

**FEED AND FARM SUPPLY STORE MANAGERS' PERCEPTIONS OF  
EMPLOYEE TRAINING AS A CONTRIBUTOR TO COMPETITIVE  
ADVANTAGE**

A Dissertation

by

HENRY CLARK SPRINGFIELD III

Submitted to the Office of Graduate Studies of  
Texas A&M University  
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

December 2008

Major Subject: Agricultural Education

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**ABSTRACT**

Feed and Farm Supply Store Managers' Perceptions of Employee Training as a Contributor to Competitive Advantage. (December 2008)

Henry Clark Springfield III, B.S., Texas A&M University;

M.Agr., Texas A&M University

Chair of Advisory Committee: Dr. James R. Lindner

The purpose of this study was to assess the perception held by managers of feed and farm supply stores in Texas regarding the contribution of employee training to the competitiveness of the firm, determine if managers of feed and farm supply stores perceive that employee training can improve their competitive strength, and to determine if they will invest in employee training in order to gain a competitive advantage.

The objectives of this study include: describe the operating environment of feed and farm supply stores in Texas; describe feed and farm supply store managers' perception of employee training's contribution to their firm's competitive advantage; identify barriers to employee training in feed and farm supply stores; determine Internet availability and potential use for employee training in feed and farm supply stores; and describe the willingness of feed and farm supply store managers to engage in employee training delivered via the Internet.

This study employed a descriptive and correlational research design. A self-administered questionnaire was used to collect data from a sample frame of 305 feed and farm supply stores randomly selected from 1,487 stores in Texas.

These stores operate in a demanding, competitive environment that is changing at a rapid pace. They perceive that employee training improves customer satisfaction, contributes to business growth, improves productivity, and increases profits. The skills needed by their employees are increasing and they need training in sales, communication skills, technical knowledge, time management, retail merchandising, marketing, and business management to help the business stay competitive.

Barriers to training include not being able to see immediate results, cost, difficulties created when key employees are not on the job, travel distances to attend training, and a lack of training programs relevant to their needs.

Over 80 percent of these stores have both computers and Internet access. Managers will allow employees to use these resources for training purposes, encourage participation in online training, and allow their employees to participate in training during business hours.

It is recommended that Internet based training programs be developed in sales, communication skills, technical knowledge, time management, retail merchandising, and business management for these small agribusinesses.

## DEDICATION

This dissertation is dedicated to the most important person in my life, my wife Rose Ann Springfield. She has loved, supported, encouraged, and believed in me throughout this process. My dream of completing a PhD could never have come true if not for her willingness to make countless sacrifices for me. She is my inspiration and the love of my life.

I also want to dedicate this to my parents, Anna and the late Clark Springfield, Jr. who taught me that hard work is the prerequisite to success. It is because of their guidance and example that I know how to be a husband, employee, and friend.

I would also like to dedicate this work to the members of the Business Men's Bible Class of the First Baptist Church of Bryan, TX. They have been my mentors and a source of encouragement over the last three years. I cherish the relationship that I have with each and every one of these spiritual giants who demonstrate their faith by the way that they live their lives on a daily basis.

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To Dr. Kerry Litzenberg, thank you for believing in me and for being my advocate throughout my graduate program. You have always been available to listen and provide guidance when I am having difficulties. I cherish our relationship.

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A special thanks to Dr. Andy Vestal who stepped in on short notice to serve as an alternate committee member while Dr. Briers was in Iraq sharing his knowledge with the Iraqi people and setting high standards for future agriculture educators.

Above all, I thank God for granting me hope, strength, and the ability to complete this process.

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## CHAPTER I

### INTRODUCTION

The agribusiness industry in the United States is characterized a large number of relatively small businesses. Their ability to continue to operate is important, particularly to rural communities where agribusinesses may be the only employer and/or the only employer of young workers or those workers with minimal education or job skills.

The failure rate of agribusinesses within their first few years of operation is high, and even those businesses that have operated successfully for years are experiencing difficult times. As small business managers strive to retain their economic viability, the choice of appropriate and effective management strategies is critical, yet many agribusinesses fail to recognize that well trained employees can be a source of competitive advantage that helps the business survive difficult periods of rapid change (Duft, 1982).

A small firm with only two or three employees may not engage in a structured employee training program. However, there are many businesses categorized as small that employ a large number of individuals, and can benefit from effective training of those employees. Little research has been conducted to determine small business managers' perception of employee training as a contributor to the competitive advantage and long-term success of the business (Loan-Clarke, Boocock, Smith & Whittaker, 1999).

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This dissertation follows the style of the *Journal of Agricultural Education*.



### Statement of Problem

In the United States, the majority of businesses employ less than 100 people, yet the majority of current human resource development research focuses on larger firms with 100 employees or more (Hornsby & Kuratko, 1990). *Training* magazine, which annually reports on the state of training in the United States, completely ignores companies with fewer than one hundred employees, and only 16% of the companies they examine have fewer than five hundred workers (Hornsby & Kuratko, 1990; Rowden, 2002).

Research indicates that strategic employee training in a small business contributes to competitiveness, long-term survival, and success. While training is perceived as important by small business managers, they do not generally recognize that employee training can significantly increase the competitiveness of the business (Chacko, Wacker & Asar, 1997), and conventional wisdom has it that small businesses do not have the financial resources or the time to develop their human resources. (Rowden, 2002).

There has been minimal research to determine agribusiness managers' perception of training as a contributor to the strategic position of individual firms in the changing agribusiness environment (Hudson, 1990), and an increased understanding of the factors that affect a small business manager's decision to engage in employee development is needed (Loan-Clarke, Boocock, Smith & Whittaker, 1999).

### **Purpose and Objectives**

The purpose of this study is to assess the perception held by managers of feed and farm supply stores in Texas regarding the contribution of employee training to the competitiveness of the firm, determine if managers of feed and farm supply stores perceive that employee training can improve their competitive strength, and to determine if they will invest in employee training in order to gain a competitive advantage.

The following five objectives were addressed in this study:

1. Describe the operating environment of feed and farm supply stores in Texas.
2. Describe feed and farm supply store managers' perception of employee training's contribution to their firm's competitive advantage.
3. Identify barriers to employee training in feed and farm supply stores.
4. Determine Internet availability and potential use for employee training in feed and farm supply stores.
5. Describe the willingness of feed and farm supply store managers to engage in employee training delivered via the Internet.

### **Theoretical Framework**

Adult education and training programs in agriculture should use appropriate and effective instructional methods (Creswell & Martin, 1993). The theoretical framework of this research is based on the study of adult learning theory, the taxonomy of learning behaviors, and human resource development. It is bound by the work of Malcolm Knowles, Benjamin Bloom, and Donald Kirkpatrick.

Knowles introduced the concept of andragogy, the concept that adults learn differently from children based on six criteria: adult learners need to know why they need to learn something before undertaking to learn it; adults need to be responsible for their own decisions and to be treated as capable of self-direction; adult learners have a variety of life experiences which represent a rich resource for learning, but also represent a source of bias and presupposition; adult learners are ready to learn those things they need to know in order to cope effectively with life situations; adults orientation to learning is centered on developing increased competency levels to achieve their full potential; and the motivation for adult learners is internal rather than external (Knowles, Holton & Swanson, 2005).

Bloom identified three domains of learning behaviors or goals of the training process: the cognitive domain involving knowledge and the development of intellectual skills; the affective domain which includes feelings, values, appreciation, enthusiasms, motivations, and attitudes; and the psychomotor domain which includes physical movement, coordination, and the use of motor-skills. After training, the participant should have acquired new skills, knowledge, and/or attitudes (Bloom, 1956).

Kirkpatrick defined a model for evaluating training to measure what a participant thought and felt about a training program; the resulting increase in knowledge or ability resulting from a training program; the extent to which a participant's behavior is changed or their ability is improved, and the extent to which the training is applied in the workplace; and the effects on business as a result of training its employees (Kirkpatrick, 1998).

### **Significance of the Study**

The mission of agricultural education is to help people improve their lives through an educational process using scientific knowledge focused on issues and needs (Trede & Wade, 1993). The results of this study have implications and significance to various stakeholders including prospective and current employees of feed and farm supply stores, owners and managers of feed and farm supply stores, and instructional designers, vendors, technology manufacturers, and service providers who are involved in Internet-based training programs. It is intended that as a result of this study, training providers will have a better understanding of the working environment of the feed and farm supply store, and they will understand the barriers that exist to training in small agribusinesses. The findings of this study may be useful for assisting organizations overcome barriers, and to assist in the planning, implementation, and delivery of training for small agribusinesses.

### **Limitations**

Coverage error may have been introduced into the study because a complete data base of feed and farm stores in Texas could not be found and the study was limited to using an incomplete contact data base for the population being studied.

Isolating the impact of employee training on the competitiveness of a business is a methodological difficulty that may result in understating the significance of the relationship between employee training and business performance.

Because other variables that have the potential to influence the impact of employee training on the competitiveness of a business may not have been accounted for, there are limitations to the correlations identified by the study.

It is difficult to measure perceptions of skills deficiencies and employee training needs. Responses in this study will vary according to firm size, growth rate of the firm, and responsibilities of the respondent within the business.

### **Basic Assumptions**

The following conditions are assumed for this study:

1. All subjects who responded to the questionnaire did so voluntarily and honestly.
2. All respondents interpreted each question the way the researcher intended.
3. The questionnaire used in the study accurately captured the respondents' demographic information, and perception of training as a contributor to competitive advantage.
4. The researcher assumes that there is a causal or associative relationship between employee training and job performance.
5. The researcher assumes that there is a causal or associative relationship between employee training and business competitiveness.
6. The researcher assumes that feed and farm supply stores are profit maximizing businesses.

7. It is assumed that the goal of the study participants is to maximize the competitive advantage of their business.
8. This study measures participants' perceptions.

### **Definition of Terms**

*Added-Value Products* – A highly differentiated product that has been changed, enhanced, or improved over the basic form of the product to increase its value to the buyer (Reilly, 1992).

*Commoditization* – The dilution of a product's internal differentiation and competitive features in favor of increased sales based on price of the product alone.

*Economies of Size* – The concept that average cost per unit sold declines as the size of the business grows. The business can spread fixed costs over a large number of units sold. In addition, large, multi-store, retail businesses typically get volume discounts on the products that they buy for resale (Hofstrand, 2007).

*Feed and Farm Supply Store* – A retail store carrying mostly supplies for production farming and livestock production needs.

*Mass Merchandiser* – Large retail store offering a wide range of product categories in multiple retail locations with centralized purchasing and distribution functions.

*On-the-Job Training* – Training that is task specific and conducted in the actual work environment. The training method is determined by the instructor, and the instructor relies on their own job experience in determining the instruction to be delivered (Sisson, 2001).

## CHAPTER II

### REVIEW OF LITERATURE

#### Introduction

A small business is one that is independently owned and operated and does not dominate its field of operation. They provide opportunities for women, minorities, the young, the elderly, and individuals in their prime working years to pursue the American Dream. In the United States, 90% of the more than 24 million small businesses have fewer than 20 employees. These small businesses employ individuals of all races, genders, and ages and are more likely than large businesses to hire young individuals and individuals on public assistance (Small Business Administration, 1999).

In the United States, small agribusinesses outnumber their larger competitors in almost every market and rural community. Approximately 583,000 in number, small agribusinesses employ 7.6 million individuals and generate annual gross receipts in excess of \$26.4 billion. They are a part of the agricultural food and fiber marketing system that annually produces goods and services accounting for ten percent of the total U.S. gross domestic product (Lindberg & Monaldo, 2008; Duft, 1985; Small Business Administration, 1999).

Small businesses generally have a low probability of long-term survival with 50% of all small businesses failing to survive the first three years of business and only 44% surviving the first four years of business. Agribusiness firms experience a similar failure rate with 70% of new agribusiness firms failing in the first five years of business

(Duft, 1985; Feuer, 1988; Rowden, 2002; van Praag, 2003; Watson, Hogarth-Scott & Wilson, 1998; Zahn, 2007).

Feed and farm supply stores are a type of small agribusiness that generally sell production inputs such as feed, seed, fertilizer, and animal health supplies (Hudson, 1990) to independent agricultural producers from a retail location in the local community. The majority of feed stores are owner-managed, small businesses that are an important component of the local community providing jobs and contributing to the local economy (Coffey, 1993; Fuller-Love, 2006). An Internet search found listings for more than 13,000 feed and farm supply store businesses in the United States; 1,342 of these businesses are located in Texas (PoloCenter, 2008) serving 230,000 farms and ranches (United States Department of Agriculture, 2006).

In many feed and farm supply stores, the pace is fast and frantic and owner-managers perform the day-to-day tasks of managing the business. Their primary objective is to keep their doors open for business. They tend to operating with a minimum number of employees who often have too much work and not enough time to get it done (Duft, 1985; Feuer, 1988; Fuller-Love, 2006).

Personnel problems, the loneliness of running a small business, accounting issues, financial solvency, marketing decisions, long work hours, inflexible schedules, and working evenings and weekends, along with numerous other challenges combine to create stress on the business manager's family relationships. This in turn leads to quality of life issues, personal problems, and family issues that can significantly affect the performance of the business. As they attempt to balance business viability and family



responsibilities, the management strategies they choose become critical (McDermid, Williams, Marks & Heilbrun, 1994; Watson, Hogarth-Scott & Wilson, 1998).

Feed and farm stores exhibit the characteristics of firms in a monopolistically competitive market where many firms sell a similar product and there are few barriers to entry and exit. Because of the similarity in products and services these firms generally operate on low profit margins and price their products as low as their cost will allow. They typically rely on non-price factors such as size, location, advertising, promotions, store atmosphere, and customer service to differentiate themselves from the competition (Penson, Capps, Rosson & Woodward, 2006; Rhodes, Dauve & Parcell, 2007).

Economists define competitiveness as the ability of a firm to offer products or services that meet or exceed the customer value offered by their competition. In a differentiated market, the firm that can determine the customer's desired benefits and then develop a bundle of products and services that delivers those benefits is the firm that develops a competitive advantage (Kennedy, Harrison, Kalaitzandonakes, Peterson & Rindfuss, 1997). Feed and farm supply businesses develop a competitive advantage by offering a combination of resources that are perceived as satisfying customers' needs better than the competition (Duft, 1985; Horalíková & Zuzák, 2005).

A firm must efficiently utilize all of its resources, i.e., land, capital, labor, and management (Penson, Capps, Rosson & Woodward, 2006) in developing a competitive advantage. It is, however, the intangible resources, i.e., knowledge, cognition, and social capital, that form the internal capabilities of the firm on which a long-term sustainable competitive advantage is built (Gray, Boehlje, Amanor-Boadu & Fulton, 2004); it is

management of the firm's human resources rather than advanced technologies, patents, or strategic position that builds and sustains a competitive advantage (Pfeffer, 1994).

Maintaining a sustainable competitive advantage has become a critical problem for small agribusiness firms due to the rapid increase in the number of competitors who not only imitate the most successful firms, but strive to develop their own superior competitive advantage (Duft, 1985; Horalíková & Zuzák, 2005).

It is the firm's technical know-how, coupled with the knowledge of when, how, and what to do in order to achieve results that is fundamental in developing a sustainable competitive advantage. As the number of businesses possessing a strong competitive advantage increases in the market, the unique resource base of each firm is eroded; particularly in an environment of constant and rapid change (Gray, Boehlje, Amanor-Boadu & Fulton, 2004). As this occurs, employees of the firm become the primary resource from which businesses develop their long-term sustainable competitive advantage. The knowledge, however, of a single individual within the firm does not create the firm's competitive advantage; rather it results from the use of knowledge by all employees operating within the firm to satisfy customer needs (Horalíková & Zuzák, 2005).

### **The Changing Agribusiness Environment**

Agribusiness markets are increasing in their competitiveness at a rate that is perceived as severe and extraordinary by managers. Market conditions and competition have significantly changed, and new aggressive competitors are successfully challenging

the market position of established agribusinesses. Even those businesses that have operated successfully for years are now confronting difficult times (Chacko, Wacker & Asar, 1997; Duft, 1985; Hudson, 1990).

The agricultural sector is undergoing a rapid transformation away from traditional family farms (Gustafson, 2002). The traditional strategy of a local retail store selling feed to independent producers is being threatened by demographic, structural, manufacturing, and marketing forces (Coffey, 1993). In many rural areas, amenities and services are comparable to those offered in urban areas enabling rural residents to enjoy the comfort of living in the city while enjoying the privacy and romance of country living. Improved cellular and satellite technologies, advanced computer and Internet capabilities, and an improved highway system are facilitating the rapid growth of non-traditional residents in farming and ranching communities. These new rural residents are commonly referred to as part-time farmers, lifestyle producers, and ruralpolitans (Erickson, 2004; Padberg & Goodwin, 1985). We will refer to these new, non-traditional rural landowners as lifestyle producers.

In order to fully comprehend the challenges to feed and farm supply stores created by the changing demographics in rural markets, it is necessary to understand the distinctions between lifestyle producers and the traditional farmers and ranchers who we will refer to as commercial producers.

Lifestyle producers have multiple motivations for living in the country including living the lifestyle of a farmer or rancher, outdoor recreation, and getting back to nature (Pope & Goodwin, 1984). Their operations are small in size, they feel a connection to

the land, and they generally do not expect to make a profit. They have different goals from commercial producers and it is important to understand that this group views the world differently (Erickson, 2004; Padberg & Goodwin, 1985).

Many are doctors, lawyers, dentists, and other career professionals who want to live outside the suburbs or metro area and can afford to do so. Often they purchase a home and acreage in the country as a retreat, a place to hunt and fish, or simply for the pride of ownership or prestige of owning rural land. They enjoy gardening, watching birds and wildlife, and maintaining their lawns. They often have a horse for their kids, a few head of livestock, and they generally do not know what they need when they go to the local feed and farm supply store to make purchases. They seek businesses that can provide expertise, a wide selection of merchandise, a convenient and attractive location, and shopping hours that are convenient for their schedules (Coffey, 1993; Erickson, 2004).

Lifestyle producers seek to maximize satisfaction and are more concerned with lifestyle than with profit, while commercial producers seek to maximize profit. For example, when evaluating the opportunity to purchase land for the purpose of raising cattle, the profit maximizer (commercial producer) sees a low rate of return, whereas the satisfaction maximizer (lifestyle producer) may see the investment as an opportunity to live the cowboy lifestyle. The commercial producer looks for suppliers that can provide stable prices, product quality, and value for their dollar. The lifestyle producer looks for suppliers offering individual satisfaction through benefits such as convenience and variety, but they also evaluate the supplier on societal benefits such as food safety,

human welfare, environmental security, and ethical business conduct (Hudson, 1990; Pope & Goodwin, 1984).

At the same time that the number of lifestyle producers is rapidly increasing, the number of commercial producers is rapidly decreasing, and the technological sophistication of the commercial agricultural production is increasing.

Commercial operations are rapidly developing into industrial, vertically integrated producers of differentiated branded products. As this transformation occurs, the production methods, financial structure, sources of credit, and managerial strategies employed by these firms are evolving (Gustafson, 2002). They demand complicated services and competitive prices. Serving this client no longer occurs at the feed counter. They use the telephone and Internet to shop a broader geographical area, and in many cases have bypassed the local feed and farm supply store and are trading direct with manufacturers. To successfully serve the commercial producer today requires a technically trained, computer literate professional who can evaluate commodity, forage, and soil samples and formulate client specific recommendations (Coffey, 1993; Padberg & Goodwin, 1985).

There is a divergent, almost conflicting, contrast between the lifestyle producer and commercial producer, and many feed and farm supply stores are caught in the struggle of trying to successfully serve both. Both type of clients offer significant profit opportunity to the feed and farm supply business. The lifestyle producer is typically small while commercial farm and ranch operations rely on large production units to benefit from economies of size and cost efficiencies. The lifestyle producer is generally

more educated, more liberal, and wants to be a modern county gentleman. The commercial producer sees his life in a more restricted, narrower pattern relating to the land and local events and is the industrial component in the production of agricultural commodities. He is much less a romantic than the lifestyle producer and he is driven by economic motivations to engage in different enterprises based on profit opportunity (Padberg & Goodwin, 1985).

### **Changes in the Texas Market**

The existence of the traditional feed and farm supply store in Texas is being threatened by many factors including rapid urban expansion, a changing client base, and the rapid growth of multi-store competitors, and mass merchandisers such as Tractor Supply Company (Coffey, 1993).

According to the United States Census Bureau (2000), the rural landscape in Texas experienced a rapid and stunning change between 1970 and 2000 as the population of Texas increased 86% (Table 1); the rural population grew 60% and the urban population almost doubled, increasing 93%. Metropolitan areas in Texas expanded at a fast rate to accommodate this rapidly growing population at the expense of rural farm and ranch lands. The number of large commercial producers decreased, the number of small lifestyle producers increased, and the number of acres devoted to agricultural production decreased. These combined factors resulted in a 16% decrease in the average size of the feed and farm store customers' operations (Table 2).

As the number of rural landowners increased and the average size of farms and ranches in Texas decreased, the average size of beef cattle herds decreased 21% and the average size of sheep and goat flocks decreased 58% (Table 3).

The total number of commercial agricultural operations with management intensive livestock enterprises decreased; dairy farms decreased 85%, swine operations decreased 58%, and broiler operations decreased 13%. However, the remaining commercial operations with those same enterprises saw a significant increase in the average number of animals per operation; dairy herd size increased 677%, hogs per farm increased 281%, and broilers per flock increased 27% (Table 3).

Table 1

*Trends in Texas Population*

	Urban	Rural	Total
2000	17,204,281	3,647,539	20,851,820
1990	13,637,248	3,349,262	16,986,510
1980	11,326,436	2,902,755	14,229,191
1970	8,924,009	2,272,991	11,197,000

Table 2

*Trends in Farm Size in Texas*

	1974	2002
Total Farms	209,000	229,000
Total Acres	141,800,000	130,500,000
Acres per Farm	678	570

Table 3

*Trends in Livestock Production in Texas 1974 - 2002*

	1974			2002		
	Total Farms	Total Head	Average Head per Farm	Total Farms	Total Head	Average Head per Farm
Beef Cows	113,683	5,991,030	53	131,506	5,545,824	42
Milk Cows	13,687	297,921	22	2,080	309,058	149
Hogs and Pigs	9,441	1,406,927	149	3,962	1,659,834	419
Broilers	1,581	538,737,966	340,758	1,375	146,502,086	160,547
Sheep and Goats	7,000	890,000	127	9,000	2,700,000	300

Today's feed and farm supply store in Texas is serving both the lifestyle producer and the commercial producer. It is common for a sales person to have a commercial producer asking very detailed, technically sophisticated questions about a farm specific problem that may result in a sizeable sale, while simultaneously answering



questions of the lifestyle producer who wants to buy a bag of wild bird seed and a sack of fertilizer for their lawn. To survive, feed and farm supply stores must develop employees with marketing, merchandising and people skills that can ask the right questions and make the best sale. The traditional feed and farm supply store is becoming obsolete, the “good old boy” peddling feed from behind the store counter is fast becoming a thing of the past, and today’s feed and farm supply store employees need a different and better set of skills than has ever before (Coffey, 1993; Erickson, 2004).

