

# “Hop Fever” in the Willamette Valley

## *The Local and Global Roots of a Regional Specialty Crop*

DURING THE FALL OF 1865, Olympia, Washington, brewer Isaac Wood became frustrated with his inability to acquire hops, grown predominantly in distant East Coast and European fields. He asked a neighboring farming family, the Meekers, to plant a few hills of the crop, and they agreed to the experiment. It was a historic decision. Jacob Meeker and his son Ezra planted rootstock the following spring. By late summer, a successful harvest satiated Wood’s desire to use local hops in his beer-making and earned the Meekers more money than had any other crop.<sup>1</sup> Following the family’s windfall, Ezra Meeker energetically promoted the news to farmers across the region. He asserted that the future of Pacific Northwest farming rested in hops. Production of the specialty crop expanded rapidly, and Meeker soon proclaimed that his farming brethren had caught “hop fever.”<sup>2</sup>

By the early twentieth century, the Pacific Northwest was one of world’s leading hop exporters. Ideal environmental conditions, an established agricultural infrastructure, and improved shipping capabilities all spelled success. Oregon’s Willamette Valley appeared particularly suited for the crop. Industry experts remarked that environmental and climactic features of the region resembled the Hallertau district in Germany, a global center of hop production.<sup>3</sup> Farmers in every Willamette Valley county heeded Meeker’s ongoing endorsements by planting more crops every year. In 1905, Oregon became the leading hop-growing state in the nation and challenged German levels of production from then until World War II. The region’s growers proudly claimed the title “Hop Capital of the World.”<sup>4</sup>



*From approximately 1870 to 1950, the Willamette Valley hop harvest provided the stage for one of the region's largest annual folk gatherings. This photograph from a late-nineteenth-century Benton County hopyard shows how hop-picking was often a family affair.*

The origin story of the Willamette Valley hop industry, spanning from 1865 to 1905, involves intersecting themes of environment, economy, and culture. The history engages the Eurasian and American genesis of hop agriculture, the role of specialty crops in late-nineteenth-century diversified farmsteads, the creation and dissemination of agricultural knowledge, and the economic and sociocultural importance of the late-summer harvest. Hop cultivation brought together farmers testing new ways of making a living in the Willamette Valley, merchants working to foster global business networks, and a diverse pool of workers making some extra money at the end of each summer. When unfolded, these layers reveal how hops contributed to a local economy and community identity, and how the specialty crop connected the Willamette Valley to people and places across the world.<sup>5</sup>

### THE GLOBAL ORIGINS OF “THE WOLF OF THE WILLOW”

Hops are deep-rooted perennial plants that produce annual vines and cones. There are varieties native to East Asia (*Humulus japonicus*) and North America (*Humulus americanus*), but brewers covet only the common hop (*Humulus lupulus* L.) native to Eurasia. Before the use of hops in beer, peoples across the Northern Hemisphere collected wild cones for teas and medicinals, tender shoots for food, and vines for twine. Pliny the Elder documented the plant nearly two thousand years ago, naming it “the Wolf of the Willow” because the vigorously growing vines killed neighboring willow trees. It was not until the eighth century that Bohemian monks domesticated the plants for ornamental purposes, and five hundred years later that beer-makers across Europe consistently used hop cones in their brews. Only after experimentation with dandelion, heather, and other plants did brewers decide on the hop for its many useful beer-brewing characteristics. The bitter alpha acids in hops help balance the sweetness of malted grain, and hop oil provides pleasant aromatic qualities. The soft resins in *Humulus lupulus* (that is, alpha and beta acids) also have strong antibacterial activity and act as a natural preservative, giving the malted concoctions a longer shelf life.<sup>6</sup>

By the eighteenth century, the world centers of hop production resided in Bavaria, Bohemia, and England. The reasons were environmental and cultural. First, the plant only grows and produces well at latitudes of 30 to 55 degrees on either side of the equator and in climates that provide winter frosts for required dormancy, wet springs to initiate rapid growth, and dry summers to stave off pests and diseases. Although varied in climates and soil types, all three regions met these criteria. Second, cultivation in these regions was good business because they were also the European centers of beer production. Initially grown in small plots and used for small-scale beer-making, hop agriculture expanded as commercialization of the beer industry increased during the end of the eighteenth century and into the nineteenth. Europe’s escalating populations consumed the beverage for leisure, and during this era of early industrialism, hopped beer was often a safer beverage to consume than water. As Europeans increasingly colonized distant parts of the world, the fermented beverage provided a widespread source of refreshment and nourishment. The origins of the India Pale Ale (IPA), popular today, trace back nearly two hundred years, to when the beverage earned its name because of the large quantities of hops that English brewers used to preserve beer for long oceanic voyages to India.<sup>7</sup>

It was on earlier transoceanic voyages, however, that the common hop first traveled outside European centers of production. In excursions to temperate regions of Australia, South Africa, and the Americas, European colo-



*Hop driers once spanned the Willamette Valley agricultural landscape, with nearly 1,500 individual growers in the early twentieth century needing to prepare their crops for the marketplace. This image, from about 1900, captures the end-process with baled dry hops, ready for shipping.*

nists imported a wealth of new plants and animals. Historian Alfred Crosby refers to these biological transplantations as *portmanteau biota*, or suitcase species.<sup>8</sup> Journalist Michael Pollan calls the purposefully introduced plants *the botany of desire*, or botanical species that humans continually modify for nutritional, aesthetic, or recreational purposes. Pollan argues: “The species that have spent the last ten thousand or so years figuring out how best to feed, heal, clothe, intoxicate, and otherwise delight us have made themselves some of nature’s greatest success stories.”<sup>9</sup> Common Eurasian and African fauna and flora that resettled in colonized lands include horses, cows, pigs, sheep, wheat, rye, and rice. Other non-native fruits, vegetables, and specialty crops also filled dinner plates and contributed to the contents of beer and wine glasses in the new colonies.<sup>10</sup> The records of the Massachusetts Bay Company indicate that along with hopped beer, hop plants arrived with European settlers of North America as early as the 1620s. Throughout the

rest of that century and the next, colonists along the Atlantic seaboard cultivated hops for household beer production. Some ambitious beer-makers sought *Humulus americanus* in the wild, but those plants produced smaller cones and were largely undesirable.<sup>11</sup>

#### THE WILLAMETTE VALLEY'S "HOP FEVER"

Many who settled the Willamette Valley in the mid nineteenth century believed they had found an agricultural utopia. Seemingly anything planted grew in this area framed to the west by the Coast Range and to the east by the Cascades, and to the north and south by the Columbia River and the Calapooya Mountains (near present-day Eugene). While the abundant and incessant rain of the long winter and spring seasons prevented many from declaring the region a "second Eden," the achievements and potential of farming took center stage.<sup>12</sup>

Euro-American settlers first capitalized on sandy-loam soils, timely rainfall, and generous transportation networks provided by the Columbia and Willamette river systems to cultivate and export wheat and livestock. They first built markets during the peak years of the fur trade, between the 1820s and 1840s, and then supplied the California Gold Rush of the 1850s. A decade later, farmers established a transoceanic grain trade with a central market in Liverpool.<sup>13</sup>

