

APPLE CAPITAL:
GROWERS, LABOR AND TECHNOLOGY
IN THE ORIGIN AND DEVELOPMENT
OF THE WASHINGTON STATE
APPLE INDUSTRY,
1890-1930

By

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To the Faculty of Washington State University:

The members of the Committee appointed to examine the dissertation of
TONY ZARAGOZA find it satisfactory and recommend that it be accepted.

Chair

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Abstract

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It is important to investigate the origin and development of apple production in the Pacific Northwest because the story is as American as apple pie itself. This dissertation examines the history and political economy of the apple industry in Washington State during the period from 1890-1930. The apple industry was aided—even nurtured—by two of the most powerful institutions in the world at the time, the U.S. federal government and transcontinental railroads. These two institutions secured the foundational elements of agriculture—land and water. Once these basics were established through dispossession and reclamation, settlers became orchardists and apples became a commodity. Settlers planted vast acres, and apple growers formed cooperative associations to create and maintain the necessary conditions to make their growing industry more profitable and competitive, including marketing the fruit nationally and globally. As the industry grew beyond five and ten acre plots, growers needed larger amounts of seasonal

labor to pick and pack the fruit. As the demand for more workers continued to increase, growers found ways to obtain the labor they needed by using various social groups, at first local men, women and children, predominantly European Americans, and then later European American migrants. Prior to World War I, Native American, Chinese, and Japanese workers in small numbers also picked and packed apples, and during the war, the roots of migrant labor by Filipinos and Mexicanos began. At the same time, however, the industry also found ways to reduce the amount of labor necessary and the costs of production through the scientific management of the labor process, and through the implementation of a vast array of labor-saving and labor-replacing technologies. These three solutions to the labor problem are still crucial to profitability in the industry today.

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CHAPTER ONE

INTRODUCTION

The period from 1890 to 1930 might be called the origin and development of the apple industry in Washington State. According to economic geographers Lemons and Tousey, “Favorable geographical factors and production conditions resulted in a rapid and sustained growth of the industry from 1890-1930” (1945, 161). By the first decade of the twentieth century, Washington apples became a yearly multi-million dollar industry, and since its origin, the Washington state apple industry has generated somewhere approaching a hundred billion dollars. The industry grew enormously from 1905 to 1920 and developed a need for a consistent and reliable labor force to harvest the crop. The story often told about the origins of the apple industry in Washington invokes brave, intelligent, and hard-working pioneers who were able to take advantage of extraordinary soil and abundant sunshine and plant the ideal crop for the climate¹. The Europeans and Euro-Americans settlers devoted arduous labor to build the industry. The soil of central Washington was fed by the ashes of volcanoes for millions of years as well as being the bottom of a giant lake, Glacial Lake Missoula, which covered much of the inland Pacific Northwest for 2,000 years between 13,000 and 15,000 years ago (Bjornstad 2006). The sunshine and arid climate are well suited for the growth of fruit trees, especially apples. This is the typical story market economists tell about commodities and the regions that become able to produce them best (Ricardo 1817); the story is called “comparative advantage,” and it explains how

¹ See for instance, Luce, Bright, Hoyt and Lemons, the Washington Apple Commission Washington apple history page <http://www.bestapples.com/facts/facts_washington.shtml> and various videos produced by the industry such as *Fresh Washington Apples* (1991).

Washington became part of the global economy well suited for the production of apples.

Rational and industrious individuals seized on such advantages to build economies.

The histories devoted specifically to apples that are available follow in a similar vein. Both popular² and scholarly works refer to these favorable geographic factors and leading individuals as they discuss the first orchards, apple varieties, and developments in apple horticulture. For example, from *The Encyclopedia of Practical Horticulture* come three familiar answers to the question of why Washington was an important region for the profitable production of apples and why Washington became the nation's "apple capital." These answers pertain to today's apple industry as much they do to the early industry they refer to nearly one hundred years ago, when the three volumes which comprise this copiously researched monograph were first published. First,

the latitude is in the great apple-producing belt of the world. Even where the latitude would seem not to be far enough north the altitude of the hills and mountain ranges often compensates for the distance south, and gives cool nights, and a temperature favorable for the growing of the best fruits. Second, in a large part of this country there is during the day a bright sunshine and at night a cool air, both of which tend to give color and flavor to the apple. Third, the character of the volcanic ash soil, on which a large portion of this region is built, is favorable for the growth of the apple tree and its fruits. (Lowther and Worthington 1914, 17).

² For instance some popular histories include Bright (1988), representations at the Wenatchee Valley Museum including the film "Celebration" (1985), Toppenish Murals, A few exceptions to this include the Washington State Horticultural Association video "Celebrating a Century, 1904-2004" (2005) and the book *Washington Apple Country* by John Marshall and Rick Steigmeyer (1995), which both mention the workforce in the apple industry, though they do not discuss in detail the history of the workers.

Various studies since also discuss the origins of the apple industry in similar ways. Each of these studies emphasizes the environmental conditions that made apple production “natural” and the hard work of the growers that built on nature’s gifts.

But this is not the whole story. The dominant story is flattering; it is meant to build state pride, reinforce the significance of local industry and interest tourists and customers in the state’s most prized crop. There are important aspects of the story that are missing and necessary to understand fully not only the history of the Washington apple industry, but also the history of the Pacific Northwest and the history of capitalist development in the United States.

This dissertation explores the beginning of the apple industry in Washington State during the period from 1890-1930. Here, I examine the history and political economy of the origin and development of the industry and how growers got the necessary infrastructure and met their other needs to succeed. The apple industry, hardly an industry in the beginning, was aided—even nurtured—by two of the largest and most powerful institutions in the world at the time: the U.S. federal government and transcontinental railroads. These two institutions secured the two most foundational elements for agriculture—land and water. Once these basics were established, settlers became orchardists and apples became a commodity, and these growers found significant ways to work together to become an industry and acquire the various components and conditions they needed to make their growing industry more competitive. Besides trees the other essential element for apple production was the labor needed to culture the orchards and harvest the crops. As orchards grew, the industry needed more labor to enable the growers’ profit (or in some years to limit their losses). The industry found ways to get the labor it needed by using various groups, eventually coming to rely on migrants from within the U.S. as well as international workers. At the same time, however, the industry also found ways to reduce

the amount of labor necessary through the organization and management of work, and through the implementation of laborsaving and labor replacing technologies.

Digging deeper still we also see that the apple industry is an example of settler colonialism in North America. The birth and development of apples offers a representative microcosm of the growth and development of capitalism during this period and of how capitalist nation-states subsidize and develop regional capitalist industries. Looking at this specific industry at this specific time and place provides a window into a specific point in capitalist development, as well as some of the key characteristics of capitalist production in the U.S. in the early twentieth century. The roots of many issues and concepts that workers, organizers, scholars, artists, and consumers have been discussing and organizing around recently such as agribusiness, industrial agriculture, monocrop systems, pesticides, immigrant labor and immigration, the gender division of labor, automation among others can be witnessed in the development of the commercial apple industry in this period. Apples provide one example among a myriad of commodities that show how workers, growers, investors, and managers must abide the imperatives of capitalist production, competition, and accumulation.

Of course the latitude, soil, and work of the growers were important, but these factors would not have mattered without the taking of the land, the large federal and state government aid (through subsidizing land acquisition, infrastructure development, and cheap labor maintenance), the corporate investments of the railroads and banks, and the work that hundreds of thousands of laborers did to build the infrastructure, clear the land, and yearly harvest the crops. This dissertation seeks to add a political economy context to the origin of the apple industry by drawing out these themes. In order to fully understand the rise of industrial agriculture in the West and specifically in apples in the Pacific Northwest we have to see it as the “legacy of conquest” (to use Patricia Limerick’s famous 1987 book title). This dissertation

investigates the “legacy of conquest” with concern to one industry in one small corner of the country.

Primarily, I will focus on the imperatives of capitalist production from the perspective of growers, and how they made their decisions given the choices they had as determined and conditioned by historical and economic circumstances within the capitalist mode of production. Some of the primary sources that provide the basis for this dissertation are proceedings from growers’ conventions, notes from association meetings, horticultural studies, agricultural economics briefs, government studies, labor reports, census data, newspapers and commodity trade journals, most importantly the Pacific Northwest apple industry’s principal publication, *Better Fruit*. Such publications have a significant history in U.S. agriculture including everything from daily agricultural newspapers to monthly commodity-specific journals such as *Better Fruit* or the *California Fruit Grower*, even such annuals as the *Old Farmers Almanac* going back to 1792. They provided farmers with the information on a variety of issues and kept farmers aware of political, labor and social questions that might have affected their business. *Better Fruit* began in 1906 and survived well into the 1960s and covered various fruits grown in the Pacific Northwest but focused primarily on apples. When it started it was meant for both the experienced fruit grower and the novice orchardists that were arriving in the Pacific Northwest after hearing about the possibilities of small-scale commercial orcharding. *Better Fruit* gathered articles by industry leaders and horticultural experts, featured reports and speeches from the latest conventions and meetings, displayed photos from across the apple landscape, presented the results of the most recent scientific experiments, offered pesticide spray calendars and packing diagrams, published announcement of meetings and advertisements for the latest technologies, and imparted the editor’s monthly commentaries on the state of the apple industry and advice to growers. It is truly

a rich source of information on the apple industry and I am using it to document labor history through the lens of capital.

At the same time I recognize that, as David Vaught has argued repeatedly, growers are not monolithic or homogenous. Different size orchards and growers with different amounts of wealth or approaches to growing existed throughout different regions and across different times in the apple industry (1995; 1999; 2000; etc.). But certain tendencies and motivational logics can transcend the varying circumstances of particular growers and offer an observable pattern and picture of the objective conditions in which growers made their own personal decisions. And we can examine the kinds of decisions growers made and how they were encouraged and rewarded (or discouraged and punished) by those conditions, and we can document a pattern from the leading voices of the industry as found in association meetings and industry journals. One of Vaught's key criticisms of Steven Stoll's *The Fruits of Natural Advantage* is that Stoll relied on the oft-repeated narrative of Carey McWilliams and did not look at such industry sources as the *California Fruit Grower*. Upon examination of industry sources from within the apple industry as noted above, it is clear that the Washington apple industry had various debates going on within it, but there are also clear and discernable tendencies that show that successful growers were in fact much more alike than they were different. So in a sense, like any subject under examination each individual case will deviate from one another so as not to produce a monolithic unit, but because the individuals are acting in similar conditions under similar logics (namely the logic of capitalism) and have to respond to similar circumstances, they are also not heterolithic either.

I began this project with various preconceived notions that I was able to challenge and clarify through the research. For example, labor-intensive agriculture in Washington State today is predominantly if not primarily performed by Mexican@s and Chican@s. I wanted to find out

when this began. I assumed that it had been this way since before the Bracero Program. The roots of Mexican@ and Chican@ labor in the Washington apple industry did begin during this period, but not in the ways I had assumed. In fact, the dominant presence of Mexican@ workers is relatively recent in apples, not really beginning to become a majority until the early 1970s. What I found was that in addition to family labor of the grower, poor and working class European Americans and European immigrants including men, women and children, both “locals,” folks residing in the communities, and “migrants,” folks coming into the region for work, were the primary labor force for the vast majority of the apple industry during this period. I also found that various other groups worked as part of agricultural production in this state, but again only small percentages in apples in most places: Native Americans families and tribes from reservations in Washington State as well as from British Columbia, Asian Americans including Chinese, Japanese, and Filipino, African Americans and of course Mexican@ and Chican@s. At the same time, European Americans were not necessarily the dominant labor force at this time in other commodities such as berries, hops, and sugar beets, leading me to believe there were various forms of labor segmentation at play in Washington agriculture and that apples in the hierarchy of crops was near the top.

Another preconceived idea I had was that technology was not introduced into apples (and agriculture generally) until the 1950s or after World War II at the earliest, but what I found was that technology and attempts at finding mechanical and scientific solutions to issues of apple production were present in the industry from the beginning. In fact, the period from 1910 to 1925 saw dramatic installations of technology creating many packinghouses that looked like industrial factories and orchards that relied on tractors to haul industrial gas-powered pesticide spray pumps up and down orchard rows. Additionally, I had a sense of what a sweeping change

Frederick Taylor and the ideas of scientific management had on industrial America, but had no idea how parallel these developments were in agriculture, or at least within the apple industry.

The sources of these erroneous assumptions and preconceived ideas are multiple. They have much to do with the stories we tell about agriculture generally, and its popular conception and, perhaps more pervasive, its commercially produced image. The mythic story and conception of the farm and farming are widespread throughout our culture in movies, books, toys, games, etc. In such popular representations of farming we are shown the farmer in overalls atop his tractor on his small little plot; his wife is waving to him in apron from the porch to come take a bite of the fresh apple pie she just baked. Such images are obvious constructions, but not so obvious if one does not stop to think about it or get a glimpse of an agribusiness complex. The agricultural industry itself constructs an image of itself in its advertisements, package labels, and grocery displays. But these mythic images would not have the weight they do without the fact that most folks in the U.S., like me, do not know where our food comes from, how it was produced, and how that production has changed *and* stayed the same through the course of U.S. history.

To put this in perspective we might consider that just over 1 percent of our population today could be classified as farmers, down from 42 percent in 1900 and from an estimated 75-90 percent of settler colonists around the time of the American Revolution (Hurt 2002, 35, 405). We as a population are farther away from agriculture both in terms of distance but also in terms of generations. At the same time agricultural products, like most other commodities, have more and more become fetishes that are detached from the process of production including the labor and various social costs that go into making them possible and available so cheaply. Perhaps we think we only need to know how much they cost and when they might be on sale. Perhaps most of us do not want to know where our food comes from, but then again, perhaps we are taught not to

wonder or bother. But when we start to examine our food, to demystify its origins and connect our examinations to the history of its production, we begin to see some things that might not make us chew and swallow, breathe and dig, swim and play so carefree.

In addition to general popular conceptions about agricultural production and our alienation from food and its history, apples and Washington agricultural labor specifically has received insufficient historical engagement in Pacific Northwest history, labor history, and agricultural history. The fact that as of yet there is no scholarly book on one of the region's most important if not most famous crops³, and that very few detailed labor histories of agricultural workers⁴ in one of the top ten most important agricultural regions in the country, is surprising (Krissman 1999, 271). In fact, most labor history books and collections ignore or rush over agricultural labor, when agricultural labor should be central to labor history because these workers are often at the bottom and their conditions are some of the worst. Histories of agriculture don't focus enough on workers, those who actually made the food possible to sell.

³ Industry insiders that provide good basic information, but do not offer a critical scholarly examination wrote the only books on the history of the apple industry in Washington. For instance see Luce (1972) and Bright (1988). There are several excellent dissertations on Washington apples focusing on important contemporary issues within the industry, see for instance Maldonado (2004) which examines the racial discourses around hiring among growers and managers within the industry, Cho (2004) which offers an economic analysis of the industry, and Snyder (2001), which examines health and safety risks for Latina apple packers, and Qazi (1998) which looks at women's work in the contemporary Washington fresh apple industry. An early thesis by Mabbott (1940) covers the period 1890-1930, but provides little analysis of industry as a whole, little on labor, and nothing on who is doing the work. There are also two key articles on the apple industry in Washington: Sonnenfeld, et. al. "Globalization of the Washington apple industry: its evolution and impacts" and Jarosz and Qazi "The geography of Washington's world apple".

