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AN ABSTRACT OF THE THESIS OF Kathleen E. Hudson Cooler for
the Master of Arts in History presented January 10, 1986.

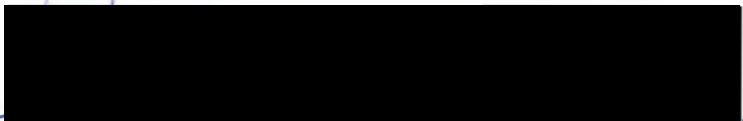
Title: Hop Agriculture in Oregon: The First Century.

APPROVED BY MEMBERS OF THE THESIS COMMITTEE:


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For well over a century the growing of hops has been a small but significant part of Oregon's agricultural economy, providing income amounting to millions of dollars to thousands of laborers and hundreds of farmers, as well as to the state itself. The hop industry as it exists today within the state is much different than it was in earlier years, particularly in terms of manpower and mechanization.

This thesis was written to document, through both primary and secondary sources, the history of hop growing as it was in Oregon between 1850 and 1950. In those years, hop growing was most often a speculative venture. Growers could be rich one year and bankrupt the next due to the uncertainties of marketing.

Three issues dominated the growers' concerns: market swings, availability of harvesting labor, and cleanliness of picking. The study of more than four hundred contemporary books and newspaper accounts on the subject, thirteen personal interviews, and sixty questionnaires reveals unpredictability in all three areas. That is, the market for hops had pronounced fluctuations, labor was often in short supply, and extraneous materials were regularly mixed with freshly picked hops. The growers' responses to the situation, while earnest, were too often unproductive. Attempts were made by the growers, with little success, to form organizations for their mutual benefit and to control the market. Efforts to entice harvest help to the fields, while occupying many hours, did not guarantee a full crew. Despite the repeated exhortations of the growers, clean picking was the ideal, not the norm.

There are a number of people still living who well remember both the traditional industry and the dramatic changes that altered the business forever. They remember

the "boom or bust" economy of hop growing, the "month-long picnic" of harvesting, and the camaraderie of the fields. They remember recurring labor shortages and the search for alternatives to manual harvesting. Their recollections, combined with printed sources, tell the story of early hop agriculture in Oregon.

By 1950, hop growers had what appeared to be the answers to their concerns: federal controls to stabilize the market and a mechanical picker that picked cleanly and was available when needed. The market controls and mechanical harvesters combined with two additional factors, a drop in the amount of hops used to flavor beer and a fungus disease known as downy mildew, to alter the traditional nature of the industry permanently.

In the late 1940s, there were over one thousand hop growers in Oregon. By 1952, there were fewer than four hundred. At the height of production, Oregon had twenty-six thousand acres in hops. By 1955 the acreage was less than four thousand and dropping. The days when thousands of laborers were needed to help with hop harvest were at an end.

At present, the hop industry in Oregon is a small and thriving business, its form much changed since the early years. Those early years, 1850 to 1950, and the hop industry as it was then, are now a memory.

HOP AGRICULTURE IN OREGON
THE FIRST CENTURY

by
KATHLEEN E. HUDSON COOLER

A thesis submitted in partial fulfillment of the
requirements for the degree of

MASTER OF ARTS
in
HISTORY

Portland State University

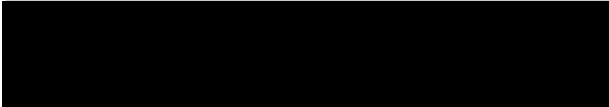
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TO THE OFFICE OF GRADUATE STUDIES AND RESEARCH:

The members of the Committee approve the thesis of
Kathleen E. Hudson Cooler presented January 10, 1986.


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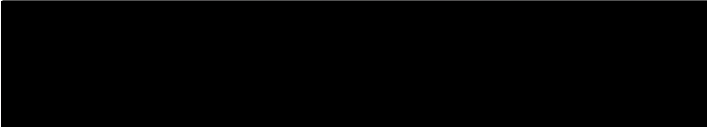

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PREFACE

The Oregon hop industry has touched the lives of many people since the plant was first grown in the state. Thousands have grown hops; tens of thousands have harvested the crops. The business is still practiced in Oregon, but in a modern form much altered from the traditional. The change in the nature of the industry began in the mid 1930s, accelerated in the 1940s, and climaxed in the mid 1950s, a full century after the genesis of hop growing in the state. That transitional score of years witnessed a dramatic reduction in both the number of hop growers and the acreage upon which they grew hops, as well as a conversion from manual to mechanical harvesting.

The purpose of this study is to examine the hop industry as it existed in Oregon from approximately 1850 to 1950. Emphasis is placed on the Willamette Valley as it was the geographical center of the industry in Oregon and on human harvesters as they were the most numerous of those involved in the business.

Much of the information regarding the experiences of growers and harvesters was obtained from interviews and questionnaires gathered by the Benton County Historical Museum in 1982 during that organization's research project

on the hop industry. I acknowledge gratefully the use of its records, and the assistance of the many individuals who contributed their thoughts and memories to the project.

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CHAPTER I

INTRODUCTION

Two hop species exist, the Japanese Hop (Humulus japonicus Sieb. & Zucc.) and the Common Hop (Humulus lupulus L.).¹ The former grows in the Orient and is used as an ornamental plant. The latter is indigenous to Europe and Western Asia and is regarded as the ancestral stock of the cultivated hop. It is the Common Hop and its descendants with which this study is concerned. Both in its wild and cultivated states, the Common Hop has been known and used for many centuries.

USE

One of the most popular traditional uses of the hop was as a medicine. Hops were widely used and advocated to cure ailments and to relieve pain. The stems, vines, and blossoms were prepared as medicinal foods, teas, syrups or extracts, and poultices. Hops prepared with oatmeal and water were eaten to soothe stomach ulcers. Hops were drunk as a tea to cleanse the blood and reduce

¹A. H. Burgess, Hops: Botany, Cultivation, and Utilization (New York: Interscience Publishers, Inc., 1964) 19.

fever, relieve restlessness, and induce sleep. As a syrup or in extract form, hops were reputed to heal skin diseases, and ease the pain of gout and rheumatism. Hop leaves applied topically as a poultice were used to reduce swellings.²

Such medicinal use had sound basis. Certain constituents of the hop, known as colupulone and humulone, possess antibacterial properties.³ Before today's more effective antibiotics became available, the hop was a valuable aid to healing.

Another historical and modern use of the hop has been as food. Although virtually nothing is heard today in the United States of using hops as a food, the plant is considered an edible elsewhere, including England, where it is used as a vegetable. Young shoots may be cooked and eaten like asparagus, while hop buds can be used in salad.⁴

A number of other uses for the hop have been investigated. Hop roots, for instance, contain a starchy substance which was used in the production of alcohol,

²Herbert Myrick, The Hop: Its Culture and Cure, Marketing and Manufacture (New York: Orange Judd Company, 1904) 19 and 21; P. L. Simmonds, Hops; Their Cultivation, Commerce, and Uses in Various Countries (London, 1877) 18.

³Burgess, 270-71.

⁴English Hops Limited, Great Britain, letter to the author, 2 Sept. 1985; Myrick, 21; Simmonds, 6.

and tannin which was used to cure leather. At one time, the roots were thought to have great potential as a material for pulp to be used for making cardboard and paper. In fact, in the middle of the nineteenth century several patents were issued in Great Britain for processes incorporating the hop in papermaking. Hops stems were seen as valuable for their sap, from which a dye could be made; for their ash, which was an ingredient in so-called Bohemian glass; and for their fiber, which could be manufactured into rope or very coarse cloth. Hops were fed to horses and cattle as fodder, and used as ornamental climbers.⁵

Less common uses for hops included veterinary use to eliminate worms, act as a diurectic, and rid animals of lice. Fresh hops were used to keep moths from closets. Hop extract was used as a glue. Hop residue left after brewing, known as spent hops, was made into activated carbon and used for water purification.⁶ Many of these uses represent deliberate attempts to expand the market potential of the plant. In almost every case, other products were used to the same end more effectively, or more economically, or both.

⁵Myrick, 21; Simmonds, 5-9.

⁶L. D. Wood, Hops: Their Production and Uses (Chicago: The National Hops Company, 1938), 76-82.

A more common use of the hop was as an ingredient added to yeast, although there is no known reason for doing so. The practice may have originated because brewers were usually bakers as well, since the raw materials for making both beer and bread are grain and yeast. It is possible that yeast and hops were combined and kept handy to be mixed with grains, regardless of whether the desired end product was beer or bread. As recently as the early twentieth century, yeast manufacturers used nearly 500,000 pounds of hops annually in making yeast, although the practice is now ended.⁷

Hops were originally added to beer primarily for preservation purposes, now assured through modern sanitation and pasteurization techniques. At present, the principal purpose of adding hops to beer and ales is to give an agreeable, or slightly bitter hop taste, and to impart a characteristic aroma. While other uses may be of historical interest, the only significant modern use of the hop is in brewing.

HISTORY

The Common Hop was for many centuries a wild plant, and there is some disagreement as to the time when deliberate cultivation of the plant began. However,

⁷Ibid., 80-81.

records indicate that cultivated hop gardens were associated with French and German monasteries as early as the eighth and ninth centuries, A.D.⁸ Purposeful cultivation was initiated at different times in different countries thereafter.

There is also some disagreement as to when hops were first added to beer, a process known as "hopping" the beer. In 1364, Emperor Charles IV (1355-78) of the Holy Roman Empire was presented with a complaint against hopped beer, so it was definitely known by that date. Taking a personal interest in hop growing, Emperor Charles IV toured districts under his rule, indicating those areas he considered most suitable for hop cultivation. Additionally, in order to control what he considered to be his country's superior quality hop, he ordered the death penalty for anyone who exported Bohemian hop rootstock.⁹

By the year 1400, hop cultivation was an established European agricultural industry with two of the major production centers located in the German duchy of Bavaria and the province of Bohemia, now part of present-day

⁸Burgess, 1; Emanuel Gross, Hops in their Botanical, Agricultural and Technical Aspect and as an Article of Commerce, trans. Charles Salter (London: Scott, Greenwood and Co., 1900) 3-4.

⁹Gross, 4 and 6.

Czechoslovakia. Small family operations dominated, and the majority of European growers had hop fields of one acre or less.¹⁰

By the fifteenth century, hop cultivation had crossed the English Channel. It is thought that Flemish immigrants relocating in England first introduced the specifics of hop cultivation to the English in the late 1400s or early 1500s.¹¹

Hops were originally added to beer to protect against bacterial spoilage and, to a lesser extent, to mask the sweet taste of the drink. Many of the English initially objected to the taste of hopped beer, and both Henry VII (1485-1509) and Henry VIII (1509-57) forbade the use of hops in beer. Moreover, during the reign of Henry VIII, Londoners petitioned Parliament against the use of hops in beer with the claim that hops, "...would spoil the taste of the drink, and endanger the people."¹² There is also evidence that hopped beer was considered a foreign (Dutch) beverage, and thereby suspect. As English author Boorde wrote in his book Dyetary (1542),

¹⁰Myrick, 2-3; Hubert H. Parker, The Hop Industry (London: P. S. King & Son, Ltd., 1934) 163-81.

