

COMMUNICATING THE DAIRY MESSAGE:
HOW LOCUS OF CONTROL RELATES TO PRODUCER PERCEPTIONS OF
MANDATORY AND ENTREPRENEURIAL MARKETING

By

CARRIE SUMRALL PEDREIRO

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To my parents, David and Jamie, for their support, and my husband Michael, for his constant love and encouragement.

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Abstract of Thesis Presented to the Graduate School
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Carrie Sumrall Pedreiro

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Milk and other dairy products are an essential part of a well-balanced diet. Although the health benefits of dairy products have been demonstrated and recommended by the Department of Health and Human Services, many consumers are choosing other options in the food and beverage categories. The dairy industry uses promotional efforts to educate consumers, thus sustaining the livelihood of its producers. Dairy producers are required to contribute to the marketing of dairy through the checkoff program, and may also choose to promote their farm entrepreneurially. Determining producer perceptions regarding their mandatory promotional investment and perceived need for entrepreneurial marketing as well as how innate traits, such as locus of control, relate to these perceptions is the first step in understanding if current marketing efforts are accurately presenting their commodity.

The purpose of this study was to describe the perceptions of the Florida-based members of Southeast Milk, Incorporated (SMI) dairy cooperative regarding mandatory and entrepreneurial dairy marketing efforts, as well as describe those perceptions in terms of producers' locus of control score. Using a descriptive census survey, this study was guided by the following objectives: 1) to describe Florida cooperative milk producers in terms of their locus of control

score (internal or external) and exposure to mandatory marketing (checkoff) information, 2) describe their perceptions regarding the importance and value of the checkoff program, 3) describe their perceptions regarding the need for, effectiveness of, and levels of participation in entrepreneurial dairy marketing, 4) describe their locus of control score in terms of their perceptions of the value of the checkoff program to the dairy industry and importance of the checkoff to their dairy operation, and 5) describe their locus of control score in terms of their need for and investment in entrepreneurial marketing efforts.

A total of 58 people responded to the survey, for an overall response rate of 49.2%. The majority of respondents (60.3%) agreed the checkoff program had some level of value to their dairy operations. Producers in Florida were more interested in programs that promote the industry image and promotion in grocery stores, rather than sports marketing activities.

Half of the respondents indicated they believed entrepreneurial promotion was necessary, in addition to the checkoff program. However, only 33.9% of producers were investing in such efforts. This study found that farm tours were the entrepreneurial marketing method most valued by producers to promote their farm and their industry. Websites were poorly rated with few producers finding them to be an effective form of industry promotion.

Producers' responses regarding the importance and value of the checkoff program were similar when comparing locus of control scores. However, in terms of entrepreneurial marketing, producers with an internal locus of control were more actively participating in entrepreneurial activities and saw a greater need for such efforts. Producers with an external locus of control were not as active or favorable toward entrepreneurial marketing efforts.

CHAPTER 1 INTRODUCTION

Introduction to the Study

“Milk. It does a body good.” That popular slogan from a 1980s milk advertising campaign speaks volumes of the value of milk and other dairy products to a well balanced diet. King (2005) reported that beyond being a great source of calcium, milk and milk products are rich in a variety of nutrients including potassium, phosphorus, riboflavin, vitamin D, and vitamin B₁₂ among others. Milk has historically been known to reduce the risk of osteoporosis, but new research suggests milk had added effects to combat hypertension, kidney stones, gout, obesity, and type 2 diabetes (King, 2005). The importance of milk has been recognized by the Department of Health and Human Services and the Department of Agriculture with an increase in the recommendation of milk intake from 2 to 3 cups per day in 2005 (King, 2005).

Dairy producers play an important role in the delivery of high quality milk and dairy products to consumers. The milk category alone is dominated by private label, and in 2004, “31.6 percent of milk volume in the grocery channel was accounted for by branded products” (USDA, 2005, p. 52). The low percentage of branded products in this category puts milk at a disadvantage because of the challenges inherent to marketing a category as opposed to a brand (USDA, 2005). Many consumer purchase decisions are made on the basis of the perceived quality of generics. While the unbranded “generic” label is associated with a perceived lower quality, the health benefits and nutritional components of milk are equal to that of a branded product due to the strict governmental standards assigned to this commodity.

Although the nutritional benefits seem evident, and consumers have many fluid milk options in the dairy case, competing fluid markets are presenting consumers with additional choices for refreshment. In an evaluation of consumptive beverages, excluding alcohol, Capps

(2004) reported that from September 2001 to September 2003, milk commanded 26.7% of expenditure share, or portion of the revenue accrued by consumer dollars, while soft drinks controlled 38.7%, juices held 27.1%, and bottled water collected the remaining share with 7.5%. Proactive promotion efforts are essential to the education and recruitment of dairy consumers. The United States Department of Agriculture (USDA) reported that “fluid milk’s loss of market share to other beverages may be due to aggressive marketing by competing beverage producers” (USDA, 2005, p. 36).

Florida cooperative dairy producers are currently investing 15 cents per hundredweight of milk produced to national and local promotion efforts through a mandatory dairy checkoff. This dairy-producer funded checkoff is currently the largest program in the United States with regard to revenue (USDA, 2005). From 2000 to 2004, every dollar invested in generic milk marketing, communicating the value of the commodity milk rather than a specific brand, returned on average \$5.11 in net revenue to the farmer (USDA, 2005).

Marketing involves communicative tactics to attract new business (Stokes, 2000). Entrepreneurial marketing is defined by Collinson and Shaw (2001) to encompass two distinct areas of management: marketing and entrepreneurship. Both categories are “change focused, opportunistic in nature and innovative in their approach to management” (Collinson & Shaw, 2001, p. 761). Entrepreneurial marketing for this study is defined as practices or innovations individual dairy producers fund, in addition to their mandatory investment in the checkoff program, to promote the dairy industry and dairy products. Examples of entrepreneurial dairy marketing include, but are not limited to, farm tours, company newsletters, and farm websites. Entrepreneurial behavior represents a more informal type of marketing, relying on the intuition and energy of an individual (Stokes, 2000).

The Dairy and Tobacco Adjustment Act of 1983 coupled with the Dairy Promotion and Research Order of 1984 authorized a national dairy product promotion, research, and nutrition education program for all dairy producers (DFI, 2006). Funds for promotional programs are generated from producers via mandatory deductions from milk checks termed checkoff dollars. An understanding of Florida cooperative dairy producers' knowledge of promotional programs funded by their mandatory promotion investment and their perceptions of that checkoff program is essential in determining their level of satisfaction with the program. Florida dairy producers' perceptions regarding the value and importance of dairy marketing are fundamental elements in the understanding of current level of satisfaction regarding mandatory promotion investments. In addition, perceptions of and satisfaction with mandatory marketing investments can provide valuable insight to levels of participation in entrepreneurial marketing efforts.

Mueller and Thomas (2000) cite Rotter's locus of control as the theory that "an individual perceives the outcome of an event as being either within or beyond his or her personal control" (p. 56). Locus of control score is defined on an internal-external scale. Internal locus of control and innovativeness are two frequently cited personal traits associated with entrepreneurial potential (Mueller & Thomas, 2000). It is unknown whether dairy producers feel they have control over their mandatory marketing, and a lack of research in the area of entrepreneurial dairy marketing efforts currently exists. One aspect of this study, therefore, was to discover how dairy producers' locus of control score relates to perceptions of the importance and value of current generic milk marketing efforts and the need for and investment in entrepreneurial marketing of dairy. This discovery is the primary step in determining if current generic milk marketing efforts are effective and how dairy producers can contribute to positive promotion of the dairy industry.

The intention of this study was to examine cooperative producers' business values and perceptions of current dairy promotion efforts funded by producer checkoff dollars based on their locus of control score. In addition, this study sought to define current entrepreneurial marketing efforts conducted by producers in addition to their mandatory promotion investment.

Background and Significance of the Problem

Dairy producers in the United States have the option of being independent or become a member of a dairy cooperative, a voluntary association formed by dairy producers. For the purpose of this study, Florida dairy producers who belong to the cooperative Southeast Milk, Incorporated (SMI) were described. Voluntary associations depend on the participant to supply the association's resources (Covington, 1993). Florida dairy producer numbers are continuing to decline while demand for dairy in the Southeast is rising (Sumrall, 2006). By this estimation, supply is decreasing while demand continues to increase. Huffman and Evenson (1989) explain that agriculture in the United States is a highly competitive industry. Environmental challenges such as hot temperatures and high humidity can force Florida producers to move to a cooler, arid climate leaving the state in a supply deficit. This deficit creates further burden on the remaining Florida producers as the cost of importing milk from great distances is prohibitive. Ultimately, the funding for this import bill must come out of the producers' pockets. The net effect of a shrinking local supply of milk is even further negative pressure on the farm price of milk (Sumrall, 2006). To the degree that Florida milk production continues to decline, the economics for those that remain become more difficult. A viable market for Florida milk is apparent, and promoting dairy production and products in the Southeast is important to farmer survival.

With the approval of The Dairy and Tobacco Adjustment Act of 1983 and the Dairy Promotion and Research Order of 1984, a national dairy product promotion, research, and nutrition education program for all dairy producers was created (USDA, 2006). Funding for

such programs is provided by dairy producers. In Florida, each producer pays a mandatory 15 cents per hundredweight of milk via a dairy checkoff program (DFI, 2006). The National Dairy Promotion and Research Board (NDB) was formed in 1984 and is monitored by the USDA. The overarching purpose of the NDB is to strengthen demand for dairy in domestic and foreign markets and is funded via the dairy checkoff (DFI, 2006). The NDB receives five cents per hundredweight of the producer checkoff. Dairy Management Incorporated (DMI) was funded in 1995 and is responsible for the management of domestic and international promotion programs. The majority of dairy promotion in Florida is controlled by Dairy Farmers Incorporated (DFI). DFI, established in 1958, is Florida's milk promotion group created to carry out the promotional programs of DMI. The remaining 10 cents per hundredweight of checkoff dollars invested in Florida is collected by DFI and used to fund dairy promotional and educational programs.

Theoretical Framework

Three theoretical instruments were utilized for this study including locus of control, theory of planned behavior, and integrated marketing communications. These theories will be addressed thoroughly in Chapter 2, however, a short introduction to these frameworks is provided below.

This study examined Florida cooperative milk producers' perceptions of the value and importance of promotion and marketing efforts developed by DFI. Rotter's (1966) locus of control is the personality predisposition that describes an individual's perception of their ability to change a situation. This theory is derived from Rotter's social learning theory, which explains a person's actions are predicted on the basis of values, expectations, and situations a person finds themselves in (Lefcourt, 1982). The theory is based on the internal-external scale that "measures an individual's perception of how much control he is able to exert over the events in his life" (Miller & Toulouse, 1986, p. 1392). Locus of control score was utilized in two contexts for this

study: locus of control and perceptions of the value and importance of mandatory investments, and locus of control and employment of innovative practices and entrepreneurial marketing.

Locus of control score is defined on an internal-external scale. Kaine, Sandall, and Bewsell (2003) reported that “individuals with a strong internal locus of control believe that they can influence many events in their lives” while “individuals with a strong external locus of control believe that there is little they can do to influence events that occur in their lives” (Kaine et al., 2003, p. 2). Mueller and Thomas (2000) cited Rotter’s description of individuals saying an “internal” individual believes they have influence over the outcomes of a situation through ability, effort, or skills, and “externals” believe forces outside their control determine outcomes. This study will categorize producers as “internal” or “external” on the locus of control scale to gain better understanding of how locus of control relates to perceptions of mandatory and entrepreneurial marketing.

The theory of planned behavior (TPB) states that a person’s behavioral intention is fundamentally determined by three factors: the attitude that the person holds towards the behavior, the degree of social pressure felt by the person to perform or not perform the behavior, and the degree of control that the person feels he or she has over performing the behavior. Although dependent on the application, the more positive the attitude and subjective norm with respect to a behavior, and the greater the perceived control, the stronger the intention is to perform the behavior (Ajzen, 1991). Determining Florida cooperative dairy producers’ attitudes towards marketing can contribute to the overall understanding of their behaviors regarding entrepreneurial promotion. The more positive producer attitudes are regarding marketing and promotion, the stronger their intention will be to participate voluntarily in such behaviors. In

addition, the greater the control producers perceive they have, the stronger the intention will be to perform the related behavior.

Integrated marketing communications (IMC) is defined by Grayson (2002) as a cross-functional process for planning, executing, and monitoring brand communications designed to profitably acquire, retain, and grow customers. While Florida cooperative dairy farmers are creating a generic product, the concept of IMC and brand communications can be applied to promote the commodity as a whole. Harris and Strang (1985) suggest that consumers' purchasing decisions for generics are influenced by the perceived quality of generics. Generic milk producers produce milk under the same strict standards as branded milk. The perception of inferior quality of generic products is not accurate in most nonfood items. Holm (2006) acknowledges the primary goal of IMC is to affect the perception of value and behavior through directed communication. Implementing IMC practices on generic operations can improve consumer perception of value on the generic milk category.

Statement of the Problem

The discovery of how the personality theory locus of control relates to an individual's perceptions of current generic milk marketing efforts and personal entrepreneurial marketing of dairy is the primary step in determining if current generic milk marketing efforts are effective and how the cooperative dairy farmer can contribute to positive promotion of the dairy industry. Dairy producers are in the business of producing a food for human consumption and must conform to rigorous environmental procedures, health codes, and standards, and much energy is funneled into the production of fluid milk. Other beverages such as soft drinks and juices are dominating the consumptive beverage market and production challenges create strain on market price. Public perceptions of the dairy industry and dairy production are unknown; however, the

promotion of dairy products can positively promote the industry while educating consumers on the nutritional benefits of dairy.

Purpose and Objectives

The purpose of this study was to describe the relationship between the locus of control score of Floridian members of the SMI dairy cooperative to their business values and perceptions of current dairy promotion efforts funded by producer checkoff dollars (mandatory marketing). In addition, this study described current entrepreneurial marketing efforts conducted by producers and the frequency in which those entrepreneurial efforts occur, as well as the producers' opinions to the usefulness of marketing in addition to their mandatory promotion investment. The study's objectives were as follows:

- Objective 1: To describe Florida cooperative milk producers in terms of their locus of control score, as well as their exposure to mandatory marketing checkoff information.
- Objective 2: To describe Florida cooperative milk producers' perceptions regarding the importance of the mandatory marketing (checkoff) to the dairy industry, as well as their individual operations, and their perceptions of the value of the checkoff program overall.
- Objective 3: To describe Florida cooperative milk producers' perceptions regarding the need for, effectiveness of, levels of participation in, and factors that prevent producers from participating in entrepreneurial dairy marketing.
- Objective 4: To describe Florida cooperative dairy producers' locus of control score in terms of their perceptions of the value of the checkoff program to the dairy industry and importance of the checkoff to their dairy operation.
- Objective 5: To describe Florida cooperative dairy producers' locus of control score in terms of their need for and investment in entrepreneurial marketing efforts.

Operational Definitions

Checkoff. A dairy-producer funded program designed to promote dairy products domestically and internationally.

Consumer. Any individual who purchases milk for consumption.

Cooperative. An entrepreneurial association comprised of dairy farmers who own, operate, and control the business. Members finance the business and share in profits earned in proportion to the volume of milk marketed.

Dairy Farmers Incorporated (DFI). Florida's dairy promotional group designed to enhance the industry's image and increase sales of dairy in the state through advertising, public relations, and education.

Dairy Management Incorporated (DMI). The operating company designed to manage domestic and international dairy promotional programs in the United States.

Entrepreneurial Marketing. Any promotional effort paid for by the dairy producer in addition to their mandatory marketing investment (checkoff) that is designed to promote the dairy industry and its products.

Fluid Milk. The form of milk that is purchased by the dairy cooperative.

Generic Marketing. The promotion of a non-branded commodity.

Generic Milk. Milk produced with no brand affiliation. The term generic milk is applicable to milk collected by a cooperative.

Hundredweight. The measurement of milk, approximately 100 pounds or 11.6 gallons.

National Dairy Promotion and Research Board (NDB). Organization monitored by the United States Department of Agriculture designed to strengthen the demand for dairy products in domestic and foreign markets.

