

Final Report

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Farmer-Centered, Value-Added Processing and Marketing Opportunities for Northeast Dairy Farmers

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Match

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Duration

1997 to 2000

Summary

This project explored the potential for dairy farmers to make and market cheeses or yogurt or bottle milk. Farmer-to-farmer seminars and tours showed farmers the viability of different business development strategies. We disseminated workshop proceedings and a value-added dairy database to over 400 farmers and advisors, and counseled and referred about 70 farmers. Five groups of farmers participated in 13 days of practical farmstead cheese making workshops. A business consultant developed budgets for one type of dairy processing enterprise. Interviews and visits with over 50 farmstead dairy processors are being developed into case studies and a book.

Objectives

Identify keys to success and regulatory, economic, technical, and other barriers among milk producer and handlers, farmstead dairy manufacturers, and innovative value-added processing and marketing enterprises, especially among dairies those using cow's milk.

Develop and publish a series of case studies of six to ten successful enterprises, both farmstead (producer-handler and producer-manufacturer) dairy operations and other farmer-centered, value-added dairy processing and marketing operations, identifying their strengths and weaknesses, production and marketing strategies, resources, successes, failures, and barriers.

Develop and publish, with the case study report, engineered economic and labor budgets for various types of farmer-centered value-added dairy processing and marketing enterprises, based on an in-depth analysis of six to ten successful alternative operations.

Catalog and characterize land-grant, extension, community economic development, organizational, and entrepreneurial activities, especially in the Northeast, that support the development of farmer-centered, value-added processing and marketing enterprises, including creative business structures and arrangements that minimize or effectively manage capital investments.

Organize the research and applied development work around the questions and involvement of stakeholders—interested dairy producers, community economic developers, and agency and organizational representatives—using a Participatory Action Research framework.

Produce and disseminate a guide book on several milk processing and marketing alternatives for prospective producer-handlers and specialty processors.

Determine the potential availability of components such as excess processing capacity, used processing equipment, grant and loan opportunities, and consumer demand areas needed for new farmstead and farmer-centered dairy processing operations.

In partnership with one or two geographically clustered groups of interested dairy farmers, conduct an exploratory and pre-feasibility study of possible farmer-centered, value-added dairy enterprises, to include a field investigation of marketing opportunities.

Organize a conference on farmer-centered, value-added processing and marketing opportunities for Northeast dairy farmers.

Methods

Our primary methods for addressing the question of value-added dairy (VAD) opportunities for northeast farmers were organizing a series of farmer-to-farmer educational programs and conducting over 50 farmer interviews and site visits in nine states to learn about established VAD farm enterprises. Through this research, we were able to characterize these operations, and learn about their strengths and weaknesses, strategies, resources, and challenges.

In three seminars, several VAD farmers shared their stories and lessons on starting and managing fluid milk bottling, yogurt, and cheese making enterprises. VAD tours showcased six diverse farms, with much learned about what was involved in different types and scales of operations. We also held four three-day hands-on cheese making workshops with a well-known British cheese maker and dairy processing educator.

Our occasional VAD newsletter consisted of our seminar proceedings and other relevant information. We counseled and referred at least 70 farmers and other individuals who were exploring the potential for VAD enterprises. We compiled a database of northeast VAD farms. A business consultant produced an engineered budget for three sizes of farmstead yogurt enterprises.

Results

Farmstead dairy processing can be an economically and socially rewarding option, with farmstead cheese an especially viable niche. VAD enables additional family members to earn their livelihood from a dairy farm without expansion. Significantly, VAD farming also facilitates the entry of newcomers into agriculture as a full-time livelihood. Combined with a processing operation, dairy herds that are much smaller than average (five to 20 cows, 50 sheep, 20 to 50 goats) can provide significant or even primary family income, while moderate-size (50- to 100-cow) dairy farms can adequately support multiple families.