⁴ Some of the few books concerning a history of Washington State agricultural workers include Gamboa (1990), which looks primarily at the Bracero Program in Washington with a social and cultural focus; Garcia and Garcia (2005), which offers a collection of essays on Pacific Northwest labor history and activism but with very little from before World War II; Hall (2001) offers a history of the Industrial Workers of the World organizing agricultural workers in Washington.

And agricultural histories of the West that focus on workers tend to be centered on California⁵. With notable exceptions,⁶ there also has been very little scholarly work on the use of technology in agriculture and nearly nothing on Taylorism in producing food. In this sense then this dissertation contributes to opening up new areas for scholarly work. And broadens the story we tell about apples and the work it has required to produce them.

This dissertation, in the tradition of American Studies, provides an interdisciplinary approach by combining history, political economy, comparative ethnic studies, business studies, the history and philosophy of science, and the study of industry literature. Each chapter takes a slightly different disciplinary focal point and combination of disciplines, but together the dissertation is richer for it. These many disciplines together provide an important lens through which to understand the emergence of the industry, its driving forces, and the transformation of land and labor.

Chapter two examines the origins of Washington agriculture as part of a settler colony where land was violently taken, aided by the U.S. military and federal legislation, infrastructure such as railroads and irrigation were built⁷, an industry was developed and a regional commodity was created. According to historian Erasmo Gamboa, from the beginning the apple industry was

⁵ Some of the best include, Carey McWilliams's *Factories in the Field* (1939), Ernesto Galarza's *Merchants of Labor: the Mexican bracero story* (1964), Camille Guerin-Gonzales's *Mexican workers and American dreams: immigration, repatriation, and California farm labor, 1900-1939* (1994), Jose Alamillo's *Making Lemonade out of Lemons: Mexican American labor and leisure in a California town, 1880-1960*.

⁶ Most notably Fitzgerald's *Every Farm a Factory* (2003) begins to explore both technology and Taylorism in Agriculture; and Jellison's *Entitled to Power* examines the relationship between farmwomen and technology.

⁷ In the recent book on the Great Northern Railroad *Profiting from the Plains*, Clair Strom shows the apple industry was in great part a creation of the railroads. This new industry among others provided a commodity in the Pacific Northwest to ship across the country and an industry to draw people from the Midwest and East out to the Pacific Northwest to buy land and establish businesses.

dominated by owner operators (2000, 3). These were highly specialized crops requiring heavy investment and lots of knowledge. Chapter three shows that as the apple commodity was established and developed, the apple industry developed a class of producers made up of these owner operators who formed organizations to cooperate for their mutual interests. Due to this cooperation the industry was capable of coordinating on many significant levels and its cooperative efforts gave it significant advantages over other apple-growing regions. As competition among growers and between apples and other industries, like rail, retailers and other fruits, increased the pressure to reduce costs of production, growers needed to find ways to produce their commodity as quickly and cheaply as possible.

The next three chapters of the dissertation turn to the three solutions growers found to cut production costs and maintain the profit margins. Achieving, managing and maintaining a ready and reliable labor force primarily addressed this. According to Gamboa, success of the Washington agricultural industry, and we might say agriculture generally, has always depended on “an extensive supply of farm labor” and because of the perishable nature of crops a “labor shortage was the most serious obstacle encountered by farmers” (2000, 2). This is also a key feature that often gets left out of the dominant story of apples—who did the work⁸. The work that is often discussed is that of the growers themselves, who undoubtedly worked hard but certainly not all by themselves. For example in *Better Fruit*, there are pictures of people picking apples from trees or packing apples into boxes or spraying lead arsenate on the trees from horse drawn pumps, but they remain anonymous and there is rarely any mention in the text of who is doing the work and why. There are various instructions on how to manage those workers and

⁸ Historian and teacher Leverne Mabbott is one of the few writers of Washington apple history that discusses workers, though only for two pages. It is significantly more treatment of workers than most other historians of the industry and quite helpful in giving some idea of the conditions that farmworkers face as they do their work.

discussion of the prevailing wage along with news of the latest laborsaving equipment. Chapter four offers a labor history of apples, but from a different angle. Labor histories often focus on what workers are doing and the details and debates in organizing. This chapter will provide a multi-racial history of the apple work force from 1890-1930 and examine how growers understood and used their work force to lower production costs by lowering the cost of labor by finding populations who will work cheaply year after year. This period marks the roots of mexican@s as the primary seasonal labor force for the industry, but I will also trace various other groups involved in the harvesting of apples.

Chapter five examines another solution the growers used to lower the costs of production, the implementation of scientific management in the production process. By studying and dividing up the work process in the orchard and in the fields, growers were able to save significant costs in terms of labor. In chapter six I examine the final major solution growers found to cut the cost of commodity production—reduce the number of necessary workers as much as possible through the use of technology and laborsaving devices. The laborsaving and labor-replacing equipment both reduce the number of workers needed per box of fruit harvested and reduce the amount of skill needed thus increasing the potential labor pool. The early packing tables in the first decade of the twentieth century were the precursors to the gravity grading and sorting machines of the 1920s which were precursors to the mechanized machines of the 1940s and 50s which led to the automated, optical scanning, microchip-driven factories of today.

When most people living in the U.S. hear the word apple, we think of Washington, of the mountains, of apple trees, of apple pies, of all-Americanness. But most of us do not think of how the apples got to us, or of the history of the labor and land that made those apples possible. Nor do we consider or contemplate how the land was seized and developed or how the growers

organized to reduce labor costs however they could. It is of course important to know this history and the political economy that conditioned it because it is a story as American as apple pie itself.

CHAPTER TWO

LAND AND COMMODITY INFRASTRUCTURE

Figure 2.1 Wenatchee Valley c. 1920



Source: Manuscripts, Archives, and Special Collections (MASC). Washington State University (WSU). Pullman, WA.

I. Introduction

Isaac Stevens would probably be quite proud to see how Wenatchee and East Wenatchee developed (figure 1.1) with the railroad rolling through, roads and streets dissecting the landscape, bridge spanning the great Columbia, and apple orchards teeming in the valley. For this was the vision he had for Eastern Washington as he and his party surveyed a rail route from the Mississippi to the Pacific. In the early 1850s he surveyed what became central Washington and

wrote, “Nearly all the country, indeed, east of the Cascades, is a good grazing country, and most of it is well adapted to agriculture. My own personal observations were quite considerable in this respect [...]. Actual settlers invariable speak well of the country” (Stevens 1855, 148). He added that much of it could be “easily cleared.” The value of the land was apparent to Stevens; to him it seemed a “rich and inviting,” and because of this he felt that “Indian matters” needed to be settled urgently as “the attention of settlers has already been called to many pleasant valleys. [...] I am satisfied a portion of the emigration to Washington and Oregon will, after this year, be by the passes explored under my direction” (152). Stevens advised that “encouragement should be given to settlements,” and that geographic explorations should be “followed by land surveys” to begin marking the land for the rule of property and title (153). Stevens had no doubt that “with an energetic land system” the valleys would “smile with cottages and yield the products of the soil” (154). And indeed over the next eighty years the land filled with settlements and the rich volcanic soils yielded apples and countless other crops throughout the lands Stevens surveyed in Washington. The products of the soil perhaps began as subsistence crops, but settlers quickly commodified them, growing them to make profit in the local, national and later international market⁹. It may seem obvious, but must be said: an agricultural commodity begins with land. The U.S. conquered apple land taking it from the indigenous inhabitants, and systematically

⁹ Karl Marx and Frederick Engels worked extensively on understanding the process by which goods were turned into commodities, and Marx’s *Capital* Vol. 1 begins with and treats extensively the concepts of commodity and commodification. For other sources on commodification see Lears, *No place of grace: antimodernism and the transformation of American culture, 1880–1920*; Wood, *The origin of capitalism*; McNally, *Against the market*; Ewen, *Captains of consciousness: Advertising and the social roots of consumer culture* and the Summer 2003 issue of *The hedgehog review*, The commodification of everything. For an anthropological perspective on commodification see Appadurai, ed., *The social life of things* and a follow up book edited by Binsbergen and Geschiere, *Commodification: things, agency, and identities*.

pulled into a private property paradigm, a system of commodity production for markets, and the expansion of a growing U.S. imperial project¹⁰.

This project began with the establishment of trading posts, forts, missions, railroads, property grids, and irrigated lands, which all formed a vast network of imperial architecture digging into and piling on the landscape. The infrastructure of commodity production provided the necessary elements for expansion internally and the drive to expand externally. One element of the internal expansion was the appearance of row upon row of apple orchards in pockets of the Pacific Northwest that covered over traditional gathering places and hunting grounds. Rivers where indigenous families freely caught spawning fish became dammed up. The traditional lands and water ways of the Native groups of the Columbia Plateau were transformed over a one hundred year period, roughly 1830-1930, into vast irrigated tracts of monocultural farms and orchards, railroad tracks with steam engines puffing smoke and hauling out timber, ore and crops, concrete sidewalks and streets where automobiles sped past telephone poles on the way back from tall brick courthouses past banks to large plantation style homes.

The Washington apple industry was part of a settler colony built on the land and water base taken from Native peoples. An understanding of the commodity chain of Washington apples must include the expropriation of land as well as the aid role of the biggest corporations at the time, the railroads, and the aid given to them by the U.S. nation-state in establishing an agro-industrial region in the Pacific Northwest. The federal government aid did not stop with taking the land and securing it from its indigenous inhabitants. The public-private partnership between the federal government and the railroads provided the burgeoning apple industry of Washington with the infrastructure for shipping the new commodity and irrigation necessary to fully develop

¹⁰ The maps, reconnaissance and scientific studies were a survey to the Department of War of a railroad route from “the headwaters of the Mississippi to the Puget Sound” read like a blueprint of Manifest Destiny.

the commodity and the new industry. On top of this infrastructure, thousands of growers built an industry around the production and sale of apples. These growers also built the industry by organizing for their common needs and sharing information about the latest issues through cooperative commodity associations, yearly conventions, and industry journals.

II. Capitalist Expansion: Origin and Development of Commodity Apples

U.S. political and economic rulers were able to purchase, annex, conquer, and seize vast chunks of the continent. This dispossession, or primitive accumulation¹¹, enabled ruling class European settlers to build their initial wealth that would be further accumulated through exploitation of workers and the super-exploitation of slaves. The U.S ruling class manifested and justified these policies long before John O’Sullivan gave it a name that stuck¹². As American empire spread and U.S. capitalism began to industrialize, the U.S. government subsidized corporations to complete the first transcontinental railroad in 1869 and further developed the transcontinental railroad system following the Civil War followed by the opening of the Panama Canal in 1914. The transcontinental railroad was part of international trade connecting East Coast ports with West Coast ports and thus the entire U.S., Europe and Asia. The Panama Canal also became part of

¹¹ In Part VIII of *Capital*, Vol. 1, Marx discusses at length the concept of primitive accumulation. He defines it as “an accumulation not the result of the capitalistic mode of production, but its starting point.” More recently David Harvey in his various works beginning with *The Limits to Capital* has emphasized the importance of historic and ongoing primitive accumulation.

¹² Manifest Destiny sweeping from Europe included the invasion and conquest of Native land from the initial wars on the Pequot in Massachusetts through Andrew Jackson’s military and political campaigns for “Indian Removal” through the Trail of Tears, right on through to Nez Perce and Modoc Wars and purchases and treaties such as the Louisiana Purchase, the Treaty of Guadalupe ending the U.S. invasion of Mexico (Drinnon 1990). Manifest Destiny even crossed the Pacific Ocean making the Philippines a colony of the U.S.

U.S. globalized trade and the international trade of commodities—the European dream represented most clearly by Columbus’s search for a more efficient trade route with Asia.

While the U.S. capitalist economy expanded across the continent, settlers brought with them, as historian Patricia Limerick has pointed out, fences and legal deeds that defined and enacted property, production and consumption via the market, and wage labor. At the same time, indigenous peoples struggled to defend and maintain traditional economies and ways of living (1987). Traditional practices of agriculture, gathering, fishing and trading were fully disrupted by the invasion of settlers. Many settlers moved west to find opportunities that were less available because of deep competition and growing polarization of wealth in the East. The ideological, political, and economic momentum of Manifest Destiny¹³ encouraged an economic migration in which people moved to find a way to fit into the capitalist economy at the expense of native inhabitants of the land, and in a ever-spreading cycle brought with them the very system of practices, logics, and relationships that had disrupted their live and the lives of their ancestors. In a capitalist system people get their needs and desires met through commodities, goods and services that are bought and sold in the market. Not all things that meet needs are for sale, but if these yet unsold things can be made into commodities they are. To buy commodities one must own the means of production or sell one’s labor power for a wage. Owners who control the production of commodities must find, create, and increase markets by encouraging demands for the commodity. As part of this process commodities have two characteristics: the use-value and exchange value (Marx 1859, 19). For example, apples have a value as apples that are used to fulfill human needs and desires (use-value), and the apple has value in the market in relation to

¹³ Similar imperial expansion projects were made by European settlers around the world including the so-called “great trek” of Boers in South Africa, the “entradas” and “bandeiras” by the Portuguese in Brazil, Spain’s “conquistas” of Central and South America, the squatter and selector expeditions in Australia, etc.

other commodities (exchange-value). In a commodity system, life itself is subject to the market, as the sale of commodities is about making money. Thus life became organized around making money through the sale of ever-greater numbers of commodities. As apples became a commodity in the Pacific Northwest, the development of the region and apple production became organized around meeting the needs of commodity producers and thus subject to the logic of profit.

The dramatic rise and growth of the Washington apple industry had everything to do with the expansion of the industrial capitalist economy and massive federal government support from “purchasing” land and privatizing it and building forts and maintaining armed forces to support and protect missions and trading posts in newly acquired land, to subsidizing railroads and irrigation to develop land, through trade policy and the creation of knowledge in public universities. State government also supported and subsidized the industry by marketing the state’s commodities as part of the state and through scientific research and dissemination of new knowledge and techniques via extension stations. With the resulting infrastructure Washington apples were able—in roughly one generation—to compete at the national and international scale and after two generations became the state world’s leading apple producer. Apples were a good example of what Henry Clay named “the American System:” the program for making the federal government an energetic instrument of an economy that combined agriculture and industry. This government aid occurred at the behest of the railroads. In order for such a commodity regime to work the new industry needed growers, land, water, trees, capital, cultivation, harvest, transport, and markets. Much of this was supplied by the railroads.

Commodities, though inanimate objects, have the power to structure life. They become an obsession. They are the intermediaries in relationships. Lives revolve around them and human beings become dependent on producing them. But it is not the commodities themselves that do this, but the relationships that commodities embody and the imperatives they mediate.

Producing, selling, and buying apples, became the means by which people connected to apples or near apples related and around which human life became organized. The creation and development of the apple industry in Washington, just one of many commodity industries in the Pacific Northwest, created specialized commodity producing regions around the state that had as a key organizing principle the production of apples for market. This meant that decisions made at all levels revolved around how they would impact the growth of this particular commodity, as well as other key commodities.

The Apple's Journey to Washington and the First Orchards

Apples¹⁴ began their journey to Washington in the fruit forests around Alma Ata where apples were first domesticated (Morgan and Richards 1993, 9) in what is now Kazakhstan very close to Kyrgyzstan and China in an area called Tian Shan around the second century B.C.E (Pollan 2002, 13). From these forests the apple emerged as an important food and symbol that over thousands of years was carried and planted across Europe, Southwest Asian, East Asia and Northern Africa in different waves and areas by the Persian, Greek and Roman Empires (Morgan and Richards 1993, 12-16). Apples took 6,000 years to reach Europe and then only 300 to arrive in the North American colonies (Junpier and Mabblerley 2006, 156). Some of the first apples in the eastern region of the North American continent were planted by Samuel de Champlain in the 1620s in Quebec (Junpier and Mabblerley 2006, 156) and shortly after in 1647 by Governor Peter Stuyvesant planted in New Amsterdam an apple tree from the Netherlands on the corner of what is now Third Avenue and 13th Street in New York City (New York Apple Association, 2002). The first commercial nursery was established on Long Island in 1730 (New

¹⁴ For a broad history of apples in addition to Pollan, and Junpier and Mabblerley, see Morgan and Richards, *The book of apples* and Browning, *Apples*.