Producer. An individual or group of individuals in the profession of milking dairy cattle.

Limitations to the Study

This study was descriptive in nature and unique to the census population it addressed. Results from this study can not be generalized beyond its population. Additional limitations to this study involve the research method. While a mailed survey method was the most appropriate

for the study's population, Dillman (2007) pointed out this method can create a slower response rate. The length of the survey may affect producers' willingness to participate. Additionally, there is a higher cost associated with the administration of a mailed survey as opposed to web-based surveys or interviews. The interpretation of the collected data may allow for researcher bias.

Summary

This chapter offered an introduction to this research study, while providing relevant background. The information presented in this chapter rationalized the need for and relevancy of this study. In addition, this chapter described the purpose and objectives for this study. The framework and history of the cooperative dairy checkoff was also addressed. The next chapter will review and examine pertinent literature conducted in this field.

CHAPTER 2 REVIEW OF THE LITERATURE

Marketing of dairy production and products is essential in the progression of knowledge about dairy production at the consumer level. Florida cooperative dairy producers participate in the mandatory marketing program, also known as the checkoff. The first objective of this study was to describe Florida cooperative milk producers' locus of control score, as well as their exposure to mandatory marketing checkoff information. In addition to the checkoff, some dairy producers choose to participate in innovative ways of promoting their farm or products via entrepreneurial marketing. Morris, Schindehutte, and LaForge (2001) defined entrepreneurial marketing as the term "used as an umbrella to capture conceptualizations of marketing as an innovative, risk-taking, proactive area of managerial responsibility" (p. 1). Therefore, this study sought to identify Florida cooperative milk producers' perceptions regarding the need for entrepreneurial dairy marketing as well as identify and describe their current levels of participation in entrepreneurial marketing efforts.

Another important factor related to producer perceptions and participation levels in marketing is personality. This study explored producers' locus of control score and perceptions about mandatory and entrepreneurial dairy promotion. This study examined three main variables including 1) locus of control, 2) value and importance of the checkoff program, and 3) need for and participation in entrepreneurial dairy marketing.

This chapter presents a review of the relevant literature dealing with the dairy checkoff program, as well as mandatory and entrepreneurial marketing and promotion. This review also focuses on generic advertising and promotion, specifically in the dairy industry. Additionally, emphasis is placed on the relevant literature related to the theoretical framework of this study

which includes locus of control, the theory of planned behavior, and integrated marketing communications.

This chapter is divided into the following main sections: dairy promotion in the United States, marketing and promotion of generic dairy, theoretical framework for the study, and summary.

Dairy Promotion in the United States

History of Dairy Promotion in the United States

Numerous pieces of legislation and various dairy promotion-related associations have provided the blueprint for the development of dairy promotion in the United States. The National Dairy Council (NDC) was founded in 1915 to provide credible, scientific research to the general public regarding dairy products. The American Dairy Association (ADA) was formed in 1940 to focus on domestic dairy sales (DFI, 2006). The Agricultural Marketing Agreement Act of 1937 provided regulatory actions that placed restrictions on the quantity of a commodity that can be sold, limited the grade, size, or quality of the commodity, regulated packaging and container sizes, and provided some limited generic promotion and advertising allowances (Crespi, 2001). In 1970, NDC and ADA merged, forming a federation known as The United Dairy Industry Association (UDIA). This merger sought to centralize state and regional generic producer promotion organizations to more efficiently look after the common good and allow local units to retain authority over local affairs (DFI, 2006). The Dairy Production Stabilization Act of 1983, referred to as the Dairy Act, sought to identify a clear, concise plan for dairy advertising and promotion. The Dairy Act authorized a national producer program designed to promote dairy products, carry out research, and develop nutrition educational programs focused on increasing human consumption of milk and other dairy products while reducing milk surpluses (USDA, 2006).

The Dairy Act receives funding via a mandatory 15-cent-per-hundredweight assessment, also referred to as the dairy checkoff program, on milk produced and commercially marketed by dairy farmers in the United States (USDA, 2006). The National Dairy Promotion and Research Board (NDB) was formed in 1984 by Congress in response to the Dairy Act. The NDB, monitored by the United States Department of Agriculture (USDA), was formed to strengthen the demand for dairy products in domestic and foreign markets and oversees the checkoff program (DFI, 2006). Founded in 1995 by UDIA and NDB, Dairy Management, Incorporated (DMI) was created as the operating company to manage domestic and international dairy promotion programs, leaving them responsible for driving the demand for dairy products produced in the United States (DFI, 2006). Today, the dairy industry continues to have the largest generic promotion program in terms of revenue of any United States agricultural commodity group (Kaiser, 1997).

Florida Dairy Promotion

Most dairy farmers in Florida belong to a dairy cooperative. A dairy cooperative is a business that is owned, operated, and controlled by the dairy producers who benefit from its services (USDA, 2005). The USDA reports members of the cooperatives finance the organization as well as share in the profits it earns “in proportion to the volume of milk they market through the cooperative” (USDA, 2005, p. 1). The last national survey of dairy cooperatives in 2002 reported the nation has 196 dairy cooperatives in 26 states (USDA, 2005). Florida currently has one dairy cooperative based in the state, Southeast Milk, Incorporated (SMI). Members of SMI must contribute 15 cents per hundredweight of all milk produced on their farm to the dairy checkoff program. The producer-funded promotional assessment is divided among federal and qualified local, state, or regional dairy product promotion, research, or nutrition education programs (USDA, 2006). SMI members contribute five cents per

hundredweight of milk to national budgets coordinated by DMI, and the remaining 10 cents per hundredweight provides funding for Dairy Farmers, Incorporated (DFI), Florida's qualified dairy promotion, research, and nutritional program (DFI, 2006).

Marketing and Promotion of Generic Dairy

Overview of Generic Advertising and Promotion

When promoting a homogenous generic product, every producer of a commodity group must be compelled to support a generic advertising program and that advertising must not benefit some growers over others (Crespi, 2001). Crespi (2001) explained "in the absence of a significant market presence, there is no incentive for either an individual producer or a cooperative to engage in advertising because other producers of the same commodity may then free ride upon this advertising" (p. 11).

Generic advertising "promotes the consumption of the general commodity by a cooperative effort of producers" (Blisard, 1999, p. 181). This advertising may be entrepreneurial or mandatory. In the case of the dairy industry, the commodity checkoff program is mandatory. Research regarding the effectiveness of the checkoff program is limited, as most studies are conducted in-house by selected promotion boards resulting in proprietary information. It is difficult to tell if generic advertising influences consumer choices because "little evidence is available since only the two dairy promotion programs require an independent evaluation of the program's effectiveness, which must be delivered to Congress each year" (Blisard, 1999, p. 183). Blisard (1999) concluded that generic advertising did have a positive impact on fluid milk and cheese sales.

Chakravarti and Janiszewski (2004) stated "the legislative goal of generic advertising is to increase the primary demand of a product without influencing the market share of any one producer" (p. 489). The authors further explained that generic advertising is "designed to

enhance category beliefs, increase across category differentiation, and reduce the advertised category's price elasticity" (p. 489). In the case of dairy, generic advertising is used by a cooperative to promote an essentially homogenous product (Blisard, 1998). Blisard (1998) justifies that because generic advertising seeks to promote a general commodity, all producers in the industry benefit from its promotion, including individuals that do not contribute monetarily.

The introduction of generics into the marketplace has intensified the battle for shelf space (Harris & Strang, 1985). While the majority of generics are in the nonfood items category where emphasis on quality may not be high, milk has a heavy presence in the private label market. Many consumer purchase decisions are made on the basis of the perceived quality of generics and "many of the stronger generic categories are characterized by low brand loyalty" (Harris & Strang, 1985, p. 74).

Gherty (1995) warned that success depends on producers' ability to identify who their customers are and what those people need, want, and most importantly, expect. The milk category is dominated by private label, and in 2004, "31.6 percent of milk volume in the grocery channel was accounted for by branded products" (USDA, 2005, p. 52). The low percentage of branded products in this category puts milk at a disadvantage due to the challenges inherent to marketing a category as opposed to a brand (USDA, 2005). "The high share of private label milk reinforces milk's commodity image, making competitive premium-image products more attractive to consumers" (USDA, 2005, p. 52).

However, research has shown that generic dairy advertising has a positive impact on the demand for fluid milk and other dairy products and on farm milk prices (Kaiser & Schmit, 2003). Kaiser and Schmit (2003) reported an increase in the demand for milk at the processor level with an increase in generic milk advertising. The distributional effects of farmer-funded generic dairy

marketing displayed producer welfare gains of around 3.5% of industry revenues for both cheese and fluid milk (Kaiser & Schmit, 2003, p. 299). Kaiser (1997) concluded, “Farmers are receiving a high return on their investment in generic dairy advertising” (p. 311).

Florida Producer Challenges

Chung and Kaiser (2000) stated that regional differences such as climate, management practices, and the price of land exist in agricultural production. Environmental challenges, such as hot temperatures and high humidity, can force Florida producers to move to a cooler, arid climate leaving the state in a supply deficit. In a deficit situation, milk must be brought into the state to make up the supply difference, and the funding for this import bill must come out of the Florida producers' pocket. The net effect of a shrinking local supply of milk is even further negative pressure on the farm price of milk (Sumrall, 2006). Different regions of dairy production will respond differently to the change in the market price of dairy products (Chung & Kaiser, 2000).

Additionally, the supply and demand of milk is counter-cyclical over the course of the year (Hovhannisyan, Urutyan, & Dunn, 2004). Florida producers experience a surplus of milk in the cool, winter months and a deficit in the hot, summer months, causing a fluctuation in importing and exporting milk. From August 5, 2005, to December 16, 2005, the state of Florida had to import milk to meet demand (USDA, 2006). From December 30 to July 15 the state had a surplus exporting fluid milk to other regions of the United States (USDA, 2006).

This study defined four regions of Florida in terms of their saturation of dairy producers. Regions were distinguished using Lafayette county, a popular dairy county, and the separation currently used by marketing professionals (Lussier, personal communication, October 9, 2006). These regions included 1) Panhandle (areas west of Lafayette County); 2) Lafayette County, and

areas north of Interstate 10 (I-10), 3) North Florida: areas north of Interstate 4 (I-4) to I-10, and 4) South Florida: areas south of I-4. Figure 2-1 illustrates those regions in further detail.

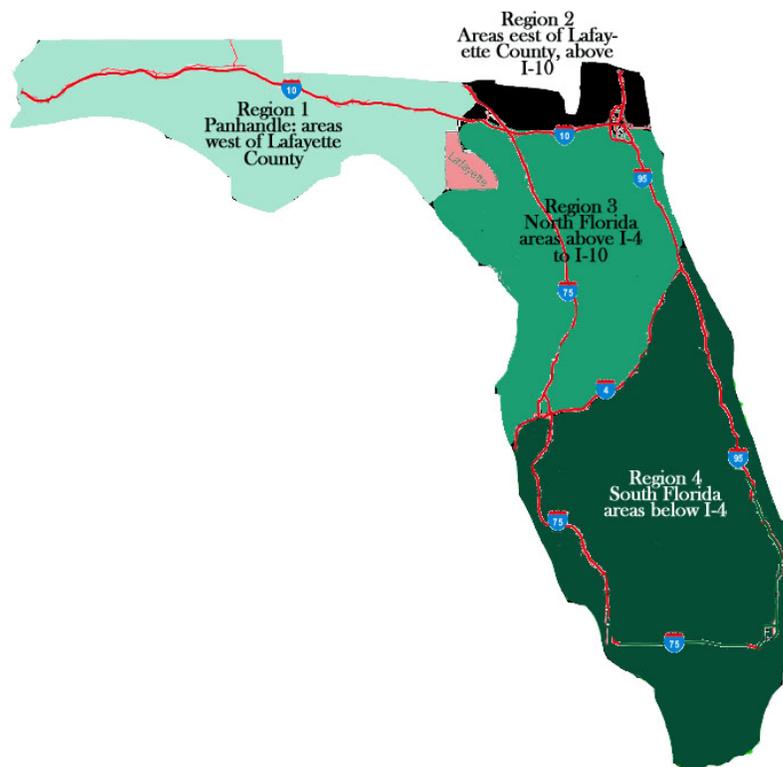


Figure 2-1. Different regions of Florida milk producers.

Mandatory Marketing

Chung and Kaiser (2000) concluded from their research that while generic advertising funded by a checkoff program has positive correlations to overall producer gains, those producer participants do not benefit equally.

Separate from producer promotion investments, the Federal Milk Order (FMO) program assists dairy farmers in marketing their milk. The FMO, instituted by the dairy producer, provides “a means of equally sharing revenues generated by a classified pricing system” where “processors are assured of paying the same minimum price as their competitors for milk used within the same product classification” (Stukenburg, Blayney, & Miller, 2006, p. 1195). Florida

milk producers are under Federal Order 6 and within this order, approximately 88% of all milk goes to Class I. Class I consists of fluid milk products and is the highest priced order (Stukenberg et al., 2006). Figure 2-2 displays the fluctuations in Class I milk price from 1977-2003. Fluctuations in milk price mostly are dependent on utilization of that price class. In times of milk and dairy surpluses, FMO prices can be closely related to support prices, and when “support prices are artificially high, they inflate market prices and federal order prices capture these higher prices” (Stukenberg, 2006).

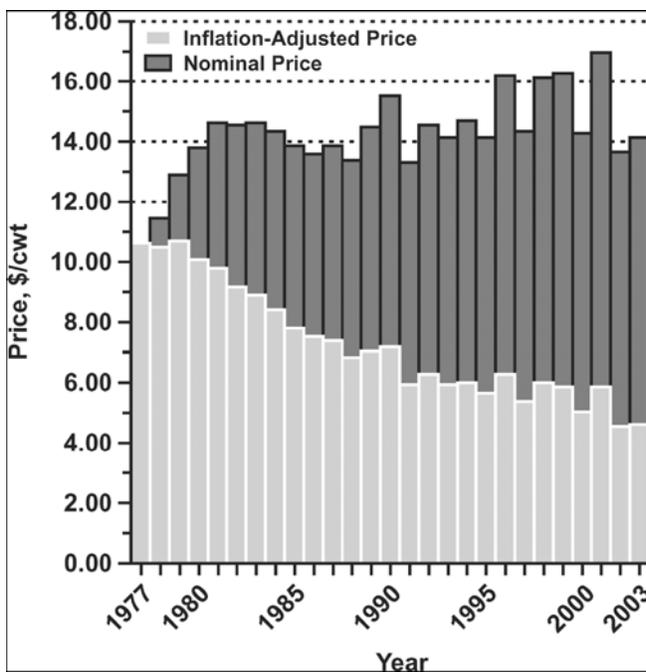


Figure 2-2 Federal milk marketing order Class I prices (annual averages) from 1977-2003.

(Stukenberg et al., 2006)

Dairy producers are competing for market share with various other consumptive beverages. Fluid milk is the third-largest category by volume in its competitive set (USDA, 2005). However, in 2005, every category in this competitive set, with the exclusion of milk and fruit beverages, experienced an increase in sales (USDA, 2006). “At \$150 million in spending in 2004, milk ranked fourth within the competitive set, accounting for less than 10 percent of spending” and while that spending is significant, “milk accounts for approximately 18 percent of

the competitive set volume and thus, remains significantly underrepresented in share of voice” (USDA, 2005, p. 50). Figure 2-3 illustrates both the competitive set volume for 2004 and the media spending by those same categories for 2004. Milk is in a unique situation in its competitive category. Its price continues to increase faster than any other category and its spending for marketing is declining (USDA, 2005). This decline in spending has a negative impact on milk consumption.