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*Whether hanging from timber poles or wire trellises (seen above), hops provided a visible indicator of the Willamette Valley's agricultural diversity.*

Despite this widespread success, there were indications that the region's agricultural potential had scarcely been tapped. Henderson Luelling and William Meek had established the Willamette Valley's first horticultural and nursery supply company in 1848, and many farmers experimented with new crops as the century progressed. To the delight of settlers seeking a resemblance of their homelands, non-native shade trees, fruits, and vegetables began to colonize the landscape in much the same way as grains and livestock imported from Eurasia and Africa.<sup>14</sup> Yet, before the 1870s, finding markets beyond the region for fruits, vegetables, and other specialty crops — including hops — proved difficult. Before Isaac Wood and the Meeker family experimented with hops in western Washington, a handful of farmers had planted desirable English Cluster hop varieties in the Pacific Northwest. Yields were minimal and used mainly for household brewing. The 1850 Agricultural Census recorded only 8 total pounds of hops produced in Oregon Territory. The census of 1860 reported 493 pounds for the new state of Oregon.<sup>15</sup>

The market for specialty crops grown in the Pacific Northwest expanded during the 1870s and 1880s as transcontinental railroads opened new shipping opportunities. While seafaring vessels remained critical for commodity transport, railroads could move goods from farms to cities and across larger sections of the country at a faster pace. Additionally, the development of refrigerated cars by the 1880s allowed for successful shipments of fresh fruits, vegetables, and other specialty crops. As William Cronon and other historians have argued, railroads revolutionized American commodity extraction by opening the vast resources of American nature to the world at an extremely rapid pace. Whether anticipating these changes in transportation or benefitting from blind luck, the Meekers' decision in the late 1860s to plant and promote hops across the Pacific Northwest occurred at an ideal historical moment. National and global distribution of specialty crops was now economical and efficient.<sup>16</sup>

In the same decade that Meeker began his commercial hop endeavor in Washington, a couple of forward-looking Willamette Valley farmers shared a similar notion. After securing Eurasian rootstock from Wisconsin, William Wells and Adam Weisner of Buena Vista, Oregon (Polk County), planted their first hops in 1867.<sup>17</sup> Their efforts ended in failure but made other farmers in the region aware of the crop. Two years later, with rootstock acquired from Weisner, George Leasure of Lane County raised Oregon's first commercial hop harvest.<sup>18</sup> Inspired by this success and Meeker's enterprising efforts, several other farmers began growing hops on the banks of the McKenzie River near Eugene. The following decade witnessed success by notable grow-

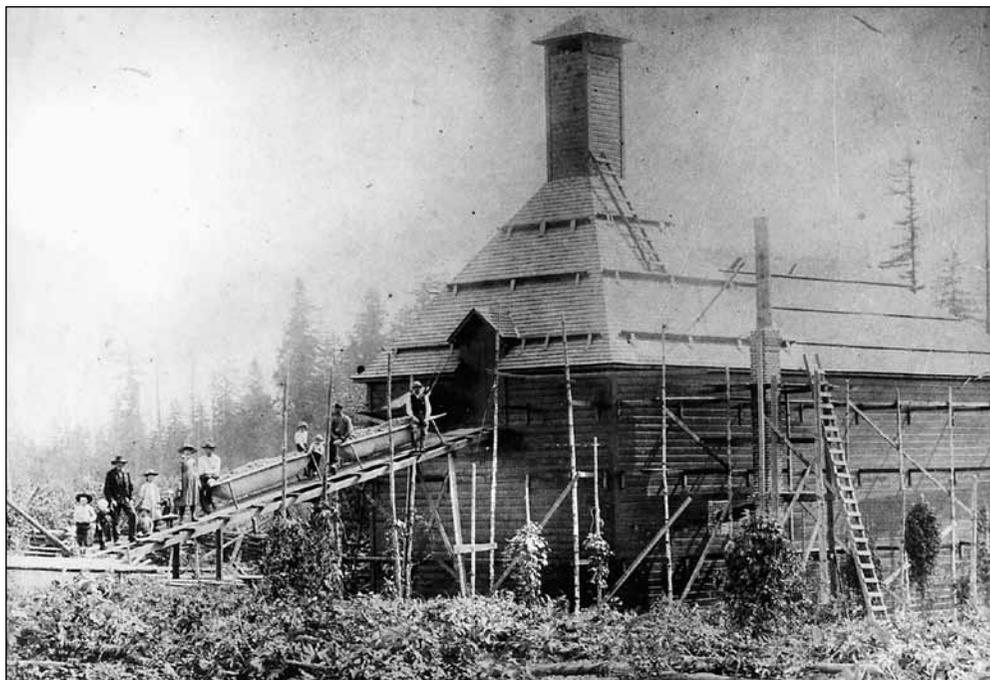
ers such as J.W. Kunoff and George E. May. Alexander Seavey also became a prominent figure in the area's hop culture, and his sons operated one of the nation's most successful hop companies well into the twentieth century.<sup>19</sup> In 1873, the *Oregonian* reported that yields in the Willamette Valley topped two thousand pounds an acre, or approximately double the output of other hop growers around the world. As this news spread, acreage in the region multiplied. Hop farmers recognized that they were not just beneficiaries of an ideal climate, soils, and shipping opportunities, but that they also had the advantage of an absence of European pests and diseases that reduced yields.<sup>20</sup>

During that promising beginning for the Pacific Northwest's hop industry, the 1870 Agricultural Census reported a combined 15,907 pounds harvested in Oregon and Washington. Those crops supplied local brewers but had little effect on the national or international marketplace. Ten years later, the census noted on hops: "Of the 46,800 acres in this crop during the year 1879 New York reports 39,072 and Wisconsin 4,439. No other state besides California reports as many as a thousand acres."<sup>21</sup> These observations ignore the rapid growth of hop-raising in the Pacific Northwest during the previous decade. In 1880, Pacific Northwest farmers produced nearly a million pounds of hops from 838 acres of fields.<sup>22</sup>

But that was just the beginning. In 1882, a global hop shortage brought new and lasting attention to the Pacific Northwest's hop-growing potential. Unpredictable weather that year led to one of Europe's worst agricultural outputs of the late nineteenth century, and disease attacked hop crops on the American East Coast and in the Midwest.<sup>23</sup> Along with California, Oregon and Washington arose as the most stable hop producers in the world. Prices skyrocketed as brewers from Latin America to Europe had few options but to purchase Pacific Coast hops. Ezra Meeker compared the agricultural windfall to California's 1849 Gold Rush:

The high value of hops prevailing for the past four years, culminating in the unprecedented price of one dollar per pound for the crop in 1882, has naturally attracted a wide-spread interest. An article that can be produced in large quantities, and sold for nearly ten-fold its cost, engenders a speculative feeling akin to that of a veritable gold-mining furore [sic] of the palmy days of '49, when the discovery of gold in California was first made known to the multitude.<sup>24</sup>

While Meeker had a penchant for hyperbole, he did not exaggerate the revenues from the hop bonanza. What started as Isaac Wood's desire for a local hop supply in Olympia was beginning to transform into a lucrative agricultural industry with an international marketplace. In the closing years of the nineteenth century, anyone with land west of the Cascades could see an opportunity in "the Wolf of the Willow."



