

FARM Assistance

Helping Agriculture Make Informed Decisions



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Foreword

For Texas agriculture to become more profitable and competitive--in light of uncertain weather conditions, risky prices, and increasing production expenses--farmers and ranchers must be better able to weigh the risks and projected impacts of alternative decisions on their operations. In response to this need, Texas Cooperative Extension specialists offer a whole farm and ranch computerized decision support system for long-term strategic planning decisions, called

Financial And Risk Management Assistance (FARM Assistance).

Individual agricultural operations statewide, using information specific to their business, can effectively assess the expected financial impact of proposed changes, as well as the financial risk associated with those changes. For example, producers can compare their cash flow risk under various plans, and view estimates of their plan's impact on net worth (wealth) 10 years down the

road--will they be worse off or better off? And not just whether they are worse or better off, but is the projected payoff from the plan worth the risk of failure. In the past, management changes were evaluated based on gut instincts and average conditions. Texas producers have, at their fingertips, the ability to evaluate their plans including the risks they face with technical financial expertise. Contact the FARM Assistance team toll free at 1-877-TAMRISK.



Executive Summary

Texas Agriculture 2004: Road to Success is intended to illustrate the activities and results of the FARM Assistance program of Texas Cooperative Extension. Since its inception the FARM Assistance team has conducted over 700 strategic farm and ranch analyses for Texas producers. Program participants represent almost 2 million acres of productive crop and pasture land across the state.

The program's broadest impacts fall into two main categories. The first is helping individual producers evaluate strategic plans and alternatives for their operations. The average alternative studied for participants has a projected net worth impact of \$28,000

per year. The second area of program impact is the delivery of analyses and information from an in-depth farm level database representing Texas agriculture. Using actual farm and ranch data, the FARM Assistance team has conducted research on important industry issues such as state tax policies and federal farm policies. Additional work has focused on identifying the characteristics of successful producers versus producers that face financial struggles.

The data included in this annual report of the FARM Assistance program is a collection of approximately 200 of the most recent program participants. Data results indicate that both finan-

cial success and financial stress are evident in all categories of agricultural production. However, tendencies of some groups suggest that crop farms have the highest level of projected financial success, compared to purely livestock and diversified operations. Among crop farms, producers with significant acres of high valued corn and cotton production fair better than the wheat and grain sorghum categories. A final note regarding irrigated crop production is worth highlighting. Among the producers of most irrigated crops, the highest yields tend to occur in groups that project the least financial success, suggesting that yields are not a defining characteristic of farm financial success.

The FARM Assistance Team

While FARM Assistance is technically a "computerized decision support system" founded on the capacities of a financial forecasting model, the real backbone of the service are the individual specialists who conduct the analysis and deliver the information in a professional format. FARM Assistance is not software; rather it is a service provided by a technical analyst.

To find out more or sign up for the FARM Assistance program, look us up on the web:

<http://trmep.tamu.edu>

Or contact the FARM Assistance specialist near you:

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806-677-5667

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The FARM Assistance Team

Dr. Joe Outlaw



Dr. Joe Outlaw is an Associate Professor and Extension Economist in the Department of Agricultural Economics at Texas A&M University. His extension education and applied research activities are in farm management, agricultural policy, and risk management, focusing on issues relevant to Texas crop producers. In addition, he is the Co-Coordinator of Extension's Texas Risk Management Education Program. He is specifically in charge of coordinating the Financial and Risk Management (FARM) Assistance program that provides one-on-one assistance to Texas producers.

Dr. Outlaw is a member of the Agricultural and Food Policy Center and conducts applied research on issues relevant to Texas.

He is originally from Devine, Texas. He is married to Natalie and has three children, Stephanie, Layne and Dylan. Dr. Outlaw received his B.S. (1987), M.S. (1988) and Ph.D. (1992) degrees from Texas A&M University, all in agricultural economics. In 1992 he received the College of Agriculture and Life Sciences Outstanding Graduate Student Award.

Dr. Steven Klose



Dr. Steven Klose is an Assistant Professor and Extension Economist in the Department of Agricultural Economics at Texas A&M University. His extension activities are focused on the support of the Texas Risk Management Education Program. Specifically, Steven works in the area of farm level simulation modeling and is responsible for the research, design, and development of the FARM Assistance Model. Steven also works directly with district risk management faculty, assisting with the application of this decision information model to unique and diverse Texas agricultural operations.

Steven is a member of the Agricultural and Food Policy Center and works with this group in the areas of applied policy research and farm level simulation modeling.

He is originally from Haskell, Texas. He is married to Jennifer and they have a daughter, Kayla and a son Carson. Steven is an Aggie, class of 1992, graduating Magna Cum Laude from Texas A&M University with a B.S. in agricultural economics. He also received M.S. and Ph.D. degrees in agricultural economics from Texas A&M in 1995 and 2001.

“Any agribusiness person desiring accurate analysis of his or her present business operation, as well as a good handle on potential future prospects being considered, should really consider using the FARM Assistance program.”

– Dolan Brinson, Stonewall County Livestock Producer

Greg Kaase

Greg Kaase is an Extension Program Specialist - Risk Management with Texas Cooperative Extension located in College Station. Kaase joined the Texas A&M System in October 1992 when he was hired as a County Extension Agent in Milam County. Kaase also served as the 4-H Coordinator in Brazos County from 1994-1997 and as the County Extension Agent - Agriculture in Haskell County from 1997-1999. His position as a Risk Management Specialist became effective in February of 1999.

Kaase holds a bachelor's degree in Animal Science and a Master's degree in Agricultural Education from Texas A&M University. His activities focus on assisting producers in measuring risk and understanding the economic impacts of alternative risk management strategies, new technology, and changing agricultural policies.



George Knappek

George M. Knappek is Extension Economist - Risk Management, with Texas Agricultural Extension Service based in College Station. His extension education activities focus on risk management for crop and livestock producers.

Prior to joining TCE, Knappek worked as a credit analyst at First Texas Bank in Georgetown, TX. He was born and raised on a farm in Williamson County and received his bachelor's and master's degrees from Texas A&M University, both in Agricultural Economics.



Dean McCorkle

Dean McCorkle is Extension Economist - Risk Management, Texas Cooperative Extension. His Extension education activities focus in the areas of farm management and marketing. As a part of the Texas Risk Management Education Program, he coordinates and maintains the Risk Management Education Curriculum Guide - a comprehensive set of curriculum consisting of short publications and teaching support materials on a wide range of risk management topics. Mr. McCorkle also works with crop and livestock producers across the state in analyzing risk management strategies with the FARM Assistance program.

Prior to his current position, Mr. McCorkle was an Assistant Research Scientist for the Texas Agricultural Experiment Station and an Extension Agricultural Economist for Kansas State University. He received his B.S. (1988) and M.A. (1991) degrees from Texas A&M University, all in Agricultural Economics.

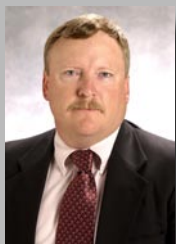


The FARM Assistance Team



Wade Polk

Wade Polk is an Extension Economist, Risk Management, with Texas Cooperative Extension, District 7 based in San Angelo. He is also the Risk Management contact person for district 6. Polk joined the Texas A&M System in June 2000. He holds a bachelor's degree in Agricultural Economics from Texas Tech University and a Master's degree in Agricultural & Applied Economics from Texas Tech University. Polk's Extension and applied research programs focus on working with producers in measuring risk and understanding the economic impacts of alternative risk management strategies, new technology, and changing agricultural policies.



Jay Yates

Jay Yates is an Extension Economist - Risk Management with Texas Cooperative Extension based in Lubbock, Texas (District 2). As the risk management specialist in District 2, his activities focus on analyzing the financial performance and associated risk of alternative financing, investing and operational decisions for crop and livestock producers in the South Plains.

Yates re-joined the Texas A&M System in April 2002 after a 15-year absence. Previously he served with the Center For Farm Financial Management at the University of Minnesota, the National Grain Sorghum Producers in Abernathy, Texas, and spent the last 12 years farming in southwestern New Mexico. He graduated Summa Cum Laude in 1983 from Tarleton State University with a B.S. in agricultural economics. He received his M.S. degree in agricultural economics in 1985 from Texas A&M University.

Jay is originally from Deming, New Mexico and is married to Shelly Maupin from Ira, Texas. They have three children, Amber, Ira and Zay and reside in Shallowater, Texas.



Diana "DeDe" Jones

DeDe Jones is an Extension Economist, Risk Management with District 1 Texas Cooperative Extension based in Amarillo. DeDe joined the Texas A&M system in October 2000. She holds a bachelor's degree in Agricultural Economics and an M.B.A. in Marketing from Texas Tech University. Her activities focus on analyzing the financial performance and associated risk of alternative financing, investing, and operational decisions for crop and livestock producers in the Panhandle.

Jones is originally from Stephenville, TX and is married to Cody from Stanton, TX. They have a new son, Brandon, that was born in March.

“The FARM Assistance program has put me on track to make my ranch the most productive it can be.”

– R.M. “Dick” Shepherd, Montague County Livestock Producer

Will Phinzy

Will Phinzy is located at the Research and Extension Center in Uvalde. Will received both a B.S. in agricultural economics and an M.B.A. from Texas Tech. He has worked for Continental Grain’s Cattle Feeding Division and more recently at Vista Genetics, a pure-bred seed stock operation.



Dustin Gaskins

Dustin Gaskins is an Extension Economist, Risk Management with District 1 Texas Cooperative Extension based in Amarillo. Dustin joined the Texas A&M system in February 2001. His activities focus on analyzing the financial performance and associated risk of alternative financing, investing, and operational decisions for crop and livestock producers in the Panhandle.

Dustin worked with our team while he was an Ag. Economics graduate student at Texas A&M. He is originally from Knott, Texas where he grew up working on the family cotton farm.



Natalie Outlaw

Natalie Outlaw is a Systems Analyst - Risk Management with Texas Cooperative Extension. Natalie joined Extension in February 1999. She holds a bachelor’s degree in Business Administration - Management Information Systems from Texas A&M University.

Prior to her current position, Natalie worked in the Agricultural and Food Policy Center at Texas A&M.



Kellie Zboril

Kellie Zboril is the Office Associate for the Risk Management Group with Texas Cooperative Extension. Kellie began her career in Extension in May 1999 as Senior Secretary at the Southeast District 9 Headquarters. She joined the Risk Management Group in June 2002.



Program Description



Program Background

In 1997, Texas Cooperative Extension was provided funds from the 75th Texas Legislature to develop a pilot risk management education program to address increased financial and marketing risk, as well as the already high level of risk associated with production agriculture in Texas. The region of the pilot program included the Texas Panhandle, South Plains, and Rolling Plains. The following year the initiative effort was expanded to cover the entire state of Texas.

The program, referred to as the Texas Risk Management Education

Program (TRMEP), was designed to assist Texas farmers and ranchers in better identifying the sources of risk in the operation, to inform producers of how to use available tools and/or strategies for managing risk, and to help producers quantify the financial impacts of alternative risk management strategies. As a part of TRMEP, the FARM Assistance program was born.

The FARM Assistance team conducted 17 focus group meetings in the pilot areas with groups of producers, lenders, and agribusiness interests. The meetings were held to determine the sources of risk they, or their clientele, face in their opera-

tions and what capabilities would enable a computer-assisted decision tool to aid them in making better management decisions.

FARM Assistance is best described as a computerized decision support system. The computer model itself was built on a foundation of 20 plus years of research. Agricultural economists with the Texas A&M University System have developed and perfected methods in risk analysis and in simulating the financial future of an agricultural production firm. Through FARM Assistance, these capabilities have been extended to provide farmers and ranchers in Texas with sound decision-making information.

Program Description: Process

Extension specialists work with producers one-on-one, so the entire FARM Assistance analysis is an individualized process. Before the process begins, program subscribers are asked to do a little homework by gathering some paperwork. The required data is readily available from crop insurance agents, the Farm Service Agency (FSA) office, accountants, and loan officers. Often the information needed has already been compiled in order to obtain financing. The producer's cost of the FARM Assistance analysis includes

the time spent gathering data, the time spent with the extension specialist, and a subscription fee of \$250.

The analysis begins with an initial data collection meeting and can typically be finalized in two subsequent meetings. The information collected in the initial meeting is used to develop a preliminary baseline projection for the operation. In the second meeting, the extension specialist and the subscriber review the input data, verify preliminary results, and develop any alternative strategies to

be analyzed. Finally, in a third meeting, the extension specialist will deliver and explain the FARM Assistance analysis report.

The total time required for this process depends on the complexity of the operation, the completeness of a subscriber's information, the subscriber's schedule, and the specialist's schedule. While everyone is different, the typical time subscribers spend in session with the specialist is 3-5 hours for the initial meeting, 2-3 hours for the review, and 1-2 hours for the final report delivery.



Program Description: Analysis



A key objective of the FARM Assistance analysis is to compare and contrast the expected outcomes of different strategic actions for a farm or ranch by conducting a “what if” type of analysis. This type of analysis is often referred to as investment analysis or capital budgeting. The idea is that the farm or ranch manager has an investment, a set of capital resources, and opportunities at his disposal. The key question is: What is the best plan to follow given my current situation as well as the opportunities and risks that I face?

An investment analysis is typically focused on two main issues, **financial profitability** and **financial feasibility**. The first is the issue of which plan is more profitable or beneficial, that is, which will lead to more net worth in the end. A more profitable plan can also be one that provides for a greater standard of living along the way. Second is the issue of whether the plan is feasible. Will it cash flow or is it likely to fail? Fi-

nally, the risk associated with both of these measures is a critical factor the producer should consider when making a strategic decision.

The projected change in the financial position of a business is a significant indication of the plan’s profitability. For this reason the analysis will often focus on the change in real net worth over the time period and compare the projected ending real net worth of each alternative. Pointing out the annual cash position and the probability of cash shortages highlights the feasibility of each plan.

Again, this analysis is intended to provide information to support the decision-making process. It is not intended to make a decision for you. Because the FARM Assistance analysis compares the ranges of possibilities for different strategic actions, it is not always clear that one plan is better than another. It may be that one plan is expected to generate more net worth, but it is less fea-

sible in terms of cash flow. In other cases, an alternative plan may have a higher average net worth but more downside risk. Each subscriber must also weigh other factors in their decision such as the level of work or stress associated with a particular strategic plan. One of the primary benefits of the FARM Assistance program is the individual consultation and explanation provided by the extension specialist. The specialist is able to provide insight into the financial health of an operation that provides better decision-making and peace of mind.

The FARM Assistance analysis will make no recommendations. The decision made is up to the individual and will depend on personal preferences and the level of risk each individual is willing to take. The purpose of the FARM Assistance program is to objectively present the information that will be the most valuable to subscribers as they make their business decisions.

Program Description: Projection

The core of the FARM Assistance decision support system is a ten-year financial and economic projection of the farm or ranch assuming a specific strategic plan of action (long term plan of operation). The initial projection is called the “baseline.” The baseline is intended to give the subscriber a sense of where the business may be headed financially, and to uncover potential strengths and weaknesses in the operation. The baseline also provides a benchmark against which to compare projections of alternative strategic actions.

The process begins with information provided by the subscriber describing the activities and current situation of the farm or ranch being input into the computer program. The program then generates an economic environment in which the farm or ranch operates over the

next ten years. The economic environment consists of specific factors such as prices, yields, inflation, interest costs, etc. *In no way are we suggesting that we know exactly what the economic conditions will be for the next ten years.* However, a great deal of scientific research and expertise are gathered annually by the Food and Agricultural Policy Research Institute (FAPRI) and the Agricultural and Food Policy Center (AFPC) research teams to develop a projection specifically for agriculture over the next ten years.

This single projection is only one of the many possible outcomes that could happen over the next ten years. Simply put, the future is risky. The unique advantage of the FARM Assistance projection is that it illustrates the risk associated with the future financial success of the busi-

ness. The process of simulating the operation’s strategic plan over the next ten years is actually repeated 100 times. During each repetition the operation faces a different set of prices and yields. The 100 different possible futures are developed using tested statistical methods so that the risk reflects the past conditions experienced by the farm or ranch and the forecasting expertise of the FAPRI / AFPC projection.

