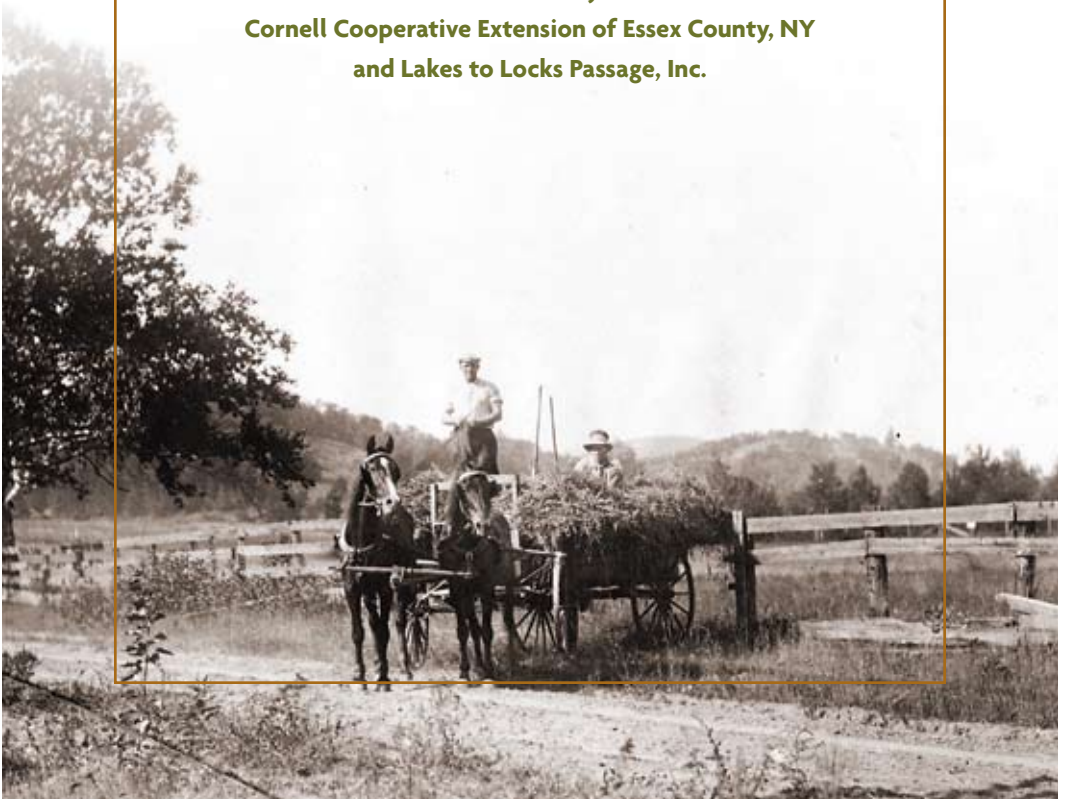


FROM FOREST TO FIELDS:

A History of Agriculture in New York's Champlain Valley

By Andrew Alberti and Anita Deming

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Foreword

*Dedicated to all the farmers
who feed our families every day.*

This book is one of the most rewarding projects of my career. We have tried to distill many years of history into a few short pages while providing useful insights into agriculture that will help residents as well as visitors learn about our rich history. It is intended to be used in combination with the *Guide to Local Farms and Food in the Historic Champlain Valley*, which will help you find our farms and hear the farmers' stories directly.

Many people have donated their expertise and time to make sure that this is an accurate and readable account. "Thank you" is just not strong enough to express my gratitude. We could not have completed the project without the vision and funding from NYS Department of Agriculture and Markets, and Cornell Cooperative Extension Association of Essex County, John Fadden, Virginia Westbrook, Margaret Gibbs, Jennifer Kuba, Paula Dennis, and Janet Kennedy who deserve special note for their extraordinary efforts.

Anita Deming
Executive Director
Cornell Cooperative Extension — Essex County



Cornell University
Cooperative Extension
Essex County

MAP KEY

1. 1812 Homestead
2. Adirondack Architectural Heritage
3. Ausable Valley Grange
4. Clinton County Historical Association
5. Cornell Cooperative Extension Clinton County
6. Cornell Cooperative Extension Essex County
7. Cornell Cooperative Extension Franklin County
8. Cornell Cooperative Extension Warren County
9. Cornell Cooperative Extension Washington County
10. Crown Point State Historic Site
11. Essex County Fairgrounds
12. Essex County Historical Society/
Adirondack History Center Museum
13. Essex County Fish Hatchery
14. Fort Ticonderoga
15. Iron Center Museum
16. John Brown Farm
17. Miner Institute
18. Penfield Homestead Museum
19. Six Nations Indian Museum
20. Skenesboro Museum
21. Uihlein Sugar Maple Field Station
22. Whallonsburg Grange
23. Wilder Homestead

For more information see pages 44–47

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Cultivators of the earth are the most valuable citizens. They are the most vigorous, the most independent, the most virtuous, & they are tied to their country & wedded to its liberty & interests by the most lasting bonds.

Thomas Jefferson: Letter to John Jay, August 23, 1785

When Thomas Jefferson conceived of an independent American nation, he believed that farmers would be the best citizens because owning the land one cultivates secures economic and political independence, a central concept in his ideal republic. While touring Lake Champlain with James Madison in 1791, Jefferson saw abundant land, fit for cultivation, and envisioned small farms in the place of the densely forested wilderness.

Geology and geography would play a decisive role in the settlement and pursuit of agriculture on the western shore of Lake Champlain. During the Ice Age, glaciers a mile thick scoured the landscape, rounding off mountains and gouging out valleys as they gradually advanced and retreated over many thousands of years. When the climate finally warmed,

melt-water filled the Champlain Valley with a glacial lake hundreds of feet above the present water level before finally finding an outlet, leaving sand at the feet of the Adirondack Mountains. Marine waters returned for a time until the earth's crust rebounded from the weight of the ice, leaving clay from the sea-bottom near the present lakeshore. These clays are naturally rich in potassium and high in lime, well-suited for raising forage crops. The sands are more acidic and lower in nutrients, best suited for raising other crops requiring better drainage such as vegetables and fruit. When the connection to the ocean was lost, it left a series of broad connected waterways that still form an inland water passage. This strategic waterway became the artery that would bring humans and agricultural life to the Champlain Valley.

The following review of farming in New York's Champlain Valley explores the evolution of agriculture as practiced by Native Americans to the modern era. Along the way, we highlight cultural resources that celebrate the region's rich agricultural heritage and the agricultural institutions that apply university-based research to its continued improvement.

The First Farmers

About 10,000 to 13,000 years ago, humans arrived in the Champlain Valley following the mammoth, elk, and mastodon, which provided food, tools, clothing, ornaments, and even shelter. As the climate warmed, these large mammals moved further north, or became extinct, forcing the Native Americans to adopt new survival techniques. They focused on hunting forest animals, gathering wild foods, and fishing. The climate eventually stabilized and the rivers' currents slowed, allowing trading networks to develop. Hunting tools, fishing equipment, and cultivation techniques came to the Champlain Valley from as far away as Mexico.

