



Teaching the Unit

Unit 8: Changing Times on the Farm

Unit Summary

Although New Hampshire is well known for a handful of industries such as fish, lumber, and manufacturing, by far the most common economic pursuit for the people who have lived here has been farming. New England farming is distinct from farming in other parts of the country, though, where agricultural pursuits centered around growing cash crops in large amounts to be shipped to markets elsewhere. Instead, New England farmers created self-sufficient farmsteads that produced a wide variety of goods from the natural resources around them, with relatively little left over for sale in the marketplace. In the mid-19th century, the rise of industrialization and the growth of cities changed these agricultural patterns, as New England farmers began producing and selling perishable goods to populations living in the developing urban communities and factory towns of the Northeast. Instead of producing goods to support just themselves, New England farmers began to produce goods for the marketplace. New Hampshire farming practices mirrored these larger regional trends, although many of the products cultivated on New Hampshire farms were unique to the state.

Full Educator Overview

The Big Picture

This unit covers a long span of time, roughly the early 1600s to the early 1900s. Although farming was the chief occupation of most of the people who lived in New Hampshire during that period, it is seldom discussed as a topic in its own right. Yet agriculture practices had a profound impact on the culture and society of New Hampshire during this period and reflect changes that were occurring elsewhere in the country.

- New Hampshire's climate and topography presents challenges for farmers, including rocky soil, thick forests, and a short growing season. Nevertheless, New Hampshire farmers overcame these adversities and carved working farmsteads from the wilderness.
- Farm families thrived by engaging in a number of different agricultural pursuits. Growing crops like corn or wheat was one of those pursuits, but not the primary one. They also maintained orchards, harvested timber, grew a variety of vegetables, cultivated bees and maple syrup, and kept herds of livestock. By diversifying their agricultural pursuits, farmers established self-sufficient farms that were largely independent of outside economic forces.
- Industrialization, especially the rise of textile mills, changed the nature of farming in the state and in the region. New Hampshire underwent a sheep boom as farmers converted their fields to pasturage for sheep, which produced wool that supported the state's burgeoning textile mills. Farm families also supplied a ready source of labor for New Hampshire's early manufacturing operations.
- Faced with competition from midwestern and western farmers in the second half of the 19th century, NH farmers shifted their efforts to supplying major metropolitan areas like Boston and New York with dairy products, poultry, fruits, and vegetables.
- In the final decades of the 19th century, thousands of people left their farms in New Hampshire and headed either to jobs in the cities or to the western United States where they could farm more profitably. New Hampshire's population went from being predominantly rural to overwhelmingly urban in the space of a few short decades.



Communal Farming

How did the English settlers in New Hampshire adopt Abenaki agricultural practices to create their first farming communities?

The Abenaki had been practicing agriculture for thousands of years by the time the first English settlers arrived in New Hampshire in the 1620s. Although the English came to New England to make money in the fish and fur trades, they needed to grow enough food to survive while they were here. Everyone undertook farming to some degree.

Initially, the English adopted the practices of the Abenaki, growing the three sisters (corn, beans, and squash) to supplement diets primarily dependent on fish and small game. They also followed the Abenaki practice of communal farming, at least in the very earliest years after the English arrived. Given the overwhelming challenges of establishing self-sufficient communities, the English migrants, particularly in the towns of Hampton and Exeter, engaged in collective farming. They labored in community fields, and each town maintained community herds of livestock that grazed on community commons, which were essentially just meadows. The New Hampshire town common, which is nowadays a park located in the center of town, grew out of this notion of a common grazing area for the herds of livestock. Agricultural decisions, such as when to plant and harvest, were made by the town meeting.

Self-Sufficient Farming

What agricultural pursuits characterized the typical New Hampshire farm in colonial times?

The arrival of more and more people in the 1630s and 1640s altered these communal practices. The hundreds of men and women who started coming to New Hampshire were not intending to make their fortunes and leave. Instead, their intent was to settle permanently in the area, which meant they needed to develop stable, long-term methods to produce enough food to support a growing population. At the same time, they began to shift away from communal farming and toward family farming with an emphasis on individual property rights and self-sufficiency.