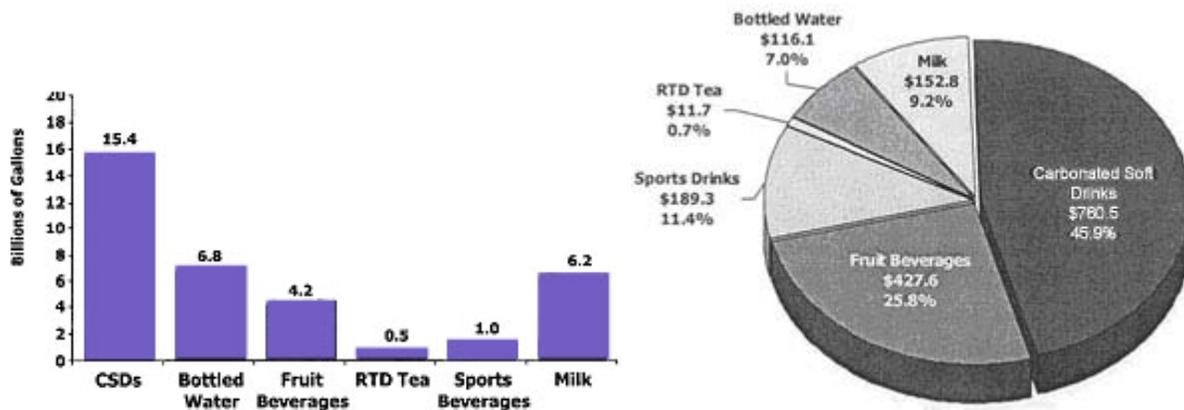


Figure 2-3. Competitive set volume for 2004 vs. media spending by category for 2004 (millions of dollars)

(Stukenberg et al., 2006)

CSDs: Carbonated Soft Drinks

RTD: Ready to Drink

Entrepreneurial Marketing

Entrepreneurial marketing for this study is defined as practices or innovations individual dairy producers fund, in addition to their mandatory investment in the checkoff program, to promote the dairy industry and dairy products. Entrepreneurial behavior represents a more informal type of marketing relying on the intuition and energy of an individual (Stokes, 2000). Stokes (2000) defined entrepreneurs as “innovation-oriented” and often “driven by new ideas and intuitive market feel” (p. 1). Mueller and Thomas (2000) suggested motivations for becoming an entrepreneur can be categorized into either push/pull situational factors or personal

characteristics. Push/pull factors can include dissatisfaction with an aspect of one's business, or frustrations with current situations. Personal characteristics can include personality traits such as one's desire for achievement, or level of innovativeness (Mueller & Thomas, 2000).

Many dairy producers may not feel they have the expertise to formulate an entrepreneurial marketing strategy. Dartt (2001) suggested that many dairy producers are production-oriented and, rather than spending time in a leadership or management role, they are focused more on the technical side of their operations. Many managers are criticized because they lack the ability or are unwilling to consider the variety of strategic options that are available to their business (Gallen, 2006).

Consumer trust is another important factor to consider. Increasingly strong media coverage of food safety can have an effect on the public's perception of animal agriculture. Animal activists have had little influence on demand for animal products, but have increased public concern about food safety (Zimbelman, Wilson, Bennett, & Curtis, 1995). Another factor influencing public perception of agriculture is population. "Because of the decreasing number of people involved in production agriculture, the general public is becoming increasingly more removed from having direct knowledge of farm practices" (Zimbelman et al., 1995, p. 153). However, 93% of Americans questioned in a 1990 American Farm Bureau Federation (AFBF) survey believed that farmers are trustworthy, and 88% agreed that "farmers are doing a good job of producing healthy food" (Zimbelman, 1995, p. 155).

Langinier and Babcock (2005) stated that "consumers are in general less informed than producers about the quality of agricultural goods" (p. 1). Building trust with the public can be effective coming straight from the farmer. Consumers are most likely to seek out information on a topic, in this case dairy production, through communication with a trustworthy source (Yee,

Yeung, & Morris, 2005). Food safety concerns continue to grow and sales are affected if there is a perceived risk to consumer health (Yee et al., 2005). In the case of dairy, consumers purchased less milk with the increased emphasis on bovine growth hormone residues, even though consumers could not detect the residues themselves (Yee et al., 2005). Yee et al. (2005) concluded that “trust could positively influence consumers’ decision on future purchase” (p. 844). They found that providing information was the most important factor in trust building (Yee et al., 2005). One recommendation from the study to build trust with farmers and help foster links with local farmers was the implementation of farm visits or tours to educate consumers about the origins of their food (Yee et al., 2005).

Theoretical Framework for the Study

Locus of Control

Locus of control is a construct that originates from Rotter’s social learning theory, which explains a person’s actions are predicted on the basis of values, expectations, and situations a person finds themselves in (Lefcourt, 1982). The theory is based on the internal-external scale that “measures an individual’s perception of how much control he is able to exert over the events in his life” (Miller & Toulouse, 1986, p. 1392). Rotter developed the construct of generalized expectancies for internal versus external control and explains the “internal versus external control refers to the degree to which persons expect that a reinforcement or an outcome of their behavior is contingent on their own behavior or personal characteristics versus the degree to which persons expect that the reinforcement or outcome is a function of chance, luck, or fate, is under the control of powerful others, or is simply unpredictable” (Rotter, 1990, p. 489).

Entrepreneurial behavior represents a more informal type of marketing relying on the intuition and energy of an individual (Stokes, 2000). Internal locus of control and innovativeness are two frequently cited personal traits associated with entrepreneurial potential (Mueller &

Thomas, 2000). Mueller and Thomas (2000) cited Rotter's locus of control as the theory that "an individual perceives the outcome of an event as being either within or beyond his or her personal control" (p. 56).

Kaine, Sandall, and Bewsell (2003) investigated the relationship between locus of control and agricultural producer propensity to adopt innovations and participate in extension programs. The authors reported that "individuals with a strong internal locus of control believe that they can influence many events in their lives" while "individuals with a strong external locus of control believe that there is little they can do to influence events that occur in their lives" (Kaine et al., 2003, p. 2). The authors deduced that producers with an internal locus of control will be more likely to seek opportunities that would improve their skill base, and producers who measured on the external scale would be less likely to try any new techniques and technologies (p. 2). Results showed that producers with a strong internal locus of control were less likely than other producers to experience low financial performance, more likely to exhibit a high propensity to adopt innovations, and more likely to participate in extension or benchmark programs. Conversely, producers with a strong external locus of control were evaluated to be more likely to experience low financial performance, less likely to exhibit a high propensity to adopt innovations, and less likely to participate in extension or benchmarking programs than other producers (Kaine et al., 2003, p. 9).

Miller and Toulouse (1986) reported locus of control on the basis of strategy, decision making, structure, and performance. Table 2-1 illustrates the expected relationships between Chief Executive Officer (CEO) personality and their organization.

Table 2-1 Expected relationships between CEO personality and organization*

	Flexible Personality	High Need for Achievement	Internal Locus of Control
Strategy	Niche-focussed	Broad Aggressive Marketing	Innovative
Decision Making	Intuitive Short-time horizon Reactive Risk taking	Analytical Long-term planning Proactive Risk aversion	Informal Long-term Proactive Risk neutral
Structure	Informal Unspecialized Much delegation of authority Few controls Few liaison devices	Formal Specialized Little delegation of authority Many controls Many liaison devices	Informal Mixed Much delegation Mixed Mixed
Performance	Successful in small firms and dynamic environments	Successful in large firms and stable environments	Successful in any size firm, but especially so in dynamic environments
Facilitating Conditions: We expect that the relationships between CEO personality and organizational variables will be higher in (a) small organizations, and (b) dynamic environments.			

* The attributes listed are for high scores on the variables in question. For example, the higher the score on CEO flexibility, the more will strategies be focussed, decision making intuitive, and so on.

(Miller & Toulouse, 1986, p. 1392)

Theory of Planned Behavior

The theory of planned behavior (TPB) states that a person's behavioral intention is fundamentally determined by three factors: the attitude that the person holds towards the behavior; the degree of social pressure felt by the person to perform or not perform the behavior; and the degree of control that the person feels he or she has over performing the behavior. Although dependent on the application, the more positive the attitude and subjective norm with respect to a behavior, and the greater the perceived control, the stronger the intention is to perform the behavior (Ajzen, 1991). Determining Florida cooperative dairy producers' attitudes towards marketing can contribute to the overall understanding of their behaviors regarding entrepreneurial promotion. In addition, the greater the control producers perceive they have, the

stronger the intention will be to perform the related behavior. Figure 2-3 presents Ajzen's theory of planned behavior in its most applicable form.

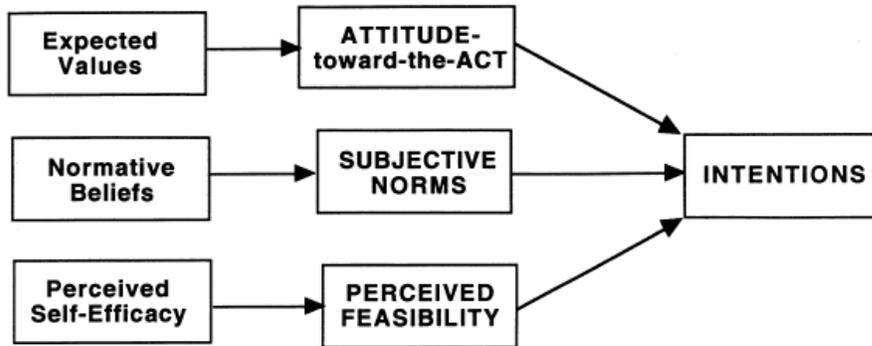


Figure 2-3 Ajzen's theory of planned behavior model.

(Krueger, Reilly, & Carsrud, 2000)

Ajzen's theory of planned behavior model suggests a person's intentions could be a direct result of that individual's attitude toward the act. While it is unknown whether or not dairy producers feel entrepreneurial marketing will benefit their operation, their attitude toward innovation can affect their intentions regarding marketing. Veciana, Aponte, and Urbano (2000) explained Ajzen's attitude toward the act "refers to the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question" (p. 168). Following this definition, a cooperative dairy producer's appraisal of entrepreneurial marketing can affect his/her intentions depending on if that producer is favorable or unfavorable to the activity. A more favorable opinion would suggest a higher incidence of participation in entrepreneurial activity, whereas an unfavorable opinion would lessen that participation.

Perceived self-efficacy is another important component of Ajzen's model with respect to this study. Bandura (1977) defined self-efficacy as "the conviction that one can successfully execute the behavior required" (p. 193). Shepherd and Kreuger (2002) further explained that "high self-efficacy leads to increased initiative and persistence and thus improved performance;

low self-efficacy reduces effort and thus performance” (p. 171). Following Ajzen’s model, perceived self-efficacy leads to a perceived feasibility of the behavior, and finally the intention to perform that behavior. Dairy producers with high self-efficacy would believe that entrepreneurial marketing is more feasible, therefore participating more regularly.

Integrated Marketing Communications

Communication is comprised of sound, image, and writing and all three of these factors have been dependent on technological development (Holm, 2006). Holm further notes that “communication is the process by which individuals share meaning” and “each participant must fully understand the meaning of the other’s communication” (p. 29). Affecting the perception of behavior and value through directed communication is the overarching goal of integrated marketing communications (IMC) (Holm, 2006).

Hutton (1996) explained IMC has long-term implications to help create communications that help create relationships instead of simply persuading potential buyers. Creating a website is a form of entrepreneurial marketing as defined by this study. While cooperative dairy farmers without a brand presence are not as concerned with brand loyalty, commodity loyalty is an issue of concern. Public awareness of a commodity, its production, and benefits is important to increasing sales in that commodity area. An Internet presence can be a crucial part of the integrated marketing process. The Internet is a “totally controllable media” where Web presence plays a “major role” especially when “promoting messages a company wants to impart to its customers” (Harridge-March, 2004, p. 297).

While cooperative dairy farmers are selling a generic, un-branded milk product, the public consumer still must be convinced of a product’s quality before purchase, therefore making marketing a concern. Proctor (1999) explained a total marketing communications strategy is crucial when identifying the target audience and attracting customers to products or services.

Sharma and Sheth (2004) stated “The Web is growing at a dramatic pace and is significantly impacting customer and business market behaviors” (p. 696). Although cooperative dairy farmers do not have a specific brand, the Web can have an impact on a consumer’s decision to buy dairy products.

Summary

This chapter has reviewed literature related to generic dairy promotion, both mandatory and entrepreneurial in nature. The literature presented focused on the evolution of the dairy promotion, how it is funded, and how producers participate. Additionally, an overview of relevant literature related to the general topic of generic advertising and promotion was presented, and more specifically, how dairy is promoted generically. Entrepreneurial marketing issues in literature were addressed and how managerial attitudes and behaviors can influence these decisions. A focus on relevant literature related to the theoretical framework of the study including locus of control, theory of planned behavior, and integrated marketing communications was presented.

CHAPTER 3 METHODOLOGY

Introduction

The purpose of this study was to describe the perceptions of the Florida-based members of Southeast Milk, Incorporated (SMI) dairy cooperative regarding the promotion efforts used to market their commodity, as well as explore producers' locus of control score and their perceptions of dairy marketing efforts. A producer's placement on the internal-external locus of control scale was examined to explain the relationship of that measurement of personality to the producer's perceptions of current mandatory marketing efforts funded by producer checkoff dollars. In addition, this study described current entrepreneurial marketing efforts conducted by producers, the frequency in which those entrepreneurial efforts occur, and producers' perceptions as to the usefulness of marketing, in addition to their mandatory promotion investment. Those entrepreneurial marketing perceptions and perceptions were again related to producers' locus of control scale placement.

This chapter describes the methodology used to address the research objectives presented in this study. The research objectives were as follows:

- Objective 1: To describe Florida cooperative milk producers in terms of their locus of control score, as well as their exposure to mandatory marketing checkoff information.
- Objective 2: To describe Florida cooperative milk producers' perceptions regarding the importance of the mandatory marketing (checkoff) to the dairy industry, as well as their individual operations, and their perceptions of the value of the checkoff program overall.
- Objective 3: To describe Florida cooperative milk producers' perceptions regarding the need for, effectiveness of, levels of participation in, and factors that prevent producers from participating in entrepreneurial dairy marketing.
- Objective 4: To describe Florida cooperative dairy producers' locus of control score in terms of their perceptions of the value of the checkoff program to the dairy industry and importance of the checkoff to their dairy operation.

- Objective 5: To describe Florida cooperative dairy producers' locus of control score in terms of their need for and investment in entrepreneurial marketing efforts.

This chapter is organized by research design, subject selection, instrumentation, data collection, data analysis, reliability and validity, and summary.

Research Design

The research design for this study was a descriptive survey using a census population of all Florida dairy producers (N=118) belonging to the dairy cooperative Southeast Milk, Incorporated (SMI). The survey was distributed via mail using Dillman's Tailored Design Method (Dillman, 2007). The survey instrument was mailed to all members of the population of SMI dairy producers.

Population

The population for the study was comprised of a census of Florida dairy producers (N=118) who are currently members of the SMI dairy cooperative. At the time of data collection, SMI had 307 members covering Florida, and parts of Georgia, Alabama, Tennessee, Louisiana, and South Carolina (Covington, personal communication, August 28, 2006). Because the largest percentage of membership in the SMI cooperative was represented by the state of Florida, and every state's regional promotional programs are unique, the Florida membership was selected as the population for the study. The researcher obtained a current list of Florida SMI members when preparation of the survey instrument was complete and ready for distribution.

Instrumentation

Instrumentation consisted of a survey instrument comprised of 25 questions within four sections including 1) checkoff/mandatory marketing, 2) entrepreneurial marketing, 3) locus of

control, and 4) demographic questions (Appendix C). The purpose of the questionnaire was to identify information relevant to the research objectives defined at the beginning of this chapter.

Part one, the mandatory marketing/checkoff section, included nine questions adapted from a survey written by Dairy Management Incorporated that was designed to determine producer perceptions of the checkoff program (Bavido, personal communication, October 27, 2006). Question one included 10 items that measured respondents' perceptions on the importance of promotional programs funded by the checkoff with regard to the dairy industry, as well as the respondents' individual operations. The response scale for these items was designed using a 1 to 5 Likert-like scale with 1=not important to 5=very important. Question two named specific promotional programs in Florida managed by Dairy Farmers Incorporated (DFI) and sought to identify respondents' perceptions on the value of those programs. This question included seven items that utilized a Likert-like response scale using 1=not valuable to 5=very valuable. Question three included 11 items that questioned respondents on how strongly they agreed or disagreed that those items contributed to formulating respondents' perceptions on the checkoff program's level of success. This question utilized a Likert-like response scale using 1=strongly disagree to 5=strongly agree. Questions four through seven asked more specific questions regarding dairy farm profitability, how respondents felt regarding competing beverage markets, the value of the checkoff program to the dairy industry, and the importance of the overall checkoff program to respondents' individual operations. Each of these questions utilized a Likert-like response scale. Question eight identified how respondents receive information about DFI's programs. Question nine identified how many meetings respondents attended where the checkoff program was discussed.

