90	199.30	0.00	0.00	0.00
Beef Cattle	2209.50	4414.00	2766.80	8783.85	2180.96	2335.30
Goats	413.00	448.00	473.60	0.00	19.02	24.20
Hogs	691.70	660.80	770.00	0.00	32.60	39.10
Sheep	184.20	177.00	219.80	0.00	8.77	11.40
Aquaculture	200.00	120.00	200.00	200.00	200.00	200.00
Horses	300.00	300.00	300.00	300.00	300.00	300.00
Hunting	130.00	130.00	130.00	130.00	130.00	130.00
Other Ag Related	0.00	367.80	387.50	62.00	143.51	50.50
TOTAL	**144616.10**	**161858.70**	**25889.60**	**36241.35**	**131538.01**	**100419.10**

NUECES COUNTY ROW CROP PRODUCTION - 10-YEAR OVERVIEW

GRAIN SORGHUM

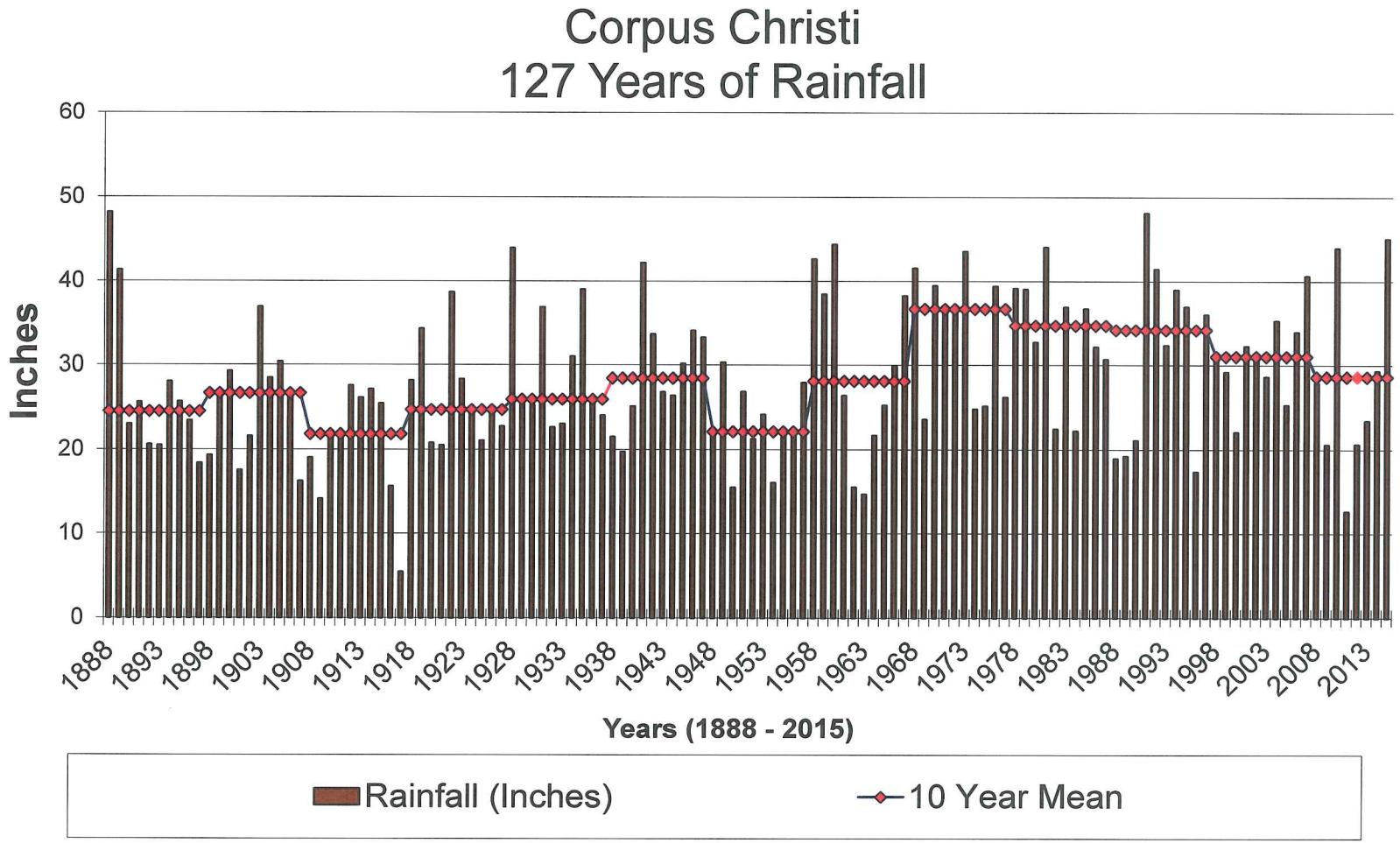
YEAR	PLANTED	ACRES HARVESTED	POUNDS/ACRE	TOTAL (CWT)
2006	158,700	92,400	1,568	1,473,000
2007	187,000	186,100	4,200	7,816,200
2008	198,850	197,880	3,797	7,513,504
2009	168,211	49,800	2,240	1,115,520
2010	183,430	183,430	4,730	8,676,239
2011	141,867	141,867	4,730	5,390,946
2012	187,196	140,100	3,370	4,721,370
2013	167,868	105,168	1,736	1,825,716
2014	155,700	154,600	3,164	5,854,978
2015	199,682	199,682	3,500	6,988,870
10-Yr Avg	**174,850**	**145,103**	**3,304**	**5,137,634**