The result is 100 potential financial outcomes. In this sense, the FARM Assistance projection is not a single projection, rather it is a picture of the range of possible outcomes that a farm or ranch could expect to face over the next ten years. Using this range, the analysis describes the risk in the financial future of a farm or ranch.



The Big Picture

The Texas A&M University System serves the people of Texas through teaching, research, and extension. The advantage of the land grant system is that each of these three efforts support and compliment the other two, making each stronger and more valuable than if the effort stood alone.

FARM Assistance is a prized component of the Texas Cooperative Extension – Agricultural Economics program unit. While FARM Assistance is fully an Extension program, it is an excellent example of the partnership spirit that is the purpose of the land grant institution.

Partnering with the Texas Agricultural Experiment Station

The FARM Assistance program was built on a foundation of 20 plus years of research. Agricultural economists with the Texas A&M University System have developed and perfected methods in risk analysis and in simulating the financial future of the agricultural production firm. These capabilities are now being extended to provide farmers and ranchers in Texas with sound decision-making information. FARM Assistance in turn supports Texas A&M University System research activities by gathering valuable insights to the “real world” issues that producers face on a daily basis. These insights help identify and direct research topics, and the individual producer data

collected through the FARM Assistance process is available to help answer critical research questions.

Partnering with Texas A&M Teaching

Participants in the FARM Assistance program benefit from interacting with specialists and professors connected to the teaching programs at Texas A&M University. Management, finance, accounting, and economic concepts taught in the classroom are highly relevant and beneficial to the farm or ranch manager. Classroom instruction at Texas A&M University is also improved through the insights and real world issues experienced through working with individual producers. Because of the University system’s interaction with the agricultural industry, students are better prepared for jobs in the industry.

Serving Texas Agriculture

The broad objective of the FARM Assistance program is to improve decision-making in and for the agricultural industry of Texas. To that end, FARM Assistance focuses on both the individual producer and the entire agricultural economy of Texas.

Serving the Individual Producer

One of the two main functions of the FARM Assistance program is

to provide individualized analytical service for agricultural producers in Texas. The FARM Assistance system provides decision-maker(s) of an agricultural operation with a 10-year financial projection of the entire operation. It is a one-of-a-kind tool, unique in that it includes all of the following features:

1. The FARM Assistance projection includes the reality of **risk** associated with agricultural production and prices.
2. The FARM Assistance projection is **specific** to an individual operation.
3. FARM Assistance provides a **long-range** (10 year) financial outlook.
4. A **professional analyst** conducts and delivers the FARM Assistance program.

The system works to help farmers and ranchers plan for their financial future and the risks they face. Unfortunately, many producers operate their farm or ranch year after year not knowing if their business is sustainable over a long period of time. By using the FARM Assistance system, a producer can gain valuable insights into the feasibility, profitability, and overall viability of his operation. A formal financial outlook can also ease or prompt valuable communication between the manager and family members, partners, or creditors.

“FARM Assistance is a valuable tool that is needed for making sound financial decisions. This program could make the difference for a farmer to succeed.”

– Larry Beseda, Cochran County Crop Producer

The system also has a powerful ability to provide decision-making information. Farmers and ranchers daily face a risky business environment, in which they must make critical and complex decisions that affect their financial stability and the future livelihood of their business and family. Unfortunately, the information that producers typically use to make critical decisions is inadequate. For years, farm and ranch managers have based decisions on

traditions, instincts, advice from neighbors, or generic advice from experts. While these factors should not be ignored, they also should not be the sole basis for critical business decisions. Some managers have the skills to “pencil out” a particular decision with accounting, finance, and economic concepts. Even in these situations, it is difficult to evaluate the full implication of strategic decisions and plans over multiple years. And more importantly, these analy-

ses do not consider the risk in future prices and production.

FARM Assistance fills the information gap, by narrowing down the effect of an alternate plan or strategy to the bottom-line cash flow, profit, and equity impacts. Using the FARM Assistance decision support system, producers now have more and better information than they have ever had to make strategic decisions and formulate viable business plans.



The Big Picture

Supporting the Agricultural Industry

While FARM Assistance has tremendous benefits for the individual subscribers who participate, it also has unlimited potential to support the entire agricultural economy of Texas. As a result of conducting over 700 analyses across the state of Texas, an extensive database has been developed portraying the wide range of operations that exist in Texas agriculture. While the individual data remains confidential, the collection of data can provide priceless information and research capabilities to aid federal and state policy makers. The aggregate data is also beneficial to the individual producer by identifying the characteristics and factors that make some producers more successful than others. The following are a few examples of the broad benefits and capabilities of the FARM Assistance database:

Farm Bill research – During the debate process leading up to the passage of the 2002 Farm Bill, the FARM Assistance team in partnership with the Agricultural & Food Policy Center (AFPC) with the Texas A&M University System provided critical analysis to U.S. Representatives from Texas regarding the potential impact of farm policy provisions on the farmers and ranchers of Texas.

State Tax Policy – 2005 is stacking up to be a critical year for Texas agriculture as the state legislature will

again take up the issue of school finance and related tax alternatives. Texas agricultural leaders in the legislature and in commodity and livestock organizations have already called on the FARM Assistance team to evaluate specific proposals and the value of current exemptions that benefit the agriculture industry. The FARM Assistance database should continue to be a valuable resource for producer organizations and lawmakers in the coming legislative process.

Identifying the Successful Producer – Like any other type of business, farmers and ranchers in Texas operate with varying degrees of financial success. Participants in the FARM Assistance program have access to reports that enable them to compare their operation to similar farms or ranches in Texas. In addition, Extension specialists have begun and continue to research the extent to which

various business characteristics and factors are related to financial success.

The trade-off relationship between risk and profits -- One of the more unique aspects of the FARM Assistance program is the ability to analyze financial performance while accounting for production and market risk. Extensive information and research is available concerning the relationship between the risks and returns associated with investing in stocks, bonds, or mutual funds. FARM Assistance creates the data that can explain the same relationships as they occur in agricultural production. The risk vs. return line of research has the potential to help producers identify opportunities to improve profits without taking on too much risk or conversely, to reduce their risks without giving up too much return.



“FARM Assistance provided by Texas Cooperative Extension will help me make the important financial projections so critical to the financial stability of my farm in the next ten years.”

– David Block, Moore County Producer



Other Duties

In addition to performing individual analyses, the FARM Assistance Program Specialists support and take part in many other programs and activities that are beneficial to the agricultural producers of Texas. One example of the broader impact of our team was our contribution in educating and helping Texas farmers with their farm program base and yield update decision that was brought about by the 2002 Farm Bill. The FARM Assistance group spoke to over 4,000 producers in Base and Yield Analysis (BYA) meetings across the state. In addition, FARM Assistance specialists provided one-on-one assistance to over 250 producers by analyzing their farm and/or ranch operations with the BYA software.

FARM Assistance specialists also contribute to many other TCE programs that include: Tomorrow's Top Agriculture Producers (TTAP), Master Marketer, QuickBooks Pro™ trainings, and general education meetings across the state.

In addition to helping today's farmers and ranchers, the FARM Assistance program also supports the farmers and ranchers of the future. Each year the Farm Assistance group hosts the State 4-H Roundup Farm and Ranch Economics contest where 4-Hers present their ideas for economic growth in the farm and ranching industry. This year, we hosted entries from nine different counties. Contestants give their presentations before a panel of three judges, typically agricultural economists and FARM Assistance faculty.

Each team is judged on their style, presentation, originality, subject matter, achievement of purpose, and their ability to answer questions from the judges. Certificate and money awards are given for 1st through 3rd place. Congratulations to the 2004 Farm and Ranch Economic contest winners: 1st place, William Echols of Stephens County; 2nd place, Ashley Patton and Kyanne Petty of Coryell County; and 3rd place, Jennifer Smith of Harrison County. Special thanks to Stiles Farm Foundation for supporting the State Farm and Ranch Economics Contest and donating the award funds.

The FARM Assistance program also holds informative meetings where ever and when ever necessary to keep our producers up-to-date on current issues and information.

Results and Impacts

FARM Assistance has been used to analyze all types and sizes of crop and livestock operations. Over 1,500 alternative scenarios with their associated risk have been analyzed for individual producers statewide – representing 1.9 million acres of crop and pasture land.

One measure of the FARM Assistance program's impact is the projected net worth consequences of alternative scenarios analyzed for each subscriber. This measure indicates the gain in net worth a producer would likely see, at the end of the 10-year planning horizon, resulting from choosing the better of two alternatives. Just looking at the difference between the base situation and one alternative scenario implies that producers going through the program, on average, could expect a \$28,000 per year difference in net worth compared to the base or baseline situation. For the 10-year planning horizon, that's almost \$300,000 per subscriber.

As mentioned previously, the FARM Assistance program serves in a broader capacity than the individual analyses performed each year. The data collected serves to answer questions regarding the impact of state and federal policy options, but also provides valuable insights into the differences that exist among agricultural producers in Texas. Simply put, the database allows all producers in the state of Texas to benefit

from the program by learning more about the characteristics and practices of successful and unsuccessful operations who do participate. The following sections have been developed in an effort to learn from the many unique producers and situations encountered with FARM Assistance participants. By dissecting and summarizing producers of different levels of success, different types, different commodities, and practices we hope to identify some of the factors that contribute to financial success in production agriculture. In that identification, the goal is to help all Texas producers improve their management information and financial success.

Before presenting the information and data that represent the FARM Assistance clientele, it is helpful to understand the typical participant in the FARM Assistance program. Like any new product or service, the early years (pre-2000) of the FARM Assistance program saw many producers that could be described as the full-time, commercial, innovative, forward-thinking managers. For sometime, the database of farms and ranches was certainly not representative of all production agriculture across the state. Instead, the program tended to attract and serve those willing to be the early adopters. These participants tended to be the more successful and proactive managers in the industry.

As time passed, the program and our client base matured. We have since served a much more representative clientele. As word spread about the benefits of strategic planning with FARM Assistance, we have worked with a wide range of producers, including the very successful to those considering leaving the business because they haven't found success. Strategic planning is beneficial at both ends of the success spectrum. The successful manager usually has many ideas and opportunities when it comes to future plans. Finding the best bang for your time and money is critical when you have many alternatives to consider. On the other hand, some producers come to us facing a dismal financial outlook or even bankruptcy options. Strategic planning in these cases can help a producer make the very difficult decision of continuing or exiting the business. Whatever their choice, our multi-year strategic planning analysis can help identify the options that are most feasible and have the potential to salvage or grow the most equity.

While we have performed over 700 analyses, this summary only includes the most current and up-to-date projections for any analysis or data summaries. For the *Texas Agriculture 2004: Road to Success*, 186 different farms and ranches have been included. Each producer's input data has been updated within the last three years, and all

“The FARM Assistance Program has been very effective in helping me evaluate the short and long term projection for two alternative management decisions. It provided me with my first opportunity to get a professional analysis of my operation.”

– Melvin L. Wilson, Nueces County Cow-Calf Producer

the farms have been subjected to the same projected outlook for crop and livestock market prices.

The 186 farms are identified in Figure 1. The regions identified in the Texas map are the 12 Texas Cooperative Extension districts. As the map indicates, our participant database is made up of individuals from all areas of Texas. Participation patterns follow the major commercial crop producing regions in the state, with significant representation in the Northern and Southern High Plains as well as the Coastal Bend Regions.

In total, the 186 operations summarized in this report represent just over 890,000 acres of productive farm and ranch land. Of that total, 130,000 acres are in irrigated production and just over half represent native pasture land. Livestock production in the group amounts to almost 10,000 head of mother cows and over 17,000 head of stocker calves. The value of all assets held by the participants totals \$295 million, and a total net worth of \$213 million is claimed by the 186 farm and ranch owner/operators. The information provided in this report is primarily for the year 2003, but also includes projected financial performance.

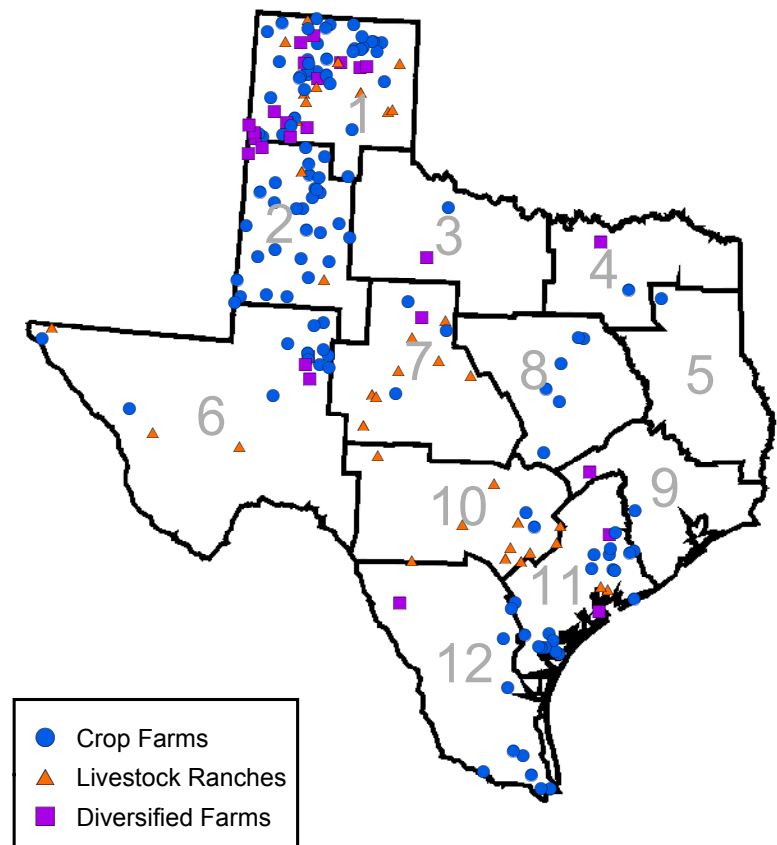
One of the objectives of analyzing the financial performance of all the

FARM Assistance participants is to learn what makes some farmers or ranchers more successful than others. The idea is to identify the characteristics or factors that are true of the financially successful producer, as well as those characteristics of the financially stressed. Once those critical factors have been identified, the information

can be used by all producers to improve their financial performance.

The first step in the process of analyzing 186 farms is to find a way to measure financial success. In particular, we are talking about forecasted success, so the question is: What financial measure is the best indicator of a successful

Figure 1. FARM Assistance Participants.



“Most businesses would have a paid staff member to do this type of detailed analysis. Thanks to FARM Assistance, I can afford this type of professional service.”

– Kevin Huffman, McLennan County Producer

financial outlook for an individual producer.

In reality, there probably isn't one measure that incorporates the many factors that contribute to the broad label of financial success. Because no single measure or financial ratio tells the whole story, we have developed the FARM Assistance Projection Score, or ProScore. The ProScore is a weighted index that considers several factors of projected performance, effectively measuring the strength of

an individual producer's financial outlook.

The three factors in the FARM Assistance ProScore success index are projected profitability, equity growth, and cash flow risk. The average return on assets (ROA) for each operation's 10-year projected planning period is used as a measure of profitability. Likewise, the average of the projected annual growth in real equity is used as another indicator of financial success. Finally, the ProScore includes a penalty (-0.25) for excessive cash flow risk, measured by Working Capital Risk or the average annual probability of a negative working capital position. To calculate an individual's ProScore, simply add the percentage ROA and the percentage Equity Growth, then subtract one-quarter of the probability of negative working capital.

$$\text{ProScore} = \text{ROA} + \text{Equity Growth} - \frac{1}{4} \text{Working Capital Risk}$$

As an example, John Q. Farmer has a projected 10-year average ROA of 4.5%, an expected average equity growth of 6%, and a 25% probability of negative working capital. John's FARM Assistance ProScore would be 4.25 (4.5 + 6 - 1/4*25).