York Apple Association, 2002). Over the next century commercial orchards expanded in New York, and over the next century and a half, they would march west with white expansion and occupation of land. Apples offer a concrete symbol of manifest destiny and imperial expansion—American as apple pie.

Apple seedlings were often brought with settlers as an easy staple—more for the lightly fermented apple cider (as safer source for drinking than local water) than as an edible snack (Pollan 2002, 21). As settlers established colonies across the continent, they also established small apple orchards. Apples were used for food eaten both fresh and dried but were so widespread because they were a rare source of fermentable sugar, which could be made into hard liquor called apple jack by freezing jugs and barrels of cider and removing the frozen water to concentrate the alcohol (Pollan 2002, 21-22). Johnny Appleseed, born John Chapman, traveled in his boat with a bag of seed planting apples across Pennsylvania, Ohio, and Indiana, and settlers harvested these apples and planted their own. Thus as new settlers crossed and colonized Pennsylvania, Ohio, Michigan, Indiana, Illinois, Iowa, Minnesota, the Dakotas, Montana, Idaho, Oregon, and Washington, they brought and planted apples as part of a Manifest Destiny.

The very first apples arrived in the Pacific Northwest, however, from the coast via the Hudson Bay Company and the fur trade. The first apples were planted in the State at Fort Vancouver in 1826 by George Simpson who brought the seeds from London in his pocket, as the story goes (Mackie 1997, 154). Fort Vancouver was considered an “agricultural oasis” and was home base of the Hudson Bay fur trade company by the late 1820s; in fact, the fort produced such a surplus that it became a central supplier of food for the company in the region. The orchard in the Fort “contributed to its reputation as an oasis” (Mackie 1997, 154). Narcissa Whitman comments on what a “delightful place” the garden is in her diaries during a visit to Vancouver (Whitman, Sept. 12 1836). Early on apples and other fruit that were planted

contributed to the growth of trading posts and then later to military outposts in the burgeoning colonization of the Pacific Northwest.

The earliest orchards in Washington were for the most part not commercial and apples were not a commodity on a large scale until the 1890s (Marshall and Steigmeyer 1995, 18). According to Bruce Mitchell, “early settlers had no incentive to raise commercial crops. Markets were a long way away and hard to get to” (Mitchell 1992, 92). Apples provided sustenance as part of subsistence farming in the form of fresh and dried fruit and of course cider and applejack all of which helped sustained settlements. Red Wolf (Nez Perce) planted an early orchard in Asotin County near the mouth of Alpowa in the mid 1830s (Luce 1972, 4). The Whitman Mission near Fort Walla Walla in southeastern Washington grew apples that they brought apple sprouts from Fort Vancouver after their visit there in 1836. In the early 1840s apple trees were planted in eastern and western Washington (Luce 1972, 4). Hiram Smith planted apples in 1854 near what is now Okanogan (Luce 1972, 5). Apple trees were planted in the Yakima region at the Ahtanum Mission in 1857 and at Ft Simcoe in 1860¹⁵ and then on a larger scale in 1877 at White Swan by Klickitat Peter, a Native man who purchased his trees in Walla Walla (Luce 1972, 5-6). The first orchard near Wenatchee was planted along with a vineyard in 1858 by German immigrant and former trapper John “Dutch” Galler south of Wenatchee in what is now Malaga. In 1872 another German immigrant Philip Miller came to Wenatchee and purchased 300 acres on which he intended to plant the first commercial orchard in the Wenatchee area. (Luce 1972, 6; Kerr 1980, 7). Miller planted the orchard in 1880, but most of his land he used to grow hay. Home orchards began along the Snake River in the 1870s to supplement the food self-sufficiency of families raising livestock and isolated along the river.

¹⁵ According to Luce there are conflicting reports around the exact dates and whether the various plantings were seedlings or from nursery. What is sure is that by 1865 trees were growing and producing apples in both the Yakima and Wenatchee Valleys.

Land upon which Yakamas, Wenatchis, Palouse, Spokane once had made their living was now becoming orchard and farmland. As plans for the railroad and irrigation began to materialize, the possibility of commercial agriculture was growing. More whites settled in and planted commercial orchards. It was this process of turning apple trees and apples into a good to be sold, subject to market forces such as profitability, competition, and expansion that orchards began to pop up across the Washington Territory that turned apples from a usable item for sustenance and frontier intoxication to a commodity.

Commodity Production Begins in Washington

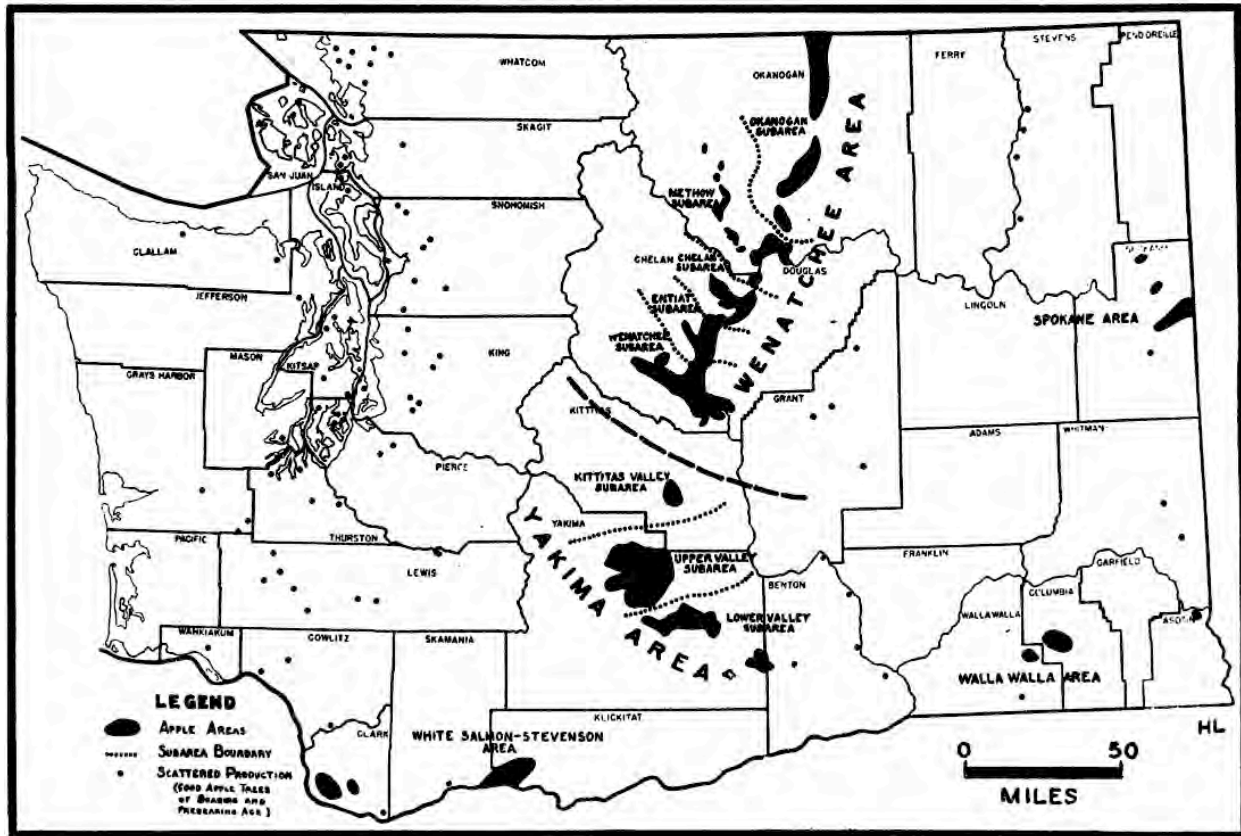
Orchards in missions, forts and small farms were planted to assure a staple source of sugar and starch and alcohol and helped maintain the health and survival of settlers. In these instances, they were not commodity crops. But as settlers established stability, they began to look for products they could sell to a market. Apples became a potential article for sale. Money could be made on them, and other money could be invested in them. This commodification of apples was an uneven process in which some settlers turned to the crop that seemed to grow best for them, and discovered they could make money, while others invested and planted explicitly to make profits from apple production. It was also uneven throughout the state, but once it began to catch on in the last three decades of the nineteenth century, the commodification of apples developed momentum and began to spread.

The Hudson Bay Company introduced commercial agriculture to the region through its subsidiary The Puget Sound Agricultural Company, which “developed several thousand acres at Fort Vancouver on the north bank of the Columbia River” (Luce 1972, 4) Henderson Luelling and William Meek established the first apple nursery in 1848 in Milwaukie, Oregon and B.F. Brown the second near Olympia in 1854 (Mcfadden 1932, 2-4). These nurseries marked the

nascent orchard industry, where farmers who desired to plant orchards could purchase trees. Luelling and Meek in addition to their nursery also sold apples in Portland beginning in 1850 and shipped apples to San Francisco beginning in 1853. Apple shipments from Portland grew steadily until 1870, and then dropped off as California apple orchards began to bear fruit (Mcfadden 1932, 4). Though it was not until 1906 that apple nurseries were established near Wenatchee, growers in central Washington could buy trees in Walla Walla beginning in 1859 (Bright 1988, 8).

In the decades prior to the railway's arrival in the Yakima Valley, families planted orchards for use and sale, but these practices increased dramatically after the railroad arrived in 1883. The first commercial orchard in the Yakima Valley was the three-acre orchard owned by Fred Thompson. The Patterson orchard was the first successful commercial orchard in Wenatchee planted in 1884. (Bright 1988, 2). In Wenatchee wagon transport was the only method of transport through the 1880s, making it hard to sell apples commercially, until the steamship arrived in 1888. The first steamboat came up the Columbia to Wenatchee in 1888. The railroad was completed in 1893 and was much more efficient than steamboats, which were often unreliable depending upon the height of the river (Luce 1972, 9). Railroads proved much more efficient than wagons and steamships for getting cargo to Seattle and to Eastern markets. By 1892-93 thirty orchards were producing around Wenatchee and selling their "surplus" fruit to "miners, prospectors, and cattlemen" moving through the area (Mcfadden 1932, 6). First carload of Apples from Yakima was shipped out in the 1880s, and by 1900 growers shipped a total of 200 carloads (Luce 1972, 7). The first freight carload of apples was shipped from Wenatchee in 1901, and by 1910 this grew to 2400 carloads (Bright 1972, 3). The Wenatchee growing region stretched up through Okanogan and the Yakima growing area extended through the entire Yakima Valley.

Figure 2.2. Map of Apple Regions of Washington



Source: Hoyt Lemons and Rayburn D. Tousley, “The Washington Apple Industry. I. Its Geographic Basis” in *Economic Geography*, July 1945.

Though Wenatchee and Yakima would become the centers of apple production in the Pacific Northwest, along the Snake River near Asotin, Wawawai, and Walla Walla the first large commercial orchards were planted in Washington. According to historian Carlos Schwantes, commercial growers planted millions of apple, pear, peach, and other fruit trees along the river beginning in the 1870s (2000, 15). These orchards did not really begin bearing until the 1880s (Crithfield 1968, 7). The first settler was Isaiah Methany who planted six acres of apples in 1875 near Waiwai (Crithfield 1968, 7). More orchards were planted over the next few years. At this time most orchards were 5-10 acres in size and were intended to produce apples for transport down river to sell in Portland. Larger orchards included the LaFollette Ranch purchased by William LaFollette in 1899, which grew apples, strawberries and soft fruits (Crithfield 1968, 35).

Figure 2.3. Composite Panoramic Image of Snake River Orchard, c 1895



Source: MASC. WSU. Pullman, WA.

Commercial orchards also appeared early around Spokane in Eastern Washington and White Salmon, just across the Columbia from Hood River (Folger and Thompson 1921, 70. As Stephan Stoll phrased it in his discussion of California farms, early commercial orchardists in Washington sought and utilized the “natural advantages” of geography to enable them to produce and sell their fruit (1998). The orchards along the Snake River and Columbia Rivers took advantage of their proximity to the river for transportation and easy irrigation making it easy to grow in these areas before the coming of the railroad and large-scale irrigation.

For these early commercial orchards to make any money, they needed to get their fruit to markets outside of their immediate locations. Orchardists and settlers also needed to get goods they could not make themselves. Steamships provided one of the first key transports, but apple shipments lasted only for a brief period from around 1870-1910. The Columbia River and its tributaries connected Okanogan, Wenatchee, Ellensburg, Pasco, Walla Walla, The Dalles, Hood River and Portland. Goods such as fruit, grain and minerals would be hauled by wagon or local trains to the boat docks and shipped down river. From Wenatchee this meant going through the difficult passage at Rock Island where many ships ran aground. Orchards along the Snake River were among the earliest commercial orchards due primarily to the ease of shipping down the Columbia. (Note the steamship in the right third of figure 1.3.) Dorsey Baker financed a railroad

from Walla Walla to the river in 1874 (Fahey 1986, 23). As Carlos Schwantes reports, “By the late 1870s steamboats like the *Spokane* and *Harvest Queen* brought settlers, agricultural implements and soldiers upriver and returned heavily loaded with cargoes of wheat and fruit. At one time, as many as 16 steamboats plied the lower Snake River, and all of them contributed to the growing wealth of the Oregon Steam Navigation Company, which monopolized the river's commerce” (Schwartz 2000, 15). Steamships were important to the beginning of commercial apple industry because markets became available for those with access to river transport. This gave commodity production an early boost that would take off once the railroads arrived. This early period of commodity production showed the railroads that apples were a key Pacific Northwest crop with significant potential commercial viability.

Developing Settler Colonies: Railroads, Land Grabs, and Early Irrigation

At the same time that the earliest commercial apple producers needed transportation and water, the Northern Pacific, Great Northern, Central Pacific, and Southern Pacific railroads were also being built and beginning to look for potential commodities and regions to develop that would need their services. These railroads emerged out of the national project of building the U.S. as a contiguous great nation from the Atlantic to the Pacific with the completion of the nearly all of the country through the expansionist 1840s¹⁶. In the wake of the U.S. invasion of Mexico and the 1848 Treaty of Guadalupe in which the U.S. gained control of California, Nevada, Utah, Arizona, New Mexico, and parts of Colorado and Wyoming, early capitalists and nation builders sought to link resources to markets with an intercontinental railroad system. In this way national

¹⁶ For more information on rail in addition to Mickelson, Orsi and Strom, see Schwantes *Going places: transportation redefines the twentieth-century West*, and *The American West in the twentieth century; the forthcoming* Schwantes and Ronda, *The West the railroads made*; Derrick, Draffan, and Osborn, *Railroads and clearcuts: legacy of Congress's 1864 Northern Pacific Railroad land grant*; and Lewty, *Across the Columbia plain: railroad expansion in the interior Northwest, 1885-1893*.

capital made concrete and practicable the political economic compulsion and ideology of Manifest Destiny. Regional conflicts emerged in Congress that delayed the realization of this desire until the Civil War made it feasible for Lincoln to circumvent congressional disputes to pass the Pacific Rail Road Act of 1862 (Orsi 2005, 7-10). The first transcontinental railroad, the Union Pacific, was completed in 1869 in the mid-latitudes of the nation, and over the next two decades, transcontinental routes in the north and south were completed. The Southern Pacific became the second transcontinental railroad in 1883 (Orsi 2005, 22). The Northern Pacific (NP), going through the Yakima Valley, was completed later in 1883 (Mickelson, 34) and workers completed the Great Northern (GN), through Wenatchee, in 1893 (Strom 2003, 42).