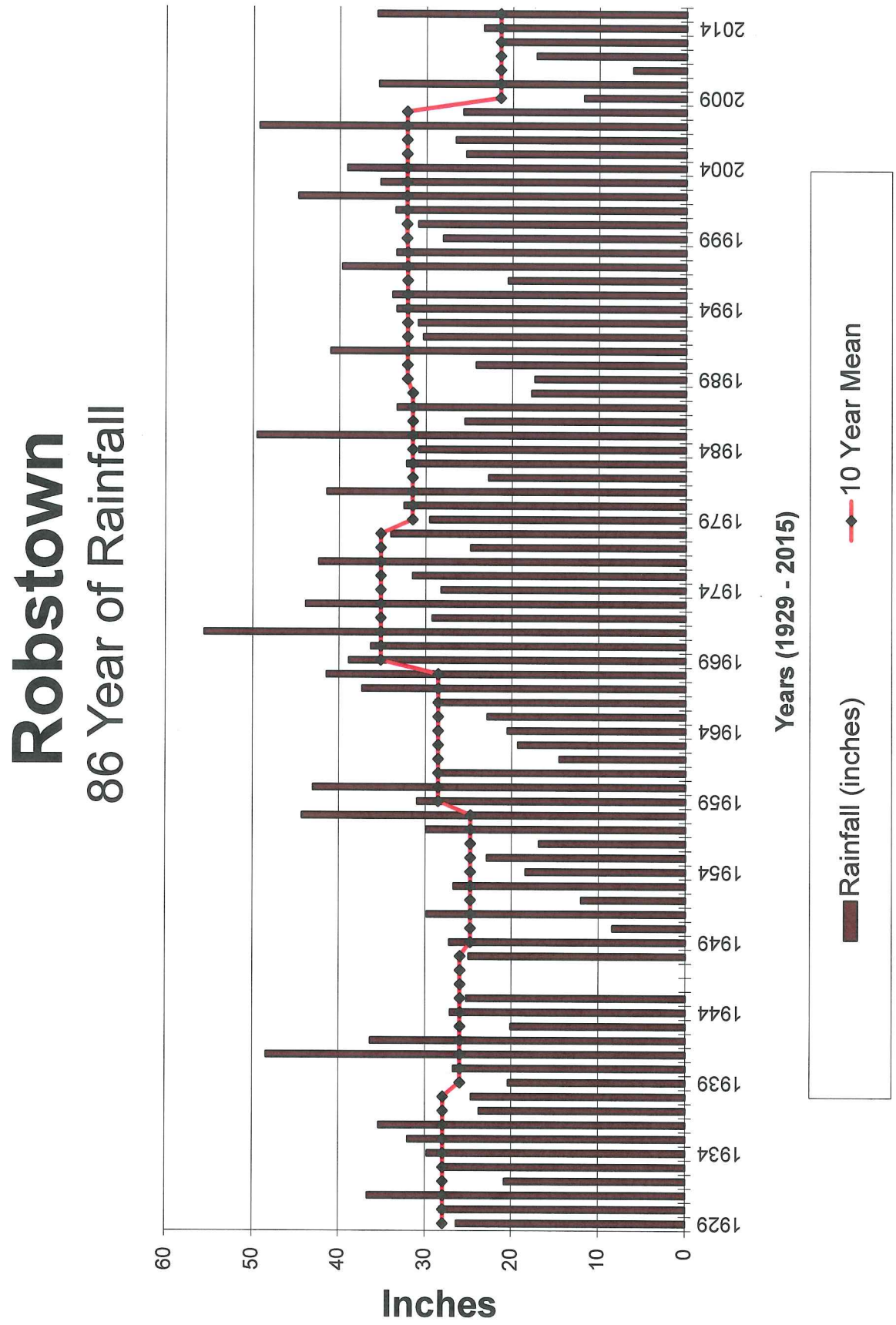
COTTON

YEAR	PLANTED	ACRES HARVESTED	POUNDS/ACRE	TOTAL (Bales)
2006	175,900	54,500	562	61,258
2007	110,300	109,900	917	201,557
2008	111,649	81,649	518	84,588
2009	125,790	4,116	360	2,963
2010	104,050	104,050	866	187,721
2011	130,840	111,527	669	155,441
2012	112,793	12,820	372	9,935
2013	168,786	2,055	350	1,498
2014	129,000	123,300	667	171,300
2015	28,547	28,547	875	49,957
10-Yr Avg	**119,766**	**63,246**	**616**	**92,622**

CORN

YEAR	PLANTED	ACRES HARVESTED	BUSHELS/ACRE	TOTAL (Bu)
2006	3,700	1,700	69	117,300
2007	10,300	10,000	86	860,000
2008	5,500	5,383	50	269,150
2009	9,309	2,313	25	57,825
2010	9,867	9,867	97	957,022
2011	12,400	12,400	58	719,200
2012	3,167	1,529	30	45,870
2013	12,300	3,100	36	110,050
2014	17,000	16,600	57	939,000
2015	19,715	19,715	72	1,419,480
10-Yr Avg	**10,326**	**8,261**	**58**	**549,490**


Corpus Christi
127 Years of Rainfall
Inches
60
50
40
30
20
10
0
1888
1893
1898
1903
1908
1913
1918
1923
1928
1933
1938
1943
1948
1953
1958
1963
1968
1973
1978
1983
1988
1993
1998
2003
2008
2013
Years (1888 - 2015)
Rainfall (Inches)
10 Year Mean


Robstown
86 Year of Rainfall
Inches
60
50
40
30
20
10
0
1929
1934
1939
1944
1949
1954
1959
1964
1969
1974
1979
1984
1989
1994
1999
2004
2009
2014
Years (1929 - 2015)
Rainfall (inches)
10 Year Mean

AGRICULTURAL INFORMATION SOURCES

Nueces County Extension Agents Agriculture/Natural Resources
710 E. Main, Suite 1; Robstown, TX 78380