The ProScore itself is a simple index that allows for a comparison of one producer to another or one producer to a group. The ProScore is capable of comparing farms of different sizes,

regions, and types because the score focuses on relative profit, growth, and probabilities instead of absolute values or cash levels.

The average ProScore over the entire 186 farms and ranches is 5.41. Most index values fall in a range between positive and negative 50. Other than direct comparisons between farms, the ProScore allows a producer to evaluate his outlook relative to all of the participants in the FARM Assistance system by looking at percentile rankings. Figure 2 illustrates the ProScore scale and the corresponding percentile rankings. For example, a ProScore of around 20 corresponds to the 75th percentile in the FARM Assistance database. That means if you have a ProScore of 20, your outlook is better than 75 percent of the producers in the database. On the other hand, if your ProScore is negative 28, your outlook is at the 10th percentile, meaning 90% of the group has a better financial outlook than you do.

In an effort to characterize the successful farm or ranch the group of 186 producers was split into 3 categories of projected financial success. The categories of success are also illustrated in Figure 2 by the colored ranges in the scale. The ProScore for every operation was sorted from highest to lowest score. The top third, or those above the 66th percentile, are labeled successful. The middle third of the group is identified as those

Figure 2. The ProScore.

Percentile	ProScore
95	36
90	27
80	22
70	18
60	14
50	11
40	6
30	1
20	-11
10	-28
5	-47

“FARM Assistance is a different look at production agriculture that will become a “MUST” for future success.”

– Bill Kubecka, Matagorda County Crop Producer

whose outlook appears to be stable. Finally the bottom third, those with a ProScore that fell below the 33rd percentile, we describe as financially stressed. With three groups of 62 producers, and each group projecting a different degree of financial success, we are able to describe many of the characteristics of the groups and begin to learn what separates the financially successful, stable, and stressed agricultural producers.

Analysis of Success Groups

While the average ProScore for all farms and ranches was 5.4, the sixty-two most successful producers were rated at 16 or higher with a 26.9 average. The stable category represents the 62 producers with a ProScore between 2 and 16 that average 9.9. The financially stressed category has an average ProScore of -20.6, and is made up of the producers that fell below a 2.

Table 1 illustrates some of the size and production characteristics of the three category rankings of producers. The first noticeable difference among the three groups is size. In terms of total receipts and total acres, the larger producers tend to be the least successful. The financially stressed operators’ average size is just less than 8,250 acres, while the successful operate an average of about 2,500 acres. While, the size difference is the opposite of what one might expect, a closer look at more specific

production data suggests that the financially stressed producers are likely to be livestock ranches. The larger size in terms of acres is due to the large average of native pasture acres (4,100 acres) in the stressed category. As the rank of success increases, the average acres of native pasture land, the number of cows, and the number of stockers all decrease. Average acres of specific row crop production increase with the level of success, also suggesting that the crop producer tends to have a more favorable financial outlook. The breakdown of land tenure arrangements indicates a higher proportion of share rented land for the successful category. Share renting is a much more common arrangement for crop production than livestock production.

A detailed look at the total receipts of all the producers more clearly illustrates the tendency of the successful classification to be heavily weighted to crop production, as opposed to livestock. Across all producers, the average total receipts in 2003 is \$605,000. Of that total, just over half comes from crop sales (Figure 3). Another 15% is from crop insurance indemnities and crop related government payments. Livestock receipts make up 28% of the total. The other receipts category represents items that are somewhat related to the operation or the land, but are not standard crop or livestock production. The other receipts category contributes only three percent to the total and usually includes activities such as custom work, lease revenue, or mineral royalties.

Table 1. Average Production Characteristics by Success Level.

	All Farms & Ranches	Successful	Stable	Stressed
Number	186	62	62	62
ProScore Rating	5.41	26.87	9.9	-20.55
2003 Total Receipts (\$1000)	604.8	589.7	567.9	656.9
Total Acres	4,784	2,531	3,575	8,247
Total Cash Lease Acres	1,973	549	1,586	3,784
Share Acres	935	1,240	998	537
Total Owned Acres	1,887	743	991	3,926
Corn Acres	287	342	312	182
Cotton Acres	469	670	450	249
Sorghum Acres	243	286	192	232
Wheat Acres	457	422	439	472
Improved Pasture Acres	100	120	66	105
Native Pasture Acres	1,861	116	1,211	4,104
Cows (# head)	53	27	33	99
Stockers (# head)	93	44	72	164

*Everyone that is serious about staying in agriculture should not pass this program up.”
 – Ben Dieterich, McLennan County Producer*

Components of Total Receipts by Success Level (\$1,000).

Figure 3. All Farms and Ranches.

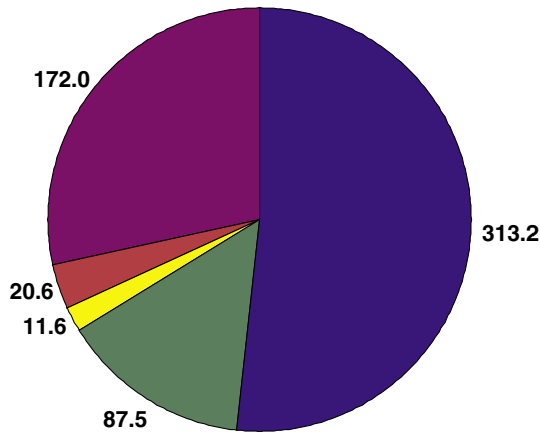


Figure 4. Successful Farms and Ranches.

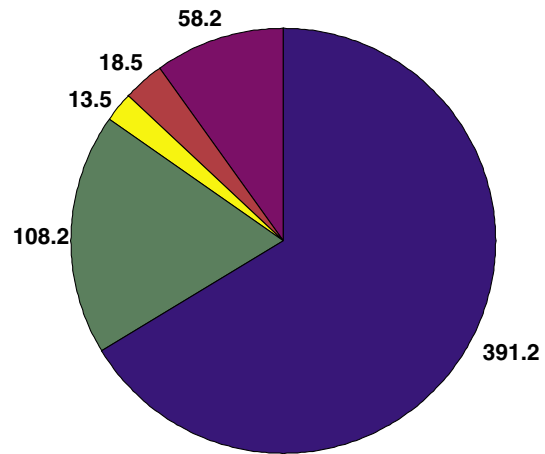


Figure 5. Stable Farms and Ranches.

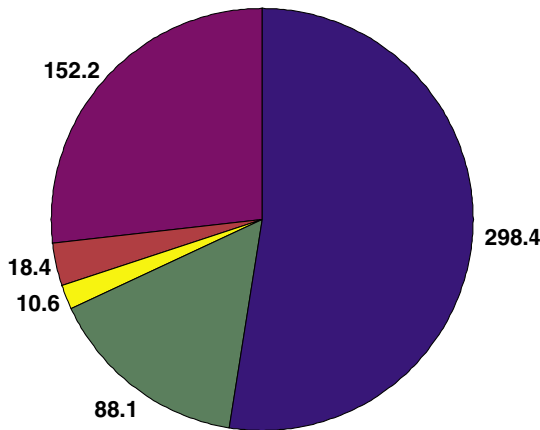
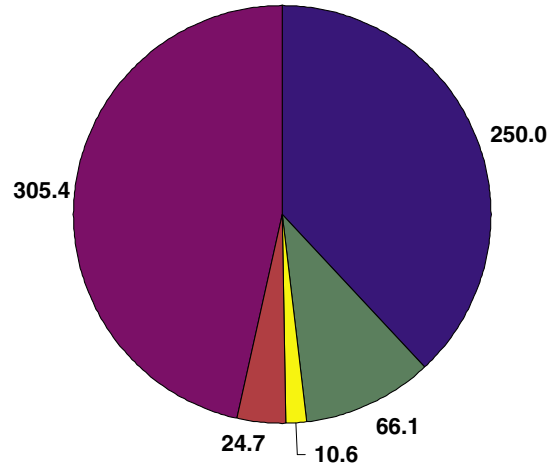


Figure 6. Stressed Farms and Ranches.



Crop Receipts
 Govt. Payments
 Crop Insurance
 Other
 Livestock

The 62 most successful operations have a higher proportion of receipts from crop activities (Figure 4). Crop sales alone make up two-thirds of receipts. When crop insurance and government payments are considered, crop related receipts make up 85%

of the average total receipts. Total receipts for the successful are slightly lower than for all participants by about \$15,000 indicating that the success is more likely coming from efficiency in production expenses, rather than generating the highest revenue.

The financially stable group of producers generate total receipts lower than both the average for all producers and the successful group (Figure 5). On average, the stable group has \$568,000 in total receipts, almost \$40,000 less than the overall average.

“FARM Assistance generates the kind of financial data that is critical to survival in production agriculture today.”

– Kent Nix, Dawson County Cotton Producer

The proportional mix of receipts from different sources almost mirrors that of the entire group of producers. Financially stressed producers have the highest total receipts and the largest percentage of livestock receipts (Figure 6). With an average of \$657,000 in total receipts, the stressed group has just over \$50,000 more receipts than the overall average. The stressed producers earn close to half of their receipts from livestock production which is considerably higher than the 10% for the successful operations and 27% for the stable.

Table 2 describes the average investment and debt structure of all farms and ranches and compares the structure of the three success groups. Real estate value per acre describes the level of investment in long-term assets such as land, barns, and houses. The level of investment is measured by the dollar value of assets per productive acre, so it does not indicate the value of land per acre. For example, a low value could indicate the land itself has a low value, or it could mean the producer leases most of his productive land, or both. A producer that leased all of his land and had no real estate assets would have a zero real estate value per acre. On average, FARM Assistance participants have \$280 invested in real estate assets per productive acre. The successful producers have significantly less real estate investment. At \$114 per acre, their investment is less than half of the overall average, and a third of the investment of the stable and stressed

producers. The higher proportion of livestock producers in the stressed category helps explain the higher real estate investment. Compared to crop production, livestock production tends to exist on more owned acreage and less leased land creating a higher investment requirement per acre.

Similarly, the machinery value per acre measures the extent of an individual’s investment in equipment per productive acre. Lower values are common for livestock producers as well as crop producers that hire custom work instead of owning the equipment. The average producer owns \$158 in equipment and machinery per acre. By comparison, the successful have an average level of machinery investment, while the stable producers have slightly more, and the stressed producers have slightly less money tied up in equipment. On the surface it may appear that too little investment in equipment causes financial problems. However, the low investment by the stressed group is likely a result of the group having more livestock production, which requires less intensive investment in equipment.

It is also helpful to compare the relative debt structure on a per productive acre basis. The long-term debt per acre for the average producer is \$58/acre. Another way to look at this measure is that every acre in the operation is carrying \$58 in debt and associated debt payments. As a simple example, the annual payment for a \$60 debt with 8% interest and 15 years remaining would be about \$7.00 per year. As was the case for the long-term asset investment in real estate, the long-term debt per acre gets progressively lower as the level of success increases. The 62 financially stressed producers have an average \$72 in long-term debt for every productive acre in their operation. Intermediate-term debt most commonly includes three to seven year term debt for machinery, equipment, and breeding livestock. The most successful producers carry an average of \$54 in intermediate-term debt per acre, higher than the \$38 average overall and twice as much as the financially stable group. In fact, the successful group has more intermediate debt per acre than long-term debt per acre, a stark contrast to the stable and

Table 2. Average Asset and Debt Structure by Success Level.

	All Farms & Ranches	Successful	Stable	Stressed
Real Estate Value Per Acre	280	114	345	381
Machinery Value Per Acre	158	159	169	147
Long Term Debt Per Acre	58	40	62	72
Intermediate Debt Per Acre	38	54	27	31
Debt To Assets %	34.4	37.4	22.9	41.2

“This program helped me evaluate my long-term goals for my operation. I was looking for someone to help me analyze my operations and be objective. And in this way it proved to be an invaluable tool.”

– Billy Reed, Dawson County Producer

Table 3. Average Financial Performance by Success Level.

	All Farms & Ranches	Successful	Stable	Stressed
Net Cash Farm Income per Acre	47.9	77.4	54.3	12.1
NCFI Standard Deviation	55.6	65.4	48.1	53.2
Expense to Receipts	0.74	0.67	0.66	0.84
Interest Expense to Receipts	0.07	0.05	0.05	0.11
Depreciation To Receipts	0.09	0.07	0.08	0.18
Family Living	29,804	24,171	34,176	30,893
Off Farm Income	8,891	8,050	10,690	7,934
Average Return On Assets %	7.9	14.4	7.3	1.9
Average Change in Real Net Worth %	4.6	14.8	5.1	-6.1
Avg Prob Negative Working Capital %	28.3	9.2	10.2	65.6

stressed groups whose intermediate-term debt is less than half of their respective long-term debt levels.

Table 3 provides a detail of the financial performance of all producers and compares the three groups by projected success. There is a clear distinction in profitability among the three groups. The most successful producers generate an average net cash farm income (NCFI) per acre of \$77, compared to \$54 and \$12 for the stable and stressed producers. The standard deviation of NCFI measures the risk in profitability. In terms of probabilities, the standard deviation describes a range of potential NCFI that the producer will realize about 70% of the time. The lower end of the range is the average NCFI minus the standard deviation, and the upper end is average NCFI plus the standard deviation. For example, the average stable producer has a NCFI per acre of \$54.3 and a \$48.1 standard deviation. That means that just over two-thirds of the time he would expect to see a

NCFI in the range between \$6.2 per acre and \$102.4 per acre. In other words, a larger standard deviation means a wider, more risky, range is possible with the same 70% probability. With an average NCFI of \$12.1 per acre and a \$53.2 standard deviation, the stressed group faces a significant risk of negative net cash farm income.

The expense to receipts ratio measures the efficiency of a producer’s ability to generate receipts. The successful and stable producers are similar in that they spend around \$0.66 in operating expenses to generate \$1.00 in receipts. The two more successful groups are also similar in the relative portion of receipts that pay for interest expenses and depreciation expenses. The stressed producers, however, are much less efficient. They spend \$0.84 for operating expenses and \$0.11 in interest for every dollar of receipts. That only leaves \$0.05 of every dollar to pay for depreciation, principal payments, family living,

taxes, and capital purchases. Depreciation alone for the group totals \$0.18 per dollar of receipts, meaning most of the group is in a negative overall profit position.

Average expenditures on family living expenses also show some distinct differences depending on the success level of the producer. The most profitable and successful producers tend to spend the least on family living expenses. At \$34,000, the stable producers spend an average of \$10,000 more annually than the successful group. The stressed producers spend almost \$31,000 each year. It isn’t clear how much can be read into the family living statistics. Members of the successful group may be financially successful because they spend less, save more, and therefore, retain more equity over time. It may also reflect the person’s management style. More specifically, the person that is highly capable of managing expenses relative to generating profits is also likely to have a careful

“This program helped me identify problem areas in my operation. I hope to use FARM Assistance to make my operation more efficient and profitable.”

– Brennan J. Vaverek, San Patricio County Livestock Producer and Vice President of Commercial State Bank in Sinton.

attitude regarding family household spending.

Another interesting characteristic of agriculture operations is the dependence on off-farm income. A legitimate question is whether the financially successful producers have achieved that status because they have substantial income from off-farm sources. Data from the FARM Assistance participants does not necessarily suggest that financial success comes from off the farm. The highest off-farm income is found in the financially stable producers who, on average, receive around \$10,700 annually from off-farm sources. The operations representing the extremes of financial success and stress actually have a similar off-farm income of around \$8,000 per year.

The final three performance measures and characteristics are the three factors included in the FARM Assistance ProScore rating. All farms and ranches average a 7.9% Return on Assets (ROA). Relative to the ROA usually quoted for agriculture; almost 8% is somewhat high. One difference is that the FARM Assistance measure of return includes the gains and losses in the market value of long-term real estate and investment assets. A change in market value of an asset can be described as an unrealized gain. Specifically, an increase in value is not realized or received until the asset

is sold and converted to cash. Most measures of ROA would not include an unrealized gain because they tend to reflect a short time period where value changes are either insignificant or impossible to measure. However, in the case of the 10-year projection of FARM Assistance, it is reasonable to assume that over a long period of time, the change in market value is an important factor in the benefits or returns to holding a land or investment asset. By comparison the most successful have a projected 14% ROA, while the stable and stressed producers have an outlook of 7% and 2% returns.