*Along with labor, the hop house was a hop grower's largest expense. This image from Benton County shows how growers transferred hops to the top floor of the building. On the ground floor, large kilns burned wood and sulphur to preserve the hops spread evenly above.*

### ROOTED IN THE LOCAL AND THE GLOBAL

From the 1860s to the early 1900s, the Willamette Valley hop industry transitioned from a speculative agricultural enterprise to a self-proclaimed “Hop Capital of the World.” As the term implied, connections grew between the local landscape and consumers across the globe, creating changes in the Willamette Valley’s environment, economy, society, and culture. Most immediately, the expansion of the Willamette Valley hop industry left its footprint on the land. Farmers first preferred to plant hopyards (more commonly called “hop gardens” in Europe) on bottomlands, claiming incredible yields from nutrient-rich soils. They created evenly spaced rows of vines that climbed ten feet or higher. Growers primarily used timber poles to support the vines until the turn of the twentieth century, when they adopted the trellis systems that are still in use today. At that time, they also increasingly expanded acreages to uplands. Large barn-like structures that housed kilns for drying and curing also left an imprint on the landscape. Those build-

ings, often referred to as hop driers or hop houses (or oasts in England), had long sturdy ramps on the exterior so wagonloads of uncured hops could be unloaded onto an inner upper-story drying area. Inside, large kilns burned wood and sulphur to promote uniform drying.<sup>25</sup>

Save for a handful of farmers in the Willamette Valley who cultivated the crop extensively, the hopyard was only one part of a larger diversified farmstead. In 1895, a writer for the *Oregonian* described one of the new fields of hops: “On a broad hill slope, near Fulton, about one mile and a half south from Portland, is a model hopyard. . . . It is 14 acres in extent, and each year of the six years since it was planted, has averaged 2000 pounds of cured hops to the acre.”<sup>26</sup> Although the size of Willamette Valley farmsteads had been shrinking as the population increased and people competed with each other for land, the Fulton farm’s fourteen acres of hops likely would have been a small fraction of the entire operation. A typical farmstead included grain and hay fields, pastureland for cattle, orchards, and a vegetable garden. A view of the landscape in 1885 would not have suggested that hops had become the primary crop of the Willamette Valley. Rather, it was a widespread specialty crop that supplemented the rest of the farm’s operations. Most farmers grew between five and twenty-five acres of hops. Their goal was modest: to generate cash income to buy consumer goods in the modernizing economy.<sup>27</sup>

Far less obvious than the poles, vines, and driers that marked changes across the Willamette Valley landscape was how the cured hops integrated into the local and international economy. Unlike Ezra Meeker — who had a close relationship with the brewer Isaac Wood and who signed a long-term contract with Portland’s Henry Weinhard in 1869 — most regional farmers did not fraternize or deal directly with the end users of their harvest.<sup>28</sup> Several hop companies took root in the Willamette Valley, but a group of grower-dealers dominated the organized sale and transport of hops. Those individuals usually grew hundreds of acres of their own crop and contracted with smaller farmers for sale domestically or abroad. By the 1890s and during the first years of the twentieth century, the two most influential grower-dealers on the Pacific Coast were Ezra Meeker of Puyallup and Emil Clemens Horst of Sacramento. Both men stationed representatives in the Willamette Valley during the summer growing and harvest seasons to scout out the choicest and most productive hopyards. The competition for hop contracts was cutthroat. Even during a period when brewing expanded in Portland, Salem, Tacoma, and Seattle, the majority of Willamette Valley hop farmers sold their crops to middlemen.<sup>29</sup> Letters from Meeker family members stationed in the Willamette Valley frequently mentioned Horst’s aggressive tactics, such as offering a penny more per pound. The spirit of this competition favored small growers because it brought buyers to their



*Shouts of “wire down” once rang through Pacific Coast hopyards. The call informed pickers that the trellis wires had been lowered for access to the harvest. These workers were photographed near Silverton, Oregon, in 1903.*

hopyards. But the arrangement also put pressure on them to produce high-quality products, which was sometimes difficult given their unfamiliarity with the crop.<sup>30</sup>

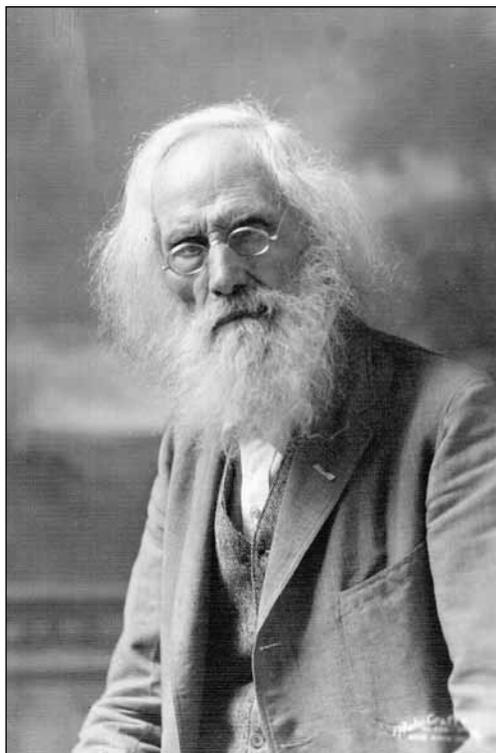
Once contracted for sale, a Willamette Valley farmer’s hops entered the international marketplace just like any other commodity. Some hops ended up in the ales and lagers of Portland’s Henry Weinhard or Seattle’s Rainier Brewing Company. Others ended up in Anheuser-Busch, Pabst, or other rapidly expanding breweries of the Midwest. Millions of pounds landed overseas, in the brewing kettles of beer-makers in Brazil, China, or the largest American hop importer of the era, Great Britain. The U.S. Department of Agriculture gave some assistance to Pacific Coast hop growers in expanding their markets during the 1890s, but it was mostly the larger grower-dealers and other hop distributors who negotiated international trade. Ezra Meeker visited Europe four times during the 1880s and 1890s, learning the details of the hop trade, and was one of the first growers to seek shipments of hops on the same ocean-bound ships that carried wheat to Liverpool. He also stationed his son in England to maintain relationships and acquire new knowledge about the industry. Horst was a native of Germany who immi-

grated to New York to open a hop company before moving to California in the late 1890s. His connections to both the eastern United States and Europe remained strong until his death a half-century later. In 1904, Horst negotiated with Ireland's Guinness Brewery to purchase Willamette Valley hops exclusively, marking one of the most impressive feats of the industry in the early twentieth century. The efforts of Horst and other grower-dealers based in the region helped expand the industry, to the dismay of many non-American hop-shipping companies. During the first decade of the twentieth century, Oregon added approximately 20 million pounds annually to the world's hop supply.<sup>31</sup>