Among the goods traded to the region was corn that Natives in New England adapted for the shorter growing season in the Northeast, demon-



Pre-Contact Mohawk disembarking from dugout canoe, one man examining deer tracks, another, with gustoweh (a type of feathered hat) listening for sounds, the other two scanning the terrain as they prepare to disembark. Evergreen shoreline opposite with mountains beyond. Courtesy: John Fadden.

strating early selective breeding. It is believed that Indians in the Champlain Valley cultivated corn as part of a companion planting system that left them free to pursue their seasonal migration from winter villages to summer camps near the Lake.



Three Sisters: Corn plants on mounds with squash shading the ground and beans climbing the cornstalks. Courtesy: John Fadden.



Corn, beans, and squash, or the “Three Sisters” as Natives called them, all worked together. The corn stalk served as a pole for the beans, the beans added nitrogen to the soil for the corn, and the squash provided ground cover to help the soil retain moisture and to discourage weeds. Thus, each plant sustained its “sister.”

Beginning in 2009, the United States Mint began minting and issuing \$1 coins featuring designs celebrating the important contributions made by Indian tribes and individual Native Americans to the history and development of the United States. The first coin, pictured here, depicts a Native American woman planting seeds in a field of corn, beans and squash.

SUCCOTASH

- 3 cups fresh corn cleaned with the kernels removed then boiled (or one bag of frozen whole kernel corn)
- 2 lbs dried lima beans soaked for at least 40 minutes then boiled
- 1 whole winter squash
- 1 lb bacon
- Pepper to taste

In a Dutch oven, iron pot, or heavy soup pot, add bacon and cook until crispy, then remove from the pot. Cut the winter squash; reduce the heat, add the cooked corn, beans, bacon and pepper to the pot. Stir frequently to reduce sticking. When everything is hot, drain the excess fat and serve.

I made inquiry of the savages whether these localities were inhabited, when they told me that the Iroquois dwelt there, and that there were beautiful valleys in these places, with plains productive in grain, such as I had eaten in this country, together with many kinds of fruit without limit.”

Samuel de Champlain, July 14, 1609 *Voyages*



A fanciful early seventeenth-century depiction of Indians, from Samuel de Champlain's *Carte Geographique de la Nouvelle France* (*Geographical Map of New France*) published c. 1612. Samuel de Champlain, considered “The Father of New France,” was a French explorer, geographer, and chronicler who founded Quebec City in 1608. He spent most of his remaining life guiding the growth of French territories in North America, dying in 1635. Courtesy Wikimedia Commons.

Fish were abundant during this period, and together with wild indigenous plants and herbs, trout and salmon provided a large portion of the Native diet. In autumn, they returned to their inland village to harvest food, both cultivated and wild, which they stored for winter. They supplemented their food stock by hunting, but tradition taught them to respect nature, so they only gathered wild crops and hunted in a different quarter of their territory each year to allow for regeneration.

The Native population was small in the Champlain Valley, and seasonal villages were scattered but well organized and protected. When Europeans arrived on the shores of Lake Champlain, they identified the Natives as nomadic, and therefore uncivilized. But the truth is that

the Indian utilized food management techniques that allowed them to survive the long winters and cool climate of the Champlain Valley for almost 12,000 years without any discernible ecological impact on the land.

A mid-eighteenth-century French depiction of an Iroquois warrior, with traditional war club, tomahawk, and ceremonial pipe-tomahawk.

Courtesy: Ron Toelke.



Top left: Brown Trout. Top right: Rainbow Trout. Right: Landlocked Salmon Below: Brook Trout. Courtesy: Wikimedia Commons.





*Pre-contact Iroquois village scene showing portions of three bark longhouses, stockade, corn storage, two corn pounders, a stretched hide, an elm bark canoe, men, women and children with a forest of hardwoods beyond the stockade.
Courtesy: John Fadden.*

Fish that thrive in Adirondack streams and lakes include Rainbow Trout, Brown Trout, Brook Trout and Landlocked Salmon. Rainbow Trout is a colorful, hearty and abundant breed found near the surface in cooler lakes, deeper in warm water. Brook Trout thrive in cold clean waters; Brown Trout, known for its distinctive coloration and markings, prefer warmer temperatures and the slower moving water found in small lakes. Landlocked Salmon is a migratory species, moving between lakes and flowing rivers. Only Brook Trout and Landlocked Salmon are native to this region.

Since 1982 the Essex County Fisheries Department has been raising three species of trout — rainbow, brown, and brook. They release nearly 50,000 young fish annually, making it one of the most unique and ambitious stocking programs in the northeastern United States. Over a dozen rearing ponds, full of trout, are situated on-site for your viewing pleasure. The hatchery is open to the public year-round, 7 days a week.

13 Essex County Fish Hatchery
Creek Road (County Route 2), Crown Point, NY 12928 518-597-3844

Explorer Jacques Cartier entered the Gulf of St. Lawrence, northeast of Lake Champlain, in search of a water route through the continent, known as the Northwest Passage. Cartier was amazed when a Native woman cured Cartier and his men of scurvy with the bark from a tree they called 'Ameda' or 'Hanneda,' later classified as Black Spruce.

Visit the Six Nations Iroquois Museum in Onchiota for a closer look at Native life in the Champlain Valley. The Museum houses a myriad of pre-contact and post-contact artifacts, contemporary arts and crafts, diagrammatic charts, posters, and other items of Haudenosaunee culture. The objects within the Museum are primarily representative of the Haudenosaunee, but there are representations of other Native American cultures as well.

- 19** Six Nations Indian Museum
1462 County Route 60, Onchiota, NY 12989 518-891-2299
www.sixnationsindianmuseum.com



Detail from Claude Joseph Sauthier's A Map of the Inhabited Part of Canada: from the French Surveys with the Frontiers of New York and New England, 1777. Courtesy: Library of Congress.

European Exploration and Settlement

In the early 17th century, Samuel de Champlain established a foothold for France on the North American continent by establishing close relationships with the Natives along the St. Lawrence River Valley. With their help, he explored Lake Champlain in 1609. The French Crown wanted New France developed as an agricultural colony, and in 1627, Cardinal Richelieu, Chief Minister to King Louis XIII, introduced a land grant system known as the Seigneurial System. Under this system, a landowner divided lots in narrow strips extending back from a shoreline.

The 1743 Hocquart Seignury encompassed Fort St. Frédéric (on Crown Point) and land along the opposite shore of Lake Champlain, around present-day Chimney Point in Vermont. Here, the French established a strong military presence against British intrusion into the Champlain Valley. Some 200 households provided the French troops with wheat, vegetables, cattle, and pigs until the British drove the French from the valley in 1759.

10 Crown Point State Historic Site
739 Bridge Road, Crown Point, NY 12928
518-597-4666 www.nysparks.com



Thomas Davies' 1760 watercolor sketch of the British camps at His Majesty's Fort at Crown Point after the French retreat. Courtesy: Library of Congress.