¹¹Gross, 4; Myrick, 1.

¹²Gross, 4; quoted in Simmonds, 1.

Beere is a naturall drynke for a docheman. An nowe of late dayes it is moche used in Englande to the detryment of many Englyschemen, speciyally it kylleth them the whiche be troubled with the Colyeke and the stone...for the drynke is a colde drynke. Yet it doth make a man fatte...as it doth appeare by the doche mennes faces and belyes....¹³

Parliament legalized the hop industry in England in 1554, despite the reservations of Boorde, the Londoners who signed the petition against hops in beer, the two Henrys, and others.¹⁴ Hop gardens were first established in the southeast part of England, in the county of Kent on small plots for family use. Commercial hop growing on larger acreages soon followed. Hop culture in England became a scientific and studied business, complete with books of instruction, by the end of the sixteenth century.¹⁵

From England, hop plants were exported to Australia, New Zealand, and North America. Exactly when the cultivated hop arrived in North America is not definitely known. Hops may have been among the plants which the Pilgrims took with them to America on the Mayflower in 1620. Beer kept better than water on a long voyage, and

¹³Quoted in Parker, 7.

¹⁴Myrick, 1.

¹⁵Burgess, 1; Parker, 8-15.

the hopped beverage was part of the Mayflower's cargo.¹⁶ It is likely that hop rootstock was also part of the cargo, as beer was considered an essential part of the diet. It was often safer to drink than water, which was frequently polluted. Hops may also have come to North America with the Massachusetts Bay Company in 1629, or somewhat later with the Germans who settled with other groups in New Netherlands.¹⁷

Hops were raised in all the colonies, as it was common for each household to grow sufficient supplies for home needs. However, as more and more people moved to the cities in the 1800s, household production of hops declined. The New England states were first to specialize in hop culture. By the mid 1800s, New York had become the primary producer of American hops for mass consumption in beer, a position it held for many years.¹⁸

As settlers moved westward, so did the hop, arriving in the Pacific Northwest around the middle of the nineteenth century. Areas of what became Washington,

¹⁶Stanley Baron, Brewed in America: A History of Beer and Ale in the United States (Boston: Little, Brown and Company, 1962) 7-8.

¹⁷Burgess, 17.

¹⁸United States, Bureau of the Census, Twelfth Census of the United States Taken in the Year 1900 (Washington: United States Census Office, 1902) vol. 6, 517-18.

Oregon, and California were, by virtue of soil and climate, particularly well-suited to the production of high quality hops. Best known of these areas were Washington's Puyallup and Yakima Valleys, Oregon's Willamette Valley, and California's Russian River area. Gradually, as production on the West Coast increased and transportation facilities improved, the Pacific states became suppliers to customers all over the United States. The hop industry in New York declined as the hop industry in the Pacific states grew, mainly because of West Coast competition. The fertile virgin soils of Oregon, Washington, and California produced more hops at less expense than did the soils of New York. By the turn of the twentieth century, the Pacific Coast had emerged as the major U. S. hop producing area.¹⁹

For many years, Oregon was the leading hop producing state in the Union. Within Oregon, there were three centers for hop growing: the Grants Pass, Eugene, and Salem-Independence areas. The latter area was of particular importance and contained the single most productive location, Independence, the so-called "Hop Center of the World."²⁰

¹⁹Ibid.

²⁰Sidney W. Newton, Early History of Independence, Oregon (Salem, OR: Panther Printing Company, 1971) 64.

CHAPTER II

BOTANY AND CULTURE

The hop is a twining perennial that produces cone-like blossoms valued for their lupulin content--the sticky, aromatic substance that gives beer its distinctive flavor. Given favorable climatic and soil conditions, the fast-growing luxuriant vines of the hop responded well to careful cultivation. The gentle climate and fertile soils of the Willamette Valley were capable of producing crops that averaged about 950 pounds of dried hops to the acre, a good yield.¹ Despite precautions, however, the value of a potentially heavy crop could be reduced or destroyed by a number of factors including pests, disease, poor weather, and insufficient harvesting help. Drying and baling completed the first phase of the farmers' work, that of producing a crop, and set the stage for the second phase, that of marketing the crop.

¹[George Leslie Sulerud], "An Economic Study of the Hop Industry in Oregon," Station Bulletin 288 (Corvallis, OR: Agricultural Experiment Station, Oregon State Agricultural College, 1931) 21.

PHYSICAL CHARACTERISTICS

Hops are dioecious; that is, male and female plants are individual and separate.² However, as hops are raised from root cuttings, rather than from seeds, pollenization of the plant is not required for propagation. It is the female plant that produces lupulin. Male plants may or may not be grown in the vicinity of female plants. If male plants are allowed to grow in hop fields, it is because pollenization results in the production of larger "seeded" cones. Since the whole cone is harvested, processed and sold, larger cones result in a higher yield per acre. However, brewers prefer seedless hops, and often pay a premium for them.³

New hop fields are set with root cuttings from which root systems develop both horizontally and vertically. The horizontal roots are extensive and provide the means whereby the plant absorbs nutrients from the soil. The vertical roots normally arise from the horizontal and provide the base from which fresh vines are annually produced.⁴

²Burgess, 19.

³[S. N. Brooks, C. E. Horner, and S. T. Likens], Hop Production, Agricultural Information Bulletin No. 240 (Washington: GPO, 1961) 3.

⁴Burgess, 20.

The new vines that are generated each season grow to lengths of twenty-five feet or more, and twine in a clockwise direction, adhering to support strings or wires by means of fine, hooked hairs. Hop leaves are heart-shaped and hairy, and are normally found on the vine in opposing pairs.⁵ While maturing, the female flowers become cone-like. The cones grow quickly, and the maturation process is accompanied by a rapid increase in lupulin. The lupulin appears as a yellow, resinous powder which adheres to the base of the individual bracts of the cone.⁶

Many varieties of hop exist, developed over the centuries from the ancestral stock by mutation, accompanied by natural or artificial selection. While various areas and growers favor different varieties, a quality hop is generally agreed to be soil and climate tolerant, easy to train and maintain, satisfactory in yield, and bears high-density cones that are aromatic, high in lupulin content, and ripen evenly.⁷

⁵Brooks, Horner, and Likens, 3.

⁶Ibid.

⁷Burgess, 43-44.

PRODUCTION TECHNOLOGY

Climate and Soil

Since the earliest days of the Oregon hop industry, climate has determined the appropriate regions for hop production while the soils within those areas determined which specific locales were best suited to hop culture. Although the plant could be grown within a fairly wide range of climatic and soil combinations, it grew best in temperate regions on well-drained soils.⁸ The commercial production range was accordingly limited.

Worldwide, short, mild winters were preferred for the culture of hops. Although moderate frost stimulated early growth, late frosts could kill the young vines. In addition, early spring weather allowed plants an advanced start at seasonal growth cycles. Adequate precipitation followed by warm, dry weather was ideal. Abundant spring rainfall encouraged development of new vines. Early summer rains and warmth fostered growth, and dry weather in late summer inhibited damage by pests and disease while producing pleasant harvest conditions.⁹ The Willamette Valley provided a particularly agreeable climate with moderate temperature variations.

⁸Ibid., 63-64 and 66-67.

⁹Brooks, Horner, and Likens, 4.

Hops were grown in a variety of soils, but commercial production created specific demands. Hop roots were extensive, and yearly growth of the vines rapid. Room to extend roots and ready availability of nutrients was required, so the preferred soils were well-drained, deep, and rich.¹⁰

Sandy or gravelly loams were considered superior because of their drainage qualities. Heavy clay soils were unsuitable as moist, compacted earth restricted root growth and favored disease. Shallow subsoil also limited the extension of roots and was, therefore, unsuitable for productive hop agriculture.¹¹ Alluvial soils deposited by the Willamette River and its tributaries had the advantage of providing a particularly rich environment for crop production. Such soils, because of the deep deposits of topsoil, were better able to withstand the depletion of nutrients which accompanied hop culture.

Cultivation

Planting of new rootstock was done either in the fall or in early spring, the latter being more common in Oregon. Late fall planting allowed cuttings to establish roots before the first growing season, while early spring planting avoided possible winter damage to new stock.

¹⁰Ibid.

¹¹Ibid.

Cuttings were set into ground that had been cleared, staked out in an orderly pattern, and worked to loosen the topsoil.¹² Fertilization of the fields, seldom necessary in the early decades of Oregon's commercial hop production, was thereafter increasingly important on a regular schedule as repeated crops depleted the soils.

Hop fields were plowed and worked in two directions, from end to end and side to side, between rows of evenly spaced cuttings or plants. Plowing of the soil to accommodate root systems and control weeds continued throughout the spring until early summer. By that time, small feeder roots grew so close to the surface of the ground that they were easily injured by working the soil.¹³

As young shoots appeared in the spring, a limited number of the healthiest were left to grow, while the others were cut out. This process of removing excess growth was repeated several times during the growing season. Left untended, hop foliage became dense, preventing sunlight from reaching and ripening the cones. At the time the shoots were two or three feet long,

¹²Ibid., 11.

¹³Ibid., 11, 15, and 20; Myrick, 79.

several were chosen and trained to a support. Excess shoots and lower leaves were removed.¹⁴

In the nineteenth century and earlier, vines were trained to grow on individual poles about six to ten feet high set five to seven feet apart. By 1900, a network of twine strung from the top of one pole to another, allowing the vines to branch out, was popular. By the 1930s, vines were usually trained to string or twine that was staked to the ground and stretched to attach to an overhead wire trellis system supported by heavy poles. In such a system, parallel and cross wires replicated the pattern of planting.¹⁵

Pests and Diseases

Pests and diseases, as well as the specific procedures for their control, varied with the years, district, weather conditions, and variety of hop. Two pests, spider mites (Tetranychus spp.) and hop aphids (Phorodon humuli), were persistent threats to the health and marketability of American grown hop plants and their cones. Spider mites destroyed the plant by withdrawing

¹⁴Brooks, Horner, and Likens, 15 and 18.

¹⁵Burgess, 89-90; Myrick, 81-83; Anglo-American Council on Productivity, The Hop Industry (London: Anglo-American Council on Productivity, 1951) 18.

the sap, and aphids excreted a so-called "honeydew," which provided a medium for the growth of mold.¹⁶

In addition to pests, both fungal and viral diseases attacked hops. Of these, downy mildew (Pseudoperonospora humuli), caused by a fungus, was the most significant agent of destruction in Oregon hop fields after its appearance in the early 1930s.¹⁷ Most farmers dusted, washed, and sprayed various powders and solutions on the hop leaves to protect against aphids, spider mites, and mildew.

Today, all of the destructive agents that affect Oregon's hops can be effectively controlled through the planting of selected varieties and the careful use of insecticides and fungicides. However, attempts to control the loss of crops to disease and pests were of major concern to hop growers prior to the 1950s.

