



## WHAT'S THE STORY OF U.S. HOPS?

### AND HOW DO WE SAVE IT?

Tiah Edmunson-Morton  
Oregon Hops and Brewing Archives  
OSU Libraries



Thanks etc.

There are so many amazing things about the history of hops in America that I could talk about, and I could easily run over the time we have for our living history panel and take up half your lunch. But because I would really dislike a speaker who did that to me, I have cut my talk to a reasonable time.

But in limiting my time I will inevitably be superficial and brief, leave off some states, miss some significant growers, skimp on the more recent facts/figures, and won't have time for stories about when I took my father-in-law hunting for hop barns between Corvallis and Portland last month when he was visiting for the holidays. I also will skip a lot of interesting stuff about hop barns and the evolution of field architecture, but I am happy to try to answer questions about that in the Q&A period. I will also remind you that we will have a living history panel in the next hour, so I am sure that our four growers can fill in gaps.

Before I talk about the history I do want to tell you a bit about me and the archives that I created in summer 2013.

**I'M AN ARCHIVIST.  
I RUN THE OREGON HOPS AND BREWING ARCHIVES.**



- NO THIS ISN'T MY FULL-TIME JOB...
- AND I DON'T DRINK AT WORK EVERYDAY...
- OR ARCHIVE ACTUAL BEER...
- OR HAVE A LIBRARY OF HOP PLANTS...

... but I do work at a university where  
you can get a PhD in brewing.

...and tell a good story

... and have beer in my office.

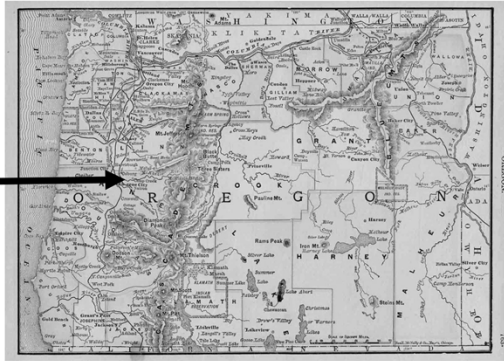
... and once upon a time  
there were hops in my family

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## A BIT OF BACKGROUND



HENRY LAWRENCE EDMUNSON,  
1897



H.L. MAINLY LIVED IN  
GOSHEN, JUST SOUTH  
OF EUGENE.

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## A black and white portrait of a man with a mustache, wearing a dark suit jacket, a white shirt, and a white bow tie. He is looking slightly to the right of the camera. The background is a textured, mottled grey. A thick black line is drawn across the right side of the image, starting from the middle and extending towards the right edge.

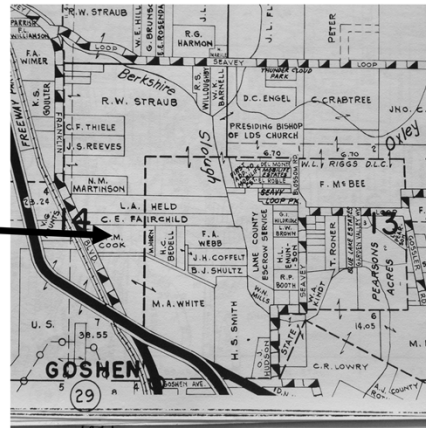
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## A BIT OF BACKGROUND



HENRY LAWRENCE EDMUNSON



H.L. STOPPED GROWING HOPS AND  
SOLD OFF THE FARM.

Fast forward → his g-great granddaughter  
became an archivist and started this  
archive.

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## WHAT DOES AN ARCHIVIST DO?

We go through piles or boxes or file cabinets and sift through computers files

"BEING A HISTORY SUPERHERO"  
KEEPS ME BUSY



### We process, arrange, and describe

- Bring physical order to collections
- Bring intellectual order to collections
- Determine organizational structure and create a guide with series on topics



Super Girl Power, c/o Mygraficos Digitalis

### We research and share

- Learn more about our collections and the people who create them.
- Work with all types of researchers
- Talk "archives" to anyone who will listen

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## WHAT IS THE OREGON HOPS & BREWING ARCHIVES?

ONGOING PROJECT TO SAVE THE HISTORY OF SCIENCE, COMMUNITY, INDUSTRY.

### COMMUNITY ENGAGEMENT:

share skills, build relationships,  
give talks, staff festival tables,  
answer questions

### DOCUMENT LIVING CULTURE & HISTORIC PAST:

gather materials, save paper/electronic records, do oral histories

**LEARN & DISCOVER:** visit farms,  
tour breweries, do research, dig  
into food or farming history,  
recreate historic beer recipes



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## EARLY DAYS: WHO WAS BREWING?

- Women as farmer wife and brewer
  - Names of books like *Frugal Housewife* for all the things that fell under the woman's domain.
- Monks in churches
  - First "production facilities" when monasteries and other Christian institutions started producing beer not only for their own consumption but also to as payment.
  - Is industrialization of brewing when making beer shifted to men?
- Students in brewing science and commercial brewers.



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I'll talk more about history of hops, but it took some time between the early 8<sup>th</sup> century cultivation of hops to a time when they were widely accepted in the brewing of beer.

Who was brewing? Initially ales and beers were brewed at home in small batches by women, and for immediate consumption, both in smaller city communities and on farms. You can see a focus on the home and home brewing in the names of later recipe books, and of course titles like *Frugal Housewife* and *The Kitchen Directory, and American Housewife, Containing the Most Valuable and Original Receipts* show that for many years these activities still fell under the woman's domain. Brewing became a main activity of monks at churches. There is a shift towards the first "production facilities" when monasteries and other Christian institutions started producing beer not just for their own consumption, but also as a form of payment. Many see this industrialization of brewing as the point where the responsibility of making beer shifted to men. In the late 1700s and early 1800s commercial breweries developed, mainly in larger urban markets, in order to have access to a sufficiently large clientele and to get their wares to customers before they spoiled. More recently, say since the early 20<sup>th</sup> century, there have been a number commercial brewers and student or trainee brewers, with an apprenticeship model that works pretty well.

