# Case Studies of Farm and Forestry Community-Based Programs

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#### **Preface**

As part of our report on the state of agriculture in Massachusetts, we were asked to "identify an innovative and successful venture in an agricultural and/or community program with significant potential for growth and impact on Massachusetts's food and agriculture industries." In the pages that follow, we focus on two such programs, one in farming and one in forestry.

The Farm Viability Enhancement Program (FVEP), funded by the Massachusetts Department of Food and Agriculture, is helping to shape the future of agriculture in the Commonwealth by offering farmers highly customized business plans and funding to preserve their valuable land. We examine one farm enterprise and the many ways this program has enhanced this farm's ability to succeed—and thrive—in an increasingly urban environment.

In "Massachusetts Family Forests: Landowners Collaborating for Individual and Community Benefit," we look at Massachusetts Family Forests, a cooperative of forest landowners who are working together toward sustainable forest management in the Commonwealth. Massachusetts Family Forests, an initiative of the Hilltown Community Development Corporation, is coordinating this effort of local landowners to enhance our forest resource through new markets, value-added products, habitat and water-quality management, educational opportunities, forest certification, and land protection.

# The Farm Viability Enhancement Program: A Case Study

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The Farm Viability Enhancement Program, now in its fifth year, was conceived as a means of preserving the financial viability of farms whose land is threatened by development. Farmers participating in the program work with FVEP consultants to create and implement comprehensive business plans. These plans are intended to improve farm income through better management practices, diversification, direct marketing, value-added initiatives, and agri-tourism. In return for implementing designated components of the plans and placing farm acreage under agricultural non-development covenants, participating farmers receive up to \$20,000 for a five-year covenant and \$40,000 for a ten-year covenant. These relatively short term deed restrictions contrast with the permanent deed restrictions of Agricultural Preservation Restriction (APR) covenants, which do not require farmer implementation of business plans.

The FVEP currently has 105 participating farmers and over 11,000 acres under covenants across the state. Criteria used by the FVEP in selecting farms for its program are, in order of importance:

- · The degree to which urban encroachment or financial instability poses a threat to the continuation of farming;
- · A fairly high number of acres to be placed in covenant;
- · The degree of farm diversification;
- The length and depth of the owner's agricultural experience;
- · The ability to meet environmental objectives; and
- · The suitability and productivity of the land for agriculture.

The FVEP currently has 105 participating farmers and over 11,000 acres under covenants across the state.

#### **Case Study**

We selected a 150-acre family farm that has been in operation for three generations. The current farmer has responded to the financial pressures of low net farm income and to perceived consumer demand and public interest. He is diversifying agricultural production and initiating innovative changes in marketing to meet the demands of relatively affluent suburban consumers. He has participated in both APR and FVEP, using program funds to increase and diversify on-farm retailing, analyze opportunities, and improve management infrastructure. Interviews with the farmer in July 2000 and a review of his business plan and financial statements provided the information for this case study.

#### **Background/History**

One hundred fifty acres of picturesque rolling meadows, open fields, orchards, forest, and marshland offer a bucolic setting in the midst of surrounding housing developments. Located in an affluent community with new home sales in the \$300,000 to \$600,000 range, this is a traditional New England farm with a legacy going back to Colonial times. The farm provides visitors with welcome relief and relaxation from the stresses of modern life in the city and its suburbs.

The present owner's grandparents purchased the farm as a homestead in the early 1900s. A commercial dairy operation and, later, a truck farm were in operation until their son died suddenly in middle age. Their grandson had left New England for college, hoping to escape farm life by studying architecture. When he returned home with a college degree in biology, he found his mother trying to keep the farm in business by continuing the truck farming operation and expanding into a small pick-your-own operation with 150 apple trees. Hayfields were becoming overgrown and buildings and equipment were in disrepair. He decided to take over the operation of the farm. Realizing that he would need security of ownership if he were to devote his life to running the farm, he proposed that his grandfather and mother include him as one of three owners of the property.