### **The Importance of Employee Training**

Many factors such as competition, entrepreneurial objectives, and education, training and prior experience of the owner-manager affect the success of a small business (Simpson, Tuck & Bellamy, 2004). In an environment of increased competition and rapid change, such as with feed and farm supply stores in Texas, well trained employees can also improve the competitiveness of the firm, contribute to long-term profits, provide a significant sustainable competitive advantage, and are a key to survival (Fairfield-Sonn, 1987; Luoma, 2000; Rowden, 2002). Thompson (1995) found that training is considered to be such a critical factor to the success of an agribusiness that in times of budgetary difficulty and limited resources, agribusiness firms tend to engage in training programs at an increasing rate.

A study of 4,000 firms by the human resources consulting firm of Watson Wyatt concluded that firms who include employee training as a business strategy have a 40% higher return to shareholders than companies that do not (Fernald, Solomon & Bradley,

1999). Along with goals for profit, growth, product quality, and customer service, employee training goals should be a key component of any business plan as a means of contributing to long-term profits and viability of the business (Fairfield-Sonn, 1987).

Small businesses are especially affected by a lack of an employee development and training strategy (Fernald, Solomon & Bradley, 1999). However, existing training programs were developed for larger businesses with many employees (Deakins & Freel, 1998; Fuller-Love, 2006), and relatively little research has been conducted to determine whether managers of small businesses perceive that an investment in employee training contributes to their competitive advantage (Loan-Clarke, Boocock, Smith & Whittaker, 1999).

Continuous training of employees takes a commitment from a business of any size but particularly from the small agribusiness manager (Fuller-Love, 2006). Employees in small agribusinesses interact with a wide variety of customers and suppliers making every employee in the business a decision maker. However, in most small businesses, the employees are unaware of the effect that the choices they make have on the success of the business (Deakins & Freel, 1998). Conventional wisdom contends that small businesses do not have the financial resources or the time to develop and train their employees (Rowden, 2002). Yet small businesses are finding an ever widening gap between the skills needed to help the business grow in today's fast changing business environment and the capabilities of their employees (American Society for Training and Development, 2006).

A skills gap limits the business's ability to grow and remain competitive in its market, and has a negative impact on product quality and economic performance (Watson, Johnson & Webb, 2006). Businesses that are growing, or adjusting to meet changing customer demands and market conditions, will always face some type of skills gap in their employee workforce. It is up to the managers of small businesses to ensure that employees have the necessary knowledge, skills, and abilities to contribute to the performance and competitiveness of the business, and the communication skills to perform their job in an environment where customer focus and customer satisfaction are critical to the long term success of the business (American Society for Training and Development, 2006).

### **Benefits of Employee Training**

Just as a business would maintain a piece of equipment to keep it operating at peak efficiency, it must invest in its employees to keep them operating at peak efficiency. Employee training can bring about changes in the knowledge, skills, attitude, and behavior (Liu & Comer, 2007). Training increases business growth (Fuller-Love, 2006), reduces the rate of business failure (Zahn, 2007), increases profit (Gadenne, 1998), reduces employee turnover, helps a small business meet competitive challenges (Fernald, Solomon & Bradley, 1999), and increases a small business's competitive advantage (Chacko, Wacker & Asar, 1997).

A strong relationship has been established between employee training and job satisfaction. Employees who are more satisfied with their lives and aspects of their work

are more helpful and cooperative to their colleagues, more punctual, report fewer sick days, and remain employed for longer periods than do dissatisfied employees (Keyes, Hysom, & Lupo, 2000). Businesses can use employee training to maximize job satisfaction and minimize employee turnover. (Goodwin & O'Connor, 2007; Rowden, 2002).

Additionally, a strong relationship has been established between employee training and customer loyalty and satisfaction. Loyalty and satisfaction occur when the customer has positive experiences with the firm's services, products, procedures, and personnel (Workforce Performance Solutions, 2006). Effective employee training results in positive customer and employee experiences, leading to improved sustainability as measured by revenues, profit, and growth. And together, employee satisfaction and customer satisfaction can improve the long-term viability of the business (Keyes, Hysom & Lupo, 2000; Workforce Performance Solutions, 2006).

### **Training Needs of the Small Business**

Small businesses are less likely to train employees than larger firms; they have a higher turnover of employees, and they generally have a shallow management structure that limits long-term career prospects for employees (Bryan, 2006). They often rely on a few large customers, have limited product offerings, serve small markets, and have frequent contact with their employees. The managers of these businesses feel that they understand what is occurring within the business, and many believe their business does not require the same type of employee training program as a larger business (Duft,

1982), even though much of their time is spent correcting problems caused by untrained employees (Feuer, 1988).

The success of small agribusinesses is highly dependent on employees' ability to interact with customers and these businesses need employees who can take possession of problems, anticipate needs, and strive for continuous improvement (Siebert, 1998). The manager's goal should be to create competencies in the firm's employees that are costly for the firm's competitors to duplicate (Gray, Boehlje, Amanor-Boadu & Fulton, 2004).

Training in small agribusinesses has traditionally focused on teaching employees the skills needed to perform job tasks (Siebert, 1998). However, Small businesses are reporting employee deficiencies in many areas that are critical to the success of their business including customer service, management, and leadership skills (American Society for Training and Development, 2006). In addition, managers have identified that employee training is needed in time management, listening skills, interpersonal communications, business and financial skills, and conflict management (Franklin, Solomon, Thomas, Fernald & Tarabishy, 2005).

Small business managers need training on issues such as people management, employee motivation, and leadership (Watson, Hogarth-Scott, and Wilson, 1998). A study of 543 agribusiness managers identified interpersonal characteristics and communication skills as the primary training needed for agribusiness managers. Specifically ranked as critical for the agribusiness manager were leadership, communication, and supervisory skills (Litzenberg & Schneider, 1987). Employees delegated management responsibilities need a solid understanding of financial and

business principles plus the leadership, managerial, and supervisory skills that inspire innovation, performance, and continual improvement in their subordinates (American Society for Training and Development, 2006).

For small businesses, training in the areas of sales skills, marketing, time-management, and basic business skills pays a high return (Fernald, Solomon & Bradley, 1999). Responding to skills shortages with short-term fixes is not sufficient, but instead should be addressed in ways that support strategic plans of the business and contribute to long-term business success (American Society for Training and Development, 2006).

### **Barriers to Employee Training in Small Businesses**

Current research indicates that today's small businesses are not investing in the employee training needed to keep their companies competitive. Managers fail to recognize employee training as a means of gaining a competitive advantage (Solomon, Fernald & Tarabishy, 2002), and training is often viewed by small businesses as an expense and a necessary evil (Webster, Walker & Barrett, 2005). The benefits of training are not always apparent in the short term and managers of small rural businesses tend to view training as a luxury that they cannot afford (Bennett & Errington, 1995).

Competition for employees' time is rapidly increasing. Managers of agribusiness firms need to know that the time they dedicate to training programs is going to be worthwhile (Hine, Fulton & Pritchett, 2005). In many small businesses, job responsibilities are not well defined, the workload is never ending and the manager of the small business serves in a variety of roles including company president, sales

representative, truck driver, warehouse dockhand, and human resource director. Most cannot justify adding a staff training position, nor can they afford to hire consultants on a regular basis and the task of employee training typically becomes the responsibility of the business manager (Feuer, 1988; Kelly & Thompson, 1988).

Managers that do recognize the benefits often find it a challenge to engage their employees in strategic training. Often in a small business, the manager is so busy doing their best to survive that they cannot seem to find the time to teach their employees how to do the jobs for which they were hired. The fact that most of their employees perform a variety of distinctly different tasks, depending on who is out sick and what did not get done yesterday does not make the training task any easier. It creates an environment where even those managers who recognize the value of training cringe at the thought of pulling people off the job, and spending money on programs for which there may not be an obvious return on investment. Many of these managers understand that to stay competitive they must educate themselves and their people, but that does not make the resources available (Fernald, Solomon & Bradley, 1999; Feuer, 1988).

Managers of small businesses point to difficulties created when key personnel are away from the job as the number one barrier to training in their business. Additionally, they point out training can only be profitable if the employee remains with the firm. Many small business managers are reluctant to provide training for employees because they believe that upon being trained, the employee may use their newly acquired skills to seek higher paying employment with competitive firms (Bryan, 2006). Other barriers to training in the small business include the cost of training, the distance and travel expense

associated with sending employees to training programs, and the lack of training programs that they perceive to be relevant to their business (Bennett & Errington, 1995).

When business is good, managers often perceive that the difficulties created by absence of key personnel attending training programs are greater than the benefits created by the training. When business is bad, managers often perceive training to be a luxury that the business cannot afford (Bryan, 2006).

### **Technology, Training and Development**

Advancements in fiber optic communications, coupled with the Internet, has increased the capabilities of computers and telecommunications, and an increasing number of agribusinesses are looking to the Internet as a marketing, management, service, and coordination tool (Hooker, Heilig & Ernst, 2001). Lagging behind the rest of the country by only eight percentage points at the end of 2005, 62% of rural America had Internet access (Horrigan & Murray, 2006).

The Internet has facilitated new, cost effective methods of delivering instruction, access to information, efficient exchange of communications, collaborative teamwork, and problem solving from a distance (Murphrey & Dooley, 2000), and it has become a common method of delivering employee training programs at the worksite for businesses of varying size in almost all industry sectors (Kim & Bonk, n.d.). Commonly referred to as distance education, this technology involves learning occurring in a location different from where the teaching is taking place (Neal & Miller, 2004; Parton, 2001). It offers participants the opportunity to learn during times that are convenient to



their schedule, study at their own pace, focus on specific content areas, assess themselves, and engage in idea exchange with the instructor and other students (Kaslon, Lodl & Greve, 2005).

Distance education has existed in one form or another since the 1800's. However, the Internet is being used more than any other continuing education delivery strategy (Hooker, Heilig & Ernst, 2001), and technology has rapidly increased in application, efficiency, and effectiveness while decreasing in cost. Many corporations, businesses, and universities are increasing technology resources to meet the demand from individuals seeking non-traditional access to training (Murphrey & Dooley, 2000), and online learning is increasing at a rate of 40% annually (Hooker, Heilig & Ernst, 2001). Online education and training is becoming readily accepted by human resource professionals and in a survey of 239 training professionals, 25% indicated that distance education was already the dominant form of training in their organization, while another 50% indicated that it would become the dominant form of employee development within their organization by 2010 (Hooker, Heilig & Ernst, 2001; Kim & Bonk, n.d.).

Computer and Internet technologies are becoming common in all industries and technical fluency is becoming a common expectation of employees (Hooker, Heilig & Ernst, 2001). However, as beneficial as the use of this technology may appear upon initial examination, there are concerns that agribusiness managers desiring to utilize distance education must resolve issues such as access to high-speed Internet service in rural areas and the computer skills of their employees. Most importantly, managers must recognize that employees with multiple responsibilities will have limited time to allocate

to the training and will most likely experience frequent interruptions while engaged in learning (Mungania, 2003). Additionally, critics of training programs delivered at a distance express concern about a lack of direct interaction between instructors and students found in the more traditional face-to-face environment (McCann, 2007).

Technological change is occurring and it is simply a matter of time until agribusiness firms will be drawn into the use of electronic communication and information sharing. Already, the cooperative extension service is experiencing a growing demand for online training courses for a variety of agribusiness management training needs (McCann, 2006).

Small agribusinesses capacity to incorporate distance education as a training strategy is improving. As this occurs, an agribusiness manager's perceived value of this technology will influence its rate of adoption as a training tool much more than the technical obstacles to their implementation and use (Murphrey & Dooley, 2000; Neal & Miller, 2004; Parton, 2001). In this atmosphere of changing technology, there is considerable confusion about what is happening, how much potential exists, and what businesses should be doing to take advantage of it. Small agribusiness firms must confront the issue of how to strategically utilize what this advanced technology has to offer to build a competitive advantage (Hooker, Heilig & Ernst, 2001; Parton, 2001).

### **Summary**

On any given day, managers would rather see their employees working as opposed to sitting in a training program. However, changes in communications

technology are facilitating delivery of employee training programs at a distance. No longer does an individual have to leave the physical location of the business to engage in employee training. Distance education is making employee development efforts within the firm easier and enhancing their importance as a tool for strategic and cultural change in agribusiness firms.

The question of whether small businesses will invest in employee training comes down to time and money. The agribusiness manager must determine to what extent employee knowledge, skills, and motivation, are limiting attainment of the firm's goals, and then determine if the cost of the training exceeds the benefits of the training within the firm.

## CHAPTER III

### METHOD OF INVESTIGATION

#### Research Design

The purpose of this study was to assess the perception held by managers of feed and farm supply stores in Texas regarding the contribution of employee training to the competitiveness of the firm, to determine if managers of feed and farm supply stores perceive that employee training can improve their competitive strength, and to determine if they will invest in employee training in order to gain a competitive advantage.

A descriptive and correlational research design was used. Descriptive research can be used to reveal opinions, attitudes, and practices (Gall, Gall & Borg, 2007), and the correlational design while not adequate for describing relationships among variables is the first step toward doing so (Tuckman, 1999). Descriptive statistics such as frequencies, percentages, means, standard deviations, and correlations were used to describe the results.

This study attempted to contribute to the body of knowledge concerning the perceived value of training in small agribusinesses; it did not attempt to find all of the answers. The objectives of this study were:

1. Describe the operating environment of feed and farm supply stores in Texas.
2. Describe feed and farm supply store managers' perception of employee training's contribution to their firm's competitive advantage.
3. Identify barriers to employee training in feed and farm supply stores.

4. Determine Internet availability and potential use for employee training in feed and farm supply stores.
5. Describe the willingness of feed and farm supply store managers to engage in employee training delivered via the Internet.

### **Population and Sample**

The population for this study consisted of 1,487 feed and farm supply stores identified in the Texas Horse & Livestock Feed Stores online directory (PoloCenter, 2008). Participants were randomly selected and the sample was reviewed by three Texas feed manufacturing company executives for accuracy of information.

A random sample of 305 store names and addresses were selected from the study population. During the data collection process, three stores were found to no longer be in operation and 36 surveys were returned undeliverable. Removing those 39 store names resulted in an accessible sample of 266 feed and farm supply stores. From the accessible sample, 139 survey responses were received by the conclusion of the data collection period representing a total return rate of 52.3% of the accessible sample. Among the 139 responses were 14 surveys that were returned blank, ultimately resulting in 125 responses that were analyzed.

### **Instrumentation**

A questionnaire (Appendix A) consisting of five sections was used to collect data for this study. Social exchange theory, which posits that people will disclose more when

they perceive that the reward from participating is greater than the cost of participation (Thibault & Kelley, 1952), was the foundation for developing the content and structure of the survey instrument.

The available instruments did not fit the population being studied. Therefore, questionnaire content reflects multiple influences from the literature including Cassidy and Eachus (2002), O'Malley and McCraw (1999), Duft (1982), Erickson (2004), and Padberg and Goodwin (1985). In addition, advice was sought from professionals involved in the feed and farm supply industry, and from faculty members at Texas A&M University. Individual questions were written with the goal that every potential respondent would interpret each question in the same way, respond accurately to each question, and be willing to answer each question (Dillman, 2007).

The first section, section one, contained eight questions designed to solicit information about employees of the business, the respondent's opinions regarding employee training, barriers to training in the business, and training needs of the business.

Section two asked participants to answer five questions seeking information about computer and Internet availability within the respondent's place of business, their willingness to use the computer and internet for training, and their employee's computer skill levels.

Section three consisted of six questions that addressed the competitive nature and operating conditions in the trade area of the participating stores.

Section four asked eleven questions about the product mix of the store, trends in sales of product categories, ownership structure of the business, number of employees, years of operation, and gross sales.

Section five, the final section, collected demographic data by asking four questions regarding job title, education, gender, and age of the participants, and it offered the participants an opportunity to comment about the study.

### **Validity**

Campbell and Stanley ( 1963) characterized internal validity as the basic requirements for research to be interpretable. They identified eight extraneous variables that, if not controlled in the research design, can interfere with the internal validity of a research study: (1) history; (2) maturation; (3) testing; (4) instrumentation; (5) statistical regression; (6) selection; (7) mortality; and (8) selection-maturation interaction. To address these threats, the following techniques were used:

1. History: This study is designed to measure perceptions of the participants. Because the study relies on participants' recall of events that have occurred over time, history is a threat to the internal validity of this study.
2. Maturation: The data were collected in the shortest time possible to minimize the threat to internal validity from maturation.
3. Testing: Participants were allowed to complete the questionnaire only once. There was not a second test or evaluation administered to the participants in this study.

4. Instrumentation: Instrumentation is not a threat to the internal validity of this study as only one questionnaire was used.
5. Statistical regression: Data collected from all respondents were analyzed as a single group.
6. Selection: Participants were randomly selected and data collected from all respondents were analyzed as a single group.
7. Experimental mortality: Data was collected in the shortest time possible and data collected from all respondents were analyzed as a single group.
8. Selection-maturation interaction: Data was collected in the shortest time possible and data collected from all respondents were analyzed as a single group.

Bracht & Glass (1968) describe external validity as the degree to which the conclusions of a study apply to other persons in other places and at other times. Threats to external validity fall into two broad categories: (1) those dealing with what population of subjects can be expected to respond in the same manner as did the participants of the study; and (2) those dealing with the “environment” of the study. These are referred to as population validity and ecological validity.

Threats to population validity include (1) the extent to which one can generalize from the study sample to a defined population, and (2) the extent to which personal variables interact with treatment effects (Bracht & Glass, 1968).

To control for threats to population validity, a random sample was selected from the study population. The original sample frame consisted of 305 store names and



addresses. However, during the data collection process, three stores were found to no longer be in operation and 36 surveys were returned undeliverable. Removing those 39 store names resulted in an accessible sample of 266 feed and farm supply stores.

From the accessible sample, 139 survey responses were received by the conclusion of the data collection period representing a total return rate of 52.3% of the accessible sample. Among the 139 responses were 14 surveys that were returned blank, ultimately resulting in 125 responses that were analyzed. Twenty-two percent of the participants submitted their responses online and 78% returned the paper questionnaire in the mail.

Data were analyzed to determine if significant differences were present between early respondents and late respondents (Lindner, Murphy & Briers, 2001). Thirty-six responses were received after June 04, 2008 and classified as late respondents. Twenty-seven percent of the early responses were submitted online and 73% of the early responders returned their questionnaires in the mail. Eight percent of the late respondents submitted their responses online, and 91% of the late responders returned the questionnaire in the mail.

One-way analysis of variance (ANOVA) procedures and independent samples t-tests were conducted on annual gross sales, number of competitors, number of employees, number of years in business, and the summated scales of employee competitiveness, training progressiveness, training perceptions, training needs, training barriers, factors of competitiveness, competitive trends, and overall competitiveness to search for significant differences between early and late respondents.

Late responders were found to have a significantly higher perception of their employees' competitiveness relative to employees of their primary competitors. In addition, they were found to have a higher measure of training progressiveness (Table 4). Therefore caution must be used in generalizing these findings to the study population.

Ecological validity is the extent to which the results of an experiment can be generalized from the set of environmental conditions created by the researcher to other environmental conditions such as the settings and conditions in which the research is conducted.

Threats identified by Bracht & Glass (1968) to ecological validity include: (1) failure to adequately describe the study in sufficient detail for others to replicate it; (2) multiple-treatment interference; (3) Hawthorne effect (attention causes differences); (4) novelty and disruption effect (anything different makes a difference); (5) experimenter effect (it only works with this experimenter); (6) pre-test sensitization; (7) post-test sensitization; (8) interaction of history and treatment effect (as time passes, the conditions under which treatments work change); (9) measurement of the dependent variable; and (10) interaction of time of measurement and treatment. Threats to ecological validity of this study were minimal due to the nature of the study design which attempted to identify perceptions of the participants through a onetime only questionnaire.

Table 4  
*Comparison of Early and Late Respondents*

	<i>n</i>	<i>M</i>	<i>SD</i>	<i>t-value</i>	<i>t-probability</i>
Annual Gross Sales					
Early Respondents	65	3,942,738	4,675,183	0.68	0.50
Late Respondents	23	5,086,957	11,226,570		
Number of Competitors					
Early Respondents	89	3.81	2.08	1.41	0.16
Late Respondents	34	4.47	2.86		
Years in business					
Early Respondents	84	36.49	23.23	0.32	0.75
Late Respondents	34	34.91	27.15		
Number of Employees					
Early Respondents	83	14.01	17.46	0.75	0.46
Late Respondents	36	11.28	20.30		
Employee Competitiveness (EC)					
Early Respondents	87	15.40	2.21	2.60	0.01
Late Respondents	35	16.51	1.95		
Training Progressiveness (TPROG)					
Early Respondents	87	10.86	3.08	2.37	0.02
Late Respondents	35	12.20	2.04		
Training Perceptions (TPERCEP)					
Early Respondents	87	33.32	9.75	0.68	0.50
Late Respondents	35	34.60	8.46		
Training Needs (TNEEDS)					
Early Respondents	83	30.90	6.02	0.13	0.90
Late Respondents	34	30.74	7.66		
Training Barriers (TBARRIERS)					
Early Respondents	82	23.35	5.84	0.99	0.33
Late Respondents	34	22.06	7.69		
Factors of Competitiveness (FOFC)					
Early Respondents	89	25.74	5.29	0.48	0.63
Late Respondents	35	26.26	5.57		
Competitive Trends (CTRENDS)					
Early Respondents	89	18.52	5.07	0.57	0.57
Late Respondents	34	19.12	5.75		
Overall Competitiveness (COMPET)					
Early Respondents	89	18.71	3.93	0.57	0.57
Late Respondents	35	18.29	3.12		

Content and face validity was established by seeking feedback from a panel of experts. Content validity is the extent to which the results produced by a set of items on a test are representative of the population from which the sample was drawn (Tuckman, 1999). The panel of experts were chosen based on their experience in the feed and farm supply store industry in Texas and were chosen using the criteria that the participant must own and/or manage a feed and farm supply business or function as a vendor of products sold by feed and farm supply stores, and must be willing to participate. The analysis and feedback from the subject matter experts was valuable in determining the items that were included in the final version of the instrument.