Part two, entrepreneurial marketing, was created to assess respondents' perceptions and participation in entrepreneurial marketing. This section included seven questions, which corresponded to questions 10-16 on the survey. Question 10 included five items. Four known entrepreneurial marketing efforts including farm/company websites, farm tours, farm/employee/company newsletters, and farm brand/logos were listed, and respondents marked "yes" or "no", depending on their participation in each item. The fifth item provided space for respondents to identify other entrepreneurial efforts not listed within the question. Questions 11 and 12 were also "yes/no" responses and measured respondents' willingness to invest in the promotion of their farm, in addition to mandatory investments, and respondents' opinion on whether it is necessary to promote their farms in addition to mandatory promotional efforts. Questions 13 through 15 utilized a Likert-like response scale with 1=strongly disagree to 5=strongly agree. These questions evaluated respondents' perceptions regarding websites as an effective way to generate interest in the dairy industry, farm tours as an effective way to generate interest in dairy production, and newsletters as a beneficial component to a dairy operation, respectively. The last question in this section utilized a "yes/no" format to identify what resources respondents felt they needed in order to participate in more entrepreneurial efforts. This question incorporated five items including time, money, people, training, and an "other" category for respondents to include resources not mentioned in the question.

Section 3, locus of control, included two questions (17 and 18) that were adapted from a previous study which investigated the relationship between locus of control and adoption of innovations and participation in extension programs by agricultural producers (Kaine, Sandall, & Bewsell, 2003). Rotter's internal-external scale is a well-established and accepted form of measuring locus of control (Brownell, 1981). Based on participants' responses, their placement

on Rotter's internal-external locus of control was identified. Question 17 included eight items, each consisting of a pair of statements. One statement identified language that corresponded to an external locus of control, while the other identified internal locus of control. External and internal statements were mixed in each item so that respondents could not identify all first statements as one way of thinking and to eliminate a pattern. Question 18 followed the same format as question 17 and included five items.

Part three, demographics, included survey questions 19 through 25 and defined participants' age, number of milking cows, number of years the participant plans to stay in the dairy business, educational level, type of dairy operation, board membership status, and region of Florida where their farm is located. Each of these questions provided appropriate answer choices and respondents were asked to check the appropriate response. For example, question 23 asked "What type of dairy operation do you operate?" This question consisted of the following five items: freestall barns, loafing barns/drylots, tunnel ventilated barns, grazing, or other. Respondents chose the item that best identified their operation style.

Data Collection

The survey instrument was distributed via postal mail. This distribution method was chosen based on the population demographic. Ary, Jacobs, Razavieh, and Sorensen (2006) identified the advantages of a mailed survey, including guaranteeing confidentiality and eliminating interviewer bias that could be present in an interview. Also, it is "possible to include a larger number of subjects as well as subjects in more diverse locations" (p. 413). Dillman (2007) suggested that within many populations of interest, coverage problems exist when using Web-based or telephone survey methods. Dillman (2007) reported, "Too few people have Internet access to justify using the Web as a sole survey mode" (p. 493). This study presented a situation where only a few members of the population have e-mail contact information. In this

type of situation, mail addresses were available for the entire population making the mailed questionnaire the most appropriate method to reach the population in its entirety.

Procedure

Prior to the collection of the primary data for this survey, a panel of experts consisting of academic professionals familiar with the research study, and dairy producers comparable to the study's population was utilized to establish face and content validity of the survey instrument. Revisions to the instrument were made based on the panel's feedback. The finalized instrument was then submitted to and approved by the University of Florida's Institutional Review Board (Appendix A). The dairy producers included in the panel were not included in the final data set.

Data collection began in January 2007 and procedures were followed using Dillman's tailored design method (Dillman, 2007). The first step in the data collection was the first wave of contact, consisting of a contact packet that included a cover letter (Appendix D) outlining the purpose of the study, need for participation, and instructions for completion; the questionnaire; the consent form (Appendix B); and a pre-paid return envelope. This first contact packet was mailed to the study's population on January 13, 2007. Respondents were given a case identification number that was separated from their names to track respondents from non-respondents, preventing additional waves of communication with respondents.

The second contact with the research population was a thank you/reminder postcard (Appendix E) mailed 10 business days later on January 25, 2007, to all members of the population. This contact thanked those who had already returned the survey, and urged those who had not to do so immediately.

The third contact was another questionnaire packet mailed to non-respondents on February 3, 2007. This packet included a new cover letter (Appendix F), and a replacement copy of the consent form and questionnaire.

A final wave was mailed February 20, 2007, consisting of the same materials sent in the third contact: new cover letter (Appendix G), replacement consent form, and questionnaire. Data collection from mailed surveys commenced on March 1, 2007.

Respondents were given a period of six weeks to complete and return the survey. After all waves had been completed, the study obtained an overall response rate of 49.2% (n=58).

Ary et al. (2006) explained that “nonresponse can be a serious problem in survey research” (p. 438). Nonresponse for this study was addressed by comparing early to late respondents. Ary et al. (2006) describe the procedure as identifying early to late respondents, and if no significant differences appear, and late respondents are believed to be typical of nonrespondents, researchers can assume the late respondents “are an unbiased sample of the recipients and can thus generalize to the total group” (p. 439). Lindner, Murphy, and Briers (2001) recommended late respondents “be defined operationally and arbitrarily as the later 50% of respondents” (p. 242). This study defined early respondents as the first 50% who responded to the survey and late respondents as the latter 50% of respondents to the survey. Twenty-three respondents completed the questionnaire after the initial contact, 22 responded after the second wave of questionnaires, and 13 responded after the final contact. The first 29 respondents were defined as “early” and the last 29 respondents were defined “late.” Responses were compared on the basis of the key variables of interest and no significant differences were observed (see chapter 4).

Data Analysis

The data collected was analyzed using descriptive statistical analysis. The Statistical Package for the Social Sciences (SPSS®) 14.0 for Windows software package was utilized for the analysis. Descriptive statistics including measures of central tendency, frequencies, and cross tabulations were calculated for the appropriate questionnaire items.

Knoke, Bohrnstedt, and Mee (2002) defined reliability as “the extent to which different operationalizations of the same concept produce consistent results” (p. 13). In order to determine the reliability and internal consistency of the response scales, Cronbach’s alpha coefficient was calculated for the scale items. The standard alpha for this study was $\alpha=.89$.

Ary et al. (2006) defined validity as “the extent to which an instrument measured what it claimed to measure” (p. 243). The internal validity of the instrument can be separated into four categories: face validity, content validity, construct validity, and criterion-related validity (Ary et al., 2006). Face and content validity were addressed through the use of the panel of experts. Face validity is defined as whether or not the instrument appears valid for the intended purpose, while content validity is defined as the degree to which the data from an instrument is representative of some defined domain (Ary et al., 2006). The panel of experts reviewed the instrument and suggested modifications to the instrument were made.

This study adapted parts of reliable, valid instrumentation used in previous studies. A dairy producer survey constructed by Dairy Management Incorporated (DMI) was adapted for questions concerning mandatory marketing. This study adapted locus of control scale questions from a study conducted by Kaine, Sandall, and Bewsell in 2003 that investigated the relationship between locus of control and adoption of innovations and participation in extension programs by agricultural producers.

Construct validity is the extent to which an instrument assesses something that is not directly measurable, but explains observable effects (Ary et al., 2006). The use of a panel of experts and a thorough review of the literature was the best foreseeable way to guard against this threat to validity. Finally, criterion-related validity is defined as the determination of whether answering the questions on the instrument was the correct way to measure the constructs (Ary et

al., 2006). The use of existing and valid instrumentation was used to guard against these threats to the study's validity.

Summary

This chapter provided an overview of the methodology associated with this study. The research design was described and selection of the study's population was explained. A thorough explanation of each component of the construction of the study's instrumentation was given. An overview of how Dillman's Tailored Design Method was employed for this study was provided. Finally, data analysis was discussed, and the reliability and validity of the study was addressed. The next chapter will provide specific information on data analysis procedures and the results received from the questionnaire.

CHAPTER 4 RESULTS

This study described the perceptions of the Florida-based members of Southeast Milk, Incorporated (SMI) dairy cooperative regarding the promotion efforts used to market their commodity, as well as explore producers' locus of control score and their perceptions of dairy marketing efforts. Producer perceptions of both mandatory marketing, marketing paid for by the producers via the dairy checkoff, and entrepreneurial marketing, promotional efforts whose expenses are paid by producers in addition to the checkoff, were studied. This study also described producers' perceptions as to the importance and value of mandatory marketing and the perceived need for and level of participation in entrepreneurial dairy marketing. In order to obtain a locus of control score, producers were scored on an adaptation of Rotter's internal-external locus of control scale. This scale measured the extent to which each individual producer felt they have control over a situation or event. Producers were scored either as "internal" or "external" on the scale.

The population for the study was comprised of a census of Florida dairy producers (N=118) who are currently members of the SMI dairy cooperative. This chapter presents the study's findings based on the research objectives defined in Chapter 1. These objectives were as follows:

- Objective 1: To describe Florida cooperative milk producers in terms of their locus of control score, as well as their exposure to mandatory marketing checkoff information.
- Objective 2: To describe Florida cooperative milk producers' perceptions regarding the importance of the mandatory marketing (checkoff) to the dairy industry, as well as their individual operations, and their perceptions of the value of the checkoff program overall.
- Objective 3: To describe Florida cooperative milk producers' perceptions regarding the need for, effectiveness of, levels of participation in, and factors that prevent producers from participating in entrepreneurial dairy marketing.

- Objective 4: To describe Florida cooperative dairy producers' locus of control score in terms of their perceptions of the value of the checkoff program to the dairy industry and importance of the checkoff to their dairy operation.
- Objective 5: To describe Florida cooperative dairy producers' locus of control score in terms of their need for and investment in entrepreneurial marketing efforts.

Results

Dillman (2007) reported that the potential for nonresponse error exists in all survey research, and nonresponse should, therefore, be considered and addressed in survey-based research studies. In order to maximize the response rate in this study, three waves of surveys were mailed and one reminder postcard. Each survey and postcard was hand-signed by the researcher and cover letters were designed for each specific wave sent to non-respondents encouraging them to return the instrument at their earliest convenience.

A total of 58 responses were received from the study's population (N=118) for an overall response rate of 49.2%, which was deemed an acceptable response rate for this population. Based on Dillman's recommendation to always address nonresponse error, a comparison of early to late respondents was utilized. Lindner, Murphy, and Briers (2001) recommended late respondents "be defined operationally and arbitrarily as the later 50% of respondents" (p. 242). This study defined early respondents (n=29) as the first 50% who responded to the survey and late respondents (n=29) as the latter 50% of respondents to the survey. Early respondents were compared to late respondents on the basis of the key variables of interest, including locus of control score, value and importance of the checkoff program, and need for and participation in entrepreneurial dairy marketing efforts.

With respect to the main variables measured in this study, there were no significant differences between early and late respondents as demonstrated by an independent samples t-test (Table 4-1).

Table 4-1. T-test for significant differences between early and late respondents.

Key Variable	Early Respondents		Late Respondents		t Value	Sig.
	Mean	SD	Mean	SD		
Value of Checkoff to Industry	3.86	1.13	3.38	1.12	1.64	0.106
Importance of Checkoff to Farm	3.90	1.11	3.21	1.20	2.26	0.028
Need for Entrepreneurial Marketing	0.52	0.51	0.46	0.51	0.39	0.696
Participation in Entrepreneurial Marketing	0.39	0.50	0.29	0.46	0.84	0.406

Demographics of Respondents

Seven demographic questions were asked to identify and describe the respondents. The majority of respondents (96.6%, n=56) were male and 3.4% (n=2) were female. Table 4-2 identifies respondents according to their age. The largest percentage of respondents (45.62%, n=26), reported their age in the range from 50-64 years. Respondents in the age range from 35-49 years (40.35%, n=23), made up the second highest category. A small percentage of respondents (12.28%, n=7) fell in the 65 years of age and older category. Only 1.75% (n=1) reported being under 34 years of age. One person did not respond to this question.

Table 4-2. Number of respondents by age.

Age (yrs)	n	%
18-34	1	1.75
35-49	23	40.35
50-64	26	45.62
65 and older	7	12.28
Total	57	100.0

Respondents' herd size, the number of milking cows per farm, was also described. Table 4-3 categorizes respondents in terms of herd size. The majority of respondents (80.8%, n=46) identified the middle three categories as a valid representation of their herd size, which covered herds ranging from 100 to 1999 milking cows. The largest portion of respondents (31.5%, n=18) reported they milked 100-499 cows in their operation. Only 10.5% (n=6) reported a herd size of

99 milking cow or less, while 8.8% (n=5) reported a herd size of 2000 or more milking cows.

One person did not respond to this question.

Table 4-3. Herd size by respondents.

Number of milking cows	<i>n</i>	%
1-99	6	10.5
100-499	18	31.5
500-999	16	28.1
1000-1999	12	21.1
2000 or more	5	8.8
Total	57	100.0

Respondents were asked how many years they planned to remain in the dairy business in any capacity. This question referred to the longevity of the individual and not their current operation. Table 4-4 illustrates those responses in three categories. The majority of respondents (42.9%, n=24) reported they plan to stay in the industry for 11 or more years. Just over one-fourth of respondents (26.8%, n=15) believed they would remain in the dairy business for 6-10 more years. A larger percentage of respondents (30.3%, n=17) projected they would stay with the dairy business for five years or less. Two people did not respond to this question.

Table 4-4. Number of years respondents plan to stay in dairy business.

Projected longevity (yrs)	<i>n</i>	%
5 or less	17	30.3
6-10	15	26.8
11 or more	24	42.9
Total	56	100.0

Table 4-5 describes respondents on the basis of education level. The majority of respondents (97.1%, n=47) reported an education level above high school, with 13.8% (n=8) reporting a graduate or professional degree. The majority of the respondents (36.2%, n=21) were college graduates, and an additional 19.0% (n=11) reported attending some college, but not officially graduating. Only one respondent (1.7%) did not graduate from high school.

Table 4-5. Level of education by respondent.

Level of Education	<i>n</i>	%
Less than high school	1	1.7
High school graduate	10	17.2
Vocational-technical training	4	6.9
Some college	11	19.0
College graduate	21	36.2
Some graduate school	3	5.2
Graduate or professional degree	8	13.8
Total	58	100.0

The type of dairy operation respondents maintained was another demographic examined (see Table 4-6). The majority of respondents (36.2%, n=21) defined their operations as drylot facilities with loafing barns for cattle. Many respondents (29.3%, n=17) reported freestall barn construction, and 25.9% (n=15) reported grazing as their type of operation. Only two respondents (3.4%) defined tunnel ventilated barns as their type of operation. A small percentage of respondents (5.2%, n=3) indicated “other” for their response as their responses listed outside total mixed ration (TMR) feeding, semi-grazing, and feed/graze cows when possible.

Table 4-6. Type of dairy operation by respondent.

Type of facility	<i>n</i>	%
Loafing barns/Drylots	21	36.2
Freestall barns	17	29.3
Grazing	15	25.9
Other	3	5.2
Tunnel ventilated barns	2	3.4
Total	58	100.0

In response to the question that asked about membership on the board at Dairy Farmers Incorporated (DFI), the Floridian promotion board that is funded by the largest percentage of producers’ checkoff dollars, 29.3% (n=3) of respondents reported they were members of DFI’s board, while 70.7% (n=41) reported they were not DFI board members. Table 4-7 represents producers’ responses.

Table 4-7. Membership of respondents on the Dairy Farmers Incorporated board.