In the wilderness of New France, soldiers found comfort by replicating familiar patterns of their cultivated French countryside and formal gardens, such as those at Versailles. At Ticonderoga, Fort Carillion had a “King’s Garden,” where a winter force of 400 French and Canadians put in an early spring garden that could supply the army with fresh vegetables from July through September. These soldiers spent more time at gardening than in warfare, producing harvests of cabbage, onion, leeks, potatoes, several kinds of beans and peas, carrots, cucumbers, radishes and lettuce, pumpkins and melons, along with horseradish, thyme, and marjoram for seasoning. The King’s Garden was restored in 2002 and is now open to visitors.

14 Fort Ticonderoga National Historic Landmark and King’s Garden
100 Fort Road PO Box 390, Ticonderoga, NY 12883
518-585-2821 www.fort-ticonderoga.org



*Reenactor Lori Fox prepares fresh produce from the Garrison Garden.
Courtesy: Fort Ticonderoga & King’s Garden.*

"They get every day a pound and a half of wheat bread. They likewise get peas, bacon, and salt meat in plenty. Sometimes they kill oxen and other cattle, the flesh of which is distributed among the soldiers. All the officers kept cows, at the expense of the King, and the milk they gave was more than sufficient to supply them."

Peter Kalm, *Journal*, Fort St. Frédéric (1748)

Once the British had taken control of the Champlain Valley, a Royal Proclamation of October 7, 1763 authorized the British colonial governors to issue grants of land to soldiers and officers who had served in the war. Among them were Colonel Philip Skene who founded Skenesboro at present-day Whitehall and William Gilliland, who established Willsboro. But most settlers were driven out of the Valley as a result of hostilities during the subsequent American Revolution. When peace finally returned, new arrivals came to settle the region's dense forests. They immediately set to work clearing land for cultivation. The War of 1812 actually stimulated migration to the region as soldiers returning from the battles along Lake Champlain created "New York Fever," encouraging migration of families from New England to this valley.



"A Good Chance," *American Hunting Scenes*, chromolithograph by Currier & Ives, 1863. Courtesy: Library of Congress.

“We had heard that Ti [Ticonderoga] was a Paradise... [but] when we got there it was all bushes. The land was densely timbered. We had one cow and a yoke of cattle ... On the 15th of April come snow breast deep and there we were. It was a terrible storm,—you could walk over the fences, and we gathered sap on snowshoes. We all went to cutting logs and when we got four walls locked together, half a roof and the chamber floor, we moved in. When we wanted groceries we had to cross the lake to J. Catlin’s for them, but oftener went without them. I remember going once to a mill and dusting up flour from behind the bolt that had worms in it, picking them out, and so making bread... When we wanted fish, all we had to do was to run down to the brook... you could have no sheep, the wolves would tear you right down ... The animals we feared most were bears, wolves, catamounts, and rattlesnakes.”

Recollection of Mrs Adolphus Sheldon, 1797,
in Flavius Cook’s *Sketches of Essex County*



Clearing up a Field by Rowland Evans Robinson from the *American Agriculturist* (1850). Used with permission from the Rokeby Museum.

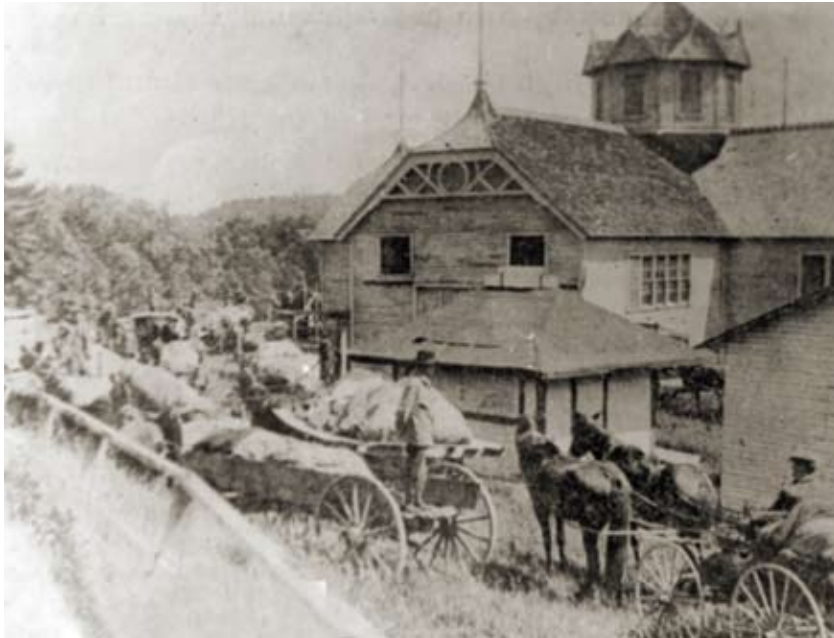
The Indians taught European settlers how to tap maple trees for their sap, which once boiled down to syrup, or even further to granular sugar consistency, is an intense sweetener with a unique flavor. As the winter eases its grip to allow for warm days and cold nights, the alternating freezing and thawing makes the sap flow. In many a “sugar bush” the traditional sap buckets have been replaced by pipelines that empty into a collection tank, but maple traditions are still strong throughout the North Country.

Pure maple syrup contains calcium, zinc, antioxidants, riboflavin and niacin, and can be used in a variety of desserts and baked goods as well as complementing sour or salty ingredients in salad dressings, glazes for meat, poultry and fish, and sauces. Try substituting maple syrup for granulated sugar in recipes: For 1 cup of granulated sugar, use $\frac{3}{4}$ to 1 cup of maple syrup, to taste. In baking, reduce the liquid by 2 to 4 tablespoons per cup of maple syrup used, add $\frac{1}{4}$ tsp baking soda and reduce the oven temperature by 25 degrees.



Buckets collecting maple sap in a sugar bush. Courtesy: Cornell Cooperative Extension.

Young immigrant families established the same kind of diversified farms their fathers and mothers had worked back home. Maple sugar, apple vinegar and cider, charcoal for the scattered iron furnaces, and lime for mortar provided money to supplement traditional crops of wheat, oats, corn, and potatoes. They would only export foods, such as butter, meat, and flour that could provide a profit beyond production and transportation costs. Potash, used to make lye and gun powder, was produced from the ashes of trees burned to clear the land; this first cash crop provided the little bit of capital farmers needed to endure the long winters after each short growing season. By the beginning of the 19th century, the wilderness took on a new appearance as fields replaced the forest, and scattered villages clustered about the waterfalls that powered sawmills, gristmills, and ironworks.



*An Essex County Wool Sale at Floral Hall on the Essex County Fairgrounds.
Courtesy: Penfield Homestead Museum, Historic Ironville, Crown Point, New York.*

The 1812 Homestead Farm & Museum in Willsboro, originally constructed as an inn, now operates as a Museum of Living History. Here you can observe hearth cooking, blacksmithing, gardening, and wool spinning; and can have a “hands-on” perspective of daily life on a farm in the early 1800s with the opportunity to make cedar shingles, cedar split-rail fences and homemade dipped candles.