Farmers faced a number of challenges in New Hampshire. There was no shortage of land but producing reliable yields from the land was another matter. Neither the geography nor the topography was hospitable for farming. The landscape was full of trees, and the soil was rocky and sandy, particularly in the seacoast region, where English settlement was concentrated until the 1720s. A high water table kept the ground soggy as well, making it difficult to plant crops. Farm families spent years, decades even, clearing fields for planting, but then planting brought its own challenges. New Hampshire's climate, then and now, offers a short 4–5 month growing season, which ultimately limits output. Farmers were also limited in the types of crops they grew. Experiments with traditional English cereal crops proved disappointing. They planted oats, barley, and rye, but only corn grew well in the seacoast region.

In addition to growing cereal crops, early colonial farmers produced a wide variety of goods from the natural resources around them.

- Fruit, mainly apples and berries, did well in New Hampshire and provided some variety to their limited diets. Apples and pears in particular flourished, and many colonists planted extensive orchards with seedlings brought from England. Cider remained the most popular drink in New England well into the 19th century. The berries native to the region also proved plentiful.



- Kitchen gardens produced vegetables such as peas, turnips, parsnips, onions, lettuce, cucumbers, asparagus, beans, squash, and, surprisingly, melons, especially watermelons.
- Fish and game (deer, turkey, pheasant, quail, rabbit) also proved reliable sources of sustenance.
- All farms kept livestock for a variety of purposes. Chickens produced eggs, sheep provided food and wool for the production of textiles, hogs and pigs were a common foodstuff, goats and cows generated milk and other dairy products, while cows also provided a source for leather and served as beasts of burden to pull plows and wagons.
- Bees were kept to produce honey, a more economical sweetener than sugar, which needed to be imported from the West Indies.
- Learning from the Abenaki, many farmers tapped maple trees and produced syrup, although it took, on average, 40 gallons of sap to produce just one gallon of syrup. Maple syrup was another alternative sweetener that was cheaper than sugar, even if labor-intensive to produce. The typical farmer might tap more than 1,000 trees every winter to harvest the needed sap.
- Farmers living in the seacoast region also harvested salt from the great salt marshes that were native to the area.

In addition to generating food, farmers also cut large quantities of lumber. New Hampshire's lush forests seemed to offer an inexhaustible supply of trees, but the settlers' need for lumber was inexhaustible as well. Wood was used for almost everything: boxes, crates, barrels; tools, wagons, farm implements; furniture; houses and outbuildings; household items like plates and bowls; and fences, which were needed to mark boundaries, contain livestock, and protect crop fields and gardens. (Although some fences were made from the rocks cleared from fields, most fences during the colonial period were wooden. New Hampshire's iconic stone walls were not widely used until the early 19th century.) In addition, the average colonial household required 40 cords of wood a year just for cooking and heating. Chopping wood was a continuous task for farm families.

By engaging in these wide-ranging activities, most New Hampshire families survived and even thrived. The birth rate was high, especially compared to England, and these large families worked together to keep their farms productive. Labor came overwhelmingly from within the family.

Most of what farm families produced, they also consumed. New Hampshire farming is typically called "subsistence farming," but that term implies a minimal output and a struggle to survive. In truth, New Hampshire farms were more successful than that. Most farms reliably produced enough to support large and growing families and could depend on farming to ensure the family's economic independence. New Hampshire farming was more accurately described as self-sufficient than subsistence.

The colony's more successful farmers produced not only enough for their families but also enough to sell a small amount of goods at market. Portsmouth and Boston both became centers of economic activity as New Hampshire farmers sold fish, cattle, or lumber to merchants who then shipped these goods to places as far away as the West Indies and Europe. New Hampshire was the major New England producer of all three commodities throughout the colonial period. In this way, New Hampshire's independent farmers were connected to the larger world of Atlantic trade.