Member status	<i>n</i>	%
No	41	70.7
Yes	17	29.3
Total	58	100.0

To better describe the saturation of respondents in the different regions of Florida, the state was divided into four sections for this study (see Figure 2-1). In response to region of the state where their operation is located, the majority of respondents (49.1%, n=28) reported their farm was located in north Florida, areas north of Interstate-4 (I-4) and south of Interstate-10 (I-10). The second largest percentage of respondents (31.6%, n=18) claim farm residency in south Florida, areas south of I-4. Only six respondents (10.5%) were representing the Panhandle, areas west of Lafayette County, and the remaining five respondents (8.8%) reported farms located in Lafayette County, and north of I-10 (see Table 4-8). One person did not respond to this question.

Table 4-8. Region of the state where respondents' farms are located.

Region	<i>n</i>	%
North Florida: north of I-4 to I-10	28	49.1
South Florida: areas south of I-4	18	31.6
Panhandle: areas west of Lafayette county	6	10.5
North Florida: Lafayette county and north of I-10	5	8.8
Total	57	100.0

Objective 1

- To describe Florida cooperative milk producers in terms of their locus of control score, as well as their exposure to mandatory marketing checkoff information.

To address this objective, respondents were described on the internal-external locus of control scale. Locus of control was described using a series of 13 pairs of questions. Each question contained one statement that was associated with internal locus of control, and one statement associated to external locus of control. Respondents were asked to pick which statement in each pair that they agreed with the most. External locus of control statements were denoted with the number 1 and internal locus of control statements were denoted with the

number 2. Respondents were categorized on the scale by the mean of their answers to the paired questions. The majority of respondents (67.2%, n=39) had a higher frequency of “2” responses, indicating an internal locus of control. The smaller percentage of respondents (32.8%, n=19) had a higher frequency of “1” responses, indicating an external locus of control classification (see Table 4-9).

Table 4-9. Respondents’ classification on the internal-external locus of control scale.

Scale classification	<i>n</i>	%
Internal	39	67.2
External	19	32.8
Total	58	100.0

In addition to locus of control, respondents were questioned on the ways in which they receive information about the checkoff. Possible types of communication included receiving information from fellow producers, DFI staff, farm/co-op meetings, and the DFI newsletter, the *Moo Memo*. Table 4-10 illustrates what percentage of respondents’ answered “yes” to a type of communication, and what percentage answered “no.” The highest rated method (96.4%, n=54) of communication to receive information about DFI’s promotional programs was DFI’s *Moo Memo*. The only communication category where the majority of respondents (52.6%, n=30) answered “no” instead of “yes” was to receive information from fellow producers.

Table 4-10. Percentage of respondents who answered “yes” or “no” to different ways in which they receive information about DFI’s promotional programs.

Information receipt	<i>n</i>	% Yes	<i>n</i>	% No
DFI’s <i>Moo Memo</i>	54	96.4	2	3.6
Farm/Co-op meetings	45	81.8	10	18.2
DFI staff	41	74.5	14	25.5
Fellow producers	27	47.4	30	52.6

Objective 2

- Objective 2: To describe Florida cooperative milk producers’ perceptions regarding the importance of the mandatory marketing (checkoff) to the dairy industry, as well as their individual operations, and their perceptions of the value of the checkoff program overall.

In order to address perceived perceptions of the importance of the checkoff program, respondents were asked their perceptions as to how important the overall checkoff program is to their operations. The majority of respondents (37.9%, n=22) answered “somewhat important,” indicating that while they did not believe the checkoff program was *very* important to their operation, they did believe it was of some importance. The lowest percentage (8.6%, n=5) of respondents answered “not important,” indicating that only five respondents felt that the checkoff was not important at all to their operation. A large percentage (60.3%, n=35) of respondents indicated the checkoff had some level of value, 20.7% (n=12) indicated they were neutral to the issue, and 19.0% (n=11) indicated the checkoff was not valuable to their operation on some level. Table 4-11 illustrates respondents’ ratings of the level of importance of the dairy checkoff program to their operation.

Table 4-11. Respondents’ replies to the level of importance of the dairy checkoff program to their dairy operation.

Importance level	<i>n</i>	%
4 (somewhat important)	22	37.9
5 (very important)	13	22.4
3 (neutral)	12	20.7
2 (somewhat not important)	6	10.4
1 (not important)	5	8.6
Total	58	100.0

To further understand respondents’ perceptions of the importance of the checkoff program, they were asked to answer 10 items that measured their perceptions of the importance of promotional programs funded by the checkoff with regard to the dairy industry, and 10 items that measured importance of those programs with regard to the respondents’ operations. Table 4-12 reports the mean (*M*) and standard deviation (*SD*) for each promotional concept with respect to the respondents’ perception of importance to the dairy industry and to their own operations. The mean was based on the scale of 1=not important, 2=little importance, 3=neutral, 4=some

importance, 5=very important. In response to the items asking about the importance of promotional concepts to the dairy industry, the item with the highest mean ($M=4.60$, $SD=0.74$) was “Improve the handling and presentation of milk in school cafeterias.” The item with the lowest mean ($M=4.28$, $SD=1.01$) was “Encourage food manufacturers to use more dairy ingredients.” In response to the items asking about the importance of promotional concepts to the respondents’ individual operations, the item with the highest mean was “Defend the image of dairy against claims of anti-dairy activists.” Two items shared the lowest mean, including “Encourage food manufacturers to use more dairy ingredients” ($M=4.05$, $SD=1.15$) and “Maintain awareness of milk and cheese through advertising” ($M=4.05$, $SD=1.14$).

Table 4-12. Respondents’ perceptions of promotional concepts and their importance to the dairy industry and their operation.

Promotional concept	<i>n</i>	Industry			Operation/ Farm	
		<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
Improve the handling and presentation of milk in school cafeterias.	55	4.60*	0.74	56	4.38	0.96
Conduct research to show the nutritional value of dairy products.	54	4.56	0.72	56	4.30	1.03
Teach kids in schools about the healthfulness of dairy products.	55	4.53	0.81	56	4.32	1.05
Defend the image of dairy against claims of anti-dairy activists.	54	4.52	0.80	56	4.41*	0.91
Influence how health professionals feel about dairy products.	54	4.52	0.84	56	4.36	0.98
Promote awareness of dairy products among consumers.	54	4.44	0.77	56	4.16	1.01
Work with retail and restaurant chains to sell more milk and cheese.	54	4.43	0.88	56	4.32	0.99
Place positive messages about dairy in consumer media.	55	4.42	0.88	56	4.14	1.05
Maintain awareness of milk and cheese through advertising.	54	4.31	0.93	56	4.05**	1.14
Encourage food manufacturers to use more dairy ingredients.	53	4.28**	1.01	55	4.05**	1.15

* *Concept with the highest mean.*

** *Concept with the lowest mean.*

In order to address perceptions as to the overall value of the checkoff program, respondents were asked to rate the value of the dairy checkoff program to the dairy industry (see Table 4-13). The majority of respondents (39.7%, n=23) indicated the checkoff program has some value, and (22.4%, n=13) indicated the checkoff program is very valuable to the dairy industry. Overall, 62.1% (n=36) of respondents felt the checkoff was valuable on some level to the industry. Only four respondents (6.9%) indicated the checkoff had no value to the dairy industry, while 8.6% (n=5) of respondents indicated the checkoff had little value. Only 13 respondents (22.4%) (n=13) were neutral to the issue.

Table 4-13. Respondents’ replies to the level of value of the dairy checkoff program to the dairy industry.

Value level	<i>n</i>	%
4 (some value)	23	39.7
5 (very valuable)	13	22.4
3 (neutral)	13	22.4
2 (little value)	5	8.6
1 (not valuable)	4	6.9
Total	58	100.0

To further address the value of the checkoff program, respondents were asked to measure the value of seven specific promotional programs in Florida managed by Dairy Farmers Incorporated (DFI). Table 4-14 illustrates respondents’ perceptions regarding these programs. Response items utilized a Likert-like response scale using 1=not valuable to 5=very valuable. Results showed that the program with the highest percentage of respondents (53.4%, n=31) denoting a rating of 5, or very valuable, was the “Media Relations” category. Two other program categories were rated “very valuable” by over half of respondents including “Industry Relations – Image” with 51.7% (n=30) and “Grocery Store Promotions” with 50.0% (n=28). The lowest rated programs according to respondents included the “Got milk? Junior Gator Fan of the Game,” with 39.7% (n=32) of respondents rating the program neutral to not valuable, and

“Florida Dairy Farmers High School Awards” with 50.0% (n=29) of respondents rating the program neutral to not valuable. Two people did not respond to the “New Look of School Milk” and “Grocery Store Promotions” categories. One person did not respond to the “3-A-Day of Dairy Advertising” category.

Table 4-14. Respondents’ perceptions of the value of specific Florida promotional programs managed by Dairy Farmers, Inc (DFI).

Promotional Program	% of respondents who answered scaled items from 1 (not valuable) to 5 (very valuable).									
	<i>n</i>	1	<i>n</i>	2	<i>n</i>	3	<i>n</i>	4	<i>n</i>	5
Media Relations	1	3.4	0	0.0	9	15.5	16	27.6	31	53.4
Industry Relations - Image	2	3.4	0	0.0	9	15.5	17	29.3	30	51.7
Grocery Store Promotions	0	0.0	1	1.8	7	12.5	20	35.7	28	50.0
New Look of School Milk	1	1.8	1	1.8	7	12.5	20	35.7	27	48.2
3-A-Day of Dairy Advertising	4	7.0	3	5.3	14	24.6	16	28.1	20	35.1
Got milk? Junior Gator Fan of the Game	6	10.3	10	17.2	16	27.6	15	25.9	11	19.0
Florida Dairy Farmers High School Awards	4	6.9	4	6.9	21	36.2	20	34.5	9	15.5

Table 4-15 shows respondents’ mean scores when rating the promotional programs.

“Grocery Store Promotions” was the item with the highest mean of 4.34 ($SD=0.77$) on a 5-point scale. Two people did not rate this program. The lowest-rated program, reporting the lowest mean (3.26, $SD=1.25$) according to respondents, was the “Got milk? Junior Gator Fan of the Game” program.

Table 4-15. Respondents’ perceptions of the value of specific Florida promotional programs managed by DFI (mean).

Promotional Program	<i>n</i>	<i>M</i>	<i>SD</i>
Grocery Store Promotions	56	4.34	0.77
Media Relations	58	4.28	0.97
New Look of School Milk	56	4.27	0.88
Industry Relations - Image	58	4.26	0.97
3-A-Day of Dairy Advertising	57	3.79	1.19
Florida Dairy Farmers High School Awards	58	3.45	1.06
Got milk? Junior Gator Fan of the Game	58	3.26	1.25

In order to determine respondents' perceptions regarding category competition, they were asked to rate how strongly they disagreed or agreed that dairy producers need promotional efforts to compete with other food and beverage companies. Table 4-16 shows that 80.8% (n=46) of respondents agreed or strongly agreed with the statement. Results reported a mean of 4.09 (SD=1.04), indicating that most respondents indicated they agreed on some level that promotional efforts are necessary for the dairy category to compete with other food and beverage categories. Four respondents (6.9%) indicated they were in some level of disagreement that promotional efforts on this issue were necessary. Only 12.3% (n=7) of respondents were neutral on the issue. One person did not respond to this question.

Table 4-16. Respondents' level of agreement that dairy producers need promotional efforts to compete with other food and beverage companies.

Level of agreement	<i>n</i>	%
4 (agree)	23	40.4
5 (strongly agree)	23	40.4
3 (neutral)	7	12.3
1 (strongly disagree)	3	5.2
2 (disagree)	1	1.7
Total	57	100.0

Objective 3

- To describe Florida cooperative milk producers' perceptions regarding the need for, effectiveness of, levels of participation in, and factors that prevent producers from participating in entrepreneurial dairy marketing.

To determine respondents' perceptions related to the need for entrepreneurial marketing, they were asked if they believed it was necessary to promote their farm in addition to the marketing and promotion provided by their mandatory checkoff investment. Respondents were almost equally divided on this issue with 50.9% (n=29) believing entrepreneurial promotion was not necessary, and 49.1% (n=28) believing entrepreneurial promotion was necessary (see Table 4-17). One person did not answer this question.

Table 4-17. Respondents' perceived need for entrepreneurial marketing.

Level of agreement	<i>n</i>	%
No	29	50.9
Yes	28	49.1

In order to determine respondents' perceptions on the effectiveness of entrepreneurial marketing, they were asked three individually scaled items (see Table 4-18). First, respondents were asked if they believed a website was an effective way to generate interest in dairy production. The mean score for the respondents was 2.77 (n=56) on a 5-point scale. Because mean values can be deceiving, it is important to note the mode in each category. The majority of respondents (41.1%, n=23) to this item scored a "neutral" rating of 3. Two people did not respond to this item. Respondents were then asked if they felt farm tours could effectively generate interest in dairy production. The mean score for the respondents was 3.49 (n=57) on a 5-point scale. The majority of respondents (29.8%, n=17) to this item scored an "agree" rating of 4. One person did not respond to this item. Lastly, respondents were asked if they felt an employee newsletter could effectively benefit their operation. The mean score for the respondents was 2.46 (n=56) on a 5-point scale. The majority of respondents (48.2%, n=27) to this item scored a "neutral" rating of 3. Two people did not respond to this item.

Table 4-18. Respondents' perceptions of the effectiveness of selected entrepreneurial marketing activities.

Effectiveness of entrepreneurial program	<i>n</i>	<i>M</i>	<i>SD</i>	<i>Mode</i>
Farm Tours	57	3.49	1.17	4
Website	56	2.77	1.91	3
Newsletter	56	2.46	0.97	3

In order to address respondents' levels of participation in entrepreneurial marketing, respondents were asked if they were investing money in the promotion of their operation in addition to the checkoff (see Table 4-19). The majority of respondents (66.1% n=37) reported they were not investing any money in farm promotion in addition to their checkoff investment.

The remaining respondents (33.9%, n=19) reported they were investing money into the promotion of their farm in addition to their checkoff investment. Two people did not answer this question.

Table 4-19. Respondents' investing in entrepreneurial promotion.

Level of agreement	<i>n</i>	%
No	37	66.1
Yes	19	33.9

To further address levels of participation in entrepreneurial marketing, respondents were asked what types of entrepreneurial activities they support. Table 4-20 shows the majority of respondents (89.3%, n=50) do not maintain a farm/company website. Two people did not respond to this item. Respondents were equally divided on their participation in farm tours. Half of respondents (50.0%, n=29) responded “yes,” and 50.0% (n=29) responded “no.” One person did not answer this item. The majority of respondents (94.5%, n=52) reported “no” when asked if they maintained a farm/employee/company newsletter. Three people did not respond to this item. The majority of respondents (89.1%, n=49) reported they did not maintain a farm brand/logo. Three people did not respond to this item. Finally, four respondents (7.1%) reported entrepreneurial items in the “other” category. Those items included selling milk and beef directly to the consumer, classes on hoof trimming, and education of youth on calf procedures and milking operation.

Table 4-20. Respondents' participation in specific entrepreneurial activities.

Entrepreneurial activity	<i>n</i>	% Yes	<i>n</i>	% No	<i>n</i> Total
Farm tours	29	50.0	29	50.0	58
Farm brand/logo	6	10.9	49	89.1	55
Farm/company Website	6	10.7	50	89.3	56
Other	4	7.1	52	92.9	56
Farm/employee/company newsletter	3	5.5	52	94.5	55

Respondents were asked a series of “yes/no” items to address the issue of non-participation. These items related to resources that respondents felt they would need in order to participate in more entrepreneurial marketing (see Table 4-21). The majority of respondents (63.0%, n=34) felt they would participate in more entrepreneurial marketing if they had more time. Four people did not respond to this item. The majority of respondents (52.7, n=29) responded “yes,” believing they would participate in more entrepreneurial marketing if they had more money. Three people did not answer this item. The majority of respondents (58.5%, n=31) reported “no” when asked if more people was a resource that would help them participate in more entrepreneurial marketing. Five people did not respond to this item. The majority of respondents (62.3%, n=33) reported “no,” when asked if more training would help them participate in more entrepreneurial marketing. Five people did not respond to this item. Finally, three respondents (5.6%) reported needed resources in the “other” category. Those items included more energy and higher profits.

Table 4-21. Respondents’ perceptions of resources needed to participate in more entrepreneurial marketing efforts.

