

**DAIRY ADVANTAGE: GROWING NORTH CAROLINA'S DAIRY INDUSTRY THROUGH
IMPROVED FARM MANAGEMENT PRACTICES***Geoffrey A. Benson**¹Professor Emeritus, Department of Agricultural and Resource Economics, North Carolina State University.***Abstract**

This paper describes a dairy development program created by members of the North Carolina dairy industry to slow or reverse the downward trend in the state's milk production. Under leadership provided by several organizations, a strategic plan was developed for the industry that included: an assessment of strengths, weaknesses, opportunities and threats; goal setting; an assessment of resources; and an action plan. The action plan called for the acquisition of additional resources, improved coordination in developing and delivering programs for dairy producers and their families, and the development of two new programs that integrate farm production management and farm business management. Great progress has been made in implementing this action plan. A Dairy Farm Assessment Program provides dairy producers an opportunity to clarify their family and business goals, and have their farm resources, farm production performance, and farm financial performance and health reviewed by a two-person team. Guidance is provided on future directions and priorities. A Profit Team Program builds on the farm assessment and creates a team of advisors to assist the dairy producer and family to achieve their goals. Results to date have been largely intangible but the program leadership firmly believes the foundation has been laid that has an increased probability of successfully achieving the stated goals.

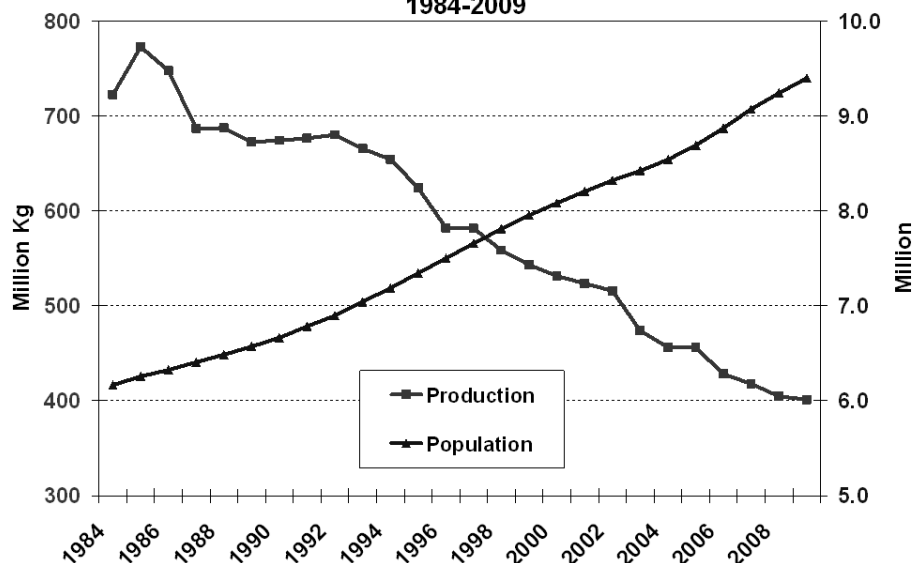
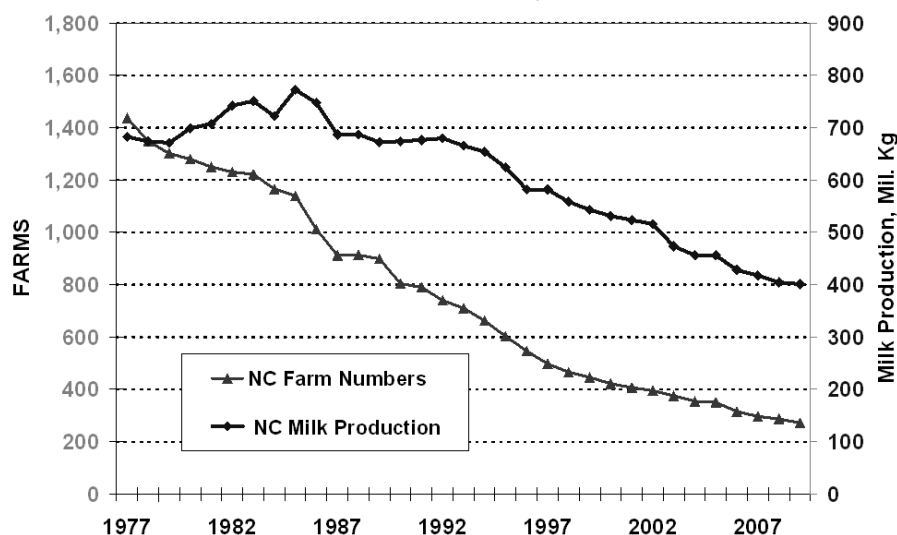
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Introduction