The equity growth measured by the average annual growth in real net worth directly reflects the severity of the outlook for the stressed group. Recall for the stressed group, that for every dollar in receipts, \$0.84 is committed to operating expenses, \$0.11 is committed to interest expense, and \$0.18 is drained through depreciation. Add family living expenses and principal payments, and it is a clear indication of a steady decline in farm equity. In fact, the farmers and ranches classified as financially stressed are on average facing an outlook that suggests a 6% annual decline in real net worth.

The cash flow risk also provides a clear distinction between the stressed producers and everyone else. While the successful and

stable groups average around a 10% probability of a negative working capital position, the financially stressed face an average 65% chance of a shortage of cash and other liquid assets relative to short-term cash requirements.

Comparisons Considering Financial Success

All 186 farms and ranches are divided equally into the successful, stable, and stressed categories, meaning the proportional make up is described as one-third successful, one-third stable, and one-third stressed. The level of success in any sub-group of producers can be illustrated by the proportional make up of the members of the group. For example, if we found that there were 60 farmers that drove red trucks, we might be curious to know if this group was more or less successful than the total group of 186 producers. If further investigation found that of the 60, 20 had been labeled successful, 20 were stable, and 20 were stressed, we would conclude that driving a red truck has no impact on the success of the operation. If we found something other than a 20-20-20 split, we might be able to suggest that driving a certain color of truck is related to, or even has an impact on, financial success. Following that example, much of the rest of the database analysis is focused on segmenting the database into sub-groups of producers and identifying the differences that exist among the groups.

“Having someone come to your home or office and help you gather information you have and put it in a package that you can read and understand so easy is and will be very beneficial to me and my family. Thanks.”

– Ronnie Hirt, Glasscock County Producer

Analysis by Geographic Region

Figure 7 presents a regional breakdown of success across all the FARM Assistance participants. The regional divisions represent Texas Cooperative Extension’s 12 districts. For this analysis we have grouped the participants into five regions based on Extension districts or combinations of districts.

The region made up of districts 4, 5, and 8 is the most successful in terms of proportions. Two-thirds of the participants in the Northeast and Central Texas region fall into the successful category, and only 11% are considered financially stressed. Unfortunately, the group is small in number relative to total participation, making it difficult to conclude that the region is home to significantly more financial success.

The Coastal Bend and South Texas region most closely resembles the even division of success levels of the total group. With a third of the participants at each success level the area is financially on par with the entire group of FARM Assistance participants.

The area containing the highest level of financial stress is the arid region of South Central and West Texas (districts 6, 7, and 10). A significant number of the participants in the region are livestock ranches. Producers facing a financially stressed

outlook make up 44% of the region, and only 23% are labeled successful.

The profile of districts 2 and 3 is almost the reverse. In the cotton dominated region, 46% of the FARM Assistance participants have a successful financial outlook. An average portion of the region is considered stable and only 20% are financially stressed.

The Northern Panhandle is close to an even profile of the participants’ success levels. At 38% the level of financially stressed producers is slightly higher than average, and the percentage of successful producers is low by about 5 percentage points.

Analysis by Producer Type

In the following section we explore the differences that exist in agricultural operations of different types. We have defined three general types of producers: Crop Farms, Livestock Ranches, or Diversified Farms. Each of the 186 operations was categorized as one of the three types based on the percentage of their total receipts that they receive from crop or livestock enterprises. A crop farm is defined as an operation whose crop enterprises account for 75% or more of total receipts. Similarly a livestock operation would earn 75% or more of their total revenue from livestock activities. Farms that did not meet either of those thresholds were clas-

sified as diversified. These diversified farms rely significantly on both crop and livestock enterprises. The first thing to point out in summarizing the different types of producers is the predominance of crop production among the FARM Assistance participants. Of the 186 operations, 123 were classified as crop farms. While Texas agriculture, in general, is dominated by cattle production, two-thirds of our participants are primarily crop farms. While no concrete evidence exists for why this is, one could speculate that crop farms tend to have more management and production options to analyze than do livestock operations.

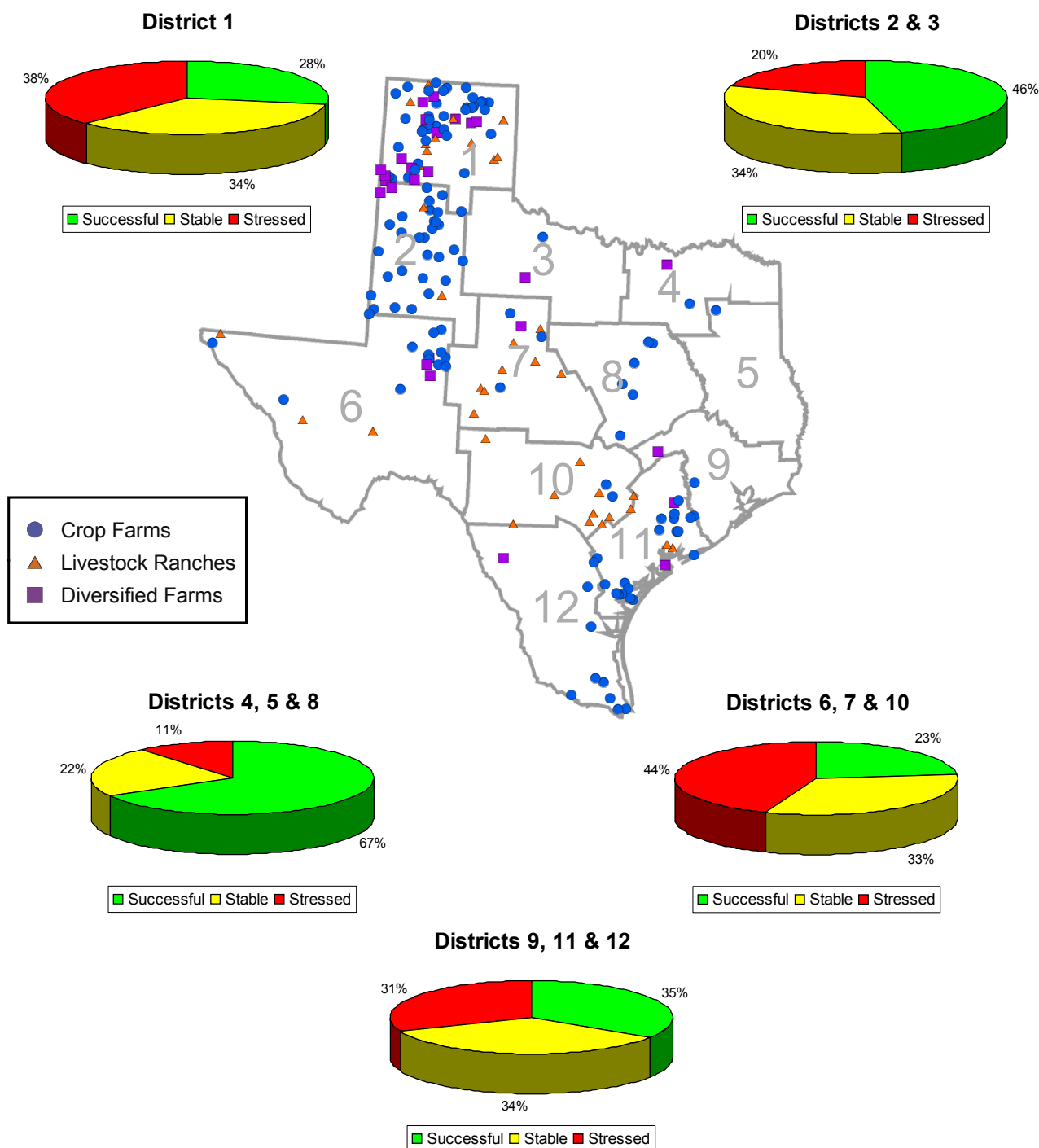
Figure 8 provides an illustration of where the different types of operations are located around the state. The crop farms are concentrated around Lubbock, Amarillo, and the Coastal Bend region. The livestock ranches dominate Extension districts 7 and 10, but also have considerable participation in the Northern Panhandle. Diversified operations participate all over the state, but the highest representation is around Amarillo. The district 1 area also has the most diverse participation, in that we find significant participation of all three producer types.

In terms of financial success, the crop farms have the distinct edge in ranking and ProScore rating. The pie charts show the proportion of each type group that is classified as finan-

“FARM Assistance has been a valuable tool in evaluating the upcoming decisions I will need to make in the future to keep my farming operation viable.”

– John Gauling, Jefferson County Rice Producer

Figure 7. Comparison of FARM Assistance Participants’ Success by Region.



“FARM Assistance helps put hard numbers to changes in production practices to show if these changes are taking you in the right direction. We must think outside of the box.”

– Mike McGuire, Haskell County Producer/Agribusinessman

cially successful, stable, or stressed. A profile different from the equal thirds found in the overall group can help identify the success level of the three operation types. Both the crop farms and the diversified farms have more than a third, almost 40%, rated as successful. The crop farms have the edge, however, in the portion rated stressed. Only 26% of the crop farms were rated as financially stressed, while another 35% were stable. The diversified operations had more financial stress, 38% of the group, and only 23% were categorized as stable. In general, neither group is drastically different from having 33% at each success level. However, the livestock ranches have a large portion of the group with a stressed financial outlook. Over half of the ranches were classified as stressed, and equally telling for the group is that such a small number, 11%, were in the successful category.

Table 4 provides the average production profile for the operations in each of the three production type groups compared to the overall averages for farm size, land tenure, and enterprise mix. While the average FARM Assistance ProScore for all 186 operations was a 5.4, the crop farms had a more favorable 9.42 average ProScore. The livestock producers had the lowest average index of success which makes sense with the high percentage of livestock ranches ranked as stressed. The 37 livestock ranches had a negative 7.84 aver-

age ProScore. With an average 5.29 ProScore rating, the 26 diversified operations are very close to the average outlook of all the participating farms and ranches.

While the crop farms are the most successful, they were the smallest operations both in terms of acreage and total receipts. With an average of \$633,000 in total receipts for 2003, the livestock ranches produced \$90,000 more than the average crop farm, and yet the group was far less successful overall. The diversified farms were much larger as measured by total receipts, with almost \$850,000 on average in 2003. But, again the extra receipts were not effectively converted to profits and financial success, as the crop farms out-performed both of the other type of operations as judged by their ProScore rating.

Table 4. Average Production Characteristics by Producer Type.

	All Farms & Ranches	Crop	Livestock	Diversified
Number	186	123	37	26
ProScore Rating	5.41	9.42	-7.84	5.29
2003 Total Receipts (\$1000)	604.8	544.8	633.2	848.5
Total Acres	4,784	2,420	13,352	3,775
Total Cash Lease Acres	1,973	349	8,126	901
Share Acres	935	1,238	43	701
Total Owned Acres	1,887	834	5,184	2,173
Corn Acres	287	370	77	135
Cotton Acres	469	614	12	338
Sorghum Acres	243	290	14	298
Wheat Acres	457	475	148	722
Improved Pasture Acres	100	21	211	293
Native Pasture Acres	1,861	120	8,380	459
Cows (# head)	53	7	182	86
Stockers (# head)	93	25	222	232

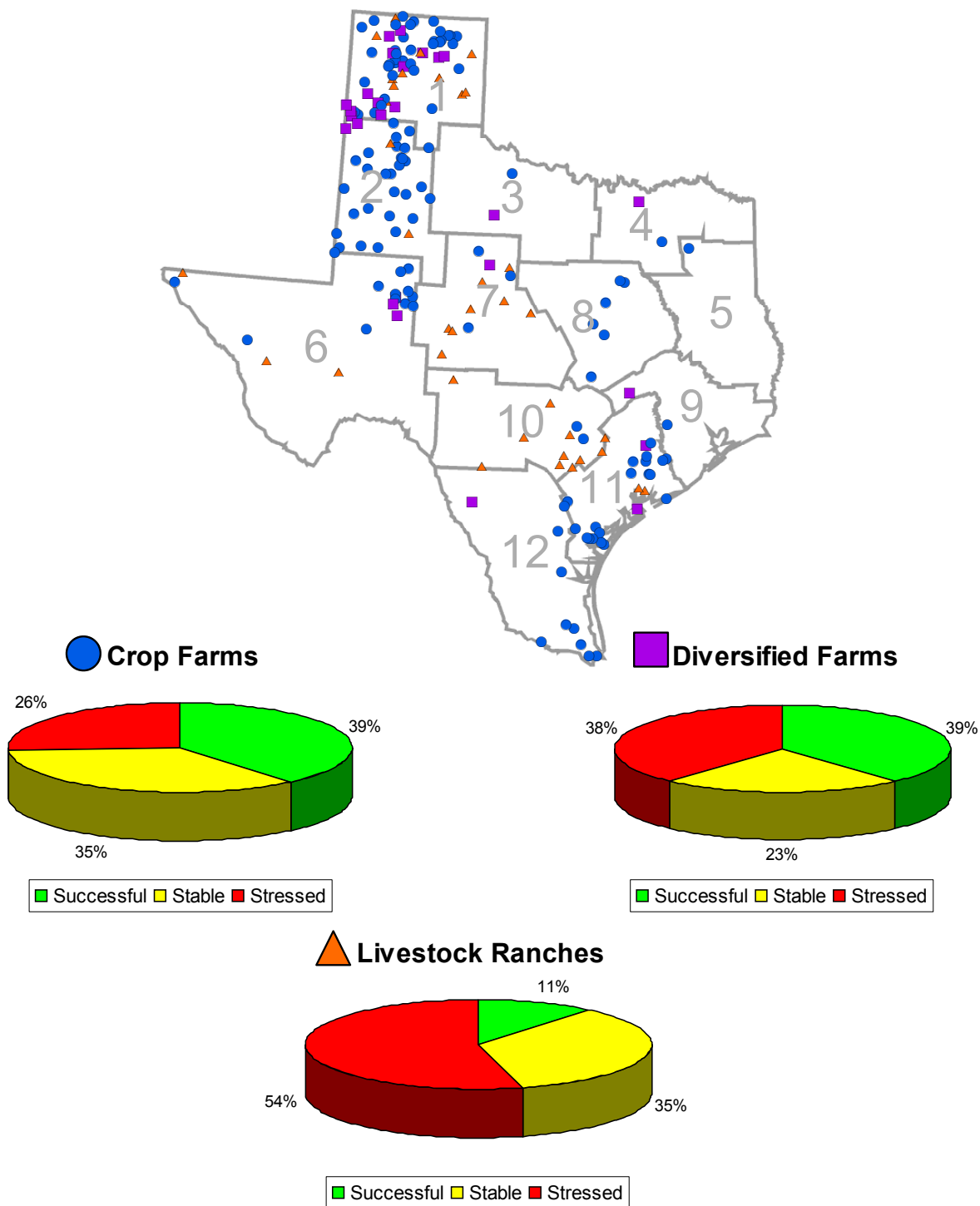
At roughly one-third of their total acreage, the crop farms also own the lowest percentage of their total productive acres. Livestock ranches own almost 40% of their total land, and diversified producers own nearly 60% of the acres they operate. Share rented land, as expected, is most common among crop farms with half of the total acres rented on a share agreement. Cash leased land is the most common arrangement for livestock production, making up 60% of the average livestock ranch’s acreage.

The mix of different crop and livestock enterprises mostly follow what you would expect from the three types of operations. Obviously, the livestock ranches have the most cattle and the crop farms have the most crop acres. While not specializing in either crop or livestock, the diversified group had

“This program can give you the confidence to make the tough choices to insure your farm’s future profitability. It is worth the time and effort.”

– Steve Raymond, Swisher County Producer

Figure 8. Comparison of FARM Assistance Participants’ Success by Producer Type.



“The FARM Assistance program is probably one of the best investments a farmer can make to evaluate the present and to project his future financial status.”

