WHAT THE FARMERS’ MUSEUM CAN LEARN FROM FARM-BASED EDUCATION

A THESIS

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To my father, who instilled a love of the roots of food production in me, when he took ‎me out on those cold March mornings of my childhood to tap the backyard maple tree.

TABLE OF CONTENTS

[Acknowledgements v](#_Toc51521625)

[Introduction 1](#_Toc51521626)

[Threats and Opportunities at The Farmers’ Museum 5](#_Toc51521627)

[The Philosophy of Farm-Based Education 13](#_Toc51521628)

[Case Studies of Three Farm-Based Education Centers 19](#_Toc51521629)

[Shelburne Farms 19](#_Toc51521630)

[Stone Barns Center for Food and Agriculture 24](#_Toc51521631)

[Phillies Bridge Farm. 28](#_Toc51521632)

[Case Studies Summary 31](#_Toc51521633)

[Recommendations for The Farmers’ Museum 34](#_Toc51521634)

[Conclusion 45](#_Toc51521635)

[Bibliography 48](#_Toc51521636)

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# Introduction

This paper explores the relationship between farm-based education and living history farms. According to CONCERN, a national nonprofit environmental education organization, farm‑based education is:

. . . a form of experiential, interdisciplinary education that connects people to the environment, their community, and the role of agriculture in our lives, [promoting] land stewardship, the value of meaningful work, and [supporting] the local food systems that sustain us.[[1]](#footnote-2)

The educational values of The Farmers’ Museum, a living history farm in Cooperstown, New York, are similar to the values of farm-based education. Part of the mission of The Farmers’ Museum is to represent “American rural life as typified in central New York by preserving the past, recording the present and educating for the future.”[[2]](#footnote-3) In order to preserve the farming past at The Farmers’ Museum, it may be useful for visitors to understand the connections between traditional farming and modern sustainable agricultural practices. Merging ideas from farm‑based education into the experience at The Farmers’ Museum can help further this understanding. My thesis is that The Farmers’ Museum in Cooperstown, New York can borrow ideas from educational programs at farm-based education centers around the country, in order to make its own educational programming more fulfilling and relevant to visitors.

Before attempting to integrate the programming at farm-based education centers into the programming at The Farmers’ Museum, it is useful to understand how these institutions differ. Farm-based education centers are sites centered on farms that schoolchildren and other audiences unfamiliar with farming visit to understand modern sustainable agriculture. Sustainable agriculture is farming that has little or minimal impact on the environment and can be sustained in one area indefinitely. As pesticides and herbicides often have drastic effects on the environment, most sustainable agriculture is also organic. Farm-based education centers provide hands-on experiences such as farming, smelling, and eating. In comparison, living history farms are museums that interpret the agricultural past of a specific time. For example, The Farmers’ Museum focuses on farming life in Upstate New York in the 1840s. There are gardens with vegetables that were grown during that decade, such as carrots, potatoes, and cabbages. Cows are milked by hand and chickens roam the grounds. There is even a garden planted with medicinal herbs. The crops and livestock are not part of a real farm, however, but are used as artifacts and educational tools; it is a stage set to recreate the past.

The research in this paper is relevant and timely, as many living history sites, such as Old Sturbridge Village in Massachusetts and Colonial Williamsburg in Virginia, are struggling to attract visitors and, thus, are searching for innovative and creative ways to expand their audiences.[[3]](#footnote-4) By comparison, The Farmers’ Museum is not struggling as much, but is still eager to create innovative programming and, thereby, increase attendance. The Farmers’ Museum is in the midst of an interpretive planning process that could benefit from the ideas put forth in this thesis; merging ideas from farm-based education into The Farmers’ Museum’s programming could enhance the relevancy of the institution.

Books have been published in recent years about the importance of local foods, sustainable agriculture, and how Americans need to be better educated about where their food comes from. There has been little written, however, about farm-based education centers in a comprehensive manner.

In addition, there has been nothing published that investigates the possible relationship between living history farms and farm-based education centers. This work examines this relationship by exploring how the philosophy and programs of farm-based education can be adapted to a living history farm.

Suggestions for The Farmers’ Museum are largely based on three case studies of farm‑based education centers. These centers are Shelburne Farms, near Burlington, Vermont; Phillies Bridge Farms, in New Paltz, New York; and Stone Barns Center for Food and Agriculture, in Pocantico Hills, New York. These sites were chosen based on recommendations from the Farm-Based Education Association (FBEA), museum professionals, and others familiar with the quality of the programs at these sites. These institutions were also selected as case studies because of their success at attracting audiences, their community profile, and their uniqueness.

The first chapter of this paper explores the question of why living history farms are struggling to attract more visitors.[[4]](#footnote-5) Included are the struggles that The Farmers’ Museum is facing with programs and visitation. Fortunately, The Farmers’ Museum has been one of the only living history farms that has increased or stabilized its attendance over the past few years. The second chapter examines the philosophy behind farm-based education and the educational theories behind that philosophy. The three case studies of farm-based education sites are presented in the third chapter, accompanied by a summary of the similarities and differences among these sites. Each case study includes a description of the site, observations of the educational programming, and what makes the site and its programs unique. The final chapter includes specific suggestions for farm‑based educational programming at The Farmers’ Museum, adapted from the case studies. These suggestions were created with the acknowledgement of the obstacles that may affect their implementation.

The intent is that the suggestions here will be utilized by The Farmers’ Museum in future programming. Where practical, other living history farms are encouraged to adapt these findings and recommendations to their own programming as well. That in itself would make this paper a success

# Threats and Opportunities at The Farmers’ Museum

The Farmers’ Museum should try to integrate farm-based education into its programming, as farm-based education is another approach to learning about agriculture and a valuable new model.

Although attendance at The Farmers’ Museum has not dropped over the past decade, it has not been increasing either. According to the New England Museum Association (NEMA) *2007 Museum Attendance Survey* this is not an isolated trend. NEMA notes that despite the fact that the history museums surveyed did not notice a decline in attendance across the board, the number of visitors was volatile.[[5]](#footnote-6) What is also of concern is that the number of museums that share their attendance figures for surveys has been dropping. NEMA believes that attendance is dropping at sites that are reluctant to share their attendance figures.[[6]](#footnote-7)

Many museums that have seen increases in attendance over the past few years reason that the increases may have occurred as a result of new programming.[[7]](#footnote-8) And even if new programming does not directly increase attendance, it often brings new ideas to an institution and helps to reinvigorate its mission. New programming, which could include farm‑based education, is also necessary if museums want to stay at the forefront of entertainment and compete with other leisure time activities.