Harvesting, Drying, Curing, and Baling

Harvesting began when the hops were mature, a time that was dependent upon the variety of hop and local climate. Most of the hops grown in Oregon ripened in late August and early September. Picking hops was a laborious hand project, involving thousands of harvesters. The availability of labor was critical, as

¹⁶Brooks, Horner, and Likens, 28.

¹⁷Ibid., 22-26.

was its timing. If picked before entirely ripe, hop cones had less brewing value and lost more weight during the drying process. If not picked within five to ten days after reaching maturity, the cones became increasingly fragile and discolored.¹⁸

Once picked, the hop cones were usually dried in a kiln built specifically for the purpose. Fresh cones contained about 70% to 80% moisture by weight. The drying and curing processes reduced that percentage significantly. Fifty pounds of green hops dried to about fifteen pounds.¹⁹

Although kiln designs varied somewhat in shape, the rectangular design was the only one to gain popularity in the Northwest. All kilns were constructed to allow the hops to be dried by heating from below. The drying floor was on the second level of the kiln, approached by outside ramps and platforms. The drying floor was not solid, but slatted and covered with fabric to prevent the hops from falling through while permitting the free flow of heated air. The hops were spread about 18" to 24" deep, and dried at temperatures below 145° for ten to fifteen hours.²⁰

¹⁸Ibid., 29-30.

¹⁹Ibid., 35.

²⁰Myrick, 180-81, 193, and 209.

Before the 1930s or 40s, most of the heat was produced by burning wood. First story flues and roof-top ventilators facilitated even drying by natural draft. Drying by forced draft using fans, practiced by some as early as the 1880s, was common by the 1930s. Fans forced or drew the heated air through the hops more quickly, thus speeding the drying process.²¹

Sulphur was sometimes burned in the kiln under the drying hops. The primary purpose of burning sulphur was to produce a more uniform and desirable product by bleaching. The process hid mold spores, helped preserve the hops by killing bacteria and mold, and accelerated the drying process.²²

After drying, the hops were allowed to cool for a period of several days. During this time of curing, two separate processes occurred: first, the temperature of the hops dropped; second, what moisture was left in the hops redistributed itself more evenly, producing a more uniform product.²³ When the cooling process was complete,

²¹E[zra] 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 Territory: E. Meeker & Co., 1883; facsimile reproduction, Seattle: The Shorey Book Store, 1972) 53-56; Myrick, 196; Anglo-American Council on Productivity, 56.

²²Meeker, 31; Myrick, 213-18; Simmonds, 9 and 58-59.

²³Burgess, 232.

the hops, which had become tough and pliable, were compressed into rectangular bales, each weighing about two hundred pounds. Stored bales were kept dry and cool to await grading and marketing.

CHAPTER III

ECONOMICS

Oregon is the greatest hop-producing State in the Union. The quality raised in this State is regarded by many buyers and brewers as the best, in consequence of which the Oregon hop is in great demand, both upon this continent and abroad....¹

Thus did the Oregon Blue Book of 1911 emphasize with little exaggeration the importance of hop growing within the state. The commercial production of hops in Oregon began around 1880, at which time the state produced about 1% of the total national crop. Before that time, census returns show minimal production of hops: 8 pounds in 1849, 493 pounds in 1859, and 9745 pounds in 1869. From that modest beginning, production jumped to 244,371 pounds in 1879 and 3,613,726 pounds in 1889 and nearly 15,000,000 pounds in 1899.²

Of the three Pacific Coast states, both Washington and California began commercial production before Oregon, and until the turn of the century all three Pacific states

¹Oregon, Secretaries of State, Frank W. Benson and Ben W. Alcott, compilers, Oregon Blue Book (Salem, OR: State Printer, 1911) 21.

²United States, Bureau of the Census, Twelfth Census of the United States Taken in the Year 1900, vol. 6, 518.

ranked behind New York in total production. By the middle of the 1890s, however, Oregon had pulled ahead of both Washington and California, contributing approximately 30% of the total national crop. In 1898, Oregon passed the production of New York and thereafter was the leading hop producing state until at least 1910 and again from 1923 through 1943.³ The year of highest production was 1935 when nearly twenty-six million pounds of hops were harvested in Oregon. The twenty-six thousand acres on which that crop was grown represented approximately one-fifth of the estimated world hop acreage for that year.⁴

MARKETING

The hop market was, historically, subject to pronounced uncertainty, and there was little stability in the marketing of hops prior to federal regulation

³United States, Department of Agriculture, Yearbook of the United States Department of Agriculture 1899 (Washington: GPO, 1900) 780; United States, Department of Agriculture, Yearbook of the United States Department of Agriculture 1900 (Washington: GPO, 1901) 815; Sulerud, 20; United States, Department of Agriculture, Hops: By States, 1915-56, Statistical Bulletin No. 225 (Washington: USDA, 1958) 4-6. Production figures by state do not exist for the years 1911 through 1914.

⁴United States, Department of Agriculture, Hops: By States, 1915-56, 4-6; G. W. Kuhlman and R. E. Fore, "Cost and Efficiency in Producing Hops in Oregon," Station Bulletin 364 (Corvallis, OR: Agricultural Experiment Station, Oregon State College, 1939) 5.

which began in the late 1930s. The United States Department of Agriculture's annual report of 1864 emphasized the problem, claiming the hop to be "the most uncertain of all crops raised in this country."⁵ The report cited three reasons: (1) highly erratic seasonal variations in yield due to the weather, (2) demand that was consistent but limited, and (3) loss of brewing value with storage.

The high productivity of the Pacific Coast states contributed to the uncertainty in marketing hops, particularly in the late nineteenth century. Other hop growing areas anticipated harvesting a marketable crop from two to four years after setting out cuttings. However, on the Pacific Coast, the soil was so fertile and the climate so amenable to hop culture that in some areas the "baby crop," that crop produced the first year of planting, was partially marketable.⁶ Quick profits and ready cash were alluring. Such immediate returns held the promise of offsetting start up costs, while at the same time news coverage of the occasional huge profits made in hop growing held the promise of padding the pocket satisfactorily.

⁵United States, Department of Agriculture, Report of the Commissioner of Agriculture for the Year 1864, "The Hop Plant," by Lewis Bollman (Washington: GPO, 1865) 97-100.

⁶Myrick, 9.

While the returns from hop growing could be timely--usually "cash on the barrel-head" from an Eastern brewer or Oregon buyer--and were a handy source of cash income, they were often less in total amount than the growers might have wished. Before the era of government regulation, the hope of making a quick profit repeatedly attracted large numbers of farmers to hop production. A large acreage planted to hops combined with a good growing season could produce huge quantities of hops. Therefore, if a number of farmers started yards at the same time, their crop, in addition to that of established yards, could easily flood the market.

That is precisely what happened a number of times over the decades. An early example was clearly illustrated in news coverage by the Oregonian, published in Portland. On 8 July 1893, with hops selling at 12¢ to 13¢ a pound, an article printed in the newspaper carried the information that the average yearly net profit on an acre of hops in Josephine County was \$250.⁷ Later that month, an article appeared under the title "Money in Hops," with a by-line out of Independence. The article emphasized the tremendous potential for profit with hop growing. In part, the article read as follows:

⁷"News of the Northwest," Oregonian [Portland, OR] 8 July 1893: 4.

As an illustration of the money made in this business may be taken J. H. Benton, living near this city. With only a few hundred dollars as capital, a few years ago he planted hopyards on shares. Last year he was \$4000 in debt, but paid it all from his crop and had nearly \$2000 left. This year he has forty acres in hops which will probably net him \$8000.... A poor man had a chance to get rich in Oregon.⁸

There were many who decided to try a hand at hop agriculture. By the spring of 1894 an article entitled "Splendid Outlook" reported "new yards without number" and an increase to 15,000 acres under cultivation with an expected harvest of 50,000 bales, up from 8,000 acres and 38,000 bales in 1893.⁹ By September of 1894, news coverage was less enthusiastic, and spoke of the increased acreage leading to "great overproduction and consequent flooding of the market with surplus."¹⁰ A month later, newly harvested hops were selling at 5¢ and 6¢ a pound, which was little more than the cost of production.¹¹

The year 1895 showed little improvement. Oregon hop farmers produced approximately 18,000,000 pounds of hops at an average cost of 7¢ a pound while selling at

⁸"Money in Hops," Oregonian [Portland, OR] 27 July 1893: 3.

⁹"Splendid Outlook," Oregonian [Portland, OR] 14 Apr. 1894: 2; Wm. J. Clarke, "Home of the Hop," Oregonian [Portland, OR] 1 Jan. 1898: 23.

¹⁰"The Hop Situation," Oregonian [Portland, OR] 12 Sept. 1894: 6.

¹¹Ibid.; Sulerud, 48.

6¢ a pound. Low quality hops were left on the vine unharvested.¹² In the spring of 1896, the Oregonian published an article "Do Not Raise Hops" in which Ezra Meeker, noted early Pacific Northwest hop grower and author of the 1883 treatise Hop Culture in the United States, advised hop growers to plant only half of the usual acreage or plow under hop fields and wait until the oversupply of hops was gone.¹³

In response to the market glut, Oregon farmers did just as Meeker recommended. Three thousand acres of hops were neglected and another 1,500 acres were plowed under. Together, that 4,500 acres represented about 28% of the area under hop cultivation.¹⁴ That fall, 1896, saw an unexpected upswing of prices. Those who had plowed under their fields, the Oregonian reported, regretted the action.¹⁵ More hops were planted the next season, and the cycle of overproduction with attendant low prices and underproduction with attendant high prices was perpetuated.

¹²"Hopgrowing in Oregon," Oregonian [Portland, OR] 4 June 1895: 4; "Oregon's Hop Crop," Oregonian [Portland, OR] 7 Oct. 1895: 9.

¹³"Do Not Raise Hops," Oregonian [Portland, OR] 13 Mar. 1896: 10.

¹⁴"Oregon's Industries," Oregonian [Portland, OR] 2 May 1896: 3.

¹⁵"Hops are Higher, Too," Oregonian [Portland, OR] 12 Nov. 1896: 8.

Swings in the prices paid for hops were marked. In the period from 1880 to 1910, hops sold for as little as 3¢ a pound and under, and for as much as \$1.13 a pound. In the period from 1910 to 1930, the market recorded lows of 7¢ a pound as well as highs of \$1.00 a pound. During the years from 1930 to 1950, the price of hops ranged from a low of 9.8¢ to a high of 68.4¢.¹⁶ Such variations contributed to the reputation of hops as a chancy, speculative crop.

On a more personal level, the autobiography of William Isaac Gadwa, long-time Oregon resident and sometime hop grower, bears first-hand witness to the vicissitudes of hop farming as an occupation. He wrote:

...I went to farming and done real well as long as I continued in that line, but when I entered the hop business that was a different story, and when the smoke cleared away all I had left was a pair of fine colts, one and two years old. ...I was now farming seven miles north of Salem on the River Road about two miles north of Keizer Square and was doing real well. This had 25 acres of hops on it. You can either make a lot of money or go broke quick which I did in the fall of 1902. There were many heart aches in this venture. The man who run the hop yard [on] which I had a two year's lease, cleared \$10,000.00 and hired all the help after I gave up. Hops had soared in price.¹⁷

¹⁶Myrick, 262; Sulerud, 48; United States, Department of Agriculture, Hops: By States, 1915-56: 5.