The researcher emailed pre-identified subject matter experts to first seek their approval to review the instrument before a pilot test was conducted. The instrument was emailed to five volunteers giving them explicit instructions which included conducting an item-by-item analysis and providing feedback on each item. They were asked to comment specifically on the overall content and wording. Their suggestions were incorporated into the instrument revisions.

### **Reliability**

The instrument was pilot tested on April 15, 2008 using a sample of five feed and farm supply store managers with whom the researcher has been associated professionally for many years. The purpose of the pilot test was to solicit feedback on the clarity of the items and to determine an estimated length of time required to respond to the items on

the questionnaire. Based on their feedback and reliability analysis, revisions were made to the instrument. The main study was conducted after the pilot study.

### **Data Collection**

Before collecting data, materials were submitted to the Office of Research Compliance Institutional Review Board (IRB) at Texas A&M University for review to ensure that the research posed no mental, emotional, or physical harm to the participants. These materials included a copy of the data collection instrument and all cover letters that were used in the data collection processes. Approval was granted on April 11, 2008.

Both a mailed paper questionnaire and an online questionnaire were used to collect data for this study. The online method is comparable to traditional paper-based methods in validity and reliability for collecting social science research data and achieves quick responses rates at minimal cost (Ladner, Wingenbach & Raven, 2002). Participants were given the option of engaging in either method to participate in the study.

All correspondence with the participants included individual passwords and a hyperlink to the study's online portal consisting of an information and consent page and a means of logging into a password protected online questionnaire which allowed the participant to submit their responses electronically. The information and consent page explained the study's purpose, provided Internal Review Board (IRB) approval and the researcher's contact information.

One-way analysis of variance (ANOVA) procedures were conducted to search for significant differences between respondents based on their method of response. The analysis failed to identify significant differences between respondents who returned a paper questionnaire by mail and those who completed and submitted the questionnaire electronically. As such, data collected from both groups of respondents were analyzed as a single group.

The data collection methods for this study followed the recommendations from *Mail and Internet Surveys: The Tailored Design Method* (Dillman, 2007). Data collection began on May 07, 2008 with the mailing of a pre-notice letter (Appendix B).

The pre-notice letter notified the sample they had been randomly selected to participate in this study. The letter also explained the need and purpose of the study, along with how the results would be used. The letter was printed on Department of Agricultural Economics letterhead to increase trust with the participants. The letters were sent out by U.S. postal ground mail in departmental envelopes.

Five days later, on May 12, 2008, survey packets, including a cover letter (Appendix C), a questionnaire, and a first-class, pre-stamped, self-addressed return envelope was mailed to the participants. The cover letter stated the purpose and need of the study and was printed on Department of Agricultural Economics letterhead.

The paper questionnaire was a multiple page, book-fold instrument measuring 8.5 in. x 7 inches. The instrument consisted of four sheets of paper copied on front and back for a total of 16 booklet pages.

Each return envelope was coded using a number to assist the researcher with nonrespondent follow-up procedures. When a completed instrument was returned, the respondent's name was permanently deleted from the mailing database and they were not contacted again. The coding allowed all of the respondents to remain anonymous to everyone but the researcher.

Respondents' names and personal information was kept in a separate database and was never associated with their responses. Reminder postcards were mailed on May 26, 2008 (Appendix D) to all non-respondents. The postcard thanked those that had responded but whose response had not been received as of May 26, and asked those that had not responded to please do so at their earliest convenience.

A second survey packet was mailed on June 4, 2008. The replacement packet contained all of the same items as the first survey packet with the exception of a new cover letter (Appendix E). This material reminded the participant that they had not yet completed and mailed the questionnaire and that the researcher would greatly appreciate their input.

A second, and final, reminder postcard was mailed June 13, 2008 (Appendix F).

### **Data Analysis**

Participant responses were coded and entered into a Microsoft Excel spreadsheet and analyzed using the Statistical Package for Social Sciences (SPSS) version 15.0 for Windows. The data generated were both descriptive and comparative.

Alpha for statistical significance was set a priori at the .05 level of probability, the conventional level for social science research (Gall, Gall & Borg, 2007; Tuckman, 1999).

Frequency and percentage were used to describe categorical data. In a frequency distribution, the most frequently occurring data is easily determined, and the frequency of participants or events in each category as a percentage of the total is readily determined (Gall, Gall, & Borg, 2007).

The mean was used as the measure of central tendency. The standard deviation was used as a measure of dispersion. Taken together, these measures generally provide a good description of how members of a sample scored on a particular measure (Gall, Gall & Borg, 2007).

Regression analysis was used to examine the influence of demographic characteristics on study variables. Regression analysis is a mathematical procedure used to predict outcomes within a certain range of probability which is used to identify the independent variables that have the most effect on dependent variables (Field, 2005).

Stepwise multiple regression analysis was used to examine the influence of the thirteen demographic characteristics listed in Table 5 on the study variables.



Table 5

*Thirteen Demographic Variables Referenced in the Text*

Demographic Variable	Reference
Store's sales volume relative to competitors' sales volume	volume of business
Perception of store's prices relative to competitors' prices	prices
Number of competitors	number of competitors
Type of business	type of business
Number of stores operated by the business	number of stores
Number of years that the business has been in operation	years in business
Annual gross sales	annual gross sales
Educational level of the respondent	education
Age of the respondent	age
Number of workers employed by the business	number of employees
Owner of the business or a hired employee of the business	ownership responsibility
Respondents' perception of growth trends in the business	market growth

Pearson Product-Moment Correlation coefficients (Pearson's  $r$ ) were calculated to describe the strength of the relationship (Gall, Gall & Borg, 2007) between all study variables and the thirteen demographic characteristics of volume of business, prices, number of competitors, type of business, number of stores, years in business, annual gross sales, education, gender, age, number of employees, ownership responsibility, and market growth.

Pearson product-moment correlation coefficients may range in size from -1.00 through +1.00. A coefficient of 0.00 indicates no relationship exists between two variables while a coefficient of -1.00 or +1.00 indicates perfect relationship. Davis (1971, p. 49) developed a convention for describing relationships (Table 6).

Table 6

*Davis' Convention for Interpreting Measure of Association*

Coefficient Description	Association Description
.70 or higher	Very Strong Positive Association
.50 to .69	Substantial Positive Association
.30 to .49	Moderate Positive Association
.10 to .29	Low Positive Association
.01 to .09	Negligible Positive Association
00	No Association
-.01 to -.09	Negligible Negative Association
-.10 to -.29	Low Negative Association
-.30 to -.49	Moderate Negative Association
-.50 to -.69	Substantial Negative Association
-.70 or lower	Very Strong Negative Association

Summated scales were calculated to measure the constructs of employee competitiveness (EC), training progressiveness (TPROG), training perceptions (TPERCEP), training needs (TNEEDS), training barriers (TBARRIERS), factors of competitiveness (FOFC), competitive trends (CTRENDS), and overall competitiveness (COMPET). Cronbach's alpha coefficients were calculated to measure the internal consistency of the summated scales (Table 7). All reliability coefficients were found to be above the acceptable range of .50 to .60 for research purposes (Ary, Jacobs & Razavieh, 1996), all were above the acceptable range of .75 for observational reliabilities (Tuckman, 1999), and all but one, the coefficient for training progressiveness, were calculated to be within the acceptable range of .80 or higher for internal consistency as proposed by Gall, Gall, and Borg (2007).

A one-way analysis of variance (ANOVA) is a procedure for comparing sample means to see if there is sufficient evidence to infer that the means of the corresponding population distributions also differ (George & Mallery, 2008). Respondents were grouped by timing of responses (i.e., early and late), method of response (i.e., returned by mail and completed electronically), years in business, number of retail stores owned by the business, and geographic region (i.e., region1, region 2, region 3).

Table 7

*Tests of Instrument Reliability*

Constructs	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>Cronbach's alpha</i>
Employee Competitiveness (EC)	122	15.72	2.190	.81
Training Progressiveness (TPROG)	122	11.25	2.879	.77
Training Perceptions (TPERCEP)	122	33.69	9.384	.95
Training Needs (TNEEDS)	117	30.85	6.506	.90
Training Barriers (TBARRIERS)	116	22.97	6.429	.85
Factors of Competitiveness (FOFC)	124	25.89	5.350	.91
Competitive Trends (CTRENDS)	123	18.68	5.250	.83
Overall Competitiveness (COMPET)	124	18.59	3.709	.87

ANOVA procedures were then conducted to search for significant differences between the groups in regards to the variables of annual gross sales, number of competitors, number of employees, number of years in business, and the summated scales of employee competitiveness, training progressiveness, training perceptions, training needs, training barriers, factors of competitiveness, competitive trends, and overall competitiveness.

### **Analysis of Data - Objective One**

To describe the environment in which feed and farm supply stores operate, descriptive statistics such as frequency and probability were used to embody the demographic characteristics of the respondents and their businesses. In addition, frequency and probability were used to describe challenges faced by store managers, product categories and growth, number of primary competitors, volume of business relative to the competition, prices relative to the competition, and number of employees.

Mean and standard deviation were used to describe respondents' perceptions of their employees' characteristics that contribute to competitive advantage. Six attitudinal questions were developed and combined with a three point Likert-type scale (worse, about the same, better) to allow the respondents to compare the level of performance of their employees to their competitors' employees for each of the six characteristics.

To interpret the results, means of 2.5 or greater were considered to indicate that the respondent's employees perform at a level above competitors' employees for that characteristic. Means ranging from 1.5 to 2.49 were interpreted to indicate employee performance equivalent to or about the same as competitors' employees for the characteristic. Means of less than 1.5 were interpreted to indicate that the respondent's employees perform at a level below that of competitors' employees for the characteristic.

To identify training resources and providers of training in feed and farm supply stores, participants were asked to respond never, occasionally, or frequently to each of six common sources of training for businesses of this type.

To interpret the results, means of 2.5 or greater were considered to indicate that the respondents frequently use that resource as a means of training their employees. Means ranging from 1.5 to 2.49 were interpreted to indicate occasional use of that resource, and means of less than 1.5 were interpreted to indicate that the respondent's never use that resource for employee training.

In addition, six attitudinal questions were developed to evaluate business managers' perception of their store's competitiveness within their market; four attitudinal questions were asked to quantify customer characteristics; seven attitudinal questions were asked to evaluate the competitiveness of their market environment; seven attitudinal questions were developed to gain an understanding of the respondent's perception of the employees in their business; five questions were asked to gain an understanding of how the training function is managed in these business; ten were asked in order to identify the respondents' perception of employee training needed within their businesses; and eight questions were asked to evaluate the respondents' perception of factors that contribute to a store's competitive advantage in their market.

These questions were combined with a four point Likert-type scale (strongly disagree, disagree, agree, strongly agree) to determine the respondent's level of agreement with the statement. Each question also had an option of no opinion in order to reduce random variance in the data (Krosnich, et al., 2002). No opinion responses were treated as missing data in analysis of the data.

To interpret the results of these individual statements, means of 3.25 or greater were considered to indicate a strong agreement by the respondents. Means ranging from

2.5 to 3.24 were interpreted as agreement with the statement. Means of 1.75 to 2.49 were interpreted as disagreement with the statement, and means of less than 1.75 were interpreted as strong disagreement with the statement.

Stepwise multiple regression analysis was used to search for significant relationships between the constructs of (1) feed and farm supply managers' perception of their store's overall competitiveness (COMPET); (2) competitive trends (CTRENDS); (3) factors that influence the respondent's perceptions of workers employed in the business (EPERCEP); (4) training progressiveness (TPROG); (5) perception of employee competitiveness (EC); (6) training needs (TNEEDS); (7) factors of competitive advantage (FOFC); and the thirteen demographic characteristics of volume of business, prices, number of competitors, type of business, number of stores, years in business, annual gross sales, education, gender, age, number of employees, ownership responsibility, and market growth.

Bivariate correlation analysis was used to examine the strength of the relationships between the individual variables that contribute to the construct of COMPET, CTRENDS, EPERCEP, EC, TPROG, TNEEDS, FOFC and the thirteen demographic characteristics of volume of business, prices, number of competitors, type of business, number of stores, years in business, annual gross sales, education, gender, age, number of employees, ownership responsibility, and market growth.

### **Analysis of Data - Objective Two**

Eleven attitudinal statements were developed to describe feed and farm supply store managers' perception of employee training's contribution to their firm's competitive advantage.

These questions were combined with a four point Likert-type scale (strongly disagree, disagree, agree, strongly agree) to determine the respondent's level of agreement with the statement. Each question also had an option of no opinion in order to reduce random variance in the data (Krosnich, et al., 2002). No opinion responses were treated as missing data in analysis of the data.

To interpret the results of these individual statements, means of 3.25 or greater were considered to indicate a strong agreement by the respondents. Means ranging from 2.5 to 3.24 were interpreted as agreement with the statement. Means of 1.75 to 2.49 were interpreted as disagreement with the statement, and means of less than 1.75 were interpreted as strong disagreement with the statement.

Stepwise multiple regression analysis was used to search for significant relationships between the construct of training perceptions (TPERCEP) and the thirteen demographic characteristics of volume of business, prices, number of competitors, type of business, number of stores, years in business, annual gross sales, education, gender, age, number of employees, ownership responsibility, and market growth.

Bivariate correlation analysis was used to examine the strength of the relationships between the individual variables that contribute to the construct of TPERCEP and the thirteen demographic characteristics of volume of business, prices,



number of competitors, type of business, number of stores, years in business, annual gross sales, education, gender, age, number of employees, ownership responsibility, and market growth.

### **Analysis of Data - Objective Three**

The third objective of the study was to identify barriers to employee training in feed and farm supply stores. To accomplish this objective, ten attitudinal statements were developed and combined with a four point Likert-type scale (strongly disagree, disagree, agree, strongly agree) to determine the respondent's level of agreement with the statement. Each question also had an option of no opinion in order to reduce random variance in the data (Krosnich, et al., 2002). No opinion responses were treated as missing data in analysis of the data.

To interpret the results of these individual statements, means of 3.25 or greater were considered to indicate a strong agreement by the respondents. Means ranging from 2.5 to 3.24 were interpreted as agreement with the statement. Means of 1.75 to 2.49 were interpreted as disagreement with the statement, and means of less than 1.75 were interpreted as strong disagreement with the statement.

Bivariate correlations were calculated to identify correlations between barriers to training in a business and the thirteen demographic characteristics of volume of business, prices, number of competitors, type of business, number of stores, years in business, annual gross sales, education, gender, age, number of employees, ownership responsibility, and market growth.

#### **Analysis of Data - Objective Four**

Descriptive statistics of frequency and probability were used to analyze and describe Internet availability and potential use for employee training in feed and farm supply stores.

#### **Analysis of Data - Objective Five**

Descriptive statistics of frequency and probability were used to analyze and describe the willingness of feed and farm supply store managers to engage their employees in training delivered via the Internet.

This chapter addressed the purpose of the study, the research objectives, the research design, population and sample, instrumentation, data collection, and data analysis procedures of the study. More detail regarding the analyses can be found in Chapter IV.

## CHAPTER IV

### RESEARCH FINDINGS AND DISCUSSION

The purpose of this study is to assess the perception held by managers of feed and farm supply stores in Texas regarding the contribution of employee training to the competitiveness of the firm, determine if managers of feed and farm supply stores perceive that employee training can improve their competitive strength, and to determine if they will invest in employee training in order to gain a competitive advantage. The objectives of this study were:

1. Describe the operating environment of feed and farm supply stores in Texas.
2. Describe managers of feed and farm supply stores in terms of their perception of employee training's contribution to their firm's competitive advantage.
3. Identify barriers to employee training in feed and farm supply stores.
4. Determine Internet availability and potential use for employee training in feed and farm supply stores.
5. Describe the willingness of feed and farm supply store managers to engage in employee training delivered via the Internet.

#### Demographic Profile of Respondents

Descriptive statistics were used to analyze the demographic data of the participants to aid in understanding the results of this research.

Twenty-four percent of the participants were female and 76% were males. Ages of the participants ranged from 23 to 83 with a mean age of 49.6 years. Age data were

categorized for reporting purposes (Table 8). Seventy-eight percent of the respondents were between the ages of 35 and 64 years old.

Table 8

*Participant Ages (n=123)*

Characteristic	<i>f</i>	%
Under 25 years of age	3	2.4
25 years to 34 years	11	8.9
35 years to 44 years	21	17.1
45 years to 54 years	45	36.6
55 years to 64 years	28	22.8
65 years of age and older	15	12.2

*Note.* Mean = 49.6 Median = 49.0 SD = 12.6

The educational level of the respondents ranged from respondents that had not completed high school to respondents with a doctoral degree (Table 9). The largest reported group (45.5%) had received a bachelor's degree, and 82.9% had completed some form of post-secondary education.

Table 9

*Education Level of Participants (n=123)*

Characteristic	<i>f</i>	%
Bachelors Degree	56	45.5
Some College Courses	27	22.0
High School Diploma or GED	20	16.3
Associates Degree	9	7.3
Masters Degree	8	6.5
Doctorate	2	1.6
No High School Diploma	1	.8

Among the participants, 60.2% were owners of the business, 39 % were managers within the business, and one (0.8%) was a sales person within the business (Table 10).

Table 10

*Participants Position of Responsibility Within the Business (n=123)*

Characteristic	<i>f</i>	%
Owner	74	60.2
General Manager	31	25.2
Operations Manager	11	8.9
Department Manager	4	3.3
Sales Manager	2	1.6
Sales Person	1	0.8

### **Profile of Responding Businesses**

Fifty-seven percent of the responding businesses were legally structured as a corporation, 25.2% were sole proprietorships, and 8.9% cooperatives. The legal structure of the remainder of the responding businesses was a partnership (Table 11).

The responding businesses had been in operation a mean of 36 years with a range of 1 to 122 years. Data regarding years in operation were grouped into categories for reporting purposes (Table 12).

Table 11

*Legal Structure of Participating Businesses (n=123)*

Legal Structure	<i>f</i>	%
Corporation	70	56.9
Sole Proprietorship	31	25.2
Cooperative	11	8.9
Partnership	11	8.9

Table 12

*Years in Operation (n=118)*

Years in Business	<i>f</i>	%
Less than 10	14	11.9
10 to 19	19	16.1
20 to 29	22	18.6
30 to 39	16	13.6
40 to 49	12	10.2
50 to 59	13	11.0
60 to 69	11	9.3
70 to 79	8	6.8
80 or more	3	2.4

*Note.* Mean = 36.0 Median = 30.0 SD = 24.3

One-way ANOVA procedures were conducted to search for significant differences between respondents based on the number of years that the business has been in operation. The analysis failed to identify significant differences between respondents based on number of years in business.

Fifty-one percent of the respondents categorized their business as a feed store, 34% as a farm and ranch supply store, 6% as a general store, and the remainder as some other type of store such as a hardware store, western wear store, tack shop, and lawn and garden center (Table 13).

Table 13

*Description of Respondents' Businesses*

	<i>f</i>	<i>%</i>
Feed Store	63	50.8
Farm and Ranch Supply Store	42	33.9
General Store	7	5.6
Lawn and Garden Center	3	2.4
Ranch Supply Store	3	2.4
Farm Supply Store	2	1.6
Tack Shop	2	1.6
Hardware Store	1	0.8
Western Wear Store	1	0.8



Seventy-eight percent of the responding businesses were businesses with a single retail location. The remaining 22% of the respondents were a part of multi-store operations (Table 14). One-way ANOVA procedures were conducted to search for significant differences between respondents based on the number of stores owned by the business. The analysis failed to identify significant differences between respondents based on number of stores.

Table 14

*Number of Stores in the Operation (n=122)*

Number of Stores	<i>f</i>	%
1	95	77.9
2	11	9.0
3	4	3.3
4	5	4.1
5	2	1.6
6	5	4.1

*Note.* Mean = 1.6 Median = 1.0 SD = 1.3

Participating stores reported mean gross sales of \$4,241,795 with a range of \$200,000 to \$55,000,000. Sixty-six percent of the participants reported annual gross sales of less than \$3,000,000. Twenty-seven percent of the participants declined to report

annual gross sales. Gross sales data were grouped into categories for reporting purposes (Table 15).

Table 15

*Annual Gross Sales (n=88)*

Gross Sales	<i>f</i>	%
\$999,999 or less	14	15.4
\$1,000,000 to \$1,999,999	27	29.7
\$2,000,000 to \$2,999,999	19	20.9
\$3,000,000 to \$3,999,999	5	5.5
\$4,000,000 to \$4,999,999	6	6.6
\$5,000,000 to \$5,999,999	3	3.3
\$6,000,000 to \$6,999,999	2	2.2
\$7,000,000 to \$7,999,999	1	1.1
\$8,000,000 to \$8,999,999	1	1.1
\$9,000,000 to \$9,999,999	2	2.2
\$10,000,000 to 14,999,999	7	7.7
\$15,000,000 or More	4	4.4

*Note.* Mean = \$4,241,795 Median = \$2,000,000 SD = \$6,943,037

Using their own definition of success, 85% of the participants reported their business to be financially successful.

The participants were grouped by geographic region (Figure 1). While there are many similarities between the regions, differences exist in the types of agricultural enterprises, quality of agricultural resources, intensity of agricultural production, population density, and density of feed and farm supply stores.



*Figure 1. Geographical Regions.*

Geographically, 56.7% of the respondents were from east and south central Texas in an area east of Interstate Highway 35 and north of Interstate Highway 10. Twenty-four percent of the respondents were from the area west of Interstate Highway

35 in Texas. The remaining respondents were from south Texas and the Rio Grande Valley in an area south of Interstate Highway 10 and east of Interstate Highway 35.

As shown in Table 16, the rate of response by geographical region was consistent with the geographical distribution of the study sample and with the geographical distribution of the study population.

Table 16

*Geographic Regions*

	Respondents ( $n=125$ )		Sample ( $n=305$ )		Population ( $n=1486$ )	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Region 1	30	24.0	57	18.7	441	29.7
Region 2	72	57.6	191	62.6	68	52.0
Region 3	23	18.4	57	18.7	22	18.4

One-way ANOVA procedures were conducted to search for significant differences between respondents based on geographic region. The analysis failed to identify significant differences between respondents from the three geographic regions. As such, data collected from respondents in the three geographic regions were analyzed as a single group.

### Findings for Objective One

Research objective one was to describe the operating environment of feed and farm supply stores in Texas. When asked about challenges in their business, 36% responded that taking time off from the business is their biggest challenge. As shown in Table 17, this was followed closely by training their employees (31.5%) and keeping customers happy (23.4%).

Table 17

#### *Challenges Faced by Feed and Farm Supply Store Managers*

Challenge	<i>f</i>	%
Taking time off from the business	45	36.3
Training employees	39	31.5
Keeping customers happy	29	23.4
Understanding IRS forms and regulations	7	5.6
Complying with environmental laws	4	3.2

To evaluate business managers' perception of their store's competitiveness within their market, six attitudinal questions were developed and combined with a four point Likert-type scale (strongly disagree, disagree, agree, strongly agree) to determine the respondent's level of agreement with the statement.