1 1812 Homestead Farm & Museum
112 Reber Rd. North, Willsboro, NY 12996 518-963-4071
http://www.pokomac.com/Year-Round_Events/1812_Homestead.htm



The Agricultural Revolution

The first significant change in the agriculture of the Champlain Valley came from the Embargo Act of 1807, which restricted trade with Britain and its colonies, including Canada. Lumbermen cleared the forest and destroyed the wolf population, allowing Valley farms to raise sheep and support American production of the expensive woolens previously imported from Britain. Newly imported Spanish Merino sheep proved ideal for the Champlain Valley as they could graze on the rocky and sandy higher ground that could not support crops. Some of America’s most famous breeding ewes came from the Champlain Valley and were exported to produce flocks as far away as Australia.

In 1807, Elkanah Watson, merchant and early promoter of the Champlain Canal, began raising Merinos and promoting better agricultural practices. Watson invested his own funds to encourage American diplomats in foreign countries to send new seeds, improved farm tools, and the best livestock to the United States. In 1809, Watson organized the first cattle show, which soon became an annual affair. The organizers awarded prizes for cattle, and domestic goods to encourage improvements in agricultural products through competition. Gradually, county fairs emerged to showcase social, political, educational exhibits, along with recreational activities. Inspired by Watson, New York State began providing funding for county agricultural societies in 1819, extending social and educational interaction of farmers throughout the year. Watson and his family moved to Port Kent in 1828 where he continued his work promoting better agricultural practices.

After the War of 1812, Valley trade began to reorient itself toward domestic markets encouraged by an increased tariff on international trade. With the completion of the Champlain Canal in 1823, farmers could quickly and inexpensively ship apples, potatoes, timber, wool, and

Shortly after the Revolutionary War, Morgan horses, America's first breed of horse, supported the farms of upstate New York as the original "sport utility vehicle." A single Morgan horse was able to clear rocky hillsides, plow fields, pull the family wagon to church in style, and win impromptu road races both under saddle and in harness. In the middle of the 19th century one Morgan in Ticonderoga, named for Ethan Allen, was the talk of nearly every tavern and dining table across America, as he put Ticonderoga on the map for siring fast-trotting Morgans. In fact, well-known horsemen of the day claimed that no other town of its size bred and raised as many horses of superior blood and value as Ticonderoga.

Bred by Joel Holcomb, a local hotel owner and stage driver, Ethan Allen won his first race as a three-year-old at the 1852 Clinton County Fair. By the age of four, Ethan Allen's promoters claimed him to be the fastest trotting stallion in the world. His fame lasted for a long time — even at 18 years of age, he set a record in a match race, considered the crowning event of his life. The ground-covering trot of the Morgan horse drew huge crowds



Extractive industries, such as the Bay State Furnace pictured here, aided considerably in the growth of communities along Lake Champlain. Courtesy Town of Moriah Historical Society Collection.

pot and pearl ash to major American cities such as Boston, New York, and Philadelphia. Soon port towns with deep harbors and calm waters at Rouses Point, Plattsburgh, Port Henry, and Whitehall dominated commerce on the Lake.

to America's early race tracks, as racing became the focal point and principal form of entertainment at county fairgrounds across America. Although no longer dominated by Morgan horses, harness racing is still a key feature of the Essex and Clinton County Fairs.

11 Essex County Fairgrounds
RT 9N (Main Street), Westport, NY www.essexcountyfair.org



Horse race between Ethan Allen and George F. Patten. Courtesy: National Museum of the Morgan Horse, Shelburne, VT.

While John Brown's 1859 anti-slavery raid of Harper's Ferry earned him national notoriety as a militant abolitionist, few recall that "John Brown's Body" actually came to rest on his humble farm just outside Lake Placid. In his early years, Brown traveled throughout the northeast and even to Europe, examining sheep and learning about the wool industry in an effort to raise funds to fight slavery.

During his travels, Brown met Gerritt Smith of central New York, who planned to give parcels of his Adirondack land to black farmers who had to own land in order to gain the right to vote in New York State. Brown was captivated with the idea of joining the efforts of the black freemen, and in 1849 moved his family to the Adirondacks to help the new community. His farm is now a New York State Historic Site.

16 John Brown Farm State Historic Site
115 John Brown Road, Lake Placid, NY 12946 518-523-3900
www.nysparks.state.ny.us/historic-sites/29/details.aspx



Seneca Ray Stoddard's 1896 stereo view of John Brown's grave and big rock at the John Brown Farm State Historic Site. Courtesy: Library of Congress.



Farmers of the late 19th century were true innovators, as they adopted machinery to fit their needs in the field. Courtesy: Essex County Historical Society/ Adirondack History Center Museum.

In 1832, a small group of farmers met in Albany to organize the New York State Agricultural Society as a guiding voice for state agricultural policy, and to educate farmers on improved agricultural practices. Local, county, and state societies supported agricultural experimentation and published journals and newspapers to disseminate advances in cultivation methods, breeding of improved crop varieties and herds, and use of fertilizers, pesticides, and irrigation.

By the 1840s, sheep farmers in the East were being put out of business by Western woolgrowers. But as the Union prepared for war, limiting trade across the Mason Dixon line, agricultural production in the Champlain Valley expanded once again. During the Civil War years, with a decreased supply of labor, the industry adopted new labor-saving



Champlain Valley sheep were shorn by hand, wool production peaked in 1840. Courtesy: Essex County Historical Society/ Adirondack History Center Museum.



Crown Point Creamery, about 1900. Courtesy: Penfield Homestead Museum, Historic Ironville, Crown Point, New York.

machines such as the steel plow with interchangeable parts, the reaper and corn picker. These innovations made farming more productive, and farmers discovered they could feed the Union troops and still export to Europe. Farmers now had the capital to invest in the burgeoning dairy industry.

When Americans learned the high price wealthy British landowners were paying for full-blooded cows, they began importing cattle from the best herds in Europe. In 1861, Gerrit S. Miller of Peterboro, NY imported three cows and one bull as the first step towards what became a thriving Holstein cow industry in New York. This breed of black and white dairy cow, originating in the Netherlands, has been bred into the world's highest producing dairy animal.

With an increase in dairy yields, farmers shifted from commodities to products. The first creamery factory opened in Essex County in 1864. The extension of a rail line from the Hudson Valley to the west shore of Lake Champlain, and on to Montreal, allowed easy transport of dairy products. Soon nearly every Lake Champlain village had a creamery linked by a spur to the main rail line. Farm wagons loaded with milk cans assembled at the creamery early in the morning, and "creamery butter" would soon roll away to city markets. During the second half of the 19th century,

“We propose meeting together, talking together, working together, buying together, selling together, and, in general, acting together for our mutual protection and advancement, as occasion may require.”

Declaration of Purposes of the National Grange (1874)

After the Civil War, farmers came together to organize the “Patrons of Husbandry,” also known as the National Grange. This non-partisan fraternal organization supported family farms by organizing cooperatives to eliminate “middlemen” (such as the railroad industry and grain warehouses). The “Grange Movement” put national and international markets within reach of small farms. The local and state Grange gained significant political power in the second half of the 19th century, and their common stance against the railroad “robber-barons” caused a boom in membership. In the early 20th century, the

Grange gained traction in the Champlain Valley, establishing centers in Wadhams, Whallonsburg, Whitehall, and Keeseville.