¹⁷William Isaac Gadwa, "Autobiography, 1874-1945," Oregon Historical Quarterly [Portland, OR] 80 (1979): 283.

Many farmers experienced such misfortunes, and a monograph published in 1939 by the Oregon State College Agricultural Experiment Station suggested that crop specialization in hops was a risky venture. Only through diversification of crops would the farmer have a reasonably secure living.¹⁸

The element of uncertainty in marketing encouraged the system of contracting whereby a grower would pledge the sale of his crop as much as three or four years in advance of harvest to a buyer. The buyers, in turn, arranged sales to brewers and other customers. The contracts between grower and buyer were set for a specific prearranged price per pound. Such contracts gave the grower the advantage of knowing exactly what return he could expect, while protecting him from drastic drops in the market price. Of course, contracting also meant that the grower did not realize increased profits in years of increased demand. Sometimes a farmer would compromise, contracting part of his crop and selling the remainder on the open market at harvest time.

A second, and perhaps more compelling, reason to contract the sale of hops was that the buyers regularly advanced money in the spring and again in the fall to cover the expenses of cultivation and harvest. A

¹⁸Kuhlman and Fore, 51-52.

newspaper article of 1900 claimed that 95% of Oregon hop farmers had to borrow money in order to harvest their crops.¹⁹ Contracting simplified that borrowing. The system of contracting began in the 1800s, and although precise figures do not exist for most years, in both 1906 and 1930 about 33% to 40% of the Oregon hop crop was contracted.²⁰

The buyers made a living from hops that was even more uncertain than was the farmers'. With no sure means of predicting weather conditions, yield, and demand, the buyers used their knowledge of individual farmers, usual crop conditions, and a bit of educated guesswork to size up the situation, and then hoped for the best. As the market fell or rose, so did the fortunes of many buyers. Some lived in plenty one year and in want the next.

Evelyn Sibley Lampman's recollection of life in Dallas, Oregon in the early twentieth century emphasizes the precarious livelihood of the buyer:

One of my favorites of Dad's friends was Chalmers Kirkpatrick. He looked a little out of place in that circle of men around the stove because he was something of a dandy. He drove to Portland to buy his clothes instead of patronizing Finseth's Mercantile Store. He was a hop buyer,

¹⁹"Pool of Hopgrowers," Oregonian [Portland, OR] 4 July 1900: 10.

²⁰"Drouth Will Cut Oregon Hop Crop," Oregonian [Portland, OR] 13 Aug. 1906: 1.

which meant that his income went up and down. When there were many hops and the price was high, Chalmers had a lot of money. The next year he borrowed at the bank.²¹

Hop buyers were not entirely at the mercy of the market, however. Sometimes they protected themselves with a contract clause requiring the hops produced by the grower to be "#1 quality." Since that designation properly belonged only to German sun-dried hops, the contractor had an excuse to turn down any hops so contracted if he wished; that is, if the market price was lower than the price he had negotiated by contract with the farmer.²² Even contracts without such a clause could be invalidated. The buyer could reject hops for any number of reasons, including "broken," "high-dried," "slack-dried," "moldy," or simply "not up to sample." a newspaper article of 1906 mentioned a plan formulated in Lane County to pass legislation to provide a state hop inspector to grade hops. It was thought to thus alleviate the widespread problem of buyer "rejection upon inspection."²³

In addition, there were some efforts by dealers to influence the market. Crop estimates had a definite

²¹Evelyn Sibley Lampman, "Dallas Memories," Oregon Historical Quarterly [Portland, OR] 77 (1976): 263.

²²Newton, 68.

²³"Want a Hop Inspector," Oregonian [Portland, OR] 11 Jan. 1906: 6.

effect upon prices because a high estimate, indicating a possible oversupply, would tend to encourage an early sale by farmers who feared being caught holding hops after the brewers had met their needs. Conversely, low crop estimates indicated a probable shortage and encouraged holding hops for better prices than were traditionally offered immediately after harvest. Often, crop estimates put out by buyers' interest groups overestimated the harvest. Farmers' interest groups would, in turn, often underestimate the crop.²⁴

Buyers would sometimes sell to brewers hops that they did not own, planning to buy at a low price when the market opened in October and thus cover their previous commitments. This was called "selling short." Upon several occasions, those interested in a low market price used bogus telegrams and circulars with false and misleading information to convince growers to sell early at a low price.²⁵

It was in response to demands from hop growers, buyers, and brewers seeking a measure of marketing security that the first "Hop Marketing Agreement and Order" was established by the federal government in 1937.

²⁴"Strenuous Times in Hop Market," Oregonian [Portland, OR] 6 Sept. 1905: 6.

²⁵Ibid.; "Hop Bears Plan Great Stampede," Oregonian [Portland, OR] 7 Sept. 1905: 14.

The Order expired in 1945, but was revived in 1949 as the federal Hop Control Board. The Board had but one primary function: to stabilize the hop market by balancing supply with demand.²⁶ Under the influence of the Board, much of the traditional character of hop marketing changed permanently.

VALUE

There were a few years in which hops were of limited worth to the state, to the buyer, or to the individual grower. In fact, on at least one occasion when the hop crop was particularly large, excess hops could not be sold at any price and were dumped into the Willamette River. On another occasion, hops that were unsaleable because of an oversupply were used as fertilizer.²⁷ However, there were many more years in which hops brought a significant amount of cash income to Oregon's growers, thereby bolstering the overall economy of the state.

Statistics compiled during the years of the federal census show that from the time the state hop industry blossomed in the 1890s until 1950, Oregon hop growers

²⁶Anglo-American Council on Productivity, 80.

²⁷Newton, 68; Ben Maxwell, "Into the Past: Backward Look Recalls Hop Era," Capital Journal [Salem, OR] 2 Jan. 1959, sec. 2: 1.

consistently produced crops worth approximately two to six million dollars a year. Annual figures support those of the census, showing that hop sales have met or exceeded a million dollars nearly every year since 1897.²⁸

The value of the crop can be figured by multiplying the total production by the price per pound. Several factors affect both figures. Total production is affected by the number of acres under cultivation, soil fertility, farming techniques, pests and disease, weather, and the availability of help to harvest the crop. The price per pound is, in turn, affected most substantially by total national and international production, quality of the hop, market demand, hopping ratio, and market confidence. Politics may affect both production and price.

The factors affecting total production are relatively self-explanatory. Given careful husbandry, good weather, and an adequate number of harvesters, the more acreage planted to hops the larger the total production. That total production was the primary factor

²⁸United States, Department of Agriculture, Yearbook of the United States Department of Agriculture 1900, 815-16; United States, Department of Agriculture, Yearbook of the United States Department of Agriculture 1901, (Washington: GPO, 1902) 717; United States, Department of Agriculture, Yearbook of the United States Department of Agriculture 1906 (Washington: GPO, 1907) 608; United States, Department of Agriculture, Yearbook of the United States Department of Agriculture 1910 (Washington: GPO, 1911) 597; United States, Department of Agriculture, Hops: By States, 1915-56, 6; Sulerud, 20 and 48; Clarke.

affecting the price per pound. Seasonal fluctuations had to be considered not merely on a local or even national basis, but on an international level as well. Failure of the New York, English, or European hop crop meant more demand and a higher price for the Oregon grown product. On the other hand, a large foreign crop could reduce the demand and price paid for hops grown in the state.

The price of hops depended not only on production but also on quality. Traditionally, hops were graded by the buyer prior to purchase and labeled as fancy, choice, prime, medium, or poor. Grading was subjective, based upon the judgment of individuals as to how a sample of the baled hop looked, felt, and smelled.²⁹ By necessity, individual preferences entered into the evaluation. In general, a light yellow-green color was favored. A sticky feel, indicating high lupulin content, and a full, pleasant aroma were valued. In addition, brewers preferred seedless hops that were picked cleanly; that is, free of stems and leaves. Hops having the desirable characteristics generally received a higher price on the open market.

Demand was another factor taken into consideration in the marketing of hops because the maximum market

²⁹Myrick, 219.

demand determined the total amount of beer consumed. Beer was but one of many beverages competing for purchase, and advertising was a long-standing means of enhancing consumer demand and consumption. Although most of today's advertising for beer relates to relaxation and "good times," in years gone by it more frequently focused on health. For example, in the years prior to World War I, advertisements for Schlitz and Pabst Blue Ribbon claimed beer to be a nourishing and pure "aid to digestion." Schlitz called their beverage "a tonic of proven efficiency--the trifle of alcohol only 4½%." Pabst was somewhat more sweeping in its claims that their Blue Ribbon beer "nourishes the whole body, invigorates the nerves, enriches the blood and refreshes the brain."³⁰

While market demand determined the total amount of beer consumed, hopping ratios determined the total amount of hops used to flavor the beer. That ratio declined steadily over the decades from 1½ pounds of hops to each 31-gallon barrel of beer in the early 1880s to less than ½ pound of hops in 1948. Except for the years of prohibition, there was a more or less steady increase in output of beer by American brewers. However, because of

³⁰ "Whet Your Appetite!," Oregonian [Portland, OR] 20 July 1906: 5; "Pure Beer a Builder of Health," Oregonian [Portland, OR] 18 Nov. 1913: 4.

the progressive decline in hopping ratios, there was not a proportionate increase in demand for hops.³¹

In addition to production, quality, maximum market demand, and hopping ratios, yet another factor in hop prices was market confidence. So-called "weak" sellers would market their hops at relatively low prices in order to be sure of getting rid of their crops, particularly in a year with a surplus of hops or when a larger than usual harvest had been estimated to exist. "Strong" sellers held back until prices went up. If there were few weak sellers, the price would, usually, go up simply because brewers had to have hops every year. But if there were too many weak sellers, the price would remain low because the brewers could easily meet their needs without increasing the prices they were willing to pay. Some growers had little choice: it was difficult for those who had mortgaged their crops in order to pay operating expenses to hold their hops for higher prices when loans were due.³²

As early as 1877, hop growers organized associations for their shared benefit, and in 1899 the Oregon Hopgrowers' Association was formed and incorporated for

³¹Meeker, 140; Myrick, 15; Sulerud, 45; United States, Department of Agriculture, Outlook for Hops from the Pacific Coast (Washington: GPO, 1948) 10-11.

³²"Pool of Hopgrowers."

"mutual profit and protection." Among the organization's objectives were better prices and control of the output of Oregon's hops. Members formed a pool, placing the sale of their hops into the hands of the Association, which acted as the selling agent. Each grower was to receive a share of sale monies based on the quality and quantity of the hops he had contributed to the pool.³³ This and similar organizations met with varying degrees of failure. For the most part, it proved impossible to organize the growers sufficiently to control the market.