North Carolina has a growing population, currently 9.5 million, which creates a growing market for dairy products. However, the state's milk production has been declining for over 20 years, Figure 1. The number of dairy farms and dairy cows has been decreasing, Figure 2. Milk yields per cow have increased and are the highest in the region but this increase has been insufficient to offset the decline in cow numbers. There are concerns that a continuation of these trends will erode the industry's infrastructure, which would both create additional challenges for the remaining dairy farms and threaten the viability of the milk processing sector, which increasingly relies on out-of-state sources of raw milk. Sustaining the states dairy industry would enhance its contribution to the local economy and help preserve working farmland and open space in areas subject to increasing urbanization.

Information on the profitability of dairy farming in North Carolina (NC) is limited but the available data suggests that NC dairy farm profits are competitive with those in other regions of the United States (US). However, there are challenges. There is considerable variation in financial performance and health among NC dairy farms, although this is generally the case across the country. The increasing volatility of US milk prices creates frequent periods of financial stress for all producers. The population growth that is creating a growing market is occurring largely in the same areas where dairy farms are currently located, creating competition for land and human resources. The eastern part of the state is the main agricultural region, primarily row crops, specialty crops, hogs, and poultry. It has a lower population density, larger farms and lower land prices. Any large new dairy farms likely would locate in this region.

Figure 1. North Carolina Milk Production and Population, 1984-2009**Figure 2. NORTH CAROLINA GRADE A DAIRY FARMS AND MILK PRODUCTION, 1977-2009**

Creating the Dairy Advantage Program

In 2006, a group of people involved in the dairy industry came together to discuss what might be done to stabilize or even reverse the observed trends in milk production. This group included representatives of the NC Dairy Producers Association, the NC Department of Agriculture and Consumer Services, the NC Farm Bureau Federation and the NC State Grange (both general farm organizations), allied industries with a dairy producer clientele, NC State University, and the NC Cooperative Extension Service. This group decided that a strategic planning effort was called for and provided leadership for creating an industry-wide committee for this purpose. This planning committee followed a fairly standard approach to strategic planning, including an assessment of the dairy industries strengths, weaknesses, opportunities and threats. Based on this assessment, the committee concluded there were reasonable prospects for reversing past trends.

After taking an inventory of resources, the committee developed a set of prioritized goals. The committee also investigated a number of existing dairy development programs and activities in other states that could help achieve these goals. Selected programs were adapted and incorporated into an action plan. The committee completed its work by late 2007 and revealed this strategic plan to the industry and other interested organizations. This strategic plan was given the name Dairy Advantage and a copy is available on line at <http://www.ag-econ.ncsu.edu/faculty/benson/>. The name North Carolina Dairy Advantage was registered as a trade mark/service mark to protect the program's identity.

Four goals were identified and prioritized as follows:

1. Enhance the value of the milk and dairy products produced in NC
2. Enhance dairy farm family quality of life
3. Increase the volume of milk produced in the state
4. Support dairy farm numbers

The action plan called for programs and activities that would have a positive effect on the observed trends in the NC dairy industry through:

1. Farm retention
2. Farm expansion, including value added activities
3. Farm relocation and recruitment

Resources

No organization or program can succeed without the necessary resources, including both human and financial resources.

1. Human Resources. One of the issues identified in the strategic planning process was the fragmented nature of the existing human resources and programs providing support for dairy farmers. Most of the individuals with dairy responsibilities working for state government, farm organizations, and NC State University had responsibility for other commodities or activities in addition to the dairy industry. Allied industries typically work on a regional basis and cover more than one state. A systematic review was conducted of dairy subject matter topics and the organizations with the required competencies. Primary responsibilities for the highest priority topics and activities were determined in order to focus resources and avoid duplication of effort. Gaps were identified and strategies devised to address priority needs.