Federal government gave much of the land upon which many of the transcontinental railroads were built to railroad investors. The largest of the railroad land grants, roughly 45 million acres in an 80-mile wide band running 2,000 miles from the Great Lakes to Puget Sound was given to the NP. Thanks to the land grant from the federal government NP owned roughly half of the Yakima Valley (Strom 2003, 51). Some of this land was given to investors when the NP filed for bankruptcy in 1873 but much of this land was sold off to various investors who would become agricultural and timber magnates. Because of their control of land, commerce, and travel, the railroads had immense power in the development of Washington State and the U.S. West generally.¹⁷ Railroads promoted irrigation in the valleys along their routes to encourage settlement density and “maximize land sales and haulage” (Strom 2003, 50). The

¹⁷ The power of the railroads in Washington State can also be demonstrated by the Northern Pacific’s ability to move an entire town. In 1884 the Northern Pacific planned to establish a depot in Yakima County and was searching for the best price on land—free. They argued that because they would bring business to the area, they should be given the land. Owners of land in Yakima City (now Union Gap) refused to forfeit land, and Northern Pacific was granted land four miles north, and NP offered to pay expenses for any business or home willing to move to the depot station town of North Yakima (now Yakima) incorporated in 1886 (Gibson 2002).

Northern Pacific began to explore the possibilities of irrigated agriculture in the Yakima Valley around 1890 (Strom 2003, 51).

The Great Northern, which was not granted land, had to seek out loans and make early profits to reassure investors (Strom 2003, 7-8). The Great Northern under the leadership of James J. Hill sought “to promote commerce in both directions” especially agriculture, and in order to make this happen Hill and GNR had to develop programs to settle the land with people coming from the East to plant crops that would not only depend on the railroad to get their crops to market back East, but that would also require “maximum railroad use” (Strom 2003, 50). But Hill also expressed an agrarian philosophy and patriarchal dream of developing agriculture along the route of the Great Northern to lessen urban decay and the tension building in the cities as well as a way to feed a growing U.S. population¹⁸. The Great Northern implemented a long-range policy of developing agriculture along its route from Minnesota to the Puget Sound. As part of this policy the Great Northern developed Wenatchee as a key region along its railroad that could ship apples to markets in the Midwest and East. In order to make this possible the Great Northern spent large sums of money to clear and irrigate the land and build the basic infrastructure of mythic Jeffersonian yeoman agriculture (small plots of intensive farms) that the railroad hoped to capitalize on (Strom 2003, 50).

There had been attempts at irrigation prior, but not large enough to support commodity

¹⁸ Hill’s sentiments are not that much different than Cecil Rhodes’s famous word concerning imperialism at about this time: “My cherished idea is a solution for the social problem, i.e., in order to save the 40,000,000 inhabitants of the United Kingdom from a bloody civil war, we colonial statesmen must acquire new lands to settle the surplus population, to provide new markets for the goods produced in the factories and mines. The Empire, as I have always said, is a bread and butter question. If you want to avoid civil war, you must become imperialists” (1895).

apples on the scale that the railroads were looking for¹⁹. The earliest irrigation in Washington, according to Christine Pfaff was on the Whitman Mission and began around 1840 (2002, 7). Between 1840 and 1890 various entrepreneurs built small local irrigation projects East of the Cascades. Notably Hiram Smith built irrigation around his orchard in Okanogan County and other orchardists built similar small-scale irrigation around Yakima, Wenatchee, and Walla Walla (Pfaff 2002, 1-2). In 1877 Philip Miller hired Jacob Shotwell to dig irrigation ditches for his orchard, which by the early 1880s was said to be “promising” (Strom 2003, 52). For the most part locals were using local capital to develop homesteads, but this was not enough to make the area thrive. It was not until the railroads came that national and international capital began flowing into these areas to invest in large-scale irrigation and development. Thomas Burke of Seattle invested with other speculators including James Hill of the Great Northern (Strom 2003, 53). To avoid Sherman Anti-Trust legislation, Hill worked through subsidiaries and front companies such as the Wenatchee Development Company and later the Wenatchee Waterpower Company (Strom 2003, 51-52). W.T. Clark began building the Highline Canal using Scottish capital to form the Wenatchee Canal Company, which also made an agreement with the Wenatchee Development Company. The project proved costly, and the conglomeration of local, national, and international investors soon realized that larger institutions would be needed for such projects in the future. In the Yakima Valley the Northern Pacific, Yakima, and Kittitas Irrigation Company (two-thirds of shares owned by the railroad) built the Sunnyside Canal beginning in 1889, which helped to show the enormous potential for commercial agriculture in the valley and dramatically increased the property values of lots that were irrigated (Pfaff 2002, 15-16). The Northern Pacific, Yakima, and Kittitas Irrigation Company “claimed the entire flow

¹⁹ For works on irrigation in the U.S. West in addition to Pfaff and the many works of Pisani, see Worster, *Rivers of empire: water, aridity, and the growth of the American West* ; White, *The organic machine*; and Rowley, *The Bureau of Reclamation: origins and growth to 1945*.

of the Yakima River and began diverting most of it onto private land through its Sunnyside Canal” (Pisani 2002, 185). But this was the limit to expansion without an influx of more money to consolidate and develop the many smaller irrigation ditches throughout the valley. Disputes over water caused immense tensions between European American settlers and Native Americans as well as among European American growers (Pisani 2002, 185).

In 1890, to ease growing tensions over water rights caused by a drought in the 1880s that was compounded by the increase in the number of settlers who were attempting to farm, a state law was passed allowing cooperative districts to form (Pfaff 2002). But this too was not enough and the “crusade,” as Donald Pisani has characterized it, for a national irrigation project began (Pisani 1984). As far as the railroads were concerned, private attempts at irrigation did bring settlers to the valley and developed the infrastructure of the apple industry,²⁰ but cost much more than anticipated (Strom 2003, 53). All of the major railroads sought to broaden their strategy to achieve the dream of vast irrigated lands blooming with crops looking for markets. They advocated public funding of the large-scale irrigation projects through a National Reclamation Act. The Act was passed in 1902 and federal dollars flooded the state. According to Pisani the act “would never have passed Congress without political and financial support from the nation’s largest railroads” (2002, 13). Railroad magnate James J. Hill observed, “Where irrigation prevails, agriculture knows three admirable conditions: certainty, abundance, and variety” (quoted in Pisani 2002, 13). This certainly became true for commercial apple growers, who now had an advanced infrastructure that could build the industry setting the stage for Washington to become the leading apple state. This also gave the railroads another commodity to add the “certainty, abundance, and variety” of their portfolio of goods to ship. And the federal government was footing a good portion of the bill.

²⁰ The Southern Pacific developed similar schemes in California and Oregon (Orsi 198-204).

In the early 1880s, at the time of the first successful orchards in Washington State, less than half a million acres of land were irrigated in all the U.S. Over the next twenty years this would jump enormously, to 4.1 million (nearly 50,000 in Washington) in 1890 and to 7.3 million acres (135,000 in Washington) in 1900, though most of the irrigated land in the West was in California, Colorado, and Utah (Pisani 2002, 2; Pfaff 2002, 2-3). Over this twenty year period in Washington, various small scale irrigation projects were built around the state, but it wasn't until the Reclamation Act project around Yakima and the Highline canal project around Wenatchee that large scale commercial orcharding was possible. Before these large scale irrigation projects, Washington was just another state producing apples. Washington had a growing industry, but it was minor, similar to Iowa or Ohio. In 1899 for example Washington produced 729,000 bushels of apples compared to 874,000 by Oregon and 3,488,000 by California. This would change fully over the next twenty years. In 1909 Washington climbed to over two and a half million while Oregon reached nearly two million and California to nearly six and a half million. But by 1919 Washington accelerated production to well over twenty-one million while Oregon plateaued at nearly seven million and California nearly eight million. The two key ingredients to this success were the railroad and large-scale irrigation projects. According to Mabbott, irrigation provided a tremendous boost for planting and then yields around 1903-1912. This growth was made possible by a government appropriation of \$500,000 in 1905 and by investments from mortgage companies from Portland and elsewhere. The capital for rail was also connected to the State in terms of the land grant and obviously industrial and finance capital. Commercial orchards bloomed in Yakima when the Northern Pacific railway arrives in the valley in 1883 (Luce 1972, 7). The railroad allowed for the reliable transportation of perishable goods. The completion of the railroad through Wenatchee to the Puget Sound in 1893 changed the North Central Washington and the developing industry.

Railroads did not just transport goods that happened to develop. Railroads helped nurture—even create—the apple industry in the Pacific Northwest and various other industries in the West. They brought in the capital and organization for early large-scale irrigation, and then when this reached its limits, the railroads used their influence in D.C. to push for the largest infrastructure projects since the building of the railroads themselves. Railroads brought in people: both entrepreneurs ready to start new lives by planting orchards and workers who would work the land, pack or move the crops, or sell goods or services to their fellow residents. Railroads brought in supplies and of course shipped the crops out. Railroads were state-subsidized economic infrastructures that enabled the region to bloom. But they did this using the vast power and deep pockets of the federal government in line with the Hamiltonian political economy of the “American School,” as it was called. The “American School” was the dominant school of thought in American political economy thought the nineteenth century. It espoused “developmental economic nationalism” based on the thinking of Alexander Hamilton, “whose Report on Manufactures (1791) had called for federal government activism in sponsoring infrastructure development and industrialization behind tariff walls that would keep out British manufactured goods” (Lind 1997, 229). The American School, elaborated and promoted by economists like Henry Carey (economic advisor to Abraham Lincoln), “inspired the ‘American System’ of Henry Clay” (Lind 1997, 217). The American System enabled the federal government to energetically promote U.S. industrialization and development; the development of railroads to transport commodities was a key component of their project.

III. Early Industry Growth 1894-1910: Organizing for Basic Needs

Figure 2.4. Okanogan Orchard, c 1905



Source: Frank Matsura Photograph Collection. Manuscripts, Archives, and Special Collections (MASC). Washington State University (WSU). Pullman, WA.

Once the key components of the necessary infrastructure had been secured, namely land, rail, water, and fruit trees, the early growth of the industry was structured around meeting the immediate needs of improving production and distribution of the crop. Thus growers needed to further expand markets, control pests, improve orcharding practices, etc. As the industry and orchards grew, growers also needed a larger workforce and increased productivity through scientific management and technology. They needed to understand the issues they as a group faced and have some means to achieve successful resolution on those issues. In order for growers

to achieve this new level of development, they needed to share information and organize themselves.

Various elements within the industry recognized the need to act in concert by forming organizations to meet these needs. These organizations and their development will be a central concern of chapter two. But for now let it be noted that one of the first organizations in the Pacific Northwest was the Pacific Northwest Fruit Growers Association (NFGA), which formed in Spokane Feb 14-16, 1894. The NFGA brought together “representative fruit growers and horticulturalists” from Washington, Oregon, Idaho, British Columbia and “representatives of traffic departments of each of the through companies—Northern Pacific, Union Pacific, and Great Northern Railroads” as well as representatives of fruit dealers and commission merchants (NFGA 1894, 3). The meeting represented attempts by those in the apple industry to begin organizing around the things the industry needed to thrive and expand. The Northwest Fruit Growers Association would eventually found a commodity journal called *Better Fruit* in 1906, which would become its organ and become a central hub around which key ideas would emerge and be distributed.

Better Fruit: Apple Agitprop

Puyallup and Sumner Fruitgrowers Association President and future state senator and gubernatorial candidate W.H. Paulhamus warned his fellow growers in the inaugural issue of *Better Fruit* about how much had changed in farming: “The day of farming as grandfather farmed is past. We must apply modern methods, conduct the business on the farm in the same manner as the merchant conducts his business in the city” (*BF* July 1906, 6) In the lead article of the first issue of the new journal, Paulhamus spells out not only what growers needed to do in this new age of commodity driven farming but also would become the mission of *Better Fruit*. Modern

methods for Paulhamus meant that growers must take their profession seriously and “make a study of our conditions, raise the crops that our soil is best adapted for, harvest the crops at the time they should be harvested, and in the manner that they should be harvested, and have a capable distributor to find us our markets.” (*BF* July 1906, 6) *Better Fruit* assisted growers in improving their orchards. But more significantly it would quickly become a key node for the early organizing of the apple industry by sharing information and helping to connect growers over the great distances between growing districts and between regional meetings²¹. *Better Fruit* and other commodity journals²² served to communicate across the industry, to share knowledge, experience, information, and techniques covering all areas of production while also attempting to unite growers politically and ideologically. *Better Fruit* allowed for the quicker and more systematic diffusion of ideas, new methods, new equipment, the latest issues facing growers and how they might organize themselves. *Better Fruit* was a key vehicle for moving apple growers from a loose group of unconnected individuals farmers who happened to have similar interests, a class-in-itself, to an organized group of growers who recognized and fought for their common interests, a class-for-itself, by raising the consciousness of growers about their industry and what was necessary to succeed. Despite differences between individual growers, as commentators such as David Vaught have emphasized, *Better Fruit* channeled the essence of capitalism and its expression for Pacific Northwest fruit producers at the beginning of the twentieth century around

²¹ The relationship between *Better Fruit* and the railroads, like the relationship between early growers associations and the railroads is unclear. Overall they had parallel interests as displayed in a letter to editor E.H. Shepard from A.D. Charlton, A.G.P.A. of Northern Pacific congratulating the journal on its growth, “As an advertising medium the Northern Pacific says ‘Well Done.’ ... The result is ‘*Better Fruit*’ to the Northern Pacific.” At the same time that *Better Fruit* begins in 1906 a Hood River promotional pamphlet comes out called “See Venice, but don't die until you see Hood River.” At the same time *Better Fruit* propagandized for the growers’ needs and as conflicts with rail erupted *Better Fruit* agitated on behalf of growers though they occasionally tried to patch things up.

²² For a timeline of fruitgrower journals see Appendix A.

which growers could find commonalities and unite to become a class-for-itself. The primary and most powerful commonality was, of course, profit, based on scientific knowledge, technology and marketing.

Figure 2.5. Covers of *Better Fruit*



Better Fruit began in July 1906 as a glossy industry journal published in Hood River, Oregon with the printing of seven thousand copies. Hood River, located about sixty miles upriver, west of Portland was at that time the “apple capital” of the Pacific Northwest and would remain so until around 1912 when Wenatchee and Yakima became the dominant apple producing regions. The first issue of *Better Fruit* was serious, sober, and scientifically minded. The editors explained clearly and straightforwardly how *Better Fruit* would function: “The articles will be from practical, able and successful men. No others will appear. The articles will be practical, commercial, up to date and brief . [...] Nothing will appear but what is of value to the fruit grower. Therefore we will have no society column; no fashion columns [. . .]” The journal was focused on the fruit growing industry and aimed selectively at fruitgrowers who were predominantly, if not exclusively men. There were certainly women who were orchardists alongside or even leading their husbands or fathers, but the industry was structured around the dictates of men. In fact nearly no articles with a woman’s byline appeared during *Better Fruit*’s first twenty-five years, except a scattered few about apple recipes or “home economics.” In this way *Better Fruit* reinforced the idea that apple growing was a patriarchal institution and at least publicly gendered as a male space with men exclusively as the leadership²³.