The global connections of the Pacific Northwest hop industry were not only directed outward. Aside from land, water, timbers, manure fertilizer, and the raw materials needed in kiln construction, most hop-growers' supplies arrived from beyond the region. Growers continually imported hop rootstock from Europe, and they became fascinated with finding new varieties that provided high yields and had properties valued by brewers. Most were English varieties, which produced the highest yields, but other specimens arrived from Bohemia, Bavaria, Canada, Russia, and even New Zealand and Tasmania.<sup>32</sup> For sprays used in pest and disease prevention, growers utilized tobacco from the American South as well as whale oil from around the Pacific Rim and the bark of quassia trees from South America. They also relied on lye, sulphur, and burlap acquired from various merchants who were both inside and outside the region. By the turn of the twentieth century, as hop growers transitioned from timber poles to the trellis system, they also imported coir (string made from coconut) from tropical locations across the Pacific Ocean. Not surprisingly, perhaps, it was Ezra Meeker who originally orchestrated relationships with Seattle and Portland merchants for acquisition and distribution of these materials. His E. Meeker Company was at the center of these local and global commodity exchanges, and it therefore acted as a point of exchange between urban suppliers and rural farmers. Meeker's efforts in the hop industry allowed him to become one of the Pacific Northwest's first millionaires in the closing decades of the nineteenth century. Residents of the region anointed him the "hop king."<sup>33</sup>

Meeker's influence reached beyond buying and selling hops and other agricultural goods. Because regional hop farmers had little to no familiarity with the crop before securing rootstock and planting, they needed specialized agricultural information before entering the business. Meeker understood that and positioned himself as a matrix for knowledge acquisition and dissemination. He first learned about hop culture by reading newspapers, trade journals published in Europe and on the American East Coast, and a range of books on the subject. English volumes available during his foray into the

business included E.J. Lance's *The Hop Farmer* (published in London in 1838) and H.M. Manwaring's *A Treatise on the Cultivation and Growth of Hops, in the Kent Style* (published in London in 1855). These works described contemporary agricultural methods and analyzed markets. As American production rose during the mid nineteenth century, domestic publications also began to aid Pacific Northwest growers. The most prominent books included Andrew Fuller's *Hop Culture* (published in New York in 1865) and D.B. Rudd's *The Cultivation of Hops, and their Preparation for Market* (published in Wisconsin in 1868). New York's *Emmet Wells' Weekly Hop Circular* was the most important weekly journal. Meeker also spent considerable time corresponding with hop growers from near and far. He traveled around the Pacific Coast, East Coast, and England, learning from leaders of the industry. His sources of knowledge therefore reflected both local variances of cultivation and first-hand



*Ezra Meeker used the hop industry to become one of the Pacific Northwest's first millionaires. The photo above shows Meeker in the early 1920s, long after he had moved on from "the Wolf of the Willow."*

encounters with the most important representatives from around the world. That information allowed Meeker to succeed along with the regional growers who depended on his knowledge. He gained a reputation as an expert in the field, and he was willing and eager to share information with others. His eagerness reflected desires to both improve the overall quality and perception of Pacific Northwest hops and generate more business for his company.<sup>34</sup>

As the hop industry took firm root in the Pacific Northwest, Meeker recognized the need for an updated informational work. In 1883, the year of global hop shortage that put the Pacific Northwest on the map, he penned *Hop Culture in the United States Being a Practical Treatise on Hop Growing in Washington Territory, from the Cutting to the Bale*. The work became the fundamental source of knowledge for the region's local growers. While



*Each spring hop plants emerged from their deep root systems. Growers cut back the initial growth to inspire heartier, consistent vines that they could then train to poles or trellises. Today, for fear of diseases, scientists deter growers from letting the hops spread out this far on the ground.*

careful to declare the dangers of hop-raising and the whims of the market, Meeker outlined clear plans for cultivating and preparing the crop for buyers.<sup>35</sup> He offered basic information, such as the need for planting rootstock in the spring, cutting back the initial shoots to encourage a second growth of more stable and vigorous stock, and training those climbing vines to timbers. He also described many variances specific to the Pacific Northwest. In contrast to the set-up preferred by many English and German growers, for example, Meeker advised: “Where but one pole to the hill is intended, the plants should be seven feet apart, set in squares. Some growers prefer to set two poles to the hill and in such cases usually plant seven feet by seven and a half or eight.”<sup>36</sup> He included advice on other local variations in the Pacific Northwest, including available timber resources for poles and local sources of fertilization. Meeker also noted that, for first-year growers: “It is customary to plant corn or potatoes between hop-hills . . . sometimes one row and sometimes two between the rows. . . . The young vines are allowed to lie on the ground, as they produce no hops, but it will cost very little.”<sup>37</sup> Meeker also imparted his wisdom on acquiring sufficient labor for seasonal picking,

the need for quality controls in the picking process, and the intricacies of kiln drying for preservation after harvest. His work is the best evidence of both the flow of new knowledge into the region and its creation there and dissemination elsewhere. Surviving records of the E. Meeker Company reveal a steady string of requests for *Hop Culture in the United States* from Pacific Coast hop growers and others from all over the world.<sup>38</sup>

As the hop industry matured, Meeker became just one of many regional farmers who were integrated into a local and global knowledge exchange. Other growers approached the business with the same verve as the “hop king” and engaged in widespread information-seeking activity. They scoured available print resources, acquiring and contributing to the broad creation and dissemination of hop knowledge. Like Meeker, many made journeys to the East Coast and Europe to better understand the industry’s details. Additionally, local newspapers offered advice on where to find plantings and supplies and where to acquire loans. They also reported findings from around the region. In 1874, for example, the *Oregonian* reported that “T.W. Spencer, of McMinnville, in this State, has just returned from the hop regions of Puget Sound. He informs us that the people of that region are all in a fever of excitement about hops, and everyone who can secure a spot of ground is preparing to start in the business.”<sup>39</sup> An article from 1876 noted: “The hop raisers are in the midst of their picking this week, and we are informed that there will be a fair crop, a good quality, and a good price per pound.”<sup>40</sup> Over time, the federal government also recognized the regional importance of hops. During the 1890s, the U.S. Department of Agriculture (USDA) provided reports on cultivation methods and assessed the potential to expand hop exports across the globe, particularly to Latin America and East Asia. In the first decade of the twentieth century, the federal government also invested in a hop research program in Corvallis, and momentum grew with the passage of the Smith-Lever Act of 1914, which expanded the role of the Agricultural Extension Service. Crop scientists in Oregon established lasting relationships with other leaders from around the world, most notably those at England’s Wye College.<sup>41</sup>