The Gift of the Grangers
Courtesy:
Wikimedia
Commons.



Heart's Delight 1918 promotional calendar. Courtesy: William H. Miner Agricultural Research Institute.

the Federal government issued more than a hundred patents for milking devices; the first milking machine in 1870 expanded the “milk shed” of eastern cities. Cows and hayfields soon filled the landscape.

By the late 19th century extractive industries such as lumbering and mining aided in the prosperity of the region. But the depletion of woodlands reduced the soil's ability to retain water, hastened topsoil erosion, and led to severe flooding. The New York State Legislature took proactive measures to stem the tide of environmental degradation by setting aside large tracts of State land as Forest Preserve and established the Adirondack Park in 1892. During the “Progressive Era” in the early 20th century, William and Alice Miner of Chazy, NY responded to the idealism of the time by creating Heart's Delight Farm as their vision of a farmer's utopia. Utilizing the most advanced scientific principles of the day, the Miner farm specialized in dairy and equine management because of their importance to the region.

Visitors to Heart's Delight Farm can learn the history of the farm from the Heritage Exhibit and Wayside Walk. The family homestead grew from a farmhouse and a couple of barns on 144 acres in 1903, into a model farm of 300 structures on 15,000 acres employing 800 workers. A private hydroelectric plant powered the latest equipment. The best hotels and restaurants in New York City and Chicago bought ham, sausages, eggs, and other produce from the farm. Miner provided for education to continue at Heart's Delight Farm in his will; the William H. Miner Agricultural Research Institute in Chazy now encompasses a library, laboratories and housing for students in dairy and equine studies from SUNY Plattsburgh and University of Vermont.

17 William H. Miner Agricultural Research Institute
Heart's Delight Farm Heritage Exhibit
1034 Miner Farm Road, PO Box 90, Chazy, New York 12921
518-846-7121, ext. 149
www.whminer.com



Heart's Delight Farm, 1909. Courtesy: William H. Miner Agricultural Research Institute.

Farmers have been regarded with good-natured tolerance by city dwellers as being merely an incident in national life ... But ... our fields must be tilled, our cows must be milked [along with] many other details relating to food production... whereby the world's population may be fed.

Heart's Delight Farm Book (1915)

The idea of using research-based knowledge to improve farm life became a national priority when Congress passed the Morrill Act in 1862. Congress granted federal lands to the states to establish “land grant” colleges focused on teaching agriculture, engineering, and science. One of the first Land Grant colleges, Cornell, has overseen Cooperative Extension services in the region since the program was started. During Franklin Roosevelt’s first hundred days in 1933, he extended the program to combat decades of destructive farming without crop rotation, fallow fields, cover crops or other techniques to prevent soil erosion.

Early researchers at experiment stations of the land-grant college system and USDA saw that adults in the farming community did not readily accept new agricultural discoveries. But, educators found that youth



*Youth education is vital to the mission of Cornell Cooperative Extension.
Courtesy Cornell Cooperative Extension.*



would “experiment” with these new ideas and then share their experiences and successes with their parents. When Congress created the Cooperative Extension, it included boys’ and girls’ club work, which soon became known as 4-H clubs — Head, Heart, Health, and Hands — for practical and “hands-on” learning connected to rural life. In the 1950s 4-H began to extend into urban areas with a focus on the personal growth. In New York, the Cornell Cooperative Extension supports the 4-H program, and the club activities are proudly displayed each year at the County Fairs.

I pledge my Head to clearer thinking, my Heart to greater loyalty, my Health to better living and Hands to larger service for my club, my community, my country and my world.

4-H Club Pledge

Seaman Asahel Knapp (1831–1911) came from Schroon Lake, NY and graduated from Union College. Following a career as physician, college instructor, and, later, administrator, he took up farming late in life. Knapp embraced demonstration as a teaching method. In a campaign against the boll weevil in Louisiana, he provided incentives for farmers to settle in each township provided each participant, in turn, would demonstrate to other farmers what could be done by adopting improved farming methods. By 1902, Knapp was employed by the government to promote good agricultural practices in the South. He is considered to be the nation’s first Cooperative Extension agent. The Cornell Cooperative Extension (building pictured above) continues to serve the region’s farmers helping to create strong and vibrant communities.



6 Cornell Cooperative Extension — Essex County
3 Sisco St. PO Box 388, Westport, NY 12993
518-962-4810 www.cce.cornell.edu/essex/

Farming in the Modern Era

The population boom that followed the Second World War drastically increased the demand for food in the United States. Agricultural scientists responded by increasing crop yields through improved agricultural and genetic technology, nicknamed “The Green Revolution.” This brought improved irrigation, pesticides, chemical fertilizers, and hybridized crop varieties into widespread use, providing increased yields on less acreage.

Despite the change of the seasons, today’s consumer expects fresh produce in the supermarket year-round. In the North Country, some farmers use film mulches, drip irrigation, row covers, low and high tunnels (or “hoop-houses”) to extend the growing season for crops. Other farmers choose to grow staple crops that are well suited to the Adirondack climate, such as corn, soybeans, and hay.

Today, careful management is necessary to maintain the quality of our food and environment. Farmers use a process called Integrated Pest Manage-



Environmentally friendly, ultra-low volume experimental herbicide application methods developed by ARS plant physiologist Chester McWhorter (now retired) and colleagues could significantly reduce the use of agricultural chemicals. Courtesy: Keith Weller.



These Holstein cows are bred to “freshen” every 12 to 14 months, lactating for about 10 months, then “dried off” before having another calf and starting the process again. Courtesy: Kristine Leerkes of the Leerkes Farm in Ticonderoga

ment (IPM), in which they set out traps and count insects before they use pesticides. All commercial pesticide users are required to be licensed by the New York State Department of Environmental Conservation to ensure that they are capable and well trained.

Birdsfoot trefoil is a high-protein forage that grows well in the valley’s heavy clay soils. With the August morning fog, the seed pods remain hydrated so farmers can harvest the seed before pods burst open. In 1939, Champlain Valley farmers began growing Birdsfoot trefoil seed as a cash crop. After World War II, the Sherman family of Westport organized a seed cooperative of more than one hundred farms to grade, package, and market seed. After the cooperative went out of business in the 1970’s the site became an organic flour mill, Champlain Valley Milling, which is still in operation today.

First introduced by Jesuits preaching in the Champlain Valley nearly three centuries ago, apples became a staple crop of the region. Pioneers usually brought a bag of apple seeds from their New England homes along with their belongings, and the young orchards were among the earliest improvements on the land. In recent years, orchardists have adopted a new method of propagating fruit trees by grafting. A disease resistant rootstock is grafted onto a dwarf trunk, which is then grafted onto the variety of apple that is preferred for eating. These grafted trees are easier to pick and require less pesticide. Today, our most popular varieties are Honey Crisp, McIntosh and Empire apples.