Twenty-five years ago marked the beginning of the son's takeover of farm operations. He started his work by maintaining the hayfields to sell hay and the woodlots to sell cordwood. Because these enterprises produced little income, he began to consider possibilities for expansion. He believed he had three options: running horse stables, expanding the orchards, or operating greenhouses. Since he was most interested in orchards and believed his skills would best match orchard management, he bought 300 trees to expand the fruit production enterprise.

Several years later, the farm owner sold the development rights on approximately two-thirds of the land to the state APR program. He invested some of the proceeds

in the construction of a farm stand. Initially, he sold mostly apples and some pies at the stand, but after a few years he began to sell Christmas trees and added a bakery.

A financial breakthrough for the farm occurred when a friend suggested that he initiate an educational program. During the first year of the program, hundreds of schoolchildren visited the farm, each paying \$2.50 to \$5.00. The success of this idea launched the farm into a new stage of development through agri-tourism.

#### **Organization of the Farm**

In 1998, the farm's management structure consisted of two tiers. The farm owner was at the top, serving as CEO and marketing director. Under him were the financial manager; a farm manager and an assistant farm manager, who together oversaw farm production and pick-your-own activities; a bakery and farm stand manager; and an activities and events manager. The operations of the farm consisted of fruit, vegetable, and Christmas tree production; farm stand retail sales; the bakery; educational programs; special activities and festivals; and accounting.

Changes in the farm's structure had been made over a period of years. The organizational design of the management team and the implementation of the managers' respective ventures were apparently successful, resulting in gross revenues totaling over \$900,000 in 1997. Yet the farm owner applied for farm management assistance from the FVEP in 1998 to further increase his profitability. Even though the farm's gross revenues had grown substantially in the late 1990s, increasing by \$75,000 in 1996 and nearly \$200,000 in 1997, the farm's annual net income still remained far too low, averaging under \$2,500 for the years 1995, 1996, and 1997.

The FVEP's specialized management consultants created a farm viability business plan. The farm owner agreed to place a five-year development restriction on his land and was given \$20,000 to help implement \$55,000 in changes he agreed to make, based on the FVEP team's suggestions.

#### **FVEP Recommendations Made in 1998-1999**

One recommendation made by an FVEP consultant was to increase the capacity of the farm's departmental managers for strong team building. Even though the farm owner possessed excellent interpersonal skills and had a regular presence at the business site, he often became overwhelmed by the barrage of daily problems in farm operations. The FVEP consultant recommended that he "establish an organizational structure which reduces the farm owner's day-to-day decision-making responsibility and makes each operational area responsible for its own profitability." In this way, more responsibility could be delegated to each of the

department managers, enabling the farm owner to spend the majority of his work time on broader executive responsibilities.

The new organizational structure would also endow each manager with increased opportunities to make decisions aimed at improving the profitability of his or her own operation. The managers would be guided by the feedback gained from financial reports, but would also have "a primary role in determining what information they could use best." The managers were to be empowered to take responsibility for such matters as the hiring of personnel and staff, setting schedules, determining prices and sources of goods, and creating displays, always with the goal of achieving maximum profitability.

Another recommendation was to hold weekly "Leadership Team" meetings chaired by the farm owner. The meetings were to be conducted formally by setting a specific meeting time and place, adhering to a standard agenda, being limited to 60 minutes in length, and requiring every manager's attendance. The purpose of these meetings was to review the budgeting process; share financial reports; coordinate such tasks as scheduling, staffing, and training; and discuss opportunities and problems in the farm's operation.

An additional recommendation was to improve training procedures for both the managers and the largely part time work force. The managers were to be trained to take on greater personal authority and responsibility for their own departmental areas, learn how to utilize the findings of financial reports, and become more adept at using computers. The managers, as leaders of their departments, were to be made responsible for overseeing the training of their staff. A trainer from each department was to conduct a consistent training protocol for new employees, who were to demonstrate their knowledge and skills in a post-training review.

The consultant also made recommendations for the renovation and reorganization of the farm stand, which included produce, retail product, and baked-goods sales. The farm stand was a small space, which the consultant felt could be expanded and upgraded to provide a better sales environment. The produce section focused on the four types of fruit grown on the farm, while also offering pumpkins in season and selected farm-grown vegetables.