To reinforce its seriousness and no-nonsense business approach, *Better Fruit* informed its readers that the journal would approach advertisements that same as articles, “we will positively refuse all advertising from quack doctors, patent medicines, fakers and questionable lines of business” (BF July 1906, 22). This is a marked contrast from the dominant fruit journal in the East, *Green’s Fruit Grower and Home Companion* (which would soon change its name to *Green’s Fruit Grower* in 1909 perhaps emulating *Better Fruit*) that began in 1880. *Green’s* was more of a popular

²³ In fact it was not until the 1990s that a woman served on the Washington Board of Horticulture (*Celebrating a century*).

magazine, both in the sense that it catered to a wider audience was not solely focused on fruit growing as an industry, but more as a way of life. There was horticultural advice as well as living advice, jokes, and ads for cure-alls. Whereas *Green's* appears as folksy, eclectic, and for lack of a better term, very "19th Century," *Better Fruit* was business-like, focused on fruit production, scientific, modern and practical.

The very first issue of *Better Fruit* began immediately with an article on "The Importance of Growers Associations" and various articles on "marketing." *Better Fruit* described itself as "A Monthly Illustrated Magazine Published in the Interest of Up-To-Date, Progressive Fruit-growing and Marketing." In addition to orcharding techniques around clearing land, planting trees, spraying for pests, packing fruit, etc., the two principal messages in the first years of *Better Fruit* were marketing fruit and organizing growers associations. Every issue gave lists of growers associations and horticultural societies. *Better Fruit* was constantly trying to think ahead pushing scientific approaches to growing as well as encouraging imagination and creativity for improving fruit commodity production. From its very first issue *Better Fruit* modeled what it would take for apple growing in the Pacific Northwest to become a respected and powerful agricultural industry that was a significant part of developing the Pacific Northwest and the expanding power of U.S. capital.

Better Fruit focused on apple growers making profit right from the start and sought to put to rest any populist ideals that may have in the past questioned business and the profit motive. To the editors it was perfectly natural to seek profit and would be ridiculous to think otherwise:

We are fruit growers for the same reason that others are engaged in any other business—that of making money. Most men in any line of business they undertake or any vocation they follow without doubt endeavor to earn the most they can out of their respective callings. The better work they do the better under average conditions the result

will be. We are not aiming to grow better fruit just for the pride of growing, but for the extra profit. This is the aim of the orchardists. (*BF* Jan 1908, 26)

In this line of thinking, making profit was justified as just as part of the normal, rational order of the capitalist system, but it was further naturalized in this editorial by connecting it to dominant notions of the patriarchal figure and the emerging concept of the nuclear family. *Better Fruit* continued, “Is this selfish or mercenary? I’d answer ‘no.’ Our very reason for endeavoring to grow better fruit and get better results in itself is noble, because it enables the fruit grower to give his family greater comforts; it also enables him to give his children a better education, and intellectuality leads to of better and higher life” (*BF* Jan 1908, 26). The editors offered early in the formation of Pacific Northwest fruit growing, the definition of what an orchardist should be that came to pervade the industry: the orchardist clearly had to be a scientific, business patriarch.

At the same time, *Better Fruit* defined growers racially. The January 1908 lead article, “Convention of the Northwest Fruit Growers” by Maxwell Smith, president of the Northwest Fruit Growers Association, made this abundantly clear. Smith told the convention gathered in Vancouver, B.C. that “strong indeed are the ties of a common language, but stronger still are the ties of a common ancestry.” In other words, growers in the two countries speak the same language. It was not enough to simply speak English, but as he went on to say it was more important to share English heritage across national borders as well as within each country, “we can never forget that in most of our veins British blood flows, as it does in yours, and we share with you this greatness of your glorious past” (*BF* Jan 1908, 7-10). Such outright racist remarks and appeals to Anglo Saxon superiority were not frequent in *Better Fruit*, and growers were, of course, not a monolith. Various growers perhaps had different feelings, especially those who were not Anglo-Saxon, but no contrary opinion was ever displayed in *Better Fruit* or any other apple industry speech, meeting minutes, or journal during this period.

Better Fruit developed credibility with its readers by explaining their relationship to fruit growing and to the industry

we have the same difficulties to contend with that you have, and the same obstacles to overcome. Consequently, we are able to tell you how to do these things in the best possible manner. We anticipate your wants and your troubles. In addition to all this, personal experience in managing the fruit growers unions in hood River we get the benefit of our 300 progressive fruit growers personal experience almost daily. We attended the association meetings, subscribe to over 50 horticultural papers, possess every textbook worth owning, and receive every bulletin and from the horticultural state experimental stations.

As managers of growers associations and unions within the industry they are in daily contact with markets: “We know what the buyer wants, when and how he wants it, therefore *Better Fruit* can inform you on this line. We do not know of a single editor of a horticultural paper engaged in managing an association except *Better Fruit* editors therefore, we can tell you about the commercial side of fruit growing, and no other paper can present this feature as we do, because it is our regular business” (*BF* Feb 1907, 25). The editors also encouraged growers to write for the journal, stating, “your methods and ideas must be good and pertain to fruit growing in a commercial way. Your statements must be reliable – *Better Fruit* is not a ‘hot air’ paper” (*BF* Jan 1908, 26). *Better Fruit* emphasized progress: “the orchardist of opinions of former days who has refused to conform to the ideas of his latter-day contemporaries has been left by the wayside and finds that there is much to be learned about successful fruit growing besides planting the trees.” (*BF* Feb 1907, 26). The journal covered all of the pockets of fruit growing, large and small, through out the Pacific Northwest, and occasionally touched on apple growing in the East and Midwest as well. Growers read *Better Fruit* not only across the Pacific Northwest but also across

the U.S. and in apple growing countries around the world. Within 18 months of beginning *Better Fruit* had subscribers in England, Germany, Scotland, Cuba, New Zealand, and Italy (*BF* Jan 1908, 14). Its reputation grew throughout the first three decades of the 20th century and from the beginning *Better Fruit* was a major voice in the industry.

The driving force behind the paper from 1906 until his death in 1918 was the first editor of *Better Fruit* E.H. Shepard. Shepard wrote countless articles, reports, and columns throughout his twelve years with *Better Fruit*. In one article, “Necessity and Benefits of Associations for Fruit Growers,” Shepard gave some of his background. He was the son of a California orchardist and he worked as a wholesaler for 20 years. His connection to the California industry, their growers’ exchange and journal *The California Fruit Grower*, probably shaped Shepard’s views and his interest in starting *Better Fruit*. When he started *Better Fruit*, he had owned and operated an apple orchard in Hood River for four years. (*BF* Jan 1907, 17). Shepard went on to hold many offices in fruit growers associations, was well respected in the industry, and gave speeches similar to his columns throughout fruit growing regions of the U.S. Industry insider and extension agent Bill Luce calls Shepard “a popular speaker at State Horticultural meetings” (1972, 48). Shepard’s opinion was highly respected, and he was in many respects one of the leading intellectuals of the early Pacific Northwest apple industry.

From the point at which *Better Fruit* started in 1906 and through 1930 (as well as over thirty years after),²⁴ *Better Fruit* was one of the most important industry centers for the latest ideas and information. It served as a place where growers informed one another and organized the production of their commodity. Ultimately, it was one of the places where the increasing

²⁴ *Better Fruit* moved from Hood River to Portland in 1918 and then from Portland to Washington State and became the official organ of the Washington State Apple Advertising Commission in 1938 until it folded in 1967. The current main industry journal is *Good Fruit Grower*, which began in 1950.

commodification of apples and where growers developed their industry to make money (or not lose money) out of every aspect of apples.

IV. Intensified and Extensified Commodification

During the period of industry formation and growth, from around 1894-1910, one of the key roles of the early associations and of *Better Fruit* was to work to make apples a consistent, quality commodity that would enable growers and associations to establish relationships with fruit jobbers and retailers and thus to more effectively market the fruit. Fruit jobbers were wholesalers or middlemen who bought fruit from the growers and sold it to the retailers (Maynard 1923, 29). This process of increasingly gearing the fruit, the orchard, and relationships for the market marked the further commodification of apples in the Pacific Northwest.

As was noted earlier, commodification, at its most basic, is the taking of goods that are simply used or shared and turning them into products that are exchanged or sold. This process began to occur with apples in the Pacific Northwest beginning in the second half of the nineteenth century when settlers began to grow apples for more than just the use of the settlers, for example when settlers sold to miners or others who were traveling near the orchard or took them to a nearby town or city to sell. The process of commodification does not stop with turning goods or services into products for sale or exchange. Commodification intensifies, or deepens, and it must develop constant market expansion, or extensify²⁵. Intensification meant growers

²⁵ I borrow and modify these terms from Sidney Mintz's great book on sugar, *Sweetness and Power* (1985, 122, 140, 152, 173). Though the ways in which I use the terms parallels his, he uses them almost exclusively to refer to consumption, culture and the meaning of sugar and how these changed. But I focus intensification and extensification as aspects of the production of apples and its relationship to marketing and consumption.

sought ever-new ways to make money off the crop or save money in its production.

Extensification meant growers had to find new ways to get as much of the product consumed as possible and that this consumption would grow. Intensification and extensification have many forms. As growers traded or sold their apples, the commodification intensified as the selling of the apples drove how apples were produced and changed the relationship of the settler into a grower of a commodity for the market that became dependent on those markets. This, then, still further changed the grower who sold fruit into a grower who had to market the fruit. This transformation was clearly unique for each grower and many growers arrived who were already connecting production and marketing. But judging from the many articles, speeches, and conventions on marketing and business thinking as well as the recruitment of businessmen, the leaders within the industry felt that too many growers thought of themselves simply as producers of apples, i.e. farmers and growers. Because of the deepening market relationships, growers and the apple industry generally had to learn to coax and entice consumers to make the choice to exchange their money for this particular commodity. These market relations transformed the type of relations growers had with family, neighbors, and other growers into relations based on money and markets, and thus relations between capital, labor, and consumer came to underlay interactions, expressions of power, purposes of community, etc. These market relationships structured the life of the grower and consumer alike as the grower had to find ways to produce the fruit more efficiently, then had to buy more and more goods to improve production and protect the apples and invest in their production in the form of land, tools, pesticides, labor power, etc. all in order to entice more consumers to buy more fruit.

Marketing, Brands, and Byproducts

The interaction with the market and the price structure of exchange pushed the industry to further intensify the commodification by requiring apples to be uniform and standardized as if they were products coming off a factory assembly line. Many early leaders in the industry argued for a standard box and wanted a regulated industry bound by law so that no one would violate agreed upon standards for an unfair advantage (*BF* May 1907, 26). There were debates over the particular size of the boxes, but eventually the industry settled on a consistent size. The industry dealt with grading the fruit in a similar way, and eventually standardized the fruit by establishing the industry-wide grades of extra fancy, fancy, and cull. The standardized grades were important because buyers and growers who were across the country from one another needed to be sure that the words being used to describe the fruit were consistent and reliable (Maynard 1923, 79). Extra fancy was fruit that had consistent color, shape, and no blemishes. Fancy grade fruit had few blemishes and acceptable color and shape. Culls were apples that were deformed or blemished.

Another form of intensification occurred as growers sought to exchange as much of the apples they were producing as possible. This meant that not only the high quality fruit needed to be marketed and sold, but also growers had to find markets for culls. These culls were turned into byproducts through the processing of fruit that was then sold as juice, jams, candies, dried apples, and vinegar, among others. Washington and Oregon became primarily known for supplying fresh apples. Other parts of the country that could not compete with fresh Pacific Northwest apples became more geared toward processing the fruit. Sales reinforced the idea that growers should stick to the grades and encouraged growers to the use of canneries to deal with fruit that would not be profitable to ship and would bring the price down. In the first decade of the twentieth century many new canning plants were popping up across the Pacific Northwest (*BF*

May 1907, 17). *Better Fruit* encouraged growers to consider evaporators as another side industry that developed for growers to find uses for their surplus apples (*BF* Dec 1906, 23). The manufacturers of byproducts machinery such as The Hydraulic Press Mfg. Co. of Mount Gilead, Ohio also encouraged growers to consider the “profit in the manufacture of cider” and touted the benefits of hydraulic pressing (*BF* Dec 1906, 8). It is not clear if growers did make extra profit from selling their culls as prices for culls were often very low, but it did help maintain the price of the top two grades of fruit and spawned another industry and set of workers dependent on apple production.

In addition to standardized and graded apples, growers also sought to give their fruit an identity as if it had a life of its own that could be recognized and purchased for certain qualities. The identity, or brand, of apples consisted of both the region the apple was grown in, the grower or cooperative that grew it, as well as the particular variety. This identity was encapsulated in the label on the boxes. *Better Fruit* continually stressed the importance of labels (*BF* Jan 1908, 7-10). It encouraged growers to make their district, state or region into a brand, “Every district that wishes to secure better prices should begin at once to build up a reputation by stating on the end of the package the locality where the fruit was grown” (*BF* Jan 1908, 7-10). Part of the identity/brand was to commodify not only the consumption of the apple for its sustenance, but also to imbue it with another kind of value that came with the experience of consuming it and the associations that are woven into its identity. Brand became not only a way to expect reliable quality but also feel a certain way about the act of eating apples generally and a certain brand of apples particularly.

As the fruit was standardized and branded, it could more easily be marketed. Branding and labeling the fruit enabled marketing as they presented consumers or retailers with a picturesque ideal that could be tied to consuming the fruit. Marketing became a top priority for

the industry between the 1908 and 1914 bumper crops. And by 1914 became the top priority: “marketing Apple’s – this probably is the biggest, broadest and most vital problem of the fruit industry of the Northwest at the present time” (*BF* April 1914, 20). Marketing consisted both of establishing and maintaining relationships with retailers, but also creating and nurturing demand for apples among consumers. This process of extensification was the process of developing new markets for Pacific Northwest apples, as the industry had to push out and find markets beyond those already established in large cities. As growers organized themselves into associations they could cooperate together to market the fruit. As will be shown in chapter two, cooperative associations were important for the marketing of fruit as they allowed growers to pool resources to hire marketers. As part of their marketing efforts apple growers proclaimed October 3 to be National Apple Day²⁶ (*BF* Dec 1906). Making an apple holiday and commodifying time became yet another aspect of the extensification and intensification of apple commodification. The industry recognized that they had to make apples visible and to sell the fruit by creating a wholesome image around apples and getting the image and fruit out as widely as possible.

Early marketing campaigns involved branding apples as all-American, healthy, and luxurious. For example, the old English saying “Ate an apfel avore gwain to bed, makes the doctor beg his bread” which derived from ancient advice about the health benefits of eating apples. This became the modern day, “An apple a day keeps the doctor away,” which was taken up as a widely used marketing device to connect apples with health (U.S. Apple Association; Pollan 2002). A 1908 letter from a grower to *Better Fruit* sought to bring back this old adage for the new purpose of marketing. In this way, good advice to break up the diet with fruit now became part of the commodification process: “Eat an Apple a day, Keep the doctor away.