In order to better coordinate the activities of these organizations and individuals, and to provide a more visible focal point for the dairy industry, a full time Dairy Development Coordinator position was created, to be financed through grant funds. Also, the dairy industry was successful in obtaining recurrent funding from the NC legislature for two new dairy extension educator positions with state-wide responsibilities. One position is in dairy production management and one in dairy farm business management. Both positions have been filled. However, some resources have been lost. Three NCSU Extension Specialists who worked in the dairy area retired and are unlikely to be replaced because of reductions in the University budget. These specialists worked in the areas of dairy nutrition, milking management and farm business management, marketing and policy.

The strategic planning committee identified the need for a new organization that would bring together representatives of the various organizations with a vested interest in the health of the NC dairy industry. The NC Association for Dairy Stabilization and Growth, Inc., a non-profit organization (IRS code 501(c) 3), was created in 2008 to provide leadership and oversight for the Dairy Advantage program. By-laws were developed, a Board of Directors was seated and a Steering Committee appointed to plan and oversee day-to-day activities.

2. Financial resources. Additional financial resources were required to develop and implement the strategic plan. Grants were obtained from several sources, including the Golden LEAF Foundation, the NC Agricultural Development and Farmland Preservation Trust Fund, and the NC State University Dairy and Agricultural Foundations. The NC Dairy Producers Association also made a significant financial contribution. Total funding obtained to date is approximately US\$309,000. In-kind support has been and is provided by NC Department of Agriculture and Consumer Services, NC Farm Bureau Federation, allied industries including the Carolina Farm Credit Association, and NC State University and the NC Cooperative Extension Service.

These grant funds and in-kind contributions have been used 1) to cover the incidental expenses associated with the development of the dairy industry strategic plan [committee members donated their time], 2) to hire a Dairy Development Coordinator, and 3) to support new program activities, including the Dairy Advantage pilot programs. Obtaining continuing funding is an ongoing concern and a funding committee has been created to work on this issue.

Implementation

In addition to the changes in human resources described in the preceding section, progress to date in developing programs and activities under the Dairy Advantage program banner include the following.

A) Farm Retention and Expansion activities include the creation of two pilot programs.

1. *Dairy Farm Assessment Program.* This program offers confidential one-on-one assistance to dairy producers and their families. The assessment includes identifying the goals of the family and farm business, and a comprehensive assessment of the farming operation including farm resources and infrastructure, financial performance and herd performance. The financial assessment includes profitability, cash flow and solvency. Production benchmarks are based on Dairy Herd Improvement data from Dairy Records Management Systems, an organization that processes herd records for many state associations across the US. Financial benchmarks are more of a challenge, partly because there is limited data available and partly because milk and input price volatility requires benchmarks to be very time specific.

The farm assessment normally is conducted by a two-person team, including one with dairy husbandry expertise and one with farm business and financial management skills. Once the team has conducted its assessment, the producer is provided with a written report that summarizes the farm situation and provides suggestions about future directions and priorities. This is presented and discussed at a follow-up meeting. As far as we are aware, the specific procedures and worksheets developed for use in this program are somewhat unique in the US. A description of the program and procedures is available on line at <http://www.ag-econ.ncsu.edu/faculty/benson/benson.html>. Copies of the worksheets used in these assessments are available from the author. Five assessments have been completed by dairy extension specialists and several more are partially completed.

2. *Profit Team Program.* This program is offered to producers who have completed a dairy farm assessment. It is modelled on a program developed at The Pennsylvania State University. The underlying principle is that discussing farm problems and issues in a group setting with all the key advisors present and with full information available from the Farm Assessment program will lead to better decisions than would be the case if a producer discussed problems and issues with these same advisors individually. This is a variation on the old idea that “Two heads are better than one”. Responsibility for decisions and implementation remain with the dairy producer.