By the turn of the twentieth century, Willamette Valley hopyards were undeniably the products of materials and knowledge from around the globe. They connected Pacific Ocean whaling to English scientists, American tobacco growers to Pacific Northwest loggers, and urban merchants to small farmers. The end product for all of this integration benefitted brewers and beer drinkers in every inhabited continent, attracting praise and recognition. An 1898 publication of the Oregon State Board of Agriculture, for example, proclaimed:

The garden spot of the world for the cultivation of hops is the Willamette valley, and the city of Salem sits in the center of the greatest hop district in the world. Every year the large hop dealers of London and the Eastern cities have their representatives occupying offices in Salem, and the money for an average of 75,000 bales passes through the banks of this city.<sup>42</sup>

Across the country in New York, Herbert Myrick, an expert in hops, agreed, noting the possible “monopoly of the world’s hop market by the United States, and especially by our Pacific coast states.” He even went on to suggest: “The author believes such monopoly to be possible, at least to the extent of the United States producing the largest share of the world’s consumption.”<sup>43</sup> Across the Atlantic, European interest also intensified. In 1900, Emanuel Gross, a German expert, warned his readers of a transformation in the industry: “The introduction of hop-growing into the United States,” he suggested with an eye to the Pacific Northwest, “marks a turning-point in the history of this industry, the consequences being adverse to the interests of European growers.”<sup>44</sup> While Gross remained unsure of the lasting power of American production, his writings reveal a new global awareness of America’s far corner. At the time of all of these comments, however, there were major concerns about the sustainability of the Willamette Valley hop industry.

#### CONFRONTING AND HOPPING OBSTACLES

Even with the fortunes of excellent climate and soil and access to markets, Willamette Valley hop growers faced a range of obstacles during the industry’s first decades. The growers brought some challenges on themselves, but many resulted from forces outside their control. Addressing these issues became central to maintaining success and expanding the industry. Many farmers were not immediately successful, if ever. Thus, by 1899, the apparent risks of hop agriculture led hop expert Herbert Myrick to quip: “‘The hop industry is a gamble,’ has therefore come to be an axiom.”<sup>45</sup>

The initial challenge for all American growers was competition from Europe. The centers of hop agriculture in Bavaria, Bohemia, and England had longstanding relationships with brewers. Farmers there grew the preferred noble hop varieties: Hallertauer mittelfrueh, Saaz, Tettnang, and Spalt. Brewers in the United States and other places colonized by Europeans also preferred these noble varieties and paid a premium for them because they had been trained by brewmasters in Europe. European recipes and styles of beer, after all, utilized European varieties of hops. The English hops commonly grown in the Willamette Valley were acceptable, particularly in Great Britain, but generally were not the first choice of brewers. Additionally, Pacific Coast hops were often stigmatized because of the perceived poor quality and presentation of the produce. Whether due to the sheer newness of hop

cultivation in the region or lack of quality controls, hired laborers did not adequately pick hops free of stems and leaves. Brewers worldwide did not want to purchase hop bales that contained significant amounts of detritus, which reduced the overall quality of the hops.<sup>46</sup> Farmers therefore struggled with their reputations. To make matters worse, by the 1890s, the region began to lose the original benefits of virgin soils. Increasingly, rootstock imported from Europe introduced botanical pests and diseases, which added to other environmental problems including extremely wet or dry weather that either rotted plants or burned them. All these problems threatened the quality of the region's hop harvests.<sup>47</sup>

Pacific Northwest hop growers unintentionally brought further ills upon themselves when they expanded rapidly in the fierce heat of "hop fever." As Myrick explained in 1899, referring to the region's excellent conditions: "This apparent advantage has operated to the detriment rather than to the benefit of . . . Oregon and Washington . . . because it has led to hop planting by inexperienced persons, or to the setting out of larger plantations than the owners could properly operate except by incurring heavy mortgages." He went on to highlight a related problem: "Low prices following overproduction have therefore ruined a larger proportion of those who went into hops on the Pacific coast than in any other part of the world."<sup>48</sup> Myrick was not alone in making these observations. Meeker and other industry leaders warned growers in Oregon and Washington of the conundrum. Receptive to these concerns, the *Oregonian* in 1894 warned that the region was flooding the market with surplus.<sup>49</sup> The timing could not have been worse, as the weak demand for hops had intensified amidst the nation's entrance into a major economic depression the year before. During the miserable economic climate of the mid 1890s, some farmers left their hops on the vine rather than pay workers to harvest the crop.

To mitigate economic challenges and boost the reputation of their produce, some Pacific Northwest farmers formed hop-growing organizations by the 1870s. They sought to control plantings to guard against overproduction and to standardize the harvesting and processing of the crop for quality. Those efforts increased during the depression of the 1890s but failed to achieve the goals of high prices and consistent markets. The fragmented nature of agricultural life in the Pacific Northwest and the individualistic spirit of many farmers frustrated the efforts, and growers did not achieve any measurable gains in cooperative organization until the 1930s.<sup>50</sup>

Aside from the fickle market of hops, the most pressing issue for western hop farmers was recruiting labor during the hop harvest. Once able to rely on family and neighbors, the need for seasonal workers sometimes reached crisis levels as the crop's popularity grew. Historian Mark Wyman argues

that the pattern was repeated throughout the agricultural West because of its sparse population.<sup>51</sup> Still, the hop crop brought about uncommon challenges. One USDA report indicated that “in spite of the fact that the hop acreage is only a small fraction of that given to soft fruits, apples, and other intensive agricultural crops,” the harvest required up to four times as many workers.<sup>52</sup> Hop plants per acre produce huge quantities of cones on their poles or trellises, so harvest required intensive labor. The growers’ problem of labor shortages lasted until mechanization of the harvest in the 1940s. The hundreds of thousands of individuals who participated in the annual hop harvest, however, had a different perspective.

### HOPPING PICKING TIME

From the 1870s to the 1940s, the yearly hop harvest brought vibrant rural-urban folk gatherings to the Willamette Valley. During late August and early

September, thousands of women, men, and children of varying ages, races, and classes ventured to the hop-yards from West Coast farming communities as well as the neighboring cities of Portland, Salem, and Oregon City. Labor disputes and racial hostilities were not absent from the harvest seasons, but most who participated remember the yearly excursion to the countryside as having the character of a “paid vacation.”<sup>53</sup> They set up tent camps or moved into temporary bunks provided by growers, and they spent their workdays with a singular task: picking ripe hop cones from their vines. During the three-week season, the monotony of the work and the hot summer sun could lead to exhaustion and irritation. But the rewards were ample. Families used the cash income for fall school supplies and to get through the winter. Single urban workers took advantage of their mobility to migrate to the hop fields for added income and a change of scenery. Hopyards also hosted a



Benton County Historical Society

*In the Willamette Valley, farmers used scales to pay their seasonal workers by the pounds picked. White workers on average earned a dollar a pound, while American Indians and East Asian workers earned at least ten cents less.*



*Hop baskets played a vital role in the Willamette Valley hop harvest. Farmers scrutinized the harvest to make sure that no leaves or stems made it into the baskets with the hop cones.*

multitude of social occasions. From campfires and dances to gambling and parades, the region's residents looked to the harvest to provide opportunities for reacquainting with old friends and finding new ones. In many instances, future husbands and wives met in the hopyards.<sup>54</sup>