We know that historically brewers used what they had on hand in their environment. Many recipes I've looked at are specific about the process, but not necessarily prescriptive about the ingredients. For example, rather than a named hop variety you'll see "new," "old," or "pacific." Brewers used adjuncts like rice and maize pretty regularly, and I've also found references to corn flakes, grape sugar, stale bread, molasses and bran, persimmons dried in cake, and pompion. The use of adjuncts and other "flavorings" included herbs found in the countryside or cultivated in the garden: rosemary, fennel, thyme, rose hips, yarrow, parsley, sage, hyssop, savory, chamomile, mint, etc. Spices like cinnamon, cloves, nutmeg, and ginger were added to spike the flavor. To bitter sweet beer juniper, mugwort, wormwood, or tansy might be added. In the 13<sup>th</sup>/14<sup>th</sup> century, hopped beer replaced gruit, which is a beer made with a combination of these herbs I've mentioned.

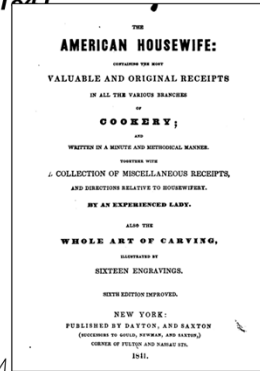
<http://brookstonbeerbulletin.com/historic-beer-birthday-emil-christian-hansen/>



**THE AMERICAN HOUSEWIFE CONTAINING THE MOST VALUABLE AND ORIGINAL RECEIPTS IN ALL THE VARIOUS BRANCHES OF COOKERY : AND WRITTEN IN A MINUTE AND METHODICAL MANNER : TOGETHER WITH A COLLECTION OF MISCELLANEOUS RECEIPTS, AND DIRECTIONS RELATIVE TO HOUSEWIFERY : ALSO THE WHOLE ART OF CARVING / BY AN EXPERIENCED LADY, 1841**

**INSTANTANEOUS BEER**

Put to a pint and a half of water four tea-spoonsful of ginger, a table-spoonful of lemon-juice—sweeten it to the taste with syrup or white sugar, and turn it into a junk bottle. Have ready a cork to fit the bottle, a string of wire to tie it down, and a mallet to drive in the cork. Then put into the bottle a heaping tea-spoonful of the super-carbonate of soda, cork it immediately, tie it down, then shake the whole up well, cut the string, and the cork will fly out. Turn it out, and drink immediately.

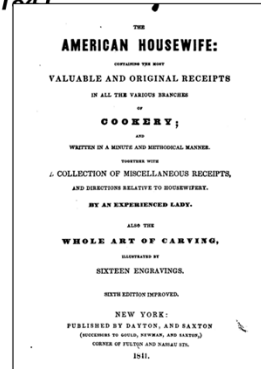


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**HOP BEER**

Put to six ounces of hops five quarts of water, and boil them three hours—then strain off the liquor, and put to the hops four quarts more of water, a tea-cup full of ginger, and boil the hops three hours longer. Strain and mix it with the

rest of the liquor, and stir in a couple of quarts of molasses. Take about half a pound of bread, and brown it very slowly—when very brown and dry, put it in the liquor, to enrich the beer. Rusked bread is the best for this purpose, but a loaf of bread cut in slices, and toasted till brittle, will do very well. When rusked bread is used, pound it fine, and brown it in a pot, as you would coffee, stirring it constantly. When the hop liquor cools, so as to be just lukewarm, add a pint of new yeast, that has no salt in it. Keep the beer covered in a temperate situation, till it has ceased fermenting, which is ascertained by the subsiding of the froth—turn it off carefully into a beer keg, or bottles. The beer should not be corked very tight, or it will burst the bottles. It should be kept in a cool place.



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## HOPS: WHAT HAVE THEY BEEN USED FOR?

Originally used for their preservative value, hops were only later noted to impart a flavor to beer.

### AND SO MUCH MORE!

- Aroma
- Flavor
- Preservative
- Medicine
- Fiber
- Veggies



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Hops have a long history, and I am indebted to Michael Tomlan for his 1995 book *Tinged With Gold* and Peter Kopp for his 2016 book *Hoptopia: A World of Agriculture and Beer in Oregon's Willamette Valley*. I'd also like to thank one of my student workers, Gillian Bergmann, who put together a helpful timeline of these early hops while I was hidden under piles of history about hops in America.

When Pliny the Elder writes about common hops in his 77 *Naturalis Historia*, he is creating the first record of hops. The first reference to hops in continental Europe appeared in 736 AD, when a prisoner in Hallertau Germany grows them, and it's also in the middle 8<sup>th</sup> century that monks begin planting and cultivating hops. Though we most often link hops with beer, historically hops served many functions in pioneer kitchens. Hops were used in cooking (breads, salads) and home decor (stuffed in pillows), but they were also known for their medicinal uses. Reportedly, hops would help with afflictions such as flatulence, tumors, skin irritations, and mental illness.

American colonists had many other uses for the plant as well. Sanborn Brown in his book *Wines and Beers of Old New England* states: "The hop cones used in the beer brewing were not the only part of the plant that the farmers found useful. It was a common vine in the settler's kitchen garden. The young shoots in the spring were eaten as a special treat in salads...a wax extracted from the tendrils was used as a reddish-brown vegetable dye, the fibers were used in textiles as a substitute for flax, the stalks were used for basket and wicker-work, and the leaves and spent hops were an excellent food for sheep."

There's some dispute about the first documented use of hops in beer, but there is evidence for an early date, also in the 8<sup>th</sup> century and probably in Bavaria, although it's most common to hear that date pushed to 300 years later to 1079 in Hallertau. Hop cultivation probably began in Eastern Europe around Bohemia, Slovenia and Bavaria before the 8th century, and spread to the rest of Europe. At this time you see cultivation for breeding for those early noble hop varieties Hallertau, Tettnanger, Spalt, and Saaz. In 1574 Reginald Scot writes "A Perfect Platform of a Hop-garden, and necessary instructions for the making and maintenance thereof, with Notes and Rules for Reformation of all Abuses," which is the first practical treatise on hop culture in England. As a side note, Scot also wrote a book about witchcraft in 1584.