There have been a number of pronounced fluctuations in production and price since the early 1900s. As noted, the flow of American hops overseas increased considerably in periods of low European production. In 1911, for instance, a small European crop greatly enhanced demand for American hops and the price went up to 36¢ a pound, nearly three times the average price in the twenty years preceding.³⁴ Prices went highest in the spring of 1919, to a high of \$1.00 a pound with the end of World War I, again because of deficient European production. During the war, European hop production nearly ceased as farmers

³³ Anonymous letter, Oregonian [Portland, OR] 18 July 1877: 4; "Hop Men Organize," Oregonian [Portland, OR] 26 Oct. 1899: 6; "Plan for Hop Sales," Oregonian [Portland, OR] 9 Dec. 1899: 6.

³⁴ United States, Department of Agriculture, Yearbook of the United States Department of Agriculture 1912 (Washington: GPO, 1913) 17; Sulerud, 48.

turned to the production of food to assist the war effort. With the end of the war, demand for hops to flavor beer was immediate but harvest of a crop was delayed until fields could be replanted and nurtured. For several years, American hops helped fill the gap between supply and demand.³⁵

The increase of European demand in 1919 coincided with a decreased American demand. Oregon hop production dropped dramatically between 1917 and 1919 as many farmers took acreage out of hop production in response to the anticipation and passage of local and national prohibition legislation and wartime food control measures that significantly reduced the manufacture of beer.³⁶ The short crops could barely meet the demands of post-war Europe, hence the surge in price to \$1.00 a pound. Even after the recovery of European hop production, there remained a limited but important export demand for Oregon hops.³⁷

American usage of hops did not altogether stop during the 1920s and early 30s. There remained a small market for the illegal manufacture of beer and the legal

³⁵United States, Department of Agriculture, Hops: By States, 1915-56, 5; Sulerud, 12 and 48.

³⁶Baron, 302-306.

³⁷United States, Department of Agriculture, Hops: By States, 1915-56, 5; Sulerud, 42.

manufacture of cereal beverages, or "near beer." Near beer was manufactured to have the flavor, body, and aroma of real beer, but not the alcohol, which was limited to less than $\frac{1}{2}$ of 1%.³⁸

With the repeal of prohibition and subsequent demand for hops, the price nearly doubled in 1933 from 18¢ to 30¢ a pound. Too many farmers, including Oregonians, decided to plant hops. Hence, production went up and the price dropped to less than 10¢ a pound by 1935. Then downy mildew, a particularly virulent fungus disease destroyed much of the 1936 crop and prices rose to an average of 29¢ a pound. A large crop in 1937 resulted in a 50% price reduction and, after several years of relative stability, demand during the years of World War II bolstered the prices paid for hops to over 60¢ a pound.³⁹ The war-time rise in price was related in part to increased consumption in the United States, and in part to increased demand by those North American, Mexican, and South American brewers who, in normal times, would have used the European hops that were cut off during the war.⁴⁰

³⁸Baron, 313-14.

³⁹Kuhlman and Fore, 2; United States, Department of Agriculture, Hops: By States, 1915-56, 5.

⁴⁰United States, Department of Agriculture, Outlook for Hops from the Pacific Coast, 11, 15, and 17.

Post-war demand remained substantial as the amount of beer consumed annually in the United States stayed at high wartime levels and America continued to supply an expanded foreign market. Prior to World War II, the United States exported hops to twenty countries; after the war, America exported hops to forty nations.⁴¹

INCOME

Despite fluctuations related to a variety of factors, hops were a significant source of income for many decades to the state of Oregon, and to individual farmers and their employees. In the census years 1899 and 1909, the value of the hop crop represented 4.3% and 5.8% respectively of Oregon's income from all crops.⁴² In 1906, a particularly profitable year for hop growers, the crop had a nationwide value of seven million dollars and was the fourteenth most important crop in the whole United States. Oregon produced approximately 40% of that crop.⁴³ From the turn of the century through 1925, Oregon

⁴¹Ibid., 15 and 18; "Brewers Ready for Record," Oregonian [Portland, OR] 29 Mar. 1947, sec. 1: 7.

⁴²United States, Bureau of the Census, Thirteenth Census of the United States Taken in the Year 1910, (Washington: United States Census Office, 1913) vol. 7, 405.

⁴³United States, Department of Agriculture, Yearbook of the United States Department of Agriculture 1906, 13; United States, Department of Agriculture, Yearbook of the United States Department of Agriculture 1910, 597.

hops had a low value of \$731,000 in 1918, a high value of \$5,440,000 in 1919, with an average value of approximately \$2,500,000.⁴⁴

Hops were described in the Oregon Blue Book 1935-36 as a "special field crop of financial consequence."⁴⁵ The description is apt. Statistics compiled by the extension service of Oregon State College for the years 1926 through 1935 show that hops accounted for 3.5% of the total cash farm income of the state during those years. That amount was about equal to the value of apples, another well-known Oregon specialty crop.⁴⁶ In the exceptional year of 1933, with the crop at a premium after repeal of prohibition, hops were second only to wheat as a source of cash income to Oregon farmers, worth well over six million dollars. United States Department of Agriculture records averaged over the twenty-five year

⁴⁴Ibid.; United States, Department of Agriculture, Yearbook of the United States Department of Agriculture 1905 (Washington: GPO, 1906) 717; United States, Department of Agriculture, Yearbook of the United States Department of Agriculture 1908 (Washington: GPO, 1909) 717; United States, Department of Agriculture, Yearbook of the United States Department of Agriculture 1910, 597; United States, Department of Agriculture, Hops: By States, 1915-56, 5; Sulerud, 48. There are no figures for the production or value of hops grown in Oregon for the years 1911 through 1914.

⁴⁵Oregon, Secretary of State, Oregon Blue Book 1935-36 (Salem, OR: State Printing Dept., 1935) 118.

⁴⁶Oregon, Secretary of State, Oregon Blue Book 1939-40 (Salem, OR: State Printing Dept., 1939) 145.

period from 1925 to 1950 show hops as a small but significant crop producing over five million dollars annually.⁴⁷

The "small but significant" amount of revenue assumes much greater importance when put in perspective geographically. Since 1879, the Willamette Valley has contained approximately 95% of all Oregon's hop producing acreage. In 1879, Lane County was the major Oregon hop producing county. Thereafter, Marion and Polk Counties became increasingly important, and by 1899 the two counties contained over half of Oregon's acreage in hops. By 1919, their share equaled 75%.⁴⁸ The industry that provided a small but meaningful source of income to the state provided a large and very important source of income to Marion and Polk Counties, as well as to many farmers and laborers.

Two other aspects of income from hop production in Oregon were of importance. First, most of Oregon's hops were purchased from outside the state, thus bringing money into Oregon. Second, before the time of mechanization, hops required more hand labor than did

⁴⁷United States, Department of Agriculture, Official Estimates: Crops-Calendar Year [1924-82], Cash Receipts from Farm Marketings, By Commodities-Oregon (Washington: Bureau of Agricultural Economics, 1983) n. pag.

⁴⁸Sulerud, 24-25.

most other field crops. The wages for that hand labor contributed greatly to the economic prosperity of the Oregon communities that provided the manpower.⁴⁹

Despite fluctuations in both production and value, the Oregon hop crop was an asset to the economy of the state for many decades.

⁴⁹Sulerud, 11.

CHAPTER IV

HARVEST

The busiest time of year on a hop farm was the three or so weeks of harvest. Many farmers grew small acreages of hops that could be hand-harvested by family members alone or with the help of near neighbors and friends. But for a number of growers, harvest meant hiring several hundred pickers to assist with the work. For those growers, obtaining sufficient reliable help to complete the harvest was a continuing challenge.

RECRUITMENT

Those farms that produced more hops than could be harvested by family and neighbors had to recruit pickers. Word-of-mouth drew some help to the hop fields as growers and those who worked in harvesting spoke to friends and acquaintances about the employment opportunities. Thereafter, tradition drew people as many families returned year after year to the same fields at harvest time. Employment bureaus also provided workers. Newspapers drew still more, using bold headlines to capture the attention of the public: "Good Pay and

Recreation" and "Men, Women and Little Children Hard at Work Gaining Cash and Happiness."¹

It was in the early years of this century that the newspaper campaign to draw a work force became most persuasive in urging the temporary forsaking of the family hearth in favor of the hop fields. Hop picking was said to be wholesome, profitable, and enjoyable. The pure country air was claimed to be invigorating; the smell of the hops themselves healthful. Would-be pickers were told that the work was light and the outdoor exercise strengthening, providentially so for those without the stamina to do heavier work. The season was short, therefore no one labored too long in the fields. Besides, the newspapers claimed, it was fun.² Many people agreed. In addition to sunlight and clean air, hop fields offered the simple pleasures of making new friends and renewing old acquaintances, as well as escaping some of the drudgery of daily home life. Many who could not have otherwise afforded a holiday combined work and pleasure in a profitable vacation. Although rates of pay varied

¹"Pickers of Hops in Great Demand," Oregonian [Portland, OR] 22 Aug. 1906: 12; Victoria Case, "Hop Yards Visited in Picking Season," Oregonian [Portland, OR] 22 Sept. 1929, sec. 6: 7.

²Bonnie L. Grimm, "One Cent Per Pound Plus a Fourth Cent Bonus," Oregonian [Portland, OR] 7 Nov. 1937, magazine section: 6.

over the decades, pickers were almost always able to recover the expenses of transportation and board, with cash left over. The Oregonian encouraged prospective pickers by counseling:

Whole families make it a practice, year after year, to visit the hop yards in the Fall, for in addition to enjoying the campfire life they can earn a tidy sum by the light labor of picking hops.³

For those still hesitant, there was the additional lure at some of the larger yards of nightly dances, weekly religious services, medical care, matrimonial bureaus, vaudeville shows, and ball games.⁴ Many answered this call to "the greatest of all warm weather outings" billed as "three weeks of camping and fun and money-making under the blue skies of Oregon."⁵

World War I, prohibition, and cuts in hop acreage combined to reduce the hop picking crowds and dampen the holiday atmosphere. By the 1920s, many pickers were otherwise unemployed, glad to find a job, and more

³"Hop Pickers Off," Oregonian [Portland, OR] 4 Sept. 1910, sec. 2: 16.

⁴"Marion County Hops," Oregonian [Portland, OR] 26 Aug. 1895: 6; "The First in Hop Production," Oregonian [Portland, OR] 1 Jan. 1902: 12; "Great Year in Hops," Oregonian [Portland, OR] 1 Jan. 1903: 11; "An Industrial Outing," Oregonian [Portland, OR] 25 July 1906: 8; "Pickers of Hops in Great Demand"; Marion Macrae, "Biggest Hopyard in the World," Oregonian [Portland, OR] 9 Sept. 1906: 38-39.

⁵"Pickers of Hops in Great Demand."

interested in working than amusement. The larger yards stressed not dances and good times, but clean houses, piped water, and sanitary conditions.⁶ In Polk County, 1922 marked the elimination of dance halls from the individual hop ranches and the centralization of entertainment facilities in Independence. The Chamber of Commerce of that town staged a street carnival in 1927 in honor of the hop harvesting crews. The entertainment was intended to be "wholesome and legitimate."⁷

In the 1930s, Independence sponsored the first of a number of "Hop Fiestas" to celebrate the beginning of hop harvesting. A queen and court were chosen to preside over grand festivities that included carnivals, parades with marching bands and floats, and dances.⁸ The ranches began to offer fewer and more decorous diversions. Radio broadcasting of concerts and situation comedies gained popularity.⁹ By mid-century, the nature of the hop industry had changed so dramatically that almost all the celebrations and diversions were at an end.

