AN180

UF UNIVERSITY of FLORIDA
IFAS Extension

Florida Dairy Farm Situation and Outlook 2007[1]

Russ Giesy and Albert De Vries[2]

Situation

Dairy farming is an important part of Florida's agricultural industry. UF/IFAS has estimated that the value of cash receipts from the sale of milk for 2005 was $413 million, up 1% from the $409 million reported for 2004. Total dairy farm receipts were estimated at $444 million dollars.

The Florida Agricultural Statistics Service has indicated that there were about 130,000 dairy cows in Florida in December, 2006. That is down from 135,000 in late 2005 and 152,000 at the start of 2002. This decline is consistent with a long term trend showing fewer cows and dairy farms. The number of Florida dairy farms, 151, has continued to decline at a faster rate than numbers of cows due to narrow margins, escalating land values and the uncertainty of the cost of environmental regulations, particularly on the part of owners of dairies with less than 700 cows.

The average milk price received by Florida producers that sell milk to Southeast Milk Inc. was $18.20 in 2005. USDA reported that total production by Florida producers was 2,271 million pounds. Total milk revenues in 2005 were estimated at $413.3 million and total revenues at $444.4 million. Consequently, the Florida dairy industry remains a vital portion of Florida agriculture.

The Dairy Business Analysis Program (DBAP) is a cooperative effort of the Universities of Florida and Georgia, Southeast Milk Inc., and Southeast (Dairy Herd Improvement Association) DHIA. This project annually surveys participating dairy farms about their revenues, expenses, and investments. The average of participating DBAP dairies (2005 data) showed a slightly positive net farm income of $0.09 per cwt., 4% return to invested capital and 1% return to equity. Revenues were somewhat ($0.50 per cwt.) lower than 2004, while expenses continued an upward trend inherent since 1999 and $1.00 per cwt. higher than 2004. The cost of inputs continues to squeeze producer margins. Labor costs in 2005 were an all-time high at $3.53 per cwt., 17.4% of total expenses. Feed costs were $7.50 per cwt, in 2005, 37% of total expenses and are expected to move higher in 2006 and 2007. These Dairies that participated in DBAP averaged 1,091 cows and sold, on average, 18,474 pounds of milk per cow. Assets per cow were $6,518, debt per cow was $1,862, and equity per cow was $4,032. Equity growth rate was 0.9%, slightly lower than the 1.1% annual average since 1995. Asset turnover rate was 0.8, lower than

1. This document is AN180, one of a series of the Department of Animal Sciences, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Published February 2007. Visit the EDIS Web Site at http://edis.ifas.ufl.edu.

2. Russ Giesy, Multi-County Dairy Agent IV, Sumter County and Albert De Vries, Assistant Professor, Department of Animal Sciences; Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL, 32611.

the 0.88 average of the eleven-year period of this continuing survey (1995-2006).

Outlook

Florida farm level milk price is determined by a national supply and demand model. Most dairy economists predict that the 2007 U.S. milk price will be up about 8% over 2006, based on an expanding demand while supply grows more slowly. As a result, a predicted average 2007 milk price in Florida might be about $18 per cwt.

Heading into 2007, the cost of many inputs will likely continue to rise, particularly feed commodities and those affected by increased energy costs; utilities fuel, fertilizer, hauling, etc. Additionally, the national economic circumstance may cause an increase in interest rates, thus causing concern to those dairies that may be building, expanding or adding nutrient handling systems. Feed costs alone may add $1 per cwt to the costs of production due to future demand for corn to be used for ethanol production. Similarly, there is a high value for protein on the international market, driving up futures for soybeans and other protein sources.

Background Information, the Challenge of Dairy Production in Florida

Production Challenges

Florida's warm and humid climate is not ideal for dairy cattle that evolved during centuries of selective breeding in the relatively moderate climates of northern Europe. Heat stress has been shown to reduce production by 25% by reducing feed intake and increasing health problems such as mastitis, lameness and reproductive delay. Mastitis has been estimated to cost producers at least $300/cow/year. Udder, feet and reproductive health challenges cause the culling of about 35% of cows each year. This constrains herd replacement dynamics, causing less efficient cows to remain in the herd.

Economic Challenges

Florida's dairy producers operate under a difficult economic situation. Despite a geographic difference and a product that's difficult to transport, they increasingly compete in a national and international marketplace. The task of negotiating consistently profitable milk prices has become increasingly difficult for Florida's dairy cooperative, Southeast Milk, Inc., because larger handlers from outside the southeast would like are pushing to gain market share. Ultimately, they would like to control Florida's growing market with its high fluid utilization rate and resulting higher price.

Milk price volatility made the dairy farm economic situation in the 1990's challenging. DBAP data from 1995-2005 has shown that milk prices ranged from $15.51 in 1995 to a high of $18.56 in 1998, averaging $17.41 in 1995. This price volatility is difficult for producers since costs of production are much less variable. Florida lost a third of its dairy farms in the 1990's.

DBAP has now collected 11 years of data. From DBAP data-base, these observations can be made:

- The cost of producing milk has risen. This is important but not surprising news. The average cost of producing milk in 1996 was $18.51, compared to $20.18 in 2005. Revenues have not kept up with rising input costs. For example, the average milk price received by producers in 2005 was $18.32 per cwt. This compares to the average milk price in 1996 of $18.39, virtually the same, ten years later.