Only a minority of existing dairy farmers will be capable of the transition—heavy debt loads will prevent making the investment required. Low-input milk production gives an edge to a VAD farm, though a high-end product can sometimes offset milk production inefficiencies. The absence of familial support, inadequate management skills, and lack of marketing orientation are other common individual obstacles.

To obtain needed capital, farmers can save, find partners, borrow from financial institutions, or sell some or all of their herd. A few creative farmers have sold shares in their cows or goats to friends or investors, or coupons (“moo dollars”) to help finance their future product.

Barriers to successful startup include federal milk marketing orders (affecting only producer-handler cow dairies selling fluid milk); the required capital investment; distribution costs (labor and trucking); and the lack of readily available information. Regulations are rarely a significant problem; many VAD farmers cite their milk inspectors as a major source of assistance. While the high cost of new processing equipment can be a roadblock, resourceful farmers continue to acquire used equipment. For fluid milk sales, farm location (remoteness, lack of affluent population or potential retail outlets) can pose a significant barrier.

VAD enterprises comprise at least three businesses: farming, processing, and marketing and distribution, which are time-consuming and difficult to juggle. To reduce the land, equipment, labor, or skills required, some farmers find ways to minimize or eliminate one of these component businesses. Model collaborations, including a small marketing cooperative and arrangements where one farm owns essential infrastructure used by other farms, show promise in this regard.

Impacts and Potential Contributions

This project disseminated information to over 400 dairy farms and agricultural service providers. Over 250 farmers and agricultural professionals attended our workshops, seminars, and farm tours, and we counseled or made referrals to over 70 farmers and other individuals. While implementing a decision to start a VAD enterprise often takes a number of years, some of these participants are now building their facilities, experimenting with making cheese, or taking other tangible steps towards starting their business. In addition, farmstead cheese makers are in the process of forming a New York state association to serve their educational and group purchasing needs.

VAD can serve as a vehicle for the survival of a number of dairy farms as well as the entry of a next generation of owner-operators into agriculture. These farms are able to create truly distinctive and much desired hand-crafted foods, and can also act as anchors for community agricultural development.

VAD farms capture a much larger percentage of the consumer food dollar and a much greater value for their milk than goes to other dairy farmers. Because of the presence of a feedback loop between consumer demand and farmer practice, VAD farmers also reap rewards for being responsible stewards. VAD creates new jobs, both for farm family members and other employees. It provides opportunities for educating children and consumers about where food comes from and the value of local farming.

Project narrative

Seminars, farm tours, and hands-on workshops

We organized a series of farmer-to-farmer educational programs to provide interested farmers with information about the viability of various business development strategies. Our aim was to present realistic perspectives on the exciting possibilities while orienting participants to actual challenges such as the substantial time commitment, issues of market development, and the importance of keeping investment manageable.

In three seminars, several VAD farmers shared their stories and lessons from starting and managing fluid milk bottling, yogurt, and cheese making enterprises. Regulation, capital access, economics, labor, plant development and operation, marketing, and distribution were discussed, primarily from farmer perspectives. VAD tours showcased six diverse farms, with much learned about what was involved in different types and scales of operations.

We also held four three-day hands-on advanced cheese making workshops with a well-known British cheese maker and dairy processing educator. These programs gave some established farmstead cheese makers the option of making hard aged, surface ripened, and blue cheeses in addition to the easier fresh cheeses, and jump started farmers developing a new farmstead cheese business.

Interviews and visits

Our primary research method was documenting the business development of a wide variety of VAD farmers. In all, with the help of three research assistants, we conducted over 50 phone and in-person interviews with dairy farmers who process and market their own milk. We visited

farms in each of the New England states and New York. Most of the interviews were written up and sent to the interviewee for confirmation and clarification.

We sought to learn the stories of these farmers and obtain answers to a standard list of questions that grew out of our exchanges with other potentially interested farmers. Through these interviews we were able to characterize each of these operations and learn about their strengths and weaknesses, strategies, and resources, as well as gain an understanding of the challenges facing this subset of dairy farmers.