⁶"Hop Crop in Polk Worth \$1,000,000," Oregonian [Portland, OR] 16 Sept. 1921: 5.

⁷"Hop Picking to Start," Oregonian [Portland, OR] 31 Aug. 1922: 15; Beulah Hesse Craven, "Independence Busy on Eve of Hop Harvest," Oregonian [Portland, OR] 4 Sept. 1927, sec. 5: 8.

⁸Craig Lockwood, "The Hop Fiesta," Sun-Enterprise Newspapers, Great Events II [n.p.] 1977: 22-23.

⁹"Hop Picking to Start."

HARVESTERS

There was, of course, no single profile applicable to hop harvesters. People of all ages, both sexes, and many nationalities picked according to their abilities and inclinations. Press coverage in 1927 reported hop pickers from "many states of the Union, also, a sprinkling from Canada and Mexico, added to Japanese, Chinese, Russians, Filipinos, Hawaiians and sometimes Alaskans."¹⁰ Taking the hop industry in Oregon as a whole, it appears that the largest number of harvesters were Caucasian, both local and migrant. Still, particularly in the early years of the hop industry, significant numbers of Native Americans and East Asians were employed in picking hops, while Spanish-speaking people formed a major part of the work force in the late 1940s and after.

Native Americans had reputations as conscientious pickers. Some growers regularly recruited Indians from the Siletz, Grand Ronde, and Warm Springs reservations to pick hops. Whole families arrived in wagons and on horseback, and the hop growers furnished pasture in addition to the standard camping facilities. Sometimes the Indians took objects or food, such as baskets or huckleberries, to sell

¹⁰Craven.

to the growers and other harvesters.¹¹ Gale Evans, a Siletz Indian, recalls a generally friendly atmosphere in the hop fields. He does, however, remember rivalry between the Indians and Italians, while Sidney Newton of Independence recalls that Indians and Oriental pickers preferred to work apart from one another.¹²

Unlike the Indians, the presence of Orientals in the fields was frequently opposed by local citizens despite the fact that many crops went unpicked when Chinese, Japanese, and Filipino labor was not employed. The Orientals were willing to work for lower wages and did not refuse to pick in wet conditions, as did many Caucasians.¹³

A number of incidents over the decades sparked tempers and ill-will between Orientals and Occidentals. One such occasion was in Butteville, in Marion County, in 1893 when whites blew up houses belonging to Chinese hop growers and drove away Chinese laborers who wanted to pick hops. White pickers were described as "destitute and

¹¹Grace Hennings (former hop picker), personal conversation, 3 Mar. 1982.

¹²Gale Evans (former hop picker), interview, Benton County Historical Museum, Philomath, OR, 7 Apr. 1982; Sidney W. Newton (former hop harvester), interview, Benton County Historical Museum, Philomath, OR, 24 Mar. 1982.

¹³"Hoppickers are Disappointed: Preference Given Oriental Laborers," Oregonian [Portland, OR] 9 Sept. 1904: 4; "Hop Harvest is Stopped by Rain," Oregonian [Portland, OR] 13 Sept. 1906: 14.

desperate," in need of jobs and willing to fight for them.¹⁴ On another occasion in 1904, Japanese pickers could be hired at one-third less money than the white laborers. This pay differential and the resulting preference for Japanese labor, combined with an oversupply of workers, led to strained relations and fights between the white pickers and other harvesters.¹⁵

Such problems continued sporadically over the years. A more recent example occurred in 1932 when pickers on the Horst hop ranch in Independence struck for a higher wage and were replaced immediately by Chinese labor willing to work for less.¹⁶ Despite such intermittent bitter episodes, people who recall picking hops in the fields say that regardless of race, pickers were generally friendly with one another a majority of the time.¹⁷

As early as 1924, there was concern that migrant labor from outside the state might take work from natives.

¹⁴"All Quiet at Butteville," Oregonian [Portland, OR] 6 Sept. 1893: 8; "Chinese Hop-Pickers," Oregonian [Portland, OR] 8 Sept. 1893: 8.

¹⁵"Hoppickers are Disappointed: Preference Given Oriental Laborers."

¹⁶Charles Staley (former hop picker), interview, Benton County Historical Museum, Philomath, OR, 2 Apr. 1982.

¹⁷Benton County Historical Museum, questionnaires, interviews, and research pertaining to study of hop industry, Jan. through Apr. 1982.

In that year, the Oregon Seasonal Employment Commission was set up. Its aim was "a circulation of the seasonal workers with homes in the state, so regulated as to care for all seasonal work without calling upon the outside floating population."¹⁸ As local labor became increasingly difficult to obtain, however, growers had no option but to hire outsiders. By the 1940s the number of migrant laborers, especially Spanish-speaking, had grown significantly. By the early 1950s, one grower recalls that 90% of his harvesters were Spanish-speaking.¹⁹

Pickers were not the only harvest crew to be employed. There were also those who lowered the hops within the reach of the pickers, measured or weighed the hops, transferred the hops to the driers, dried the hops, and baled the dried product. Every acre of hops required the work of four or five people to see the hop from the vine to the bale.²⁰

MOTIVE

The newspapers stressed the money to be made in picking hops and it is probable that the majority of

¹⁸"Hop-Picking Near; Labor Stabilized," Oregonian [Portland, OR] 25 Aug. 1924: 18.

¹⁹Harvey Kaser (retired hop grower), personal conversation, 16 Apr. 1982.

²⁰"Northwest States," Oregonian [Portland, OR] 28 Aug. 1893: 2.

harvesters sought and accepted employment in the hop yards primarily because they wanted to earn money. In the 1800s when many people farmed for a living and when barter or trade were more common than now, hop picking was sometimes the only source of cash with which to pay taxes, make payments on the mortgage, or buy necessities.

In the 1900s, the uses to which the money from hop picking was put may be described generally in three broad categories: subsistence, supplementary, and discretionary spending. In times of sluggish economy and unemployment, the money earned picking hops and other field crops helped provide a subsistence level income. Particularly in the years of the Great Depression, picking hops and other crops was a way for a family to work together to survive bad times. "It Won't Make You Rich, But Hop Picking at Those Prices Keeps the Wolf Away, at Least," claimed headlines of 1937.²¹

More commonly, the wages from hop picking were used to supplement the family resources. While father worked on the farm or as a city wage earner, mother made money during hop season to paint the house, pay off debts, or perhaps buy a sewing machine. Children earned money to buy school books and clothes. Sometimes, fathers

²¹Grimm.

scheduled vacations from work to coincide with hop picking and accompanied their families to the field.

In good times, cash from picking hops could be used for the purchase of coveted extras such as a piano or a telephone, and as pocket money for the youngsters. Indeed, some people picked hops primarily because they enjoyed the social camaraderie, considering the income a secondary benefit.²²

Rosa Cole, who picked hops for a number of years both as a child and as an adult, spoke for many when she summarized her reasons for picking: "I liked hops. I liked work. I liked my paycheck."²³

ARRIVAL

In major hop producing areas, the size and number of the hop ranches meant the influx of thousands of workers during harvest season. For example, Independence, the "hop center of the world," was a quiet town most of the year. Harvest season, however, brought huge crowds--as many as twenty-five thousand laborers, most of whom arrived by train. Train companies such as the Oregon Electric were hard-pressed to provide space for everyone.

²²Benton County Historical Museum.

²³Rosa Cole (former hop picker and grower), interview, Benton County Historical Museum, Philomath, OR, 17 Feb. 1982.

In 1904, a single yard in Independence hired two thousand pickers to harvest its four hundred acres of hops and required five passenger trains of eight coaches each to transport the harvest help from Portland.²⁴

The pickers were met at the depot by the growers or their representatives who provided transportation by wagon to the fields for the pickers and their baggage. Boxes and bundles of household and personal goods were flung on top of the wagons as the trip to the fields began its final stage. Some of the pickers traveled by steamboats, such as the Oregona, while others arrived in their own wagons, on horseback, or on foot. In later years, autos, bicycles, and buses were popular modes of transportation.

Whatever the means of transport, the pickers arrived ready to choose their campsites, set up housekeeping, get to know their temporary neighbors, and await the morning call to work.

²⁴"Innovation in Hop Yards," Oregonian [Portland, OR] 16 Oct. 1904: 11; "Hop-Pickers Off," Oregonian [Portland, OR] 4 Sept. 1906: 8.

CHAPTER V

FIELD CONDITIONS

Usually, the hop yard was a pleasant place in which to spend the three weeks of harvest time. People were friendly and the work could be done at whatever pace the individual chose. The atmosphere was one of freedom: a break with normal routine.

LIVING

There were two basic types of living arrangements made for the approximately three weeks of the typical harvest season: live-in and live-out. While many camped or were housed immediately adjacent to the fields, large numbers labored by day and returned to their own homes at night. Pickers who lived at home usually arrived in the fields early, often after completing several hours of chores, with lunches packed in a pail or basket for noonday refreshment. Work in the hop yards usually ended in the late afternoon, after which time they returned home. There, they frequently faced several more hours of chores before bedtime.

Those who lived on the hop farm during harvest had an easier time in many ways. Although they still had to

do some of the jobs they would have had to do at home, such as child care and meal preparation, they were released from quite a number of other responsibilities. For them, a vacation mood prevailed.

Accommodations at the farms varied. Pickers usually provided their own food and bedding, and sometimes their own tent and campstove. Some slept in their wagons or trucks. On the larger farms, the growers provided tents or cabins as well as clean water, stoves, firewood, tables, benches, straw for sleeping mats, and garbage pick-up. Most of the early grower-provided facilities were primitive but adequate. In later years facilities improved, and some growers maintained concrete block housing complete with flooring, inside plumbing, washrooms and showers, and gas cookers.¹

Small stores, stocked with food, a few household items, and articles of clothing were often run on both the larger and more modest farms. Prices in such stores varied, sometimes competitive with and sometimes more expensive than prices at stores elsewhere. Many growers provided the stores primarily as a convenience to those pickers who were without transportation once they reached the fields. On some ranches, delivery trucks made

¹Benton County Historical Museum.

regular runs from nearby towns to sell meats, bread, and fruit to the hop pickers.²

WORKING

Pickers were up and about early in order to complete chores, eat, and be in the fields by six or seven in the morning. Appropriate dress was old clothing and cast-offs because hop stains were common and resisted removal. Long sleeves protected arms. Alternatively, old stockings with the toe removed were drawn up over wrists and forearms. Hop vines were scratchy and cut tender skin. Most pickers also protected their hands, either with gloves or with heavy tape wrapped around the thumb and index finger. The latter protection was preferred by those who particularly disliked the hop-permeated smell of damp gloves. Work began while the dew was still on the vine, and gloves soon became saturated by moisture which emphasized the pungent smell of the hops. In addition, many wore hats for cover from the occasional rain and the more usual bright sun.³

Daily, upon arrival in the fields, containers were assigned to the pickers. Boxes were used in the earliest days of the Oregon hop industry. Called "hoppers," the large and compartmentalized containers held nine bushels.