Over the past decade there has been a push from inside the museum community, and from some visitors themselves, to create visitor experiences that mesh with museum values. These values, such as authenticity, are not always fully integrated into the visitor experience. One example of such a visitor experience is dining. Alice Waters, the organic restaurateur and promoter of sustainable agriculture, describes a recent visit to a natural history museum, which much like The Farmers’ Museum explores agricultural themes in its exhibits. However, the museum ignores these themes in the dining areas. Waters notes the thematic disconnect in the museum’s cafeteria, where there is an:

. . . unmistakable steam table smell of pre-cooked, portion-controlled food. In this marvelous museum, surrounded on all sides by splendid exhibits that celebrate the complexity of life and the diversity of human achievement, people appear to have stopped thinking when it comes to their own everyday experience. People appear to be oblivious that the cafeteria represents the antitheses of the values celebrated in the museum.[[8]](#footnote-9)

According to Chris Fulvio, Director of Dining Services at The Farmers’ Museum, for institutions of The Farmers’ Museum’s size there are many obstacles to creating a local, organic dining experience. At large events museums often need to serve as many people as possible and quality may have to be sacrificed for quantity. In addition, it can be prohibitively expensive to buy locally grown food.[[9]](#footnote-10) In addition, some institutions do not have the space or resources to properly deal with food safety. Fulvio explains that during the time that the exhibition *Ice Cream: Our Cool Obsession* was up The Farmers’ Museum was not able to serve real ice cream, but had to serve mass-produced, frozen, ice-cream novelties instead, because there was no sink in the café, as required by local health regulations. There is also a perception that many visitors are not willing to pay premium prices for quality. Despite the difficulties that many museum dining services have, there are museums that have outstanding food services that feed many people. These museums have improved their food services by turning their museums into not just destinations for art and history, but for food as well.[[10]](#footnote-11)

There is also an increasing awareness that museums need to be at the forefront of the “green” revolution. “Going green” in this context means that a museum needs to integrate practices that protect and conserve the environment into the way it does business. This includes introducing environmentally friendly programs and procedures such as recycling, using energy saving light bulbs, and procuring environmentally safe building materials for new structures. Recent writings on this subject include Sarah Brophy and Elizabeth Wylie’s *The Green Museum: A Primer on Environmental Practice,* as well as articles in AAM’s *Museum* and in the yearly proceedings of the Association of Living History, Farm, and Agricultural Museums (ALHFAM). In *The Green Museum,* the authors explain that conserving the environment is being done not just for its own sake but to help museums become more sustainable and fulfill their missions. The book gives examples of how “greening” your museum can save money by reducing waste and that the money saved can be used for mission related activities.[[11]](#footnote-12) Many young visitors to museums have grown up in a society that puts a value on conservation. To better connect with this audience, museums must provide programs that help preserve the environment.[[12]](#footnote-13)

At the same time that museums are looking for ways to become more environmentally friendly, there has been a shift from the visitor’s desire to know about the past to a desire to understand the present, and how we as a society have reached this point. Garet Livermore, Vice President for Education at The Farmers’ Museum, believes that there is a declining interest in historic agriculture and more of an interest in the basics of modern agriculture, as fewer and fewer people come from a farming background.[[13]](#footnote-14) Unfortunately, there are very few museums that focus on modern-day agriculture.[[14]](#footnote-15)

In 2004, at the ALHFAM annual conference in Dearborn, Michigan, the outgoing president, Steve Miller, spoke on *The Power of Agricultural Literacy*. The talk not only focused on food production in the past (which many people believe living history farms interpret the most effectively), but also on where food comes from today and where it may come from in the future. Miller cited a number of factors that make agricultural literacy so important in the 21st century. Agriculture and food production are more centralized then at any time in history and a few big companies exert enormous influence over agricultural practices. In an era of globalization, food products are being transported around the world, often at great cost to the environment.

There is also interest in how the present food system can be changed. Consumers want better treatment of farm animals, agricultural practices that are friendly to the environment, and greater safety and variety in their food options.[[15]](#footnote-16) Because of increased public support for improved quality in modern agriculture, it is important for museums to play a role in educating the public in how to make these changes.

Miller’s talk brings up similar issues to those addressed by the farm-park paradigm. The farm-park model was put forth in the 1980s by Darwin Kelsey, an expert in agricultural history and a graduate of the Cooperstown Graduate Program in History Museum Studies. According to Kelsey, the farm park paradigm:

. . . tries to directly confront urbanized Americans’ limited grasp of how food, fiber, and other agricultural products are produced to sustain their way of life and how the choices and processes involved in such production affect our environment and culture.[[16]](#footnote-17)

The farm-park paradigm is best represented by Lake Farm Park, in Kirtland, Ohio. Lake Farm Park is based on European farm parks that preserve endangered breeds of livestock. In addition to borrowing ideas from the European farm‑park tradition, Lake Farm Park educates visitors about contemporary issues, such as the role of genetics in farming, animal rights, preservation of the environment, the tough economic and environmental choices that farmers have to make, and how different agricultural systems work.[[17]](#footnote-18) Like Lake Farm Park, farm-based education centers address the agricultural issues that consumers are most concerned about.

At the same time that museums such as The Farmers’ Museum are struggling to increase their attendance, farm-based education centers seem to be doing quite well. Brooke Redmond, president of the Farm Based Education Association (FBEA), believes that farm based education centers have been increasing in popularity over the past 20 years.[[18]](#footnote-19) Stone Barns has seen its membership increase and has a large volunteer base.[[19]](#footnote-20) Shelburne Farms has seen attendance increase from 70,000 visitors in 1990 to 134,000 visitors in 2007.[[20]](#footnote-21) FBEA is a fairly young organization, having only been organized in the late spring of 2006. According to its website, FBEA was organized to, “ . . . support the professional needs of the fast-growing farm-based education community.” At the time of its founding FBEA had 11 members. Today, the organization has almost 700 institutional members.[[21]](#footnote-22) Redmond thinks that the existence of FBEA has also strengthened farm-based education, as it brings enthusiasm into the industry and creates a professional support system.

Many of these farm-based education sites also run popular farmers’ markets, responding to consumers’ desires to be more intimately connected with the farms they buy from. From 1994 to 2002, the number of farmers’ markets around the nation increased by 80%.[[22]](#footnote-23) The not-for-profit Otsego 2000 established the Cooperstown Farmers’ Market in 1991. Otsego 2000’s mission is forwarding “ . . . intelligent planning for the environment in northern Otsego County and preventing irreversible change and damage to the unique resources of the region.” These unique resources include agricultural land and crops, as they are interconnected with the region’s environment.[[23]](#footnote-24)

Farming in the Cooperstown area has also changed in the last decade. Unlike a state such as Vermont, which has long championed a small-farm model, for many years farmers in New York State followed the Cornell System of Agriculture. Under the Cornell System, farmers were pressured to expand their farms and shift to monoculture (growing only one crop or raising only one type of animal). Only recently have New York farmers reaped the advantages of small-scale, polyculture farming.[[24]](#footnote-25) One example is how in the Mohawk Valley foreclosed farms have been bought up by Amish families from Pennsylvania. These Amish farms are by definition, family farms and provide much of what the families eat (although they do shop at the local supermarket for some items).[[25]](#footnote-26) Some of these farms sell directly to customers at the Cooperstown Farmers’ Market.[[26]](#footnote-27)

In the Cooperstown area there are also a number of locally produced agricultural products, such as beer and cheese. There are a number of sellers of local cheeses at the Farmers’ Market in Cooperstown and the Cooperstown Cheese Company has a store in the nearby village of Milford. The milk for the cheese from the Cooperstown Cheese Company comes from locally raised cows. There are also two breweries in the area: Brewery Ommegang, a Belgian style brewery established in 1997, and the Cooperstown Brewing Company, established in 1995.[[27]](#footnote-28)

One organization that is championing small farms in Central New York is the Center for Agricultural Development and Entrepreneurship (CADE). CADE was found in 1991 and runs the Oneonta Farmers’ Market. Part of its mission statement is to:

. . . increase the number of successful small farm enterprises and agricultural businesses in Otsego County and the surrounding area. This will be achieved through research, entrepreneurship education, technical assistance, marketing, promotion, youth and consumer education, and public policy.

One example of a CADE project is the Value-Added Local Food Promotion and Campaign, which ran from January 1 to December 31, 2008. CADE consultants and staff helped ten different farms develop marketing and business plans, decrease distribution costs, open up to new markets, and promote their food locally through educational events. This group of farms also marketed collectively in order to enjoy economies of scale and to maximize profit.[[28]](#footnote-29)

The Farmers’ Museum faces pressures to increase attendance, become more environmentally friendly, improve its food service, and incorporate modern agricultural practices into its programming, while at the same time trying to expand its reach. The Farmers’ Museum faces these pressures as their endowment is shrinking and our collective economic future holds more challenge than promise. To try to understand how The Farmers’ Museum can turn these threats into opportunities, and survive through an unsure economic climate, it helps to understand the strengths of farm-based education center programing and how The Farmers’ Museum could adapt these strengths to its own programs. However, to better understand how The Farmers’ Museum can borrow ideas from farm-based education centers in its own programming, it is important to understand the philosophies that underpin farm-based education in general.