The social aspects of the harvest labor added a festive nature to the hopyards. Like the origins of much of commercial hop culture, the roots of the Willamette Valley hop harvest lay in England. Throughout the eighteenth and nineteenth centuries, rural Kent transformed from a serene pastoral landscape to one dotted with a series of teaming, small villages. Londoners of all walks of life populated the hop gardens, seeking the same economic and cultural rewards as their successors in Oregon. The spectacle drew onlookers who drew conclusions about the unskilled labor and migrant working camps. On viewing those headed to Kent, Charles Dickens petulantly noted,

“I have been amazed . . . by the number of miserable lean wretches, hardly able to crawl, who go hop-picking.”<sup>55</sup> Others had much different opinions. One journalist in 1877 best captured the tension of perception and reality of the Kent hop harvest. “Judging from appearances,” he noted, “one would have set down the whole crowd as belonging to the lowest class — as composed of the scourings of the slums.” Unlike Dickens, who did not spend much time at a hop camp, this journalist’s discussion took a sharp turn after spending three weeks in the field. He continued:

No greater mistake could have been made. . . . I was soon to discover that it is as customary with working families of comparative respectability to go “a hopping” in September as it is for members of another section of society to go to the moors, the seaside, Switzerland, and Norway, and for similar reasons — relaxation and health.<sup>56</sup>

While the writing may have reflected a bourgeois glossing over of the conditions of poverty and filth, the journalist explained to his readers that the hop harvest offered an opportunity for escape to a rustic countryside for a late summer romp. Another nineteenth-century English journalist captured this sentiment when he suggested that many Londoners simply looked forward to a “month of Bohemian life.”<sup>57</sup>

By the late nineteenth century, most successful hop growers understood the need to make the harvest more convivial than it had been. They integrated better living and working accommodations, better pay, and even transportation to the countryside. Edward Albert White, a Kentish grower, became famous for introducing organized dances and sporting events. Those additions to the harvest culture occurred simultaneously with work rules related to efficient picking, including assignments to specific sections of each hop garden and calculations of payment by field bosses. By the time hop culture arrived in the United States, most of these elements of the harvest had been established.<sup>58</sup> According to historian David Vaught, “growers knew well that the actual work . . . was anything but a ‘vacation.’ . . . Hop pickers endured excessive dust and pollen, oppressive heat, a contact rash similar to poison oak . . . and even the threat of electrocution from an unexpected storm ‘taking possession of the wires.’” Still, he continues, “growers were not about to disavow ‘the picturesque feature of hop picking time.’”<sup>59</sup>

The Willamette Valley tent cities that sprung up in a matter of days signaled the start of the season and drew widespread commentary. Local media outlets and those from as far away as London announced the “hop picking time” for the curiosity of their readers. H.L. Davis’s novel *Honey in the Horn*, a popular account of early-twentieth-century Oregon, featured the hop harvest. His book and the newspapers and magazines of the late nineteenth and early twentieth centuries explained the requirements and



*For many Oregon residents, the hop harvest served as a late summer “paid vacation.” Until the proliferation of automobiles during the 1920s, most workers arrived by wagon, train, or river steamer with all of the necessities for camping and entertainment in tow.*

attractions of hop picking. Bonnets or straw hats provided protection from the late summer sun, while gloves or old stockings protected hands and arms from skin abrasions or rashes from the hop vines. Publications explained the standards of yard assignments and payment for pounds picked and did not shy away from documenting the common practices of segregation by race and lower payment for non-whites. Accounts also focused on the festive nature of the harvest, including a multicultural mosaic wherein workers celebrated the season with live music, dancing, campfires, and fraternizing. Such distractions ensured the yearly excursion to the countryside took on the character of a “paid vacation.”

The West Coast hop harvest differed significantly from that of England due to the varied backgrounds of laborers in America. Many farmers on the Pacific Coast preferred to employ white families, who they viewed as hardworking and trustworthy. Often, however, that was not an option, so growers hired those from across the social spectrum. A reporter from *Out West* magazine noted: “Hardly elsewhere can be found so many nationalities, classes and types, busied at a common occupation. There are the office man and woman, the clerk, the professional man, the student, the teacher and the invalid, eager for the physical benefits . . . or bent on enjoying a



*Ezra Meeker's hopyards became famous across the West Coast for their lively, multicultural feel. The photo above (from about 1890) juxtaposes the chaos of the camp with the order of the surrounding hopyards waiting to be picked.*

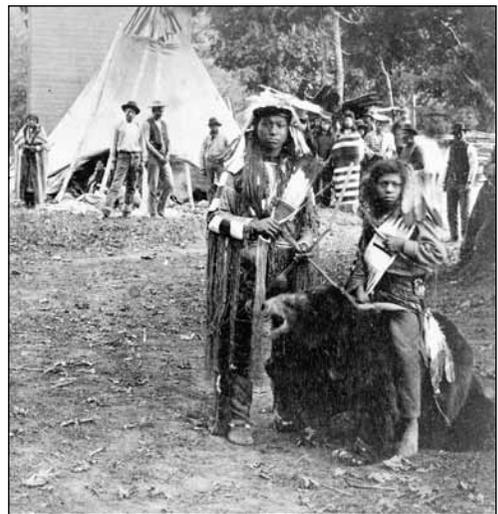
vacation.” The reporter specifically identified white families and “bands of Japanese . . . Chinese; some negroes, the ever-present Italian, the ‘Hobo,’ and lastly, the Paiutes.”<sup>60</sup> Hopyards became a common meeting place of social and cultural diversity, mixed with a potpourri of foods, games, and songs of various races and ethnicities in the noise of the harvest nights.

In the Pacific Northwest, the American Indian workforce captured special attention from onlookers. Meeker set an early precedent by hiring tribal members from around Puget Sound. His decision was mutually beneficial. Meeker recognized his good fortune that the indigenous laborers were quality hop-pickers, noting that they were “reliable” workers who labored until “pitch dark.”<sup>61</sup> They were also available and eager. He remarked that Indian workers “come from far and near, some in wagons, some on horseback, a few on foot, but the greater number in canoes. . . . They were of all conditions, the old and young, the blind and maimed, the workers and idlers.”<sup>62</sup> As several historians have explained, the hop harvest also marked a critical point in the region’s indigenous history. During the late nineteenth century, tribes from around the Pacific Northwest had been severed from their traditional economies and sought wage labor to make ends meet.<sup>63</sup>