- Since revenues have increased more slowly than costs, it follows that margins have decreased. In fact, the average net farm income per cwt. was $1.22 for years 1995 thru 1999, but $0.73 from 2000-2005, a 33% reduction.

- Reasons for declining profit margins are several but one statistic that stands out from the others is capital investment. Total assets employed in the business on a per-cow basis clearly show that investments have risen substantially. In the years 1995-1997, total assets per cow averaged $3,721 compared to $4,357 in years 1998-2001 and $6,086 in 2002-2005.

- Since margins have decreased over time, yet producers have increased the assets of their businesses, the data suggest that assets are being

used less efficiently. If this is true, the dairy farms would have had increased difficulty paying for new assets. Financial data supports this conclusion. Debt per cow averaged $1,381 in years 1995-1997, $1,400 in years 1998-2001 and $1,853 in years 2002-2005. Producers have leveraged their futures to provide new assets.

- Asset turnover rate (ATR) is another statistic that provides another method of analysis of the same effect (declining ability of dairy farms to pay for investments in new assets). ATR is total annual revenues divided by total assets. Thus, ATR indicates the ability of a business to efficiently utilize assets to generate revenues. DBAP average ATR in years 1995-1997 was 1.03, 0.99 in years 1998-2001 and 0.67 in years 2002-2005.

Note: DBAP does not provide participating dairy farms an opportunity to increase values for real estate. This is done to provide a clearer view of profitability, that is, DBAP profitability comes from productive activities, not from asset value inflation.

These points show clearly that DBAP dairy farms have been adding assets to their businesses since 1995 that have not increased profitability, but rather, have decreased asset efficiency and profit margins.

Environmental Challenges

Dairies face increased regulation due to social pressure. While cows on pasture invoke warm, fuzzy feelings with many Americans, the increasing size of herds causes the public to be concerned with odors, flies and real or imagined potential losses of nutrients that influence water quality.

The greatest reason for the environmental issues facing Florida dairy producers is the high concentration of animals on farmland. High-producing cows may consume 100 pounds of feed and 50 gallons of water per day. They may excrete 195 pounds of manure and urine. Florida dairies average nearly 730 cows and about 50% of them raise young replacement cattle as well. Thus, there is an extremely high volume of nutrients flowing through the dairy system. Even minuscule percentages of these nutrients, if lost, could command attention of regulatory agencies. Further, if cow densities on land become fixed by regulatory action, these new constraints on herd size will negate the opportunity to increase herd size to forever limit most farms' opportunity to grow, dooming them to eventual inefficiency and discontinuation.

The cost of nutrient handling systems that will meet the future requirements of environmental regulatory agencies is unknown and perceived to be a major constraint to dairies as they commit to the future. These costs have two parts; (a) the original investment costs of engineering and putting the new systems in place and (b) operating and maintaining the systems well into the future. These systems, incorporating significant levels of new technology, have been implemented to ensure that dairies efficiently handle nutrients in an environmentally friendly manner. New UF/IFAS research projects are studying the feasibility of using manure nutrients as an energy source in the generation of electricity. The UF/IFAS Extension Service is helping to determine the cost of implementing and operating these new systems so as to aid management decisions for these dairies. Also, the information will be valuable to many others that have yet to develop their best responses to environmental regulation.

Size and location differences among dairies significantly differing affect nutrient handling system expense. Additionally, different types of systems have differing initial investment and operating expenses. Dairies that employ such new systems take on a competitive disadvantage since investing in these new systems generally does not generate a positive return.

New environmental regulations for dairy farms of less than 700 will be introduced in 2007. There were 101 such dairies (46 with less than 200 cows and 55 dairy farms with 201-699 cows). Great concern has been expressed relative about the future of these dairy farms. The cost of complying with these new regulations is being assessed by UF/IFAS Extension Service as this is written in early 2007.

Social Challenges

The population of Florida continues to grow at a phenomenal rate. This has implications for dairies. First, their property is highly valued for development purposes. Second, the demand for milk grows with the population. Third, fluid milk products have limited shelf life, so milk produced in Florida is greatly preferred by processor/handlers. Fourth, higher energy costs have increased the cost of importing milk from distant areas. Lastly, environmental regulatory agencies may become more assertive in 2007 with respect to middle and smaller sized dairy farms.

It is recommended that (1) new regulations that may be implemented by environmental agencies be timed coincidentally with opportunities for cost sharing and (2) the state legislature develop an encouragement for new or expanded dairy operations that will meet requirements of concentrated animal feeding operations. Several states, including Texas and South Dakota, have created enticements, while states such as Wisconsin have cost shared herd expansion.

Opportunity

The future for Florida dairying is strong because of the market. Florida's growing population ensures a demand for fluid milk products which generate the greatest value in the marketplace. Also, high costs of energy help resist transportation of fluid milk into the Florida market from areas with product surpluses such as the upper mid-west and west. There remains a strong future for dairies that can ensure cows a comfortable and safe lifestyle, show society an environmentally friendly operation, and maintain a profitable business structure in a changing world.