# The Philosophy of Farm-Based Education

Farm-based education is built upon a number of innovative philosophies in the fields of agriculture and education. As farm-based education is interdisciplinary, this chapter not only summarizes these philosophies but also explains how they complement one another.

Many farm-based education centers, including Shelburne Farms, view themselves as sites of community-based education. Community-based education uses the local community as a tool for education while improving the community at the same time. This type of education is often practiced through community service projects that meld with a school’s curriculum. Community‑based education teaches students to be stewards of their own community. In this manner, students learn about the communities that they live and go to school in, and so the process of learning about environmental stewardship and sustainability becomes personally relevant. Also, because there is a tangible goal in their learning, students take great pride and ownership in their accomplishments.[[29]](#footnote-30)

Unlike environmental education, which only looks at the local natural environment, community-based education addresses both the natural and man-made environments, revealing how they interact and shape one another.[[30]](#footnote-31) Thus, it is a great method to use in conjunction with farm-based education. Community-based education is at its core local, but it also makes issues close to home relate to more global forces and events.[[31]](#footnote-32) For example, it is possible to connect the loss of farmland and the social problems facing school communities on a local level with loss of farmland and farming as a way of life on a national level.[[32]](#footnote-33) Saving a local farm can also make students personally involved with agriculture, and might actually change their food choices.

All community-based education is at its roots a form of experiential education. In the experiential education model, learning is seen as a process and is not about outcomes. According to D.A. Kolb, “Learning is the process whereby knowledge is created through the transformation of experience.”[[33]](#footnote-34) This transformation of experience can be looked at as a feedback loop. A learner goes through a concrete experience, and then they think about and reflect on that experience. From these reflections, the learner forms abstract concepts and generalizations, and then tests these implications in a new situation. This situation can be viewed as another concrete experience, and the loop begins again.[[34]](#footnote-35) Visiting a farm, understanding how food is grown, and helping with farm chores are examples of experiences in the most literal sense.

In addition to being experiential, farm-based education tends to acknowledge, encourage, and reward many ways of learning. Brooke Redmond, director of the FBEA, believes that one of the major influences on farm-based education is the theory of multiple intelligences.[[35]](#footnote-36) The educator Howard Gardner first developed the theory of multiple intelligences in the 1980s. Gardner believes that there are a certain number of abilities that are valued by human cultures. These abilities or intelligences are independent but combine in multiple adaptive ways.[[36]](#footnote-37) As farm-based education tends to be hands-on and participatory, it offers students an opportunity to exercise many of their intelligences. Interpersonal skills can be strengthened on a farm by doing farm chores with other students, working as a team to make sure the farm is working well. Through simple manual activities, such as planting seeds or shoveling dirt, students can learn how to use their gross motor skills. Teaching the method of laying out crops can be used to develop spatial intelligence. Learning about the science of how crops grow, and animals develop can contribute to logical-mathematical intelligence. Tasting and smelling vegetables can help with intrapersonal skills. In the right context, farming can be used as a powerful and almost endless approach to learning, both on an individual and communal level.

As farming uses many intelligences, it can be quite a complex subject. Because of the complexity, one of the best ways to understand agriculture is through the lens of systems thinking. Systems thinking is based on chaos theory, first put forth by Edward Lorenz and popularized as the “butterfly effect.” The “butterfly effect” is the idea that a butterfly flapping its wings in Brazil can set off a tornado in Texas. While that hypothesis may be difficult to prove, everything in the world is arguably interconnected, and according to Lorenz, “ . . . tiny differences in a complex system can produce large and unanticipated effects.”[[37]](#footnote-38) Instead of looking at events and ideas in isolated ways, systems thinking examines events and ideas holistically. Systems thinking explores both the whole of a system and the relationships among its pieces. This allows for a better understanding of how events will affect the system and how they will influence each other.[[38]](#footnote-39) Systems thinking not only examines events in a system, but also examines *patterns* in the system (what happens over time) and the structure of the entire system (why the patterns occurs). The question that eventually needs to be answered is: How have assumptions and world views created and sustained the structures of the system?[[39]](#footnote-40)

In his book *The Omnivore’s Dilemma*, Michael Pollan emphasizes the importance of working with the natural system in growing food products. When the natural system is not followed, problems result. Industrial agriculture has mechanized and simplified the raising of crops and animals, which ultimately makes agriculture unsustainable. One example of working against the natural order is feeding corn to cows. Cows have multiple stomachs that are designed to digest grass. They can be kept relatively healthy by letting them graze on grass. Feeding them corn (which is cheaper) interferes with their digestive systems. The pH of their stomachs is made unnaturally acidic by the corn, and they become bloated, sick, and immunocompromised. To remedy this, cows are given antibiotics, which just complicates the situation, increasing the probability that diseases and infections will evolve that are resistant to antibiotics. Feeding corn to cows is, thus, a small event in the system, but which has large repercussions.[[40]](#footnote-41) To remedy a problem like this, Pollan not only encourages farmers to stop feeding corn to cows, but to look more holistically at industrial agriculture. It is important for people to understand how and why the structures of industrial agriculture were created before the system can be changed for the better. Philosophers such as Pollan have influenced farm-based education centers that raise livestock and crops in harmony with the natural system.

The writer that many theorists of sustainable agriculture take their ideas from today is Wendell Berry. Berry, who has been writing about this subject since the 1970s, emphasizes how we have lost the “cultural” aspects of agriculture in modern society. At one time people lived and worked on farms, and farming activities were part of their culture. The family meal was a culmination of these farming activities. Alice Waters describes the family meal as one of “ . . . shared necessity and ritualized cooperation . . . a ritual that can express tradition, character, sustainability and diversity.”[[41]](#footnote-42) That is why Wendell Berry describes eating as an agricultural act. However, the family meal has turned into a meal eaten quickly, made with non-local products that are highly processed. Food and eating have lost their cultural significance.[[42]](#footnote-43)

Since traditional farming and eating as a family is disappearing from our culture there is less incentive to care about it. In modern industrial agriculture the emphasis is on maximizing production.[[43]](#footnote-44) The problem with industrial agriculture is that it depletes the soil and creates a great deal of waste. To be better stewards of the land, we must farm to restore and maintain the land. Berry even believes that recreating ties to the land creates better democratic citizens. He supports Thomas Jefferson’s view that farmers are “ . . . the most independent, the most vigorous, the most virtuous, and they are tied to their country, and wedded to its liberty and interests by the most lasting bonds.”[[44]](#footnote-45) On a basic level, farming creates communities. Everything is connected in a cultural system; trying to disconnect agriculture from this system causes our culture as well as our land to be unhealthy. Farm-based education centers show that farming is still a democratic and noble pursuit, and such centers try to reconnect communities with their farming heritage.

Proponents of sustainable agriculture not only take their philosophy from traditional farming practices, but look to new practices as well. Sustainable agriculture can be quite innovative. For example, to reduce the reliance on out of season produce flown halfway across the country, some farmers are trying to figure out ways to lengthen the growing season. To sell sustainably grown produce and meat, farms are setting up community supported agriculture (CSA) programs in which community members take on a share of the farmer’s risk in exchange for a share of the harvest.[[45]](#footnote-46) These community members have a personal and financial connection to the farm and become concerned about its welfare.