Phone: 361.767.5223 Fax: 361.767.5248
Web Address: http://nueces.agrilife.org/
E-mail: nueces-tx@tamu.edu

Texas A&M AgriLife Research and Extension Center
Corpus Christi A&M Research and Extension Center
10345 State Hwy 44; Corpus Christi, TX 78406-9704
Physical Location: Hwy 44, 4 miles West of CC Airport
Phone: 361.265.9203 Fax: 361.265.9434
Web Address: http://ccag.tamu.edu/

Farm Service Agency
548 S. Hwy 77, Suite A; Robstown, TX 78380
361.387.2533

Natural Resources Conservation Service
548 S. Hwy 77, Suite B; Robstown, TX 78380
361.387.2533

Cotton Classing Office/USDA AMS - Corpus Christi
3545 Twin River Boulevard; Corpus Christi, TX 78410
Phone: 361.241.4001 Fax: 361.241.0133

Texas Department of Agriculture - Austin
Pesticide Applicator Certification Division
(regulatory information and pesticide enforcement)
PO Box 12847; Austin, TX 78711
512.475.1675 TELL-TDA 1.800.835.5832

TEXAS A&M AGRILIFE EXTENSION

Trade names of commercial products used in this report is included only for better understanding and clarity. Reference to commercial products or trade names is made with the understanding that no discrimination is intended and no endorsement by Texas A&M AgriLife Extension Service and the Texas A&M University System is implied. Readers should realize that results from one experiment do not represent conclusive evidence that the same response would occur where conditions vary.