An outside retail sales professional with roadside stand expertise was asked to analyze the product mix, with an emphasis on adding other fruits and fruit products. This resulted in a recommendation to maximize merchandizing effectiveness by introducing high-profit-margin commodities, such as specialty houseplants and seasonal holiday-related goods. Products were to be marked with easy-to-read price stickers and arranged more attractively in eye-catching displays. In addition, the consultant recommended that the traffic flow be improved by rearranging the display shelves, that employees wear company shirts

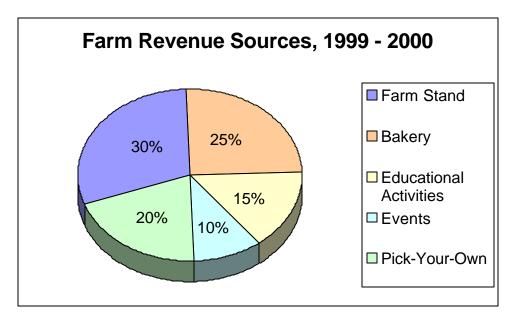
for easy identification, and that security procedures concerning shoplifting and cashier responsibility be reviewed and improved.

One of the more profitable areas of the farm's operation was the on-site bakery. By following the recommendations of the FVEP consultant, the bakery manager could increase profits by bringing prices more in line with those of competitors and by featuring fresh seasonal farm fruit in bakery products to highlight the farm's major asset.

The FVEP consultant recommended reviewing labor costs by comparing work schedules to customer attendance for days of the week when profits were the highest and days when profits were relatively low. Naturally, profits were the highest on the weekends, but the consultant suggested that a decision could be made to close the stand on the day or days that showed the least amount of profit by making an analysis of the revenue fluctuations from day to day over a period of time.

Finally, the consultant made two recommendations for improving the farm's communications systems. One was to install a phone answering system to handle routine inquiries and direct calls to the key booking functions. The other was to create a Web site that would provide directions, a calendar, and information about seasonal farm operations, events, and programs.

#### Structure of the Farm Business in 2000



Marketing and Revenues. The farm business has diversified and expanded considerably. "Pick-your-own" fruit pumpkins and "choose-and-cut" Christmas trees remain major portions of the business.

constituting 20

percent of the current sales revenue. There are about two acres of strawberries, three acres of peaches and nectarines, a little over half an acre each of pears and tart red cherries, about 25 acres of apples (early, mid-season, and late varieties),

14 acres of Christmas trees, and 10 acres of pumpkins. A heritage orchard, with over 200 trees of ten different antique apple varieties, provides "gourmet" apples that are sold at premium prices. The remainder of the farm consists of about a dozen acres of hayfields that are rented out; seventy acres of woodland, ponds, and wetlands; and ten acres of roads and parking.

The farm stand and the bakery now generate the largest portions of farm revenue, at 30 percent and 25 percent, respectively. The stand offers flowers grown on the farm, some brought-in produce and food products, gift items, coffee, beverages, and fresh-baked goods that are reasonably priced and that feature seasonal fruit grown on the farm.

While high demand for the farm's baked goods has already made the bakery quite successful, the rest of the farm stand still has potential for expansion. Areas for customers outside the farm stand have been outfitted to encourage them to spend time relaxing. There are picnic tables, a children's play area, a covered patio, and walking trails. Farm-grown vegetable sales were recently eliminated, because the farm manager did not have expertise in vegetables and believed that focusing on fruit production for pick-your-own sales would be more productive. (Farm-grown vegetable sales in 1999 were under \$1,500.)

Agri-tourism revenues are being pursued. Entertainment and educational programs generate about 25 percent of total revenues. These activities, events, and programs include a viewing and petting zoo, tractor-drawn hayrides, birthday parties, weekend festival days to match seasonal crops (such as a strawberry festival and a peach festival) and holidays (such as Halloween), summer writing and craft/nature camps for elementary school children, and educational group tours about planting, beekeeping, and wildlife.