One major distinction between traditional farming and modern sustainable agriculture is that today farmers have a number of ways to raise crops and livestock. Up until the early 20th century, farmers did not know how to farm inorganically.[[46]](#footnote-47) Learning lessons from the past, as well as looking into the future, can change how Americans view what they grow and eat. The next chapter explores how these changes are being implemented at three different farm-based education centers.

# Case Studies of Three Farm-Based Education Centers

## Shelburne Farms

Shelburne Farms, located near Burlington, Vermont, and on the eastern shore of Lake Champlain, is the model for farm-based education centers and a major force in spreading the ideas of sustainable agriculture and healthy eating. Shelburne was founded in 1886 as a model agricultural estate to demonstrate innovative farming methods. By the mid-20th century, Shelburne Farms was beginning to wane in influence and attraction. In 1972, Shelburne Farms decided to change its focus to address conservation issues. Today, Shelburne Farms mission is:

To cultivate a conservation ethic in students, educators, and the general public by teaching and demonstrating the stewardship of natural and agricultural resources.[[47]](#footnote-48)

Shelburne supports a number of on-site and off-site programs. One example of an off-site program is Vermont Food Education Every Day (FEED), a collaboration with the Northeast Organic Farming Association of Vermont and Food Works, a farm-based education center in Montpelier, Vermont, that works to improve connections between farms and schools, serve local and healthy foods in school cafeterias, facilitate farm tours, and introduce ideas about sustainable agriculture into the public school curriculum.[[48]](#footnote-49)

Visiting Shelburne Farms on a drizzly day in early November 2008, I found a number of elementary school students from St. Albans, Vermont, participating in the program *Farm Life and History*. The learning objectives of this program included how modern-day agriculture compares with agriculture in the nineteenth century, the important role agriculture still plays in our lives, and the physically hard work needed to manage a farm.

The program began with a short skit, which compared a morning in the life of a 19th century schoolgirl, Tabitha, with a modern-day schoolgirl. The skit was a means for the children to compare modern life with life “back then”; to see that compared to people in the nineteenth century, people today are disconnected from the origins of the resources that they use. It was also a way to get the students to start thinking about food products as coming from a farm, as opposed to coming from the supermarket. Tabitha had to start a fire when she awoke while her counterpart was already warm because of her home’s central heating. Tabitha gathered eggs from her family’s chickens for her breakfast while the other girl opened a ready to eat package of cereal from the supermarket. The skit was interactive; one of the farm educators had the children yell “good morning” to “wake up” the two girls and posed questions from time to time, such as asking Tabitha how she got more light in her room in the morning (the answer: a candle). The students quickly became immersed in the performance and appeared transported to a different time and place.

After the skit, the students broke into a number of groups. The group observed for this paper gathered around in a circle so the farm teacher could facilitate a discussion about modern-day farming. Many of the students’ parents had gardens but only one student lived on a farm. The main question of the discussion was: What would you have on a farm and why? Most kids wanted to have a horse on their farm. The reasoning that most of them gave was that a horse is cute. The educators had to explain that horses could also be very useful for transportation and for their manure. The discussion helped the students to begin to realize how important farms are and why proper stewardship of agricultural resources is crucial.

Later that day, the students went outside to the on-site farm to participate in some farm chores. Before the students began the chores, the farm educator emphasized how important it is to respect the animals, a first step in demonstrating the proper stewardship of livestock.

The first chore was making cornmeal to feed the chickens. The children were given rocks and wood stumps in order to grind the corn. This provided a lesson in cooperation, as each student had to take their turn in grinding the corn. The farm teacher emphasized that today machines are used to grind meal and that hand grinding is what millers would have done a “long time ago.” After the chickens were fed, the educator showed the students how to handle a chicken (hold them near your body so that they feel safe—a process that respects the animal). Some of the chickens were brought outside so that they could get some fresh air.

Shelburne Farms has a mobile chicken coop, a device used by many model organic farms. The chickens scratch the ground in a limited area, looking for grubs and other insects in the droppings of other animals, spreading the manure around in the process and keeping the ground well fertilized. The chickens are an integral part in keeping the farm sustainable.[[49]](#footnote-50)

Another chore that day was spreading wood chips for the sheep’s winter bedding. This involved the class raking up wood chips and putting them into buckets. Some of the kids found this a bit monotonous and wanted something else to do. However, the chore was quite physical and showed the importance of using your body in farm work. It also made the students gain a respect for the work that farmers do.

At this point, the children took a break for lunch, which had little educational merit, except for the emphasis of putting organic items such as banana peels into a compost heap. The students had brought their own lunches, some of which were full of pre-packaged foods with dubious nutritional value. This was unfortunate as Shelburne Farms produces a number of fresh food products, which could have been integrated into the educational program and served at lunch. Lunchtime could have provided an opportunity to visit the on-site bakery and purchase a loaf of bread to go along with some Shelburne Farms cheddar cheese. Shelburne Farms cheese is made on-site with milk from their dairy (the bread is also made on-site, but from wheat that is grown elsewhere). Introducing the students to the foods that Shelburne produces might have strengthened the understanding of Shelburne Farms as a commercially viable working farm, one that is not just for show.

After lunch, the students were involved in two activities dealing with products that are made on farms: beeswax and wool. The first activity was making candles. The students took turns dipping pieces of string into hot wax until enough collected to form a candle. The students enjoyed the sight of a candle slowly being formed on their pieces of string. After this activity the students were introduced to how bees create wax. The educator read a picture book about a beekeeper and showed them a deconstruction of a bee box. She explained that to get honey and wax from bees, a beekeeper needs to handle a bee box with woolen gloves. One student asked where the woolen gloves came from. The answer, that they came from sheep, led to a lesson about wool. It was a great way to show how farms are integrated systems, where one process is used to create a product that can be used in another process. These processes cannot be accomplished without each other.

The next activity was a puzzle. Different objects such as scissors and yarn were taken out of a bag so students could try to figure out what they were used for in the process of shearing sheep. The students then had to put the processes in the correct order. This was followed by a number of smaller activities dealing with wool, including washing off dirty wool, carding wool, and spinning wool into yarn.

After the program, the farm teachers came together to assess the effectiveness of the lesson (assessments are given to the schoolteachers to fill out as well). Because of the emphasis on experience in farm-based education, there are sometimes issues concerning how to create activities that are highly involved for the students but that are also safe. During the wax-dipping session a few children got minor burns. The teachers agreed that next time the hot wax should be monitored more carefully. Other problems were that some of the groups got to do some activities that the other groups did not get to do and that in November, some activities, such as visiting the cheese factory are not possible. It struck me that many of the issues that the teachers had at Shelburne Farms are similar to those at The Farmers’ Museum; issues that deal with the unexpected consequences of activities that involve raw materials and live animals and plants, as well as the effects that the change of seasons brings.

Except for the problems with students bringing their own lunches, everything about the Shelburne Farms educational program was impressive. Some of the programs at Shelburne are similar to those at living-history farms, but Shelburne differs in that it tries to make connections between historical farming and modern-day agriculture. In addition, the program I shadowed was hands on in ways that made the children have a visceral understanding of farming, through activities such as encouraging the children to pick up the chickens. Shelburne does not seem to be afraid to show its visitors how difficult and monotonous farm life can be (such as when raking the woodchips), and is careful not to romanticize agriculture. The farm teachers were also adept at creating connections between the activities, and hopefully the students went home with some knowledge of the interconnectedness of everything that happens on a farm.