Newsletter and proceedings, and information and referral

To satisfy the hunger for information expressed by the many farmers and farm advisors who contacted us, we also produced an occasional newsletter consisting of the proceedings of our seminars with other relevant information. We counseled and referred at least 70 farmers and others who were exploring the potential for VAD enterprises.

Data base of VAD farms in New York and New England

To assist with referrals and in identifying farms for investigation, we compiled a database of VAD farms in New England states and New York. We gathered and updated lists of dairy farmers who process their own milk from state agriculture departments and other sources.

Engineered budget

A business consultant compiled and synthesized information from several VAD farmers identified by our project. He produced an engineered budget for several sizes of farmstead yogurt enterprises.

Results

In this section, I will report on some of our research findings which will be elaborated in the forthcoming book.

Successful VAD farmers often acknowledge that their enterprise serves as a way to employ additional family members productively in the farm business rather than a means to reap windfall profits. VAD farming also facilitates the entry of newcomers into agriculture as a full-time livelihood.

A key to success is often an extended family that works well together, or, on small VAD farms, couples or partners who can work closely. Those businesses that thrive have a good fit with the family, land, geography, and financial base and have articulated a clear, focused business identity and goal.

Only a minority of existing dairy farmers will be capable of the transition. Heavy debt loads will prevent making the investment required. Low-input milk production gives an edge to a VAD farm, though a high-end product can sometimes offset milk production inefficiencies. The absence of familial support, inadequate management skills, and lack of marketing orientation are other common obstacles.

To obtain capital, farmers save, find partners (a strategy fraught with problems), borrow from financial institutions, or sell some or all of their herd. A few creative farmers have sold shares in their cows or goats to friends or investors, or coupons (moo dollars) to help finance their future product.

Barriers to successful start up include federal milk marketing orders (affecting only producer-handler cow dairies selling fluid milk), the required capital investment, distribution costs (labor and trucking), and the lack of readily available information. Regulations were, in a minority of situations, a significant problem, while other VAD farmers cited their milk inspectors as a major source of assistance. While the high cost of new processing equipment can be a roadblock, resourceful farmers continue to acquire used equipment. For fluid milk sales, farm location (remoteness, lack of affluent population or potential retail outlets) can pose a significant barrier.

Successful VAD farmers generally produce superior quality milk and none use rBGH. The preponderance of minor breeds (Jerseys, for example) among cow VAD farms further differentiates their product from mass-produced milk.

Large herds may be an obstacle for VAD enterprise development for several reasons. First, milk marketing orders and commodity milk buyers may penalize dairy farmers who withhold any of their milk to bottle or process themselves. Some buyers even prohibit dairy farmers from processing a portion of their milk. Secondly, depending upon various factors, the markets needed to absorb the milk production of large numbers of animals may take years to develop. One couple, starting out with 150 goats, produced far more cheese than they could sell even within a broad delivery radius; after several years, they were forced to sell the farm.

VAD enterprises comprise at least three businesses: farming, processing, and marketing and distribution. These interconnected businesses are difficult to juggle and almost always require more time than the farmer projects. Some farmers cope with this complexity by minimizing or eliminating their involvement with one of these component businesses. For example, many VAD farms, especially goat dairies, don't produce their own feed.

Collaborative arrangements are a more unusual strategy used by farmers to avoid involvement in every aspect of VAD. In a state outside the jurisdiction of a milk market order, one farm subsidizes its new bottling plant by bottling milk for several other dairy farms. (Milk marketing orders have used financial disincentives to strongly discourage joint bottling operations.) This unusual arrangement, while not without problems, has been mutually beneficial.