So commercial hop production began in England in the early 1500s when cultivation practices were adopted from Flemish growers. And of course as Europeans began colonizing the new world, they carried the tradition of hop cultivation with them. English settlers introduced hops into the Southern Hemisphere in South Africa, New Zealand and Australia in the early 1800s. As the popularity of hopped beer and ales spread, the Japanese began cultivating American and German hop varieties around 1876.

## HOPS: WHERE HAVE THEY GROWN?

**Hops Produced in the United States, as returned by the Census of 1890, 1860, 1870 and 1880, representing the crop of the preceding year. Table obtained for this work direct from the Bureau of Statistics at Washington, D. C.**

STATES AND TERRITORIES	Pounds, 1890.	Pounds, 1860.	Pounds, 1870.	Pounds, 1880.	Area in 1880.
Total	3,497,090	10,997,998	15,455,589	18,346,378	45,800
Alabama	276	507			
Arizona					
Arkansas	157	146			
California		80	645		
Colorado					
Connecticut	554	959	1		
Delaware	248	474			
Dist. of Columbia	12	12			
Florida	14	109			
Georgia					
Idaho	1,551	2,244	104		
Illinois	91,798	97,884	63		
Indiana	8,447	9,078	171		
Iowa					
Kansas					
Kentucky	4,389	5,097			
Louisiana	192	37			
Maine	49,120	80,397	196		
Maryland	1,870	2,043	2		
Massachusetts	121,295	181,201	61		
Michigan	16,483	80,609	818		
Minnesota					
Mississippi	473	224			
Missouri	4,120	2,255	19		
Montana					
Nebraska					
Nevada					
New Hampshire	257,174	330,438	90		
New Jersey	2,123	3,799	150		
New Mexico					
New York	2,335,497	9,671,031	17,358		
North Carolina	3,241	1,787			
Ohio	43,721	97,533	108		
Oregon	22,025	403	9		
Pennsylvania	277	43,161	90		
Rhode Island					
South Carolina	24	104			
Tennessee	1,034	1,581			
Texas	7	103	81		
Utah	50	543	389		
Vermont	288,043	530,677	347,947	109,339	284
Virginia	11,048	16,074	10,999	1,539	28
Washington			44	8,161	792,977
West Virginia					234
Wisconsin	15,939	135,587	4,620,155	1,966,847	4,439
Wyoming					



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Before I get into the meat of this talk, I want to share a few things I've discovered. So the first will not be a surprise: this history is riddled with peaks and valleys, with big variations in price. There is also an interesting thread that runs through with national competition, namely that as westward expansion happened, it made it more and more challenging for the smaller fields in the New England area.

You'll also see that growers were giving narrative descriptions for hops rather than directly identifying varieties – and of course these could be wild varieties without names or new varieties from spontaneous in field crosses. This is great, it's exciting for thinking about how fields were working or what was already growing, but it isn't great for answering historic research questions from people who want to know specifically which varieties were being grown.

As an archivist who works a lot with historians, I can tell you that we like to look at change over time. Looking at pictures we can learn a lot about field layouts or how barns were constructed or who was picking in fields, we can tell a lot about this change over time. But when I was putting this talk together I wanted to give some numbers on yield or acreage – but I found that these numbers can vary based on where you look and by who was reporting, which is makes comparison tough.

Okay, on to history!

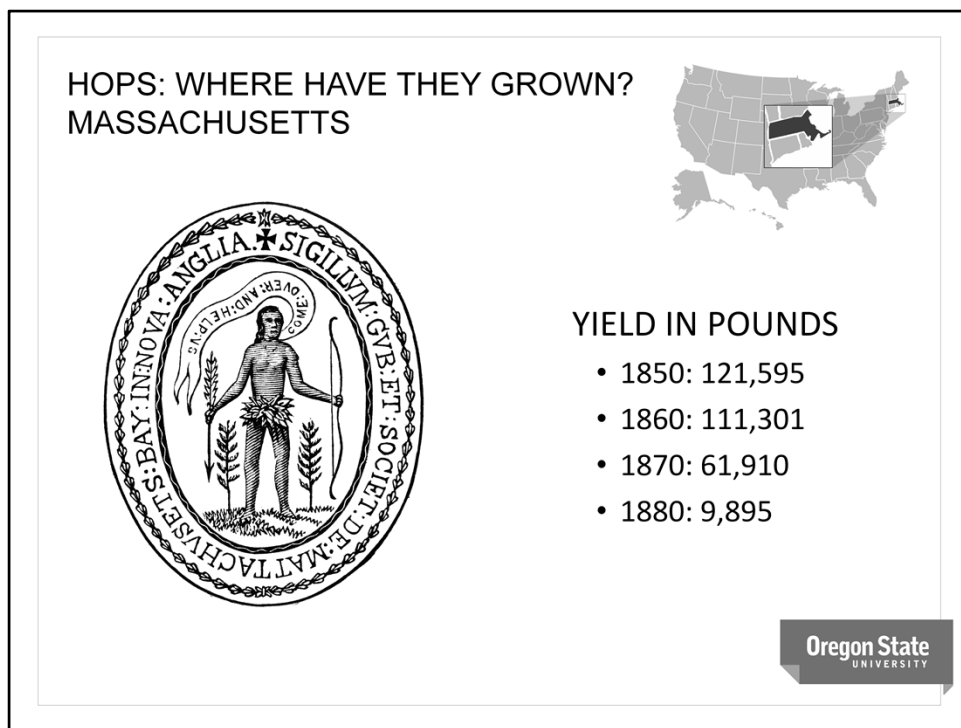
This page that you can't read is from Ezra Meeker's 1883 book *Hop Culture: A Practical Treatise on Hop Growing in Washington, from the Cutting to the Bale*. Only New Mexico and Montana are left off this list, and of course Hawaii because it wasn't a state.