## Stone Barns Center for Food and Agriculture

Stone Barns Center for Food and Agriculture is located in Pocantico Hills, New York, a short drive north from New York City. It is an area that is very disconnected from farming, and so Stone Barns has a great deal to teach its community. Stone Barns’ mission is: “To celebrate, teach and advance community-based food production and enjoyment, from farm to classroom to table.” The center will celebrate its fifth-year anniversary in May 2009.[[50]](#footnote-51)

Stone Barns contains a branch of the celebrated Manhattan restaurant Blue Hill. The restaurant gets a substantial percentage of its raw ingredients from Stone Barns and other local farms, supplementing their food supply with a few exotic and not locally available ingredients like lemons. The restaurant’s menu changes with the seasons. During an early spring meal at the restaurant, fava beans were in season, and ended up being the supporting player in many of the dishes.

For those who cannot afford the prices or get a reservation, there is a small outdoor café that also serves food from the farm. The utensils, plates, and napkins at the café are all recyclable, made from a corn-based product. Sitting in the café, one has a view of some of the vegetable and fruit fields nearby.

During the visit for this paper in late November, a school group from an AP environmental science class from Katonah, New York, was touring. The educational program they participated in was *From Farm to Forest,* and was supposed to have been done in conjunction with the nearby Rockefeller State Park Preserve, but was limited to Stone Barns at the time due to state budget cuts. The students were given a tour of the farm and participated in farm chores. Since it was part of an environmental science class, the scientific aspects of Stone Barns’ operations were emphasized. The purpose of the program was to identify specific sustainable land use practices at Stone Barns and to show how the natural world is an integral part of these practices.

The first stop was the root cellar, which in the days before refrigeration was the best place to store vegetables. The interpreter emphasized that root cellars have come back into style as more people want to eat seasonally. Consumers who eat seasonally can avoid having to buy food during the winter flown in from warmer climates. To eat vegetables during the winter, these consumers need a way to store the hardiest varieties. Of course, one way to do this is to can and freeze vegetables. But some people who eat seasonally want fresh produce during the winter; hence, the importance of a root cellar.

Stone Barns is active in pursuing innovative ways of growing food, such as using greenhouses and hydroponics (growing crops in water). Many of these methods can improve the variety of foods that can be grown locally during the winter. In the vegetable field the students were shown an experiment in four-season gardening. Cold tolerant plants, such as brussels sprouts and broccoli, were covered in plastic to extend their growing season.

The importance of four-season gardening and root cellars to Stone Barns’ mission is that these procedures advance community-based food production; as opposed to getting produce from South America and California during the winter, which does not support the local economy.

The students also learned about how the fields were fertilized with compost. The composting system at Stone Barns is quite complex. Most of the students seemed to be unaware of composting, as none had a compost heap at home. Before they reached the large piles of compost at Stone Barns the smell hit them, a stench similar to strong smelling cheese. As the decomposition of organic matter creates a great deal of heat, steam rose from the pile. There was definitely a “wow” factor in the size of the piles and the stench and steam the compost created. This compost eventually turns into rich soil that Stone Barns uses in its own fields and sells to other farmers. Stone Barns has been experimenting with compost, using forced oxygen to kill microbes in items not usually compostable, such as animal parts and post-consumer products. Stone Barns has a soil scientist on staff who experiments with compost and the farm teacher suggested being a soil scientist as a possible career path.

On their visit, the students visited a number of the animals, including the pigs, sheep, and chickens. Most felt that the pigs were the most fascinating to watch as the sows were nursing their piglets. There were a lot of cries of “cute” by the teenage girls. The farm teacher took advantage of the curiosity of the students to explain how this was the way that all pigs used to be raised but that today most pigs are raised on factory farms where they are weaned at a very young age.

The last stop on the students’ tour of the farm was the kitchen garden, where they participated in several chores. Some of the students planted garlic while others raked leaves. The students also had a chance to taste some fennel that was growing.

In an interview conducted in late August 2008, Craig Haney, Agricultural Manager at Stone Barns, explained that there are a number of both indirect and direct lessons that visitors take home from a visit. One indirect lesson involves the scale of food production. Being confronted with hundreds of chickens roaming around the chicken coop is an overwhelming experience. In addition to both the tangible and intangible outcomes, Stone Barns emphasizes the humane raising of farm animals. Sheep, pigs, chickens, and veal calves are some of the animals raised for meat on the farm. All the animals are free range and breeds are chosen for their suitability to the four seasons of the Hudson Valley.[[51]](#footnote-52) During the visit, turkeys were being slaughtered on-site for Thanksgiving. Despite the upcoming holiday, it would have been obvious something was happening because only a handful of turkeys were still roaming around. The farm makes people confront difficult questions, such as the ethics of eating meat. During the center’s summer program one child remarked that:

It’s sad to see them play and know that they’re going to be slaughtered one day. But if people pay to eat them and that helps the farm, I guess it’s OK.[[52]](#footnote-53)

Stone Barns is still a young organization and much of what they are doing is still in the trial and error stage. The center is still experimenting with what the most effective methods are to teach visitors about sustainable agriculture. Stone Barns is not set in its ways but is rather in a position to shape the future of farm-based education.

## Phillies Bridge Farm.

Phillies Bridge Farm is located in New Paltz, New York, a college town in the Hudson Valley, about 80 miles from New York City. Organic and sustainable agriculture is prevalent around New Paltz, and Phillies Bridge is one of four nonprofit CSAs in the area. Margaret Cheo, the education director at Phillies Bridge, attributes having so many CSAs in one area to a nearby populace that is very supportive of them. Part of the mission of Phillies Bridge Farm is to:

. . . demonstrate and promote local agriculture that is ecologically sound, community oriented, and economically viable . . . through farm demonstrations, educational programs, internships, research, dissemination of information, distribution of food to those in need, and the operation of a working farm.[[53]](#footnote-54)

For this paper, the farm was visited twice in early fall 2008. During the first visit, a group of people were creating an outdoor oven out of mud and clay. Community members who had shares in the CSA were picking up their share of vegetables and eggs for the week and there were volunteers helping to harvest vegetables in the fields. At the beginning of the growing season, shares in the CSA are sold for a fixed price. This money is an investment in the farm that is used to buy seeds and farm equipment and to pay employees. This reduces economic risks for the farm, while the consumer gets a certain share of fresh vegetables during the growing season and a sense of ownership of the farm. One way Phillies Bridge Farm is unique is that some of the shares of the CSA are donated to local social service agencies and the low-income families that they serve.[[54]](#footnote-55) These families not only get the chance to participate in harvesting fresh vegetables but they also receive lessons in nutrition and healthy cooking.[[55]](#footnote-56)

During the second visit, an educational program for kindergarteners from an elementary school in New Paltz was being conducted. What was most impressive was how tasting vegetables in the fields was a central part of the program (as the students themselves harvest the vegetables they taste, there are no health code issues). Cheo explained that an activity like cooking can be done at home but tasting a vegetable straight out of the ground on a farm is site-specific. During their visit, most of the students seemed excited to be eating such fresh vegetables. When asked if they liked beets, the students responded, “gross.” However, when they tasted the beets grown on the farm, they were surprised by how sweet they were and changed their opinion about the vegetable.

One extended activity that the kids participated in was creating corn pancakes. The farm teacher told the story of the “three sisters”: corn, beans, and squash; an Iroquois Indian tale that explains how these three crops help each other grow. The beans grow on the corn stalk, while at the same time they fertilize the soil, and the squash keeps the weeds at bay. She told this story while standing in front of the crops, using them as props. The students then helped to create pancakes with two of these crops: corn and squash. However, to create the pancakes, eggs were needed.

The farm teacher used this as an opportunity to introduce the children to the chickens and harvest fresh eggs. The kids were excited to collect the eggs and spent the time going over to the chicken run making up a song about harvesting eggs. The children were surprised when they realized that freshly harvested eggs are warm. The farm teacher used the chickens for a biology lesson, showing how chickens are related to reptiles, with their reptilian legs. The kids also learned a lesson in patience when they realized that it was much easier to pick up a chicken if they slowly crept up to it than if they ran after it.