In another collaborative model, farmers avoid ownership of both processing and distribution capacity. A small, democratic milk marketing cooperative consists of about eight family farms who meet every couple of weeks. This coop contracts out the bottling and delivery of their milk to stores and supermarkets. Farm family members are paid to manage marketing and billing, and coop members conduct high profile in-store and community promotions of their milk. Unique circumstances, such as the area's demographics and good facilitation of the founding farmer group, have enabled coop members to begin to reap significant returns.

A third form of collaboration involves one farm providing the aging facility and labor and marketing and distribution functions for a specialty cheese. That farm, which assisted a number of other farms in learning to produce its distinctive product, grades, buys, ages, and markets these associated farms' cheeses. The challenge is to develop a win-win arrangement that is fair to and sustains both parties.

A number of successful VAD farms previously started businesses that taught them retail skills. Some created a clientele and turned their farm into a known destination through a produce stand, agri-tourism, inn, or ski trails. One VAD farm's bakery attracts a large customer base; another farm has run a tiny grocery store for decades. Without these complementary businesses, farms rarely sell much of their milk at the farm.

Market outlets for fluid milk are limited, and demographics and competition will influence the likelihood of success. Home delivery presents an attractive option but requires more trucking, fuel, labor, and coordination. Some VAD farms have had to haul their milk three or more hours to find desirable markets. In contrast, farmers have demonstrated the potential for developing a local market niche for additive-free, organic yogurt, and even for farmstead pudding.

Farmstead cheeses represent a substantial untapped niche. Because of the diversity of cheeses and the emerging gourmet tastes of a growing portion of the population, cheese is an excellent choice for VAD farmers. The entry costs are lower than for bottling milk, but making cheese is an art requiring much practice. Short courses and consultants are very helpful for new cheese makers. Producing an aged (over 60 days) cheese permits a farmer to avoid the cost of a pasteurizer; however, aging cheese ties up inventory and affects cash flow.

Marketing and distribution are the biggest challenges faced by many farmers considering or involved in VAD processing. In building their markets, VAD farms do not depend on paid advertising as a primary means to attract customers, but instead rely on their uniqueness as farmstead producers as a major asset. Using distributors for a portion of sales is sometimes a necessary tradeoff. Middle people take a big chunk of the consumer dollar and tend to neither represent nor solicit valuable feedback as ably as the VAD farmer can. Some farmstead cheese makers sell their products at farmers' markets, mail order, and to smaller stores and restaurants in their area, but use a distributor for major chains and more distant markets.

Impacts

This project has interacted with over 400 dairy farms. Over 250 farmers and agricultural professionals attended our workshops, seminars, and farm tours, and we counseled or made referrals to over 100 farmers and individuals who work with farmers.

Among the farmers who have participated in the project's educational programs or have been in communication with us, many have been able to determine whether to proceed with pursuing a VAD business for their farm. The contrast between the bottling and cheese making has encouraged some farmers to decide to make cheese. Implementing a decision to start such an enterprise often takes a number of years. Some of these participating farmers are now experimenting with making cheese, visiting established VAD farms, locating used equipment, and making or implementing plans to develop their facility and their new business. The project

has also assisted some farmers who already had VAD enterprises in addressing the weak links in their businesses.

In addition to serving as a vehicle for the survival of a number of dairy farms and the entry of a next generation of owner-operators into agriculture, VAD farms can be anchors for community agricultural development. As unique small businesses, which by definition must market themselves to the public, such farms typically exert a disproportionate positive influence both on the dairy industry and in their communities. VAD farms have the potential of becoming a thriving agricultural sector like farm wineries. Their existence is likely to foster the growth of other small producer-marketers. This rural development strategy is being used advantageously in Vermont where a network of farmstead and specialty cheese producers has been actively promoted by the state.

VAD farms capture a much larger percentage of the consumer food dollar and a much greater value for their milk than goes to other dairy farmers. Because of the presence of a feedback loop between consumer demand and farmer practice, VAD farmers also reap rewards for being responsible stewards. VAD creates new jobs, both for farm family members and for outside employees. It provides opportunities for agri-tourism and for educating children and consumers about where food comes from and the value of local farming.