Native peoples engaged in the same types of work as whites, but they were segregated in fieldwork and paid less. Whereas white workers averaged

one dollar per one hundred pounds picked, indigenous workers earned ninety cents.<sup>64</sup> They camped in their own makeshift tent communities, as did other workers. In other ways, the American Indian groups stood out. Capturing the local intrigue for the arrival of Indians to the hop harvest on the Puget Sound, one *Overland Monthly* writer described the experience as the “event of the year.” The journalist explained: “These Indians, with their boats and rush tents, their baskets and babies, their cards and gambling, and all the hoo-doo and *tamanamus*, or midnight dances, make the autumn in the Sound country a time of panoramic interest.”<sup>65</sup> Along with an expansive interest in gambling and dancing, horse racing and sweat baths became part of this seasonal cultural landscape of Indian labor. Indians also increased their economic opportunities, and shared their culture, through the sale of traditional basket ware, photographs of Indians for white tourists, and as some historians have inferred, prostitution. As historian Paige Raibmon suggests, indigenous women in particular led the charge to embrace the spectacle surrounding the gathering of Indians for hop harvest. But equally important were the white entrepreneurs who jumped at the opportunity to exploit the unique harvest culture. Local businesspeople built hotels for tourists, established transportation networks to the hop fields, and promoted their undertakings. Although many tourists arrived from within the region, others arrived from further destinations. Famed naturalist John Muir commented that Snoqualmie during hop harvest was one of the best tourist destinations he had visited.<sup>66</sup>

In the Willamette Valley, the arrival of the American Indian workforce to the hopyards was less dramatic because of the fewer numbers of Indians available and because they did not arrive in extensive canoe enclaves as did those from the Puget Sound. Still, their activity did not escape notice, for they provided an important source of labor in Oregon. In *The Settler’s Handbook to Oregon* (1904), Wallis Nash captured, in part,



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*American Indians played a vital role in Pacific Northwest hop harvest. For hop growers, their presence helped meet the needs of labor in the sparsely populated region. Indian groups arrived at the hopyards to earn cash income and trade, gamble, and socialize with members from other tribes.*

the importance of the yearly trek to the Willamette Valley hopyards:

The Indians on the reservations enjoy it heartily. There is a regular exodus from the Grand Ronde Reservation in Polk County and the Siletz in Lincoln County. The road out from the latter passed through our ranch and the procession of wagons, with their dusky occupants, men, women and children all bound for the hop yards, was a long one, every year.<sup>67</sup>

While Indians took the opportunity to secure scarce money to participate in the cash economy, there were also complaints. One Siletz tribal member, Gale Evans, recalled that in the first half of the twentieth century, “as long as you could walk, they made you pick. No monkeying around.”<sup>68</sup>

During the early twentieth century, the cultural makeup of the hopyards began to change. American Indian, East Asian, Filipino, Mexican, and African American people continued to work the hop fields, but growers took advantage of the opportunity to hire middle-class white families. That decision reflected an imbedded desire for Americanization following a massive period of immigration and intensified nativism surrounding U.S. participation in World War I. By the 1920s, David Vaught has suggested, “hop picking . . . increasingly became a white, even middle-class, undertaking.”<sup>69</sup> Still, it is important to recognize that the Willamette Valley hopyards continued to provide a meeting ground for a diverse swath of the region’s residents. Those individuals and families augmented their yearly incomes and social calendars while enabling local farmers to achieve success. Their hands picked the millions of hop cones that would eventually find their ways to brewers and beer-drinkers around the world.

#### THE WILLAMETTE VALLEY HOP LEGACY

Ezra Meeker relinquished his reign as the regional “hop king” in the mid 1890s. Whereas many credit hop aphid infestations as the culprit of his demise, the depression of 1893 was to blame. Meeker’s millions earned from “the Wolf of the Willow” dwindled in the face of upswings in European production, and scores of small farmers in the Pacific Northwest defaulted on loans that he as a middleman administered. By 1897, Meeker abandoned his acreage to seek gold fortunes in the Yukon.<sup>70</sup> But the hop culture of the Pacific Northwest endured beyond the charisma and expertise of this one man. Emil Clemens Horst and other grower-dealers filled that vacuum. So, too, did brewing-industry professionals and representatives from the USDA. Furthermore, despite ongoing obstacles, Oregon hop acreage continued to expand. When Willamette Valley boosters claimed the title of “Hop Capital of the World” in the first decade of the twentieth century, the state averaged approximately twenty thousand acres of hops harvested each year.<sup>71</sup>

The Willamette Valley's claim as the "Hop Capital of the World" reflected not just the region's productivity but also the improved quality of the crop, evidenced by Guinness Brewery's exclusive contract in 1904 and a span of awards in worldwide agricultural competitions.<sup>72</sup> Scientific and technological advances from the Oregon Agricultural Extension Service in Corvallis and individual growers such as Arch Sloper, who developed improvements to the trellis system among other accomplishments, also contributed to the success. A group of resilient small farmers also adapted to local and global changes in beer consumption and agriculture. For all these reasons, Willamette Valley hop growers thrived through two world wars, the nation's experiment with Prohibition, and the Great Depression.

The Willamette Valley hop industry encountered a period of decline in the mid twentieth century that resulted from the introduction of the plant disease downy mildew. But farmers have continuously planted and harvested thousands of acres of the crop into the twenty-first century. Today, the Pacific Northwest is the only commercial hop producing region in the United States, contributing approximately one third of the world's supply. While Washington has been the most productive state in recent decades — particularly in the Yakima Valley — Oregon has remained an important player in global hop culture.<sup>73</sup>

Uncovering the history of the Willamette Valley hop industry provides an avenue for understanding the broader importance of specialty crops as they expanded in the late nineteenth and early twentieth centuries. More so than wheat, livestock, and other staples that make up the majority of Oregon farming exports, the smaller scale of hop agriculture offers a traceable commodity, from the lands of hundreds of small farmers to brew kettles around the world. Ezra Meeker and Emil Clemens Horst's records, at the very least, demonstrate how the crop integrated onto the Pacific Northwest landscape and became essential to Henry Weinhard's and Guinness's brewing. At the base of the origin story of hop cultivation in the Willamette Valley were environmental conditions that proved ideal for growing the crop. Farmers applied knowledge atop that base of fertile land in the form of cultivation methods and technologies collectively built across time and two continents. Additional sources reveal the role that labor played in picking the crop, particularly how the harvest connected people of different races, ethnicities, and classes from across the American West. Locally, these individuals and families embraced multiple meanings of the harvest; yet their labor connected to beer producers and consumers across the world.

While the story of labor changed with mechanization during the mid twentieth century, the continuity in agriculture, science, and community offers a way to understand the region's local and global connections to the

present day, when the hop has become increasingly visible as a result of marketing efforts by large brewers and the increased hopping ratios in formulas from brewers entrenched in the growing world of craft beer. This is all to say that the contents of pint glasses in Oregon, the Pacific Coast, and all edges of the planet have a much richer and more far-reaching history than might have been imagined.