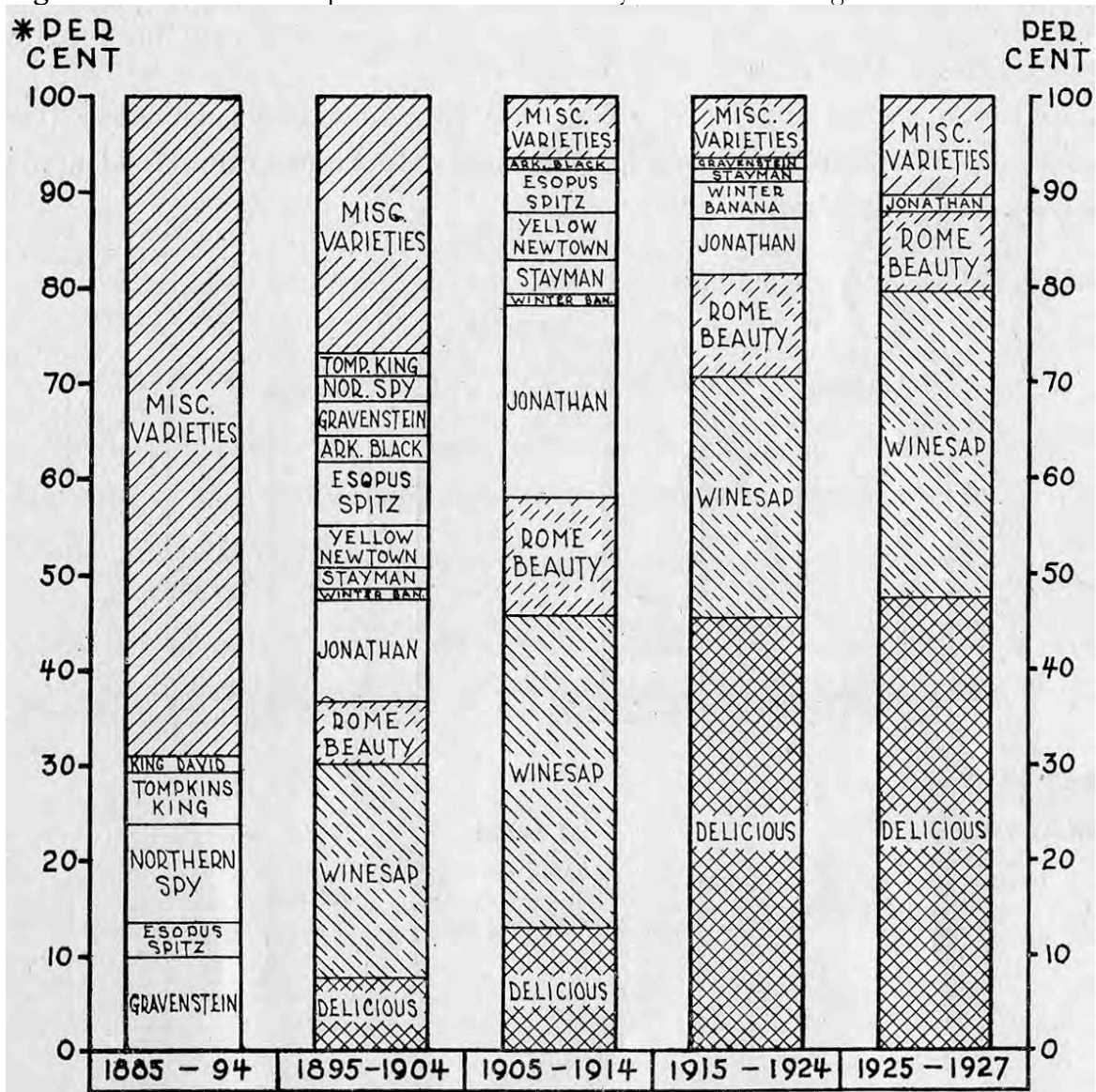
²⁶ Later it would become National Apple Week, then National Apple Month and as of 1996 it was expanded “to a three-month promotional window from September through November” (U.S. Apple Association).

Health's best way, Eat Apple's every day" (*BF* Oct 1913, 24). Many in the industry also sought to market apples as a luxury fruit. This was the opposite approach that bananas, a growing competitor of apples, took during the first decade of the twentieth century in their campaign as "the poor man's fruit" in an effort to popularize bananas as a mass commodity, which was similar to what Ford was doing with the Model T (Jenkins 2000, 14). Because the apple industry attempted to emphasize and maintain high quality standards and "nothing but absolutely perfect fruit is allowed to be sold," an early campaign attempted to sell apples by emphasizing their luxuriousness (*BF* March 1908, 52). According to Hood River growers, their apples were served on the tables of East coast millionaires, of royalty, and the wealthy classes of Europe including Queen Victoria and "the imperial Chinese exhibition will soon have on display eight boxes of hood River Apple's, ordered by the Chinese government for that said purpose" (*BF* March 1908, 52). The need for marketing would become ever greater as growers planted more trees and as new growers and investors entered the industry after 1908.

The intensified commodification represented by standardization, branding, and marketing came together in the search for marketable and shippable apple varieties. Growers not only sought varieties that consumers would purchase, but also varieties that were adaptable to location and soil, pest resistant, easier to care for, and that shipped well, grew consistently, stored well, sold easily, etc. The priorities in varietal plantings and production, however were determined by market forces, so that variety was narrowed as growers sought the one best variety, further making a monocrop orchard even more "monocropped." Ultimately, the sum of these factors enabled growers to determine which varieties or variety was most profitable. In the 1890s in the Pacific Northwest, there were hundreds of varieties of apples grown. Many of the early varieties according to A.C. Bright were varieties settlers brought with them from the East or Midwest and could not adapt to the climate of the Pacific Northwest (1988, 133). But still others

were discarded based on storage or shipping criteria that made them less profitable. As can be seen in figure 2.6, Gravenstein and Northern Spy were significant early varieties. Winesap emerged as a profitable variety in Washington in the late 1890s and remained so throughout this period, according to Folger and Thomson, for its productivity, hardiness, and regular bearing (1921, 441).

Figure 2.6. Relative Importance of Each Variety to Total Planting



Source: Johnson, Neil W. "Economic aspects of apple production in Washington" in State College of Washington Agricultural Experiment Station Bulletin, Pullman, WA. 1930.

The apple variety that would come to dominate the industry during this period (and remain dominant through the year 2000) was the red delicious. According to Bill Luce, the red delicious was “adaptable” and “hardy” (1972, 13), and Folger and Thomson add that it was its “quality par-excellence” that made for its “fancy trade demand” (1921, 441). Additionally, its very name was already a marketable brand in itself and given the name delicious for that very reason, replacing its original name “hawkeye” after the state in which it was discovered (Luce 1972, 13-14). The Delicious apple during this period was produced mostly in Yakima and Wenatchee (Folger and Thomson 1921, 406), and this may have added to the fame and reputation of these growing districts. According to Earle Blodgett, who was a plant pathologist in the Department of Agriculture of Washington State, “Never before in the history of horticulture has so large an industry been so dependent, so extensively influenced and so favorable promoted by one variety, as in the case of the Delicious Apple” (quoted in Luce 1972, 17). It was this dependency and narrowing of varieties that would also increase pest problems such as codling moth in the industry. The narrowing of apple varieties clearly shows the intensification and extensification of apple commodification in the Washington state apple industry.

Selling the West

Apples became a commodity intensively and extensively, but the commodification also worked on two different levels: 1) as a commodity produced and sold for local, national, and international markets, and 2) the idea of growing apples as commodity became a marketing vehicle to sell another commodity—land. Land was transformed into a commodity by first seizing it from the indigenous peoples, then giving it value, raising the value by making it able to produce crops and draw settlers, and finally marketing it. In the case of apples, this meant clearing the land, irrigating it and advertising it throughout the country, but especially back East in an effort to

draw more settlers and more capital. The commodification of Washington apples, like other crops and extractive industries, was bound up with and helped enable the commodification of the West.

The railroads first and most obviously sold movement—the transportation of commodities and people. But they also sold land that they had received in grants from the U.S. government or that they purchased and invested in. To sell these two commodities (transportation and land), the railroads needed other commodities such as crops, timber, and minerals to draw buyers. The railroads helped to enable, create, and develop these commodity industries. The apple was one such commodity the railroads enabled in order to create markets for their other goods. Of course, the apple was a commodity before it arrived in the Pacific Northwest, but the process of it becoming *a commodity produced in the Pacific Northwest* drove the development of various regions such as Wenatchee and Yakima as commodity producing areas, designed literally from the ground up to serve this function. These areas were then organized specifically around the function of commodity production and distribution via the railroads. Fueling the railroads as well as the need for further industrialization and development was the marketing and sale of land in the West. It was the mythic dream of Jeffersonian democracy, a dream also based in Adam Smith and John Locke. Railroads sold this dream; *Better Fruit* sold this dream.

One means the railroads used to sell the Pacific Northwest was through booklets and pamphlets appealing to people around the country to consider visiting or moving to the Pacific Northwest. The earliest pamphlets appeared before the route to the Pacific was completed. The first “Settlers' guide to Oregon and Washington Territory and to the lands of the Northern Pacific Railroad on the Pacific slope,” was produced in 1872 and scores appeared over the next decades. After the Northern Pacific was completed, an 1893 pamphlet about the Yakima Valley

emphasized the growing irrigation and vast possibilities to be an independent farmer. Other early pamphlets selling the Pacific Northwest included Northern Pacific's "A journey through wonderland, or the Pacific Northwest and Alaska" (Peattie 1890) and Red Apple Real Estate's "Chelan county" promoting Wenatchee and the rest of Chelan county for settlement and tourism (Republic Press, 1904). These earlier pamphlets featured apples but focused more generally on the regions themselves.

At the end of the first decade of the twentieth century, Northern Pacific produced several annual versions of the pamphlet "Apple Growing in the Northwest," which showed in colorful displays what life might be like owning or working on an orchard in Washington. Under the photos appeared captions such as, "The women become adept in scientific fruit packing," and "Just one tree, but it tells the story," which showed an apple tree full of large round apples and a man admiring them. Another picture showing apples had the caption "Gold from the orchards of Spokane country" clearly offering a new "gold rush" and emulating the mobilizer of fifty years prior. The 1910 version of "Apple Growing in the Northwest" featured testimonials from the 1909 Spokane National Apple Show. The pamphlet introduced the testimonials stating, "Every One of them purchased Raw Land, Cared for it Personally and Annual Crops Now Make Them Independent" and emphasizing how the testimonials "indicate [. . .] that the incomparable climatic and soil conditions were the chief factors in these successes, and they emphasize the fact that there is room for an army of growers, opportunities to establish many happy homes, chances to make money to develop varied resources, and to have a part in the growth and progress of the country" (20). One testimonial offered, "I have been in the orchard business only two years, yet I am convinced that it is the best paying industry in the United States. [. . .] with plenty of opportunities for young men who are willing to work hard for their start" (15). In this way the apple regions of Washington were presented as a bootstraps paradise. The apple regions were

also presented as overflowing with abundance as various testimonials refer to “inexhaustible resources,” “unprecedented advantages,” and “beautiful agricultural districts, rich with abundant yields” (27). Railroads were key to bringing such European American settlers to the area and to bringing Pacific Northwest commodities such as timber, mineral resources, wheat, and fruit, among others to the markets of the East. Later especially between 1910-20 railroads became a key factor in bringing in Mexican workers to the Pacific Northwest (Gamboa 2000, xix).

During the same period that Northern Pacific produced pamphlets about growing apples in the Pacific Northwest, *Better Fruit* also promoted migration to the Pacific Northwest. But *Better Fruit* targeted potential growers much more selectively. They were recruiting businessmen: “trained men are in great demand in orchard work. The opportunity is great in this industry. The editor of *Better Fruit* has had hundreds of request for just such men, but they are scarce – large orchardists are on the lookout for them continually.” After announcing the need for well-trained businessmen, *Better Fruit* offered a vision of a better life, “The successful man in the big city [...] He’s buying fruit lands and setting orchards for two reasons, for he knows that the life of the fruit grower in the country – the simple life, so to speak – is the personification of health, and what is equally important to know that no other legitimate investment is safer or will pay a greater percent on the investment.” (*BF* Feb 1908, 28). *Better Fruit* attempted to sell the idea of coming to the Pacific Northwest because life was simple, healthy, and profitable compared to life in New York, Philadelphia or Chicago at that time. But as we will see in chapter two given the forces of the market and of competition, the lifestyle some potential growers sought to escape would be replicated in Washington apple country.

Better Fruit also argued that orchard life in the Pacific Northwest offered independence and freedom. For example *Better Fruit* cheered a letter sent in by reader and new orchardist A.T. Richardson of North Yakima, Washington. The headline read, “True Independence is the

Orchardist's Lot." In it Richardson echoed the call to the big city business man stuck in his office: "The 'tired' business or professional man, if he only had the right pointer and the confidence would in many cases find that this land of small fruit ranches and easy vacations is just what he and his children need. And also the land, in a way, needs him." He went on to say that he came to orcharding without any special knowledge about the industry itself. He chose Washington because he "concluded that certain parts of this state (and I presume certain parts of Oregon were the same) offered the best openings for what I wanted in the United States." He succeeded because the land was what he thought it would be and because he "looked at the raising of fruit as a manufacturing business, and brought to it the ideas of a manufacturer and not those of an Eastern farmer" (*BF* Dec 1906,14). Richardson offered in his letter a vision of the "American Dream": freedom, health, profit and independence that were embodied in Western lands. This was a myth that was imposed on the land and indoctrinated into specific Americans, especially working class European Americans (though it spills over to workers of color). As historian Camille Guerin-Gonzalez, argues in her book *Mexican Workers and American Dreams* this is the dream that appeals most to entrepreneurial white men of the petty bourgeois because it was this group who had most access to this dream.

Another part of the American Dream emphasized in *Better Fruit* was that anyone who worked hard could make it—a version of Alger's *Struggling Upward*, which like other moralistic upward mobility myths blanketed this period. The examples in *Better Fruit* were many. R. H. Weber, horticultural commissioner from the Dalles, Oregon offered a typical narrative. He told readers he started with practically nothing and was now one of the most successful nurserymen in the Pacific Northwest. He owned fruit growing property in Hood River, Mossier, and the Dalles, and told readers "I got to the Dalles 18 years ago, in 1890, when fruit growing was in its infancy. It had not reached the commercial stage. Carload shipments from this point were unheard of."

But with hard work and determination, Weber wrote, he was able to establish significant status and holdings (*BF* March 1908). Weber also emphasized that fruit growing remained open to all classes: “Hood River apple’s have made the penniless wealthy, and the well to do more so, and offered great inducement to the prospective fruit grower, be he rich or poor” (*BF* March 1908, 52). More possibilities probably existed at this time in the Pacific Northwest than elsewhere for white male settlers to succeed. But for most people folks of color and women, this dream was far from reach, and was still relatively rare for most working class and poor European American men. What was more it rested on the dispossession of Native Peoples, exploitation of thousands of Chinese, Irish, and other railroad workers and Native American, European American, and Japanese labor that built the irrigation ditches and canals. These were the beginnings of the commodification of land and the building of apples as a commodity. By 1910 commodity apples and commodity land together with labor of tens of thousands who would never see the fruits of their labor enabled the European American growers to establish and develop the beginnings of a powerful industry. Much of the greatest wealth of the industry was made on the sale of land. As new settlers arrived and bought land, the demand for good fruit land drove up the prices and those who had land to sell made handsome profits with each new wave of settlers.