To interpret the results of these individual statements, means of 3.25 or greater were considered to indicate a strong agreement by the respondents. Means ranging from 2.5 to 3.24 were interpreted as agreement with the statement. Means of 1.75 to 2.49 were interpreted as disagreement with the statement, and means of less than 1.75 were interpreted as strong disagreement with the statement.

The respondents tended to strongly agree with the statement that their store is well established in the market ( $M = 3.5$ ,  $SD = .56$ ).

They were in agreement with the remaining statements regarding the competitiveness of their business. Means for the responses to these five questions ranged from 3.0 to 3.2 and standard deviations ranged from .54 to .78 (Table 18).

Table 18

*Competitive Nature of Their Business*

Indicators of Competitiveness	<i>f</i>	<i>M</i>	<i>SD</i>
This store is well established	124	3.5	.56
We compete well against other stores in the market	124	3.2	.60
We are experiencing new customer growth	123	3.1	.68
We are financially successful	124	3.1	.64
We can survive changing market conditions	123	3.1	.54
We are competitive with mass merchandisers	123	3.0	.78

*Note.* 1 = Strongly Disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree

To identify demographic factors that significantly influence a manager's perceptions of their store's competitiveness in the marketplace, stepwise multiple regression analysis was used to search for significant relationships between the scale of feed and farm supply managers' perception of their store's overall competitiveness (COMPET) and thirteen demographic characteristics of volume of business, prices, number of competitors, type of business, number of stores, years in business, annual gross sales, education, gender, age, number of employees, ownership responsibility, and market growth.

Table 19

*Relationships Between Manager's Perception of Competitiveness and Demographic Variables*

Independent Variables	<i>B</i>	<i>SE<sub>b</sub></i>	<i>Beta</i>	<i>t</i>	<i>p</i>
Volume of Business	2.029	.651	.337	3.117	.003

*Note.*  $R^2 = .113$ ,  $F = 9.72$ ,  $p = .003$

As shown in Table 19, the only demographic characteristic found to significantly influence a managers' perception of their store's competitiveness was their store's volume of business relative to competitors in their market ( $R^2 = .113$ ,  $F= 9.72$ ,  $p = .003$ ). The result was interpreted to infer that as a store's sales volume increases, the store manager's confidence in their store's competitiveness increases.

Bivariate correlation analysis was used to examine the strength of the relationships between the individual variables that contribute to the construct of COMPET and the thirteen demographic characteristics of volume of business, prices, number of competitors, type of business, number of stores, years in business, annual gross sales, education, gender, age, number of employees, ownership responsibility, and market growth.

The results revealed relationships with strengths ranging from moderate positive associations to low negative associations (Table 20).



Table 20

*Strength of Relationships Between Variables Affecting Perceptions of Competitiveness and Demographic Characteristics*

Characteristic	Competitive With Mass Merchandisers <i>r</i>	Can Survive Changing Market Conditions <i>r</i>	Compete Well Against Other Stores in the Market <i>r</i>	Experiencing New Customer Growth <i>r</i>	Financially Successful <i>r</i>	Well Established in the Market <i>r</i>
Volume of Business	0.38*	0.17	0.32*	0.31	0.29*	0.28*
Prices	-0.17	-0.23	-0.12	-0.17	-0.16	-0.12
Number of Competitors	0.01	0.00	-0.05	-0.16	-0.02	-0.11
Type of Business	-0.10	0.07	-0.02	0.01	0.05	0.02
Years in Business	-0.10	0.04	0.10	0.12	0.13	0.17
Annual Gross Sales	0.10	0.15	0.13	0.18	0.16	0.09
Level of education	0.06	-0.05	0.17	-0.04	0.12	0.09
Gender	-0.13	0.09	0.12	0.05	0.17	0.13
Age	-0.20*	-0.11	-0.18*	-0.16	-0.12	-0.24*
Number of Employees	0.17	0.14	0.12	0.11	0.17	0.12
Ownership	0.04	0.18	0.02	0.11	0.14	0.09
Market Growth	0.09	0.16	0.09	0.05	0.10	0.14
Number of Stores	-0.03	0.00	-0.02	-0.01	0.06	-0.04

Note. \*  $p < 0.05$

The five most frequently reported core product categories were feed, animal health supplies, livestock supplies, fertilizer, and lawn and garden products (Table 21).

Table 21

*Core Product Categories*

	<i>f</i>	<i>%</i>
Feed	121	96.8
Animal Health	112	89.6
Livestock Supply	98	78.4
Fertilizer	98	78.4
Lawn and Garden	97	77.6
Ag Chemicals	75	62.5
Saddles and Tack	58	46.4
Fencing	57	45.8
Hardware	51	40.8
Gifts	50	40.0
Clothing and Apparel	21	16.8
Equipment (Tractors, Trailers, etc.)	9	7.2
Home Furnishings	7	5.6
Tractor and Automotive Parts	6	4.8

As indicated in Table 22, feed was reported most frequently as the most important product category (86.3%), followed by lawn and garden (4.0%), fertilizer (3.2%), and animal health supplies (1.6%).

Table 22

*Most Important Product Category*

	<i>f</i>	<i>%</i>
Feed	107	86.3
Lawn and Garden	5	4.0
Fertilizer	4	3.2
Animal Health	2	1.6
Saddles and Tack	2	1.6
Ag Chemicals	1	0.8
Livestock Supply	1	0.8

Feed was the most frequently identified product category of growth with 68% percent of the respondents indicating an increase in sales of feed over the past ten years. Fifty-three percent identified a growth in sales of animal health supplies, 49% identified a growth in lawn and garden products, 35% reported growth in the sale of livestock supplies, and 29% reported a growth in the sale of gift items in their store (Table 23).

Eighty-five percent of the respondents report population growth in their market over the past ten years.

Table 23

*Product Category Growth*

	<i>f</i>	<i>%</i>
Feed	83	68.0
Animal Health	64	53.3
Lawn and Garden	56	48.7
Livestock Supply	40	35.1
Gifts	36	28.8
Fertilizer	36	28.8
Ag Chemicals	30	25.4
Fencing	28	25.0
Saddles and Tack	23	21.7
Hardware	18	16.2
Clothing and Apparel	14	13.1
Equipment (Tractors, Trailers, etc.)	7	6.5
Home Furnishings	5	4.8
Tractor and Automotive Parts	4	3.8

To quantify customer characteristics, four attitudinal questions were developed and combined with a four point Likert-type scale (strongly disagree, disagree, agree, strongly agree) to determine the respondent's level of agreement with the statement.

To interpret the results of these individual statements, means of 3.25 or greater were considered to indicate a strong agreement by the respondents. Means ranging from 2.5 to 3.24 were interpreted as agreement with the statement. Means of 1.75 to 2.49 were interpreted as disagreement with the statement, and means of less than 1.75 were interpreted as strong disagreement with the statement.

Respondents generally were in strong agreement that customers rely on their store for solutions to their (the customer's) problems ( $M = 3.3$ ,  $SD = .52$ ).

The respondents tended to agree with the remaining statements regarding customer characteristics. Means ranged from 2.6 to 3.2 and standard deviations ranged from .56 to .64 (Table 24).

Table 24

*Customer Characteristics*

	<i>n</i>	<i>M</i>	<i>SD</i>
Customers rely on this store for solutions to their problems	122	3.3	.52
Customers are loyal to this store	121	3.2	.56
Customers generally know what	122	2.8	.64
Customers generally know what they need	124	2.6	.63

*Note.* 1 = Strongly Disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree

The respondents indicate that they operate in a competitive environment with a mean of four competitors, and a range of one competitor to 15 competitors. One respondent (0.8%) reported no competitors in their market (Table 25).

Table 25

*Number of Primary Competitors (n=123)*

Number of Competitors	<i>f</i>	%
0	1	0.8
1	15	12.2
2	14	11.4
3	33	26.8
4	15	12.2
5	16	13.0
6	17	13.8
7 or more	12	9.8

*Note.* Mean = 4.0 Median = 3.0 SD = 2.4

Ninety-seven percent of the participants reported their sales volume to be about the same as, or higher than, competitive businesses in their market (Table 26).

Table 26

*Volume of Business Relative to Competitors (n=117)*

	<i>f</i>	<i>%</i>
Higher than my competitors	63	53.8
About the same as my competitors	50	42.7
Less than my competitors	5	3.4

To evaluate trends in the competitiveness of their environment, seven competitor attitudinal questions were developed and combined with a four point Likert-type scale (strongly disagree, disagree, agree, strongly agree) to determine the respondent's level of agreement with the statement.

To interpret the results of these individual statements, means of 3.25 or greater were considered to indicate a strong agreement by the respondents. Means ranging from 2.5 to 3.24 were interpreted as agreement with the statement. Means of 1.75 to 2.49 were interpreted as disagreement with the statement, and means of less than 1.75 were interpreted as strong disagreement with the statement.

The respondents were in agreement with all seven statements regarding competitiveness trends in their markets with means ranging from 2.81 to 3.03, and the standard deviations ranged from .68 to .85 (Table 27).

The researcher interpreted this to infer that the environment in which these stores operate is becoming increasingly more competitive.

These trends reveal an environment of a large number of direct competitors, many of which are maintaining non-traditional hours of operation, opening on Saturday afternoon and Sunday when traditional businesses of this nature are closed, selling products at a competitive price, and offering an expanded product selection. It is important to note that the respondents indicate that their competitors are utilizing non-price strategies centered on customer convenience more than they are using price as a strategy to compete.

Table 27

*Competitive Trends in the Respondents' Markets*

	<i>n</i>	<i>M</i>	<i>SD</i>
A mass merchandiser has opened a store in my market	120	3.03	.79
Competitors have lowered their margins/markup/prices	106	2.99	.68
One or more aggressive competitors have opened	117	2.88	.76
Competitors are open late hours on Saturday	116	2.84	.78
Competitors have expanded their merchandise selection	109	2.83	.69
Competitors are open late hours on weekdays	114	2.82	.79
Competitors are now open on Sunday	114	2.81	.85

*Note.* 1 = Strongly Disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree



To identify demographic characteristics that significantly predict the respondent's perceptions of trends of competitiveness in their market, stepwise multiple regression analysis was used to search for significant relationships between the construct of competitive trends (CTRENDS) and the thirteen demographic characteristics of volume of business, prices, number of competitors, type of business, number of stores, years in business, annual gross sales, education, gender, age, number of employees, ownership responsibility, and market growth.

As demonstrated in Table 28, the number of competitors in a respondent's trade area ( $R^2 = .096$ ,  $F= 8.102$ ,  $p = .006$ ) was found to be the only statistically significant demographic characteristic predictor of a managers' perception of competitiveness in their market.

The researcher interpreted this result to infer that as the number of stores in the respondent's trade area increases, the respondent's perception of a competitive market environment increases.

Table 28

*Relationships Between Manager's Perception of Trends in Competitiveness and Demographic Variables*

Independent Variables	<i>B</i>	<i>SE<sub>b</sub></i>	<i>Beta</i>	<i>t</i>	<i>p</i>
Number of Competitors	.639	.224	.310	2.846	.006

*Note.*  $R^2 = .096$ ,  $F= 8.102$ ,  $p = .006$

Bivariate correlation analysis was used to examine the strength of the relationships between the individual variables that contribute to the construct of CTRENDS and the thirteen demographic characteristics of volume of business, prices, number of competitors, type of business, number of stores, years in business, annual gross sales, education, gender, age, number of employees, ownership responsibility, and market growth.

The results revealed relationships with strengths ranging from low positive associations to low negative associations (Table 29).

The results of the correlation analysis between the variables of CTRENDS and the thirteen respondent demographics support the findings of the regression analysis used to search for relationships between CTRENDS and the demographic variables of the respondents.

Table 29

*Strength of Relationships Between Trends in Competitiveness of the Market and Demographic Characteristics*

Characteristic	Competitors Have Lowered Their Prices	Aggressive Competitors Have Opened in This Market	A Mass Merchant Has Opened in This Market	Competitors Have Expanded Their Selection of Merchandise	Competitors Are Now Open Late Hours on Weekdays	Competitors Are Now Open Late Hours on Saturday	Competitors Are Now Open on Sunday
	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>
Volume of Business	0.05	-0.10	-0.14	-0.19*	-0.01	0.01	0.07
Prices	0.29*	0.12	0.02	0.08	0.00	-0.04	-0.08
Number of Competitors	0.15	0.24*	0.24*	0.18*	0.03	0.06	0.09
Type of Business	0.08	-0.01	-0.15	-0.06	-0.15	-0.19*	-0.13
Years in Business	-0.02	-0.22*	-0.16	-0.05	0.08	0.11	0.08
Annual Gross Sales	0.19	0.08	0.11	0.14	0.12	0.09	0.10
Education	0.05	0.10	0.02	0.05	0.04	0.09	-0.02
Gender	0.03	-0.08	-0.11	-0.04	-0.10	-0.04	-0.23*
Age	-0.15	-0.10	-0.12	-0.13	-0.10	-0.19*	0.02
Number of Employees	0.14	0.00	0.08	0.00	0.04	0.05	0.06
Ownership	0.07	-0.05	0.00	-0.05	0.02	0.04	0.02
Market Growth	0.07	-0.05	-0.15	0.13	0.04	-0.05	0.08
Number of Stores	0.09	0.00	-0.09	-0.14	-0.17	-0.11	-0.15

Note. \*  $p < 0.05$

When asked to compare their overall prices to the prices of their competitors, 80% of the respondents characterized their prices as being about the same or lower than their competitor's prices (Table 30). This looks as if the respondents are generally using price to compete with the non-price strategies of longer hours, open on weekends, and expanded products selection used by their competitors.

Table 30

*Prices Relative to the Competition (n=124)*

	<i>f</i>	<i>%</i>
About the same as my competitors	79	63.7
Higher than my competitors	25	20.2
Less than my competitors	20	16.1

The responding businesses employ from one to 125 employees with a mean of thirteen employees and a median of seven employees. Sixty-nine percent of these agribusinesses employ 10 or fewer employees.

As shown in Table 31, data relating to number of employees were grouped into categories for reporting purposes.

Table 31

*Number of Employees (n=119)*

Number of Employees	<i>f</i>	%
1 to 5	36	30.3
6 to 10	45	37.8
11 to 15	15	12.6
16 to 25	12	10.1
More than 25	11	9.2

*Note.* Mean = 13.2 Median = 7.0 SD = 18.3

To gain an understanding of the respondent's perception of the employees in their business, seven attitudinal questions were developed and combined with a four point Likert-type scale (strongly disagree, disagree, agree, strongly agree) to determine the respondent's level of agreement with the statement.

To interpret the results of these individual statements, means of 3.25 or greater were considered to indicate a strong agreement by the respondents. Means ranging from 2.5 to 3.24 were interpreted as agreement with the statement. Means of 1.75 to 2.49 were interpreted as disagreement with the statement, and means of less than 1.75 were interpreted as strong disagreement with the statement.

As demonstrated in Table 32, the respondents perceive that the technical and specialized skills needed by their employees is increasing ( $M = 3.24$ ,  $SD = .70$ ), their employees need training for the business to remain competitive in their market ( $M =$

3.12,  $SD = .69$ ), that each of their employees perform a variety of distinctly different tasks ( $M = 3.08$ ,  $SD = .70$ ), their employees have the skills needed to handle the challenges of today ( $M = 2.82$ ,  $SD = .62$ ), and their employees have the skills needed to handle the challenges of tomorrow ( $M = 2.58$ ,  $SD = .65$ ).

The respondents disagreed that their business has a high percentage of older employees ( $M = 2.23$ ,  $SD = .90$ ), and that their time is spent correcting employee mistakes ( $M = 2.09$ ,  $SD = .69$ ).

Table 32

*Managers' Perceptions of Their Employees*

	<i>n</i>	<i>M</i>	<i>SD.</i>
Technical and specialized skills needed by employees is increasing	119	3.24	.70
Employees need training to help us stay competitive	121	3.12	.69
Employees perform a variety of distinctly different tasks	120	3.08	.70
Our employees have the skills to handle the challenges of today	119	2.82	.62
Our employees have the skills to handle the challenges of tomorrow	111	2.58	.65
This business has a high percentage of older employees	121	2.23	.90
My time is spent correcting employee mistakes	118	2.09	.69

*Note.* 1 = Strongly Disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree

To identify demographic factors that influence the respondent's perceptions of workers employed in the business, stepwise multiple regression analysis was conducted

using the construct of perception of employee skills (EPERCEP) as the dependent variable in order to identify significant relationships between EPERCEP and the thirteen demographic characteristics of volume of business, prices, number of competitors, type of business, number of stores, years in business, annual gross sales, education, gender, age, number of employees, ownership responsibility, and market growth.

As shown in Table 33, a store's annual gross sales ( $R^2 = .148$ ,  $F = 13.408$ ,  $p = .000$ ), the number of competitors in a store's trade area ( $R^2 = .262$ ,  $F = 11.767$ ), and the store's prices relative to their competitors' prices ( $R^2 = .300$ ,  $F = 4.031$ ,  $p = .048$ ) were found to significantly influence a respondent's perception of the workers employed by the business.

The relationship between gross sales and the respondent's perceptions of workers employed by the business was interpreted to infer that as the gross sales of a business increase, the manager's confidence in the skills and abilities of the employees of the business increases.

The relationship between the number of competitors in a store's trade area and the respondent's perceptions of workers employed by the business was interpreted to infer that as the competitiveness resulting from a growing number of competitors increases, the respondent's confidence in the skills and abilities of the store's employees decreases.

Table 33

*Relationships Between the Respondent's Perception of Workers Employed by Their Business and Demographic Characteristics*

Independent Variables	<i>B</i>	<i>SE<sub>b</sub></i>	<i>Beta</i>	<i>t</i>	<i>p</i>
Step 1					
Annual Gross Sales	1.08E-007	.000	.39	3.66	.000
Step 2					
Annual Gross Sales	1.55E-007	.000	.55	5.03	.000
Number of Competitors	-.310	.090	-.38	-3.43	.001
Step 3					
Annual Gross Sales	1.52E-007	.000	.54	4.988	.000
Number of Competitors	-.289	.089	-.35	-3.23	.002
Prices	-.698	.348	-.20	-2.01	.048

*Note.* Step 1  $R^2 = .148$ ,  $F = 13.408$ ,  $p = .000$ ; Step 2  $R^2 = .262$ ,  $F = 11.767$ ,  $p = .001$ ; Step 3  $R^2 = .300$ ,  $F = 4.031$ ,  $p = .048$

The relationship between the prices charged by a store and the respondent's perception of employee skills and abilities was interpreted to indicate that as a store increases their prices in relation to the prices charged by their competitors, the store manager's confidence in the skills and abilities of the employees of the store decreases.

Bivariate correlation analysis was used to examine the strength of the relationships between the individual variables that contribute to the construct of EPERCEP and the thirteen demographic characteristics of volume of business, prices,



number of competitors, type of business, number of stores, years in business, annual gross sales, education, gender, age, number of employees, ownership responsibility, and market growth. The results revealed relationships with strengths ranging from low positive associations to low negative associations (Table 34).

Respondents were asked compare their employees to the employees of competitive businesses on six characteristics and attributes that contribute to competitive advantage. Six attitudinal questions were developed and combined with a three point Likert-type scale (worse, about the same, better) to allow the respondents to compare the level of performance of their employees to their competitors' employees for each of the six characteristics.

To interpret the results, means of 2.5 or greater were considered to indicate that the respondent's employees perform at a level above competitors' employees for that characteristic. Means ranging from 1.5 to 2.49 were interpreted to indicate employee performance equivalent to or about the same as competitors' employees for the characteristic. Means of less than 1.5 were interpreted to indicate that the respondent's employees perform at a level below that of competitors' employees for the characteristic.

Table 34

*Strength of Relationships Between Respondents' Perception of Workers Employed by Their Business and Demographic Characteristics*

	Employees have the skills to handle the challenges of today	Employees have the skills needed to handle the challenges of tomorrow	Employees need training to help us stay competitive	Technical and specialized skills needed by our employees is increasing
Characteristic	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>
Volume of Business	0.23*	0.11	-0.09	0.05
Prices	-0.18	-0.27*	0.15	0.04
Number of Competitors	-0.02	-0.02	-0.04	0.00
Type of Business	-0.03	-0.03	-0.03	-0.06
Years in Business	0.17	0.20*	-0.12	-0.02
Annual Gross Sales	0.25*	0.23*	0.18	0.26*
Education	0.20*	0.03	0.12	0.13
Gender	0.13	0.06	-0.02	0.12
Age	0.02	-0.15	0.04	0.05
Number of Employees	0.09	0.03	0.23*	0.19*
Ownership	-0.12	-0.04	0.15	0.10
Market Growth	0.18	0.18*	0.08	0.19*
Number of Stores	-0.16	-0.17	0.20	0.12

Note. \*  $p < 0.05$

The respondents rated their employees better than their competitors' employees in the four characteristics of friendliness ( $M = 2.79$ ,  $SD = .41$ ), ability to solve customer problems ( $M = 2.75$ ,  $SD = .43$ ), attitudes ( $M = 2.67$ ,  $SD = .54$ ), and product knowledge ( $M = 2.61$ ,  $SD = .51$ ). The respondents rated their employees about the same as the competitors' employees on the characteristics of technical knowledge ( $M = 2.46$ ,  $SD = .56$ ) and overall level of training ( $M = 2.46$ ,  $SD = .56$ ).

Table 35 provides details of the respondents' perceptions of their employees' characteristics relative to their competitors' employees. The results indicate that the respondents have a high level of confidence in their employees' ability to provide customers with an experience that contributes to the competitive advantage of the business.

Table 35

*Employee Characteristics Relative to Competitors' Employees*

Characteristic	<i>n</i>	<i>M</i>	<i>SD</i>
Friendliness	121	2.79	.41
Ability to solve customer problems	122	2.75	.43
Attitudes	122	2.67	.54
Product knowledge	122	2.61	.51
Technical knowledge	122	2.46	.56
Level of Training	122	2.46	.56

*Note.* 1 = Worse, 2 = About the same, 3 = Better

To identify demographic factors that significantly influence the respondent's perceptions of their employees' characteristics of competitiveness relative to their competitor's employees, stepwise multiple regression analysis was used to search for significant relationships between the construct of perception of employee competitiveness (EC) and the thirteen demographic characteristics of volume of business, prices, number of competitors, type of business, number of stores, years in business, annual gross sales, education, gender, age, number of employees, ownership responsibility, and market growth.