Economic analysis

Farmstead dairy processing can be an economically and socially rewarding option for a minority of farmers. It enables additional family members to earn their living from a dairy farm without expansion. Combined with a processing operation, dairy herds which are much smaller than average (five to 20 cows, 50 sheep, 20 to 50 goats) can provide significant or even primary family income, and moderate-size (50- to 100-cow) dairy farms can adequately support multiple families.

The gross income derived by VAD dairy farmers ranges from two to—in rare instances—as much as eight or 10 times the “blend price” that farmers receive when they ship milk as a commodity. However, twice to four times the commodity price received at the farmgate is a more reasonable frame of reference; the highest, most unusual, prices might be paid for small quantities of specialty cheeses sold directly at farmers’ markets or by mail order.

While VAD farm revenues can be considerably higher per animal than those from commodity milk production, the investment, risk, and labor requirements are also much higher. The costs of adopting a VAD strategy for a farm that already has a dairy herd and approved milk house can range from \$5,000 to \$250,000 and up. Occasionally, for very small operations, the cost can be even lower. The investment required depends upon a number of factors: The numbers and species of dairy animals, the type of product, building and other infrastructure requirements, and the resourcefulness of the farmer in obtaining equipment.

A dedicated room conforming to state dairy sanitation standards is required for dairy processing, as well as a potable water supply and an adequate system for disposing of waste water and whey. Equipment required to bottle milk includes a boiler, pasteurizer, filler/capper, bottle washer (if using glass bottles), and a walk-in cooler. Most farms also use a homogenizer. Significant storage space is required for bottles, jugs, or other containers.

For cheese making, equipment needed includes a cheese vat, specialized utensils, stainless steel tables, cheese molds and presses, aging room, packing equipment, and whey removal system. A boiler and ice builder are desirable. Other specialized equipment, such as brine tanks, are needed for certain types of cheeses. To make cheeses that are not aged at least 60 days, a farm needs a pasteurizer.

Areas needing further study

VAD farmers and other farmer entrepreneurs would benefit from greater understanding of creative ways to organize distribution systems. Minimizing transportation expense and labor to deliver their products to end users is a major challenge.

In addition, Americans have much to learn about European marketing systems, including farmer networks and cooperatives and the development of collaborative processing arrangements for specialty food products. In studying such formations, it is essential to take into account important differences that will influence the outcomes if these systems are transplanted to the U.S. Differences include traditional knowledge, availability of technical assistance, the critical mass of specialty producers, consumer tastes, market development, and the relationship between cost of production and prices paid.

Outreach

The project's interactive workshops and farm tours have served as a forum for dozens of farmers who are interested in starting or refining a VAD enterprise to explore their pressing questions. Prospective VAD farmers have communicated their assumptions, ideas, and plans as well as articulating their needs. Through our programs and subsequent contacts, they have been influenced by farmers who run existing VAD businesses, and have also influenced one another as well, guiding this project with their concerns.

This kind of farmer involvement has also provided the researcher with a number of farmer-advisors who are informally engaged in their own practical research on VAD issues for their farming futures. The project has benefited from both the information and contacts acquired by these farmers and, as importantly, from an ongoing dialog about how to develop such a business. Learning firsthand about the diverse aspirations, resources, and constraints that farmers bring to this pursuit has been invaluable in shaping this project and boosting its relevance.

We have held four farm tours, visiting and engaging in extensive discussions at a total of six farms, and held three five-hour seminars, covering startup issues and farmstead cheese making and marketing, and four three-day advanced, hands-on cheese making workshops. Attendance at the tours ranged from a dozen to over 100, while the seminars attracted between 20 and 40 farmers and agricultural professionals. The more in-depth, hands-on cheese making workshops, of necessity limited in size, had over 40 participants.