V. Conclusion

By the time of the first Spokane National Apple Show in 1908, the crowning moment of Washington’s apple industry, apples in Washington were booming. Primitive accumulation, land that had been acquired through dispossession of the native inhabitants, and exploitation, commodity transportation infrastructure and irrigation infrastructure that built by the labor of immigrant workers, enabled this boom. Once land, rail, and irrigation—the most basic needs of

agricultural commodity production and distribution—had been established, settlers began to plant widely and the industry began to organize itself and share knowledge and information. The leadership of *Better Fruit* and growers' cooperative associations developed the Pacific Northwest and specifically Washington State's Wenatchee and Yakima districts as the premier apple growing regions of the world. As the industry expanded so did the towns. As orchard towns expanded needs for services expanded as well. The agricultural regions of Washington became a magnet that drew people out from the East and Midwest. But as we have seen, this did not happen without substantial promotion by the railroads and the apple industry, as well as other agricultural industries. As the apple industry expanded and developed, growers needed to organize themselves more thoroughly to deal with the new issues that emerged (such as the need for a reliable work force and a reduction of production costs, which will be examined in chapters four, five and six). With this dramatic growth also came a parallel growth of growers' independence as they began to tussle with the railroads and other economic actors who were trying to make money on apples. As we will see in the following chapter, though the railroads established and nurtured the early apple industry, apple growers developed themselves into an industry onto itself and through cooperation, the apple industry began to assert its independence as it developed into force in the regional, and U.S. economy.

CHAPTER THREE

COOPERATION AND COMPETITION

Figure 3.1. Display from the 1908 Spokane National Apple Show.



Source: *Better Fruit*, Feb 1909, 11 & 12.

I. Introduction: Spokane National Apple Show

The Spokane National Apple Show (SNAS) began in December 1908 as a commercial apple extravaganza, a huge display for Washington fruit on a global stage. According to Leonard Hegnaur, longtime Washington State College horticulturist writing in 1958, “the early shows had no counterpart anywhere in the world. Never before or since has there been a show like them” (197). Over 100,000 people attended! (*BF* Feb 1909, 11) The very first SNAS was held “in a huge tent adjoining the city armory” with 2 million shiny apples packed and on display from 38 states (197). According to one reporter “The Show was one of surprises and charm. It was more than an entertainment; it was more than educational; it was inspirational” (*BF* Feb 1909, 12). It marked the culmination of the work to make apples a principle Washington commodity.

This was not Spokane’s first fruit gathering; such gatherings of fruitmen had been held in Spokane and the Pacific Northwest for nearly 20 years. One of the first was the 1895 Spokane

Fruit Fair, which grew out of early efforts to provide growers with a chance to meet and work together and to display the apples to the general public. According to historian Katherine Morrissey, the annual fruit fairs in Spokane drew entries from throughout the region and helped to create a name for Spokane (1997, 128). The early fruit fairs were nothing on the scale of the National Apple Show. Like at the SNAS, fruit was abundantly displayed at the 1895 fair, but the 1908 SNAS, like the shows that followed, was all business and did not have banquet tables adorned with fruit of all kinds arranged artistically like giant cornucopias spilling forth. At the SNAS, apples were neatly arranged in columns and rows seven apple boxes tall and ninety long—a rail carload of apples—as if they were about to be put on a train or had just been taken off one for display in a large store window. Though there were evening banquets, vaudeville acts, and choral concerts, the industry’s main concern was marketing the fruit. Social events offered opportunities for business as well as pleasure. Growers brought their best commodities to the SNAS and were eager to make sales and ship their fruit. Buyers from across Europe and the U.S. snapped up the prize-winning apples to be shipped immediately on the rail lines. In fact, railroads helped to sponsor the SNAS to boost Washington apples, Washington tourism and Washington immigration. They helped to finance the show and advised the programming and even the awards²⁷ (Strom 2003, 127).

The Spokane National Apple Show held ten annual apple galas ending with its last show in November 1917. Though the Apple Shows in themselves lost money, the long-term impact on the apple industry was invaluable (Fahey 1986, 110). At the shows growers were able to display their best apples and connect with traffickers, railroad representatives, and equipment suppliers, thus establishing relationships and industry business networks, which would form the foundation

²⁷ Eastern apples were taken out of cold storage and accidentally sent in heated cars that ruined the apples to the point they could not be displayed, and Oregon apples that had won prizes in other shows did not win any prizes at the Spokane National Apple show (*BF* Feb 1909, 13).

for growth. The apple shows did not enable the orchards surrounding Spokane to become prominent in the country or state as had been hoped by the host city, but they did help Washington State apples more generally, especially the apple regions along the Columbia River, in their dramatic ascendancy as the apple capital of the world (Fahey 1986, 110). To coincide with the apple show, The Washington Horticultural Association held its annual meeting where growers were able to meet with each other to share concerns, make plans, and coordinate their actions as well as to lessen competition and advance frameworks for cooperation as a class with common interests, needs, and enemies. Not only was the Spokane National Apple Show the crowning moment of the Washington apple industry, revealing the apple's iconic stature as an important Pacific Northwest commodity, but it was also, along with countless association meetings, a site where the various contradictions between cooperation and competition could be smoothed out.

Through events such as the SNAS and countless other meetings and conventions, the apple industry developed a class of producers made up of these owner operators across the Pacific Northwest, including in Washington five principle apple areas: Spokane, Walla Walla, Wenatchee-Okanogan, White Salmon, and Yakima. This group of producers through cooperation developed a powerful and well-organized industry focused on national and international trade. Though not as well organized as many hoped, the industry was capable of coordinating on many significant levels. These cooperative efforts (combined with public and private infrastructure as outlined in chapter one) enabled the Washington apple industry to succeed in the face of maturing monopoly capitalism and growing market pressures to market the fruit, deal with pests, and reduce the costs of production. Apple shows, growers' conventions, and commodity journals helped to develop industry cooperation by forming and educating a class of growers who together could work out responses to these growing pressures.

II. Industry Development

The development of Washington apples happened during a golden age, for many, if not most farmers, when high demand brought generally good prices, and farmers were not yet saddled with extensive debt (Watkins 1995, 9). It was certainly a golden age for Washington apples as prices were consistently high enough that growers could make significant returns on their investments and competitive pressures were relatively lower than they would be in the coming years. If a grower had commercial apples to sell, they could be sold quite easily to commission buyers that would come to town. For a brief period, during the first decade of the twentieth century, growers lived the Jeffersonian dream represented in picture books promoting the Pacific Northwest. During this time the average size orchard was 10-15 acres in both Yakima and Wenatchee districts and Mabbott speculates that this size was “economical” (1940, 38). Certainly she meant economical in terms of profits as well as labor and technology costs in that most growers could handle the crop themselves with family labor or labor exchanges with nearby orchards and farms.

But the Jeffersonian paradise did not last long. Due to massive plantings during this golden age, prices dropped in 1912 and 1914 with bumper crops and not enough railroad cars (Hampson 1933, 15). New pressures to market fruit and cut costs began to increase, as the millions of trees came into bearing in the Pacific Northwest. When WWI began, global trade was reduced and uncertainty pushed growers to become conservative in their spending. H.C. Sampson, an official in the Northwest Horticultural Association, encouraged *Better Fruit* readers to “adjust their ideas away from the basis of the high prices of a few years ago to a basis of modest profit on carefully tended, economically managed orchards.” The industry moved from

what was talked about as a golden age of effortless profits to a period in which apple growers were more dependent on price, expanding markets, and cutting costs to ensure profits.

Meanwhile, as important infrastructure was built, the industry was able to mature and develop. Many of the key developments such as centralized packing, marketing, efficient division of labor, a byproducts industry and cooperative organization existed prior to 1900, but from 1910 to 1925, they became industry-wide elements and revolutionized the industry. Not only did more growers adopt the new methods, but also growers who did not keep up could not make money on apples and had to find another calling. Deeper domestic and more expansive international trade was made increasingly possible by emerging new technologies such as electricity, the telephone, the refrigerated rail car and storage unit, and global shipping especially facilitated by the Panama Canal.

Growth of the Industry: More Trees, More Apples

The Spokane National Apple Show began at the peak of the golden age and was the culmination of this period in Washington apple history. One “observant visitor,” speaking as if from a prepared statement, told the *Better Fruit* reporter at the first Spokane National Apple Show:

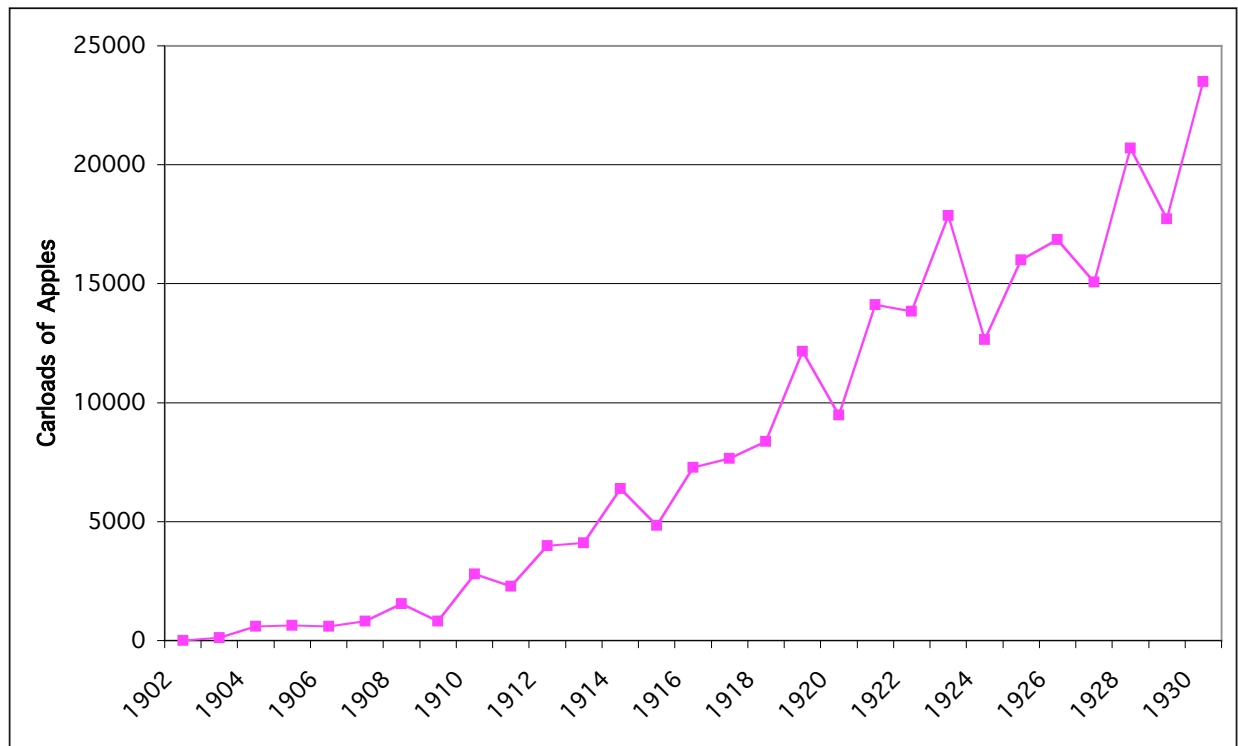
It comes with clearness and force to the mind that apple growing is a delightful and profitable industry, capable of manifold and speedy development. Here is the product from orchards already in bearing, but young orchards many times larger than the bearing orchards are now in the soil and under cultivation. We know that the product will be greater next year than this year, and greater every year thereafter for the next decade, even though not another tree be planted. But more of them will be planted every year[...]. (*BF* Feb 1909, 12)

This prediction proved accurate and perhaps even an understatement. According to Chester Hampson's comprehensive 1933 study "Trends in the Apple Industry" covering roughly 1890-1930, "apple production in Washington increased very rapidly between about 1910 and 1920" (44). Total production went from five million bushels in 1910 to twenty-five million bushels in 1920 and then on to thirty-five million bushels in 1930. Heavy plantings in Washington began "a few years before 1910" and continued nearly through 1920 (Hampson 1933, 45). Not only did the state go from three million bearing trees in 1910 to nearly eight million bearing trees in 1920, but also the average yield per tree doubled (Hampson 1933, 47). At the same time, the Pacific Northwest led by Washington, was beginning to overtake the production of the Eastern states to become the leading apple area. Washington became the leading apple state in 1917 (Fahey 1986, 110). According to Mabbott, after a period of rapid growth the industry reached maturity in the period between 1912-1930.

Over this period the shape and reach of the industry developed and changed as it consolidates geographically and organizationally. According to Fahey, "Millions of trees would be ripped out in the twenties" and this resulted in consolidation around the industries in Yakima and Wenatchee-Okanogan (1986, 117). Hampson's findings show that from 1921-1930 car-lot shipments from Wenatchee-Okanogan and Yakima rose steadily while shipments from the next three biggest districts Spokane, Walla Walla, and White Salmon dropped off considerably (1933, 56-58). For example, whereas Wenatchee shipped 15,131 car-lots in 1921 and 24,611 in 1930, Spokane shipped 2,452 in 1921 and 676 in 1930 (Hampson 1933, 91). This was also reflected in consolidation around the big four marketers—two from Yakima and two from Wenatchee—controlling a combined 85 percent of Washington commercial apples in the twenties that came to dominate the industry were the Yakima Horticultural Union, the Yakima Fruit Growers Association, Skookum Packers, the Wenatchee District Cooperative (Fahey 125). Wenatchee

became the apple capital of both the state and the country during this time. Unlike Yakima, the Wenatchee area was dependent upon apples as the one staple crop. The heavy plantings of tree just before 1912 resulted in Wenatchee becoming the leading production region through the 1920s with 51.5 percent of the states total apple shipments. Yakima followed close behind with 41 percent and the rest of the state producing 7.5 percent. Growth of the industry in Wenatchee can be seen in Figure 3.2.

Figure 3.2. Total Number of Carloads of Apples Shipped from Wenatchee, 1902-1930.



Data Source: Leverne Mabbott, *A history of the Wenatchee-Okanogan apple industry prior to 1930*, 1940.

The industry was not prepared for the rapid growth that it achieved. Mabbott notes that before 1910 eastern buyers came into the various apple districts in the Pacific Northwest and arranged purchases; therefore after 1910 growers had to adjust with the increase in production to seek out buyers to sell the fruit and “the locality suffered the consequences of confusion, inadequate storage space, and insufficient transporting facilities” (Mabbott 1940, 47). A shortage

of refrigerator railroad cars during the period 1912-1923 caused growers to have to compete for space as the industry was growing rapidly and quickly outgrowing the available facilities (Mabbott 1940, 47). Shippers charged that the railroad company had neglected them and organized together to demand more railroad cars. This would be an ongoing battle between the apple industry and the railroads over the next twenty years.

Amidst this rapid growth, Washington apple prices fluctuated enormously. Prices dropped during the two largest crops of 1912 and 1914 and remained low during the first few years of WWI (Hampson 1933, 15). Though apple prices, like most agricultural commodity prices, increased during the war due to wartime barriers to trade and an economy geared toward production for the war, sales were sluggish. Domestic and export sales rose again following the war (Hampson 1933, 14-15), but competition had become fierce in the industry. Despite the pressures of rapidly increasing production during the second decade of the twentieth century and fluctuating prices, apple growers who were able to survive the bad seasons were able to make money and accumulate wealth. The keys to survival involved reducing costs as much as possible and being part of strong cooperative associations that could sell the fruit (which in many ways also meant having an orchard near Wenatchee or Yakima).