## NOTES

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1. The author would like to thank Alfred Haunold, retired courtesy professor of crop science at Oregon State University, for his help in all aspects of this project. Additionally, I would like to thank Dennis Larsen of the Ezra Meeker Historical Society for his assistance in uncovering the history of the Meeker family's first hop plantings. In his various writings, Ezra Meeker continually misrepresented both his first year of planting as 1864 or 1865, and the brewer for whom he planted as Charles Wood, not Isaac Wood. Larsen has drawn from various publications, including those with remarks from Ezra Meeker's brother John Valentine, to paint a more accurate picture. For Isaac Wood's brewery, see: *Pioneer and Democrat* (Olympia, Washington Territory), July 22, 1859; and *Pioneer and Democrat* (Olympia, Washington Territory), May 24, 1861. For the Meeker family's first hop plantings, see: "Hops and Their Cultivation," *Tacoma Daily Ledger* July 25, 1894, 2; "Hop Growing in the Pacific Northwest," *The Pacific Rural Press* 24:9 (August 26, 1882): 134; E. Meeker, *Hop Culture in the United States Being a Practical Treatise on Hop Growing in Washington Territory, from the Cutting to the Bale* (Puyallup, Washington: Ezra Meeker & Co., 1883), 8; and Ezra Meeker and Howard R. Driggs, ed., *Ox-Team Days on the Oregon Trail* (Yonkers-on-Hudson, NY: World Book Company, 1922), 155.

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  8. Alfred W. Crosby, *Ecological Imperialism: The Biological Expansion of Europe, 900–1900* (Cambridge: Cambridge University Press, 1986).
  9. Michael Pollan, *The Botany of Desire: A Plant’s-Eye View of the World* (New York: Random House, 2001), xiv–xvi.
  10. Discussions of biological exchange frequently arise in environmental history. For the most complete overviews, see Alfred W. Crosby, *The Columbian Exchange: Biological and Cultural Consequences of 1492* (Westport, Conn.: Greenwood Publishing Company, 1972); and Judith A. Carney and Richard Nicholas Rosomoff, *In the Shadow of Slavery: Africa’s Botanical Legacy in the Atlantic World* (Berkeley: University of California Press, 2009).
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  13. H.O. Lang, ed., *History of the Willamette Valley, Being a Description of the Valley and its Resources, with an account of its Discovery and Settlement by White Men, and its Subsequent History; Together with Personal Reminiscences of its Early Pioneers* (Portland, Ore.: Himes and Lang, 1885), 547; Robbins, *Landscapes of Promise*, 103–107; Rodman Wilson Paul, “The Great California Grain War: The Grangers Challenge the Wheat King,” *Pacific Historical Review* 27:4 (November 1958): 331–49.
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  15. United States, Department of the Interior, Census Office, *Report Upon the Statistics of Agriculture; Compiled From Returns at the Tenth Census* (Washington, D.C.: Government Printing Office, 1883), 19, 23.
  16. William Cronon, *Nature’s Metropolis: Chicago and the Great West* (New York: W.W. Norton & Company, 1991), 74–93; Robbins, *Landscapes of Promise*, 102–16.
  17. “Oregon’s First Hop Yards,” *Oregon Native Son and Historical Magazine* 1:4 (August 1899): 180; Tomlan, *Tinged with Gold*, 30.
  18. “First Hop Yard,” *Eugene City Herald*, September 8, 1899, 220. Alternate publications refer to George Leasure as George Leisure. I use Leisure because the majority of sources utilize it.
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  20. Tomlan, *Tinged with Gold*, 11–18; “Oregon Hops,” *Oregonian*, March 10, 1873.
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  23. “The Agricultural Prospect,” *New York Times*, August 1, 1882, 2. Belgian wheat, for example, was at half output for the year. “European Crop Prospects,” *New York Times*, August 10, 1882, 3; “Failure of the Wisconsin Hop Crop,” *New York Times*, September 4, 1882, 2.
  24. Meeker, *Hop Culture in the United States*, 3.
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  26. “On a Model Hop Farm,” *Oregonian*, October 6, 1895.
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31. Tomlan, *Tinged with Gold*, 33; S.R. Dennison and Oliver MacDonagh, *Guinness, 1886–1939: From Incorporation to the Second World War* (Cork, Ireland: Cork University Press, 1998), 112–14; United States Department of Agriculture, Bureau of Agricultural Economics, *Outlook for Hops from the Pacific Coast* (Washington, D.C.: GPO, 1948), 28; William A. Schoenfeld, John Marshall, Jr., and Paul C. Newman, *A Compendium of Hop Statistics (of Interest to the Pacific Coast States)* (Portland, Ore.: 1930), 2; “E. Clemens Horst Called By Death,” *Pacific Hop Grower* (May 1940); *Tacoma Daily Ledger*, June 29, 1886.

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33. Meeker, *Hop Culture in the United States*, 3; Howard Jaslyn to E. Meeker and Co., June 2, 1892, box 3, Meeker Collection; Gladys Shafer, “Success, Adversity Marked Meeker’s Life,” *The Tacoma Sunday Ledger-News Tribune*, March 19, 1961, 3; Frank L. Green, *Ezra Meeker, Pioneer: A Guide to the Ezra Meeker Papers in the Library of the Washington State Historical Society* (Tacoma: Washington State Historical Society, 1969).

34. Meeker and Driggs, *Ox-Team Days*, 155–59; Wm. Sanders (on behalf of the Central Experimental Farm, Department of Agriculture, Ottawa) to E. Meeker Esq., March 30, 1894, box 3, Meeker Collection. This letter is one in a series of correspondence from Canadian scientists seeking to exchange hops and information. It indicated that a Canadian representative from Ottawa

would be visiting Meeker and the larger Pacific Northwest to learn about hop growing and to inform the “Canadian Governmental Experimental farms.”

35. Meeker, *Hop Culture in the United States*, 4.

36. *Ibid.*, 10.

37. *Ibid.*, 83.

38. Howard Jaslyn to E. Meeker and Co., June 2, 1892, box 3, Meeker Collection; John A. Shafer to E. Meeker & Son, August 17, 1893, box 3, Meeker Collection.

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40. “Eugene Items,” *Oregonian*, September 18, 1876.

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Gold, 99–104.

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55. Frank T. Marzials, John Forster, Marnie Dickens, and Adolphus W. Ward, *The Life of Charles Dickens* (New York: The University Society Inc.: 1908), 248–49.

56. “Three Weeks with the Hop-Pickers,” *Littell’s Living Age*, 5th Series, 20:135 (December 1877): 790.

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60. Otilia Willi, “Hop-Picking in the

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61. Meeker, *Hop Culture in the United States*, 18.

62. *Ibid.*, 18.

63. See larger discussions in: Alexandra Harmon, *Indians in the Making: Ethnic Relations and Indian Identities around Puget Sound* (Berkeley: University of California Press, 1998); Raibmon, *Authentic Indians*; and Coll Thrush, *Native Seattle: Histories from the Crossing-Over Place* (Seattle: University of Washington Press, 2007).

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65. “Indian Hop-Pickers,” *The Overland Monthly*, 2d series, 17:98 (February 1891): 162.

66. Raibmon, *Authentic Indians*, 88.

67. Wallis Nash, *The Settler’s Handbook to Oregon* (Portland, Ore.: J.K. Gill Co., 1904), 127.

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69. David Vaught, *Cultivating California*, 90.

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