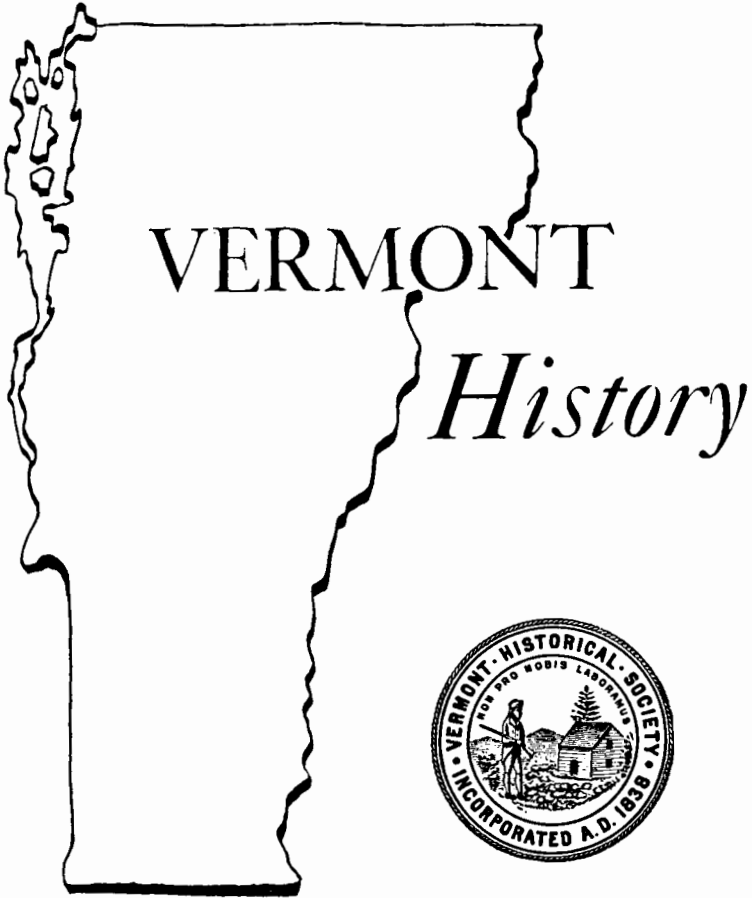


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For several decades in the nineteenth century hops were a significant and lucrative agricultural alternative for some Vermont farmers.

The Hops Boom in Nineteenth Century Vermont

By THOMAS RUMNEY

Local and regional studies of land use are critical to geographers and historians examining America's past landscapes. Questions about how farmers used their lands and how and why these uses changed over time present attractive opportunities for scholars in a number of disciplines to comprehend the past, its peoples, and their activities.¹ This study of nineteenth century hop cultivation in Vermont affords an interesting illustration of temporal and spatial change in the state's agricultural landscape.

Hops, the dried catkins derived from the hop vine, a member of the hemp family, have a single purpose: to flavor and help preserve ales, beers, and other malted beverages.² Both the Dutch, who were brewing beer in New Amsterdam as early as 1623, and the settlers of Massachusetts Bay, who were brewing by 1637, carried hops to the American colonies.³ Hop buds and oils give to beers and ales a slightly bitter, clarifying taste and aroma, help to process the brewing "wort" (or fermenting fluids carrying the malt and other ingredients), and at one time were used to preserve the finished beverages.⁴ Hops, however, have no other important uses aside from those in brewing. They cannot, for example, be used as an animal fodder, a food grain, or a vegetable for humans. Therefore, hop, as a plant and crop, presents special opportunities to those interested in studying cropping patterns and crop production.

In addition to this narrow range of uses, hop presented significant challenges to its American cultivators. Hops production was both capital and labor intensive. It required large outlays of money and materials for poles and frames for the hop vines to grow on. Hop also demanded large amounts of fertilizer, protection from insects and disease, and elaborate facilities for post-harvest processing. These included drying houses and

“sweating” rooms where hop buds were first heated, then quickly cooled to concentrate the resins in the buds so needed for flavoring. These expensive necessities tended to inhibit wide involvement among a region’s farmers. Also required were pruning of the vines, fertilizer application, hand weeding, and careful harvesting by hand. Only recently has production of hops been aided by newly developed machinery.⁵