Improvements were made in the layout of the public areas. The fenced play area now leads to the animal facilities. In the animal area are coin-operated livestock feed purchase stations, which generate between \$8,000 and \$9,000 annually. Beyond the animal area, farm visitors find a trail with placards posted along the way featuring a children's theme. The trail opens to a cool grove of pines, ideal for picnics and gatherings, and continues on to the heritage orchard.

The farm owner has also renovated equipment and buildings. He outfitted the hay wagons with covers after calculating that just one day's revenue not lost due to bad weather would more than pay for the covers. He has converted the farm's grand old historic hay barn to accommodate educational and entertainment events, providing a bee and honey room and lofts for storytelling and birthday parties. The owner rents outdoor sites with tents or canopies to customers for

their own business and family functions and facilitates the hiring of local entertainers and caterers for these functions.

Local advertising has been successful, and a positive reputation of the farm and its offerings is well established. A dozen brochures explain the various programs and activities. There is now a Web site that gives general information about the farm and specific information on special activities. Unlike some farms that must deal with public political resistance, the farm enjoys wide community acceptance, except for receiving occasional complaints about noise and chemical spraying of the orchards. All in all, the farm is seen as a public asset.

#### **Financial Management**

Of all the farm owner's tasks, financial management is his least favorite. His financial administrator has kept accounts using the Quickbooks record-keeping system. The owner has been working with an FVEP consultant to separate the accounts into departments so that he can review the profitability of the different areas of his farm business and so that each manager can take on more responsibility for his or her area.

The farm owner has kept both the educational/entertainment activities and the pick-your-own operation financially viable by charging relatively high prices, and this has proved successful. School tours are now priced at \$6 per student, and birthday parties cost \$150 for up to ten children plus \$10 per additional participant. Charging appropriately high fees has kept this department of the farm profitable. He has also kept the pick-your-own operation profitable by pricing apples at \$10 per peck and \$15 per half-bushel, peaches at \$1.29 per pound, and Christmas trees at \$40 each. In other departments of the farm, such as the bakery, pricing is comparatively lower.

Broadening the scope of the farm enterprise was a calculated financial risk. The owner realized that generating sufficient sales to prosper as a traditional wholesale farmer with a somewhat modest land base did not seem feasible, so he adopted several nontraditional marketing strategies to enhance profits. To minimize his financial risk, he created diverse sources of income. By direct marketing with pick-your-own and the farm stand, engaging in value-added enterprises such as the bakery, and selling the farm experience through educational and entertainment activities, he has been able to keep the farm in business. With expanded marketing and diversification and improved management, he hopes to increase the farm's financial viability in the future.

#### **Employee Management**

Having high-quality employees is central to the successful operation of the farm. Even though the owner considers people skills to be his major managerial strength, he acknowledges that dealing with employee problems is one of his biggest headaches. The labor market is tight, making the pool of qualified applicants small. Seasonal employees number up to 60 during the peak season of fall festivals and pick-your-own activity. He has expanded the farm stand season by opening in March, rather than May, in order to decrease employee turnover.

Fortunately, the farm owner has skilled, experienced, and committed personnel in the key positions. The management team now includes two half-time coordinators, one for education and one for activities; and four full-time managers, one for the farm stand, one for the bakery, one for farm production, and one for financial management and business administration. The farm owner meets with the six members of his management team as a group every other week and individually in alternate weeks. He has experienced some difficulty finding dedicated employees who will stay with the farm, because the lower pay scale and benefits cannot compete with those provided by professional employment in the area. He has been fortunate in retaining the financial manager for almost a decade and the farm manager for almost five years. He has found it more profitable to outsource many jobs, such as pruning and machinery repair, that were formerly done by his manager and assistant manager.

#### **Options for the Future**

As CEO, the farm owner is responsible for determining the overall direction of the farm in the future and for communicating this to his staff. He would like to increase profits by boosting sales with expanded activities and cutting costs with more efficient operations. He also wants to continue to encourage the members of his management team to be less dependent on him for day-to-day operations by delegating more authority to them. This will require separate financial accounting for each departmental area. The farm owner's decision to expand pick-your-own production rather than vegetable production is one example of department-based decision making that is dependent on financial analysis. Another example is the decision to expand the farm stand by buying additional vegetables, plants, products, and displays, a decision best made by the farm stand manager after analyzing financial reports.