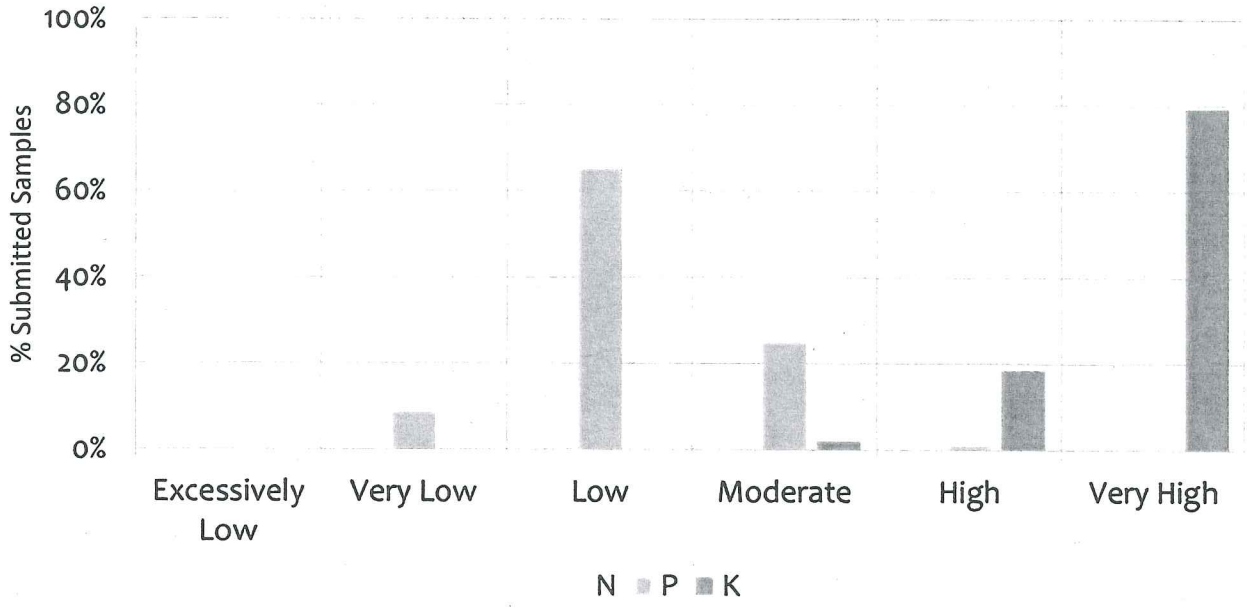


Figure 1. Distribution of submitted soil samples across 6 fertility ranges for primary nutrients.

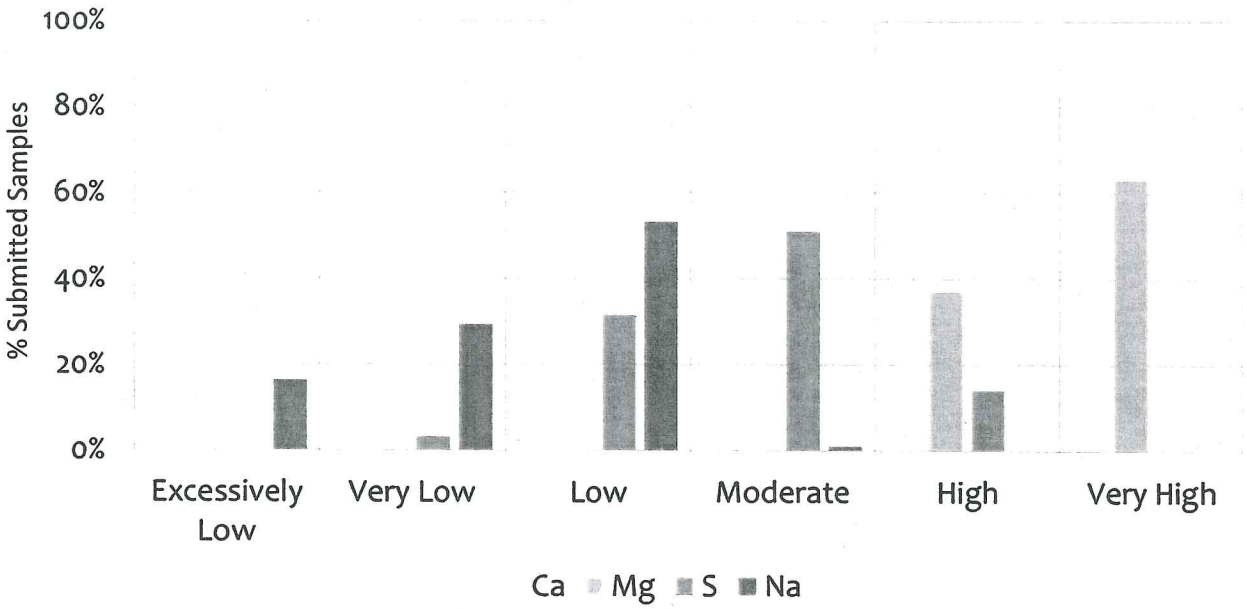


Figure 2. Distribution of submitted soil samples across 6 fertility ranges for secondary nutrients.

Conclusions

Soil fertility varies widely. Soil testing allows growers to credit themselves for any residual fertility in their soils allowing them to apply only what is needed to meet their realistic yield goal.