Resource	Yes		No	
	<i>n</i>	%	<i>n</i>	%
More time	34	63.0	20	37.0
More money	29	52.7	26	47.3
More people	22	41.5	31	58.5
More training	20	37.7	33	62.3
Other	3	5.6	51	94.4

Objective 4

- Objective 4: To describe Florida cooperative dairy producers’ locus of control score with regard to their perceptions of the value of the checkoff program to the dairy industry and importance of the checkoff to their dairy operation.

A cross tabulation analysis was employed to describe respondents’ perceptions of the value of the checkoff program to the dairy industry based on their locus of control score (see Table 4-22). The majority of respondents with an internal locus of control (69.4%, n=25) indicated the

checkoff program was of value to the dairy industry, while 5.6% (n=2) indicated the checkoff was of little to no value. The majority of respondents with an external locus of control (47.3%, n=9) denoted the checkoff program was of value to the dairy industry, while 31.6% (n=6) denoted the checkoff program was of little to no value to the dairy industry.

Table 4-22. Respondents' perceptions about the value of the checkoff program to the dairy industry with relation to their locus of control scale classification.

Scale classification	<i>n</i>	Moderately not valuable to not valuable	<i>n</i>	Neutral	<i>n</i>	Moderately valuable to very valuable
Internal	2	5.6	9	25.0	25	69.4
External	6	31.6	4	21.1	9	47.3

The importance of the checkoff program to respondents' individual operation was also addressed based on locus of control score (see Table 4-23). The majority of respondents with an internal locus of control (69.4%, n=25) indicated the checkoff program was important to their operation, while 11.1% (n=4) indicated the checkoff was of little to no importance to their dairy operation. The majority of respondents with an external locus of control (42.1%, n=8) denoted the checkoff program was important to their operation, while 31.6% (n=6) denoted the checkoff program was of little to no importance to their individual operation.

Table 4-23. Respondents' perceptions about the importance of the checkoff program to their dairy operation with relation to their locus of control scale classification.

Scale classification	<i>n</i>	Little to no importance	<i>n</i>	Neutral	<i>n</i>	Important to very important
Internal	4	11.1	7	19.5	25	69.4
External	6	31.6	5	26.3	8	42.1

Objective 5

- To describe Florida cooperative dairy producers' locus of control score with regard to their need for and investment in entrepreneurial marketing efforts.

A cross tabulation analysis was employed to describe respondents' perceptions of the need for entrepreneurial marketing efforts in addition to the checkoff, based on their locus of control

score (see Table 4-24). The majority of respondents with an internal locus of control (63.9%, n=23) indicated entrepreneurial marketing was necessary to promote dairy, while 36.1% (n=13) indicated there was no perceived need for entrepreneurial marketing. The majority of respondents with an external locus of control (72.2%, n=13) denoted entrepreneurial marketing was not necessary to promote dairy, while 27.8% (n=5) indicated there was a need for marketing efforts in addition to the checkoff program.

Table 4-24. Respondents' perceptions for the need of entrepreneurial marketing efforts to promote dairy in addition to the checkoff program based on their locus of control score.

Scale classification	Perceived need for entrepreneurial marketing			
	<i>n</i>	% No	<i>n</i>	% Yes
Internal	13	36.1	23	63.9
External	13	72.2	5	27.8

Respondents' investment in entrepreneurial marketing was addressed, based on locus of control score (see Table 4-25). The majority of respondents with an internal locus of control (57.1%, n=20) indicated they were not investing money for the promotion of dairy in addition to their checkoff investment. Many respondents (42.9%, n=15) indicated they were investing money in entrepreneurial marketing efforts beyond their mandatory checkoff investment. The majority of respondents with an external locus of control (83.3%, n=15) responded they were not investing any additional funds into the promotion of dairy in addition to their mandatory investment. Only three respondents (16.7%) indicated they were investing in the promotion of dairy beyond their checkoff investment.

Table 4-25. Respondents' investment in entrepreneurial activity based on their internal-external locus of control score.

Scale classification	Entrepreneurial investment in addition to checkoff program			
	<i>n</i>	% No	<i>n</i>	% Yes
Internal	20	57.1	15	42.9
External	15	83.3	3	16.7

Summary

This chapter presented the results of the study organized by the research objectives presented in Chapter 1. Basic descriptive statistics were used to describe the population for this study, their locus of control score, their perceptions regarding the importance and value of their mandatory marketing investment, and their perceptions regarding entrepreneurial marketing. The next chapter will present a summary of findings, conclusions of those findings, discussion, and implications of this research study.

CHAPTER 5 DISCUSSION

This study explored the perceptions of Floridian members of the dairy cooperative Southeast Milk, Incorporated (SMI) regarding mandatory (checkoff) and entrepreneurial marketing based on their locus of control score. Specifically, the study examined respondents' perceptions of the value of the checkoff to the dairy industry, and the importance of the checkoff to their individual operation. The perceived need for entrepreneurial marketing and the level at which producers participate in identified entrepreneurial marketing efforts were also described.

The survey instrument consisted of 25 questions designed to gain a clear understanding of respondents' perceptions regarding the marketing of their commodity. The survey was mailed to the census population (N=118) in a series of three waves.

This chapter presents key findings of the study, implications, limitations, recommendations, suggestions for future research, and conclusions. This chapter is arranged by the guiding objectives of the study. Those objectives are as follows:

- Objective 1: To describe Florida cooperative milk producers in terms of their locus of control score, as well as their exposure to mandatory marketing checkoff information.
- Objective 2: To describe Florida cooperative milk producers' perceptions regarding the importance of the mandatory marketing (checkoff) to the dairy industry, as well as their individual operations, and their perceptions of the value of the checkoff program overall.
- Objective 3: To describe Florida cooperative milk producers' perceptions regarding the need for, effectiveness of, levels of participation in, and factors that prevent producers from participating in entrepreneurial dairy marketing.
- Objective 4: To describe Florida cooperative dairy producers' locus of control score in terms of their perceptions of the value of the checkoff program to the dairy industry and importance of the checkoff to their dairy operation.
- Objective 5: To describe Florida cooperative dairy producers' locus of control score in terms of their need for and investment in entrepreneurial marketing efforts.

Key Findings and Implications

Demographics

A total of 58 Florida members of the dairy cooperative SMI responded to the study, for an overall response rate of 49.2%. Key demographics as reported by respondents included age, herd size, and region of the state their operation was located. The majority of respondents (45.6%, n=26) ranged in age from 50-64, and 40.4% (n=23) were ages 35-49. These results echo Dairy Farmers Incorporated (DFI) statistics citing the average age of the Florida dairy owner/operator is 56 (<http://www.floridamilk.com/didyouknow.html>). The largest portion of respondents (31.6%, n=18) reported they milked 100-499 cows in their operation, 28.1% (n=16) had a herd size of 500-999 milking cows, and 21.1% (n=12) reported a herd size of 1000-1999. Only 10.5% (n=6) reported a herd size of 99 milking cow or less, while 8.8% (n=5) reported a herd size of 2000 or more milking cows. Gisey, de Vries, Bray, and Webb (2006) reported the average herd size for Florida farms was approximately 730 cows. The majority of respondents (49.1%, n=28) reported their farm was located in north Florida, areas north of Interstate-4 (I-4) and south of Interstate-10 (I-10), 31.6% (n=18) claim farm residency in south Florida, areas south of I-4, six respondents (10.5%) were representing the Panhandle, areas west of Lafayette County, and the remaining five respondents (8.8%) reported farms located in Lafayette County, and in areas north of I-10.

Objective 1

Locus of control is a construct that originates from Rotter's social learning theory, which explains that a person's actions can be predicted on the basis of values, expectations, and situations a person finds themselves in (Lefcourt, 1982). The theory is based on the internal-external scale that "measures an individual's perception of how much control he is able to exert over the events in his life" (Miller & Toulouse, 1986, p. 1392). Based on the data associated

with Objective 1, the majority of respondents (67.2%) were categorized as having an internal locus of control, while the remaining 32.8% were categorized as demonstrating responses associated with an external locus of control. These results indicate that most dairy producers in Florida are more likely to make decisions regarding marketing based on the characteristics associated with internal locus of control. Kaine, Sandall, and Bewsell (2003) conducted a study investigating the relationship between locus of control and agricultural producer propensity to adopt innovations and participate in extension programs. They reported that “individuals with a strong internal locus of control believe that they can influence many events in their lives” (p. 2). Additionally, the authors deduced that producers with an internal locus of control were more likely to seek opportunities that would improve their skill base, more likely to exhibit a high propensity to adopt innovations, and more likely to participate in extension or benchmark programs (Kaine et al., 2003, p. 9). Following this description, it can be implied that dairy producers with a more internal locus of control are more open to entrepreneurial marketing, and more likely to participate in innovative behavior.

Conversely, Kaine, Sandall, and Bewsell (2003) reported “individuals with a strong external locus of control believe that there is little they can do to influence events that occur in their lives” (p. 2). Those producers with a more external locus of control would be less likely to try any new techniques and technologies, less likely to exhibit a high propensity to adopt innovations, and less likely to participate in extension or benchmarking programs than other producers (Kaine et al., 2003, p. 9). It can be implied that dairy producers that scored “external” in this study are less likely to take risks associated with entrepreneurial marketing.

Additionally, Objective 1 described producers’ exposure to mandatory marketing checkoff information. It was important to first determine how much access producers had to information

regarding their mandatory promotional investment before exploring their perceptions of the programs' value and importance. In order to determine receipt of checkoff information, respondents were asked to explain how they receive information about promotional programs that are organized and managed by Dairy Farmers Incorporated (DFI), which is funded by dairy producer checkoff dollars. Possible types of communication included receiving information from fellow producers, DFI staff, farm/co-op meetings, and the DFI newsletter, the *Moo Memo*. The highest-rated method of communication was DFI's *Moo Memo*, while the lowest-rated communication category was to receive information from fellow producers. These findings indicate that DFI's newsletter is the most utilized method for producers to learn how their checkoff investment dollars are being spent in the promotion of the dairy industry and its products.

Objective 2

Objective 2 was to describe Florida cooperative milk producers' perceptions regarding the value and importance of the checkoff to the dairy industry overall, as well as describe their perceptions of the importance of the checkoff program to their individual operations. The majority of respondents (60.3%) agreed the checkoff program overall had some level of value to their dairy operations. Because this was an overarching question, respondents were also asked to rate the importance of several promotional goals of the checkoff program to understand which promotional concepts were most important to the overall dairy industry, and which were most important to dairy producers' individual operations.

When addressing the overall dairy industry, the promotional concept producers rated of highest importance was to "Improve the handling and presentation of milk in school cafeterias." The lowest rated category was to "Encourage food manufacturers to use more dairy ingredients." Because 88% of the milk produced in Florida is sold as fluid milk, school cafeterias are a large

part of milk sales. In 2005, Dairy Farmers Incorporated (DFI) implemented school marketing with the “New Look of School Milk” program which replaced conventional milk cartons with plastic resalable bottles, and offered more flavors of milk. This improved presentation of milk in cafeterias, coupled with keeping milk at a cold temperature, can improve consumption of milk in the schools and increase sales of milk in Florida. Survey responses indicate that Florida producers agree this is an important promotional concept.

In response to the items asking about the importance of promotional concepts to the respondents’ individual operations, producers agreed that to “Defend the image of dairy against claims of anti-dairy activists” was of highest importance to their operations. Animal activists have had little influence on demand for animal products, but have increased public concern about food safety (Zimbelman, Wilson, Bennett, & Curtis, 1995). Increasingly strong media coverage of food safety can have an effect on the public’s perception of animal agriculture. The more educated consumers are to their food supply and assurance of its safety, the more positive associations consumers will have regarding their purchases.

Two items were seen as the lowest in terms of importance to producers’ operations. These items included “Encourage food manufacturers to use more dairy ingredients” and “Maintain awareness of milk and cheese through advertising.” As mentioned in Chapter 2, the milk category is dominated by private label, and the low percentage of branded products in this category puts milk at a disadvantage due to the challenges inherent to marketing a category as opposed to a brand (USDA, 2005). One strong way consumers will make a positive association connected with the purchase of milk is through advertising. Milk needs to be competitive, and consumers need to be more educated on dairy products benefits as well as consumer options in the dairy case, such as chocolate, strawberry, and other flavored milk. Mandatory marketing

programs can accomplish this promotion. It can be implied that because respondents of this study rated maintaining the awareness of milk and cheese through advertising as one of the lowest promotional concepts of importance that they may not fully understand the impact advertising has on their category.

However, respondents were clear on their perceptions regarding category competition. When asked to rate how strongly they disagreed or agreed that dairy producers need promotional efforts to compete with other food and beverage companies, 80.8% of respondents agreed. Because Florida milk producers are under federal order 6, approximately 88% of all milk is sold under the classification of dairy products “Class I.” Class I consists of fluid milk products and is the highest-priced order (Stukenberg et al., 2006). Some respondents may have rated cheese (Class III) advertisement low, as they did not see the direct connection to their operation. However, the highest-priced classification of dairy products between Class III (cheese), or Class IV (powdered milk) sets the price for Class I (fluid milk). Therefore, producers should be concerned with the advertisement of all dairy products, and not just the class utilization of their farm milk. The higher the cheese price, the higher the fluid milk category will be priced.

In response to the value, 62.1% of respondents felt the checkoff was valuable on some level to the overall dairy industry. Dairy Farmers Incorporated (DFI) has launched several promotional programs, funded by producers’ checkoff dollars, to promote dairy throughout the state of Florida. Respondents were asked to rank the value of DFI’s current program categories in order to understand where producers feel their money is best spent. Results showed that there were three programs or program categories that 50.0% or more of respondents highly valued, including “Media Relations,” “Industry Relations – Image,” and “Grocery Store Promotions.” The aforementioned “New Look of School Milk” program was rated very valuable by 48.2% of

respondents. The lowest-rated programs according to respondents included the “Got milk? Junior Gator Fan of the Game,” with 39.7% of respondents rating the program neutral to not valuable, and “Florida Dairy Farmers High School Awards,” with 50.0% of respondents rating the program neutral to not valuable.

These responses indicate that producers may be more concerned with media relations, industry image, and grocery store promotions than sports marketing programs in Florida. However, sports marketing reaches consumers that may otherwise remained untouched by traditional forms of advertisement. For milk to be competitive, the mass marketing efforts of advertising must reach as many consumers as possible. Educating producers on the value of these sports-marketing related programs could help increase their importance to producers.

Objective 3

Objective 3 explored producers’ perceptions of entrepreneurial marketing. The study first identified respondents’ perceived need for entrepreneurial marketing efforts in addition to the checkoff. Respondents were almost equally divided on this issue, with 50.9% believing entrepreneurial promotion was not necessary, and 49.1% denoting they believed entrepreneurial promotion was necessary.

Next, respondents were asked to describe the effectiveness of entrepreneurial marketing for promotion of the dairy industry. Entrepreneurial promotion was defined for this study as promotion that is funded by producers in addition to their mandatory checkoff investment. Entrepreneurial activities included websites and farm tours.

In response to entrepreneurial marketing efforts, 23.2% of respondents indicated that farm websites were effective in promoting the dairy industry, 41.1% of respondents indicated they were neutral, and 35.7% believed websites were not an effective method to promote the dairy industry. Proctor (1999) explained a total marketing communications strategy is crucial when

identifying the target audience and attracting customers to products or services. In addition, Sharma and Sheth (2004) stated “The web is growing at a dramatic pace and is significantly impacting customer and business market behaviors” (p. 696). The low agreement between respondents and the effectiveness of a website indicates that most respondents may not understand the impact the Internet has on its consumers. This implication could be based on the high age of respondents. Bucy (2000) reported that age was negatively associated with Internet use, suggesting older respondents use the Internet less. While Internet usage is growing in all age groups, respondents to this study may not be highly represented on the Web.

When describing the effectiveness of entrepreneurial marketing, 52.6% of respondents indicated farm tours were effective in promoting the dairy industry, 26.3% of respondents indicated they were neutral, and 21.1% believed farm tours were not an effective method to promote the dairy industry. Wallace et al. (2005) concluded that “trust could positively influence consumers’ decision on future purchase” (p. 844). One recommendation was the implementation of farm visits or tours to educate consumers about the origins of their food, help foster links with local farmers, showing they care and building trust with farmers (Wallace et al., 2005). Results from this study echo that conclusion. The majority of respondents agreed that farm tours are an effective way to promote dairy. Because a farm tour is a direct connection to the producers, it can be assumed that they would feel strongly that educating people on their business can help promote their industry.