Precise financial analysis of each departmental area is difficult to accomplish, because these areas, although conceptually separate, are in fact very much interconnected. For instance, flowers grown on the farm are sold at the farm stand, and educational and entertainment activities are very much dependent on the pick-your-own fruit operation as well as pumpkin production. Special events and festivals bolster retail sales of bakery goods. In short, the departmental areas should be analyzed separately for financial accountability, but with the

understanding that each department's operation complements the others. Decisions made to increase or to decrease one department's function will ultimately affect all of the others. For each manager to merely review his or her own department's financial accounts is not enough to make appropriate expansion or reduction decisions. They are all working toward overall success of the business.

To improve working conditions for farm-stand employees, the farm owner would like to add three months of operation in the winter to make the stand a year-round operation. By providing stable, year-round employment opportunities for more workers, he will be better able to retain part-time employees and cut costs for employee training and retraining.

An ice cream stand is being planned to boost profits during the slower summer months. In contrast to the high cost of cider-making equipment and its sizable space requirements, the cost of ice cream making is moderate. Profit margins for ice cream promise to be excellent, as there are constant streams of would-be ice cream customers involved in the educational programs and entertainment activities. Decisions will soon be made concerning whether to make ice cream on site and how to present it attractively to customers.

The farm owner plans to expand the "business and family functions" program by setting up four permanent sites for private events, such as company picnics and weddings. He also plans to build a permanent bathroom facility, connected to the town sewer, to replace portable toilets. He is considering installing a golf ball driving range.

To ensure the farm's long-term viability, the farm owner is considering the development of 40 to 80 low-income elder housing units on 10 acres of the farm. He believes that the town government will endorse his proposal, because less than 6 percent of currently available housing is low-income. This would help elders who wish to remain in the community but can no longer afford to do so. It would also provide more opportunities for government grants, and ensure fewer, less costly services than for families with children. Installing multi-unit housing on the 10 acres of land should be more profitable than building conventional single-family homes on lots, which are zoned for a two-acre minimum. Portions of the profits gained from the housing venture would be divided among the heirs of the farm owner's mother. Remaining profits would be used to establish a farm trust that would ensure the long-term viability of the farm, overseeing the operations in perpetuity.

The farm owner has conceived of many creative ways to make his business grow. He participates in professional organizations, talks with other farmers, and takes advantage of government programs such as APR and disaster relief. He has

conferred with FVEP consultants and collaborated with his team of employees. In the future, he will require additional assistance from consultants, such as those provided by FVEP, in order to complete profitability analyses of the farm.

#### **Conclusions**

The farm possesses many distinctive advantages, making it a popular attraction for area residents and tourists. The natural landscape of the farm, in contrast to the bordering housing developments, has aesthetic and emotional appeal for customers. The farm piques the imagination of visitors and provides a welcome haven from the stresses of modern life. The farm's location within relatively affluent suburbs allows easy access to an ever-growing number of enthusiastic customers.

Customers have responded quite favorably to the broad marketing strategy that includes agricultural education and entertainment. The owner has successfully identified consumer demands and has had the creative vision to conceive of new programs. He understands how to market his "product," a New England farm experience that is enjoyable for a wide variety of customers, young and old alike. The farm has a satisfied and loyal following.

In addition to a successful marketing strategy, the farm owner has strong people management skills that have helped him create an effective and pleasant working environment with minimal conflict. His high visibility around the farm helps keep employee morale high, and these satisfied employees inspire customer confidence. The farm has greatly benefited from the fact that employee commitment has remained consistently high.

The farm has an opportunity for continued growth. If further changes in operations are implemented, the FVEP's predicts, overall revenue should increase by at least 10 percent annually, with expenses rising by no more than 5 percent per year.

This is an impressive model of a successful New England farm operation that focuses on pick-your-own orchards, a retail farm stand, and the promotion of agritourism. The farm has enjoyed remarkable growth. Overall sales increased rapidly in recent years as the farm expanded its bakery, as well as its educational and special-event activities. No longer operating at a loss, and net income available for the farm owner's salary reached \$62,000 in 1999, the highest level ever.