– Ed Ermis, Refugio County Producer

Components of Total Receipts by Operation Type (\$1,000).

Figure 9. All Farms and Ranches.

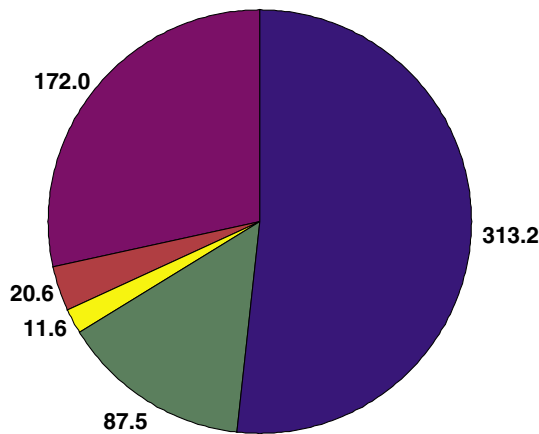


Figure 10. Crop Farms.

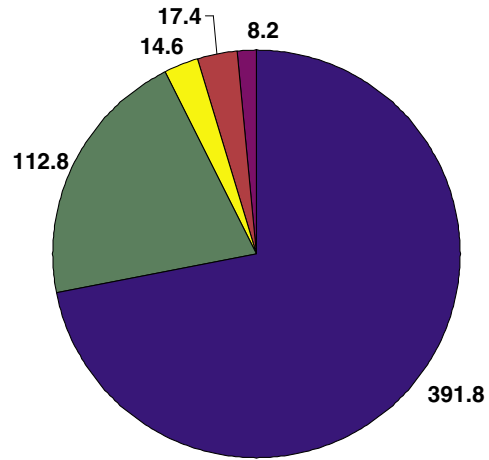


Figure 11. Livestock Ranches.

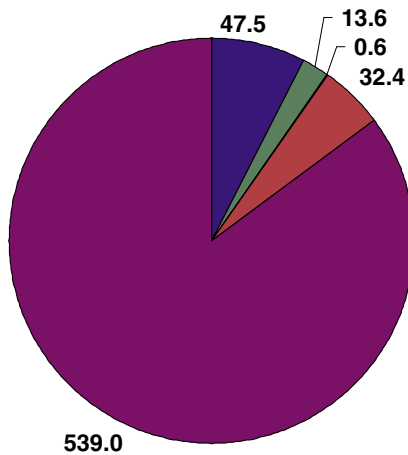
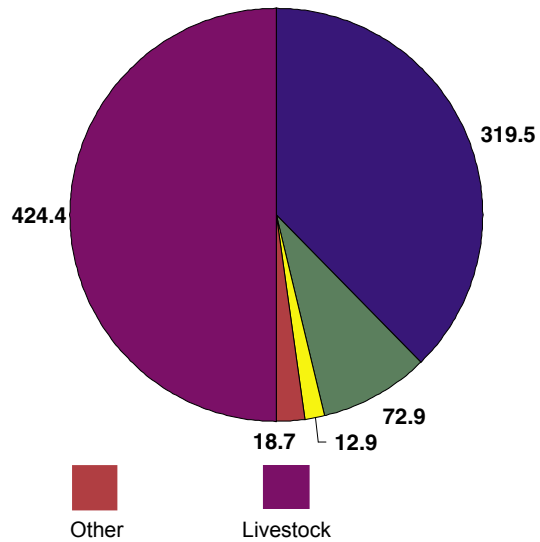


Figure 12. Diversified Operations.



Crop Receipts
 Govt. Payments
 Crop Insurance
 Other
 Livestock

the highest average acreage of wheat production, sorghum production, improved pasture, and the largest average stocker numbers. The crop farms

had minimal livestock production, and cotton acres dominated the average production mix of the group. The livestock ranches are primarily large na-

tive pasture operations with little crop production other than wheat. The average livestock ranch in the program has a 182 head cow herd, over 200

“The information received in my report is invaluable. It will make future decisions easier to pencil out, and make me a better manager.”

– Larry Romine, Martin County Producer

Table 5. Average Asset and Debt Structure by Producer Type.

	All Farms & Ranches	Crop	Livestock	Diversified
Real Estate Value Per Acre	280	275	256	338
Machinery Value Per Acre	158	193	58	135
Long Term Debt Per Acre	58	60	49	63
Intermediate Debt Per Acre	38	51	4	24
Debt To Assets %	34.4	34.7	29.7	35.6

stockers, and over 8000 acres of native pasture.

Figures 9,10,11, & 12 illustrate the detail of sources of receipts for all participants and for the three types of producers. Because the type categories were defined by the proportion of receipts from various activities, the percent of receipts that come from crop and livestock sales are pre-determined by the classification.

For the 123 crop farms, the average non-crop related revenues were less than 5% of total receipts. The bulk of average receipts are generated from crop sales (72%), crop related government payments (21%), and crop insurance (2.5%). In contrast, the livestock producers received almost 10% of their receipts from crop activities and another 5% from other non-livestock sales sources. The diversified category was almost an even split between crop and livestock revenue sources. Exactly 50% of the average diversified producer’s revenue comes from livestock sales and almost 48% comes from crops, government payments, and crop insurance sources.

Table 5 provides a comparison of the asset and debt levels for the different types of producer participants. The level of investment in real estate is interestingly similar between crop farms and livestock ranches. Both groups fall in the range of \$250-\$275 invested per productive acre, and both own close to 35% of their productive acres. On average, livestock ranches own a slightly larger percentage of their total acreage, 38% compared to 34% for crop farms, but crop land typically carries a higher value. The end result is that crop farms carry almost \$20 more real estate value per acre compared to the average livestock ranch partici-

part. The diversified operations have the most invested in real estate assets at \$338 per productive acre. Unlike the pure livestock or crop operations, the diversified group owns 57% of their total acres resulting in the highest level of long-term real estate investment. Investment in equipment assets, as expected, is the highest for crop farms at \$193 per acre and the lowest for livestock ranches at \$58 per acre.

Debt level is similar for crop and diversified operations. Both groups have close to a 35% overall debt-to-asset ratio, and around \$60 of long-term debt per acre. The livestock operations carry less overall debt with just under 30% and around \$50 in long-term debt per productive acre. The largest difference in debt structure is in the amount of intermediate-term debt per acre. The difference reflects the amount of machinery and equipment investment required by the three types of producers. Crop farms carry

Table 6. Average Financial Performance by Producer Type.

	All Farms & Ranches	Crop	Livestock	Diversified
Net Cash Farm Income per Acre	47.9	61.3	5.3	45.0
NCFI Standard Deviation	55.6	58.8	37.1	66.9
Expense to Receipts	0.74	0.69	0.85	0.71
Interest Expense to Receipts	0.07	0.07	0.07	0.08
Depreciation To Receipts	0.1109	0.08	0.13	0.06
Family Living	29,804	31,299	27,532	20,663
Off Farm Income	8,891	10,166	6,358	6,465
Average Return On Assets	7.9	8.9	4.0	8.4
Average Change in Real Net Worth %	4.6	6.8	-2.7	4.5
Avg Prob Negative Working Capital %	28.3	25.3	36.8	30.5

“We do have very good records on our operation, but the FARM Assistance analysis took our understanding of what we are doing to another level. It will help us plan for the future in a more coherent manner.”

– Stephen Swensen, Swensen Land and Cattle Company, Haskell County

twice the intermediate-term debt, \$51 per acre, compared to \$24 per acre for diversified participants. Finally, the 37 livestock producers average a minimal \$4 per acre in intermediate-term debt.

Table 6 provides a comparison of the financial performance indicators for the three types of FARM Assistance producers. As suggested earlier by the overall ProScore rating, among the participants, the crop farms generally had the best financial outlook. The outlook for the livestock group indicates some future financial stress, and the diversified group is fairly stable on average. Most of the indicators found in Table 6 follow the broad assessment of the ProScore ratings. In terms of profitability, crop farms produce \$61 in net cash farm income per acre and had the best average efficiency with a 0.69 expense-to-receipts ratio. The livestock ranches had the lowest profitability with only \$5.3 net cash income per acre. In terms of efficiency, the livestock group spends \$0.85 in cash expenses for every dollar of receipts generated, on average. The diversified producers had an efficiency measure of 0.71 expense-to-

receipts ratio, and \$45 in net cash income per acre.

The debt load, in terms of the relative amount of earnings spent on interest expenses was similar for all three producer groups. The interest expense-to-receipts ratio averaged 7% across all producers and the three groups ranged from 7% to 8%, showing little difference in interest expense burden. The relative depreciation expense, however, did indicate a varying level for the different types of producers. While not a cash expense, depreciation represents a significant drain on profitability and equity. Livestock producers typically do not have a large complement of depreciable equipment, but breeding livestock are depreciable. Relative to the receipts generated annually, the livestock ranch participants had the highest level of depreciation at \$0.13 per \$1.00 of receipts.

In addition to the highest levels of financial success, the crop farms had the highest draw from the business for family living expenses and the most off-farm income. Average family living expenses were just over \$31,000 for the crop farms. The lowest family liv-

ing expenses were found among the diversified producers, with less than \$21,000 per year. The livestock and diversified producers had similar off farm income between \$6,000 and \$6,500, while crop farms claimed over \$10,000 in off farm income sources.

The financial indicators that define the ProScore rating measure the relative profitability, equity growth, and liquidity risk. The financial outlook for all three measures was poorest for the livestock producers. A 4% return on assets and almost 3% equity loss annually is a direct result of the low financial performance expected. In addition, the livestock group faces slightly more than a 35% chance each year of a negative working capital position. The outlook for liquidity risk is better for the diversified and crop farm groups, with 30% and 25% average chances of negative working capital. The crop and diversified producers also show twice the percentage return on assets compared to the average livestock ranch. The highest projected equity growth is found with the crop farms, which average almost a 7% annual growth in real equity.



Commodity Analysis

The following sections are devoted to the analysis of the production of four major crops grown across Texas. The primary purpose is to evaluate a segment of similar producers to find out how one group compares to another and how those in a commodity group compare to their peers.

Participants were labeled as being corn, cotton, sorghum, and/or wheat

producers. The label determination was made based on the relative acreage dedicated to a commodity. It would be rare to find producers that were so specialized as to grow only one crop. Even highly specialized production will usually have secondary or rotation crops included in the whole farm mix. Therefore many individuals were identified with more than one crop production. The identification to a crop means

that a producer had a significant percentage (more than 25%) of their total acres planted to a crop. With a 25% threshold, a single producer could actually fall into more than one category. For example, a crop farmer with an acreage mix of 40% cotton, 30% corn, 25% sorghum, and 5% wheat would be counted in three different commodity groups, but would not be included in those labeled as wheat producers.

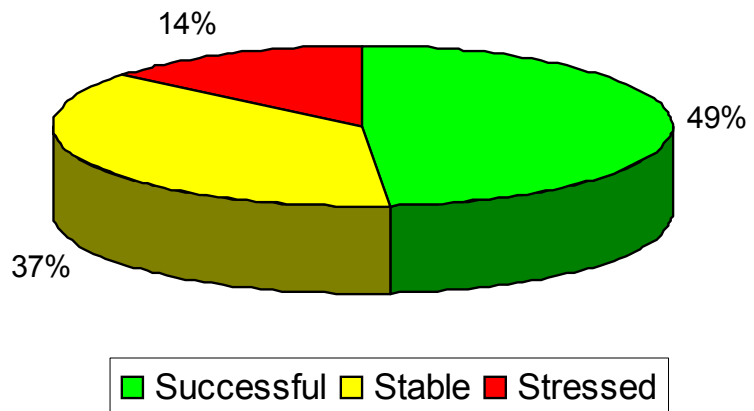
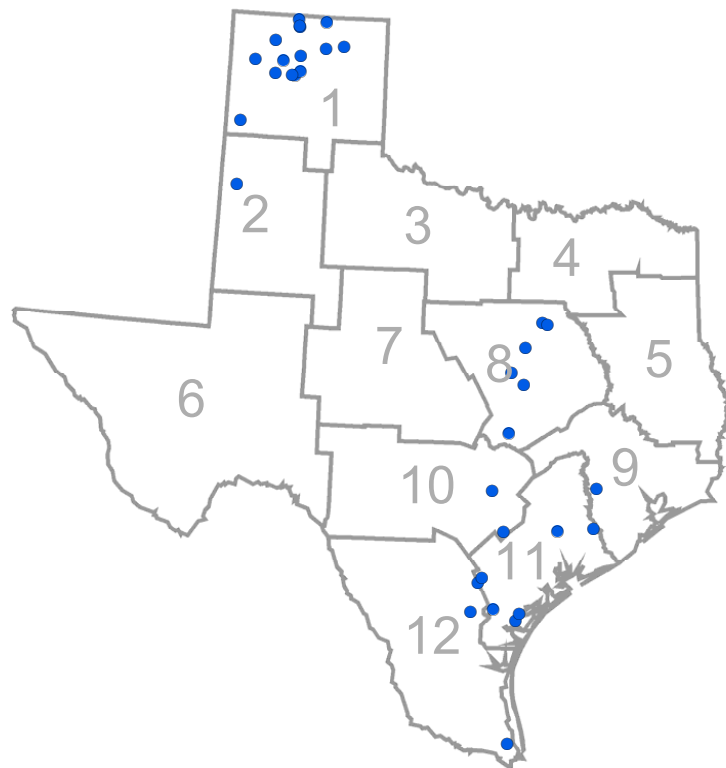


Commodity Analysis: Corn Production

Figure 13 represents all the FARM Assistance participants with at least 25% of their acreage in corn. Following general production patterns in the state, these corn producers operate in the Northern Panhandle, Central and South Central Texas through the Coastal Bend. The pie chart describes the general success level of those labeled as corn producers, those with at least 25% of their acreage in corn production. In general, the financial outlook for corn producing participants was among the most favorable. Almost half of the group is identified as successful, and only 14% are facing a stressed financial projection. The remaining 37% of the corn producers have a stable financial outlook.

Figures 14 illustrates and describes average yields and production costs for dryland corn production. The 23 FARM Assistance participants that produced dryland corn had an overall ProScore rating of 11.6, slightly less than the 11.89 average for the 34 producers that met the 25% threshold for acres dedicated to corn. Of the 23 dryland producers, 14 were among the successful participants, 6 were financially stable, and only 3 were labeled as stressed. The average yield and cost data are provided to find some insight into the expense structure and production results for corn production as performed by producers of varying levels of success. In other words, can we learn something from the way successful

Figure 13. Location and Success of Corn Participants.



“Our company needed to make a decision concerning the future investments of the company. This analysis gave us the information we needed to make a sound business decision.”

– Phil A. Smith, Bowie County Cow-Calf Producer

producers grow dryland corn? Can we learn what not to do from those that are less successful?

The first notable item from Figure 14 is that there are only 3 and 6 participants in the stressed and stable groups, respectively. The small numbers suggest two things. First, one must be careful reading too much into the average numbers reported for such small groups. For example, with only 3 producers to evaluate, we can't be certain that the average accurately reflects dryland corn production by struggling farmers across the state. Second, the fact that there are few numbers in these categories indicates that participants growing corn are generally more successful than many other segments of the FARM Assistance participation. While the small numbers prevent drawing many conclusions about industry trends, there may be much to learn from the example of a few producers that meet a unique set of characteristics.