The Century Farm Program began in 1937 to honor New York Farms in continuous operation on the same land by the same family for 100 years or more. Gunnison Orchards, in Crown Point, N.Y., is a 6th-generation Century Farm enterprise, the original farm having been started in 1826. Albert Gunnison planted the first orchard on the site about 1900, but it was not until his son entered the business that the orchard began its commercial success. Hugh Gunnison, Albert's grandson, joined the firm in 1958, and in time added additional acres, cold storage, and a packing house. Today, Gunnison welcomes visitors to their shop on Route 9N in Crown Point, with Adirondack apparel, fresh baked goods, and of course, apples.

Gunnison Orchards

Route 9N & 22N, Crown Point, NY 12928 518-597-9222



Apples, such as the McIntosh pictured here, remain a staple crop in the Champlain Valley. Courtesy: Cornell Cooperative Extension.

Today, milk is the primary agricultural product in the Champlain Valley, due to the availability of forage and proximity of markets. Since 1950, advances in the dairy industry have increased annual milk production from 650 gallons to 2,100 gallons per cow. With almost 20,000 cows in the region producing 42 million gallons a year, there is enough milk, yogurt, butter, cheese and ice cream for over half a million people.

Once a farm reaches 200 milking cows, a Comprehensive Nutrient Management plan must be developed to reduce potential pollution from the farm into lakes or streams. These nutrient management plans call for testing the soil, livestock rations, crop yields, and the nutrients from manure to design a fertilizer plan that minimizes purchased nutrients from off the



Traditional pruning of standard McIntosh apple tree. Courtesy: Cornell Cooperative Extension.

farm. To reduce the farm's potential impact on water quality, many farmers store manure in a liquid form. This "slurry" is spread onto the fields and quickly incorporated into the soil, adding nutrients while reducing phosphorus runoff and reducing the need to purchase fertilizer.

There are several experimental farms in the Champlain Valley whose mission is to help farmers learn new production methods and increase profit, while protecting the environment. These include the Miner Institute in Chazy, the Cornell Uihlein Maple and Potato Research Stations in Lake



Wheat grown at the Cornell Willsboro Research Station is certified organic and goes to Champlain Valley Milling. Courtesy: Anita Deming.

The Cornell Uihlein Maple Field Station's 200+ acres of forest near Lake Placid provides an outdoor laboratory for the study of forest health and management. The station's greenhouse and orchards form the core of the research initiative to identify and cultivate genetically improved maple stock. State-of-the-art vacuum tubing and processing equipment enable researchers to develop improved techniques for sap collection and syrup processing. Results of the research projects are shared with maple producers and scientists in professional journals and farm magazines, as well as trainings and presentations at the Field Station and the Cornell Sugar Maple Website. The Field Station's sugar bush of approximately 4,000 taps, has shown increasing annual production, demonstrating the merits of new technology and proper forest stewardship. Proceeds from the sales of Uihlein maple products help support the research and extension efforts.

21 Uihlein Sugar Maple Research & Extension Field Station
157 Bear Cub Lane, Lake Placid, NY 12946 518-523-9337
www.maple.dnr.cornell.edu/uihleiu/uihleiu.htm



The sugar house at Uihlein. Courtesy: Michael Farrell.

Placid, and the Cornell Research Farm in Willsboro. Cornell Cooperative Extension offers classes and demonstrations around the region where farmers learn the most up-to-date management practices. Funding and advice from the United States Department of Agriculture Department of Natural Resource Conservation Service and County Soil and Water Conservation Districts help farmers implement best management practices. They design and cost-share the construction of water quality protection structures.

To manage their greater yields more efficiently, farmers have needed to invest in newer and increasingly expensive machines. Innovations in trans-

portation and refrigeration have increased quality and competition in the marketplace. Consequently, many small farms have been incorporated into larger farms or abandoned altogether, leaving only the rock walls that once served as boundary fences hidden in the returning woods.

Although the larger present-day farms remain family-owned and operated, many have adopted a corporate structure to protect their family's assets. By identifying a specialized market, today's producers can reduce costs and increase efficiency. Most farmers have a sophisticated business plan to help them focus on their priorities, prepare for market fluctuations, and maintain a sustainable business by making strategic investments in technology and infrastructure.

There has also been a growth in small direct-market farms in the Champlain Valley. These local farmers often choose to sell their produce through retail markets such as a farm stand or farmers' markets. By creating their own outlets for raw products, farmers can increase profitability. With the recent trend toward "buying local," growing numbers of direct-market farmers now have a strong regional identity as part of "Adirondack Harvest," which connects local farmers to their communities and regional markets. Be sure to visit www.adirondackharvest.com to find farm fresh local food in Northern New York counties, a listing of all of the farmers markets, as well as restaurants and stores that specialize in providing farm fresh cuisine.



South Meadow Farms is just one of the many farm stands found in the Champlain Valley Local Food Guide. Courtesy Tony Corwin.

Agriculture Features

Early Barn

Barns built by the French and English settlers during the post-Revolutionary War period can still be seen throughout the Champlain Valley. These simple rectangular buildings were constructed with hand hewn timber frames, most often with center-bay doors on their eaves sides. The “Yankee” barns moved the entrance to the gable end, making it easier to expand the barn with additional bays. These early subsistence-farm barns provided the space for threshing grains, storing dry hay and stabling the family’s cow, sheep, and oxen.



Early barns. Courtesy Paula Dennis.

Bank Barn

Bank Barns were built into the slope of a hillside with fieldstones creating the foundation and walls. The lower level had its own entrance for livestock and convenient removal of manure, the upper level stored feed and farm equipment. As agricultural technology and design innovations allowed for increased herd sizes, these barns became larger and included ventilators, cupolas and high-drives.



At top: Bank Barn; below: Gambrel Roof Barn Courtesy: Anita Deming



Gambrel Roof Barn

By the early 1900s changes in government regulations and animal handling practices for dairy operations led to concrete-floored stanchions on the ground level. The gambrel, or hipped, roof increased the space available for storage of dry hay. The barns were often long and flanked by milk houses and upright silos. Most roof gables extended several feet to accommodate a pulley for hoisting hay into the loft.

Modern Freestall Dairy Barns

The modern dairy barn is laid out in long rows with feed mangers in one row and sand bedded stalls along the outer walls. Called “freestall” barns because the cow can choose her favorite stall, they are designed for efficient management of large herds with the primary purpose of keeping cows comfortable. High ceilings and open walls improve air quality and circulation. Many farms utilize computer technology to recognize an individual cow at feeding time, and provide the appropriate feed concentrate to maximize milk production.



*Freestall dairy barns at the William H. Miner Agricultural Research Institute.
Courtesy: Anita Deming.*



Modern Milking parlors allow farmers to stand in a lower level and still access the cow's udder, saving wear and tear on the farmer's knees and back. Courtesy: Anita Deming.

Forage

Grazing livestock consume plant leaves and stems as forage found in pasture, hay or silage. Many farmers practice rotational grazing to maximize pasture quality. For winter feeding, most commercial dairy farms will either store hay in large round bales or chop it for silage. Corn or grass silage is easier to produce and store because it gets chopped and stored where it ferments. Just like in brewing beer, the sugar in the hay or corn can turn into alcohol, causing it to become pickled or preserved. Because silage contains higher moisture content, it can be made in one day instead of the three days it takes to cure and dry hay. Ruminant animals, such as dairy cattle, can handle large quantities roughage and do quite well on fermented feeds such as silage. However, animals with simple stomachs that cannot release gas,

like horses, do not tolerate dust, mold, or fermented feeds.