In short, this farm business possesses a wealth of advantages. Some are inherent to its history and location, and others have resulted from staff vision and collaborative efforts to implement changes, as well as the hard work of all the employees. The farm's gross income now stands at approximately \$1 million, and the future promises even greater prosperity.

#### **Recommendations for Farmers**

Farmers who want to improve the viability of their farms should examine the particulars of their own situations: the farm's location, the characteristics of their land and natural resources, and the potential consumer population of the surrounding area. They should also assess their own individual strengths and interests regarding new business ventures.

Examining options for change includes recognizing the financial risks involved. Various aspects of an educational/entertainment component, for example, can succeed or fail, and failures can be very costly. Will a given advertising program be successful? Will activities and events be popular? Will customers be willing to pay the prices required to support these endeavors? What about direct sales? A farm stand involves considerable financial investment, and the increased revenues may not be sufficient to cover added expenses. Of course, taking the calculated risks necessary for business expansion can lead to sound financial growth, as was true for the farm owner in this case study, but there are no guarantees.

Farmers with large land holdings, concerned about maintaining long-range solvency for their farms, may consider selling a small portion of their land for residential or commercial development. This would be a reasonable option if the funds can be applied to make the farm financially secure over the long term.

Farm owners with heirs can set up trusts to settle inheritances and to make sure their farm operations continue indefinitely.

To raise revenues, farmers could consider placing the development rights to their land in the APR's permanent restriction program or in the temporary restriction program offered by FVEP. The farm owner in this case study sold the majority of his development rights to the state but retained the rights for the remainder.

#### **Sources of Information**

Buchanan, Robert D., and Robert D. Espeseth. 1991. *Developing a Bed and Breakfast Business Plan*, North Central Regional Extension Publication 273. Champaign-Urbana: University of Illinois.

Hamilton, Neil D. 1999. *The Legal Guide for Direct Farm Marketing*. Des Moines, IA.: Drake University Agricultural Law Center.

Kays, Jonathan S., Gary Goff, Peter Smallidge, William Grafton, and James Parkhurst, editors. 1998. Natural Resources Income Opportunities on Private Lands Conference, April 5–7, 1998, Hagerstown, MD. College Park: University of Maryland Cooperative Extension.

Schuck, Nancy Grudens, Wayne Knoblauch, Judy Green, and Mary Saylor. 1988. *Farming Alternatives: A Guide to Evaluating the Feasibility of New Farm-Based Enterprises*, NRAEA-32. Ithaca, N.Y.: Northeast Regional Agricultural Engineering Service, Cornell University.

#### Web Sites:

www.ams.usda.gov/directmarketing/news\_3\_00.htm

www.massdfa.org/

www.sare.org/san/market99/

www.westmass.com/agbusiness/

For help enhancing farm profits, consulting assistance is available through FVEP.

## Massachusetts Family Forests: Landowners Collaborating for Individual and Community Benefit

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Massachusetts forests are growing, and local forest landowners are working together to increase both private and public benefits from this unique renewable resource. Sixty-two percent of the Commonwealth's land area is classified as forest land. Private, non-industrial forest landowners own over 2.4 million acres of this land.

Despite a loss of timberland acreage (down 9.8 percent since 1985), the total volume of timber has been increasing at a substantial rate. Urban and suburban sprawl threaten areas within the I- 495 belt and along the border with Connecticut near Springfield, but the remaining areas have increasing forest cover and rapid tree growth. Businesses that choose to utilize this renewable resource will be well positioned for future growth.

#### **Case Study**

A group of Western Massachusetts forest landowners and other interested citizens are forming a cooperative called Massachusetts Family Forests (MFF). This cooperative was inspired by a local wood initiative at the Hilltown Community Development Corporation in Chesterfield, MA. It began with an investigation of ways to improve the local forest products—based economy through better use of the forest resource. The idea of forest products certification has also been a central theme throughout the early development phase of this group.

#### **Using the Forest Resource**

The MFF cooperative is looking for creative ways to manage and enjoy the growing forest resource. They share the common challenge of how to best utilize forests that contain an abundance of "lesser-valued" species. Their goal is to get the most out of their forest resource in a sustainable fashion, not only for themselves, but for their communities as well.