As shown in Table 36, a store's volume of business, the education level of the respondent, and the store's prices relative to competitors' prices were found to be statistically significant influences on the respondents' perception of their employees' competitiveness characteristics.

The relationship that was found to exist between a store's volume of business and the respondent's perceptions of the competitive characteristics of the employees of the store was interpreted to infer that as a store's volume of business increases, the store manager's perception that the employees of the store are contributing to the competitiveness of the store through personal characteristics such as attitude, friendliness, and the ability to solve a customer's problems increases.

Table 36

*Relationships Between the Respondents' Perception of Their Employees' Competitiveness Characteristics and Demographic Variables*

Independent Variables	<i>B</i>	<i>SE<sub>b</sub></i>	<i>Beta</i>	<i>t</i>	<i>p</i>
Step 1					
Volume of Business	1.49	.424	.37	3.51	.001
Step 2					
Volume of Business	1.35	.420	.34	3.22	.002
Highest Level of Manager's Education	.384	.177	.226	2.16	.034
Step 3					
Volume of Business	1.24	.414	.31	2.99	.004
Highest Level of Manager's Education	.407	.174	.24	2.34	.022
Prices	-.862	.405	-.22	-2.13	.037

*Note.* Step 1  $R^2 = .138$ ,  $F = 12.332$ ,  $p = .001$ ; Step 2  $R^2 = .188$ ,  $F = 4.678$ ,  $p = .034$ ; Step 3  $R^2 = .234$ ,  $F = 4.527$ ,  $p = .037$

The relationship between the education level of the respondent and the respondent's perceptions of the competitive characteristics of the employees of the store was interpreted to infer that as a store manager's level of education increases, the store manager's perception of the employees' competitive characteristics increases. This looks as if store managers with higher levels of education are hiring employees with personal characteristics that contribute to the competitiveness of the store, or the manager is

creating a culture that promotes and develops these competitive characteristics in the employees of the business.

The relationship between the prices charged by a store and the respondent's perception of the competitive characteristics of the employees of the store was interpreted to indicate that as a store increases their prices in relation to the prices charged by their competitors, the store manager's perception of the store employees' competitive characteristics increases. This seems to imply that stores that charge higher prices are employing workers with a higher degree of competitive characteristics than those stores that rely on price as their competitive advantage. This also raises the question as to whether a causal relationship exists between the competitive characteristics of a store's employees and that store's ability to charge higher prices than their competitors.

Bivariate correlation analysis was used to examine the strength of the relationships between the individual variables that contribute to the construct of EC and the thirteen demographic characteristics of volume of business, prices, number of competitors, type of business, number of stores, years in business, annual gross sales, education, gender, age, number of employees, ownership responsibility, and market growth.

The results revealed relationships with strengths ranging from moderate positive associations to low negative associations (Table 37).

Table 37

*Strength of Relationship Between the Respondents' Perception of Their Employees' Competitive Characteristics and the Respondents' Demographic Characteristics*

Demographic Characteristic	Problem Solving Skills	Attitudes	Friendliness	Product Knowledge	Technical Knowledge	Level of Training
	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>
Volume Of Business	0.33*	0.09	0.00	0.25*	0.37*	0.32*
Prices	-0.16	-0.07	-0.07	-0.24	-0.17	-0.15
Number of Competitors	0.03	0.10	0.05	0.07	0.01	0.18
Type of Business	0.03	-0.12	-0.13	0.02	-0.13	-0.09
Years in Business	0.20*	-0.16	-0.06	0.02	0.11	-0.02
Annual Gross Sales	0.17	-0.04	-0.05	0.16	0.15	0.13
Education	0.18*	0.11	0.09	0.08	0.18*	0.17
Gender	0.02	-0.03	-0.07	-0.05	0.12	-0.13
Age	0.09	0.19*	0.19*	-0.01	0.11	0.00
Number of Employees	0.14	-0.08	-0.05	0.06	0.01	0.10
Ownership	-0.11	-0.20*	-0.05	-0.03	-0.16	-0.19*
Market Growth Trends	0.23*	0.27*	0.18	0.09	0.15	0.04
Number of Stores	-0.01	-0.03	0.00	-0.05	-0.04	-0.12

Note. \*  $p < 0.05$

To gain an understanding of how these businesses manage the training function in their business, five questions were developed and combined with a four point Likert-type scale (strongly disagree, disagree, agree, strongly agree) to determine the respondent's level of agreement with the statement.

To interpret the results of these individual statements, means of 3.25 or greater were considered to indicate a strong agreement by the respondents. Means ranging from 2.5 to 3.24 were interpreted as agreement with the statement. Means of 1.75 to 2.49 were interpreted as disagreement with the statement, and means of less than 1.75 were interpreted as strong disagreement with the statement.

As indicated in Table 38, respondents were in agreement that they have tasks within the business that require training ( $M = 3.12$ ,  $SD = .49$ ), and that the business has a history of training employees ( $M = 2.73$ ,  $SD = .74$ ).

However, the respondents expressed disagreement that their business has a dedicated training manager ( $M = 2.09$ ,  $SD = .70$ ), a written plan for training employees ( $M = 2.07$ ,  $SD = .66$ ), or a training budget ( $M = 1.93$ ,  $SD = .64$ ).



Table 38

*Employee Training in the Store*

	<i>n</i>	<i>M</i>	<i>SD</i>
We have tasks that require training	120	3.12	.49
Our business has a history of training employees	119	2.73	.74
Our business has a dedicated training manager	110	2.09	.70
Our business has a written plan for training employees	114	2.07	.66
Our business has a training budget	111	1.93	.64

*Note.* 1 = Strongly Disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree

Stepwise multiple regression analysis was conducted with the statement ‘We have tasks that require training’ as the dependent variable to discover which demographic characteristics influence the respondent’s recognition of the need for training. As indicated in Table 39, the number of workers employed by the business ( $R^2 = .169$ ,  $F = 15.614$ ,  $p = .000$ ), the number of years the store has been in business ( $R^2 = .231$ ,  $F = 6.152$ ,  $p = .015$ ), the respondent’s gender ( $R^2 = .283$ ,  $F = 5.497$ ,  $p = .022$ ), and the prices charged by the store relative to the prices of their competitors ( $R^2 = .323$ ,  $F = 4.291$ ,  $p = .042$ ) all influence the respondent’s recognition of the need for training in their business.

The researcher interpreted this to indicate that as the number of workers increase in a store, so does the store manager’s recognition of the need for employee training; the longer a store is in business, the store manager’s recognition of a need for employee

training decreases; male managers more than female managers recognize a need for employee training; and in those stores where price is the primary competitive strategy, the store managers are less likely to recognize a need for employee training.

Table 39

*Relationships Between Manager's Recognition of Training Needs and Demographic Variables*

Independent Variables	<i>B</i>	<i>SE<sub>b</sub></i>	<i>Beta</i>	<i>t</i>	<i>p</i>
Step 1					
Number of Employees	.012	.003	.411	3.95	.000
Step 2					
Number of Employees	.013	.003	.428	4.25	.000
Number of Years in Business	-.006	.002	-.250	-2.48	.015
Step 3					
Number of Employees	.013	.003	.418	4.26	.000
Number of Years in Business	-.007	.002	-.299	-2.99	.004
Gender	.341	.145	.235	2.35	.022
Step 4					
Number of Employees	.013	.003	.423	4.40	.000
Number of Years in Business	-.008	.002	-.319	-3.24	.002
Gender	.356	.142	.246	2.50	.015
Prices	-.211	.102	-.199	-2.07	.042

*Note.* Step 1  $R^2 = .169$ ,  $F = 15.614$ ,  $p = .000$ ; Step 2  $R^2 = .231$ ,  $F = 6.152$ ,  $p = .015$ ; Step 3  $R^2 = .283$ ,  $F = 5.497$ ,  $p = .022$ ; Step 4  $R^2 = .323$ ,  $F = 4.291$ ,  $p = .042$

To identify demographic characteristics that significantly influence a whether a store engages in training their employees, stepwise multiple regression analysis was conducted to search for significant relationships between the construct of training progressiveness (TPROG) and the thirteen demographic characteristics of volume of business, prices, number of competitors, type of business, number of stores, years in business, annual gross sales, education, gender, age, number of employees, ownership responsibility, and market growth.

As shown in Table 40, the level of a store's annual gross sales ( $R^2 = .302$ ,  $F= 7.74$ ,  $p = .007$ ) was found to be a statistically significant influence on the level of engagement in the training function in the store. This was interpreted to infer that stores with high annual gross sales are more likely to have a history of training their employees and are more likely to have a training budget and written training plan.

Table 40

*Relationships Between Training Progressiveness and Demographic Variables*

Independent Variables	<i>B</i>	<i>SE<sub>b</sub></i>	<i>Beta</i>	<i>t</i>	<i>p</i>
Volume of Business	1.23E-007	.000	.302	2.781	.007

*Note.*  $R^2 = .302$ ,  $F= 7.74$ ,  $p = .007$

Bivariate correlation analysis was used to examine the strength of the relationships between the individual variables that contribute to the construct of TPROG and the thirteen demographic characteristics volume of business, prices, number of competitors, type of business, number of stores, years in business, annual gross sales, education, gender, age, number of employees, ownership responsibility, and market growth.

The results revealed relationships with strengths ranging from a moderate positive association to low negative associations (Table 41).

To identify the resources and providers of training in feed and farm supply stores, participants were asked to respond never, occasionally, or frequently to each of six common sources of training for businesses of this type.

To interpret the results, means of 2.5 or greater were considered to indicate that the respondents frequently use that resource as a means of training their employees. Means ranging from 1.5 to 2.49 were interpreted to indicate occasional use of that resource, and means of less than 1.5 were interpreted to indicate that the respondent's never use that resource for employee training.

As indicated in Table 42, formal internal training ( $M = 2.13$ ,  $SD = .67$ ), vendors and suppliers ( $M = 2.03$ ,  $SD = .59$ ), seminars ( $M = 1.70$ ,  $SD = .54$ ), and formal external training ( $M = 1.59$ ,  $SD = .59$ ) are used occasionally as sources of training.

Table 41

*Strength of Relationships Between Engagement in Managing the Training Function and Demographic Characteristics*

	Tasks That Require Training	Dedicated Training Manager	Training Budget	History of Training Employees	Written Training Plan
Characteristic	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>
Volume of Business	0.06	0.00	0.03	0.07	0.00
Prices	0.02	-0.03	0.16	-0.11	0.15
Number of Competitors	0.10	0.13	0.12	0.13	0.18*
Type of Business	0.08	-0.01	0.00	-0.04	0.04
Years in Business	-0.14	-0.07	-0.07	-0.05	-0.11
Annual Gross Sales	0.25*	0.10	0.26*	0.24*	0.17
Education	0.09	-0.15	-0.04	-0.01	0.01
Gender	0.16	0.05	0.04	0.16	0.07
Age	-0.07	0.00	-0.03	0.09	-0.01
Number of Employees	0.24*	0.11	0.25*	0.18	0.22*
Ownership	0.11	-0.01	0.01	0.03	0.03
Market Growth	0.04	-0.02	0.10	0.24	0.08
Number of Stores	0.24*	0.09	0.18	-0.05	0.03

Note. \*  $p < 0.05$

Short courses ( $M = 1.45$ ,  $SD = .56$ ), and internet or online training ( $M = 1.34$ ,  $SD = .54$ ) are rarely used.

To identify demographic characteristics that significantly influence the manager's selection of training resources, stepwise multiple regression analysis was conducted to search for significant relationships between the training resources identified in Table 42 and the thirteen demographic characteristics of volume of business, prices, number of competitors, type of business, number of stores, years in business, annual gross sales, education, gender, age, number of employees, ownership responsibility and market growth.

Table 42

*Sources of Training*

	<i>n</i>	<i>p</i>	<i>M</i>	<i>SD</i>
Formal internal training	120	80.0	2.13	.67
Vendors and suppliers	121	81.6	2.03	.59
Seminars	121	64.0	1.70	.54
Formal external training	121	52.0	1.59	.59
Short courses	121	40.8	1.45	.56
Internet/Online	121	29.6	1.34	.54

*Note.* 1 = Never, 2 = Occasionally, 3 = Frequently

The annual gross sales of a business ( $R^2 = .078$ ,  $F= 6.39$ ,  $p = .014$ ) were found to have a significant influence on the manager's decision to use internal formal training (Table 43). The results were interpreted to infer that the use of internal formal training increases as the firm's annual sales increase.

Table 43

*Relationship Between the Use of Internal Formal Training and Demographic Characteristics*

Independent Variables	<i>B</i>	<i>SE<sub>b</sub></i>	<i>Beta</i>	<i>t</i>	<i>p</i>
Volume of Business	2.50E-008	.000	.280	2.527	.014

*Note.*  $R^2 = .078$ ,  $F= 6.39$ ,  $p = .014$

In addition, the number of workers employed by a business ( $R^2 = .120$ ,  $F = 10.470$ ,  $p = .002$ ), and the type of business ( $R^2 = .166$ ,  $F = 4.234$ ,  $p = .043$ ) were found to have significant influences on the selection of vendors and suppliers as providers of training for employees of the business (Table 44).

The results were taken to indicate that reliance on vendors and suppliers as a source of employee training increases as the number of workers employed by the firm increases. In addition, traditional feed and farm supply stores rely less on vendors and suppliers for employee training than do tack shops, western wear stores, and lawn and garden centers.

Table 44

*Relationship Between the Selection of Vendors and Suppliers as an Employee Training Source and Demographic Characteristics*

Independent Variables	<i>B</i>	<i>SE<sub>b</sub></i>	<i>Beta</i>	<i>t</i>	<i>p</i>
Step 1					
Number of Employees	.010	.003	.346	3.24	.002
Step 2					
Number of Employees	.012	.003	.387	3.63	.001
Type of Business	-.068	.033	-.219	-2.06	.043

*Note.* Step 1  $R^2 = .120$ ,  $F = 10.470$ ,  $p = .002$ ; Step 2  $R^2 = .166$ ,  $F = 4.234$ ,  $p = .043$

The number of workers employed by a business ( $R^2 = .147$ ,  $F = 13.31$ ,  $p = .000$ ) was found to have a significant influence on the selection of training seminars as a resource for training employees in that business (Table 45). The results indicate that as the number of employees increase, the use of training seminars for employee training increases.

Table 45

*Relationship Between the Selection of Training Seminars as an Employee Training Source and Demographic Characteristics*

Independent Variables	<i>B</i>	<i>SE<sub>b</sub></i>	<i>Beta</i>	<i>t</i>	<i>p</i>
Number of Employees	.011	.003	.384	3.648	.000

*Note.*  $R^2 = .147$ ,  $F = 13.31$ ,  $p = .000$



The number of workers employed by the business ( $R^2 = .067, F = 5.557, p = .021$ ) and the age of the respondent ( $R^2 = .114, F = 4.007, p = .049$ ) were both found to have significant influences on the selection of formal external training programs as a resource for training employees of the business (Table 46). This was interpreted to mean that as the number of workers employed by the business increase, the use of formal external training programs as a resource for training employees of the business increases. In addition, the researcher concluded that as the age of the business manager increases, so does the selection of external training programs as a resource for training employees of the business.

Table 46

*Relationship Between the Selection of Formal External Training as an Employee Training Source and Demographic Characteristics*

Independent Variables	<i>B</i>	<i>SE<sub>b</sub></i>	<i>Beta</i>	<i>t</i>	<i>p</i>
Step 1					
Number of Employees	.008	.003	.259	2.36	.021
Step 2					
Number of Employees	.008	.003	.276	2.55	.013
Age of the Manager	.010	.005	.217	2.00	.049

*Note.* Step 1  $R^2 = .067, F = 5.557, p = .021$ ; Step 2  $R^2 = .114, F = 4.007, p = .049$

The number of stores operated by the business ( $R^2 = .068$ ,  $F= 5.647$ ,  $p = .020$ ) was found have a significant influence on the use of internet based training programs for employee training in the business (Table 47). This led the researcher to infer that stores with multiple retail locations utilize Internet based training programs more than businesses with a single location.

Bivariate correlation analysis was used to examine the strength of the relationships between the most commonly used sources of training and the thirteen demographic characteristics of volume of business, prices, number of competitors, type of business, number of stores, years in business, annual gross sales, education, gender, age, number of employees, ownership responsibility, and market growth.

Table 47

*Relationship Between the Use of Internet Based Training and Demographic Characteristics*

Independent Variables	<i>B</i>	<i>SE<sub>b</sub></i>	<i>Beta</i>	<i>t</i>	<i>p</i>
Number of Store Locations	.115	048	.261	2.376	.020

*Note.*  $R^2 = .068$ ,  $F= 5.647$ ,  $p = .020$

The results revealed relationships with strengths ranging from low moderate positive associations to low negative associations (Table 48).

Table 48

*Strength of Respondent Demographics Characteristics to Sources of Employee Training*

Characteristic	Formal Internal Training	Vendors and Suppliers	Seminars	Formal External Training	Short Courses	Internet
	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>
Volume of Business	0.08	0.29*	0.17	0.17	0.15	0.13
Prices	-0.07	0.02	0.06	0.09	0.01	-0.01
Number of Competitors	0.15	-0.08	-0.10	-0.02	-0.04	0.06
Type of Business	0.02	-0.07	-0.01	0.07	0.02	0.02
Number of Stores	0.16	0.12	0.12	0.15	0.03	0.12
Years in Business	-0.03	-0.08	-0.09	-0.10	-0.03	0.00
Annual Gross Sales	0.25*	0.27*	0.35*	0.22*	-0.04	0.20
Education	0.02	0.13	0.14	0.10	0.08	0.11
Gender	0.00	0.04	0.05	0.07	-0.03	0.01
Age	0.15	0.03	0.06	0.13	0.12	-0.01
Number of Employees	0.23*	0.24*	0.38*	0.32*	0.13	0.19*
Ownership Responsibility	0.02	0.06	0.23*	0.08	-0.02	0.05
Market Growth	0.04	0.12	0.17	0.14	-0.03	0.08

Note. \*  $p < 0.05$

To identify the store managers' perception of employee training needed within the business, participants were asked to respond to questions regarding the need for employee training in ten different areas. Ten attitudinal questions were developed and combined with a four point Likert-type scale (strongly disagree, disagree, agree, strongly agree) to determine the respondent's level of agreement with the statement.

To interpret the results of these individual statements, means of 3.25 or greater were considered to indicate a strong agreement by the respondents. Means ranging from 2.5 to 3.24 were interpreted as agreement with the statement. Means of 1.75 to 2.49 were interpreted as disagreement with the statement, and means of less than 1.75 were interpreted as strong disagreement with the statement.

As indicated in Table 49, respondents tended to strongly agree that training is needed in the areas of sales skills ( $M = 3.43$ ,  $SD = .58$ ), communication skills ( $M = 3.38$ ,  $SD = .64$ ), product knowledge ( $M = 3.36$ ,  $SD = .67$ ), technical knowledge ( $M = 3.37$ ,  $SD = .55$ ), time management ( $M = 3.37$ ,  $SD = .64$ ), retail merchandising ( $M = 3.25$ ,  $SD = .63$ ).

In general, the respondents agree that their employees need training in the areas of marketing ( $M = 3.24$ ,  $SD = .65$ ), business management ( $M = 3.15$ ,  $SD = .68$ ), entrepreneurship ( $M = 2.87$ ,  $SD = .76$ ), and accounting and finance ( $M = 2.77$ ,  $SD = .81$ ).

Table 49

*Managers' Perceptions of Areas in Which Employees Need Training*

	<i>n</i>	<i>M</i>	<i>SD</i>
Sales Skills	115	3.43	.58
Communication skills	116	3.38	.64
Product knowledge	116	3.37	.67
Technical knowledge	115	3.37	.55
Time management	113	3.37	.64
Retail merchandising	113	3.36	.63
Marketing	117	3.24	.65
Business management	110	3.15	.68
Entrepreneurship	100	2.87	.76
Accounting and finance	105	2.77	.81

*Note.* 1 = Strongly Disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree

Stepwise multiple regression analysis was conducted with training needs (TNEEDS) selected as the dependent variable to identify which of the thirteen demographic characteristics of volume of business, prices, number of competitors, type of business, number of stores, years in business, annual gross sales, education, gender, age, number of employees, ownership responsibility, and market growth significantly influences the store manager's perception of the type of employee training needed.

As indicated in Table 50, the manager's gender ( $R^2 = .151, F = 12.937, p = .001$ ) and whether the store manager is the owner of the business or a hired employee of the business ( $R^2 = .203, F = 4.717, p = .033$ ) were found to have the strongest influence on the respondent's perception of the types of employee training needed.

Table 50

*Relationships Between Manager's Perception of Types of Training Needed and Demographic Characteristics*

Independent Variables	<i>B</i>	<i>SE<sub>b</sub></i>	<i>Beta</i>	<i>t</i>	<i>p</i>
Step 1					
Gender	6.600	1.835	.388	3.60	.001
Step 2					
Gender	6.335	1.794	.372	3.53	.001
Ownership	3.181	1.465	.229	2.17	.033

*Note.* Step 1  $R^2 = .151, F = 12.937, p = .001$ ; Step 2  $R^2 = .203, F = 4.717, p = .033$

To further analyze the results and to gain a better understanding of the factors influencing the respondents' perception of the type of training needed based on gender and ownership responsibility of the participants, the data for the ten subscales used to construct TNEEDS were coded into ten new variables. For each of these new variables, the original responses of no opinion, strongly disagree, and disagree were coded into the

response of Do Not Need, and the responses of agree and strongly agree were coded into the response of Need.

The SPSS data file was then split to compare groups based on gender, and descriptive statistical analysis was conducted on each of the ten new variables (Table 51).

The SPSS data file was coded to analyze all data without groups, and an independent samples t-test was conducted to compare the mean perception of need for each of the ten types of training based on gender.

Of the ten types of training, only the perception of need for entrepreneurship training was found to be statistically significant, ( $t = -2.39, p = .025$ ). Female business managers ( $M = 1.50, SD = .51$ ) were found to have a lower perception of the need for entrepreneurship training than male business managers ( $M = 1.79, SD = .41$ ).