As children grew and families expanded, the need for more land became a matter of constant concern, pushing the colonists to move further and further west. This expansion was also fueled by a steady stream of new arrivals from Massachusetts throughout the colonial period (a migration pattern that continues even today). By the 1720s, colonists had begun to settle in the Merrimack River Valley and, a few decades later, the Connecticut River Valley. These areas were better suited



to agriculture, although there was no escaping the hilly terrain, the rocky soil, the abundant trees, and the short growing season. Nevertheless, crops that had struggled in the seacoast region, such as rye, wheat, barley, and oats, did better further inland. In fact, the Connecticut River Valley became known as the “bread basket of New England.” Corn remained the predominant cereal crop, though, until the end of the 19th century.

New arrivals to New Hampshire in the 18th century also brought new kinds of crops. The Scots-Irish, who began settling in the Merrimack River Valley near Londonderry in the 1720s, relied heavily on potatoes and other root vegetables for sustenance. New Hampshire often boasts of being the “birthplace” of the potato in North America, courtesy of the Scots-Irish who arrived at that time. Whether or not the first potato in America was planted in Londonderry, the Scots-Irish in the region certainly did much to promote the growing of potatoes in New Hampshire, producing large quantities of the vegetable and developing other uses for it, such as the production of starch as a stiffening agent for textiles. Whiskey distilleries that relied on potatoes (rather than grain) as a prime ingredient became common in New Hampshire as well.

The Scots-Irish also planted large amounts of flax, which they used to make linen. Londonderry became renowned for its fine linen production in the mid-18th century, a skill developed by the area’s Scots-Irish women. In addition to linen, flax was used to make highly durable rope. The plant also produced flaxseed and linseed oil, widely used in cooking, to feed livestock, and as a lubricant for machinery. These new crops gave a greater variety to New Hampshire farms but didn’t fundamentally change the nature of agriculture. New Hampshire farms still needed to produce a wide variety of products to thrive, rather than specializing in so-called cash crops, like tobacco or cotton (grown in the South) or wheat (grown in the Midwest). And the majority of what farm families generated on their farms still went to support the families themselves rather being sold at market.

The proliferation and stability of New Hampshire’s family farms made the colony predominantly middle class. Outside of Portsmouth, New Hampshire was overwhelmingly rural, with no other major population centers developing until the middle of the 19th century. For most of the people of New Hampshire, life followed the rhythm of the seasons. Community activities, such as church, school, and town meeting, were all structured around the agricultural calendar. Nearly every member of the community, aside from the minister, made their living through agriculture. It was a hard, labor-intensive life, but it offered opportunities for economic independence that were undreamed of in England or anywhere else in Europe.

By the second half of the 18th century, many New Hampshire farms had become established agricultural operations, and most farm families had successfully negotiated the challenging early years when fields needed to be cleared, fences and houses built, and herds of livestock established. The success of these farming operations can be seen in the architecture of the period, as small, simple cabins gave way to sprawling farm complexes. When a farm was being cleared, colonists tended to build one- or two-room houses to provide living quarters and small barns to provide shelter for livestock. As farms prospered, families typically built much larger houses that were connected to the small, original houses to accommodate the growing number of children or the multi-generational nature of many households. A farm’s original barn was often replaced with a much larger one as the size of the livestock herds expanded. The result was a series of buildings known as a connected farm, or “big house, little house, back house, barn.” These types of farm complexes became popular in the mid-18th century. Although common all over New England, connected farms were particularly popular in Vermont, New Hampshire, and Maine, probably because the cold temperatures prompted people to build these linked structures that allowed them to pass from the house to the barn without going outside in the winter.



During the long New Hampshire winters, farmers found other pursuits to occupy themselves. Men often developed skills to become cordwainers, coopers, silver- or tinsmiths, or furniture makers in the off-season, while women frequently spun thread, wove textiles, and sewed clothing. The products they made were used by their families but also afforded them a means to barter or exchange with other farm families in the town.

This barter economy predominated throughout New Hampshire's colonial period, and people seldom had money on hand. Even a community's minister often found himself paid in food, clothing, or wood instead of currency. What little commerce there was in farming communities tended to be conducted on the local level, and if bartering wasn't an option, farmers relied on credit, which was extended to them based on their reputations within their own communities. Both the barter and credit economies were systems based on personal relationships.