Four wood species top the list in terms of timber volume: eastern white pine, red maple, red oak, and eastern hemlock. Two of these species, white pine and red oak, have traditionally held high value in the marketplace. Perhaps as a result of their lower valuation, hemlock and red maple have shown some of the fastest growth rates over the recent past. Eastern hemlock growth is outstripping harvest by a wide margin: removals amount to just 6.5 percent of annual growth. The comparable figure for red maple is 14.8 percent. In other words, on average, we are removing only about one-tenth of the annual growth of these two "lesser-valued" species.

These figures present a problem, or an opportunity, for Massachusetts forest landowners. How can they better manage their forest landscapes? Can they find value-added markets for hemlock and red maple? The MFF landowners, in cooperation with area foresters, loggers, sawmills, and other interested local citizens, are coming together to help answer these questions.

The MFF initiative seeks to improve the local economy and minimize the expense and energy wasted through long-distance transportation and handling of wood products. If local wood users can easily identify and purchase wood that is grown and processed locally, then the expense of shipping lumber from elsewhere can be eliminated. This strategy might provide a dual benefit: Through an alternative, "buy-local" distribution system, local producers might be able to charge a higher price while at the same time allowing local wood purchasers a lower cost.

#### **Timber and Non-timber Values**

The initial goals of Massachusetts Family Forests are:

- · Create access to markets for "lesser-valued" species;
- · Produce value-added products;
- · Build local economies;
- · Manage cooperatively to improve wildlife habitat, water quality, and recreation;
- · Organize for grant opportunities and political influence;
- · Provide educational opportunities;
- · Share in equipment and service expertise;
- · Explore green (forest products) certification;
- · Provide a tool for land protection.

These interests are varied and almost evenly divided between traditional timber and non-timber forest values. Among the timber values, several of the stated goals are aimed at addressing the rapid growth of red maple and hemlock. Access to new markets, value-added production, and forest certification are three methods that would improve the profitability of harvesting these species. Active forest management on these and other species would support higher residual forest stand values.

The MFF landowners also recognize that individual forest management decisions have broader social and economic implications. "Public good" values, including aesthetic, watershed, wildlife, and recreational concerns, rank high among the MFF goals. This recognition of the broad social value of non-industrial private forest (NIPF) landholdings is emerging as a central theme in the developing MFF cooperative.

#### **Forest Certification**

Forest stewardship runs deep in the minds of many Massachusetts forest landowners. Stewardship encompasses a notion of conservation in which the landowner takes responsibility for the future health of the land. It promotes an ethic that considers wildlife, water quality, soil, wood production, recreation, and aesthetics in land management decisions.

Massachusetts ranks near the top among states with ecologically sound forest management policies. Forest management legislation, enforced by the Department of Environmental Management, closely regulates forest harvest practices. This history of caring for the forest gives Massachusetts landowners a competitive advantage in the emerging forest products certification movement. Forest certification has several elements:

- · Providing a market incentive to improve forest management;
- · Voluntary implementation;
- · Meeting environmental, economic, and social interest criteria;
- · Certification by an independent third party to provide objectivity and credibility.

The benefits of certification could include a price premium for certified lumber and access to new markets for the traditional lesser-valued species. Currently, retailers such as Home Depot and Lowe's are driving the market for certified forest products with public statements indicating their desire to "buy green."

Forest certification in the United States appears to be aligning with the model proposed by the Forest Stewardship Council (FSC). This organization "certifies the

certifiers," who currently include U.S.-based Scientific Certification Systems and SmartWood. In its most basic form, the FSC certification process provides an independent assessment of the extent to which a forest landowner, manager, or distribution system (chain-of-custody certification) meets ten principles and criteria of sustainable forestry:

In order to be certified, a company must meet all applicable laws, have legally established rights to harvest, respect indigenous rights, maintain community well-being, conserve economic resources, protect biological diversity, have a written management plan, engage in regular monitoring, maintain high conservation value forests, and manage plantations to alleviate pressures on natural forests. (FSC)

#### The Hilltown Wood Project

In August 1998, the Hilltown Community Development Corporation (Hilltown CDC) initiated the Hilltown Wood Project to promote responsible forest management and to unite local wood producers, wood processors, and wood users so as to develop beneficial and local economic relationships. Since that time, the Hilltown CDC has worked in a number of areas to achieve these goals.