The average yield for all dryland corn production in the FARM Assistance program was almost 76 bushels per acre. The least successful group actually has the highest budgeted yield at over 82 bushels per acre, but a negative 45.3 FARM Assistance ProScore rating. Keep in mind that many other factors and other enterprises contribute to the overall ProScore rating. That said, why is the lowest financial success found among the

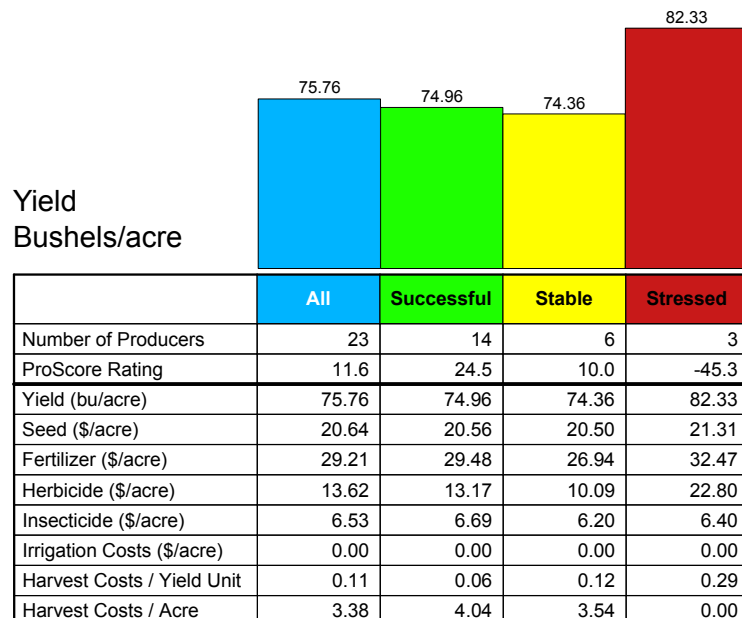
producers with the best yields? The average corn expense items suggest that the stressed producers spend more on variable crop production costs than do the more successful producers of dryland corn. The group of financially stressed producers has the highest seed, fertilizer, herbicide, and harvesting costs. The numbers suggest these producers are paying too much to achieve the highest yield.

Another factor that could be contributing to the high yields for the least successful producers has to do with producer expectations. The FARM Assistance program is a long range planning tool; therefore, the comparisons drawn are based on planned or budgeted numbers rather than actual observations. Additionally, the

FARM Assistance team members have observed that the least successful producers have the poorest understanding of their own operation. One explanation of the higher yields is that they reflect unrealistic yield expectations by poor managers.

Figure 15 provides the budgeted yields and costs of production for the 40 FARM Assistance participants that produce irrigated corn. Only 9 of the irrigated corn producers were labeled as financially stressed by their overall FARM Assistance ProScore. With an average rating of negative 15.5, the group was well below the average success index of 9.9 for all irrigated corn producers. Again, the budgeted yield data shows that higher yields do not necessarily indicate

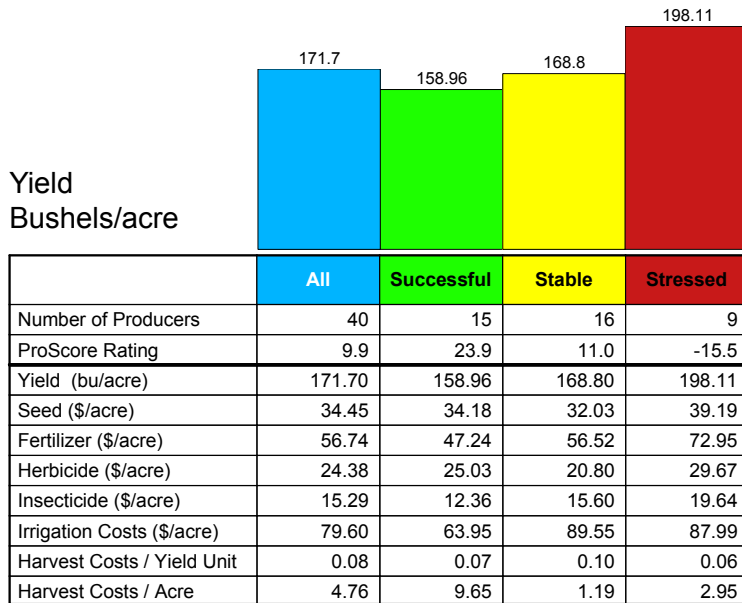
Figure 14. Yield and Cost Comparisons for Dryland Corn.



“I recommend FARM Assistance to any producer that wants to get a better handle on their financial position. The information is practical and will lay a foundation for future financial decisions.”

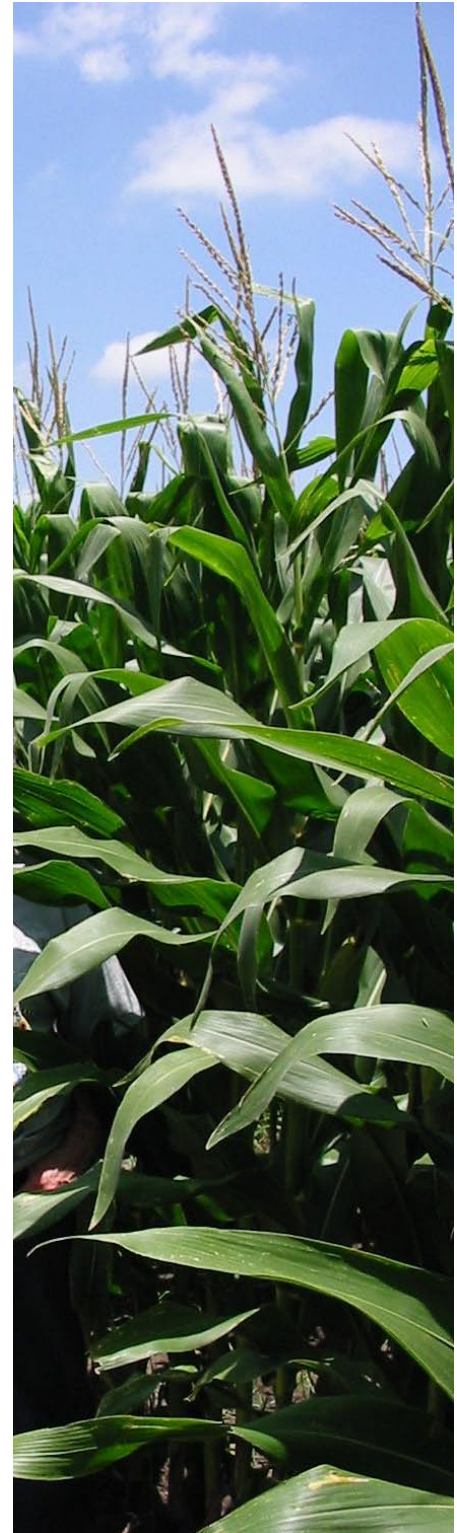
– Dee Vaughn, Moore County Producer

Figure 15. Yield and Cost Comparisons for Irrigated Corn.



financial success. In fact the opposite is true. The 9 irrigated corn producers with the least financial success had the highest yields. Planning yields for the stressed group were 198 bushels per acre, 30 bushels more than the stable producers. On the other hand, the most successful 15 irrigated corn growers had the lowest yield with 159 bushels per acre, 10 bushels less than the stable group. As expected, the expense data shows that the stressed producers spend considerably more on most variable expense items. In particular, the stressed producers spend \$26

more on fertilizer and \$24 more on irrigation compared to the most successful producers. The 15 most successful irrigated corn growers had an average ProScore rating of 23.9, and spend less than average on almost every category except herbicide and harvesting costs. By the FARM Assistance data design, high variable harvesting cost is an indication of a producer paying for custom harvesting. In many situations the expense of custom harvesting can be less than the overhead costs associated with owning harvesting equipment.

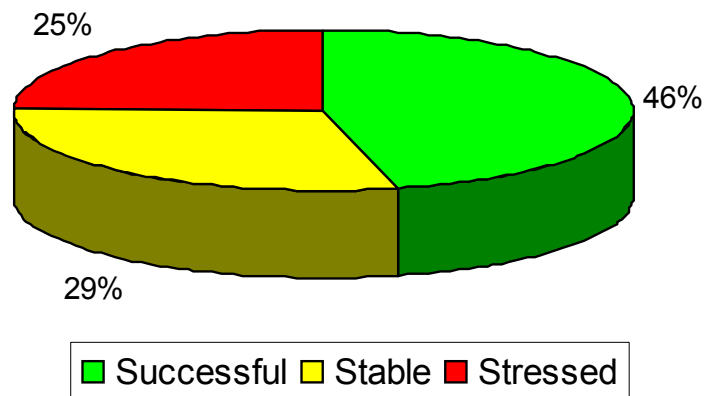
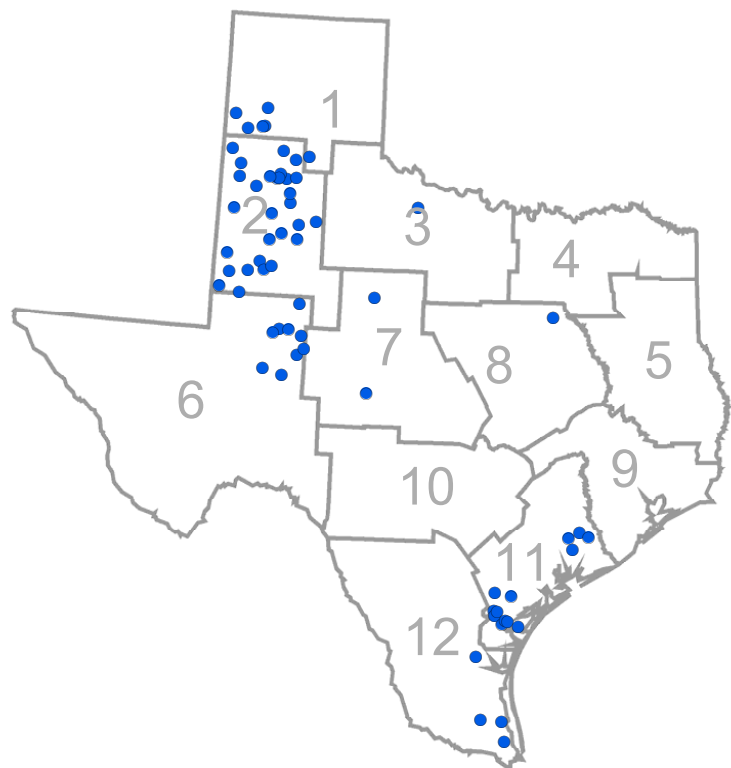


Commodity Analysis: Cotton Production

The map in Figure 16 shows the 65 FARM Assistance participants that have at least 25 percent of their acres in cotton production across the state. The cotton producers are scattered throughout the Southern Plains around Lubbock and the Coastal Bend to the Rio Grande Valley. The pie chart indicates the general level of success found among the cotton producers in the FARM Assistance system. The broad group of all farms and ranches were evenly divided among stressed, stable, and successful categories. The financial outlook for cotton production is better than the overall average with almost half of the cotton farms labeled successful and only 25% in the financially stressed category.

Figure 17 provides a comparison of 64 participants that produce dryland cotton. In the case of dryland cotton, low yields are associated with the least financial success. The 17 stressed dryland cotton producers had an average ProScore rating of negative 19 and the lowest yield with 345 lbs. per acre. The best budgeted yields were found in the stable group of 16 producers who average just over 380 lbs. per acre and had a financial outlook of a 10.8 ProScore rating. The most

Figure 16. Location and Success of Cotton Participants.

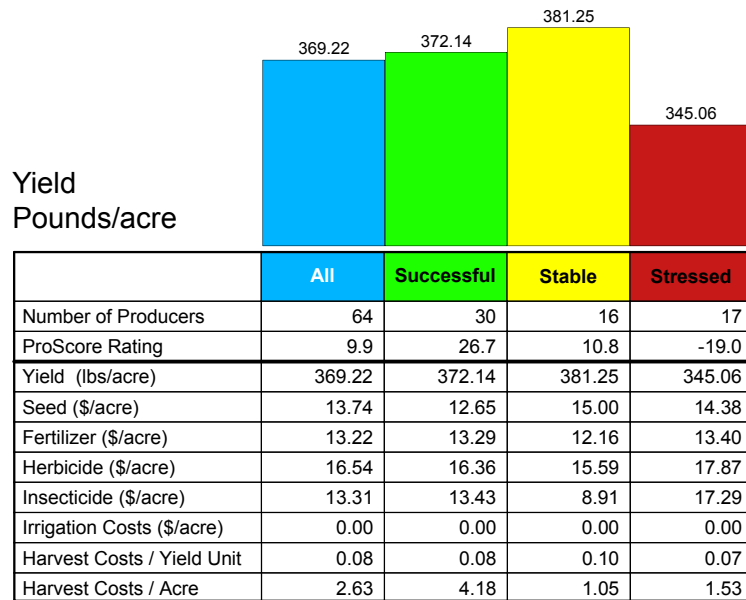


“FARM Assistance is very educational and has helped us to see where we need to make adjustments in our operation in order to be more profitable. We are so grateful to have learned about this service.”

– H.P. Bradley, Wheeler County Producer



Figure 17. Yield and Cost Comparisons for Dryland Cotton.



successful dryland cotton producers had a slightly lower yield with 372 lbs. per acre, but the group had an average 26.7 ProScore rating.

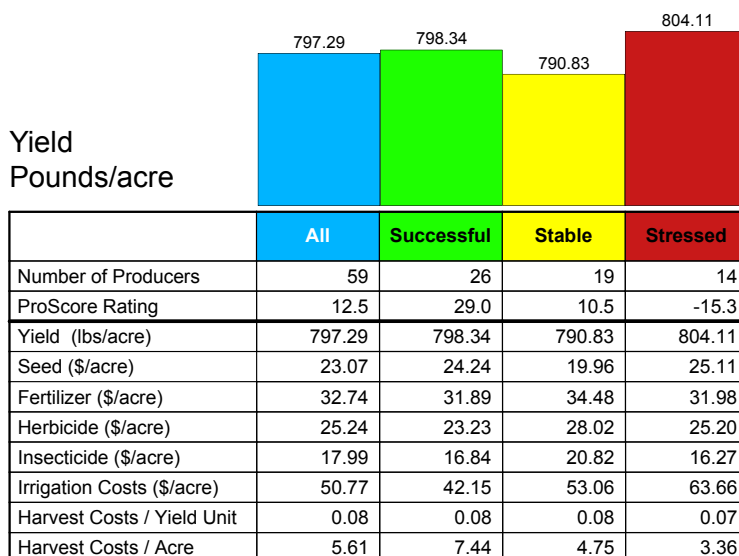
In terms of production costs, all three groups were very similar, as would be expected for dryland production. The biggest differences were in harvesting and ginning costs. The stressed producers had the lowest harvesting cost among dryland producers. Again, for the FARM Assistance data, that is usually an indication of limited use of custom harvesting and more overhead expenses tied up in harvesting equipment.

Yields and cost data for irrigated cotton production are found in Figure 18. Irrigated cotton yields were similar across all levels of financial success. For all 59 producers of irrigated cotton, the average yield is slightly less than 800 lbs. per acre. The stressed producers had the highest yield. The lowest yield was found in the financially stable category, but the two groups only differed by 14 lbs. per acre. The most obvious differences exist in irrigation expenses where the most successful spend \$42, the financially stable producers spend \$53, and the stressed producers spend over \$63 per acre. As a group, the 59 pro-

“FARM Assistance is a very good unbiased third party perspective of my operation.”
 – Carl V. Looten, Carson County Producer

ducers of irrigated cotton have a ProScore rating of 12.5, a few points above the 9.4 average for all crop farms. The stable irrigated cotton producers have a ProScore average of 10.5, while the successful and stressed group average 29 and negative 15.3, respectively.

Figure 18. Yield and Cost Comparisons for Irrigated Cotton.