Given producers’ perceptions of the need for and effectiveness of entrepreneurial marketing, respondents were asked to identify their level of participation in entrepreneurial marketing efforts. When asked about their investment in entrepreneurial marketing, 33.9% (n=19) of respondents reported they were investing money into the promotion of their farm in

addition to their checkoff investment. To gain a clearer understanding of where their entrepreneurial dollars were going, respondents were asked what specific entrepreneurial activities they were investing in. The highest-rated forms of entrepreneurial activity were identified with 50.0% of respondents participating in farm tours, 10.9% having a farm brand or logo, and 10.7% maintaining a farm/company website.

Objective 4

Previous Objectives described respondents' locus of control score, perceptions of value of the checkoff to the dairy industry, and perceptions of importance of the checkoff program to their individual operations. Objective 4 combined these variables to determine how locus of control score corresponded to respondents' perceptions of value and importance of the checkoff.

In response to value, the 69.4% of respondents with an internal locus of control indicated the checkoff program was of value to the dairy industry, while 47.3% of respondents with an external locus of control denoted the checkoff program was of value to the dairy industry.

The majority (69.4%) of respondents with an internal locus of control indicated the checkoff program was important to their operation, while 42.1% of respondents with an external locus of control denoted the checkoff program was important to their operation.

Mueller and Thomas (2000) cited Rotter's description of individuals saying an "internal" individual believes they have influence over the outcomes of a situation through ability, effort, or skills, and "externals" believe forces outside their control determine outcomes. It can be implied that the respondents with an internal locus of control possessed more of a "buy-in" to the checkoff program, feeling as if they had influence in the programs value and importance, while respondents with an external locus of control felt that mandatory marketing of dairy is outside their control, therefore harder to place value upon.

Objective 5

This study's final Objective involved describing Florida cooperative dairy producers' perceptions of the need for and investment in entrepreneurial marketing efforts with regard to their locus of control score. The majority (63.9%) of respondents with an internal locus of control indicated entrepreneurial marketing was necessary to promote dairy, while only 27.8% of respondents with an external locus of control indicated entrepreneurial marketing was necessary. Entrepreneurial behavior represents a more informal type of marketing relying on the intuition and energy of an individual (Stokes, 2000). Internal locus of control and innovativeness are two frequently cited personal traits associated with entrepreneurial potential (Mueller & Thomas, 2000). That being said, one would predict that producers with a higher internal locus of control would be more open to entrepreneurial behavior. This study's finding resonated with this assumption. More than half of internal locus of control producers felt a need for entrepreneurial marketing. The external locus of control producers were opposite, with only 27.8% feeling entrepreneurial marketing was necessary.

Kaine, Sandall, and Bewsell (2003) reported that "individuals with a strong internal locus of control believe that they can influence many events in their lives" while "individuals with a strong external locus of control believe that there is little they can do to influence events that occur in their lives" (Kaine et al., 2003, p. 2). Because people with an internal locus of control believe the outcome of events are within their personal control, it can be concluded that the internal locus of control producers are more likely to take a risk and invest in dairy entrepreneurially. Regarding participation, 42.9% of respondents in this study with an internal locus of control responded they were investing money in entrepreneurial marketing efforts beyond their mandatory checkoff investment, while only three respondents (16.7%) with an

external locus of control score indicated they were investing in the promotion of dairy beyond their checkoff investment.

This study found 67.2% of respondents had an internal locus of control, and 32.8% had an external locus of control. Overall, only 33.9% of all respondents in the study (internal and external locus of control scored) indicated they were investing in entrepreneurial promotion, while almost half (49.0%) of all respondents indicated a need for entrepreneurial promotion.

Limitations

This study was descriptive in nature and unique to the census population it addressed. Results from this study, therefore, can not be generalized beyond this population. Even so, much can be learned from this study and applied to future research.

One strength of this study was the use of a census of cooperative dairy producers in the state of Florida, belonging to Southeast Milk, Incorporated (SMI). In addition, the response rate for this study was 49.2%, which was deemed satisfactory for the population. Nonresponse error was addressed in Chapter 4, by comparing early and late respondents, showing each group to be similar with regard to value and importance of the checkoff program, and need for and participation in entrepreneurial marketing efforts.

The instrument used in this study (see Appendix C) was lengthy. While efforts were made to facilitate item-response in a user-friendly format, a few of the respondents made comments that some questions were confusing. Even in the presence of question-by-question directions and opportunity for each question to be answered, some respondents skipped certain questions throughout the survey. While there was no particular pattern to missing items overall, these missing values may have had an effect on the results of the study.

While the mailed survey method was the best option when considering the study's population, it may have somewhat hindered response rate. The method took a long period of

time with a slow response rate between waves. Given more time, a fourth wave of surveys would have drawn a larger response rate. In addition, this method was expensive when totaling the printing of survey packet materials, cost of envelopes, and cost of mailing three waves to the population.

Recommendations

Results of this study provide opportunity for recommendations in theory, directions for future research, and practice.

Recommendations for Theory

The main theoretical framework for this study was Rotter's locus of control, which was based on Rotter's social learning theory. There is great opportunity for an extension of this theory in the realm of agricultural communications. Personality has a great effect on the way we communicate, and the personality characteristics associated with locus of control have great implications on the way producers receive information, or distribute it.

Additionally, the media theory of uses and gratifications can have valuable insight into the uses of media and consumer perceptions of agriculture. Wimmer and Dominick (1994) explained that uses and gratifications theory began in the 1940s when researchers became interested in why audiences engaged in various forms of media behavior, such as reading the newspaper or listening to the radio. Determining what media consumers use to gain information about dairy production and dairy products could better help producers and agricultural communicators understand what type of media to utilize for promotion. The Internet and other forms of instant gratification media are continuing to increase in popularity and agriculturalists should seize the opportunity to connect with consumers this way. This study showed that the majority of producers do not feel a website is an effective way to promote the dairy industry. Research in this area could prove otherwise.

Hutton (1996) explained integrated marketing communications (IMC) has long-term implications to help create communications that help create relationships instead of simply persuading potential buyers. IMC had great potential in the industries related to agriculture. DFI, and other marketing arms of the dairy industry along with cooperatives and producers can join forces to better communicate dairy together. More localized marketing efforts would promote the dairy farms in various communities reaching the local population and letting producers see how their farm is impacting their community. Marketing associations such as DFI could develop materials to promote farm tours to producers. This study showed farm tours are a favorable way of promotion by producers. Having materials to aid producers in achieving successful farm tours would increase their occurrence. Additionally, DFI could team with a website developer or professional agricultural communicator to create farm website templates allowing dairy farmers to create their own farm website quickly and cost-effectively. These types of tools would give producers a tangible reward for their efforts and having a convenient means to perform these types of entrepreneurial marketing could benefit all involved in the industry.

This study proved that producers differed in their perceptions of mandatory and entrepreneurial marketing based on their locus of control score on the internal-external scale. Understanding how this theory applies to the agricultural industry can benefit agricultural communicators, as well as consumers of their commodities. This study revealed that producers with an external locus of control tended to be less innovative and less likely to distribute or seek information through more entrepreneurial media, including websites. These producers are not likely to utilize DFI's website to receive information regarding their checkoff. With external producers, DFI's monthly newsletter, *The Moo Memo*, is a great way to communicate with these

producers. Additionally, producers valued the face-to-face interaction with consumers. DFI should communicate on a more frequent basis with producers in this manner to strengthen communication with the two groups. Many producers may miss a meeting with DFI due to unexpected issues related to their operations. More frequently held meetings in all regions of the state would improve relations between the groups and better educate producers on their mandatory investment.

Directions for Future Research

Although this study focused specifically on the perceptions of dairy producers in the state of Florida regarding mandatory and entrepreneurial dairy marketing, research in other states is essential to further understand the importance of promotion to the dairy industry. While many dairy studies focus on consumer perceptions, more research should be done with producers to help promote the industry effectively.

It would also be important to survey producers on not just state promotional programs such as DFI, but national promotional programs as well. Because producers have a heavy investment in the checkoff, it is to the benefit of promotional groups to understand what is important to the producer. These promotional groups must meet the demands of their consumer audience as well as the producers who fund the promotion.

In addition to dairy, other commodity groups involved in a checkoff program should investigate the issues of producer perceptions regarding programs the checkoff implements. Because the producers are the key stakeholders in a checkoff program, it would logically be concluded that promotional groups should pay close attention to the producers' perceptions of importance and value of their programs.

A follow-up study conducted with a different type of research design could further build on the results presented here. An experimental design that would give producers something to

react to could help gain a clearer understanding of how locus of control affects producer perceptions of marketing. A qualitative design utilizing a focus group or interview process would extend on the census population presented in this study and dig deeper into how producers' perceptions affect their decisions regarding entrepreneurial marketing. Employing a mixed-method design would add more insights regarding producers' perceptions of marketing.

Barriers and constraints to entrepreneurial marketing should also be further studied. This research unveiled that many producers feel entrepreneurial marketing is necessary beyond the checkoff, but a small majority were actually participating in these marketing efforts. A study that explores the perceptions of these barriers and constraints would shed new light on how agricultural communicators can bridge the gap between the need and execution of entrepreneurial promotion.

Recommendations for Practice

Langinier and Babcock (2005) stated that "consumers are in general less informed than producers about the quality of agricultural goods" (p. 1). Consumers are most likely to seek out information on a topic, in this case dairy production, through communication with a trustworthy source (Wallace, Yee, Yeung, & Morris, 2005). Successful construction of trust between the dairy producer and the public can be an effective way to not only increase public trust of the dairy industry and the foods it provides, but also increase awareness of dairy production methods. Producers spend countless hours and economic resources to ensure their products meet rigorous health standards set by state and national officials. Educating consumers through not only advertisement, but direct connections with producers could have positive rewards for the industry as a whole.

Producers should also be further educated on the marketing practices they fund, and their options for entrepreneurial marketing activity. A more solid educational effort to producers

laying out the value of marketing would help producers understand the need for marketing efforts. Additionally, the value of seeking out a professional agricultural communicator to better develop entrepreneurial marketing strategies could benefit the producers' operations and the consumer awareness of dairy production.

In addition, stronger communication between commodity groups and producers on the benefits of advertising is necessary. Producers who are far removed from the process of advertising should be educated on its benefits to fully understand the dispersal of funds to certain promotional programs. DFI should expand on current efforts to better educate producers on where their checkoff investment is being spent. While the majority of respondents to this survey felt the checkoff was of some value, many did not make the connection to the value of advertising. More aggressive efforts from DFI to educate their key stakeholders would help better make the connection between advertising and consumer perceptions of dairy.

Producers cited "more time" as the resource they most needed in order to participate in entrepreneurial efforts. Outsourcing people to help producers in this area would better equip producers to carry out entrepreneurial activities. These agricultural communications professionals could help producers develop websites, newsletters, or materials for farm tours. For example, DFI could help producers manage their time by providing producers with a talking points sheet in the event that guests arrive on their farm. This would help producers have an educational resource to draw upon quickly in order to provide visitors with accurate information. In addition, providing producers with bio-security materials such as plastic boots, and promotional materials such as pencils or other related materials with educational information on the dairy industry would add to the touring experience for the visitor, better educate them on the industry, and help the producer facility public good will with his/her guests. Promotional

materials are currently available to producers, but many do not know of their availability. Increased communication between DFI and producers on marketing materials that could aid producers in their entrepreneurial efforts is necessary to further promote the industry.

Conclusions

Mandatory marketing of dairy is not going to disappear. The promotion of dairy is necessary to educate consumers on dairy products, and the production process involved in bringing milk, cheese, ice cream, yogurt, and other dairy products to store shelves. Dairy producers fund this marketing effort through their checkoff program, and while it is mandatory, producers deserve a clear understanding of how their funds are spent, and a strong voice in agreement or disagreement therein. However, producers must also seek the knowledge available to understand the importance and value of mandatory marketing.

Entrepreneurial marketing is a unique way for the individual dairy producer to highlight their business. It was no surprise that farm tours were the entrepreneurial activity that most respondents felt valuable to their business. The face-to-face connection between producer and consumer builds a relationship with that commodity group. In addition, producers feel they are able to tell their story, their own way. Website utilization was deemed unbeneficial to the promotion of the dairy industry by the majority of respondents. However, producers should understand the growth of the Internet, and how their commodity is grossly underrepresented on this media. Websites have the ability to create the “brand” image of a generic commodity, educate consumers to the methods of dairy production and benefits of dairy products, and it is a cost-effective way for a producer to promote his/her industry. While farm tours are ideal, not all consumers have the opportunity to visit a dairy farm. The Internet provides a way for consumers to come to the farm and learn from the comfort of their own home. Producers can even set up a virtual farm tour, allowing website guests to take a peek at their operation. The experience of

touring a farm has more impact than just reading about it, and if the consumer can't have that experience in person, the Internet allows them to take a tour and see the process visually. A solid promotion of dairy production on the Internet can prompt users to learn more, becoming better educated, more skeptical of activist rants, and more apt to buy dairy in their local grocery store.

Public good will is an issue that should not be overlooked. While some producers may feel that entrepreneurial marketing efforts are unnecessary, they may be overlooking consumers that will not be reached any other way. In addition, producers can increase the public understanding of their business by allowing community members to get a first hand experience through a farm tour. Dairy producers are an asset to each community they represent, and increased exposure of the community to producers' efforts related to cow comfort and environmental awareness on their operations can foster education and appreciation of the industry within the public.

Producers are the key to the industry. They have the passion for the business and are the best to tell the story of dairy to potential consumers. Bandura (1977) defined self-efficacy as "the conviction that one can successfully execute the behavior required" (p. 193). Producers may not feel they have the resources or ability to adequately represent their operation, or their industry. For that reason, mandatory marketing helps communicate dairy to the masses and can speak for producers who would not otherwise know what to say or how to say it. Conversely, this study found many producers with high entrepreneurial potential. For producers that feel entrepreneurial marketing is necessary, professional agricultural communicators can help promote producers' operations in the manner producers feel will most adequately represent their life's work. This combination of producer passion and agricultural communicator know how can promote the dairy industry, one glass of milk at a time.

APPENDIX A
INSTITUTIONAL REVIEW BOARD APPROVAL

UF Institutional Review Board
UNIVERSITY of FLORIDA

PO Box 112250
Gainesville, FL 32611-2250
352-392-0433 (Phone)
352-392-9234 (Fax)
irb2@ufl.edu

DATE: January 12, 2006

TO: Carrie Pedreiro
PO Box 110540
Campus

FROM: Ira S. Fischler, Chair *ISF:dl*
University of Florida
Institutional Review Board

SUBJECT: **Approval of Protocol #2006-U-1149**

TITLE: Communicating the Dairy Message: How Producer Personality Relates to Perceptions of Mandatory and Entrepreneurial Marketing

SPONSOR: None

I am pleased to advise you that the University of Florida Institutional Review Board has recommended approval of this protocol. Based on its review, the UFIRB determined that this research presents no more than minimal risk to participants. Given your protocol, it is essential that you obtain signed documentation of informed consent from each participant. Enclosed is the dated, IRB-approved informed consent to be used when recruiting participants for the research.

It is essential that each of your participants sign a copy of your approved informed consent that bears the IRB approval stamp and expiration date.

If you wish to make any changes to this protocol, *including the need to increase the number of participants authorized*, you must disclose your plans before you implement them so that the Board can assess their impact on your protocol. In addition, you must report to the Board any unexpected complications that affect your participants.

If you have not completed this protocol by **January 7, 2008**, please telephone our office (392-0433), and we will discuss the renewal process with you. It is important that you keep your Department Chair informed about the status of this research protocol.

ISF:dl

APPENDIX B
INFORMED CONSENT STATEMENT

INFORMED CONSENT

Protocol Title: Communicating the Dairy Message: How Producer Personality Relates to Perceptions of Mandatory and Entrepreneurial Marketing

Please read this consent document carefully before you decide to participate in this study.