The Impact of Industrialization

How did the rise of industrialization change farming practices in New Hampshire?

The colonial pattern of farming predominated into the first decades of the 19th century, but the rise of industrialization had a profound impact on agriculture in the state. Farming in New Hampshire remained a family-based operation, and farmers continued to produce most of the goods they needed to survive, but they also started to become more sensitive to larger economic forces. Gradually they went from self-sufficient farming, which primarily supported their own families, to market farming by the end of the century, which required them to sell most of what they produced for cash and then purchase the goods their families needed with the proceeds.

This shift became pronounced alongside advancements in textile manufacturing. In addition to all of the other tasks farmers managed (growing crops, tending livestock, harvesting lumber, engaging in skilled craftsmanship), farm families also became important players in producing cloth on a large scale. New Hampshire farm families had always made textiles—raising sheep, producing wool, spinning thread and yarn, weaving cloth, and sewing clothing, curtains, and bedding. By the 1810s, though, farmers in southern New Hampshire started to sell the thread they spun to fledgling mill operations, which would then use mechanized looms to weave the thread into cloth for mass textile production. It was known as the putting out system—i.e., part of the textile production process was “put out” to local farm families. Eventually, as the use of technology expanded, this entire process was moved into the factories, but initially it was highly dependent on the industry of farm women working within their own homes. In the 1820s, thread became such a valuable commodity that general stores accepted it in lieu of currency.

Once the factories brought all stages of textile production under their own roofs, they were still dependent on the labor of farm women. The New England mill girls who provided the first workforce in the mills came overwhelmingly from New Hampshire farms. These young women flocked to the state's growing cities where they lived by the dictates of factory clocks and stayed in boardinghouses far from parental oversight. Working in the mills provided an economic opportunity that could not be passed over lightly. The girls' labor on the farm was valued less than that of their brothers; they could make more money and contribute more to the support of the family by working in the textile factories of Manchester, Nashua, and Dover.

Industrialization's impact extended far beyond labor, though. The need for the raw materials of textile production—wool—prompted New Hampshire farmers to transform the agricultural practices that had shaped rural life for decades, if not centuries. Suddenly, New Hampshire found itself at the center of what became known as the Great Sheep Boom. It began in the 1810s when a new variety of sheep, merino sheep, began to be imported from Spain and Portugal. Sheep had always



been among the livestock kept on New Hampshire farms, but the herds were small and raised for food as much as for wool, which was coarse and short. Merino sheep, on the other hand, produced long, soft, superfine wool that was perfect for textile production. Spain and Portugal limited, and sometimes prohibited, merino sheep from being exported, but in 1812, the U.S. envoy to Lisbon was granted approval to bring a small herd to his farm in Vermont.

From there this variety of sheep spread rapidly throughout the state and spilled over into neighboring New Hampshire. Both states underwent what was called “sheep mania” in the decades that followed. The boom peaked in the 1830s, collapsed in the late 1840s, and then peaked again in the 1860s, probably because of cotton shortages during the Civil War, since cotton was imported from the South. New Hampshire had more than half a million merino sheep at the boom’s height in 1830, and sheep farms existed all over the state. In hilly, rocky areas not fit for the cultivation of crops, sheep were a viable farm product. The Connecticut River Valley, which had once produced the bulk of the state’s cereal crops, became the epicenter of the sheep boom on both sides of the river.

The transition from growing crops to raising sheep was substantial, and changed the rhythms of farm life, not least because sheep required more acreage than crops, and that acreage had to be fenced. It was during this period that New Hampshire farmers constructed thousands of miles of stone walls, which stood 3 or 4 feet high when they were constructed to keep the sheep penned in. (The stone walls that still exist today in the state appear shorter because of the build up of soil over time.) Tillable land was converted to grasslands and meadows for sheep grazing. Barns were built at a ferocious pace to provide shelter for sheep herds. And the farmers’ need to get large quantities of fleece to marketplaces or factories prompted towns to invest in road and bridge construction all across the state. By the 1840s, this transportation network was supplemented with railroads that spread far into the countryside so that farmers could get their fleece to market.