Ready to help make the pancakes, the students took turns scooping pumpkin (it had already been baked) and turning corn into cornmeal with a grinder. One student commented that it was hard but fun work. The farm teacher mixed all the needed ingredients together and cooked the pancakes on a griddle. Before adding flour to the mixture, the teacher showed the group what wheat seeds look like and explained that they eat wheat in the form of bread every day. Most of the children found the pancakes to be quite tasty. The lesson was impressive because it showed a complete food system, from growing to harvesting and consuming.

In the farm’s guide to school field trip programs it is emphasized that, “The farm is a living, dynamic classroom, always changing, with many ‘teachable moments’ to take advantage of.”[[56]](#footnote-57) The program observed was an informal learning experience, in which discovery was more important than specific learning objectives. Hopefully, what the kindergarteners discovered was that fresh local produce is delicious, changing their own and their families’ eating habits, and promoting local agriculture in the process.

Phillies Bridge Farm fits the definition of what community-based education should be about. The farm tries to be an integral part of the New Paltz community by selling and donating shares of its CSA to its neighbors. Phillies Bridge gives off an aura of informality, which made me feel right at home. I hope that other visitors feel the same way.

## Case Studies Summary

The three farm-based education centers explored in this study provide a broad view of the many topics and types of programs that farm-based education encompasses. All three centers studied routinely provide educational programs for a variety of age groups: kindergarteners, elementary schoolers, high schoolers, and adults. Despite the differences in the centers discussed, all three sites have some similarities.

First, visitors to the sites gain knowledge of the connections between agricultural products and their origins. Shelburne for instance, provides a change in perspective; from the idea that a farm is full of “cute” animals to a realization that farms are necessary if we want wool gloves and sweet honey. At Phillies Bridge Farm visitors learn that common foods, such as grapes, come from vines that grow out of the ground. One student observed was surprised to learn that the grapes he picked from the vine during his visit tasted like “real” grapes. At Stone Barns, when visitors eat their lunches at the café, they do so while looking at fields of plants that are in their food.

Each organization has programs that enable the public to taste the fruits of their labors and to reconnect with the sources of their food. Phillies Bridge Farm sells shares of its CSA to members of the community, while both Stone Barns and Shelburne Farms host farmers markets during the warmer months, in addition to offering restaurants that use their farm products. Shelburne operates a shop that sells its own breads and cheeses. Eating is integral to the activities at all of the sites and is a major part of the experience. For example, learning about the “three sisters” at Phillies Bridge and eating corn pancakes or eating Shelburne’s cheese on-site after passing by the mooing cows that created the raw product.

All three sites make it a priority, as part of their missions, to reach out to their community. Phillies Bridge donates CSA shares to local impoverished families. Stone Barns and Shelburne have programs for teachers to introduce ideas about sustainable agriculture into their curricula. In addition, Shelburne offers a program for farmers on how to turn their farms into educational sites.

In addition, these centers make connections to the natural environment that surrounds them. As farm-based education centers they realize that sustainable agriculture in the northeast United States is dependent on nearby forests. With approximately 400 acres of woodlands, Shelburne Farms employs a sustainable forestry program that makes full use of this resource without depleting it. Every year roughly 20 acres are harvested and then left alone for about 20 years. The harvested wood is used for heating and furniture (there is an on-site furniture operation), and scraps are turned into wood chips for animal bedding. The trees that are not harvested are used as part of an animal refuge and a way to teach visitors about sustainable forestry and ecology. The program observed at Stone Barns during this study was intended to be taught in conjunction with the bordering Rockefeller State Park Preserve. If the state had had the money, after the farm tour the students would have had a tour of the preserve and been introduced to the idea of integrating farms and forests. Benefits of this integration are mentioned in the lesson outline and include trees being used as fences and providing shade for crops and animals. Phillies Bridge’s educational program *The Nature Trail—Beyond the Farm Ecosystem* compares and contrasts the natural system of a forest and the artificial system of a farm. The program also teaches how farms and forests are interdependent and part of a larger environment.

Two major differences among the three sites are their respective sizes and locations. One of the goals of farm-based education is to give visitors a sense of place. Shelburne is in an area with a large number of dairy farms, so it makes sense that they have a large dairy cow operation. Phillies Bridge farm may be small, but other small farms surround it. It is also mainly a CSA, unlike Stone Barns and Shelburne. It needs to stay small to preserve a community feeling and to be in harmony with other farms in the area. Stone Barns is close to a major metropolitan area, and therefore in the best position to introduce those unfamiliar with agriculture to farming.

The three case studies offer solid examples of how farm-based education can be used to reintroduce the public to the importance of sustainable agriculture. However, the purpose of this paper is not just to show how farm-based education has been successful. Rather, it is to take these successes and offer them for adaptation at The Farmers’ Museum and other living history farms. The next chapter of this thesis is a summary of how The Farmers’ Museum can make changes that best use educational techniques from farm-based education sites.

# Recommendations for The Farmers’ Museum

At the farm-based education centers I visited, when I asked how industrial agriculture is presented to visitors, the response was that it cannot be explained in black-and-white terms. The educators at these centers do not tell visitors that industrial agriculture is disrespectful to animals, unhealthy, or unsustainable, or that sustainable agriculture is the only way to go. The most common approach seems to be to explain the facts and let visitors decide what the best way to farm is. Farm-based educators inform people that there are choices to be made in how agriculture is practiced and that how we purchase our food helps to determine the types of farms that flourish.

As of this writing, The Farmers’ Museum already has some programs that use the strategies of farm-based education. One place where The Farmers’ Museum makes connections to modern farming is on the internet. *Harvest of History* (www.harvestofhistory.org), a website created in conjunction with the National Gardening Association, allows school groups and other visitors to take a virtual tour of The Farmers’ Museum and to create videos of their experiences using pre-filmed clips. Some of these film clips include scenes of modern-day farming. The problems of industrial agriculture are alluded to but not thoroughly addressed. In one film clip of a small local poultry farm, the narrator mentions that the chickens have plenty of room to move around but does not mention that industrially bred chickens do not have this option. The move from traditional to industrial means of farming is also shown as exclusively one of progress. The only exception is a clip of small-plot farmers in the late 1940s complaining about the impossibility of competing with large industrial farms. However, this is not a clip of modern farmers, and the website seems to show the farmers’ plight as a thing of the past. I am not telling The Farmers’ Museum to take all of their film clips about industrial agriculture off the *Harvest of History* website. Rather, it should add film clips about the problems of industrial agriculture, being careful to let viewers (students and teachers) make up their minds about what type of farming is best. Being less didactic and more appealing to a broader audience could increase visitation to both the website and The Farmers’ Museum.

Classroom activities recommended on the web site delve more deeply into questions about whether industrial or sustainable agriculture is better. In fact, some of the activities are similar to the programs at farm-based education centers. One activity uses a school garden as a jumping off point to explore the pros and cons of genetic engineering. It would be beneficial to the educational process to integrate these activities into the on-site programming at The Farmers’ Museum.

It speaks volumes about her beliefs and opinions that the part of museums that Alice Waters believes needs to change the most are museum cafeterias.[[57]](#footnote-58) Cooperstown’s museums could potentially benefit from incorporating a greater degree of farm-based education into their operations. Food service operations for the New York State Historical Association (NYSHA), which includes The Farmers’ Museum and the Fenimore Art Museum, could be more integrated into the overall visitor experience. A large part of the farm-based educational experience is understanding the importance of America’s farming heritage. Eating local produce and meats is part of celebrating this heritage and should be emphasized in practice as well as in theory. I recommend that food services at the museum experiment with incorporating Alice Waters’ ideas, by serving local and seasonal foods and creating signature regional dishes.