Early settlers to North America could pick native wild hops in the woods around their settlements. However, the Dutch settlers, decided to import dried hops from their homeland. English settlers imported cuttings from England and in 1629 the Massachusetts Company began growing hops commercially.

By the turn of the 19<sup>th</sup> century, specific areas specializing in hops began to form in America. Massachusetts, Connecticut, Vermont, New Hampshire Maine, and New York all became early hop growing areas. By the early 1800s hop growing had declined in the northern New England states, and because New York had better soil and was close to the large population centers, that became the main hop-growing region by the 1880s. Mildew and pests hit New York in the first decade of the 20<sup>th</sup> century, and by the late 1920s both had devastated eastern hop yards.

The main hop-producing region had already shifted, this time to the Pacific Northwest. Hop growing began in the NW in the 1850s and by the turn of the century both Oregon and California produced more hops than New York. Powdery Mildew was unknown in the region and downy mildew, while present, didn't threaten the crop. Early western farmers were helped by the construction of the trans continental railroad, which allowed them to transport their hops to the breweries in the mid-west and east. And to prompt the question – yes hops were still grown during Prohibition, but they were primarily grown for export. When the Prohibition was lifted in 1933 hop acreage rapidly increased. Oregon,

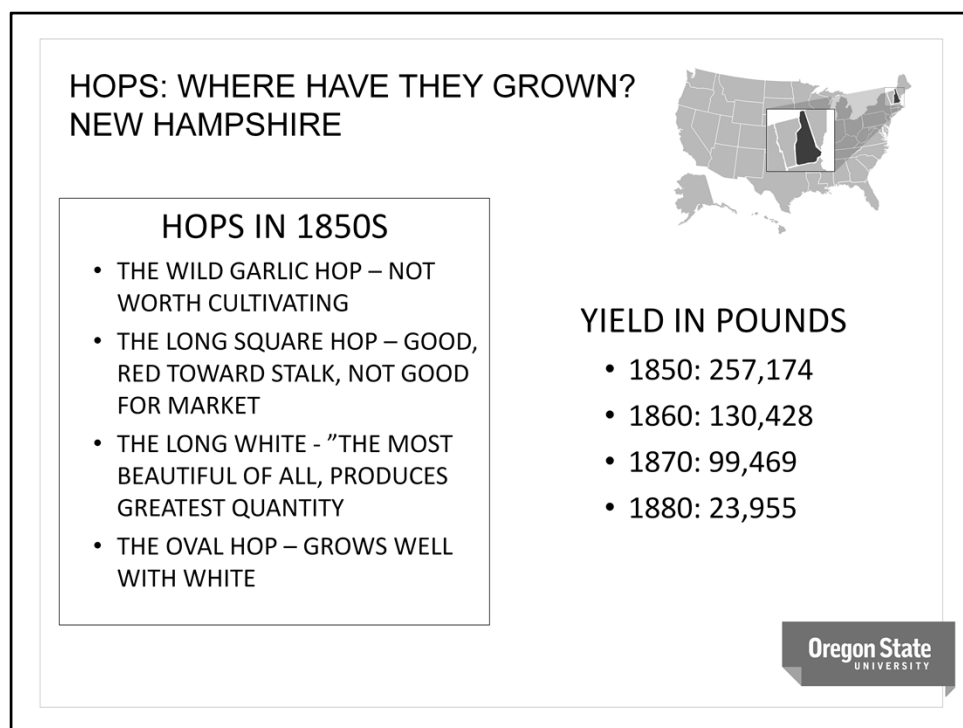
Washington and California led in hop production, and by the 1950s Idaho joined the other three western hop producing states. Following World War II, the US was the largest hop producing country in the world, and much of what was produced was exported.



In 1627 a small hops industry was established in Virginia, and we even see support from the state legislature in 1657, the crop didn't take off in the US.

Roots were on the list of articles brought through the Massachusetts Bay Company in 1628/29, the first commercial yard recognized in Massachusetts was established in 1702 in Woburn, and we know they were shipping hops to New York as early as 1718. Most were grown in Middlesex county. We know they had some success since a 1732 English law banned export from US through Ireland. But it's clear by the early 1800s that hops are becoming a commercial and agriculturally significant crop. In 1806, Massachusetts was producing enough that they wanted to regulate the crop, so they enacted a law that said hops raised or imported to the state had to be inspected. New Hampshire followed suit in 1819. And in 1831 Massachusetts hop growers passed a constitution with other rules and regulations for industry.

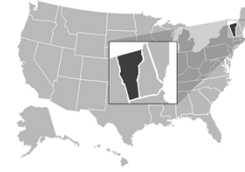
The major growers in Massachusetts and New Hampshire believed it possible to identify as many as five "distinct species." yet they appear frequently to have been grown together promiscuously with no consensus on the desirability of one type as opposed to another. In other instances strong preferences were established. A correspondent to The Farmer's Monthly Visitor in 1839 noted that in the vicinity of Amherst, New Hampshire the "long white" variety was most commonly grown being considered best in both quantity and quality of product.



I found a lot really amazing information in Ag Society records, which give all sorts of bigger picture and specific details. You will also often get pieces or statements from growers, which as an archivist is pretty wonderful since we really value these types of first hand accounts. These descriptions of hops growing in New Hampshire in 1850 come from the Transactions of the new hampshire state agricultural society for 1854.

In the early portion of the 1800s a handful of growers moved from Massachusetts to New Hampshire to set up yards. 1825-1830 Bedford was the top hop growing town, but generally most were grown in Hillsborough County.