Table 51

*Perception of Types of Training Needed by Gender of the Business Manager*

Type of Training	<i>f</i>	<i>p</i>	<i>M</i>	<i>SD</i>	<i>f</i>	<i>p</i>	<i>M</i>	<i>SD</i>
	Female (n=25)				Male (n=89)			
Product Knowledge	23	92.0	1.92	.28	81	91.0	1.91	.29
Technical Knowledge	24	96.0	1.96	.20	85	95.5	1.97	.18
Retail Merchandising	21	84.0	1.87	.34	83	93.2	1.95	.21
Sales Skills	21	84.0	1.84	.37	88	97.7	1.99	.11
Communication Skills	21	84.0	1.84	.37	83	93.2	1.93	.25
Time Management	20	80.0	1.83	.38	83	93.2	1.95	.21
Business Management	17	68.0	1.77	.43	77	86.5	1.89	.31
Marketing Skills	17	68.0	1.81	.40	81	91.0	1.92	.27
Accounting and Finance	12	48.0	1.52	.51	58	65.2	1.73	.45
Entrepreneurship	10	40.0	1.50	.51	78	87.6	1.79	.41

<sup>a</sup> 1= Do Not Need, 2 = Need



As indicated in Table 52, the SPSS data file was then split to compare groups based on ownership responsibility of the respondents and descriptive statistical analysis was conducted on each of the ten variables in Table 51.

The SPSS data file was coded to analyze all data without groups and an independent samples t-test was conducted to compare the mean perception of need for each of the ten types of training based on ownership responsibility.

Of the ten types of training, only the perception of the need for accounting and finance training for employees was found to be statistically significant ( $t = -2.31, p = .023$ ). Business owners ( $M = 1.61, SD = .49$ ) were found to have a lower perception of the need for accounting and finance training for the employees of the business than did managers who were hired employees without an ownership position in the business ( $M = 1.81, SD = .40$ ).

Bivariate correlation analysis was used to examine the strength of the relationships between the individual variables that contribute to the construct of TNEEDS and the thirteen demographic characteristics volume of business, prices, number of competitors, type of business, number of stores, years in business, annual gross sales, education, gender, age, number of employees, ownership responsibility, and market growth.

The results revealed relationships with strengths ranging from low positive association to low negative association (Table 53).

Table 52

*Perception of Types of Training Needed by Ownership Position in the Business*

Type of Training	<i>f</i>	<i>p</i>	<i>M<sup>a</sup></i>	<i>SD</i>	<i>f</i>	<i>p</i>	<i>M<sup>a</sup></i>	<i>SD</i>
	Business Owners (n= 66)				Employee (n= 48)			
Product Knowledge	61	92.4	1.92	0.27	43	89.6	1.90	0.31
Technical Knowledge	63	95.5	1.95	0.21	46	95.8	1.98	0.15
Retail Merchandising	60	90.9	1.92	0.27	44	91.7	1.96	0.21
Sales Skills	63	95.5	1.95	0.21	45	93.8	1.96	0.20
Communication Skills	62	93.9	1.94	0.24	42	87.5	1.88	0.33
Time Management	59	89.4	1.94	0.25	44	91.7	1.92	0.28
Business Management	51	77.3	1.85	0.36	43	89.6	1.90	0.31
Marketing Skills	56	84.8	1.90	0.30	43	89.6	1.91	0.28
Accounting and Finance	37	56.1	1.61	0.49	34	70.8	1.81	0.40
Entrepreneurship	41	62.1	1.69	0.46	31	64.6	1.79	0.41

<sup>a</sup> 1= Do Not Need, 2 = Need

Table 53

*Strength of Respondent Demographics Characteristics to Perception of Training Needed*

Characteristic	Product Knowledge	Technical Knowledge	Retail Merchandising	Sales Skills	Communication Skills	Time Management	Business Management	Marketing Skills	Accounting & Finance	Entrepreneurship
	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>
Volume of Business	0.08	-0.06	0.01	0.08	0.13	0.04	0.02	0.20*	-0.05	-0.08
Prices	0.23*	0.20*	0.12	0.13	0.20*	0.14	0.02	0.03	0.05	0.06
Number of Competitors	0.00	0.04	-0.01	0.06	-0.02	-0.13	-0.04	-0.04	-0.04	-0.06
Type of Business	0.04	0.01	0.18-	0.15	0.10	0.04	-0.01	-0.01	0.02	0.02
Years in Business	0.03	0.01	-0.01	-0.06	0.04	0.02	0.11	0.17	0.06	0.04
Annual Gross Sales	0.17	0.17	0.09	0.18	0.21	0.15	0.16	0.14	0.01	0.04
Level of education	0.01	0.02	0.05	0.03	0.00	-0.04	-0.07	0.08	0.02	0.14
Gender	0.11	0.06	0.16	0.17	0.15	0.19*	0.18*	0.30*	0.10	0.22*
Age	0.12	-0.12	-0.09	-0.03	0.04	-0.04	0.08	-0.02	-0.10	-0.10
Number of Employees	0.14	0.19	0.18	0.21*	0.23*	0.12	0.13	0.07	-0.04	-0.01
Ownership	0.11	0.26*	0.15	0.09	0.08	0.23*	0.27*	0.16	0.09	0.02
Market Growth	0.05	0.09	0.09	0.13	0.11	0.06	0.10	0.18	0.01	0.06
Number of Stores	0.08	0.12	0.12	0.04	0.14	0.19*	0.16	0.10	-0.13	-0.08

Note. \*  $p < 0.05$

To evaluate the respondents' perception of factors that contribute to a store's competitive advantage in this market, eight attitudinal questions were developed regarding factors of competitive advantage and combined with a four point Likert-type scale (strongly disagree, disagree, agree, strongly agree) to determine the respondent's level of agreement with the statement.

To interpret the results of these individual statements, means of 3.25 or greater were considered to indicate a strong agreement by the respondents. Means ranging from 2.5 to 3.24 were interpreted as agreement with the statement. Means of 1.75 to 2.49 were interpreted as disagreement with the statement, and means of less than 1.75 were interpreted as strong disagreement with the statement.

The respondents tended to strongly agree with six of the eight statements regarding factors that contribute to competitive advantage. Means for these statements ranged from 3.27 to 3.47 and standard deviations from .60 to .71 (Table 54).

The respondents tended to agree with the two statements that appearance of the store ( $M = 3.27$ ,  $SD = .63$ ) and added value products ( $M = 3.27$ ,  $SD = .55$ ) are factors that contribute to a store's competitive advantage.

Table 54

*Factors of Competitive Advantage*

	<i>n</i>	<i>M</i>	<i>SD</i>
Good customer service	122	3.47	.67
Product quality	121	3.45	.66
Friendly atmosphere	121	3.44	.66
Wide product selection	120	3.38	.57
Well trained employees	116	3.30	.71
Competitive price	123	3.27	.60
Appearance of the store	121	3.23	.63
Added value products	115	3.23	.55

*Note.* 1 = Strongly Disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree

To identify demographic characteristics that significantly influence the respondent's perceptions of factors that contribute to the competitive advantage of a feed and farm supply business, stepwise multiple regression analysis was used to search for significant relationships between the summated scale of factors of competitive advantage (FOFC) and the thirteen demographic characteristics of volume of business, prices, number of competitors, type of business, number of stores, years in business, annual gross sales, education, gender, age, number of employees, ownership responsibility, and market growth.

As shown in Table 55, the age of the respondent ( $R^2 = .095$ ,  $F = 8.061$ ,  $p = .006$ ), the store's prices relative to the prices of competitors ( $R^2 = .163$ ,  $F = 6.216$ ,  $p = .015$ ), and the store's annual gross sales ( $R^2 = .220$ ,  $F = 5.479$ ,  $p = .022$ ) were found to have a significant influence on the respondents' perception of factors that contribute to a store's competitive advantage.

Table 55

*Relationships Between Manager's Perception of Factors That Contribute to Competitive Advantage and Demographic Characteristics*

Independent					
Variables	<i>B</i>	<i>SE<sub>b</sub></i>	<i>Beta</i>	<i>t</i>	<i>p</i>
Step 1					
Age of Manager	-.105	.037	-.308	-2.84	.006
Step 2					
Age of Manager	-.107	.036	-.312	-2.98	.004
Prices	-2.005	.804	-2.62	-2.49	.015
Step 3					
Age of Manager	-.108	.035	-3.17	-3.11	.003
Prices	-1.987	.781	-.259	-2.54	.013
Annual Gross Sales	1.44E-007	.000	.239	2.34	.022

*Note.* Step 1  $R^2 = .095$ ,  $F = 8.061$ ,  $p = .006$ ; Step 2  $R^2 = .163$ ,  $F = 6.216$ ,  $p = .015$ ; Step 3  $R^2 = .220$ ,  $F = 5.479$ ,  $p = .022$

To further explore the difference in means based on age, an independent samples t-test was conducted to compare the mean perception of factors that contribute to competitive advantage based on age using a cut point of 49 years old, the median age of the study participants. Of the nine perceived factors of competitive advantage, two were identified as being statistically significant predictors of differences between store managers' perceptions based on the respondents' ages.

The age of the respondent was found to have a significant influence ( $t = -2.01$ ,  $p = .047$ ) on the respondent's perception of the contribution of added value products to a store's competitive advantage. Those respondents of less than 49 years of age ( $M = 3.28$ ,  $SD = .71$ ) were found to have a higher perception of the contribution of added value products to a store's competitive advantage than did those store managers of 49 of age or more ( $M = 2.97$ ,  $SD = .93$ ). This led the researcher to infer that the older the store manager, the lower the perception of the contribution of added value products to the store's competitive advantage.

The age of the respondent was also found to have a significant influence ( $t = -2.43$ ,  $p = .017$ ) on the respondent's perception of the contribution of employee training to a store's competitive advantage. This led the researcher to conclude that the older the store manager, the lower the perception of the contribution of well trained employees to the store's competitive advantage.

Additional analysis was conducted using an independent samples t-test to compare the mean perception of factors that contribute to a store's competitive advantage. The participating stores' annual gross sales was used as a grouping variable,

and a cut point of \$2,000,000, the median gross sales of the study participants, was used to analyze the data. Of the nine perceived factors of competitive advantage, two were identified as having a statistically significant influence on the respondents' perceptions of factors that contribute to competitive advantage.

The sales of added value products by a store was found to be statistically significant ( $t = 2.64, p = .010$ ). Respondents from those stores with annual gross sales of \$2,000,000 or more ( $M = 3.38, SD = .53$ ) were found to have a higher perception of the contribution of added value products to a store's competitive advantage than did those respondents from stores with annual gross sales of less than \$2,000,000 ( $M = 2.97, SD = .87$ ). This led the researcher to conclude that as a store's annual gross sales increase, the store manager's perception of the contribution of added value products to the store's competitive advantage increases.

Well trained employees in a store was also found to be statistically significant ( $t = 2.82, p = .006$ ). Respondents from those stores with annual gross sales of \$2,000,000 or more ( $M = 3.48, SD = .65$ ) were found to have a higher perception of the contribution of well trained employees to a store's competitive advantage than did respondents from stores with annual gross sales of less than \$2,000,000 ( $M = 2.95, SD = 1.09$ ). This was interpreted to infer that as a store's annual gross sales increase, the store manager's perception of the contribution of well trained employees to the store's competitive advantage increases.

Bivariate correlation analysis was used to examine the strength of the relationships between the individual variables that contribute to the construct of FOFC



and the thirteen demographic characteristics of volume of business, prices, number of competitors, type of business, number of stores, years in business, annual gross sales, education, gender, age, number of employees, ownership responsibility, and market growth.

The results revealed relationships with strengths ranging from low positive associations to moderate negative associations (Table 56).

To gain a different perspective of the results, the data for the eight subscales of FOFC were coded into eight new variables. For each of these new variables, the original responses of no opinion, strongly disagree, and disagree were coded into the response of Does Not Contribute to Competitive Advantage, and the responses of agree and strongly agree were coded into the response of Does Contribute to Competitive Advantage.

Table 56

*Strength of Relationships Between Respondents' Perceptions of Factors of Competitive Advantage and Demographic Characteristics*

Characteristic	Added Value Products <i>r</i>	Appearance of The Store <i>r</i>	Competitive Price <i>r</i>	Friendly Atmosphere <i>r</i>	Good Customer Service <i>r</i>	Product Quality <i>r</i>	Well Trained Employees <i>r</i>	Wide Product Selection <i>r</i>
Volume of Business	0.25*	0.04	0.10	0.00	0.07	0.14	0.04	0.07
Prices	-0.02	-0.06	-0.02	-0.14	-0.14	-0.20*	-0.15	-0.16
Number of Competitors	-0.07	-0.12	-0.12	-0.17	-0.20*	-0.23*	0.01	-0.03
Type of Business	0.05	0.04	0.04	0.12	0.06	0.00	0.00	-0.01
Years in Business	0.04	0.06	0.17	0.18	0.15	0.19	-0.01	0.04
Annual Gross Sales	0.18	0.21	0.18	0.06	0.08	0.15	0.21	0.13
Education	0.07	0.11	0.07	0.06	0.11	0.11	0.02	0.03
Gender	0.02	-0.02	-0.09	-0.09	-0.14	-0.07	-0.05	0.02
Age	-0.19*	-0.14	-0.25*	-0.18*	-0.15	-0.10	-0.32*	-0.13
Number of Employees	0.10	0.14	0.17	0.13	0.12	0.13	0.20	0.11
Ownership	0.05	0.14	0.21	0.15	0.13	0.03	0.13	0.17
Market Growth	0.02	0.07	0.12	0.12	0.16	0.13	0.05	0.07
Number of Stores	-0.04	0.09	0.13	0.06	0.06	0.02	0.06	0.01

Note. \*  $p < 0.05$

To gain a different perspective of the results, the data for the eight subscales of FOFC were coded into eight new variables. For each of these new variables, the original responses of no opinion, strongly disagree, and disagree were coded into the response of Does Not Contribute to Competitive Advantage, and the responses of agree and strongly agree were coded into the response of Does Contribute to Competitive Advantage.

The respondents' perceptions of these factors contribution to a store's competitive advantage are displayed in Table 57. It is important to note that a well trained employee ranked last out of the eight factors that contribute to a store's competitive advantage.

Table 57

*Factor That Contribute to Competitive Advantage*

Factors	<i>n</i>	%
Wide product selection	118	94.4
Competitive price	115	92.7
Friendly atmosphere	112	91.8
Good customer service	112	91.1
Product quality	112	91.1
Appearance of the store	110	89.4
Added value products	108	86.4
Well trained employees	103	83.7

### Findings for Objective Two

Objective two was to describe feed and farm supply store managers' perception of employee training's contribution to their firm's competitive advantage. As indicated in Table 58, employee training is perceived as contributing to a store's competitive advantage in a number of ways.

Table 58

#### *Employee Training's Contribution to Competitive Advantage*

Benefits	<i>n</i>	%
Improves customer satisfaction	118	96.7
Contributes to business growth	115	94.3
Increases a store's competitive advantage	114	94.2
Improves productivity	112	91.8
Increases a store's profits	111	91.0
Increases customer loyalty	107	88.4
Improves employee attitudes	107	87.7
Increases job satisfaction	106	86.9
Changes employee behaviors	105	86.1
Reduces employee absenteeism	75	61.5
Reduces employee turnover	72	59.5

To analyze the respondents' perception of employee training's contribution to a store's competitive advantage, eleven attitudinal statements were developed and combined with a four point Likert-type scale (strongly disagree, disagree, agree, strongly agree) to determine the respondent's level of agreement with the statement.

To interpret the results of these individual statements, means of 3.25 or greater were considered to indicate a strong agreement by the respondents. Means ranging from 2.5 to 3.24 were interpreted as agreement with the statement. Means of 1.75 to 2.49 were interpreted as disagreement with the statement, and means of less than 1.75 were interpreted as strong disagreement with the statement.

As shown in Table 59, respondents tended to strongly agree with eight of the eleven statements regarding employee training's contribution to the competitive advantage of the business. The means for these statements ranged from 2.93.27 9 to 3.51 and the standard deviation from .50 to .60.

The respondents generally agreed with the remaining statements as indicated by means that ranged from 2.90 to 2.99 with standard deviations ranging from .72 to .97.

Table 59

*Training's Contribution to Competitive Advantage*

	<i>n</i>	<i>M</i>	<i>SD</i>
Improves customer satisfaction	118	3.51	.50
Increases a store's competitive advantage	116	3.50	.54
Increases a store's profits	122	3.50	.58
Increases customer loyalty	111	3.47	.60
Improves productivity	116	3.42	.56
Increases job satisfaction	110	3.42	.57
Contributes to business growth	116	3.40	.51
Improves employee attitudes	113	3.35	.58
Changes employee behaviors	114	2.99	.97
Reduces employee absenteeism	103	2.90	.72
Reduces employee turnover	102	2.90	.75

*Note.* 1 = Strongly Disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree

To identify demographic characteristics that significantly influence a respondent's perception of the contribution of employee training to the firm's competitive advantage, stepwise multiple regression analysis was conducted to search for significant relationships between the scale of training perceptions (TPERCEP) and the thirteen demographic characteristics of volume of business, prices, number of competitors, type of business, number of stores, years in business, annual gross sales,

education, gender, age, number of employees, ownership responsibility, and market growth.

The results of the linear regression analysis (Table 60) revealed that the number of workers employed by a business ( $R^2 = .067$ ,  $F = 5.231$ ,  $p = .025$ ), the number of years that the store has been in business ( $R^2 = .121$ ,  $F = 4.962$ ,  $p = .029$ ), and the respondent's gender ( $R^2 = .198$ ,  $F = 7.161$ ,  $p = .009$ ) were found to be significantly influence a respondent's perception of employee training's contribution to competitive advantage.

Table 60

*Relationships Between Manager's Perception of Employee Skills and Demographic Variables*

Independent Variables	<i>B</i>	<i>SE<sub>b</sub></i>	<i>Beta</i>	<i>t</i>	<i>p</i>
Step 1					
Number of Employees	.138	.061	.252	2.29	.025
Step 2					
Number of Employees	.148	.059	.269	2.50	.015
Years in Business	-.107	.048	-.240	-2.23	.029
Step 3					
Number of Employees	.141	.057	.257	2.48	.016
Years in Business	-.134	.047	-.300	-2.83	.006
Gender	7.452	2.785	.284	2.68	.009

*Note.* Step 1  $R^2 = .067$ ,  $F = 5.231$ ,  $p = .025$ ; Step 2  $R^2 = .121$ ,  $F = 4.962$ ,  $p = .029$ ; Step 3  $R^2 = .198$ ,  $F = 7.161$ ,  $p = .009$

An independent samples t-test was conducted to examine the differences between the respondents' perception of employee training's contribution to the firm's competitive advantage based on the number of workers employed by a business. A cut point of seven employees, the median number of workers employed by the participating businesses, was used to compare the means of the perceptions of the participants. Through this analysis, the number of workers employed by a business was identified as a significant influence on the respondents' perceptions of employee training's contribution to business growth, overall competitive advantage, profits, and customer satisfaction.

The number of workers employed by a store was found to be statistically significant ( $t = -2.01$ ,  $p = .047$ ) in explaining the differences between managers' perceptions of training as a contributor to business growth. Those respondents from stores that employ seven or more workers ( $M = 3.41$ ,  $SD = .52$ ) were found to place a higher value on employee training's contribution to business growth than did those respondents from stores that employ less than seven workers ( $M = 2.89$ ,  $SD = 1.24$ ). This was interpreted to infer that as a store employs more workers, the manager's perception is that engaging in increased levels of employee training contributes to the growth of the business.

The number of workers employed by a store was found to be statistically significant ( $t = -2.32$ ,  $p = .024$ ) in explaining the differences between respondents' perceptions of training as a contributor to overall competitive advantage. Those respondents from stores that employ seven or more workers ( $M = 3.51$ ,  $SD = .53$ ) were found to place a value on employee training's contribution to competitive advantage as



compared to those respondents from stores that employ less than seven workers ( $M = 3.05$ ,  $SD = 1.23$ ). This was interpreted to infer that as a store employs more workers, the manager's perception is that engaging in increased employee training contributes to the store's competitive advantage.

The number of workers employed by a store was found to be statistically significant ( $t = -2.01$ ,  $p = .047$ ) in explaining the differences between respondents' perceptions of training as a contributor to profit. Those respondents from stores that employ seven or more workers ( $M = 3.48$ ,  $SD = .67$ ) were found to place a higher value on training's contribution to profit than did those respondents from stores that employ less than seven workers ( $M = 2.89$ ,  $SD = 1.40$ ). This was interpreted to infer that as a store employs more workers, the store manager's perception is that engaging in increased levels of employee training contributes to the profitability of the business.

The number of workers employed by a store was found to be statistically significant ( $t = -2.14$ ,  $p = .034$ ) in explaining the differences between respondents' perceptions of training as a contributor to customer satisfaction. Those respondents from stores that employ seven or more workers ( $M = 3.51$ ,  $SD = .50$ ) were found to place a higher value on training's contribution to profit than did those respondents from stores that employ less than seven workers ( $M = 3.18$ ,  $SD = 1.13$ ). This was interpreted to infer that as a store employs more workers, the manager's perception is that engaging in increased levels of employee training contributes to increased customer satisfaction.

In addition, the researcher conducted an independent sample t-test to compare the means of respondents' perception of factors that contribute to competitive advantage

based on the number of years that a store has been in business. A cut point of 30 years, the median number of years that participating stores have been in business, was used to compare the means of the perceptions of the participants. Of the eleven perceived benefits of employee training, only one was identified as being a statistically significant predictor of differences between store managers' perceptions based on the number of years that the store has been in business.

Employee training changes employee behaviors was found to be statistically significant ( $t = -2.11$ ,  $p = .037$ ). Those respondents from stores which had been in business less than 30 years ( $M = 3.19$ ,  $SD = .81$ ) were found to place a higher value on employee training's contribution to changing employee behavior than did those respondents from stores which had been in business less 30 years or more ( $M = 2.81$ ,  $SD = 1.08$ ). This led the researcher to conclude that the longer a store is in business, the less the manager perceives that training can change employee behaviors.

An independent sample t-test was used to compare the means of perceptions of factors that contribute to a store's competitive advantage based on the gender of the respondent. Of the eleven perceived benefits of employee training, only one was identified as having a statistically significant influence on respondents' perceptions of employee training based on the respondents' gender.

Employ training improves customer satisfaction was found to be statistically significant ( $t = -2.16$ ,  $p = .033$ ) based on the gender of the respondent. Male respondents ( $M = 3.48$ ,  $SD = .62$ ) were found to have a higher perception of the contribution of employee training to improved customer satisfaction as compared to female respondents

( $M = 3.11$ ,  $SD = 1.22$ ). This was interpreted to infer that female store managers have a lower perception of employee training's contribution to improved customer satisfaction.

Bivariate correlation analysis was used to examine the strength of the relationships between the individual variables that contribute to the construct of TPERCEP and the thirteen demographic characteristics. The results revealed relationships with strengths ranging from low positive associations to low negative associations (Table 61).

### **Findings for Objective Three**

The third objective of the study was to identify barriers to employee training in feed and farm supply stores.

To accomplish this objective, ten attitudinal statements were developed and combined with a four point Likert-type scale (strongly disagree, disagree, agree, strongly agree) to determine the respondent's level of agreement with the statement.