Introducing Waters’ ideas to living history interpretations at the museum may not be feasible because of health codes (If visitors prepare the food themselves as part of a program, they may eat it, but usually only the interpreters are involved in making the food). If visitors actually tasted the food, Lippitt Farmhouse (where most of the historic food is made at the museum) would be considered a restaurant and subject to health codes and inspection.[[58]](#footnote-59) Gwen Miner, Director of Domestic Arts at The Farmers’ Museum, recalled a time when visitors were allowed to taste the food, but this created something of a feeding frenzy. Because of recent news reports about food borne illness there is also a fear among some visitors about eating food prepared in settings such as Lippitt. Miner explained that if people do become sick after a trip to Cooperstown, and believe it was caused by food borne illness, they will be more likely to blame The Farmers’ Museum for feeling ill than a restaurant they went to on Main Street. The liability issues and potentially negative public relations such an event could generate are simply not worth the risk.

Because of the real concerns about letting visitors eat historically prepared foods, dining services needs to lead the way in engaging the sense of taste. There was a time when NYSHA’s food services primarily served New York state foods. However, food services stopped this practice because of concerns about affordability.[[59]](#footnote-60) Chris Fulvio, Director of Food Services at NYSHA, explained that small amounts of food, such as a few cherry tomatoes, are sometimes purchased locally. For larger quantities of food, however, because there are no locally licensed food service purveyors, food services buys from national or regional ones instead.

Turning museum cafés and restaurants into dining destinations has been shown to improve dining services at many museums. NYSHA could transform its café into a dining destination by serving local organically grown and raised produce, dairy, and meat. More tourists and local residents would come to the restaurant to eat, creating enough additional revenue to offset the higher costs of the food served. Customers might also be willing to pay more money if they believed that they were helping the local economy. This type of program would require a marketing plan to let people know about the museum’s commitment to using local foods and supporting local farms.

Dairy products are a good place to start such a program because they are easy to get locally. Patti Brunner, co-owner of the Sunny Slope Bed and Breakfast and Dairy Farm, on the outskirts of Cooperstown, thinks that in the last twenty years more local farms have gone organic, even if the majority of farms are still conventional. She estimates that there are about seven organic farms in the immediate area, and even many conventional farms are family owned. Sunny Slope is part of a larger dairy co-op, Organic Valley. Even though Organic Valley is national, Patti explained that when you get milk from Organic Valley in Cooperstown it is from the local area.[[60]](#footnote-61)

Another solution to the problem that food services has of affording local food products is to bring in chefs from outside the museum for special events. Last August’s *A Taste of the Sublime* brought some fifteen local artists to the back lawn of the Fenimore Art Museum (facing Lake Otsego) to exhibit and sell their art. To complement the art, local breweries and wineries offered drink samples, and the culinary program at SUNY Cobleskill provided food tastings. According to Fulvio, it was a “cultured” crowd that came to this event and the event was a perfect occasion to serve local and sustainable food. The food aspect of the event may be expanded this year.[[61]](#footnote-62)

Bringing local chefs to The Farmers’ Museum for a special dinner may also be a good idea. One suggestion is to adapt the idea of an “earth dinner.” Organic Valley farms in the Cooperstown are have been organizing these dinners for the last five years. At each table, there is at least one local farmer. The meals are prepared by chefs who use locally raised farm products. The idea is to stimulate conversations between farmers and local consumers and to encourage people to eat at least one dinner a year where they know where all their food comes from.[[62]](#footnote-63) A similar event could easily be arranged at The Farmers’ Museum.

The problem with such an event is that it targets a limited audience. To reach a broader audience the museum might consider working with school children. Vermont Food Education Every Day (FEED), a collaboration between Shelburne and the Northeast Organic Farming Association of Vermont, in partnership with the National Farm to School Network: Vermont, has published *A Guide for Using Local Foods in Schools.* This may be a good resource for food services at The Farmers’ Museum because public school cafeterias routinely face some of the same problems that plague museum dining services, such as serving high volumes of food and a small profit margin. Public schools also face the problem of picky eaters.

The FEED guide encourages school cafeterias to host taste tests for students. At these taste tests, cafeterias, often with the help of students, prepare a “new” food or recipe. Students taste the food and decide whether they like or dislike it, and if they would eat it again. If the taste test is successful, the food or recipe is considered for addition to the cafeteria menu. These taste tests can be quite simple and can consist of just sliced fruit or vegetables. “Fun facts” about the food being served lets students get familiar with and accepting of the unknown food. The FEED guide also encourages students to cook or bake something with the unfamiliar ingredient in the taste test, because such a process involves students with the food in question and makes them more likely to try, and perhaps like the food.[[63]](#footnote-64) At Shelburne, one program teaches students how to make pizza using a mobile outdoor oven and unfamiliar ingredients, such as arugula. Food services at The Farmers’ Museum could adapt these programs to test local foods for its café, and it might want to invest in an oven for a similar pizza program. This would give the museum a better idea of what foods might sell well in the café and at the same time would educate visitors about foods they may have not previously enjoyed.

Visitors might also be educated about sustainable ways of dealing with waste. For instance, The Farmers’ Museum could introduce a compost program. *The Green Museum* claims that composting is one of the best green practices available, because it both reduces and recycles waste.[[64]](#footnote-65) Compost as we know it today did not exist in the 1830s, the interpretive period at The Farmers’ Museum, but fertilization with manure was a wide-spread practice. Instead of throwing out food scraps, vegetable peels were fed to the pigs and meat scraps went to the cats and dogs. The droppings of cows were turned into manure. Few materials were simply discarded because virtually everything had a use.[[65]](#footnote-66) If there is an interpretive issue, and the staff at The Farmers’ Museum do not want to use the compost on their crops, the compost can be shipped out to other locations or sold to local farmers to use on their own fields, a practice that Stone Barns uses for its excess compost.

Compost should not be hidden to show how clean The Farmers’ Museum is. It has a powerful impact on visitors to see the huge piles of compost and manure at Stone Barns. Emily Holmes, in her thesis on agricultural interpretation at The Farmers’ Museum, explains that manure decomposing is important to show in action because:

The natural cycle through which food is processed by animals and later returned to the earth to aid the growth of new food could be quite clearly illustrated if all the components were visible.[[66]](#footnote-67)

The same can be said for compost decomposing.

For composting, as well as many other green practices, it is best to start out small. Composting vegetation is fairly straightforward but when composting animal products, as well as man-made items like corn plastic, humidity and temperature need to be controlled.[[67]](#footnote-68) This is likely beyond the scope of The Farmers’ Museum.

 The Farmers’ Museum has considered starting a compost program, and Chris Fulvio thinks that the economic savings just from composting coffee grounds would make it financially worthwhile. For school groups, composting could also be a learning experience. Students could deposit organic items, such as banana peels or apple cores, into a compost at the end of lunch, and teachers could give a quick lesson on why compost is so rich in nutrients. Such a program might encourage students to go home and ask their parents to compost, or ask their school to start a composting program.

Garet Livermore, Vice President of Education at The Farmers’ Museum, supports the idea of incorporating ideas from farm-based education centers, especially from Shelburne, into the experience at The Farmers’ Museum. According to Holmes:

Simply storing a tractor next to a horse drawn wagon, especially if signs explained each of them, or holding up a modern milking machine during the daily hand-milking demonstration would make a blatant statement.[[68]](#footnote-69)

Livermore, however, is worried how introducing ideas about modern farming might interfere with the historic integrity of The Farmers’ Museum. The museum’s Village Crossroads is set in the 1830s. The crop fields and animal barns are a little looser in their historical accuracy but the tools being used are still animal powered. An area of The Farmers’ Museum that would make connections to modern-day agriculture would have to be set as far back from the crossroads as possible.