My name is Carrie Pedreiro and I am a graduate student in the Department of Agricultural Education and Communication at the University of Florida. Thank you for taking the time to participate in this study. Your participation is completely voluntary. There is no penalty for not participating. The purpose of this study is to assess the level of knowledge and perceptions of Florida cooperative dairy producers regarding their mandatory marketing program, perceptions of and levels of participation in entrepreneurial marketing efforts, and level of measurement on the internal-external locus of control personality scale. If you choose to participate, you will answer items on a confidential survey that will take about 30 minutes to complete. You can stop any time without penalty and you do not have to answer any question you do not wish to answer.

All answers are confidential to the extent provided by law. There are no known risks associated with this study and there is no compensation or other direct benefit to you for participation.

If you'd like to learn more about this study, please contact me at 408 Rolfs Hall, Gainesville campus, 352-392-0502 ext. 244, pedreiro@ufl.edu, or my supervisor, Dr. Tracy Irani, 213 Rolfs Hall, Gainesville campus, 352-392-0502 ext. 225, irani@ufl.edu. If you have questions about your rights as a research participant, please contact the UFIRB Office, Box 112250, University of Florida, Gainesville, FL, 32611-2250, 352-392-0433.

Agreement:

I have read the procedure described above. I voluntarily agree to participate in the procedure and I have received a copy of this description.

Participant: _____ Date: _____

Principal Investigator: _____ Date: _____

Approved by
University of Florida
Institutional Review Board 02
Protocol # 2006-U-1149
For Use Through 01/07/2008

APPENDIX C
DAIRY PRODUCER MARKETING SURVEY

Dairy Producer Marketing Survey

The following survey will be used to evaluate current Florida dairy producers' knowledge and perceptions regarding your mandatory promotional investment and entrepreneurial marketing efforts. Please answer the following questions to the best of your ability. **Thank you for your participation!**

I. Rate the importance of the following dairy industry promotional programs, funded by the checkoff, to the dairy industry on the scale to the left, and to your individual operation on the scale to the right. *Mark the appropriate box that corresponds to your answer.*

Important to the dairy industry.				
Not Important				Very Important
1	2	3	4	5
1	X	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5

Dairy industry promotional programs:
***** EXAMPLE *****

- Place positive messages about dairy in consumer media.**
- Teach kids in schools about the healthfulness of dairy products.
- Improve the handling and presentation of milk in school cafeterias.**
- Work with retail and restaurant chains to sell more milk and cheese.
- Influence how health professionals feel about dairy products.**
- Conduct research to show the nutritional value of dairy products.
- Encourage food manufacturers to use more dairy ingredients.**
- Promote awareness of dairy products among consumers.
- Defend the image of dairy against claims of anti-dairy activists.**
- Maintain awareness of milk and cheese through advertising.

Important to my farm.				
Not Important				Very Important
1	2	3	4	5
1	2	3	X	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5

OVER

2. How valuable do you think the following Dairy Farmers, Inc (DFI) dairy promotional programs are to the dairy industry: *Circle the number that corresponds to your answer.*

	Not Valuable		Very Valuable		
	1	2	3	4	5
***** EXAMPLE *****	1	2	3	4	5
New Look of School Milk	1	2	3	4	5
Florida Dairy Farmers High School Awards	1	2	3	4	5
3-A-Day of Dairy Advertising	1	2	3	4	5
Got milk? Junior Gator Fan of the Game	1	2	3	4	5
Grocery Store Promotions	1	2	3	4	5
Media Relations	1	2	3	4	5
Industry Relations—Image	1	2	3	4	5

3. Based on your expectations of the dairy checkoff program, how important are the following items when evaluating the success of the checkoff? *Circle the most appropriate lettering for your answer.*

SD = Strongly Disagree, D = Disagree, N = Neutral, A = Agree, SA = Strongly Agree

***** EXAMPLE *****	SD	D	N	A	SA
Directly increase on-farm milk price.	SD	D	N	A	SA
Increases in per capita consumption of milk.	SD	D	N	A	SA
Increases in per capita consumption of cheese.	SD	D	N	A	SA
More positive consumer perceptions of milk and milk products.	SD	D	N	A	SA
More positive consumer perceptions of dairy producers.	SD	D	N	A	SA
More positive consumer perceptions of the dairy industry.	SD	D	N	A	SA
Successful defense from attacks by animal rights groups.	SD	D	N	A	SA
Successful defense from attacks by environmental groups.	SD	D	N	A	SA
Dollar value of increase in demand is greater than the dollars that producers invest in the checkoff.	SD	D	N	A	SA
Teaching children about the nutritional value of milk and other dairy products.	SD	D	N	A	SA
Getting new packaging such as plastic, re-sealable containers in schools and restaurants.	SD	D	N	A	SA

OVER

4. Dairy farming can be a profitable business.
Circle the number that best corresponds to your answer.

Strongly Disagree Strongly Agree
1 2 3 4 5

5. Dairy producers need promotional efforts to compete with other food and beverage companies.

Strongly Disagree Strongly Agree
1 2 3 4 5

6. How valuable do you think the overall dairy checkoff program is to the dairy industry?

Not Valuable Very Valuable
1 2 3 4 5

7. How important do you think the checkoff program is in relation to your operation?

Not Important Extremely Important
1 2 3 4 5

8. Do you receive information about DFI's programs in the following ways? (Check yes or no for the each of the following items.)

Fellow producers YES NO

DFI Staff YES NO

Farm/Co-op meetings YES NO

DFI's *Moo Memo* YES NO

9. How often do you attend dairy producer meetings where the dairy checkoff is discussed? (Check one.)

- More than once a month
- Once a month
- Once a quarter
- Once a year
- Never

10. Do you participate in any of the following entrepreneurial marketing activities? (Check yes or no for each of the following items.)

Farm/Company website YES NO

Farm tours YES NO

Farm/Employee/Company newsletter YES NO

Farm brand/logo YES NO

Other: _____

11. I am investing money in the promotion of my farm in addition to my checkoff promotion.

YES NO

12. I believe it is necessary to promote my farm in addition to the marketing efforts funded by the checkoff.

YES NO

13. I believe a farm website can be effective in generating interest in dairy production.

Strongly Disagree Strongly Agree
1 2 3 4 5

14. I believe farm tours can be effective in generating interest in dairy production.

Strongly Disagree Strongly Agree
1 2 3 4 5

15. I feel an employee newsletter can benefit my operation.

Strongly Disagree Strongly Agree
1 2 3 4 5

OVER 

16. I would participate in more entrepreneurial marketing efforts if I had: (Check yes or no for each of the following items.)

More time YES NO

More money YES NO

More people YES NO

More training YES NO

Other: _____

17. For each pair of statements below, check next to the statement you agree with the most. *Check one statement for each pair (You should have 8 statements selected at the end of this page).*

EXAMPLE: Statement one.

EXAMPLE: Statement two.

I generally find that most new ideas that come out don't really apply to my farm.

For most new ideas, I generally find that with a lot of time and effort, I can get them to work on my farm.

Economic conditions these days make it very difficult for me to increase the size of my farm.

Even in today's economic conditions, there is often opportunity for me to increase the size of my farm.

In my situation, I can usually find ways of reducing overhead.

For my farm operation, overhead costs are a burden that I really just have to put up with.

For the sorts of things I buy for my farm, there's not a lot I can do about unexpected cost increases.

I generally find in my situation that I can reduce costs by planning ahead.

Even though times have been tough, I still think it is sensible to go into debt when you have a proposition that looks promising.

In these tough times, I would rather pay my way as I go because I think it is too risky to borrow money.

To me, banks are just like other businesses, so it pays to spend some time negotiating with them.

I feel you tend to be at the mercy of the banks if you borrow money.

Because dairy farming is such an uncertain business, I find it's best to follow fairly closely the plan I have used in recent years.

Because each year is different from the last, I prefer to set up a new plan each year.

For a dairy like mine, working out its strengths and weaknesses in great detail wouldn't help me much because so much of what happens outside the farm gate is out of my hands anyway.

In my experience, working out the strengths of my farm business in some detail can often give me useful leads for the future.

OVER 

18. For each pair of statements below, check next to the statement you agree with the most. *Check one statement for each pair. (You should have 5 statements selected at the end of this section).*

- To me, off-farm investments give a good balance to the investments I make in my farm.
- In my experience, there are so many things that are beyond your control when you go into off-farm investments that they are really not worth the trouble.
- For a dairy operation like mine, working out the threats and opportunities wouldn't help me much because you can't do much about what happens outside the dairy anyway.
- In my experience, identifying the threats and opportunities facing my farm business can often give me a good idea of the direction I should be going.
- Mostly, it doesn't worry me that things often turn out differently to my farm plans. I still find the effort put into the plans and re-adjusting them is generally repaid.
- For my situation, things can change so much that putting a lot of effort into drawing up farm plans is not really a worthwhile thing to do.
- I generally find that budgeting is a help in running my farm even though things may not turn out as I thought.
- In my situation, budgets aren't very useful as so many things can change during a year.
- For a farm like mine, its market value is something that I really don't have much influence over.
- As the owner of a farm, I can usually have some influence on its market value.

19. Into what age range do you fall? *(Check one.)*

- 18-34
- 35-49
- 50-64
- 65 and older

20. How many cows are in your milking herd? *(Check one.)*

- 1 to 99
- 100-499
- 500-999
- 1000-1999
- 2000 or more

21. How many more years are you planning to stay in the dairy business? *(Check one.)*

- Less than 5 years
- 5-10 years
- More than 10 years

22. What was the last level of school you completed? *(Check one.)*

- Less than high school
- High school graduate
- Vocational-technical training
- Some college
- College graduate
- Some graduate school
- Graduate or professional degree

OVER 

23. What type of dairy operation do you operate? (Check one.)

- Freestall barns
- Loafing barns/Drylots
- Tunnel ventilated barns
- Grazing
- Other (please specify): _____

24. Are you currently a board member of Dairy Farmers, Incorporated? (Check one.)

- Yes
- No

25. In what region of the state is your farm located? (Check one.)

- Panhandle: areas west of Lafayette County
- North Florida: areas east of Lafayette County, above I-10 to Georgia state line.
- North Florida: areas above I-4 to I-10
- South Florida: areas below I-4

Please use the space below to provide any additional comments or suggestions.



Thank you for participating! Please return the survey in the postage-paid, self-addressed envelope.

APPENDIX D
COVER LETTER (WAVE 1)



IFAS

Agricultural Education and Communication Department

408 Rolfs Hall/P.O. Box 110540

Gainesville, FL 32611-0540

Telephone: (352) 392-0502

<http://aec.ifas.ufl.edu>

January 12, 2007

Dear Florida Dairy Producer:

Happy New Year! My name is Carrie Pedreiro and I am a master's student at the University of Florida in the Department of Agricultural Education and Communication. My thesis research is centered around determining your current level of knowledge and perceptions regarding the promotional programs you fund via the dairy checkoff.

You were chosen to participate in this survey because you are a dairy producer in the state of Florida who belongs to Southeast Milk, Incorporated. In order for the results to accurately represent all Florida producers, it is very important that each questionnaire be completed and returned. Responding should take no longer than 30 minutes of your time, but will be critical to the success of the study. I would urge you to complete the questionnaire and return it in the enclosed envelope by January 21, 2007.

You can rest assured that your responses will remain completely confidential. You have been assigned a number only to identify which questionnaires are returned to prevent sending you an additional copy. Also in this mailing is a consent form explaining your rights as an elective participant. Please read through the consent form, sign and date on the "participant" line, and return the form with your questionnaire in the postage-paid envelope.

If you have any questions about the study, feel free to contact me via phone or e-mail. You can reach me at 352-392-0502, extension 244, or by e-mail at Pedreiro@ufl.edu.

Thank you for your time. Your cooperation is greatly appreciated.

Sincerely,

Carrie Pedreiro
Graduate Teaching Assistant

Enclosure

APPENDIX E
SURVEY REMINDER/THANK YOU POSTCARD

January 23, 2007

Florida Dairy Producer,

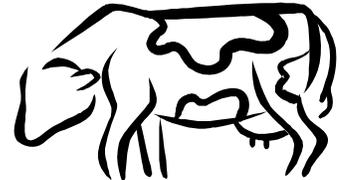
Last week a questionnaire was mailed to you seeking your opinions about dairy marketing. You were chosen to receive the questionnaire due to your membership with Southeast Milk, Incorporated.

If you have already completed the questionnaire and returned it, please accept my sincere thanks. If not, please do so today. It is only by asking people like you to share your opinions that we can understand the dairy producers' perspective regarding the marketing of your commodity. Your participation is greatly appreciated.

If you did not receive a questionnaire, or have misplaced it, please call me at 352-392-0502, extension 244 and I will send another one in the mail to you today.

Sincerely,

Carrie Pedreiro
UF Graduate Student
Pedreiro@ufl.edu



APPENDIX F
COVER LETTER (WAVE 2)



IFAS

Agricultural Education and Communication Department

408 Rolfs Hall/P.O. Box 110540
Gainesville, FL 32611-0540
Telephone: (352) 392-0502
<http://aec.ifas.ufl.edu>

February 2, 2007

Dear Florida Dairy Producer:

About three weeks ago I sent you a questionnaire that asked about your opinions as a Florida dairy producer regarding mandatory and entrepreneurial marketing. To the best of my knowledge, your questionnaire has not yet been returned.

The comments of producers who have already responded are revealing a variety of opinions on the subject. I think the results are going to be beneficial to all Florida producers, the leaders of the dairy industry in Florida, and helpful to those involved in your mandatory marketing programs.

I am writing again due to the importance your questionnaire has to collecting accurate results of my study. It is only by hearing from a large portion of my population that I can assure all Florida producers can be accurately represented on these issues.

You have been assigned a questionnaire identification number. This number is only present to mark you off our mailing list once your questionnaire has been returned. Your name is in no other way connected to your responses. Protecting the confidentiality of your answers is very important to me, as well as the University of Florida.

I hope that you will fill out and return the questionnaire as soon as possible. If you have any questions, please contact me via phone or e-mail. You can reach me at 352-392-0502, extension 244, or by e-mail at Pedreiro@ufl.edu if you have trouble reaching me by phone.

Sincerely,

Carrie Pedreiro
Graduate Teaching Assistant

Enclosure

APPENDIX G
COVER LETTER (WAVE 3)



IFAS

Agricultural Education and Communication Department

408 Rolfs Hall/P.O. Box 110540
Gainesville, FL 32611-0540
Telephone: (352) 392-0502
<http://aec.ifas.ufl.edu>

February 2, 2007

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I hope that you will fill out and return the questionnaire as soon as possible. If you have any questions, please contact me via phone or e-mail. You can reach me at 352-392-0502, extension 244, or by e-mail at Pedreiro@ufl.edu if you have trouble reaching me by phone.

Sincerely,

Carrie Pedreiro
Graduate Teaching Assistant

Enclosure

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BIOGRAPHICAL SKETCH

Carrie Sumrall Pedreiro was born on October 23, 1979 in McComb, Mississippi. As a child, she developed a deep love for agriculture and communication through her active involvement in 4-H and FFA. Discovering a passion for public speaking, Carrie pursued activities that would nurture and develop her communication skills. She won numerous speaking awards, including State FFA Creed Speaker for Colorado in 1995.

Carrie graduated valedictorian from Valley High School in Gilcrest, Colorado in 1998. Driven by a passion and appreciation for animal agriculture and communication, she earned her B.S. in animal science with a double major in speech communications from Colorado State University (CSU) in 2002. While at CSU, Carrie was a member of the dairy judging team, taking sixth overall in the reasons division at the national contest in 2001.

Carrie's professional experience includes working on all areas of her family's dairy farm, including herd health, calf management, and parlor management. She also has developed newsletters and websites, and currently serves as editor for Dairy Production Systems' company newsletter and website. Carrie also worked for an organic dairy company in Colorado as a sales and marketing assistant until relocating to Florida in 2004.

Once in Florida, Carrie decided to pursue her Master of Science degree in agricultural communications at the University of Florida to further cultivate her talents, and gain experience in teaching and research. She served as a graduate teaching assistant and research assistant during her graduate program.

Upon completion of her M.S. program, Carrie will pursue opportunities in agricultural communications, hoping to focus on the dairy industry. Carrie has been married to Michael Pedreiro for 3 years, and they are expecting their first child in June 2007.