To interpret the results of these individual statements, means of 3.25 or greater were considered to indicate a strong agreement by the respondents. Means ranging from 2.5 to 3.24 were interpreted as agreement with the statement. Means of 1.75 to 2.49 were interpreted as disagreement with the statement, and means of less than 1.75 were interpreted as strong disagreement with the statement.

Respondents were in agreement with four of the statements regarding training's contribution to the competitive advantage of the business. The means ranged from 2.50 to 2.87 with a range of .90 to 1.03 of the standard deviation (Table 62).

Table 61

*Strength of Respondent Demographics Characteristics to Perception of Benefits of Training*

Characteristic	Changes Behaviors	Contributes to Business Growth	Improves Customer Satisfaction	Improves Employee Attitudes	Improves Productivity	Increases Competitive Advantage	Increases Profits	Increases Customer Loyalty	Increases Job Satisfaction	Reduces Absenteeism	Reduces Employee Turnover
	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>
Volume of Business	-0.09	-0.08	-0.11	-0.15	-0.10	-0.04	-0.12	-0.06	-0.20*	-0.12	-0.01
Prices	0.12	0.00	0.08	0.12	0.03	0.03	0.01	-0.06	-0.06	-0.03	-0.05
Number of Competitors	0.16	0.14	0.13	0.17	0.10	0.14	0.10	0.16	0.18*	0.21*	0.22*
Type of Business	-0.01	0.01	-0.03	0.04	0.05	0.05	0.04	0.02	0.01	-0.04	0.03
Years in Business	-0.23*	-0.22*	-0.21*	-0.20*	-0.16*	-0.17*	-0.09	-0.13	-0.17	-0.16	-0.15
Annual Gross Sales	0.21*	0.17	0.14	0.18	0.16	0.17	0.18	0.17	0.19	0.20	0.24
Education	0.06	-0.02	0.02	0.09	0.08	0.05	0.01	0.04	0.11	0.02	0.12
Gender	0.06	0.10	0.19*	0.11	0.11	0.13	0.07	0.09	0.09	0.17	0.15
Age	0.02	0.01	-0.08	0.06	0.00	0.00	0.03	0.01	0.03	0.11	0.05
Number of Employees	0.20*	0.19*	0.16	0.16	0.14	0.14	0.16	0.16	0.12	0.12	0.23*
Ownership	0.21*	0.20*	0.22*	0.10	0.17	0.18	0.17	0.04	0.10	-0.08	0.00
Market Growth	0.01	0.17	0.07	0.04	0.04	0.02	0.05	0.06	0.00	0.18*	0.18*
Number of Stores	0.11	0.21*	0.17	0.16	0.14	0.09	0.14	0.08	0.10	-0.06	0.12

Note. \*  $p < 0.05$

The respondents disagreed with the statements “cannot see the immediate return from training” ( $M = 1.95$ ,  $SD = .88$ ) and “poor return on investment in training” ( $M = 1.82$ ,  $SD = 1.04$ ).

Table 62

*Barriers to Training*

Barriers	<i>n</i>	<i>M</i>	<i>SD</i>
Difficulties created when key personnel are away from the job	108	3.03	.76
Distance to attend training	106	2.76	.74
Lack of relevant training courses	105	2.71	.66
Employees not interested	110	2.64	.74
Lack of employee appreciation	107	2.55	.69
Financial cost	107	2.54	.68
Employee turnover	108	2.43	.74
Cost is greater than the benefit	104	2.22	.65
Poor return on investment in training	95	2.19	.70
Cannot see immediate results	103	2.17	.60

*Note.* 1 = Strongly Disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree

The researcher utilized SPSS 15.0, *Bivariate Correlations*, to search for correlations between barriers to training in a business and the thirteen demographic characteristics of volume of business, prices, number of competitors, type of business,

number of stores, years in business, annual gross sales, education, gender, age, number of employees, ownership responsibility, and market growth.

As indicated in Table 63, analysis revealed a lack of strong relationships between barriers to training and demographic characteristics of the business. This was interpreted to indicate that these agribusinesses, regardless their demographic differences share a common set of obstacles and barriers to training in their business.

#### **Findings for Objective Four**

Objective four was to determine Internet availability and potential use for employee training in feed and farm supply stores. Eighty-five percent of the participants report that there is a computer in their store, and 80.8% (Table 64) report Internet availability within their store.

Table 63

*Strength of Respondent Demographic Characteristics to Perceived Barriers to Training*

Characteristic	Cannot See Immediate Results	Cost Is Greater Than the Benefit	Key Personnel Away From the Job	Distance to Attend Training	Employees Not Interested	Financial Cost	Employee Turnover	Lack of Employee Appreciation	Lack of Relevant Training Courses	Poor Return on Investment
	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>
Volume of Business	0.03	-0.04	-0.03	-0.01	-0.09	-0.05	0.06	-0.09	-0.06	-0.05
Prices	0.09	0.10	0.13	0.03	0.11	0.10	-0.02	0.02	-0.04	0.00
Number of Competitors	0.03	0.10	0.07	0.15	0.12	0.10	-0.03	0.02	0.06	0.11
Type of Business	-0.04	-0.11	0.07	0.07	-0.29*	-0.14	0.10	-0.06	0.08	0.02
Years in Business	0.12	-0.01	0.17	0.03	0.01	0.02	-0.09	-0.11	0.07	0.16
Annual Gross Sales	0.01	-0.04	0.17	0.13	-0.06	0.01	0.14	-0.08	-0.01	0.10
Level of education	0.06	0.04	0.09	-0.05	-0.15	0.00	0.00	-0.01	0.07	0.11
Gender	0.25*	0.04	0.12	0.09	0.11	0.04	0.11	0.07	0.04	-0.05
Age	0.17	0.07	-0.05	-0.02	-0.07	-0.02	-0.08	-0.11	-0.04	0.03
Number of Employees	-0.07	-0.10	0.10	0.02	-0.07	-0.03	0.12	-0.12	-0.11	-0.04
Ownership	-0.20*	-0.13	0.04	0.01	0.07	0.03	0.09	0.14	-0.01	-0.06
Market Growth	0.16	-0.14	-0.01	0.10	-0.02	0.05	-0.06	-0.02	0.15	-0.04
Number of Stores	-0.07	0.01	0.00	-0.01	-0.05	-0.14	0.06	-0.02	-0.19*	-0.23*

Note. \*  $p < 0.05$

Table 64

*Type of Internet Access (n=101)*

	<i>f</i>	<i>%</i>
DSL Enabled Phone Line	45	44.6
Dial Up	16	15.8
Cable Modem	13	12.9
Wireless	9	8.9
T-1/Fiber Optic	8	7.9
Don't Know Connection Type	6	5.9
Satellite Dish	4	4.0

Sixty-five percent of the respondents indicate that their employees have existing computer skills that are adequate to participate in online training programs. Another 30% indicate that their employees have novice computer skills but are trainable. Only 5% of the respondents feel that their employees cannot be trained to use the computer for online training programs (Table 65).



Table 65

*Employee Computer Skills*

Skill Level	<i>f</i>	%
Average	58	46.4
Novice - trainable	28	22.4
Expert	6	4.8
Novice - not trainable	5	4.0

**Findings for Objective Five**

Objective five was to describe the willingness of feed and farm supply store managers to engage their employees in training delivered via the Internet.

Eighty-eight percent of the participants indicated a willingness to allow their employees to use computers and Internet access in the store for training purposes. Ninety-two percent of the respondents indicated that they would encourage their employees to participate in online training programs, 74% are willing to allow their employees to engage in online training during regular business hours, and 66% indicated a willingness to pay employees' registration fees for online training courses (Table 66).

Table 66

*Willingness to Engage in Online Training*

	<i>f</i>	<i>%</i>
Allow Employees to Use Computers and Internet Access in the Store for Training (n=100)		
Yes	88	88.0
No	12	12.0
Allow employees to complete training during regular work hours (n=96)		
Yes	71	74.0
No	13	13.5
No Opinion	12	12.5
Encourage employees to participate in online training (n=95)		
Yes	87	91.6
No	1	1.1
No Opinion	7	7.4
Pay employees' enrollment fees (n=93)		
Yes	61	65.6
No	7	5.6
No Opinion	25	26.9

## CHAPTER V

### SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

#### Statement of the Problem

While training is perceived as important by feed and farm supply store managers, they do not generally recognize that employee training can significantly increase the competitiveness of the business (Chacko, Wacker & Asar, 1997). There has been minimal research to determine agribusiness managers' perception of training as a contributor to the strategic position of individual firms in the changing agribusiness environment (Hudson, 1990). An increased understanding of the factors that affect a small business manager's decision to engage in employee training is needed (Loan-Clarke, Boocock, Smith & Whittaker, 1999).

#### Purpose and Objectives of the Study

The purpose of this study was to assess the perception held by managers of feed and farm supply stores in Texas regarding the contribution of employee training to the competitiveness of the firm, determine if managers of feed and farm supply stores perceive that employee training can improve their competitive strength, and to determine if they will invest in employee training in order to gain a competitive advantage. There were five specific objectives of this study:

1. Describe the operating environment of feed and farm supply stores in Texas.

2. Describe feed and farm supply store managers' perception of employee training's contribution to their firm's competitive advantage.
3. Identify barriers to employee training in feed and farm supply stores.
4. Determine Internet availability and potential use for employee training in feed and farm supply stores.
5. Describe the willingness of feed and farm supply store managers to engage in employee training delivered via the Internet.

The results of this study have implications and significance to various stakeholders of this industry. The findings are useful for assisting organizations overcome barriers, and to assist in the planning, implementation, and delivery of training for small agribusinesses.

### **Summary of Methodology**

A random sample of feed and farm supply stores was selected from across the state of Texas. Businesses selected through the sampling process were contacted through a mail survey approach outlined by Dillman (2007). The participants were offered the option of returning a completed paper survey instrument or completing the instrument electronically by accessing a link to the survey on the Texas A&M University, Department of Agricultural Economics website.

The data collection instrument contained 35 questions and was divided into seven sections: employees and employee training in the business, computer and Internet

technology availability in the business, the market in which the business operates, the business and observed business trends, and demographics.

After the initial mailing, a frame error was discovered as 36 potential respondents did not receive the instrument due to undeliverable addresses. In addition, three stores were found to be out of business. Because of these problems, the total sample was reduced to 266 potential participants.

Questionnaires were returned by 139 respondents for a response rate of 52.3% of the accessible sample. Fourteen of the surveys were returned blank producing 125 usable responses. Early versus late respondents were analyzed to determine potential non-response error (Lindner, Murphy & Briers, 2001).

Descriptive statistics were used to analyze the data including means, medians, standard deviations, percentages and frequencies. Stepwise linear regression was used to measure the degree of influence that the demographic characteristics of the respondents had on the variables of the study. The Pearson product-moment correlation was used to evaluate the strength of relationships between demographic characteristics and study variables. Correlation matrix and reliability were calculated with Cronbach's alpha. Alpha for statistical significance was set a priori at the .05 level of probability. The data were analyzed using the Statistical Package for Social Sciences (SPSS) version 15.0 software program.

### **Demographics of the Participants**

Seventy-six percent of the respondents were male, 76.5% were between the ages of 35 and 64 years old with a mean age of 49.6, and 83% have completed some form of post-secondary education with 45.5% holding a bachelor's degree. Among the participants, 60.2% were owners of the business, 39 % were managers within the business, and one was a sales person within the business.

Fifty-one percent of the respondents categorized their business as a feed store, 34% as a farm and ranch supply store, 6% as a general store, and the remainder as other types of stores such as hardware stores, western wear stores, tack shops, and lawn and garden centers.

Seventy-eight percent of the responding businesses had one retail location. The remaining 22% reported that their parent company operates two to six retail stores. Fifty-seven percent of the responding businesses were legally structured as a corporation, 25.2% were sole proprietorships, and 8.9% cooperatives. The remainders were partnerships. These businesses have been in operation from one to 122 years with a mean of 36 years in business.

Using their own definition of success, 85% of the participants reported their business to be financially successful. Participants reported mean gross sales of \$4,241,795 with a range of \$200,000 to \$55,000,000. Sixty-six percent of the participants reported annual gross sales of less than \$3,000,000.

Geographically, 57% of the respondents were located in east and central Texas in an area bounded by Interstate Highway 35 on the west and Interstate Highway 10 on the

south. Twenty-four percent of the respondents were from west of Interstate Highway 35 in Texas. The remaining respondents were from south Texas and the Rio Grande Valley in an area bounded by Interstate Highway 10 on the north and Interstate Highway 35 on the west.

### **Research Objective One**

Objective one sought to describe the operating environment of feed and farm supply stores in Texas.

The study found that feed and farm supply store managers perceive that they operate in a demanding, competitive environment and the market in which they operate is changing at a rapid pace. The population in their market has increased, they have experienced a growth of new customers, and their sales volume has increased. In addition to seeing an increase in the sales of traditional product categories such as feed, fertilizer, and animal health supplies, they have seen an increase in the sales of non-traditional product categories such as lawn and garden products, gifts, clothing, and home furnishings.

They are challenged with taking time off from the business, training their employees, and keeping their customers happy. Eighty-three percent say that many people have moved into their market in the past ten years and 82% are currently experiencing new customer growth.

Ninety-seven percent of the respondents view their store as being well established in their market, 91% say that their store competes well against other stores in

the market, and 88% feel that their store can survive changing market conditions. It was observed that as business volume increases, the respondent's perception of their store's competitiveness increases.

The core product categories for these stores include feed, animal health supplies, livestock supplies, fertilizer, and lawn and garden products. Feed was reported most frequently as the most important product category (86.3%), followed by lawn and garden (4.0%), fertilizer (3.2%), and animal health supplies (1.6%).

Sixty-eight percent of the respondents identified feed as the product category with the most growth over the past ten years. Fifty-three percent identified a growth in sales of animal health supplies, 49% identified a growth in lawn and garden products, 35% reported growth in the sale of livestock supplies, and 33% reported a growth in the sale of gift items in their store.

Ninety-two percent of the respondents feel that they have a loyal customer base and 97% of the respondents feel that their customers rely on the store for solutions to their problems. The customers generally know what they want (86%) when they come into the store but only 58% know what they actually need, thus creating the opportunity for feed and farm supply stores to develop a competitive advantage by providing solutions to customers' problems.

### ***The Competition***

Feed and farm supply stores operate in a highly competitive environment with an average of four primary competitors in each market. Even with an average of four, and



as many as 15 primary competitors, 97% of the respondents perceive that their sales volume is as high as, or higher than, their competitors' sales volume.

The study identified a rapidly changing environment that is becoming increasingly more competitive with new and aggressive competitors entering this market. Sixty-nine percent of the participants report that at least one aggressive competitor has opened a store in their market and 68% report that a mass merchant has opened a store in their market in the past ten years. As the number of competitors in a store's trade area increases, the store managers' perception of the competitiveness of the market in which they operate increases.

These newer competitors are often multi-retail location operations that benefit from economies of size, have centralized purchasing and distribution functions, and generally pay lower prices for the merchandise that they resell than do businesses with single retail locations. In addition to offering competitively priced merchandise, they utilize non-price strategies centered on customer satisfaction and convenience including an expanded product selection, extended hours of operation, and opening on Saturday afternoons and Sundays when traditional feed and farm supply stores are closed. The traditional feed and farm supply store manager is finding it hard to keep up with these fast paced changes and they are feeling pressured by this increased competitiveness.

Eighty-percent of the respondents describe their prices as being about the same or lower than their competitor's prices. This led to the conclusion that traditional feed and farm supply stores respondents are using price to compete with the non-price strategies of their newer competitors.

Seventy-three percent of the respondents, however, feel that they can compete with the mass merchants in their market, 92% say they compete well against other stores in their market, and 89% feel they can survive changing market conditions. The researcher concluded that the respondents' perceptions of their stores' competitiveness and ability to compete in their market place is a psychological response to increased sales volumes resulting from population growth and lowered prices rather than from structural adjustments made within the business to increase competitive advantage. As the traditional feed and farm supply stores lower their prices to compete with new competitors, their profits dwindle and their management style becomes even more conservative creating a situation where they are less likely to engage in formal employee training.

### ***Employees***

This study found that feed and farm supply stores in Texas employ a mean of 13 employees with a range of one employee to 125 employees. Sixty-nine percent of these agribusinesses employ 10 or fewer employees. One in three (31%) of these businesses have a high percentage of older employees, and 82% say that their employees perform a variety of distinctly different tasks; one in five (18%) say that much of their time is spent correcting employee mistakes.

The respondents exhibit a high level of confidence in their employees' abilities relative to the abilities of the employees of their competitors. They rate their employees' friendliness, their ability to solve customer problems, their attitudes, and their product knowledge as better than that of their competitors' employees. They rated their

employees' technical knowledge and overall training as about the same as their competitors' employees.

The more educated the respondent, the higher the level of confidence in their employees' competitive characteristics; as sales increase, so does the respondent's confidence in their employees competitive characteristics; and, as a store increases their prices relative to the prices charged by their competitors, so does the respondent's perception of their employees' competitive characteristics.

### ***Employee Training***

The respondents agree that well trained employees improve customer satisfaction, contribute to business growth, improve productivity, and increase profits. In addition, they agree that employee training can have a positive impact on customer loyalty, employee attitudes, and employees' job satisfaction.

Ninety-three percent of these stores recognize that they have tasks that require employee training within their business and 67% believe that they have a history of training their employees. The higher the annual gross sales, the more likely the store is to be engaged in training their employees, and as the number of workers employed by the business increases, so does the recognition of a need for employee training. However, business owners appear to be less aware of the need for employee training than do hired employees in a management capacity, and the longer a store is in business, the less likely it is that management will perceive a need for employee training.

Stores that rely on lower price as their competitive strategy are less likely to recognize the need for employee training, and female managers of feed and farm supply

stores are less likely to perceive a need for employee training than their male counterparts.

Seventy percent of the participants feel that their employees can handle the challenges of today, but only 50% feel that their employees can handle the challenges of tomorrow. Nine out of ten (87%) participants report that the technical and specialized skill needed by their employees is increasing and 86% say their employees need training to help the business stay competitive with the competition. However, the training function is loosely managed in the majority of these small agribusinesses, and in many cases, is limited to vendors and suppliers transferring product and technical information to the store's employees, or it is informal hands-on training in the performance of repetitive tasks. There is a dedicated training manager in only 20% of these businesses, only 16% have a written plan for training employees, and only 12% have a training budget. Stores with high annual gross sales are more likely to have a training budget and written training plan.

Eighty-four percent of these businesses rely on vendors and suppliers as their primary source of employee training. This reliance on vendors and suppliers increases as the number of workers employed by the firm increases. Furthermore, traditional feed and farm supply stores rely less on vendors and suppliers for employee training than do tack shops, western wear stores, and lawn and garden centers, and there is an increase in the awareness of the need for employee training as the demand for the traditional product categories of feed, fertilizer, and livestock supplies decrease and the demand for non-

traditional product categories such as tack, clothing, and lawn and garden products increase.

Eighty-three percent of these firms utilize informal training and on-the-job training activities. As the firm's annual sales increase, formal training within the firm increases. Sixty-six percent send their employees to training seminars, and as the number of workers employed by the firm increases, the use of training seminars increases.

Fifty-four percent of these businesses utilize formal training programs from outside of the business. The higher the number of employees, the more likely a feed and farm supply stores is to use formal external training programs.

Thirty-one percent of these businesses use Internet based training programs. Those businesses with multiple retail locations are more likely to utilize Internet based training programs than those businesses with a single retail location.

There is strong recognition of the need for employee training in the areas of sales skills, communication skills, product knowledge, technical knowledge, time management, retail merchandising, marketing, and business management. There is a moderate level of recognition of the need for employee training in accounting, finance, and entrepreneurship. Business owners have a lower perception of the need for accounting and finance training for the employees of the business as compared to those managers who are hired employees of the business. Female managers have a lower perception of the need for entrepreneurship training than male business managers.

### *Competitive Advantage*

When asked what factors contributed to a store's competitive advantage in their market, the respondents identified an extensive product selection (96%), added-value products (94%), competitive price (93%), friendly atmosphere (93%), product quality (93%), good customer service (92%), appearance of the store (91%), and well trained employees (89%).

It is revealing that the participants rate well-trained employees last out of the eight factors that contribute to competitive advantage. The participants rated a wide product selection, added-value products, and competitive price as the factors that most contribute to a store's competitive advantage. This led the researcher to conclude that the common strategy of the traditional feed and farm supply store is to stock everything that their customer could want at a price equal to, or below, their competitors' prices, rather than training their employees to sell solutions to customer needs utilizing added-value products. It also caused the researcher to conclude that the traditional feed and farm supply store is commoditizing added-value products by selling on price rather than selling the value of the product.

As a store's annual gross sales increase the store manager's perception of the contribution of added value products and well trained employees to the store's competitive advantage increases. Further analysis revealed that as the age of the store manager increases, the perception of the contribution of added value products and well trained employees decrease.

### **Research Objective Two**

Objective two was to describe feed and farm supply store managers' perception of employee training's contribution to their firm's competitive advantage.

Eighty-nine percent of the respondents believe that employee training contributes to the overall competitive advantage of the business. The study participants perceived that employee training improves customer satisfaction (97%), contributes to business growth (94%), improves productivity (92%), increases profits (91%), increases customer loyalty (88%), improves employee attitudes (88%), and changes employee behaviors (86%).

There is a significant relationship between the number of workers employed by a business and the manager's perception of the value of employee training. As the number of workers employed by the business increases so does the manager's perception of employee training as a contributor to the overall competitiveness of the business, to growth of the business, to the profitability of the business, and to improved customer satisfaction with the business.

### **Research Objective Three**

The third objective of the study was to identify barriers to employee training in feed and farm supply stores.

While feed and farm supply store managers agree that employee training is beneficial to their business, they encounter many obstacles that limit or prevent engagement in employee training activities. Eighty percent of the respondents indicated

that not being able to see immediate results from training efforts is the primary barrier to engaging in employee training. Additionally, 77% perceive that the cost of training is greater than the value of the benefits received from training their employees.

Employees in these firms perform a multitude of distinctively different tasks and when key personnel are away from work, difficulties are created that put undue hardship on the remaining employees and seventy-five percent of the respondents report a reluctance to send employees away from the store to engage in formal training programs.

In addition, feed and farm supply store managers cite distances that they have to send employees for training, the costs involved in training employees, and lack of training programs relevant to their needs as obstacles to training in their businesses.

#### **Research Objective Four**

Objective four was to determine Internet availability and its potential use as a method of delivering employee training in feed and farm supply stores.

Eighty-five percent of the participants report that there is a computer in their store, and 81% report internet availability within their store.

