A Survey of Licensed Dairies

in

Western North Carolina

Prepared for:

Appalachian Sustainable Agriculture Project

by

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The Appalachian Sustainable Agriculture Project (ASAP) is a nonprofit organization dedicated to sustaining farms and farming in Western North Carolina (WNC) through programs and services designed to promote local consumption of locally-grown food and farm products. Since 2003 ASAP has conducted a series of surveys and other research designed to assess the food and farm economy in the region, with an emphasis on expanding local markets for local farm products.

Among other things, the research shows that despite strong demand only a small fraction of all food produced in the region is currently consumed locally. The reasons for this disconnect between local demand and supply are many, but one set of issues involves the region's food processing and distribution system. These issues are particularly relevant for certain types of foods, most notably meat and dairy products which must be processed before they can be consumed.

To gather basic information about dairy farms in WNC and examine trends and issues affecting the future of dairy farming in the region, ASAP commissioned a survey of dairy farms in the fall of 2006.[1] For the survey, a written questionnaire was mailed to 68 licensed dairies using a list compiled by the NC Division of Environmental Health. A total of 29 surveys were returned, for a response rate of 43%.

Survey Results

Dairy farming in the region is by and large a family operation. One hundred percent of dairy farmers completing the survey identified their farms as family farms.[2] More than 90% also reported that their family had been operating the dairy for 30 years or more. Given this long history of dairy farming in the region, the fact that more than a third of survey respondents indicated they might not be able to continue operating the dairy for long is worth noting. Reasons given by farmers for the likelihood of selling or closing down their dairy operation included things like extremely low prices paid for milk and pressure from developers interested in buying their land. A nearly 70% decrease in the number of dairy farms in NC from 1,139 in 1985 to 350 in 2005 provides evidence that dairy farming in the state is in a significant period of decline.[3]

Most of the dairy farms in the region are relatively small. More than three quarters of dairy farmers completing the survey reported average herd size of fewer than 200 cows. Only one could be considered large, reporting an average of 800 cows in inventory. Average annual milk production of 20,475 pounds reported by the 29 dairies surveyed was somewhat higher than the state average of 18,611 pounds in 2005, though only two

[1] Western North Carolina is defined here as the 23 counties included in the Advantage West economic development region. The state of North Carolina is divided into seven regions for economic development purposes.
[2] In the survey, a family farm was defined as one in which the family holds financial responsibility, takes the risks and provides the majority of management decisions for the farm.
[3] Agricultural Statistics Division, North Carolina Department of Agriculture & Consumer Services.

dairies reported that they currently use the growth hormone rBST.[4] Total annual milk production in the region can be estimated as just over 252 million gallons.[5]

Dairy farmers in the region typically belong to one of three dairy cooperatives: Dairy Farmers of America, a national cooperative; Piedmont Milk Sales Inc., a milk broker; or a regional cooperative, the Maryland and Virginia Milk Producers Association. Fluid milk processors and processors of other dairy products contract directly with these organizations for much larger amounts of milk than any individual farmer could provide. This arrangement fits within the Federal Milk Marketing Order program, which is designed to stabilize market conditions and benefit both producers and consumers.[6] The program assures that dairy farmers receive a reasonable minimum price for their milk throughout the year. For consumers, it guarantees an adequate supply of milk and helps prevent wide price fluctuations during periods of heavy and light milk production.

According to producers, organic milk production is not practical in the region right now. This is important because of growing demand for organic milk nationwide and the possibility that farmers could earn a premium by selling milk certified as organically produced.[7] The cost of grain and the lack of availability of organic grain were the top two barriers rated by survey respondents regarding organic milk production. Other barriers given high ratings include (in order) the expense of transitioning, the certification process, and concerns about the health of the herd. Overall, only four dairies completing a survey expressed interest in producing organic milk. That compares to 24 dairies – 83% of all dairies surveyed – that answered yes when asked whether they could benefit from a labeling or promotional program identifying their milk as locally produced.

According to the survey, sources of support for dairy farmers are varied. Interestingly, private feed consultants and nutritionists – typically representatives of proprietary firms – were rated as the most often used source of support by dairy farmers, followed by (in order) the Farm Services Administration, the North Carolina Cooperative Extension Service, the North Carolina Department of Agriculture, and the Farm Bureau. Only two dairies reported that the North Carolina Dairy Association is a source of information and support.

Context[8]

Dairy farms are more specialized than most other types of farm operations and accordingly have particular equipment and facility needs. Dairy farmers require facilities to milk cows and to store milk and cool milk. They also need the equipment to test milk for antibiotics, bacteria, and somatic cell counts before it is picked up by milk haulers

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[4] The hormone, made by the agricultural company Monsanto and designed to increase a cow's milk supply, was approved by the FDA in 1993.

[5] Production data is derived from USDA Agriculture of Census data (14,287 milk cows in WNC in 2002) combined with production statistics provided by NCDA (17,766 average annual milk production per cow in NC in 2002).

[6] *Federal Milk Marketing Orders.* Agricultural Marketing Service, USDA. www.ams.usda.gov/dairy/orders.htm.

[7] Dimitri, C. and C. Greene. *Recent Growth Patterns in the U.S. Organic Foods Market.* 2002. Economic Research Service, USDA..

[8] See Miller, J. J., and D. P. Blayney. 2006. *Dairy Backgrounder*. USDA/Economic Research Service for a more in-depth discussion of issues and data in this section.

who are either independent operators and charge farmers a pick up fee for their services or who are vertically integrated with dairy processing facilities. Dairy farmers also tend to have fewer sources of off-farm income than other farmers making them more dependent on farm-generated income. Taken together, these factors make dairy farms particularly susceptible to price volatility, which has been severe in the industry in recent years.

The dairy industry has experienced similar consolidation and concentration as other farm sectors. From 1970 to the early 2000s, the number of dairy operations in the U.S. decreased from about 650,000 operations to about 90,000 and average herd size increased five-fold from 20 cows to 100 cows. Each year more milk is produced on fewer farms. While operations with 500 or more milk cows represented only 3.7 percent of all dairy farms in 2004, they produced 47 percent of the milk. Consolidation has also occurred in processing and fewer firms are processing raw milk into fluid milk and other manufactured products.

The dairy industry has also seen changes in product demand. In 1975, fluid milk products represent 50 percent of milk utilization. Today, about one-third of milk is processed into fluid milk and cream products, and the remaining two-thirds is processed into a variety of dairy products including cheese, yogurt, butter, ice cream, dry or condensed milk, and whey products used primarily as ingredients in processed foods. Cheese in particular has become the dominant end-product for raw milk; a little over half the milk supply is processed into nine billion pounds of cheese annually. Increasing demand for cheese as well as for butter and other manufactured dairy products reflects a shift in the dairy market from retail sales to restaurant and food processor sales. Food processing and away-from-home eating now account for the majority of dairy product usage.

Discussion

Dairy farming in the region is in a period of decline. The trend is likely to continue based on comments from survey respondents about financial pressures affecting the future of their operations and other challenges related to the current dairy industry environment. The small size of dairy farms in WNC also makes them vulnerable to industry concentration and consolidation.

Interest is high among regional dairy farmers in the idea of differentiating locally produced milk. The logistics of such a program are complicated based on the fact that milk is marketed cooperatively and pooled during production. Future research should focus whether a local label could add value to milk and how local labeling could be achieved given the realities of milk production and distribution.