## HOPS: WHERE HAVE THEY GROWN? VERMONT



### YIELD IN POUNDS

- 1850: 288,023 \* 1860: 638,677
- 1870: 527,927 \* 1880: 109,350
- 1900: 4,400

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As was the case from Massachusetts to New Hampshire, growers from New Hampshire moved to Vermont and Maine. The earliest commercial cultivation is noted in the 1825 *THE GENESSEE FARMER AND GARDENER'S JOURNAL*. In Maine you see some production until about 1845, but the price got too low and by 1852 hops were replaced by other crops or industries.

I found some really great detail about hops in Vermont in 1865 that give us a nice idea of how varieties were being described by growers. The "Grape" variety has vines and fruit that are medium size, have a mild flavor, and part easily from the stems. The "Pompey" is distinguished by large, rank-growing rough vines with dark green foliage and large, squarish, strong-flavored fruit. These are described as 3 and even 4" inches in length and hard to pick. The third variety is known by its red vines, fruit rather below the medium size, hard, of a golden color, and mild, agreeable flavor.

You see here that Vermont saw a great yield than Massachusetts and New Hampshire, but you'll also note that the numbers crash pretty quickly. In 1850 the state saw its peak compared to the national numbers, and in 1860 saw the peak for the state. The decrease in production in Vermont offers a nice opportunity to highlight the impact of westward expansion and the addition of national output from the Midwest and Pacific Northwest growers on growers in the New England states. As **these** areas expanded and improved production, Vermont's output became less important to the market – in other words as local and nationwide competition increased the overall amount of money available decreased.

At the same time, growers were facing environmental pressures with cut worm, lice, and rust in 1865, and then diseased roots and a shortage of healthy roots for cultivating new plants in 1866. But they were also facing social and cultural issues – you all may have heard that we had several waves of temperance movements. It was strong in the 1860s in Vermont and hotels and taverns were closing. There was a pretty funny workaround for some brewers though – because of the stringent laws against the alcohol content, some brewers wouldn't bottle themselves, and the bottler labeled the bottle "expressly for export," allowing for a higher alcohol content.



## HOPS: WHERE HAVE THEY GROWN? NEW YORK



### YIELD IN POUNDS

- 1850: 2,536,299
- 1880: 21,628,931
- 1906: 12,060,000
- 1920: 950,000
- 1929: 7,900
- 1937: 140,000

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Guess what? In 1825 people from New Hampshire also moved to New York. At first the harvests were modest, but after a series of English crop failures in the early 1820s the demand for hops increased, and when combined with the construction of the Great Western Turnpikes and the new Erie Canal (which allowed for cheaper east-west transportation), hop cultivation exploded.

I'll share lots of super things about New York, but one of my favorite things about my research on this state was looking at the barns. This one is from the Library of Congress and is a drying barn from Otsego County. The variety and ingenuity that went into figuring out how to dry hops was really amazing, but I have to applaud the wonderful architecture as well. This picture was taken in 1937, but its construction certainly predates that.

As I found for Vermont, there are some really wonderful descriptions of the hops growing in New York. These descriptions are from the 1870s. You have references to large and small cluster, one author says he noted no particular difference noted between them besides size. There was the grape cluster (compact bunches), Pompey – which was described by NY growers as a large coarse variety, vigorous grower, inferior to cluster in strength and flavor, and not known for keeping its color. There other references to “true Canada” and “Humphries, as well as a note that the Golding hop was tried, but found to be susceptible to rust. Also growing was the “palmer seedling,” which was large but didn't have as high a yield – one notable thing about the Palmer was that it matured 3-4 weeks later and was being increasingly cultivated in NY, Canada, and western states.

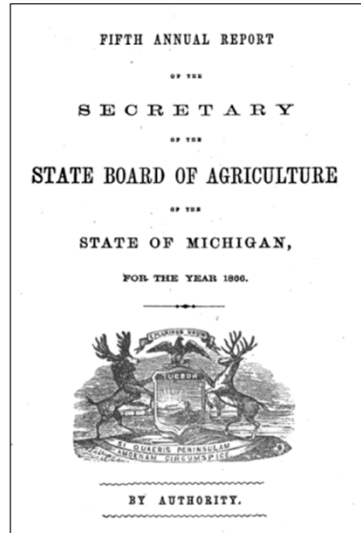
By 1840, 43 New York State counties reported having at least one hop yard. As you can see with the numbers you see here, the industry peaked in last quarter of 19th century. What happened? Bugs, mold, mildew, drought, and Prohibition.

They were also facing competition from more efficient and higher yield hop producers in

Oregon, California, and Washington. Other issues were the appearance of crop-specific insects and a “blue mold” that attacked and destroyed the hop flower, the emergence of the more reliable dairy industry, and the growing intolerance of many Americans toward alcohol. Prohibition in the 1920s and 30s resulted in the final collapse of what had been central New York’s most successful crop.

NOW HAVE THE FARM BREWERY  
LAW: 20% OF HOPS AND 20%  
OTHER INGREDIENTS FROM NY IN  
2012, 60% BY 2018, 90% BY 2024

## HOPS: WHERE HAVE THEY GROWN? MICHIGAN



### • YIELD IN POUNDS

- 1850: 10,633
- 1860: 60,602
- 1870: 828,269
- 1880: 266,010

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I admit, finding a lot about Michigan's history was tough. I do know that about the same time Michigan's first cherry tree was planted hop rhizomes were also being put in the ground. I'm going to sound like a broken record, but the hop louse ended Michigan's hop industry, and when the hops crop was decimated the cherry crops picked up the slack. But this does offer an opportunity to mention another spot

you can find historical information: state and federal departments of Agriculture, and land grant schools. This one from 1866 is 325-350 pages and will give you all sorts of information about livestock, crops, problems faced that year, and revenue information. Beyond being valuable for data and details, these are also great sources for names and locations.

During the living history panel Dan Weisen will tell you a lot about what's going on in Michigan now – it's pretty exciting.