The composition of the team depends on the farm situation. For example, in some cases the team may focus on improvements in farm performance in others it may help guide expansion or farm transition planning and implementation. Profit teams typically include a facilitator, the herd

veterinarian, a financial advisor, a nutritionist, and an extension educator. Other individuals may be included or brought in, for example, other producers, an engineer, an attorney. The operation of profit teams is described in “Dairy Advisory Teams: A Handbook for Producers”, by C.W. Heald, L.A. Holden and L.J. Hutchinson, published by Hoard’s Dairyman magazine, Fort Atkinson, WI.

Two teams are functioning at present. Several other producers have expressed interest but their teams have not been created because of retirements and the need for the recently hired individuals to become oriented. New teams will be formed once the members can be identified and supported.

3. *A number of other activities are ongoing.* Artisan cheese making, including cow’s and goat’s milk cheeses, though a small part of the industry, is growing rapidly. Artisan cheeses have been featured at agricultural fairs and assistance has been provided to dairy producers exploring value-added opportunities. Farm milk prices fell to very low levels during parts of 2008 and 2009. Two area producer meetings were held to discuss strategies for coping with these very low milk prices, including exit strategies. Annual dairy industry appreciation dinners were held on producer’s farms in 2009 and 2010. Industry communications with producers and others have been improved through the development of a new newsletter and other mailings. A web site has been developed and is operational at <http://www.ncdairyadvantage.com>. A presence has been created on Facebook at <http://www.facebook.com/pages/Burlington-NC/North-Carolina-Dairy-Advantage/170923959286>.

B) The recruitment and relocation effort is making some progress but has yet to have its first success. Materials have been developed to publicize and promote dairying opportunities in North Carolina. A New Zealand consultant was hired to help assess opportunities and guide materials development for pasture-based dairy farms. “North Carolina Dairy Advantage” had an exhibitors booth at the World Dairy Expo in Madison, Wisconsin in 2009 and 2010, one of only a few states to do so. The program is collaborating with a southern region initiative to attract new dairy farms. These activities have generated some producer interest and producer feedback is being used to develop additional information.

New dairies being built in other regions of the US are larger than those currently found in the state, so local performance data are lacking. Model dairy farms are being developed and evaluated for profitability; including a 2,000 cow confinement dairy utilizing corn (maize) silage based total mixed ration and a 600 cow pasture-based dairy. These models are for new investments on green field sites and were chosen because they represent farms of sufficient size to achieve economies of scale and size.

Locating suitable properties, whether existing dairy farms or greenfield sites, and navigating state nutrient management and other regulations, and business plan development are among the services offered by the Dairy Advantage program to producers interested in relocating to or within North Carolina.

Results

The Dairy Advantage program has had a relatively long gestation and it is still a work in progress because changing the direction of a state’s dairy industry is like turning the proverbial battleship; it takes time. Most of the initial results have been intangible. These include positive comments from the participants in the Dairy Farm Assessment and Profit Team programs, more coordination among the various industry organizations and a focus by these organizations on a common set of goals. There has been a perceptible improvement in the morale among dairy producers. The visibility of North Carolina as a place of interest for dairy farming based has increased, on an increase in the number of enquiries about opportunities in North Carolina and visits to the state. The Dairy Advantage leadership believes the foundations have been laid for the development of a dairy industry that is more competitive.

Concluding Comments

While the development and implementation of the Dairy Advantage program contains few novel features, the application of accepted business management tools and practices has created a program with a greater probability of success. Among the positive aspects of the plan is a more realistic assessment of the opportunities as well as the problems dairy producer face. Strategic planning has focused what had been fragmented efforts on the part of several organizations with a dairy farmer clientele into a more coordinated effort with clear goals and priorities. This has lead to improved cooperation and coordination in program development and delivery. There is an increased awareness of and attention paid to both production and financial management, and new initiatives combine dairy production management with farm financial management in a coordinated effort. Examples include the Dairy Farm Assessment Program and Profit Teams.

As a farm management professional working in the public sector, it is satisfying to see traditional farm management and business tools applied to new issues in a creative way in a collaborative public-private situation. University faculty and Cooperative Extension Service personnel have been and are an important component of this program. Regrettably, the number of University faculty and Extension Educators working in farm business management, both in NC and in the US, has been decreasing for several years and, at least in this region of the US, these reductions in public sector resources are not being replaced by trained personnel in the private sector. One can only wonder what opportunities may be missed as a consequence.