In addition to press releases announcing our eleven educational programs that were picked up by the farm media and some Cooperative Extension publications, we produced a newsletter with proceedings of the three workshops and other news and resources of interest. The mailing list for this occasional publication has grown to over 400 individuals, primarily dairy farmers.

Extension, state agricultural departments, and community development agencies are also represented.

Reported February 2001

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Appendices

Changes in Plan of Work

We only produced engineered budgets for farmstead yogurt enterprises (rather than also cheese making and bottling milk) because farmers were reluctant to share their economic data. There were many other confounding factors, and the budgets developed were not particularly helpful.

While we organized our research around the questions of stakeholders and gained much knowledge from farmers interested in developing value added dairy enterprises, we were unable to systematically implement a Participatory Action Research framework, due to dairy farmers' daily work loads and the geographic distances between interested farmers.

We are in the process of producing the guide book and case study report as a single publication; this has taken longer than anticipated.

We did not conduct a pre-feasibility study of possible farmer-centered, value-added dairy enterprises for a geographic cluster of farmers. First, of the farmers we recruited to the project, we did not discover a cluster of seriously interested farmers for whom such a study would have been of value. Farmers are at different stages and different speeds in their exploration, and have diverse orientations. Second, opportunities within a particular county or locality are not necessarily different than those in another. Third, after learning about how farmers have successfully started such enterprises, we became skeptical about the relevance of economic development agencies for most potential farmstead operations.

Instead of holding a final conference on farmer-centered, value-added processing and marketing opportunities for Northeast dairy farmers, we organized four three-day advanced cheese making workshops for farmstead cheese makers. Seminars early in this project to some extent performed the educational and networking functions that a conference would have been provided. We also determined that the cheese making workshops would be of greater interest and more beneficial to our audience than a less specific, centralized conference to which travel for many would also have been difficult.

Events

Seminars

December 9, 1997—Value-Added Dairy Workshop on start-up issues, Albany, NY. 40 farmers participated

March 3, 1998—Value-Added Dairy Workshop on start-up issues, Oneonta, NY. 25 farmers participated

April 14, 1998—Farmstead Cheese making and Marketing Workshop with Caleb Williams, Troy, NY. 20 farmers participated

Farm Tours/On-Farm Workshops

March 11, 1998—All-day tour of three farms: Monument Dairy, Middlebury, VT (dairy farm that bottles milk); Orb Weaver Farm, New Haven, VT (diversified farm that makes cheese); and Shelburne Farms, Shelburne, VT (non-profit farm that makes cheese). 15 farmers participated

July 7, 1998—Local Farm, Cornwall, CT (small farm that bottles raw milk). 25 farmers and others participated

Sept. 3, 1998—Milky Way Dairy, Troy, PA (grass-based family farm that bottles milk and makes other dairy products), co-sponsored by Pennsylvania Association for Sustainable Agriculture. 100-plus farmers and farm advisors participated

August 17, 1999—True North Farm, Earlton, NY (grass-based sheep dairy farm). 20 farmers plus 25 area residents participated

Hands-On Workshops

Oct. 6 - 8, 2000—Advanced Farmstead Cheese Making Workshop with British Cheese Maker Kathy Biss, Burlington, VT, co-sponsored by the Northeast Center for Food Entrepreneurship, the Vermont Cheese Council, and the UVM Small Ruminant Dairy Program. 9 farmers and 1 agricultural professional participated

Oct. 13 to 15, 2000—Advanced Farmstead Cheese Making Workshop with British Cheese Maker Kathy Biss, Ghent, NY. 11 farmers and 1 agricultural professional participated

Oct. 20 to 22, 2000—Advanced Farmstead Cheese Making Workshop with British Cheese Maker Kathy Biss, Winchendon, MA. 11 farmers participated

Oct. 25 to 27, 2000—Advanced Farmstead Cheese Making Workshop with British Cheese Maker Kathy Biss, Unity, ME, co-sponsored by Maine Organic Farmers and Gardeners Association. 10 farmers and 2 agricultural professionals participated