Bunker silos are filled and packed using tractors with loaders, then covered with a plastic tarp to make it airtight. Courtesy: Anita Deming.



Farm evolution shows gambrel and freestall barn with upright metal silos. Courtesy: Anita Deming.



Properly cured and stored “kicker-baled” hay is labor intensive and can be a challenge to produce with the fickle summertime weather conditions. Courtesy: Janet Kennedy .

Grain Production

Some Champlain Valley farmers produce organic grains that are ground into flour at Champlain Valley Milling in Westport. Although some farmers produce grain for their livestock, most large dairy farms buy commodity grain in bulk and store it in bins to be mixed with the forages to create a balanced ration for their animals.



Left: Commodity bins; right: Grain bins. Courtesy: Anita Deming.

Fences

Once man domesticated animals, they wanted to keep them close by and safe. At first, they split locust trees to build rail fences that did not require setting posts into the rocky soil. Later, rock walls were made from field-stone; many of those walls are now found along the hillsides that have been reclaimed by the forest. By the late 1800s barbed wire was developed to constrain cattle in the West, and can be seen in the Champlain Valley as a single strand atop stone walls, or in multiple strands attached to fence posts. Currently, most farmers use electrified high tensile fencing to keep domesticated animals on the farm, and wild animals out of the farm.



Snake-rail fence made from split wooden rails. Courtesy: Anita Deming.



Typical stone wall, note how the forest is reclaiming the farm field. Courtesy: Virginia Westbrook.

Sites and Attractions

Refer to the map on pages 4–5 for site locations, or refer to the indicated page for additional information.

- 1** **1812 Homestead Museum** www.pokomac.com/Year-Round_Events/1812_Homestead/1812_homestead.htm. The 1812 Homestead Farm & Museum in Willsboro, originally constructed as an inn, now operates as a Museum of Living History. Here you can observe hearth cooking, blacksmithing, gardening, and wool spinning; and can have a “hands-on” perspective of daily life on a farm in the early 1800’s with the opportunity to make cedar shingles, cedar split-rail fences and homemade dipped candles. (See page 21)
- 2** **Adirondack Architectural Heritage** www.aarch.org. AARCH promotes public understanding, appreciation and stewardship of Adirondack structures and settlements including farmsteads, “Great Camps,” public buildings and transportation infrastructure.
- 3** **AuSable Valley Grange** www.avgrange.org. The Ausable Valley Grange strives to provide a variety of activities for its membership and the general public that celebrate and explore rural community life (See page 27).
- 4** **Clinton County Historical Association** www.clintoncountyhistorical.org. The county exhibit interprets the area’s history from the earliest recorded times (1600) to the present day through its collections of paintings, maps, furniture and decorative arts. Special exhibits are regularly presented on North Country themes, including iron mining and other 19th-century industries. Collections feature Redford Glass, Staffordshire china, portraiture, photographs and textiles.
- 5–9** **Cornell Cooperative Extension** <http://cce.cornell.edu/essex/> Cornell Cooperative Extension is a key outreach system of Cornell University with a strong public mission and an extensive local presence that is responsive to needs in New York communities. Today, Cooperative Extension offers programs in five broad areas: Agriculture & Food Systems; Children, Youth, & Families; Community & Economic Vitality; Environment & Natural Resources; and Nutrition & Health. Additional Cornell Cooperative Extension web links:

www.cce.cornell.edu/essex/
www.cce.cornell.edu/clinton/
www.cce.cornell.edu/franklin/
www.cce.cornell.edu/warren/
www.cce.cornell.edu/washington/

(see page 31)
- 10** **Crown Point State Historic Site** <http://nysparks.state.ny.us/historic-sites/>. Prior to the Seven Years War, Crown Point was the only permanent settlement on Lake Champlain. Both British and French troops used this fort on Crown Point to secure control of the waterway. Today, guests can see the ruins of the original 18th-century structures, and view exhibits in the museum that interpret the French, British, and American chapters of Crown Point’s history. (See page 15)
- 11** **Essex County Fair** www.essexcountyfair.org. The first Essex County-Clinton County Fair was organized by Elkanah Watson in 1848. The Fair moved to Westport in 1865, where a number of buildings were erected, many of which still play a vital role in the festivities. The Essex County Fair is a yearly tradition, held each August, that brings together agricultural expositions, food, and entertainment (See pages 22–23).

- 12** **Essex County Historical Society/Adirondack History Center Museum www.adkhistorycenter.org**. The Adirondack History Center Museum collects and displays artifacts from over two centuries of life in Essex County and the central Adirondacks. Adjacent to the museum, the Colonial Garden features many varieties of flowers, native plants, trees and shrubs in a formal setting patterned after the gardens of Hampton Court, England and Colonial Williamsburg.
- 13** **Essex County Fish Hatchery www.lakeplacid.com/flash/whattodo/z-fishing.htm**. The Essex County Fish Hatchery in Crown Point is open to the public and over a dozen rearing ponds, full of trout, are situated on-site for your viewing pleasure. Our well-manicured grounds offer a pleasant setting for a family outing or picnic, and educational tours for special school or community groups can be arranged by contacting us directly. (See page 13)
- 14** **Fort Ticonderoga National Historic Landmark www.fort-ticonderoga.org**. Fort Ticonderoga is home to the King's Garden, originally constructed to feed French troops on their seasonal campaigns against the British. The King's Garden was restored in 2002 and is now open to visitors. (See page 16)
- 15** **Iron Center Museum/ Town of Moriah Historical Society www.townofmoriah.com/mhs.html**. After the Treaty of 1763, soldiers were given land by King George for their service in the French and Indian War. Iron ore was discovered, lumber & grist mills sprang up, farms started, furnaces were built, and the shipping of ore started, first by water and then by railroad. The Historical Society collects, preserves and exhibits old photos, historical information, and items that have significance to the Community's history.
- 16** **John Brown Farm <http://nysparks.state.ny.us/historic-sites/29/details.aspx>**. In 1849, abolitionist John Brown moved his family to North Elba, NY in an effort to give parcels of Gerritt Smith's Adirondack land to black farmers who had to own land in order to gain the right to vote in New York State. After Brown's execution, his body was returned to the humble farm outside Lake Placid. Today the home and grave of John Brown operates as a historic site and museum commemorating both the militant abolitionist and farmer, John Brown. (See page 24)
- 17** **Miner Institute and Heart's Delight Heritage Exhibit www.whminer.com**. Miner set up his vision of a farmer's utopia, based on the most advanced scientific principles of his day, specializing in dairy and equine management because of its importance to the region. Visitors to Heart's Delight Farm can learn the history of the farm from the Heritage Exhibit and Wayside Walk. (See page. 29)
- 18** **Penfield Homestead Museum www.penfieldmuseum.org**. The Penfield Foundation preserves and protects the historic landscape, hamlet and homestead associated with the early nineteenth-century ironworking history of Ironville, New York, and teaches visitors and town residents the social, industrial, and agricultural history of Crown Point and the Penfield family through exhibits, tours and special events. The museum's collection includes buildings, artifacts and an archive of documents, photographs and books related to local history.
- 19** **Six Nations Indian Museum www.sixnationsindianmuseum.com**. The Six Nations Indian Museum provides for the viewing of 3000-plus artifacts with an emphasis on the culture of the Six Nations of the Iroquois Confederacy (Haudenosaunee). The museum features storytelling lectures, and the gift shop carries Mohawk baskets, beadwork, books, t-shirts, silver jewelry, and acrylic paintings that reflect Six Nations culture. (See page 14)