## HOPS: WHERE HAVE THEY GROWN? WISCONSIN



### YIELD IN POUNDS

- 1840: 0
- 1850: 15,930
- 1860: 135,587
- **1867: 75% U.S. HOPS**
- 1870: 4,630,155
- 1880: 1,966,827
- 1890: 460,080
- 1900: 150,000
- 1910: 0



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For the sake of credit, this is not a photo housed at the OSU archives, it's from a 2013 post on the Oshkosh Beer blog called "A History of Hop Growing in Oshkosh." I love this 1860s photo a lot, for many reasons, but one thing I will point out is the trellis system they are using and the boxes. I found a lot of discussion about things like boxes, and learned that the **west coast** growers weren't excited about the standardization others in the state had embraced.

Despite what we think about brewing and the Midwest, most of the new arrivals to Wisconsin in the early 19<sup>th</sup> century weren't from Germany but from New England. Later, when the Germans came, they brought beer! But when that beer came to the Midwest it came to a spot made for growing. As the Assembly of the State of New York reported in 1865: there is no reason why you cannot grow hops in Illinois and Wisconsin, but you will find one trouble. The soil is so fertile that the vines will grow too large, overrunning and breaking down the poles and not producing fruit in proportion to the growth of the vines."

Here's something that will repeat in my slide on California and Oregon – some dispute over who was "first." James Weaver claimed to bring and plant the first roots in 1837, and Jesse Cottingham claimed to plant the first hops in 1852. As you can see from the stats here, in 1840 there was a ZERO reported for that year, which indicates to me that there may have been some acreage but no reported commercial production.

The boom is clearly limited to late 1860s, 1870s, and early 1880s – sparked largely by problems in hops growing areas of new York and new England. As we saw in Vermont, taste changes for beer styles and new growing areas in the west shrunk demand for Wisconsin hops – those with larger yards in other states could operate under economies of scale and survive price fluxuation. As a result, many farmers converted their land to another crop or to livestock. We also see a strong temperance movement in Wisconsin. In 1867 the state's Methodist convention urged local farmers to stop growing hops because of its use in alcohol – Baptists, Congregationalists, and Presbyterians made similar arguments, as did some catholic groups (many of them German).

However, the belief time that the hop market would continue to grow led farmers in the area to neglect other agricultural ventures and over produce hops. One year later in 1868, the bottom fell out of the market when the hops louse infestation was resolved in New York, resulting in an over supply of hops. Prices dropped from 60 cents a pound to less than 10 cents a pound, and growers were forced to sell their crop at a loss. Farmers lost fortunes along with homes and soon the thousands of acres of hops dwindled into obscurity.

## HOPS: WHERE HAVE THEY GROWN? CALIFORNIA



### YIELD IN POUNDS

- 1850: 0
- 1860: 80
- 1880: 1,444,077
- 1890: 5,040,000
- 1900: 9,360,000
- 1909: 8400 ACRES
- 1935: 11,040,000

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Again to give credit – not our photos. These two come from the Center for Sacramento History and both are from 1919.

No agricultural reorientation within the United States has been more sweeping than the transfer of the American hop-growing industry from the Atlantic Sea board to the Pacific Coast between 1860 and 1920. In 1893, the Pacific Coast hop crop surpassed that of New York for the first time, and the decline in Eastern production was rapid in the following years. The Census of 1920 reported no commercial production east of the Rockies, but after the repeal of the Eighteenth Amendment hop growing enjoyed a minor revival in New York.

It might not be surprising, but the earliest uses of hops in California were probably ornamental or for home brewing, which was quite popular and resulted in a number of vines growing in kitchen gardens. California was primarily hard-liquor country, and before the late 1850s there weren't many breweries in the whole state so demand wasn't that high for west coast hops. When growers did settle, they found that the mild climate in California meant a crop the first year, the soil was good, and acreage quickly expanded. There was also a shift in the design of fields from the beginning with the traditional pole system being replaced with a wide trellis because poles were too expensive because of limited wood resources and limited the yard growth.

Wilson G. Flint, one of California's most prominent business and political figures of the 1850s, seems to have made the first importation of hop roots into California in the spring of 1854. His hops came from France (which didn't make it) and New York. His brother, Daniel, who became the dean of California hop growers, planted 16 acres of hop roots on the bottom lands of the Sacramento River two miles south of Sacramento in 1858, probably planting the Pompey. Daniel became quite famous and later wrote about his experiences as a grower, writing a USDA Farmer Bulletin in 1900 about hop culture in California. His topics vary from cultivation to harvest, but his recording of the history of California hops is quite valuable, focusing at times on planting different varieties to stagger the harvest season to ensure a labor force and others on the prejudice of local brewers against California hops. He talks about terror and the way hops are being judged "In the markets too much stress is often laid on the color of hops instead of on the quality and quantity of the lupulin, which is the important element to be considered by the brewer or the manufacturer. In California, quality is usually sacrificed to the production of quantity." In evaluating quality, Daniel wanted growers to think about the hops they were growing; one leading variety he recommended was the "large gray American hop" – which was large and compact and another he'd steer clear of the was the "San Jose" hop – one that growers "don't plant if they know it." (1899)

Moving back to firsts, there was some competition for who the "first" in California was. Amasa Bushnell was a grower who moved from New York and brought routes by way of Panama in 1856, planting them in San Mateo County near where Burlingame is now. In 1858 he moved to Sebastopol and became the first grower in the Russian River area. Joel Ray also planted a yard in 1856, near Sacramento, and also claimed to be the first grower in California.

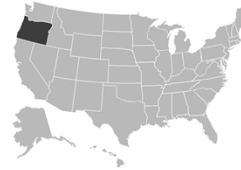
Emil Clemens Horst once owned largest number of acres of hops in the world. He revolutionized the process of growing and processing hops with his patented mechanical separator that harvested the hops while discarding the vine and leaves. The process was actually developed by his son-in-law. A 1911/12 film at Sacramento History Online film, shows the processing of hops and their shipment to market. The first part is the hop separator in operation on the "Campus Commons" ranch. The second section is scenes in hop fields at Hopland, California or in Oregon. The third section is on the weighing and transportation of bales of hops by the Oregon Railway and Navigation Company probably near Portland, Oregon.