New England producers also found raising hop botanically difficult. Hop is sensitive to many environmental stresses. Late spring frosts tend to damage or destroy the flowers, while frosts in the autumn induce rot into the mature buds. High heat and humidity stunt the growth of the vines, induce fungi on leaf and stem, and turn the buds too bitter for effective brewing. Hop is a perennial crop grown most easily in a temperate climate regime, but it must be able to survive the occasional extremes of temperate zones that can damage or destroy its usefulness to the farmer and brewer.⁶

Although beers, ales, porters, and stouts were common drinks in colonial America, particularly north of the Carolinas, other drinks including rum (produced in large volumes in coastal New England), hard cider (the interior farmer’s drink), and whiskey (the drink of the frontiersman) were more popular.⁷ The beer that Americans drank was most often made at home in small batches.⁸ In fact, most commercial brewing in the United States developed after 1800. As late as 1810 there were only 129 commercial breweries in the country. Most of these were small operations, located in northeastern urban centers stretching from Philadelphia to Boston, which sold almost exclusively to local urban markets.⁹ In Burlington, for example, although Daniel Staniford reportedly manufactured and sold ale, beer, porter, and gin as early as 1800, Vermont’s first commercial brewery was probably established by George Peterson about 1837. Peterson produced about 1500 barrels annually, a small amount, and did not continue long in business.¹⁰ Beers and ales took second place to cider, whiskey, and rum until well into the nineteenth century in the United States. This was particularly true away from the coastal cities with their fledgling commercial breweries. Consequently, barley and hop were not common crops until after the region in question had essentially become a post-frontier area.¹¹ This was the case in New England from the end of the Revolution to the start of the Civil War.

Eastern Massachusetts and southern New Hampshire were the earliest locations for commercial hop cultivation in the United States. Established by 1790, this region dominated hop production in the United States until approximately 1830. Thereafter, this concentrated hop production waned as soils in the area began to decline in fertility, insect pests became

more prevalent, and other more productive regions developed further to the west. By 1840 the center of American hop cultivation had moved westward to central New York state and northwest into Vermont.¹²

The spread of hop cultivation into Vermont during the middle portion of the nineteenth century was not merely an expansion of production from an older declining region into new, more productive growing areas. It was also the result of a number of spatial and temporal processes that more generally affected nineteenth century American agriculture. First, agriculture and its related land uses and systems moved westward with

TABLE 1
Nineteenth Century Hops Production
(in pounds)

<i>Year</i>	<i>Vermont</i>	<i>National Total</i>	<i>% Vermont</i>
1840	48,137	1,238,502	3.9
1850	288,023	3,497,029	8.2
1860	638,677	10,991,996	5.8
1870	527,927	25,456,669	2.1
1880	109,350	26,546,378	0.4
1890	51,705	39,171,270	0.1
1900	4,440	49,209,704	0.0

Sources: *Compendium, U.S. Census for 1850*, p. 174; *Compendium of the 12th U.S. Census, 1900*, p. 700.

the American frontier of population. Earlier centers of productivity for wheat, swine, and a number of other agricultural commodities had shifted westward by the time hops production migrated to Vermont and central New York from southeastern New England.¹³ As urban beer-drinking markets grew in the northeast, the demand for hops expanded, abetted by the development of a transportation system equipped to move commodities to their distant points of consumption. One other factor helped the founding and at least temporary flowering of the Vermont hops industry. Vermont farmers were forced to search for alternative profitable agricultural products to replace those items now produced in greater amounts at lower costs further west. Vermont farmers tried sheep raising, hemp growing, dairying, and hop cultivation with varying rates of success.¹⁴ Of these nineteenth century “booms” in Vermont’s agriculture, only dairying survived into the twentieth century. Yet, from approximately 1850 to 1865, Vermont hop growers produced the second largest annual crop, after New York, in the nation.