- 20 Skenesboro Museum** Whitehall's Main St. is on the National Register of Historic Places, and the Museum reflects the rich history of the town. Collections include toys, tools, railroad and canal memorabilia, and Revolutionary War artifacts. This canal front development includes lengthy new seawalls with boat utilities, large park, watercraft launch, and general recreation area — a beautiful addition to a graceful 19th century waterfront town.
- 21 Uihlein Sugar Maple Research & Extension Field Station** <http://maple.dnr.cornell.edu/Uihlein/uihlein.htm> The Uihlein Field Station's 200+ acres of forest provide an outdoor laboratory for the study of forest management and health. Its greenhouse and orchards are at the core of a northeast regional research initiative to identify and cultivate genetically improved maple stock. Tours of the Uihlein facility are available anytime of the year, but the best time to observe our production of maple syrup and related research is from late February to early April. (See page 36)
- 22 Whallonsburg Grange** The historic home of Whallonsburgh Patrons of Husbandry #954 since 1903, the Grange Hall has been restored and reclaimed as a community center for square dancing, theatre, music, indoor farmers' market and educational events.
- 23 Wilder Homestead** www.almanzowilderfarm.com. The Wilder Homestead was the home of James Wilder and his family, including Almanzo Wilder, born February 13, 1857. His boyhood here would become the story of *Farmer Boy*, the second in the series of *Little House* books written by his wife, Laura Ingalls Wilder. The Almanzo & Laura Ingalls Wilder Association is committed to preservation of the site and education not only about the Wilders in specific, but about New York state rural life in mid-nineteenth century in general.

Additional Resources

- Adirondack Life: Lake Champlain: An Illustrated History
- Bartlett Sylvester: Historical Sketches of Northern New York and the Adirondack Wilderness
- Cook, Flavius: Sketches of Essex County
- Champlain, Samuel de: The Works of Samuel de Champlain (Champlain Society)
- Champlain Valley Heritage Network: Fields at Work: Working Landscapes of the Champlain Valley
- Cunnion, Don: Essex County Agriculture: A Brief History
- Emmons, Ebenezer: Agriculture of New York: Comprising an Account of the Classification, Composition and Distribution of the Soils and Rocks, and the Natural Waters of the Different Geological Formations; Together with a Condensed View of the Climate and the Agricultural Productions of the State
- Glenn, Morris F. and LaForest, Shirley: Whallonsburg, NY: Agricultural Heritage Area
- Hedrick, U. P.: A History of Agriculture in the State of New York
- Kalm, Peter: Travels Into North America
- Maguire, J. Robert ed.: The Tour to the Northern Lakes of James Madison & Thomas Jefferson, May–June 1791
- Waston, Winslow: A General View and Agricultural Survey of the County of Essex

- Watson, Winslow C.: Pioneer History of the Champlain Valley
- Weiner, Michael A: Earth Medicine — Earth Foods, Plant Remedies, Drugs, and Natural Foods of the North American Indians, NY
- Winslow, Mike: Lake Champlain: A Natural History
- Adirondack Harvest **www.adirondackharvest.com**. With the recent trend toward buying local, we have a growing population of direct market farmers and a strong regional marketing identity called Adirondack Harvest. If you would like to locate local food and producers find a copy of the Farm Fresh Food Guide or visit the above website.
- County Soil and Water Conservation District **www.nys-soilandwater.org**. The county Soil and Water Conservation District works with USDA NRCS to develop and oversee implementation of an effective soil and water conservation and agricultural non-point source water quality programs in each county.
- **www.firstpeople.us**. This is a child friendly, educational site about American Indians and members of the First Nations. It contains Native American legends, Native Art Work, American Indian articles and treaties/agreements, poems and prayers, and words of wisdom.
- Lakes to Locks Passage **www.lakestolocks.org**. Lakes to Locks Passage guides the traveler through the interconnected waterway of the Upper Hudson River, Champlain Canal, Lake George, Lake Champlain, Richelieu River and Chambly Canal. Suggested itineraries and short videos tell more stories about the agricultural heritage.
- New York State Agricultural Society **www.nysagsociety.org**. In 1832, a small group of farmers met in Albany to organize the New York State Agricultural Society as a guiding voice for state agricultural policy, and to educate farmers on improved agricultural practices. Local, county, and state societies supported agricultural experimentation and published journals and newspapers to disseminate advances in cultivation methods, breeding of improved crop varieties and herds, and use of fertilizers, pesticides, and irrigation.
- Northern New York Agricultural Development Program (NNYADP) **www.nnyagdev.org**. NNYADP is a farmer-driven initiative to insure the long-term economic vitality of northern New York's agricultural production sector and agriculture's important contributions to the protection and enhancement of the region's environment and rich natural resource base, and to the communities in Clinton, Essex, Franklin, Jefferson, Lewis and St. Lawrence counties.
- United States Department of Agriculture **www.usda.gov**. The Department of Agriculture is primarily responsible for keeping the food sources safe, without diseases than can make people sick. They also protect the food source by inspecting fruits and plants brought in from foreign countries and preventing these from polluting the crops growing in the US.
- USDA Natural Resource Conservation Service **www.nrcs.usda.gov**. Originally established by Congress in 1935 as the Soil Conservation Service (SCS), NRCS has expanded to become a conservation leader for all natural resources, ensuring private lands are conserved, restored, and more resilient to environmental challenges, like climate change.

The Cornell Cooperative Extension

The purpose of Cornell Cooperative Extension's educational system is to enable people to improve their lives and communities through partnerships that put experience and research knowledge to work. This is achieved by extending the research and educational resources of Cornell University, and other educational institutions, through an extensive local presence that is responsive to needs in New York communities.

The nationwide network of Cooperative Extension programs began in 1914 as a means of applying land-grant university research in understandable and useful ways to farmers and rural families. Today, Cooperative Extension serves urban, suburban, town and rural areas by offering programs in five broad areas: Agriculture & Food Systems; Children, Youth, & Families; Community & Economic Vitality; Environment & Natural Resources; and Nutrition & Health.

Cornell Cooperative Extension Association of Essex County is passionate about the development of people, families, businesses, and the community, which results in a better future for people, the environment and the community delivered to all. This is accomplished through non-formal education taking place out of the classroom; using the research-based resources of a world-renowned university, supported by a national system and delivered by a highly trained, well-educated, dedicated, staff that empowers youth, adults, volunteers, and communities to achieve their goals.



Cornell University
Cooperative Extension
Essex County



www.adirondackharvest.com/guides.html