One thing I do want to touch on for California is the 1913 Wheatland Hop Riot. Ralph Durst was the largest employer of agricultural labor in California and in 1913 he advertised for workers for the hop harvest. That year the number of willing workers far outstripped demand, with some 2800 men, women, and children flocking to the Durst Ranch to work as pickers in the fields. Jobs actually existed for only about 1500 workers daily, and pay rates were consequently slashed. Aside from the pay, because there were so many people in the camp, both with jobs and without, conditions in the camp were dire. There was little clean water and only eight toilets to share between the thousands of workers, which meant disease was a problem. The workers demanded change and Durst panicked, traveling to the county seat and gathering up law enforcement and deputized citizens. Four men were killed in the resulting violence: two workers, the Yuba County district attorney, and a deputy.

**During WWI one grower turned a number of hop kilns into vegetable driers and secured big contracts for dehydrated vegetables for use by American army abroad.** 1919 article warns that demand for drivers will decrease unless marketed in a large advertising campaign. Points to experiments that show that hop driers can be used to dry all kinds of fruits and berries quickly. Also experimented on various salt water fish. Cooperative associations for marketing specific lines of food

products have been successful in California, especially for oranges, cantaloupes, raisins, and prunes - suggests this could be a new industry.

## HOPS: WHERE HAVE THEY GROWN? OREGON



### YIELD IN POUNDS

- 1850: 8
- 1860: 493
- 1870: 9,745
- 1880: 244,371
- 1890: 3,811,320
- 1900: 15,300,000
- 1906: 23,985,000
- 1935: 25,797,000



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As you can imagine, this was one of the easiest slides for me to prepare. But before I launch into the narrative history I have to point out one of my favorite stats – 8 pounds recorded in 1850. I will also say that choosing a photo for this slide was really hard. I only have one child so I never have to make these choices. So here you have Hop Field Day 1941, a nod to OSU's role in research and development, but also to women wearing a black dress and heels in a field.

We'll hear from Patrick Leavy in our living history panel in the next hour.

As we head up the Left Coast, I will note that the earliest record of the hop crop in the Pacific Northwest is one about a transport from Fort Vancouver, a 19th-century fur trading that was the headquarters of the Hudson's Bay Company, to Sitka Alaska. There is also a reference to hops growing in the Fort Vancouver Farm in 1836.

There is conflicting information about who the "first commercial hop grower" was in Oregon and the exact date hop seeds arrived in Oregon is unknown, but some dates suggest that the plants grown in Oregon could have been the first on the Pacific Coast. According to Virginia Eastlick in *The Oregon Geers*, Frederick Walcott Geer brought hop seeds with him to Oregon in 1846 and planted them near Silverton; when he died in 1866 he was the first successful hop farmer in Oregon. There's another unnamed grower referenced in a 1903 article by Henry Reed. And another reference to Adam Weisner coming to Polk County from Wisconsin in 1867. But the commonly recognized "first" grower was William Wells of Buena Vista. He planted the first commercial hop yard in Oregon in 1867; though hardly a major contributor to the global marketplace, Wells helped inspire others to invest in the specialty crop. George Leisure follows Wells as another early grower, setting up in Lane County in 1869; he supposedly bought root stock from Wiesner.

In the early 20th century hops were plentiful in Oregon and open for experimentation – and from 1905 to 1915 Oregon was the nation's largest hop producer!

Despite Prohibition and the Great Depression, Oregon hop production grew after World War I due to the disastrous effects of the war on European agriculture. From 1922 to 1943, Oregon regained the honor as the nation's largest producer, and by the 1930s (following the repeal of Prohibition), the area around Independence in Polk County was known as the "Hop Center of the World." But the entire Willamette Valley felt an increased demand for a seasonal labor force to harvest hops.

Growers advertised in newspapers to recruit urban families and provided cabins or tents, water, and other necessities for the hop-pickers, but because the work was "unskilled" pickers were recruited from all over the region for the short harvest season. Women and children were hired for their perceived picking dexterity (and lower wage demands), and a diversity of workers were found in the fields (racial, economic, geographic).

Many of the operations included entertainment, such as music and campfires, which added to a general festive atmosphere across Oregon during hop harvest season. Pickers enjoyed decent wages and a retreat from the city, although there were occasional labor disputes. Urbanites and rural laborers, married and unmarried, young and old, men and women alike enjoyed decent wages, additional income, and a retreat from the city.

The hop harvest was more than just agricultural, but also offered social and cultural opportunities as many farms offered entertainment and camping facilities. More organized hop festivals grew out of the end of harvest celebrations in the migrant camps found at the fields. Pickers still have fond memories of these celebratory evenings, but less fond ones of the hard picking during the day. By the early 1950s the hop crop began to decline and mechanical picking machines replaced the need for seasonal laborers. This change meant a demise of a large hop festivals, but



also a shift in growing practices. Many growers abandoned their crops, while others increased acreage to pay for their investment in mechanical pickers.

Concurrent with this boom/bust in production and freedom from Prohibition, hop farmers in Oregon faced a problem plaguing many other hop-growing states: mildew. In response, in 1930 the USDA and Oregon State formalized a hop research program that had existed since the first roots were planted on campus in the 1890s. 78 years later, it was Dr. Alfred Haunold who made an indelible mark on the industry with the Cascade and other popular modern American hop varieties.

## HOPS: WHERE HAVE THEY GROWN? WASHINGTON



### YIELD IN POUNDS

- 1860: 44
- 1870: 6,162
- 1880: 703,277
- 1890: 8,882,640
- 1906: 8,775,000
- 1935: 10,914,000

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Washington has clearly dominated the hops industry since the middle of the 20<sup>th</sup> century. For those of you who have not been and want to see more history about the state, I recommend making the trip to the American Hop Museum in Toppenish. It really is worth a trip!