Holmes finds the children’s farmyard to be the most problematic area at The Farmers’ Museum. As a modern interpretation of agriculture, it is out of place and unrealistically clean. Despite its problems, Katie Boardman, a museum consultant, believes that it is one of the few places at The Farmers’ Museum that allows for up close discussion about lifecycles, food, and crops.

As dairying is a major presence in Otsego County, a modern agriculture interpretive area should probably focus on milking. A visitor could come to the modern interpretive area after seeing a cow being milked on the Lippitt farmstead to see how the process has changed over time. Besides demonstrating how cows are milked today, interpreters could also talk about milk safety and the problems associated with the practices of giving cows antibiotics and hormones.

Involving the community in planting crops could also be a way to interpret modern-day agriculture. Boardman, who once worked at The Farmers’ Museum, thinks that a community vegetable garden could be set up in the courtyard behind the museum’s Louis C. Jones Center. Such a garden could be used to serve local needy families, much like Phillies Bridge does by donating shares of its CSA. Participating families could learn about nutrition and growing their own food by helping to farm some of the garden plots. The Farmers’ Museum could also work with the local food bank. At Corning Painted Post Historical Society, in Corning, New York, which interprets the survival story of an upstate New York family during the Civil War, a small garden plot has been established. Painted Post has arranged for the local youth center to tend the crops, which when harvested are donated to the local food bank.[[69]](#footnote-70) By adding crop planting programs, The Farmers’ Museum could interact in a life changing way with the lives of local people.

One of the most striking aspects of the farm-based education centers I visited, especially Phillies Bridge (as it is primarily a working farm), was the overwhelming experience of coming face-to-face with acres of crops. Some spaces that could be used to give visitors a better sense of the scale of farming include a property farther up the lake that is owned by The Farmers’ Museum and has been used for growing hay.[[70]](#footnote-71)

One space at The Farmers’ Museum that does not seem to be used to its fullest potential is the forest along the path to the Seneca Log House. Many visitors do not venture up to the house because you either must climb a long flight of steps or take a bit of a hike. There is also a lack of signage. Once on the trail there is little interpretive material. The Farmers’ Museum already has an educational program for middle and high school students that uses the forested trail. According to the educational program brochure, “ . . . students will hike the special nature trails of the site and take part in hands-on activities to learn how the landscape of New York State has changed over time due to human and natural occurrences.” A few trees on the trail are tapped seasonally for maple syrup. However, this trail could also be used to show the symbiotic relationship between farms and forests, both in the past and today, through interpretive panels.

The retail shop at The Farmers’ Museum could also learn something from farm-based education centers. At Stone Barns the museum shop sells books on sustainability and organic agriculture. Better still, Shelburne sells agricultural products, such as cheese and maple syrup, which are made on farms in the surrounding area. The Farmers’ Museum does sell some locally produced jams and jellies, but the shop could sell more products like those for sale at farm-based education sites. This would be the perfect way for visitors to take items and ideas home with them that make connections to modern agriculture.

The way in which The Farmers’ Museum could most successfully integrate farm-based education into programming, and make a significant impact on its visitors, would be by creating an exhibit on what farming actually involves today. When Boardman came to The Farmers’ Museum in 1979, as an intern, she saw visitors who were part of a generation that could relate to farming on a personal level, could add their own stories, and knew what it took to farm. By the time Boardman left the institution in 2001, there were few visitors who could relate to farming or make sense of agriculture on their own. Because of this, staff at The Farmers’ Museum have had to make changes in their interpretation, answering more basic questions about how farming works. At the same time that people need to be educated about what farming is, there is also a need at The Farmers’ Museum for a central introductory exhibit in the main barn. An introductory exhibit could focus on both modern and traditional farming methods. The modern section could include a section “Better Know a Farmer,” which could consist of audio clips of oral histories from area farmers and videos of a typical farming day.[[71]](#footnote-72) For visitors who want to know more about modern farming in the Otsego County area, The Farmers’ Museum could provide a list of online and print resources.

The ideas in this chapter are just a few suggestions of how The Farmers’ Museum might integrate farm-based education into its own programming. The key is to ensure that The Farmers’ Museum continues to be relevant, that the museum makes connections to modern agricultural issues, and that all facets of the museum’s operations are committed to the ideals of a better, greener, and more sustainable future.

# Conclusion

The Farmers’ Museum stands to benefit from the ideas and practices at by farm-based education centers. Without letting the educational theories and philosophies that are the basis for these centers permeate the culture at The Farmers’ Museum, however, these programming ideas may not have the desired impact. At farm-based education centers, these philosophies permeate every program, from dining to education. The staff at these centers believe in these philosophies and have a desire to educate others about them. Luckily, an increasing number of visitors to The Farmers’ Museum share these philosophies.

These programming ideas do not have to be detrimental or change the focus of The Farmer’s Museum. To understand the rural heritage that has shaped American culture it is necessary to understand how agriculture is practiced in today, as a point of comparison. The Farmers’ Museum can capitalize on current interests in organic gardening, eating local foods, and protecting the environment to link with the past. The story of modern sustainable agriculture can fit in seamlessly with the story already being told.

It is beyond the scope of this paper, but farm-based education centers can also learn much from living history farms. These centers have been successful so far, but they need to prove their success over a longer span of time. The Farmers’ Museum has proven that its educational programs are successful, and the museum is committed to historical accuracy. Farm-based education centers could possibly adapt The Farmers’ Museum programming to integrate history into their own programming, making connections between modern sustainable agriculture and traditional farming. The Farmers’ Museum is also a respected institution with a clear mission and goals. Many farm-based education centers are young organizations that are still a bit unclear about what they want to accomplish, and these centers could learn much from a non-profit dealing with agriculture that has stood the test of time.

The Farmers’ Museum has much strength in its interpretation and programming. The suggestions put forth in this paper are proposed as ways to enhance The Farmers’ Museum’s strengths. These recommendations can also create new connections with the community. The Farmers’ Museum is an institution that strives to connect to its community, whether local or national. With new ways to form bonds with local people, such as farmers, chefs, and teachers, The Farmers’ Museum will be even more esteemed as a force for good in the community.

The intent of this paper is that the suggestions provided for The Farmers’ Museum be used to create more universal changes within the museum community. The suggestions put forth are specifically geared to The Farmer’s Museum. However, these ideas can be adapted to other living history farms and perhaps to other types of museums as well. It is important to realize that place-based, farm-based education, much like farming, varies by topography and climate. The case studies offered are just a small sampling of the many farm-based education centers. The cases discussed are all located in a temperate zone near the Mid-Atlantic coastline that has hot summers and cold, snowy winters. How a farm-based education center in California, in a climate where crops can be grown all year round, functions is different. A living history farm in California could take some ideas from farm-based education centers in the northeast but might be better served by exploring examples closer to home.

In this uncertain economic climate, The Farmers’ Museum cannot afford not to explore every avenue for program ideas. Perhaps the success of farm-based education centers is due to a commitment to experimentation; experimenting with new ways to grow food; experimenting with educational techniques; even experimenting with how to view the world. Experimentation allows these centers to be forward-thinking and dynamic.

I believe that The Farmers’ Museum should commit to the ideas of modern sustainable agriculture. There are inherent problems in how industrial agriculture is practiced today. As fewer Americans reside on farms, there is an urgency to let people know how their food is grown and raised. People have a great trust in the stories that museums tell, and by telling a story of an alternative and better way to live, The Farmers’ Museum can play a major role in shaping the future.

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