The Hilltown CDC is a 501(c)(3) non-profit corporation serving the towns of Chesterfield, Cummington, Goshen, Plainfield, Westhampton, Williamsburg, Worthington, Chester, Huntington, Middlefield, and Russell. The mission of the CDC is to "improve the quality of life in the Hilltowns by addressing the economic, environmental, and social needs while preserving the rural integrity of the area." They accomplish this mission by helping local residents become successful business owners and improve their management skills. The CDC was incorporated in 1981.

Several small studies have been undertaken over the past two years to support the Hilltown Wood Project, including collection of data on area wood users and wood suppliers. These data, along with information gathered from landowners interested in the MFF cooperative, are being analyzed to identify market opportunities. It is hoped that the results of this work will bring local landowners, producers, and consumers of wood together.

#### **Broad-Based Roots**

Beginning with the community economic development goals of the Hilltown CDC, the MFF initiative has grown to incorporate landowner and forestry perspectives. A series of meetings over the past year have involved nearly 100 local forest landowners, consulting foresters, loggers, sawmill owners, and wood users. In

addition to local citizens and the Hilltown CDC, the effort has been supported by various non-profit, state government, and university groups, including:

- · Cooperative Development Institute, Greenfield;
- · The University of Massachusetts Donahue Institute;
- · Massachusetts Division of Environmental Management;
- · Massachusetts Forest Stewardship Program; and
- · University of Massachusetts Amherst Department of Natural Resources Conservation.

Two governing committees have been formed to lead the next development phase of MFF. The first group, a steering committee made up of area forest landowners, is providing direction for the organization. In meetings to date the steering committee has been regularly drawing on the expertise of a second "resource support group," made up of individuals from the non-profit, government, and university participants identified above.

#### **Other Forest Cooperatives**

The MFF cooperative is not without precedent. The Sustainable Woods Cooperative in Wisconsin and Vermont Family Forests in Vermont are existing cooperatives with similar missions. Both share the goals of cooperative timber management and certified forestry.

The Sustainable Woods Cooperative has 150 members owning almost 20,000 acres. In addition to timber sales and certification, they have developed the value-added functions of harvesting, saw milling, drying, and finishing lumber into millwork items. By capturing value at the downstream end of the distribution chain, the coop is able to keep more money in the local economy, thus benefiting their entire region.

Vermont Family Forests achieved green certification in 1998. Their initial certification listed 31 landowners and 4,718 acres of forested land. They provided approximately 70,000 board feet of locally grown certified lumber for a new building at Middlebury College in Vermont.

#### The Future of MFF

Though MFF is currently in the start-up phase, several initial successes provide optimism that the cooperative's goals can be achieved. Preliminary research indicates a potential to match local forest resources with local users for their

mutual benefit. Local, certified "chain-of-custody" sawmills, such as Lashway Lumber in Williamsburg, have shown specific interest in forest certification and collaborating with a certified MFF.

In cooperation with the Massachusetts Forest Stewardship Program, MFF has applied for and received a \$40,000 grant from the U.S. Forest Service to help with the cooperative formation process. This grant will be matched by an additional \$47,000 in in-kind and other contributions from MFF partners and supporters. Components of the grant-funded project include:

- · Completion of a wood supply/wood demand study;
- · Landowner organization support;
- · Investigation of forest products certification; and
- · Cost sharing of timber stand improvement to support sustainable forest management.

The ultimate success of the cooperative will be measured in two ways. First, a sufficient number of landowners, representing a critical mass of forest acreage, must step forward to form and actively support the cooperative. Second, the activities and businesses that the co-op spawns must be financially viable. The goals identified by the group have both costs and benefits. Early efforts indicate that MFF is well on its way to forming a successful enterprise that will benefit both direct participants and the community at large.