²Ibid.

³Ibid.

Pickers were paid by the box. Canvas hoppers became popular sometime later, as did baskets made of wooden slats and bags hung from metal frameworks. The baskets and bags held about twenty-five pounds, and the workers were paid by the pound. Payment by weight rather than by volume began in the mid to late 1890s and was a generally more accurate measure of work.⁴

Pickers were assigned to a specific row, frequently in pairs, one to each side of the row. In pole yards, a "pole puller" removed the pole from the ground and set it down flat or with one end on the ground and the other over the hopper, or on the fork of a pair of crossed planks. In wire yards, the "wire down" man, armed with a long pole equipped with a hook at the end, let down the hop-covered vines which were dropped to the ground or strung over jacks at a suitable height for picking.⁵

When a picker had filled a container, the shout of "Box full!" or "Basket full!" was made and the "measure man" checked or sacked and weighed the hops. The picker was then given a ticket to represent his work. The ticket, often pinned to the clothes with a large safety pin, was kept for later redemption. The hops were hauled

⁴Ibid.

⁵Ibid.

away to the dryer in boxes or sacks, each one marked to show the identity of the picker.⁶

Some pickers took breaks and as much as an hour or more off for lunch, returning to camp for a hearty meal. Others preferred to skip breaks and even lunch in order to continue picking. A worker of average ability picked from one hundred to two hundred pounds of hops a day, although some picked as much as three hundred to five hundred pounds. While the amount that could be picked by children was considerably less, it was still a contribution to the family welfare. Many youngsters were responsible for picking those hops that fell on the ground. The children were sometimes rewarded with pocket money or special treats such as soda pop. Those too young to pick slept between the rows of hops or played at the side of parents and older siblings.⁷

As far as the farmer was concerned, and provided he had a full crew, harvesters were free to pick as much or as little, as quickly or as slowly as they wished. This freedom contributed to the generally congenial atmosphere. Tickets for the work were accumulated and cashed by the grower daily, weekly, or seasonally. Each farm had distinctive tickets. In many locations, the hop tickets

⁶Ibid.

⁷Ibid.

were known as "hop money," were as good as cash, and could be used as scrip to buy provisions at camp and town stores. The merchants collected the value of the tickets from the hop growers at the end of the season.⁸ The purchases of pickers were a boost to local economies, and some stores stayed open later than usual in hop season in order to serve customers eager to buy supplies.⁹

Rules were seldom posted at the yards. It was understood that decent behavior and clean picking were expected. Picking "clean" referred to picking hop cones only, avoiding leaves and stems. The recommended method of picking was to use one hand to hold back stems and leaves and the other hand to pluck clusters of two or three cones. Hops could also be picked singly, a tedious procedure but one that resulted in very clean picking. Some harvesters, however, did not actually pick hops. Rather, the vine was held in one hand and the other hand was used to strip off cones, leaves, and some stems in a single fluid motion. With this method, baskets filled more rapidly and more money could be made. However, such "dirty" hops did not bring a good market price. Containers of dirty hops were sometimes rejected at the

⁸Craig Lockwood, "Hops--The Crop That Made Independence Famous," Sun-Enterprise Newspapers, Great Events II [n.p.] 1977: 20.

⁹"Northwest States."

dryer and returned to the responsible picker, who was obliged to dump the hops out on a piece of burlap and pick them over a second time.¹⁰

PROBLEMS

Certain problems were associated with hop harvest. One such problem was the ever-present necessity to find sufficient harvest help. Another was the control of infrequent rowdy or drunken behavior. More common problems were the annoying, although seldom serious, health concerns.

The irritating hop vines caused rashes in susceptible persons, while the heat of the day and pungent aroma of the hops created breathing difficulties for others. "Hop picker blues," a stomach and intestinal upset caused by a change in water, resulted in diarrhea and affected many at one time or another. Fumes from the sulphur used in the drying kilns were unpleasant and potentially deadly.¹¹

Throughout the years there was also a continuing concern for the physical welfare of young children and moral welfare of older youngsters. It was the growing concern for child welfare that led in the mid 1920s to

¹⁰Benton County Historical Museum.

¹¹Ibid.

the provision of day nurseries for small children by some of the larger yards.¹² Despite the worry, newspapers report only a very few instances of physical abuse or immorality.

GOOD TIMES

By late afternoon, workers who lived off the premises made their way home to supper and chores while those housed on the ranches headed back to camp. Again, those who stayed on the ranches probably had the best time. First came the essential duties: cleaning up, eating supper, and preparing for the next day as much as possible. At least one mother brought beans to a boil in an iron kettle and then buried the kettle, beans and all, in the ground. By the next night, they were ready to eat.¹³

After the chores came the fun. The morning damp, the afternoon heat, the occasional rain, and the long days--all were forgotten in the pleasure of socializing. It was a time to make friends and renew acquaintance with people met at other harvests. Children played games while friendly wrestling matches, ball games, and dances (known as hops) filled leisure time for the adults.

¹²"Pickers Invade Yards," Oregonian [Portland, OR] 5 Sept. 1926, sec. 1: 5.

¹³Benton County Historical Museum.

Playing musical instruments and singing around the campfire were particularly popular forms of entertainment for the whole family.¹⁴

The completion of harvest was a time for special celebration. It was good to have had a change of pace and to have a bit of cash in the pocket. Often, growers would award a bonus to those who worked the entire season: cash, produce, or a party complete with taffy pull. Then came the departure; more subdued, perhaps, than the arrival. Harvest was over until the next September brought hop picking season back again.

¹⁴Benton County Historical Museum.

CHAPTER VI

TECHNOLOGICAL ADVANCEMENT

A recurring theme in the story of hop harvest was the uncertainty of labor availability. Hops had to be picked as quickly as possible after reaching maturity. Picked too soon, the cones did not keep well and lacked full brewing value. If picking was delayed, the cones were fragile and apt to shatter and become discolored. A grower soon lost part of the value of his crop if labor was unavailable during the period of peak ripeness.

Additionally, the hop preferred by brewers was picked "clean," without leaves and stems. Brewers were reluctant to buy and use hops with a high percentage of extraneous material. Growers, too, had a particular interest in clean hops. Leaves and stems increased the weight of, and therefore the wage paid for, the amount of hops picked. Those responsible for weighing hops could penalize harvesters if they did not pick cleanly enough. Penalty or not, however, no grower appreciated hops that were not cleanly picked because dirty hops brought brewer complaints and, sometimes, a lower market price. American hops were consistently at a disadvantage on the national

and international markets because of the high content of leaves and stems.

As early as 1890, Americans attempted to develop a picking machine that would always be available when needed and that would also pick cleanly. Unfortunately for those most interested in such a technological advancement, early machines were less than satisfactory. It was not until the 1940s that picking machines were perfected to the point that they were capable of replacing the vast majority of human hop harvesters in the Willamette Valley.

HUMAN HARVESTING

Although newspaper accounts reveal a sufficiency and even surplus of workers to harvest hops upon occasion, it was an unusual year in which the grower found himself in a position to turn away help. In normal years, growers worried about securing enough help to harvest the crop during its prime. Often, growers caught short of help offered higher than usual wages to entice pickers from other hop ranches.

One year, an article in the Oregonian revealed that widespread fear of a picker shortage was unfounded as pickers had simply arrived later than usual.¹ However, the fact that late arrival could foster fear of a shortage

¹"Polk County Full of Pickers," Oregonian [Portland, OR] 6 Sept. 1905: 6.

is revealing. Another year, the picker was called the "only unreckoned element."² That year it was thought that a heavy demand for labor in other areas might limit the numbers available for hop picking. Even in 1935, despite a slow economy, improvement in other employment opportunities and an increase in hop acreage combined to produce a shortage of workers to harvest hops.³

Other factors, including the weather, played a part in labor availability, too. Light rain, which would not harm the hops unless it continued for some time, would make pickers uncomfortable much sooner and drive some harvesters from the fields.⁴ Economics and politics also played a part. A railroad strike in 1916 was expected to disrupt transportation of workers.⁵ Prohibition led some to abandon work in hop fields as an expression of support for a "dry" America. Both World Wars drew many from crop work to industry, but it was during World War II that the problem became acute.

An expanding economy in the 1940s and the employment of thousands in the armed forces and factories during the

²"An Industrial Outing."

³"Harvest Fields Cry for Workers," Oregonian [Portland, OR] 8 Sept. 1935: 15.

⁴"Hop Harvest is Stopped by Rain."

⁵"Hop Harvest to Start," Oregonian [Portland, OR] 31 Aug. 1916: 6.

war left the hop grower and other farmers in desperate need of harvesting help. A humorous article published in the Oregonian in 1941 told of three women who went hop picking in response to a crop harvesting crisis. Despite turning in what they considered to be a very hard day's work, they earned only 72¢ each--a disappointing return. They did not return to the fields.⁶ The women were representative of a growing segment of the population for whom a day spent picking crops was an experiment in rural life rather than a means whereby to supplement the family resources or put bread on the table.

The high wages paid during the war years lured some to the fields, but the situation was still serious. In 1945, many crops were saved only because of the employment of German prisoners-of-war to harvest. The prisoners were held at Camp Adair outside Corvallis, and were detailed to the hop growers from 6:00 a.m. to 5:00 p.m., accompanied by a guard and provided with lunch by the government. Some of the prisoners had experience with hop growing in Germany. All were reported to be well-behaved and efficient.⁷

⁶Harriet Hennessy, "We Learn About Hops," Oregonian [Portland, OR] 28 Sept. 1941, magazine section: 4.

⁷"Hop Harvest Sets Record," Oregonian [Portland, OR] 23 Sept. 1945: 12; Ann Reed Burns, "Hop Fields Lose Lure Despite Better Wages," Oregonian [Portland, OR] 20 Oct. 1946, sec. 1: 17; Benton County Historical Museum.

The war ended, and the prisoners-of-war were returned. The economy continued to grow and field labor continued to be difficult to obtain. In the 1946 harvest season, the Oregonian reported increasing efforts by growers to hire pickers:

Growers toured towns in sound trucks; advertised "view cabins"; plastered the region with ads; and wrote personal letters to old pickers. They canvassed Portland housing projects apartment by apartment, and dredged up just two truckloads of pickers. These worked two or three days and went home.⁸

Despite the availability of some transient labor, the growers became increasingly discouraged by the shortage of pickers.

Paralleling the growers continuing concern with obtaining enough harvest help was the concern with obtaining cleanly picked hops. In 1894, Oregon growers were "resolved that picking will be clean." In 1910, a depression in the market price of American hops was blamed on poor picking techniques. In 1920, a warning was sounded: harvesters must pick cleanly or Oregon hops could not compete internationally.⁹ The problem continued despite the pleas of the growers. Many pickers preferred

⁸Burns.