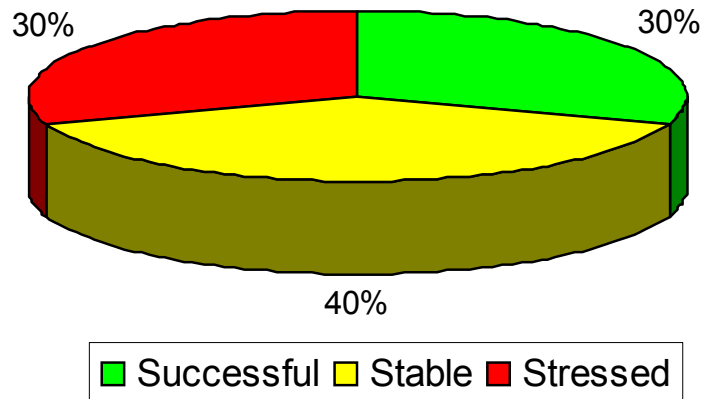
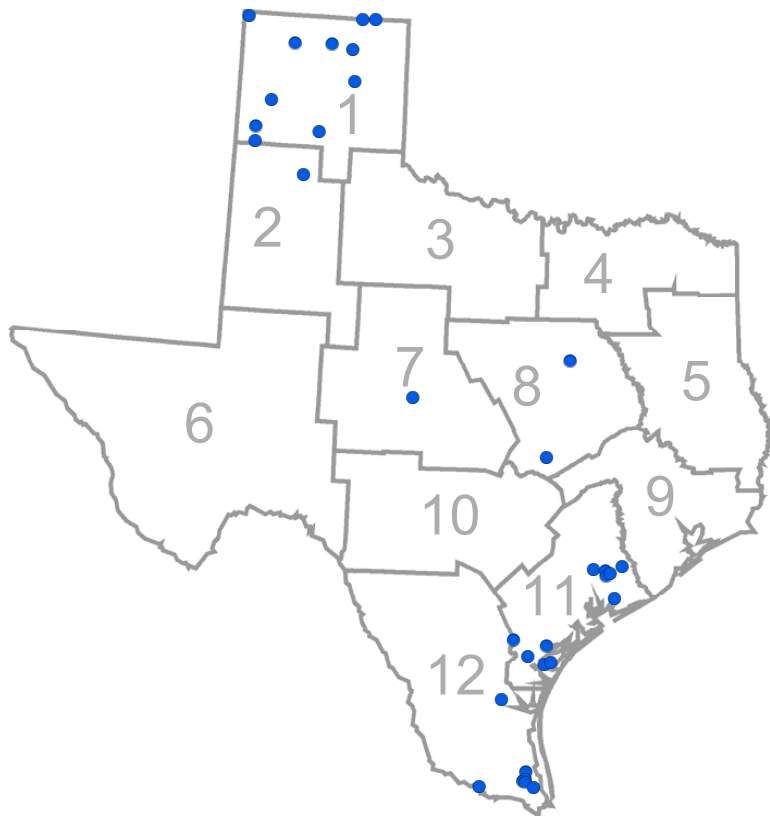


Commodity Analysis: Grain Sorghum Production

The state map in Figure 19 shows the location of 33 sorghum producers in the FARM Assistance program with more than 25% of their crop acres in grain sorghum. These farms are predominately in the Northern Panhandle and the Coastal Bend regions. The pie chart indicates the general level of success in the group. Relative to all participants, sorghum producers tend to have a slightly larger percent classified as stable, but the group has an equal number of successful and stressed producers, with 30% of each.

Figure 20 contains the yield and cost of production data for all 72 participants that grow dryland grain sorghum. Like other low input dryland crop production, per acre crop costs are typically low. There are few significant differences in the direct crop expenses across the success level groups. The most successful producers spend slightly more per acre on fertilizer and chemicals than the other two groups. The lowest average yield was among the least successful producers with 45 bushels per acre. Yield levels followed the success index as the stable group had an average 49 bushels and the successful category had the best yield at almost 52 bushels per acre. The producers of dryland sorghum had a wide range in terms of the Pro-

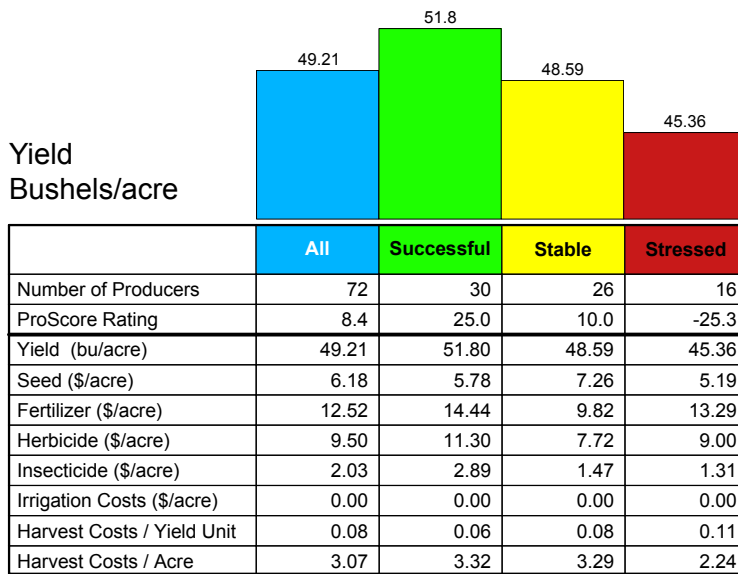
Figure 19. Location and Success of Grain Sorghum Participants.



“I wish this program would have been available in the 1970s when I first started farming and ranching. Potentially this analysis could have saved me a lot of “experience”.

– Dale Artho, Deaf Smith County Producer

Figure 20. Yield and Cost Comparisons for Dryland Grain Sorghum.

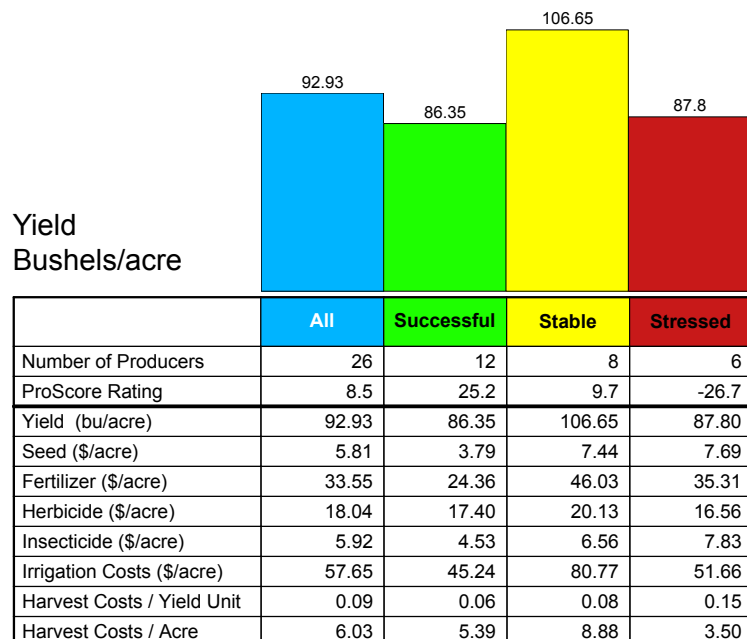


a 50 point range from over 25 to negative 26.7 for the successful and stressed groups. The stable irrigated sorghum growers had an average 9.7 ProScore rating. The group of 8 irrigated sorghum growers in the stable category had a significantly higher average yield of 107 bushels per acre. However, the stable group has a much higher cost of production to achieve the higher yields. Seed costs, insecticide, and harvesting costs are similar among the three groups, but the stable producers spend a combined \$60 per acre more than the successful group on fertilizer, herbicide, and irrigation costs.

Score rating. The most successful had a ProScore average index of 25 and the least successful were a full 50 points lower at negative 25. The stable group fell on the upper side of that 50 point range with an average ProScore of 10.

Only 26 participants in the FARM Assistance program grow irrigated sorghum (Figure 21). Of that group, almost half (12) are in the successful category. Like some other irrigated crops, the lowest yield is found among the most successful producers, suggesting their success comes from cost efficiency rather than high yields. ProScore ratings for the three success level groups are similar to the averages for the dryland sorghum producers. Again, there is

Figure 21. Yield and Cost Comparisons for Irrigated Grain Sorghum.

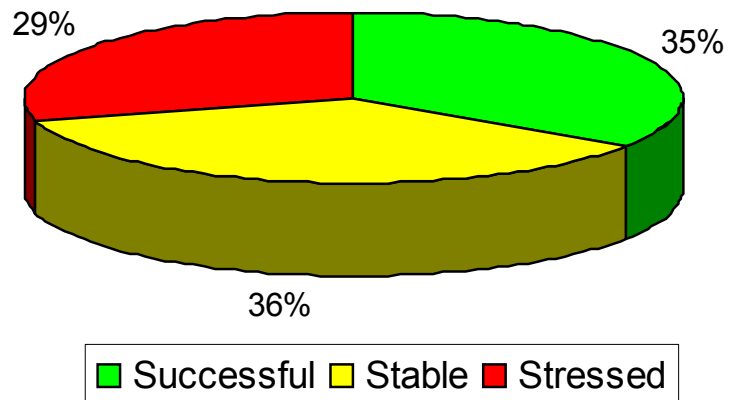
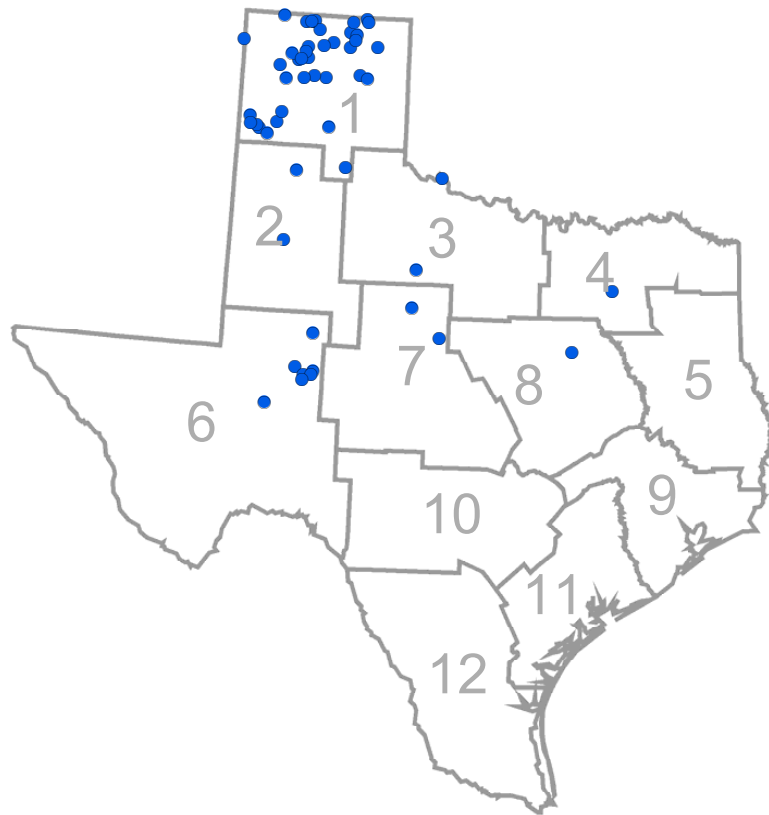


Commodity Analysis: Wheat Production

The map and pie chart in Figure 22 represents the 53 wheat producers in the FARM Assistance program with more than 25% of their planted acres devoted to wheat. These producers are found primarily in the Northern Panhandle, with a few scattered in the areas of North and West Texas. The general success level of wheat producers is slightly above the average for all participants with less than one-third (29%) labeled as stressed. The remaining 71% are divided almost evenly between those categorized as successful and stable.

Figure 23 contains the yield and cost of production data for all 88 participants that grow dryland wheat. Following the pattern of other commodity production in dryland conditions, we find the highest average yield belongs to the 27 financially successful wheat growers. In the case of dryland wheat, the most successful producers have an average yield of 23.6 bushels per acre and the average yield falls for the stable and stressed farms. The successful producers also spend the most on seed, fertilizer, herbicide, insecticide, and harvest costs. While the yield comes at a higher cost, the group still manages a level of success demonstrated by an average 26.1 Pro-Score rating. The stable group's

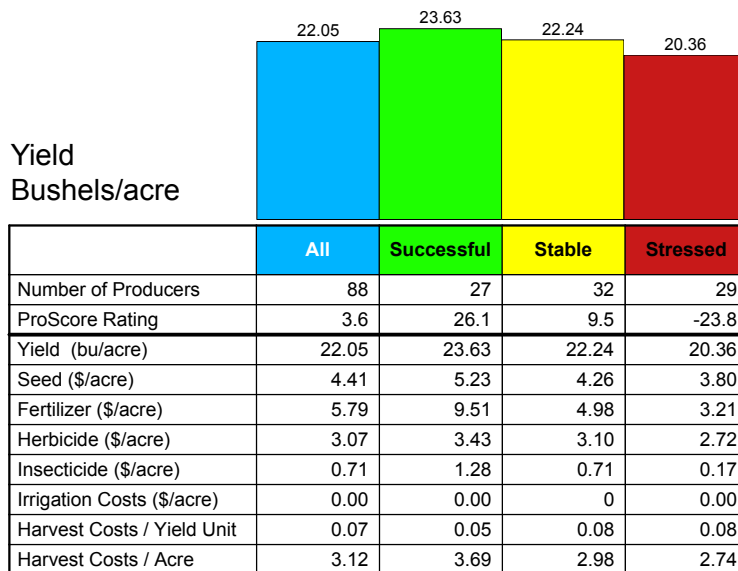
Figure 22. Location and Success of Wheat Participants.



“FARM Assistance was a nice surprise. Not full of intellectual jargon, but an exceptional amount of useful information. This program cannot help but improve a rancher/farmer’s bottom line.”

– Cole Turner, Haskell County Producer

Figure 23. Yield and Cost Comparisons for Dryland Wheat.

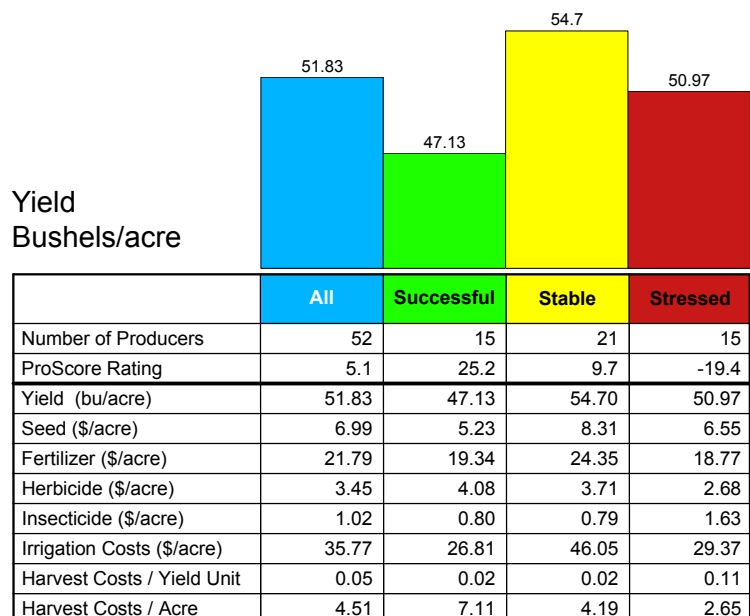


bushels per acre. However, the stable producers spend significantly more on fertilizer and irrigation to achieve a higher yield. When comparing the successful to the stressed, few differences are evident in the irrigated wheat data. Most of the cost items are similar, and the stressed producers actually have a slightly higher yield. It is apparent that the factors that distinguish between the financially successful and the financially stressed wheat producers lie outside of their respective wheat production.

success index was 9.5, while the stressed dryland wheat producers had a negative 23.8 average ProScore rating.

Yield and cost comparisons for 52 producers of irrigated wheat are found in Figure 24. The first notable difference in the data for irrigated wheat is, once again, that the lowest average yield is found with the 15 most successful producers. All irrigated wheat production among FARM Assistance subscribers has an average yield of 51.8 bushels per acre. The wheat producers that were labeled financially successful had an average budgeting yield of only 47.1 bushels per acre. The 21 stable producers had the highest yield at 54.7

Figure 24. Yield and Cost Comparisons for Irrigated Wheat.



Commodity Analysis: Crop Production Comparison

It is also useful to look at what differences exist among crop producers. The average crop farming participant has \$544,800 in total receipts. Crop sales make up 72% of total receipts (Figure 25), and government payments account for another 21%. The remaining 7% comes from crop insurance indemnities, livestock sales, and other receipts. Corn and cotton are considered the higher valued crops, and that is evident in the total receipts of the two groups of crop producers (Table 7). The 34 corn producers had average total receipts of \$655,400, the highest of the four groups of crop farms. Cotton was second with an average \$586,600 in total receipts, wheat was close behind, and sorghum fell well below with \$388,300 in average total receipts.