Sixty-five percent of the respondents indicate that their employees have adequate computer skills to participate in online training programs. Another 30% indicate that their employees have novice computer skills but are trainable. Only five percent of the respondents feel that their employees cannot be trained to use the computer for online training programs.



### **Research Objective Five**

Objective five was to describe the willingness of feed and farm supply store managers to engage their employees in training delivered via the Internet.

Eighty-eight percent of the participants indicated a willingness to allow their employees to use the store's computers and Internet access for training purposes. Ninety-two percent of the respondents indicated that they would encourage their employees to participate in online training programs and 74% are willing to allow their employees to engage in online training during regular business hours. Sixty-six percent will pay their employees' registration fees for online training courses. However, given the high rate of support for online training expressed in the study, it is possible that even more of the store managers may be willing to pay the cost of online training programs for their employees once they have examined the content of industry specific online training programs.

### **Recommendations for Action**

In general, managers of feed and farm supply stores recognize that employee training contributes value to the business. However, they rank employee training lower than other factors that contribute to the competitive advantage of the business, and it can be concluded that they do not understand the contribution of employee training in building competitiveness through other factors such as friendly atmosphere, good customer service, and appearance of the store. Therefore, managers of feed and farm supply stores need to be made aware of the importance of employee training and the role

that employee training plays in improving customer satisfaction with the business, developing customer loyalty, and reducing employee turnover.

These managers recognize that their employees need training in order to keep the stores competitive as they move forward in a rapidly changing, competitive environment. Based on the results of this study, it is recommended that Internet based training programs for feed and farm supply store employees be developed for delivery to participants in this sector of the agribusiness industry.

The technology is available in most feed and farm supply stores to accommodate Internet based training programs and managers in this sector of agribusiness exhibit a willingness to invest dollars, resources, and employee time in Internet based training that is applicable to their business.

Training programs in the areas of sales skills, communication skills, product knowledge, and technical knowledge, time management, retail merchandising, and business management are of significant interest to feed and farm supply store managers.

### **Recommendations for Future Research**

In conducting this research study, several questions surfaced related to feed and farm supply store management that merit further examination, including:

1. Are traditional feed and farm supply store owners profit maximizers or are they maximizing their satisfaction through the lifestyle associated with this type of business?

2. Are these small agribusinesses unique within the business environment in which they operate and are the natural, societal, and structural factors influencing these firms significantly different from small firms in non-agriculture industries?
3. Does a causal relationship exist between the competitive characteristics of a store's employees and that store's ability to charge higher prices than their competitors?
4. What is the return on investment in training programs to feed and farm supply businesses?
5. What is the efficiency and effectiveness of training programs or feed and farm supply businesses delivered online?
6. What is the length of tenure of trained employees compared to employees that do not receive training?

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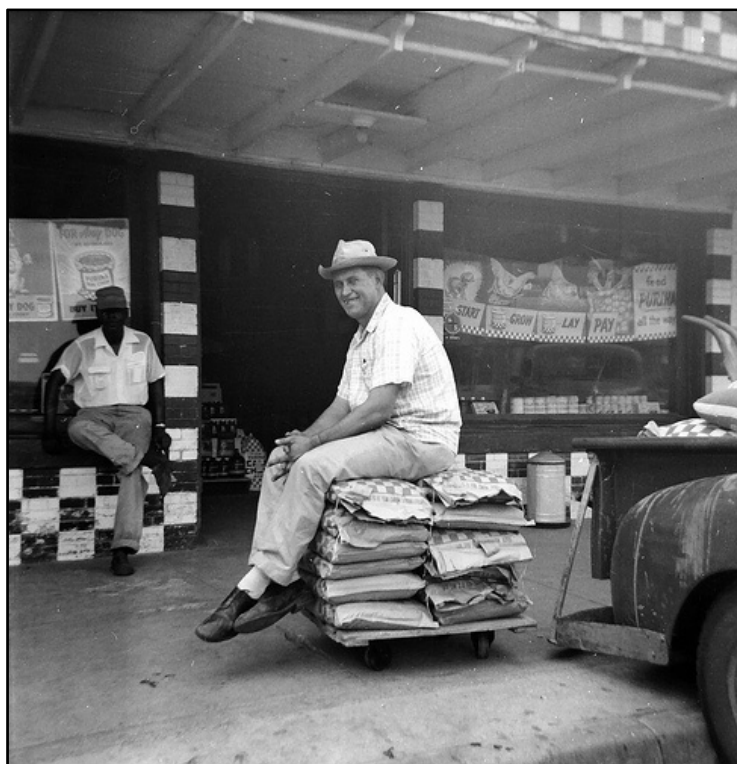
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**APPENDIX A**  
**QUESTIONNAIRE**

## Feed and Farm Supply Store Managers' Perception of Employee Training as a Contributor to Competitive Advantage



*A Study conducted by the Center for Equine Business Studies and the Department of Agricultural Economics at Texas A&M University*



The feed and farm supply store business in Texas is changing. More people are seeking country lifestyles on small tracts of agricultural land; commercial producers are growing larger in size and they often bypass the local feed and farm supply store, conducting business directly with manufacturers of needed products and supplies; and mass merchandisers such as Tractor Supply Company are increasing their presence in this market. Feed and farm supply stores that have operated successfully for years are experiencing difficult times and are seeking strategies for survival.

Research indicates that training of employees is a means of developing a competitive advantage in small businesses. However, relatively little research has been conducted to determine if managers of small agribusinesses perceive that an investment in employee training contributes to the success of the business.

Understanding the environment in which you operate, the training needs of your business, and your perception of the value of employee training will enable the Center for Equine Business Studies and the Department of Agricultural Economics at Texas A&M University to better meet your needs.

A random sample of managers of feed and farm supply stores in Texas are being asked to participate in this study. The following questionnaire has been designed to collect descriptive information about your business, the market conditions in which you operate, your perception of the value of training, obstacles to training in your business, and computer and Internet availability in your store.

This survey is voluntary. Your answers are completely confidential and will be released only as summaries in which no individual answers can be identified. When you return your completed questionnaire, your name will be deleted from the mailing list and never connected to your answers in any way.

We hope that you will take a few minutes to help with this study. We have enclosed a stamped and addressed return envelope for your convenience. Feel free to call me at (979) 845-3805 if you have any questions regarding this study.

Thank you in advance for your assistance.

*Clark Springfield*

Clark Springfield  
Department of Agricultural Economics  
Texas A&M University

**SECTION 1 – In this section we will ask questions that will help us better understand your employees, your opinions regarding employee training, barriers to training in your store, and training needs in your store**

1. **Which of the following give you the most challenges in managing your business?**  
(select only one )

- 
- Understanding IRS forms and regulations
- Complying with environmental laws
- Taking time off from the business
- Keeping all of my customers happy
- Training my employees
- 

2. **Would your customers say that your employees are better, worse, or about the same as your primary competitor's employees in the following areas?**

	Worse	About the same	Better
Ability to help solve problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Attitude	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Friendliness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Product knowledge	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Technical knowledge	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Level of training	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. Do you agree with the following statements about employees in your business

	Strongly Disagree	Disagree	Agree	Strongly Agree	No Opinion
Each employee performs a variety of distinctly different tasks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Much of my time is spent correcting employee mistakes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our business has a high percentage of older employees	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our employees have the skills needed to handle the challenges of <b>today</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our employees have the skills needed to handle the challenges of <b>tomorrow</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our employees need training to help us stay competitive with the competition	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The level of technical and specialized skills needed by our employees is increasing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. Please indicate your agreement with the following statements regarding employee training in your store.

	Strongly Disagree	Disagree	Agree	Strongly Agree	No Opinion
We have tasks that require training	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our business has a dedicated training manager	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our business has a training budget	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our business has a history of training employees	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our business has a written plan for training employees	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. Please indicate your agreement with the following statements regarding the benefits of employee training.

	Strongly Disagree	Disagree	Agree	Strongly Agree	No Opinion
Employee training changes employee behaviors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Employee training contributes to business growth	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Employee training improves customer satisfaction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Employee training improves employee attitudes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Employee training improves productivity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Employee training increases a store's competitive advantage	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Employee training increases a store's profits	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Employee training increases customer loyalty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Employee training increases job satisfaction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Employee training reduces employee absenteeism	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Employee training reduces employee turnover	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. How often do you use the following resources to train your employees?

	Never	Occasionally	Frequently
Seminars	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Short Courses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Formal training here in the store	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Formal training outside of the store	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Vendors and suppliers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Training delivered over the internet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7. Please indicate your agreement that your employees need training in the following areas.

	Strongly Disagree	Disagree	Agree	Strongly Agree	No Opinion
Product knowledge	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Technical knowledge (animal nutrition, horticulture, wildlife management, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Retail merchandising	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sales skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Communication skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Time management skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Business management skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Marketing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Accounting and finance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Entrepreneurship	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

8. Please indicate your agreement that the following barriers or obstacles prevent you from starting, continuing, or completing employee training in your store.

	Strongly Disagree	Disagree	Agree	Strongly Agree	No Opinion
Cannot see immediate results	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cost is greater than the benefit	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Difficulties created when key personnel are away from the job	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Distances we have to travel to attend training	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Employees not interested	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Financial cost	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
High rate of employee turnover	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of employee appreciation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of relevant training courses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Poor return on investment in training	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**SECTION 2 – In this section we will ask questions that will help us better understand the computer and Internet technology that is available in your store**

9. **Is there a computer in your store?**

- Yes
- No (If you do not have a computer, proceed to Question 14)

10. **Does your store have Internet access? (select all that apply )**

- No (If you do not have Internet access, proceed to Question 14)
- Yes – Dial Up (standard telephone line)
- Yes – Broadband (DSL enabled phone line)
- Yes – Broadband (cable modem)
- Yes – Broadband (wireless)
- Yes – Broadband (satellite dish)
- Yes – Broadband (T-1/fiber optic)
- Yes - Other
- Yes – But I do not know what kind of connection

11. **If you have a computer and Internet access at your store, are you willing to allow employees to use them for training purposes?**

- Yes
- No – proceed to question 14

12. **If high quality, reasonably priced, self-paced training programs that are relevant to your business were available on the Internet, would you**

	Yes	No	No Opinion
Allow employees to complete the training during regular work hours?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Encourage your employees to participate in the training?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pay employees' enrollment fees to participate in the training?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

13. **How would you rate your *average* employee's competence with computers?**

- Novice (very limited knowledge and experience with computers) and **NOT** trainable
- Novice (very limited knowledge and experience with computers) but trainable
- Average (intermediate knowledge and experience with computers)
- Expert (advanced user with a lot of computer experience)

**SECTION 3 – The following questions will help us better understand the market in which you operate**

14. **How would you compare the volume of business in your store to other stores in your market?** (check only one)

- Less than average
- Average
- More than average

15. **Do you agree that the following items provide stores in your market a competitive advantage?**

	Strongly Disagree	Disagree	Agree	Strongly Agree	No Opinion
Added value products	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Appearance of the store	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Competitive price	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Friendly atmosphere	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Good customer service	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Product quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Well trained employees	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wide product selection	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

16. **Please indicate your agreement with the following statements regarding your customers.**

	Strongly Disagree	Disagree	Agree	Strongly Agree	No Opinion
Many people have moved into my market within the last 10 years	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Customers generally know what they <b>want</b> when they come into the store	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Customers generally know what they <b>need</b> when they come into the store	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Customers rely on this store for solutions to their problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Customers are loyal to this store	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

17. Please indicate your agreement with the following statements about trends in competition in your market over the past ten years.

	Strongly Disagree	Disagree	Agree	Strongly Agree	No Opinion
One or more of my competitors has lowered their margins/markup/prices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
One or more aggressive competitors have opened stores in my market	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A mass merchandiser such as Tractor Supply has opened a store in my market	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
One or more of my competitors has expanded their selection of merchandise	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
One or more of my competitors are open late hours on weekdays	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
One or more of my competitors are open late hours on Saturday	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
One or more of my competitors is now open on Sunday	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

18. On average, when compared to your primary competitor(s), are your prices

<input type="radio"/> Higher
<input type="radio"/> About the same
<input type="radio"/> Lower

19. How many primary competitors are in your immediate trade area? \_\_\_\_\_



**SECTION 4 – In this section we will ask questions that will help us better understand your business and recent trends in your business.**

20. Which of the following **BEST** describes your business? (check only one)

- Farm Supply Store
- Farm and Ranch Supply Store
- Feed Store
- Fleet and Farm Store
- General Store
- Hardware Store
- Lawn and Garden Center
- Lumber Yard/Building Center
- Ranch Supply Store
- Tack Shop
- Western Wear Store

21. Describe the product mix of your store

**Part 1** - In the first column, select all of the product categories that you consider to be a core part of your overall business. Core products contribute significantly to your business.

**Part 2** - In the second column, select only that product category that you consider the most important to your business. (check only one)

PRODUCT CATEGORIES	PART 1	PART 2
	Core products (check all that apply)	Most important product category (check only one)
Ag Chemicals	<input type="checkbox"/>	<input type="radio"/>
Animal Health	<input type="checkbox"/>	<input type="radio"/>
Clothing and Apparel	<input type="checkbox"/>	<input type="radio"/>
Equipment (Tractors, Trailers, etc.)	<input type="checkbox"/>	<input type="radio"/>
Feed	<input type="checkbox"/>	<input type="radio"/>
Fencing	<input type="checkbox"/>	<input type="radio"/>
Fertilizer	<input type="checkbox"/>	<input type="radio"/>
Gifts	<input type="checkbox"/>	<input type="radio"/>
Hardware	<input type="checkbox"/>	<input type="radio"/>
Home Furnishings	<input type="checkbox"/>	<input type="radio"/>
Lawn and Garden	<input type="checkbox"/>	<input type="radio"/>
Livestock Supply	<input type="checkbox"/>	<input type="radio"/>
Lumber	<input type="checkbox"/>	<input type="radio"/>
Saddles and Tack	<input type="checkbox"/>	<input type="radio"/>
Tractor and Automotive Parts	<input type="checkbox"/>	<input type="radio"/>

22. What sales trends have you observed for the following product categories over the last ten years?

PRODUCT CATEGORIES	Increased	Stayed about the same	Decreased	Do not carry and have never carried
Ag Chemicals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Animal Health	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Clothing and Apparel	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Equipment (Tractors, Trailers, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Feed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fencing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fertilizer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gifts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hardware	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Home Furnishings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lawn and Garden	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Livestock Supply	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lumber	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Saddles and Tack	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tractor and Automotive Parts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

23. Please indicate your agreement that the following statements describe your store.

	Strongly Disagree	Disagree	Agree	Strongly Agree	No Opinion
We are competitive with mass merchandisers such as Tractor Supply Co	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We can survive changing market conditions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We compete well against other stores in the market	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We are experiencing new customer growth	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We are financially successful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This store is well established in the community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

24. **What is the legal structure of this business?** (*check only one*)

- Cooperative
- Corporation
- Partnership
- Sole Proprietorship

25. **Is your store part of a multi-store operation?**

- Yes
- No (*if this is a single store operation, proceed to Question 27*)

26. **How many retail stores are operated by the parent company of this business?** \_\_\_\_\_

27. **How many full-time employees does your store employ?** \_\_\_\_\_

28. **How many part-time employees does your store employ?** \_\_\_\_\_

29. **How many years has your store been in operation?** \_\_\_\_\_

30. **What are your approximate annual gross dollar sales?**

\$ \_\_\_\_\_

**SECTION 5 – In this section we will ask questions that will help us better understand you and your background**

31. **Which title best describes your work position and responsibilities?**

- Owner
- General Manager
- Operations Manager
- Department Manager
- Sales Manager
- Accountant
- Sales Person

32. **What is your highest level of education?**

- No high school diploma
- High school diploma or GED
- Some college courses
- Associates degree
- Bachelors degree
- Master's degree
- Doctorate

33. **What is your gender?**

- Female
- Male

34. **What is your age?** \_\_\_\_\_

35. Thank you for taking the time to complete the questionnaire. Your assistance in providing this information is very much appreciated. If you feel that there is anything else you would like to tell us about this study, please do so in the space provided below.

Please return your completed questionnaire in the envelope provided to:

Clark Springfield  
Center for Equine Business Studies  
Department of Agricultural Economics  
Texas A&M University  
2124 TAMU  
College Station, TX 77842

***THANK YOU!***

**APPENDIX B**  
**PARTICIPANT PRE-NOTICE LETTER**

May 07, 2008

Store Name  
Address 1  
City, State, Zip

Dear Store Manager,

In a few days, you will receive a request in the mail asking you to fill out a brief questionnaire for an important research project being conducted by the Center for Equine Business Studies and the Department of Agricultural Economics at Texas A&M University.

The purpose of this study is to assess the perception held by managers of feed and farm supply stores regarding the contribution of employee training to the competitiveness of their business. The questionnaire will also ask for information regarding the market environment in which you operate, obstacles to training in your store, computer and Internet access in your store, and your attitude toward enrolling your employees in Internet based training programs.

This letter is to inform you in advance that you have been selected as part of our study. This study is an important one that will help improve the competitiveness of feed and farm supply stores in the future, and it will enable Texas A&M University and others to better respond to your needs.

If you would prefer to complete the survey electronically, the questionnaire is located online at:

[http://agecon2.tamu.edu/surveys/Training/Training\\_Consent\\_Page.html](http://agecon2.tamu.edu/surveys/Training/Training_Consent_Page.html)

Use the pass code **UNIQUE PW** to access the questionnaire online.

Thank you for your time and participation in this study. It is only with the generous help of people like you that this research can be successful.

Respectfully,

Clark Springfield  
Department of Agricultural Economics  
Texas A&M University

**APPENDIX C**  
**COVER LETTER**



May 12, 2008

Store Name  
Address 1  
City, State, Zip

Dear Store Manager,

I am writing to ask you to fill out the enclosed questionnaire for a research study being conducted by the Department of Agricultural Economics at Texas A&M University. The purpose of this study is to help us better understand the perceptions held by feed and farm supply store managers regarding the contribution of employee training to the competitiveness of their business. Results from the study will allow Texas A&M University to better develop training programs that contribute to agribusinesses ability to stay competitive and stay in business in a rapidly changing market.

Your answers are completely confidential and will be released only as summaries in which no individual's answers can be identified. When you return your completed questionnaire, your name will be deleted from the mailing list and never connected to your answers in any way. This survey is voluntary. However, we hope that you will take a few minutes to share your opinions about employee training in feed and farm supply stores. If for some reason you prefer not to respond, please let me know by returning the blank questionnaire in the enclosed stamped envelope.

If you prefer to complete the survey electronically, the questionnaire is located online at:

[http://agecon2.tamu.edu/surveys/Training/Training\\_Consent\\_Page.html](http://agecon2.tamu.edu/surveys/Training/Training_Consent_Page.html)

Use the pass code **UNIQUE PW** to access the questionnaire online.

If you have any questions or comments about this study, please contact me at (979) 845-3805, or you can email me at [clarkspringfield@tamu.edu](mailto:clarkspringfield@tamu.edu).

Thank you for your time and participation in this study.

Respectfully,

Clark Springfield  
Department of Agricultural Economics  
Texas A&M University

**APPENDIX D**  
**THANK YOU/REMINDER POSTCARD**

May 26, 2008

In the past few days you received a questionnaire seeking your opinions regarding employee training in feed and farm supply stores.

If you have already completed and returned the questionnaire, please accept my heartfelt thanks. If not, please consider doing so at your earliest convenience.

If you prefer to complete the survey electronically, use password **UNIQUE PW** to access the survey at:

**[http://agecon2.tamu.edu/surveys/Training/Training\\_Consent\\_Page.html](http://agecon2.tamu.edu/surveys/Training/Training_Consent_Page.html)**

If you did not receive a questionnaire, or if it was lost or misplaced, please contact me at (979) 845-3805, or by email [clarkspringfield@tamu.edu](mailto:clarkspringfield@tamu.edu), and another questionnaire will be sent to you today.

**APPENDIX E**  
**SECOND COVER LETTER**

June 04, 2008

Store Name  
Address  
City, State, Zip

Dear Store Manager,

A few weeks ago, I sent a questionnaire to you that asked about your perceptions of employee training in feed and farm supply stores. To the best of our knowledge, it has not yet been returned.

I am writing again because of the importance that your questionnaire has for helping to get accurate results. Although we sent questionnaires to feed and farm supply store managers across the state, it is by hearing from nearly everyone selected for the study that we can be sure that the results are accurate.

Results from the study will allow Texas A&M University and others to better develop educational materials that contribute to agribusinesses ability to stay competitive in a rapidly changing market.

Your answers are confidential and will never be passed on to anyone else. They will be released only as summaries of all survey respondents' answers in which no individual answers can be identified.

I hope that you will fill out and return the questionnaire at your earliest convenience. If for any reason you prefer not to participate, please let me know by returning a note or the blank questionnaire in the enclosed stamped envelope.

If you prefer to complete the survey electronically, use password **UNIQUE PQ** to access the survey at:

**[http://agecon2.tamu.edu/surveys/Training/Training\\_Consent\\_Page.html](http://agecon2.tamu.edu/surveys/Training/Training_Consent_Page.html)**

If you have any questions or comments about this study, please call me at (979) 845-3805, or you can email me at [clarkspringfield@tamu.edu](mailto:clarkspringfield@tamu.edu).

Respectfully,

Clark Springfield  
Department of Agricultural Economics  
Texas A&M University

**APPENDIX F**

**FINAL THANK YOU/REMINDER POSTCARD**

During the past few weeks you have been sent several mailings about an important research study being conducted regarding the perceptions held by managers of feed and farm supply stores about employee training in their stores. This study is drawing to a close and it is imperative that we receive everyone's opinions. It is only by hearing from nearly everyone in the study that we can be sure that the results are truly representative.

If you could please take the time today to share your views and experiences with us, we would greatly appreciate it. If you have already completed and returned the questionnaire, please accept my heartfelt thanks. If not, please consider doing so at your earliest convenience.

If you prefer to complete the survey electronically, use password «**PW**» to access the survey at: [http://agecon2.tamu.edu/surveys/Training/Training\\_Consent\\_Page.html](http://agecon2.tamu.edu/surveys/Training/Training_Consent_Page.html)

If you did not receive a questionnaire, or it was misplaced, please contact me at (979) 845-3805, or email me at [clarkspringfield@tamu.edu](mailto:clarkspringfield@tamu.edu) and another questionnaire will be sent to you today.

**VITA**

Name Henry Clark Springfield III

Address 2701 Pinehurst Circle  
Bryan, TX 77802

Email Address clarkspringfield@tamu.edu

Education Bachelor of Science, Agricultural Economics, Texas A&M University, 1984

Master of Agriculture, Agricultural Economics, Texas A&M University, 1988

Doctor of Philosophy, Agricultural Education, Texas A&M University, 2008