⁹"In the Hop Fields," Oregonian [Portland, OR] 5 Sept. 1894: 8; "Good Picking Urged," Oregonian [Portland, OR] 24 Aug. 1910: 5; "Hop Warning is Given," Oregonian [Portland, OR] 27 Aug. 1920: 7.

to strip the vines and "everything in but the poles," was a common, although somewhat exaggerated, expression.¹⁰

Like the labor shortage, the problem of dirty picking reached its height during World War II. With European hop fields out of production, the market for American hops was greatly expanded. Pickers, many inexperienced and interested only in making as much money as possible, picked very dirty hops. Still the product found a market because of the large world-wide demand for hops. However, with the end of the war and resumption of hop production in Europe, competition again assumed importance. Brewers were choosier and farmers more strict about the quality of picking. For many harvesters, clean picking was simply too much trouble for too little pay. Again, the newspaper headlines told the story: "Hop Fields Lose Lure Despite Better Wages," and "Hop Picking Machines Gain Favor in Willamette Valley Yards: Labor Shortages Arouse Interest in Giant Pickers."¹¹ The industry was ripe for a change.

¹⁰Lillie L. Madsen, "Hops Still Picked by Hand at Horst Yards," Statesman [Salem, OR] 26 Aug. 1954, sec. 2: 6; Benton County Historical Museum.

¹¹Frances Blakely, "Oregon's Annual Hop Harvest," Journal [Portland, OR] 27 Oct. 1946, Pacific Parade Magazine: 1-2; Burns; Al McCreedy, "Hop Picking Machines Gain Favor in Willamette Valley Yards," Oregonian [Portland, OR] 21 Sept. 1947, sec. 2: 1.

MECHANICAL HARVESTING

A mechanical picker appeared to be the answer to the need for timely, clean picking. Several designs were drawn and machines made. However, many years passed between the concept and its practical application. E. Clemens Horst, a hop grower with ranches in California, Oregon, and Washington, used a mechanical picker with satisfactory results in California from the early 1900s. Unfortunately, the picker was unsuitable for Oregon hops which shattered more easily than those grown in California.¹² In the process of shattering, much of the lupulin was wasted.

By the 1940s, mechanical pickers that could pick Oregon hops efficiently were on the market. There were two basic types of mechanical pickers introduced in the Willamette Valley during that decade: portable and stationary. The portable picker was designed to be pulled through the fields by a tractor, processing hop vines as it moved. Due to its compact size and limited processing area, the hop vines were not picked with as much efficiency as was offered by the larger, stationary pickers.¹³

¹²Ed. Thys, "Picking Hops by Machine," Hopper [San Francisco, CA] 1.7 (Oct. 1944): 8-9.

¹³Brooks, Horner, and Likens, 34-35.

The stationary pickers were big machines permanently assembled and housed in buildings the size of a large barn. Hop vines were brought by truck from the fields for processing by the machine. Stationary pickers were of two types, called vertical or horizontal in reference to the position taken by the vine as it was fed through the machine.¹⁴

All of the machines, both portable and stationary, worked in the same general manner. Vines were fed into the machine and sets of wire fingers removed the cones, leaves, and some stems from the vine. The vines were discharged and a series of shaking and screening operations were then performed mechanically to separate the cones from the waste materials. Final inspection and separation of cones from extraneous material was done by humans.¹⁵

Stationary pickers had the advantages of larger capacity and better performance, while portable pickers eliminated the need to transport vines. When stationary pickers were employed, the vines had to be gathered and transported with care in order to avoid tangling the vines and unnecessarily breaking the cones.

¹⁴Anglo-American Council of Productivity, 30.

¹⁵Brooks, Horner, and Likens, 31-34.

Mechanical harvesting all but eliminated the growers' concern about the possible loss of crop due to labor shortages. Moreover, the machines worked more quickly and cleanly than human harvesters. The machines wasted more cones in the process than did people, but that point was of little importance when harvesters were unavailable. Approximately forty workers and a picking machine did the work that once required a crew of four hundred.¹⁶ The cost of running a machine and paying a small crew was considerably less than that of hiring hundreds at harvest time and providing accommodations.

The mechanization process, however, was expensive. While a portable picker was somewhat less costly, stationary pickers sold for \$35,000 to \$40,000 and more.¹⁷ It was a tremendous outlay of capital for a machine that was used only three or four weeks a year.

Growers were forced to make a decision. In view of the shortage of labor, if they wished to continue growing hops, they had to mechanize. The majority of Oregon hop growers did not have sufficient acreage in hops to justify or finance the initial expense of a picking

¹⁶Ralph Tautfest (retired hop grower), personal conversation, 14 Apr. 1982.

¹⁷Herman Goschie (hop grower), interview, Benton County Historical Museum, Philomath, OR, 14 Apr. 1982; Tautfest; Blakely.

machine.¹⁸ Some attempts were made to share the use of machines, but for the most part proved impractical. The harvest season was short, and everyone needed the machinery at the same time.

¹⁸Goschie.

CHAPTER VII

REDUCTION OF ACREAGE

In the late 1940s, there were over one thousand hop growers in Oregon. By 1952, there were fewer than four hundred. Acreage was cut by nearly 60% between 1946 and 1953.¹ The expense of mechanization was a major factor, but it was not the only one. There were three other elements that contributed greatly to the decrease of hop acreage and reduction in number of growers by the early 1950s: downy mildew disease, a reduced hopping ratio, and marketing controls.

DOWNY MILDEW

Just as the end of prohibition promised better times in the hop industry, a fungus disease called downy mildew first appeared in Oregon hop yards. In 1936 and sporadically thereafter it devastated the crop as no other pest or disease known before.² The moderate temperatures

¹United States, Department of Agriculture, Hops: By States, 1915-56, 4-5; Benton County Historical Museum.

²Ibid.; Al Haunold (United States Department of Agriculture Crop Science Appointee/Hops, Oregon State University), interview, Benton County Historical Museum, Philomath, OR, 1 Feb. 1982.

and damp weather of the state were conducive to the spread of the disease. Oregon's otherwise ideal hop growing climate became a liability.

Various sprays were used to combat the mildew, but none were entirely effective. While research was conducted to study the disease and possible remedies, the shortage of hops from Oregon was compensated for by increased production in the state of Washington. Arid country, such as Washington's Yakima Valley, was well-suited to hop culture when irrigated, and the dry climate was unfavorable to mildew diseases. Eventually, researchers discovered that certain varieties of hops were naturally resistant to downy mildew. However, by the time the resistant varieties were developed, Washington was firmly entrenched as the leading hop producing state in the nation.³

HOPPING RATIO

Another important factor in the reduction of Oregon hop acreage was the decrease in the amount of hops used to flavor beer, the process known as "hopping." Beers and ales used to be much stronger in hop taste. It was around the time of World War II that consumers developed a preference for a lighter beer.

³Ibid.

At the beginning of the twentieth century, approximately one pound of dried hops was used to flavor each barrel of beer. The hopping ratio was gradually reduced, and by 1947-8 less than one-half pound of hops was used to flavor the average barrel. Some brewers used as little as three or four ounces to the barrel.⁴ The 50% to 75% reduction in the ratio of hops to beer greatly decreased the demand for dried hops despite an overall increase in beer consumption.

MARKETING CONTROLS

Federal marketing controls were the final factor in the shrinking of Oregon's hop acreage. The hop market, both local and national, was very erratic over the decades. The market price of hops fluctuated as much as 400% from one year to the next on the national level and almost as much on a state level.⁵ The purpose of federal controls was to stabilize the market by balancing supply with demand.⁶

⁴Sulerud, 45; United States, Department of Agriculture, Outlook for Hops from the Pacific Coast, 11.

⁵United States, Department of Agriculture, Hops: By States, 1915-56, 3 and 5; Sulerud, 48; Myrick, 262.

⁶Anglo-American Council on Productivity, 80-82; Harvey Kaser (retired hop grower), interview, Benton County Historical Museum, Philomath, OR, 16 Apr. 1982.

At the request of growers, dealers, and brewers, controls were first instituted in 1938 to limit the quantity of hops marketed. Titled the "Hop Marketing Agreement and Order," the controls functioned under the United States Agricultural Marketing Agreement Act. The order was terminated in 1945 and subsequently reinstituted in 1949. Each year, representatives of the hop industry estimated hop production and compared it with anticipated demand. If the available crop was determined to exceed anticipated demand, a standard saleable percentage was set. A certificate to sell was then issued to each grower. Without the certificate, hops could not be legally sold or bought.⁷

Because the determination of saleable percentage could only be made late in the growing season, farmers were unable to adjust by planting fewer acres to hops. The uncertainty and futility involved in producing a crop that might not be legally saleable in its entirety was a significant factor in the decision of some growers to get out of the hop industry.⁸

⁷ Ibid.

⁸ Benton County Historical Museum.

A CHANGED INDUSTRY

Harvest mechanization, downy mildew, reduced hopping ratios, marketing controls, and the concomitant reduction of hop acreage combined to permanently change the traditional character of Oregon's hop industry. At the height of production, Oregon had 26,000 acres in hops. By 1955 the acreage was less than 4,000 and dropping.⁹

Most of the growers who left the hop business turned to farming other, more stable crops that required a smaller investment in equipment. Most of the workers who once helped harvest hops found steadier and better paying jobs. For the majority, the transition was uneventful. While there was little disruption, there was certainly change. Oregon's annual month-long picnic was at an end.

⁹United States, Department of Agriculture, Hops: By States, 1915-56, 5.

EPILOGUE

Oregon's hop industry has not disappeared, although total acreage is reduced and the industry is undeniably altered. Saleable percentages were eliminated in the 1950s, and in the 1960s federal marketing regulations were revised. Base quotas were assigned to individual growers. Those without a base quota had no legal means of marketing hops except through growers who possessed one. The assigned base system offered a measure of security and protection to those who were able and willing to invest heavily in expensive machinery, trellis systems, and modern dryers. In turn, the increased stability of the market helped shape a small but thriving multi-million dollar hop industry in the Willamette Valley.

With approximately forty growers and six thousand acres in production, Oregon now yields about 17% of the total United States hop crop.¹ The value of the 1985 crop is close to twenty million dollars.² The federal government is currently seeking to cancel federal controls

¹Robert A. Eaton, Manager, United States Hop Administrative Committee, Portland, OR, letter to the author, 28 Oct. 1985; United States, Hop Administrative Committee, Basic Hop Statistics (Portland, OR: U. S. Hop Administrative Committee, 1985) tables 1 and 2.

²James C. Flanigan, "New Hops Rules Irk Growers," Oregonian [Portland, OR] 3 Jan. 1986: B8.

over the marketing of hops. How this will affect the industry remains to be seen.³

At present, the industry is a model of modern technology and efficiency. Memories linger, however, and the aging, old-fashioned kilns that may still be seen near the traditional centers of hop production are nostalgic reminders of the days when the fields were bustling with life and cries of "Wire down!" and "Box full!" filled the air.

³Robert A. Eaton, Manager, United States Hop Administrative Committee, Portland, OR, telephone conversation, 6 Jan. 1986.

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