The shift away from self-sufficient farming also meant that people needed to buy more of the products they needed, as they were no longer making or producing these goods themselves. This change prompted the proliferation of general stores and the development of town centers. After selling their fleece, farm families had money to spend in stores, particularly as industrialization was making more goods available at affordable prices. The barter system, which had characterized New Hampshire rural life for so long, was replaced with a currency-based economy, and farmers became far more connected to the rise and fall of market economics.

Finding New Markets

How did farming practices change at the end of the 19th century, and what impact did these changes have on New Hampshire society?

By the middle of the 19th century, New Hampshire agriculture was at something of a crossroads, made more pronounced by the disruption caused by the Civil War. As farmers returned from the battlefield in the second half of the 1860s, many of them re-evaluated their way of life and made substantial changes. The sheep boom was over, and if farms were to survive, they needed to find other products to sell at market.

These years, 1870 to 1900, were challenging ones for the state’s rural population. Some people moved west, lured to the Great Plains by federal programs like the Homestead Act of 1862, which offered free land to anyone who would settle it. “Go West, young man,” urged native Granite Stater Horace Greeley, an influential newspaper publisher in New York City and one-time presidential candidate. So many people left the state in these years that they started to form clubs in places like San Francisco and Denver, calling themselves the Sons of New Hampshire.



Other people stayed in the state but moved to the growing cities, lured by the promise of wage-paying jobs in the factories and the conveniences of city life. The rural population in New Hampshire began a precipitous decline that would continue for the next several decades. In some cases, people simply walked away from their land, abandoning their farms. In 1890, the state of New Hampshire announced that by its reckoning there were 1,440 vacant farmsteads in the Granite State, prompting the agricultural board to start advertising these properties as potential summer homes. This effort to repurpose the farms of the past would spur the state's rise as a popular tourist destination for those with the means to escape the congestion and dirt of Boston, New York, Philadelphia, Washington, D.C., and Chicago in the summer months.

Ironically, the people who stayed on their New Hampshire farms did well. Two-thirds of the land in the state was considered agricultural, divided evenly between tillable fields, pasturage, and woodland. But there were fewer people to farm it, and those who remained had to adjust their agricultural practices to suit the changing times. In the decades after the Civil War, the idea of the self-sufficient New England farm, where farm families produced enough to survive with little left over to sell, was dead. Farming in New Hampshire had become irrevocably tied to the marketplace through the Industrial Revolution.

Granite State farms couldn't compete with the large midwestern agricultural concerns that began producing grains (wheat, barley, rye, corn) and livestock (cattle, sheep, hogs) in massive quantities in the middle of the 19th century and then distributed them by rail to every corner of America. Instead, New Hampshire farmers produced for market a range of semi-perishable goods with strong ties to the state's agricultural past. New Hampshire, and other parts of New England, became known for producing dairy products (milk, cream, butter, eggs), vegetables (most notably potatoes), fruit (apples, pears, peaches, blueberries, strawberries, pumpkins), and poultry.

These goods had a limited range as they could only be transported so far without spoiling. Yet the major metropolitan areas in the northeast corridor were packed with people, and all of these people needed to be fed. Although Granite State farmers had been producing many of these goods for decades, if not longer, they now produced them in larger quantities than ever before and sold them for cash rather than consuming them themselves. Goods were now loaded onto trains and sent off to Boston and beyond, or, in the case of many of the fruits and vegetables, sent to factories where the products were canned and distributed around the country. The state was also known for its maple syrup, timber, flaxseed oil, tobacco (with an accompanying cigar-making manufacturing industry), and ice, the latter of which was harvested into blocks during the winter and then used to help preserve food throughout the year until the widespread use of refrigeration in the 1930s and 1940s.