Hop cultivation centered in eastern and northeastern Vermont in what Harold A. Meeks calls the “Piedmont,” an area with the requisite well-drained soils.¹⁵ Several other factors helped to focus hop cultivation in this region of Vermont during the nineteenth century, particularly in

Orleans, Windsor, Orange, Essex, and Lamoille counties. Early roads, water transport offered by the Connecticut River, and somewhat later the construction of railroads provided useful access to expanding markets for such commercial agricultural products as hops and helped to sustain its production peak. This was necessary because there were few large consumers of hops in Vermont and growers had to sell almost exclusively to cities of the Northeast. In addition, the western half of the state had

TABLE 2
Hops Production in Nineteenth Century Vermont
by County (in pounds)

<i>1840</i>	<i>Lbs.</i>	<i>1850</i>	<i>Lbs.</i>
1. Windham	25,911	1. Windsor	79,700
2. Washington	7,859	2. Orleans	77,605
3. Essex	5,959	3. Windham	41,510
4. Windsor	2,100	4. Essex	28,250
5. Caledonia	2,011	5. Orange	27,827
6. Lamoille	1,207	6. Lamoille	15,657
7. Rutland	961	7. Washington	12,125
8. Addison	784	8. Addison	5,962
9. Orleans	642	9. Franklin	1,610
10. Orange	466	10. Caledonia	1,422
11. Chittenden	177	11. Bennington	193
12. Bennington	60	12. Rutland	162
13. Grand Isle	—	13. Chittenden	—
14. Franklin	—	14. Grand Isle	—
	48,137		292,023
<i>1860</i>	<i>Lbs.</i>	<i>1870</i>	<i>Lbs.</i>
1. Orleans	161,192	1. Orleans	254,429
2. Windsor	125,759	2. Windsor	81,542
3. Orange	81,132	3. Lamoille	68,233
4. Windham	68,631	4. Caledonia	31,910
5. Lamoille	68,017	5. Washington	26,910
6. Washington	35,560	6. Windham	22,420
7. Essex	29,242	7. Grand Isle	15,982
8. Caledonia	26,870	8. Orange	15,930
9. Rutland	21,835	9. Addison	5,220
10. Addison	12,174	10. Franklin	3,130
11. Franklin	3,736	11. Essex	1,820
12. Chittenden	2,501	12. Rutland	400
13. Grand Isle	2,000	13. Chittenden	1
14. Bennington	8	14. Bennington	—
	638,657		527,927

Source: *U.S. Censuses of Agriculture for 1840, 1850, 1860, and 1870.*

been involved in the pre-Civil War sheep boom and later in the development of Vermont's dairy industries. Curiously, hops production never took hold there. Its absence from a region bracketed by two nationally prominent production areas in central New York and eastern Vermont remains a largely unexplained phenomenon of nineteenth century Vermont's agricultural history.

In many ways, hop cultivation typified nineteenth century farming in the state, as Vermonters sought above all a commercial crop that would enable them to survive in an increasingly competitive, interregional agricultural market. Interestingly, since few Vermont farmers grew hop exclusively they were better able to survive the post-1870 decline in hops production.¹⁶

The reasons for this decline were both local and national. The most immediate cause was environmental. Hop draws large quantities of nutrients from the soil with every planting. If farmers do not carefully refertilize their hop groves, the soils quickly decline in productivity. Production per acre in most eastern groves dropped in the 1870s and 1880s and made hop much less competitive when compared to the new growing regions in California and the Pacific Northwest. Hop also is sensitive to a number of plant pests, including plant lice. There was widespread infection in most Vermont hop growing areas by the 1880s and 1890s. And, as growers in California, Oregon, and Washington began to send their crops eastward on the newly opened transcontinental railroads, it simply was no longer economically sound to invest in the expensive insecticides needed to eradicate the pests.¹⁷ Thus, by the 1870s the peak of Vermont's hop era had passed, and a quick drop off in acreage and production led finally to the disappearance of the crop shortly after 1900. By 1880 production was down to only 109,350 pounds grown on 264 acres. Production fell to 51,705 pounds in 1890, and by 1900 only 4,400 pounds of hops were grown on six acres in Orleans County.¹⁸ Another era in Vermont's ongoing search for agricultural prosperity had ended.

As with many other once significant crops on Vermont's agricultural landscape, hop simply could no longer compete in a national market. Today Vermont's hop lands and farms are but memories peering out of old photographs. Yet for several decades in the nineteenth century hops were a significant and lucrative agricultural alternative for some Vermont farmers. This preliminary study of nineteenth century hops production suggests there is much left to discover about Vermont's agricultural heritage. It also suggests that Vermont as a late developing section of New England played a significant role in the westward migration of some crops. It would be interesting to know what part, if any, individual Vermonters played in the development of hops production in the West.

NOTES

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