When comparing the make up of farm receipts, corn producers receive the highest portion of their receipts from

raw commodity sales (Figure 26). On average, the 34 corn producers received 80% of their receipts from crop sales and collected another 15% from government payments. In contrast, wheat farms were the most diversified, earning 17% of their receipts from livestock sales (Figure 29). Cotton farm receipts illustrated in Figure 27 were also somewhat diversified compared to the corn and sorghum producers. Livestock sales account for 6% of the average cotton farm's total receipts. One-quarter of the cotton producers' receipts come from government payments and crop sales account for 62% of total receipts. Sorghum producers, like corn farms, have very little diversification into livestock production (Figure 28). Crop activities account for 96% of total receipts for sorghum farms.

Given the differences, which group has the greatest projected financial

success? Based on the FARM Assistance ProScore rating (Table 7), the 65 cotton producers have the highest projected level of financial success. Among all crop farms, the average ProScore rating is 9.42, while the cotton producing participants have an average 12.26 ProScore. With a ProScore of 11.89, the corn producing participants compare favorably to the cotton producers. Wheat and sorghum producers both fall below the average for all crop farms with 8.53 and 4.74 respective ProScore ratings.

Table 7 also provides an image of the average production characteristics such as size, land tenure, and the intensity of various enterprises. In terms of total acres, the operations that planted at least 25% of their acres to wheat tended to be larger than average. That tendency is not surprising since that group has already been characterized as being the most diversified into livestock production. While the average crop farm is slightly larger than 2,400 acres, the average wheat producer operates a little over 3,000 acres. Following the same logic, on average, wheat producers had the most activity in cow-calf and stocker enterprises. Sorghum producers tended to be the smallest producers both in terms of acreage and total receipts. Corn and cotton farms were most like the average at 2,407 and 2,253 total acres, respectively.

Table 7. Average Production Characteristics of Crop Farms.

	Crop	Corn	Cotton	Sorghum	Wheat
Number	123	34	65	33	53
ProScore Rating	9.42	11.89	12.26	4.74	8.53
2003 Total Receipts	544.8	655.4	586.6	388.3	560.6
Total Acres	2,420	2,407	2,253	2,070	3,026
Total Cash Lease Acres	349	594	283	373	363
Share Acres	1,238	1,240	1,356	1,287	1,288
Total Owned Acres	834	574	616	411	1,376
Corn Acres	370	1,190	109	190	325
Cotton Acres	614	216	1,202	414	323
Sorghum Acres	290	176	246	784	265
Wheat Acres	475	366	223	270	1,234
Improved Pasture Acres	21	8	4	37	19
Native Pasture Acres	120	42	50	13	138
Cows (# head)	7	9	10	7	12
Stockers (# head)	25	1	29	0	103

“I believe FARM Assistance is a great program that any young farmer should avail himself to in order to set some long term goals.”

– Jack W. Birkner, Wharton County Producer

Components of Total Receipts by Commodity (\$1,000).

Figure 25. Crop Farms.

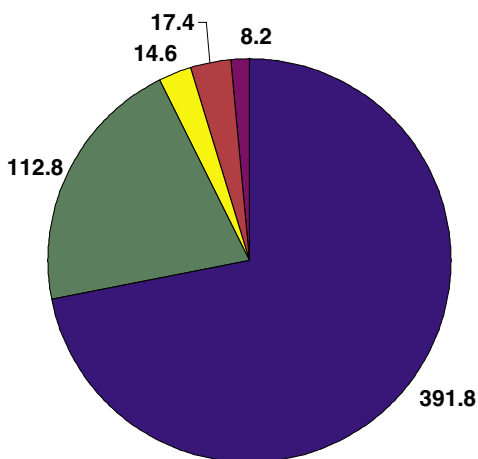


Figure 26. Corn Producers.

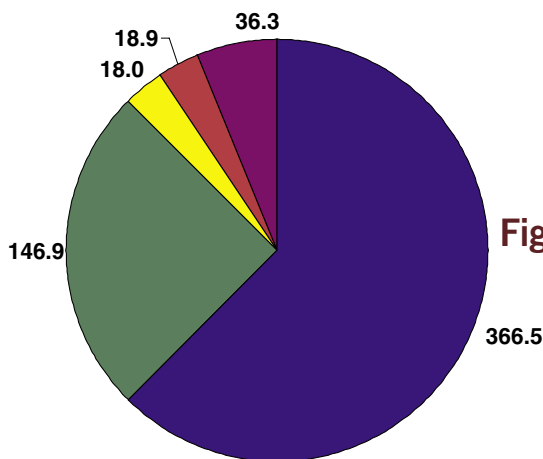
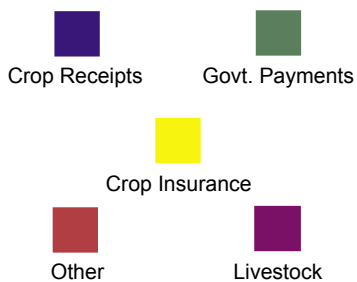
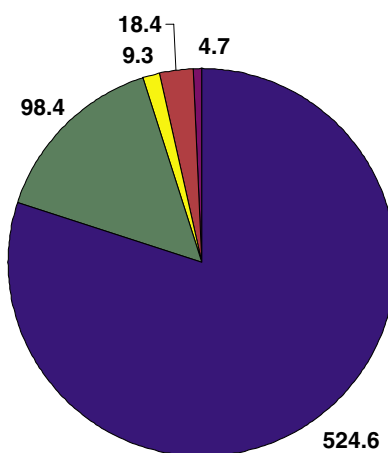


Figure 27. Cotton Producers.

Figure 28. Grain Sorghum Producers.

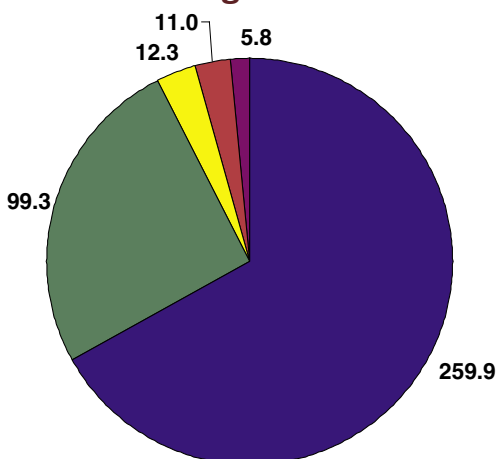
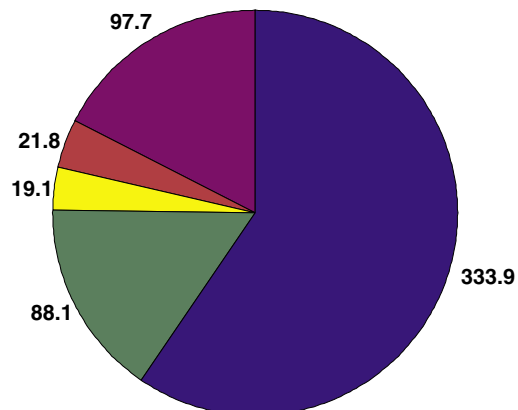


Figure 29. Wheat Producers.



“Often we are too “close” to our own operation. It is human to be set in our ways—regardless. An outside analysis indicating what works and what doesn’t is healthy for the enterprise.”

– B.D. Davis, Runnels County Producer

Table 8. Average Asset and Debt Structure for Crop Farms.

	Crop	Corn	Cotton	Sorghum	Wheat
Real Estate Value Per Acre	275	246	231	218	275
Machinery Value Per Acre	193	216	202	155	156
Long Term Debt Per Acre	60	67	57	84	67
Intermediate Debt Per Acre	51	49	61	57	30
Debt To Assets %	34.7	31.3	38.7	39.3	33.8

Share renting is the most prominent land tenure arrangement for crop farms, accounting for 51% of total acres for the average crop producer. The group is least likely to use cash leases (14% of total acres), and the average crop farm owns 35% of its productive land.

Each of the commodity groups operate over 1,200 acres of share rented land and share rents accounted for

more than 60% of acres for both cotton and sorghum producers. The extent of cash lease agreements varies by commodity specialization, and is used most by corn and sorghum producers. A full 25% of the typical corn farm’s acreage is leased on a cash basis. At 45% of their total land and 1,376 acres, wheat farms have the highest level of land ownership. Cotton producers are a distant second with less than half the

owned acres (616), which accounts for 27% of productive acres.

When considering diversification, it has already been noted that wheat farms followed by cotton farms tend to diversify the most into livestock. Diversification among crops is also a consideration for reducing risk. The crop categories are defined by those producers that have at least 25% of their acreage dedicated to a crop. Given the level of acres devoted to a primary crop, cotton farms tend to specialize more than corn, sorghum, or wheat producers. For the average cotton producer, actual cotton acres make up 53% of the total acres. Corn producers also devote almost half of their acreage to corn, while sorghum and wheat producers only



“Given the tremendous financial pressure the agricultural community is experiencing, along with a thin margin for operating mistakes a farmer/rancher can’t afford not to use FARM Assistance”

– Jack Worthington, Burleson County Producer

plant 40% of their acres to the primary crop.

Table 8 contains the average debt structure and asset investment for the different crop farms. Recall from Table 7 that the wheat producers owned the largest percentage of their acreage. Because they own 45% of their productive acres, the wheat group also has the largest investment in real estate at \$275 per acre. With more than \$200 per acre, corn and cotton producers have the most relative investment in machinery and equipment. The debt levels are similar for the different type of crop farms, with a couple of notable exceptions. Sorghum producers have the most long-term debt per acre. Unfortunately, the same group has the least amount of long-term real estate assets. The average operation carries \$51 per acre in intermediate-term debt, which is usually used to secure machinery and equipment. Wheat farms only have \$30 per acre in intermediate debt, roughly half that of the cotton and sorghum farms. The overall debt level, measured relative to total assets, averages just under 35% for all crop farms. The cotton and sorghum farms are at the upper end of the range, averaging almost 40% debt, while corn and wheat producers have closer to 30% of their assets secured with debt. The level of debt for corn and cotton farms highlights the fact that debt alone rarely tells the whole story of financial success. Corn farms

had the lowest debt level, and cotton farms had one of the highest. However, the FARM Assistance ProScore ratings indicate future success for both groups.

Financial performance measures are found in Table 9. Farms that meet the minimum specialization in cotton production have the highest average net cash income with \$68.50 per acre. In terms of crop receipts per acre, corn farms rank the highest with \$250 per acre, but the group falls over \$10 per acre short of cotton farms on net cash profit. Sorghum and wheat production are the least profitable as a group with less than \$50 in net cash income per acre. Total cash expenses divided by total receipts is an efficiency ratio that indicates the efficiency of a farm’s revenue generating capacity. The average crop farm will spend \$0.69 in cash expenses to generate one dollar in receipts. At 70 to 71% the corn, cotton, and sorghum groups have

a similar level of efficiency. Wheat farms are the most efficient when it comes to cash expenses, spending an average \$0.66 per dollar of receipts. The interest expense-to-receipts ratio indicates the intensity of the expenses dedicated to debt service. Corn farms, with the largest crop receipts, logically have the lowest interest expense-to-receipts measure. The remaining three groups are similar with 7 to 8% of their receipts used to service debt. While not a cash expense, depreciation is a drain on the farms profit. The depreciation-to-receipts ratio indicates the portion of total receipts necessary to cover depreciation expenses. At 11% of receipts, sorghum farms have the highest level of depreciation. Corn farms, with a high machinery investment (Table 8) also have an above average depreciation-to-receipts ratio.

Non-farm related items may also play an important role in the finan-

Table 9. Average Financial Performance of Crop Farms.

	Crop	Corn	Cotton	Sorghum	Wheat
Net Cash Farm Income per Acre	61.3	57.8	68.5	45.6	46.6
NCFI Standard Deviation	58.8	60.2	67.7	44.2	52.2
Crop Receipts Per Planted Acres	200.3	250.6	202.8	142.0	131.6
Expense to Receipts	0.69	0.71	0.7	0.71	0.66
Interest Expense to Receipts	0.07	0.05	0.08	0.07	0.08
Depreciation To Receipts	0.08	0.09	0.07	0.11	0.07
Family Living	22,139	30,900	31,031	30,041	27,649
Off Farm Income	10,166	12,269	10,148	11,095	8,112
Average Return On Assets %	8.9	9.3	9.9	6.8	9.1
Average Change in Real Net Worth %	6.8	7.0	8.1	5.7	6.5
Avg Prob Negative Working Capital %	25.3	17.5	22.9	30.9	27.9

“I think FARM Assistance is as close as looking into the future as you can get.”

– Stanley Sulak, Wharton County Producer

cial success of a farm operation. Off-farm income and family living expenses can support or drain the cash flow position and eventually the ability of a farm to maintain and grow equity over time. Logically, we might expect to find that the most successful operations have a significant advantage in off-farm income. This is not necessarily the case for the different commodity groups. The cotton farms were the most successful in terms of the overall ProScore rating, but both the corn and sorghum farm

groups have higher average off-farm income sources. In terms of expenditures on family living, there doesn't appear to be enough difference among the types of crop farms to conclude that family living expenses contribute to the varying levels of success for the commodity groups.

The risk present among the different type of crop farms is very similar. The standard deviation of net cash farm income (NCFI) is one measure of risk. The average

NCFI plus and minus the standard deviation indicates a range of possible NCFI that would occur about 70% of the time. For example, the average crop farm would expect a net cash farm income between \$2.50 per acre and \$120.10 per acre roughly 70% of the time. For each of the commodity groups, the lower end of that 70% range is very close to zero. A rough interpretation suggests that each group faces about a 15% chance of negative NCFI, along with a 70% chance of being in the range de-



“The FARM Assistance program has been very useful in assisting me to determine my short and long term plans to maintaining a viable business.”

– Bruce Gamble, Cameron County Producer



scribed by the average NCFI and the standard deviation, and finally another 15% chance of having NCFI above the standard deviation range. Another picture of risk is the cash flow, or liquidity, risk faced by each group. The average probability of negative working capital indicates the cash flow risk faced by each group. The average crop farm would expect a 25.3% chance of not having the short term cash or other assets they would need to meet short term cash payments and other obligations in any given

year. Cotton and wheat farms fall close to the 25% average in working capital risk, while corn farms have the most stable cash and working capital position. Sorghum farms have the highest cash flow risk at just over a 30% chance of negative working capital.

Other performance factors describing the financial outlook for the crop farms are the average return on assets and the annual growth in real net worth. Relative profit described by the percentage return

per dollar of assets is about 9% for the average crop farm. With the exception of sorghum farms, each group meets or slightly exceeds the average 9% return on assets. Sorghum farms on average fell just below a 7% annual projected return. The average change in real net worth provides the expected annual growth rate in the farm's equity. The equity growth indicates more variety in performance among the commodity groups and follows the rankings described by the overall ProScore rating. Cotton farms

“This program is the most comprehensive and helpful program I have been involved with.”

– Scott Peeples, Moore County Producer

managed the highest equity growth with over 8% annually, followed by corn farms (7%) and wheat farms (6.5%). Again, sorghum fell short of the other groups with a 5.7% annual expected growth in real net worth. In summary, financial stress and success exist across all types of crop production. Although crop categories have some overlap of participants, tendencies suggest

that groups with significant acres of cotton and corn outperform groups with large acreage proportions of wheat and grain sorghum production.

A Final Comment

The FARM Assistance team extends its appreciation to everyone that makes our program possible.

The continued support of Texas Cooperative Extension, the State of Texas, the Agriculture Industry, and especially the program subscribers make possible the great privilege of serving the people of Texas Agriculture. We look forward to serving you in the future by helping all of Texas Agriculture address difficult and risky decisions with the power of information.



FARM Assistance

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