The success farmers experienced during this period could not offset the unattractiveness of rural life for many people, though. Although groups like the New Hampshire State Grange, founded in 1873, attempted to bolster community life by hosting social events and agricultural fairs, the state's rural communities could not convince young people to stay in the country when the glamour, excitement, and opportunity of city life beckoned. Some New Hampshire towns have still not recovered their population to what it had been before the Civil War, and by the early 20th century, only one-third of Granite Staters worked in agriculture. This number represents a dramatic shift from a century earlier when nearly everyone engaged in farming at some level. But New Hampshire farms, and the people who lived on them, had proven themselves durable, flexible, and sustainable, adapting and evolving with changes in the world around them.



Course Essential Questions

Essential questions are designed to be answered repeatedly throughout the entire curriculum. This unit particularly addresses the following essential questions:

- How has New Hampshire come to be the way it is?

Unit Focus Questions

Lessons in this unit are geared towards students answering the unit focus questions comprehensively through a variety of methods. This unit's focus questions are:

1. How has farming changed in New Hampshire from the colonial period to industrialization?
2. How did the changes in farming from the 1600s to the 1900s reflect economic changes?

Lesson Plans

In the unit "Changing Times on the Farm" students explore New Hampshire's long history with farming. The first lesson examines the changes from Abenaki farming techniques and European self-sufficient farming through specialized farming and the second focuses on the accompanying economic evolution.

Lesson Plan 1: Farm Evolution

After comparing how lunch was made in colonial times to how lunch is made today, students define different kinds of farming, create a timeline of farming in New Hampshire, and explore a modern-day farm in the state.

Lesson Plan 2: Economy Evolution

Students rank objects in terms of their value and examine a graphic of an expanding economy before playing "Go Barter!" and studying the great sheep boom.

Unit Vocabulary

To come.

Using the Student Content Readings

The student content for this curriculum is designed to be used in many ways. Here are suggestions for reading activities and strategies that support independent and guided reading at different stages of each unit. Please note that some lessons in this unit use the student content in their learning activities.

- **Introducing Units:** Preview the student content before diving into lesson plans and activities. Ask students to skim the text by looking for key design elements. What are the headings? What do they tell us about the big ideas of the unit? Look for words in bold. What are the important vocabulary words used in this unit? Which are familiar? Which are not? What kinds of graphics or images are used in this content? Which important ideas do they illustrate?
- **Developing Understanding:** Some lesson plans direct you to specific sections of the student content, but the student content should be revisited throughout completion of a unit. Students can create visual representations of specific sections, summarize paragraphs, or complete jigsaw chunking and present their section summaries to other students.
- **Reviewing Concepts:** After lessons, return to the student content to look for evidence of the concept explored in the lesson. Students can create timelines, cause and effect charts, mind maps, and Venn diagrams using the information provided in each section.
- **Extending Comprehension:** Students can develop a review quiz for fellow students by writing their own questions about the information in each section. Translating the content



into data that can be displayed on a map or graph is another way to extend comprehension of the text.

Additional Resources

Format: Book

Title: *Big House, Little House, Back House, Barn: The Connected Farm Buildings of New England*

Author/Creator: Thomas C. Hubka

Audience: For Educators.

Description: Explores the four components of New England farmhouses and how they reflect rural culture in the 19th century

Format: Book

Title: *Colonial New Hampshire: A History*

Author/Creator: Jere R. Daniell

Audience: For Educators.

Description: The definitive history of New Hampshire from the arrival of Europeans to the beginning of the American Revolution

Format: Book

Title: *A Long, Deep Furrow: Three Centuries of Farming in New England*

Author/Creator: Howard S. Russell

Audience: For Educators.

Description: A comprehensive, almost encyclopedic source on farm life in this region of the country

Format: Book

Title: *Ox-cart Man*

Author/Creator: Donald Hall and Barbara Cooney

Audience: For Students.

Description: Classic children's book of a New England farmer taking his goods to market

Format: Book

Title: *Tuttle's Red Barn*

Author/Creator: Richard Mickelson

Audience: For Students.

Description: A story that follows the Tuttle family on their New Hampshire farm through American history