The first hop roots reached Washington Territory in 1863 when Charles Wood, an Olympia brewery owner, imported half a bushel from England. He gave the roots to Jacob Meeker to raise for local brewery consumption. Meeker sold the first hop crop from his Puyallup Valley yard in 1866, and word spread through the Washington Territory that this valuable crop could be grown. A few years later Meeker's son Ezra became the largest hop grower in the US, having developed 600 acres in the Puyallup and White River Valleys. In 1883 the confident younger Meeker wrote *Hop Culture: A Practical Treatise on Hop Growing in Washington, from the Cutting to the Bale*. It was a definitive handbook that encouraged other growers to try something new – as one of my colleagues in the archives says “it’s a soup to nuts” kind of book. A lot of hops history writings for Washington focus on the Meekers, so I really do encourage growers to find ways to save and share your story.

Acreage increased the following decade and once the railroad reached the valley hops success was almost assured. In 1886, the main hop farms were in the Ahtanum Creek Valley. But heading into the the early 1890's more farms were planted and Yakima County became the principal hop-growing area. Known for its hot, dry, summers and abundant irrigation, crops flourished. Toppenish and Moxee City became major market centers and have remained so to the present day. It's pretty cheesy to say "and the rest is history, especially when we still have Idaho up next, but with over 32,000 acres in 2015, I think we know that something is going right up there!

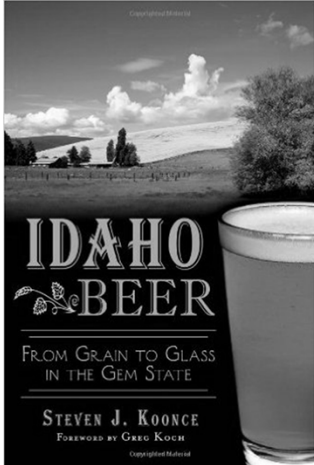

We're going to hear more about the story of hops in Washington from Steve Carpenter. But I will steal a blurb from the Yakima Chief /

**Hopunion page:** "Carpenter Ranches was established in 1868 when Charles Carpenter departed from his hop growing family in New York and settled in the Ahtanum area of the Yakima Valley, beginning with just a log cabin and an ox cart. As the first hop farm in Washington State east of the Cascade Mountains, Charles helped pioneer what is now the largest hop producing region in the world. He transformed a once wilderness area into a hop farm with his own custom-designed irrigation system, hop press, and wood-fueled kiln." So save all your good questions about his farm and how the Smith, Carpenter, and Perrault families started Yakima Chief. I will also point you to the YCH Who We Are growers site, which has nice summaries of the history of the growers.

The two pictures you see here are significant, and both were scanned by Steve. The first I love because there's a dog. The second in pointing out the role that tribal pickers played in the harvest in Washington and in Oregon. I'm not a labor historian, but I'd be happy to talk more about this in the Q&A and I'm sure the growers up next

can share some of their stories.

HOPS: WHERE HAVE THEY GROWN?  
IDAHO



TOTAL ACRES

- 1870: 21 POUNDS
- 1987: 1,799
- 1998: 3,909
- 2008: 3,933
- 2015: 4,975

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We've made it to Idaho, can you believe it? For those head scratching, this Idaho Beer book by Steven Koonce is a prompt for me to say something about people writing about this history. I have a bit of a book addiction, as well as an online blog addiction, and there are some really interesting things out there for you to read. This one was published in 2014, and if you'd like to

talk more about how I've seen people using historical and contemporary materials, please ask me in the Q&A or after the living history panel. I will also note that there is a Bend Beer book as well.

Okay, so by the time we get here, most folks who are gathering stats have just started to refer to acres, and their numbers are pretty reliable and consistent. So forgive me for reporting in acres, but I think you'll still get a sense of the trends. And yes, referring back to Meeker's chart, Idaho did produce 21 pounds in 1870. On the flip side of that is a

fast forward to the 1,700 acre Elk Mountain Farms, where Anheuser-Busch has bought most of the hops since they were planted in 1987 in the northern Idaho town of Bonners Ferry, just 10 miles south of the Canadian border. And yes, from what I know this is still the largest contiguous hop farm in the world.

We're going to hear from Mike Gooding up in the next panel, and he can talk about the history of what is now the 6<sup>th</sup> generation Gooding Farms in Wilder. A nice tie in for me in Oregon is that the Goodings started growing hops in

Western Oregon at the end of the 19<sup>th</sup> century before moving to Idaho in the 1940s.

Idaho's first hop farmers, the Batts, installed their trellises in 1934, and the world of hops have changed a lot since then. By 1948, hop growing was such a promising prospect in Canyon County that 10 different farmers started that year, including Ray

Obendorf. There was a great 2006 article I found in the Boise Weekly called “The Hopfathers: The storied past and tenuous future of Idaho's beer barons,” and I just want to read a passage from that because I think it is a nice conclusion to all of this history. Summarizing Obendorf, author Nicholas Collias captures the ebb and flow that we’ve seen through this hops history “

When he was told during the 1940s and '50s that "Cluster" hops were the norm, he grew Cluster. When scientists the University of Idaho Experimental Agriculture Station in Parma developed a new extra-bitter hop called "Galena" in the 1970s, he was near the front



of the line to plant and sell the popular strain. When brewers soured on the aroma hop "Cascade" about a decade ago, Obendorf says, he took out his Cascades, root systems and all. Then, when the brewers reversed their decision and demanded Cascades a couple of years later, he replanted. "It's a fickle business," he says."

THANKS! NOW FOR QUESTIONS.



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The records of farming history can be found on local tax rolls, county atlases and maps, and Grange membership lists, as well as in soil and water conservation districts, county Cooperative Extension agencies, and the unique “cattle earmark” books that registered the local brandlike marks farmers cut in the ears of their livestock to prove ownership. Federal and state censuses also offer a tremendous amount of information. Federal agricultural schedules appended to the censuses detail the size and value of property, number of people employed, the crops grown, and the livestock raised.