As growers organized within and between fruit districts, as *Better Fruit* became a staple source of information (and as other commodity publications like it in Washington State emerged during this period²⁸), and as apple shipments grew a recognizable apple industry began to develop. *Better Fruit* writers began to describe “the industry” and “our industry.” Industry here meant a systematic and coordinated approach and structure of production and distribution of a

²⁸ Some of the other Pacific Northwest fruit journals that published between 1890 and 1930 included *Northwest fruit grower* (begun in 1929), *Skookum news* (begun in 1926), *The pacific news* (begun in 1927 and produced by Employees of the Pacific Fruit & Produce Co.), *"Big Y" bulletin* (begun in 1928).

commodity by profit-making enterprises of independent owner-operators linked by cooperative associations that enabled centralized packing and marketing. Growers recognized the need for new methods, equipment, information, and cooperation to handle the rapid growth of the industry. *Better Fruit* called this approach “progressive,” or modern scientific fruit production, and this progressive fruit production began to resemble industrial factory production. The basics of orcharding such as dealing with pests, orcharding techniques, standardization and packaging were key issues, but marketing apples, cooperation among growers, and wrestling for a fair deal from rail and retail take on increasing importance over the second decade of the 20th century.

Growing Wealth: Profit and Accumulation

The period between the 1900 depression and the 1929 depression was one of immense expansion of American capital investment (Duboff 1989, 71). Much of the competition in this period among growers, and between growers and the other industries that made money off of apples such as the railroads and retailers represented a tug of war over how much of the accumulated wealth created by apples any group or individual would get. Despite the competition, there was ample evidence growers prospered. Photos of the time showed evidence of this: growing towns in apple regions, new banks, and expensive farmhouses. Growers that were able to compete and survive did well especially in Wenatchee and Yakima. Some grew wealthy or increased their wealth and others did well enough to carve out a comfortable if not luxurious life. In the 1920s a successful grower owned his orchard land, home, and car, and was able to travel. Some industry leaders traveled extensively abroad as did H.M. Gilbert and family in 1913-14 (*BF* Feb 1914, 9-11).

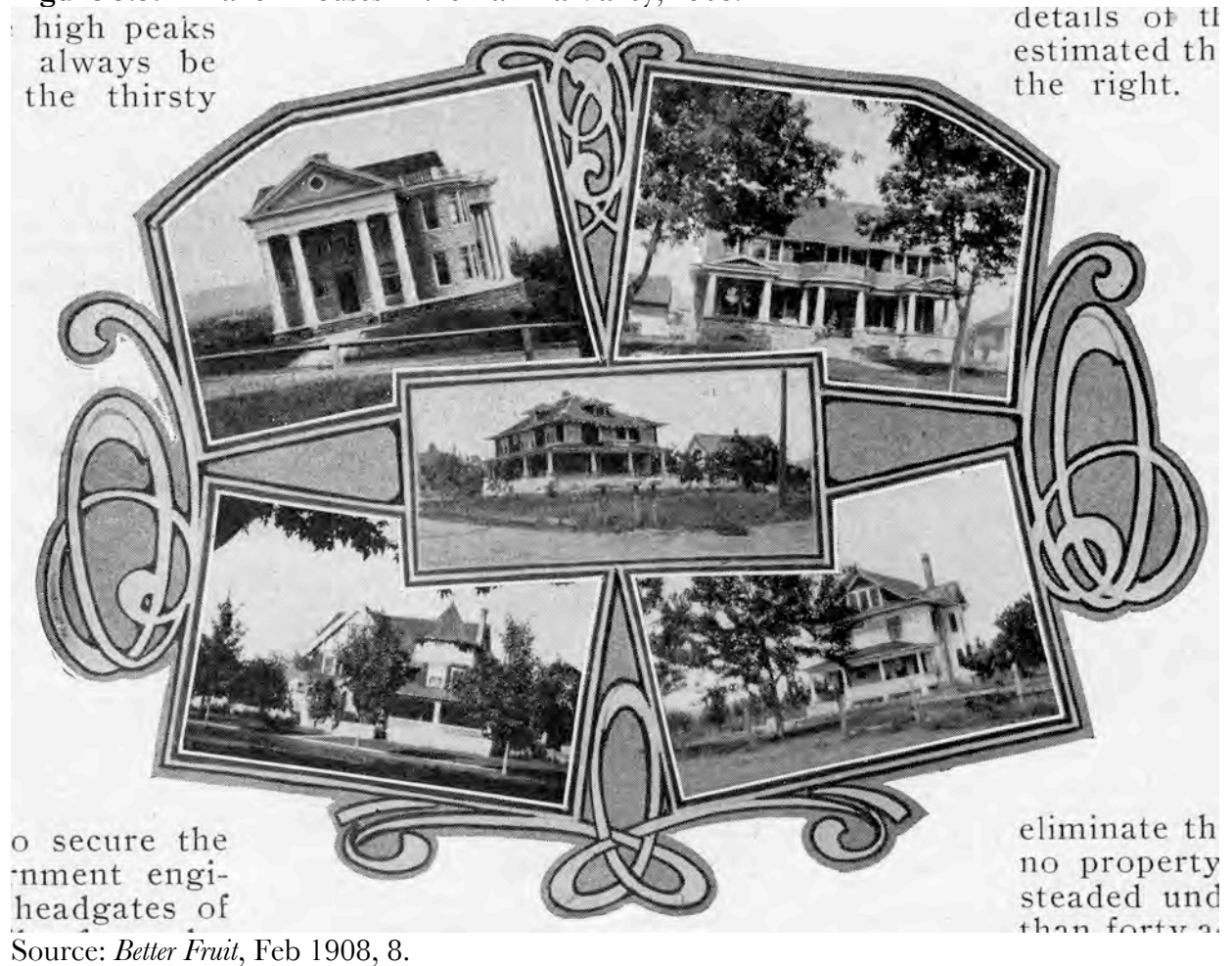
As a booster for fruit growing industries, *Better Fruit* demonstrated the wealth that growers were making²⁹ and the potential for profit. Advertisements in the first decades of the publication varied widely, but the accumulation of wealth was also evidenced in the commodities being offered to growers. The first few years of the publication show ads primarily for 1) agricultural equipment: pesticide sprays and sprayers to coat the trees, stump extractors, plows and tractors, assembly-line type fruit graders, ladders, irrigation equipment, and 2) land and trees for sale. These are expected in a commodity trade publication. As growers expanded their operations, they depended on laborsaving equipment and scientific management, which in turn required additional land acquisition to expand production to support capital investments.

Over the years ads for luxury items increased in *Better Fruit*, revealing apple production was moving away from Jeffersonian ideal of the self-sufficient family farm. Many of these goods were promoted by *Better Fruit's* editors as necessities for growers such as cars (*BF* May 1909, 53). Some necessities might include a “high grade kerosene lamp” from Standard Oil to read *Better Fruit* in the parlor after supper (*BF* Jan 1911, 90) or a shiny new roadster from Maxwell (*BF* May 1911, 58) or “the best telephone made” (*BF* March 1911, 83). Some of the ads revealed a growing consumer culture in the general population, but others clearly recognized and distinguished some growers as a wealthy new class with in apple districts. There were advertisements for Hill Military Academy (“a boarding and day school for boys”) and St. Helen’s Hall (“A Girls’ School of the Highest Class”) for growers’ children (*BF* Dec1906, 11). There were also ads for accident insurance for wealth protection, ads for jewelers, Steinway pianos, ads featuring both boys and girls asking their father about college, a 1913 ad for the “only women’s college on the pacific coast” Mills College, and many ads for banks. The prep schools, the jewels

²⁹ It did not, however, show what was happening to growers who were being forced out and bought out, workers who were exploited or who even died in helping to accumulate wealth in these agricultural strongholds.

and cars are class markers—a way to display success in town. But the primary purchase, as grower James Duffin points out, was the home (*BF* Feb 1908, 8-9). There are photos throughout the first decade of *Better Fruit* showing off the sizable and stately orchard homes across the apple regions. Duffin writes “As I ride through the fruit districts of the state and I see the many beautiful homes that are being built, I feel to say in my heart: ‘God bless the husband and father that is giving to his faithful wife and devoted children these comforts’” (*BF* May 1909, 27). These were the trophies of better fruit:

Figure 3.3. Ranch Houses in the Yakima Valley, 1908.



The photos of large pilloried houses and the advertisements for luxury goods reflect not only the growing wealth of many of those reading *Better Fruit*, but also their ambition. The photos

and ads act as an inducement and motivator; they show concretely what a reader's hard work could buy and exactly what it was growers were competing for.

Profit was an important factor in apple production for many growers in the East prior to the 20th century. But as agriculture moved west, it became more and more driven solely by the profit motive and a mindset and set of relationships framed and structured by the profit motive because capital had the space and “blank slate” to create rules and laws. The apple industry in Washington became a more advanced stage of capitalist agricultural in terms of its industrial and scientifically minded production without the fetters of older forms of production that existed in the East. From the ground up, it was created as an industry designed to produce profitable commodities, which out-competed the established apple industry in the East due to the many advantages of government subsidies and corporate investment from large rail corporations.

Looking back over the period leading to the Great Depression, Historian John Fahey concludes that the apple had become not just business but “big business” (1986, 126). As more apples left Wenatchee, more money came in. Also after the 1912-14 price squeeze, but even before, profit had to be made on volume and cost cutting methods, which led to a consolidation in the industry. Fahey emphasizes that not apples alone made, what we might call the “the Apple Industrial Complex,” but “around the apple business mushroomed a structure of service and manufacturing businesses dependent on it” (Fahey 1986, 126). This big business...³⁰

Growers were not getting wealthy on apples alone. Their profits were based on both the volume of apples sold but also on land. For example, according to the Abstract of Title for one portion of the land upon which apple entrepreneur H.M. Gilbert amassed his fortune was the 80

³⁰ There is substantial literature on some of the key economic aspects of agriculture during the first half of the twentieth century. For an overview see Hurt (2002), *American agriculture: a brief history*; Gardner (2002), *American agriculture in the twentieth century*; Krebs (1992), *The corporate reapers. For some views of agricultural economy during the nineteenth century*; Ferleger, ed. (1990), *Agriculture and national development*; Kulikoff (1992), *The agrarian origins of American capitalism*.

acres of Summit View orchard near Yakima (Nwq of section 22, Township 13 North, Range 18 EWM). The U.S. government sold 160 acres to Bernhard Aarvoll for \$400 (Gilbert, Box 9 Folder 241). After he had spent the required time on the land, Aarvoll was able to irrigate it in 1894 through the Yakima Valley Canal Company. He then sold the irrigated land to Joseph Scheiner for \$2500 in 1901. Scheiner then turned it over and sold the south half, 80 acres of the land, to H.M. Gilbert in 1904 for \$4400. He expanded irrigation of the land through the 1914 reclamation act and then in 1917 under the Yakima-Tieton Irrigation District. Gilbert purchased plots from two women who held land from the act (as the DLC Act enabled white women with means to own property). Gilbert used the money he made on his orchards to buy more land on which he developed other orchards, built packinghouses and storage sheds, and rented some of these out to other aspiring orchardists. This capital was used to develop Richey and Gilbert Co., which was doing \$350,000 worth of business by 1908 and had the largest fruit shipping business in the Yakima Valley (*BF* Feb 1908, 7). By 1928, H.M. Gilbert and his wife Marion Richey Gilbert had parleyed their initial investment of \$4400 into \$800,000 by buying land, and then selling and renting it to others (Gilbert, Box 1 Folder 3).

The foundational wealth in Wenatchee and Yakima, then, was based on external investments in infrastructure and in land and the potential value in land as developed orchard real estate. The orchards and apple regions attracted investments, but much of the profits made on apples did not make it to Wenatchee and Yakima. One such investor was Chester Congdon, who early historian of the Yakima Valley William Lyman described as a “lawyer and a capitalist” (Lyman 1919, 35). Congdon and his brother Albert capitalized the building of the Yakima Valley Canal in 1889, and Chester Congdon paid for the building of “Congdon’s Castle”³¹ on 55th Ave

³¹ This 80-room, 18-bedroom mansion was built in 1913-1914 and completed in 1915 with local stone and local labor.

and Nob Hill Blvd. He also had another mansion on the other end of the Great Northern in Duluth Minnesota. According to Gibson “His orchard of over 35,000 trees was one of the largest orchards owned by an individual. In 1913 he added a huge fruit storage and packing plant” for his Chekola Brand of apples (2002, 56). Congdon was a New York investor whose wealth was generated in financial, real estate, mining and railroad investments through the Ontario Group which bought significant acreage in Yakima in the 1890s (Lyman 1919, 36). Congdon was a partner in developing the Grays Harbor Northern Pacific Rail Road Line, and he built up orchard holdings of 375 acres out of a total of over 900 developed acres total. As an absentee landowner and orchardist, Congdon was one of a number of outside investors who made money off of the development of Washington and its apple industry.

III. Cooperation and the tensions of Class Formation

As apples became a commodity of larger and larger importance in the Pacific Northwest, growers saw common cause and formed commodity groups. These cooperative associations helped growers share some common burden together that would be much harder for a single grower to handle on his own such as central packing or national marketing. These organizations went by many different names and had different functions and coherence depending on how the organization was designed. There were cooperatives, unions, leagues, societies, federations, and associations. Over the years as pressure on growers increased the various organizations developed new ways to meet common needs, stand up to common enemies, fight for common interests, and coordinate production, shipping and marketing.

Founded in 1848, one of the first fruit commodity associations in the U.S. was the American Pomological Society, but growers associations did not reach the Pacific Northwest

until the 1890s. In the Pacific Northwest some of the first associations were the Washington Horticultural Society (1892), Hood River Grower Union (1893), The Northwest Fruit Growers Association (1894), and the Yakima County Horticultural Union (1903). In 1901 the Washington State Horticultural Association organized to enable “more intelligent planting, growing and marketing of the fruit” (Mabbott 1940, 33). Northwest growers recognized the power in numbers and in some places even echoed labor unions; for example the Yakima County Horticultural Union advertised their 1903 convention by calling out to growers with the slogan “In Union There Is Strength” (YCHU 1903). These associations played a significant role in the development of the industry and the formation of a class of growers. They emerged out of the Grange Movement and Farmers Alliance as well as the guilds and craft union tradition. Cooperative associations began with many populist and progressive ideals and traditions, but soon lost these socialistic ideals, as they became commodity groups dedicated to the more competitive success of apples for profit.

Background: Populist Politics and Growers Associations

The period following the depression of 1893 up to the Great Depression was a boom time for the U.S. economy and U.S. capital with a new stage of international growth and trade. There were occasional down turns such as the recession of 1907-1915, but generally the U.S. economy saw enormous growth. Powerful and concentrated finance and industrial monopoly capital in the U.S. and Europe began to maneuver around the globe in its quest for further accumulation based on new markets and new sources of raw materials—it was the latest stage of

globalization³². Intense fights raged over the spoils of expansion. Popular movements, including both farmers and workers, organized against monopolies, and organized for a greater say in monetary policy through political representation. From the end of the Civil War through the first decade of the twentieth century, the Grange movement, the Farmers Alliance, the Populist Party, and the Progressive party pushed for political and economic reforms. During much of the late nineteenth and early twentieth century many farmers and workers were able to form an alliance against industrial capital. Some early farmer organizations in the Pacific Northwest called themselves unions to stress their orientation as small producers³³. While looking for some collective power at one point *Better Fruit's* editors even contemplated joining the Teamsters Union because many growers were hauling their fruit to nearby markets for sale (1906).

But as the pressures of production for the market intensified, as growers emerged who had more land and power and thus hired labor, and as orchards and land in the Pacific Northwest became investment opportunities³⁴, there became less in common between growers and labor, and these contradictions became untenable. Ultimately, growers felt that they could not ally with workers and had to make some deals with capital in order to protect their own interests. They owned land and used that land to create a commodity. They worked hard and risked the land they were able to acquire. They were buying labor power and selling products. Many if not most growers moved away from seeing themselves as allies with workers and more as

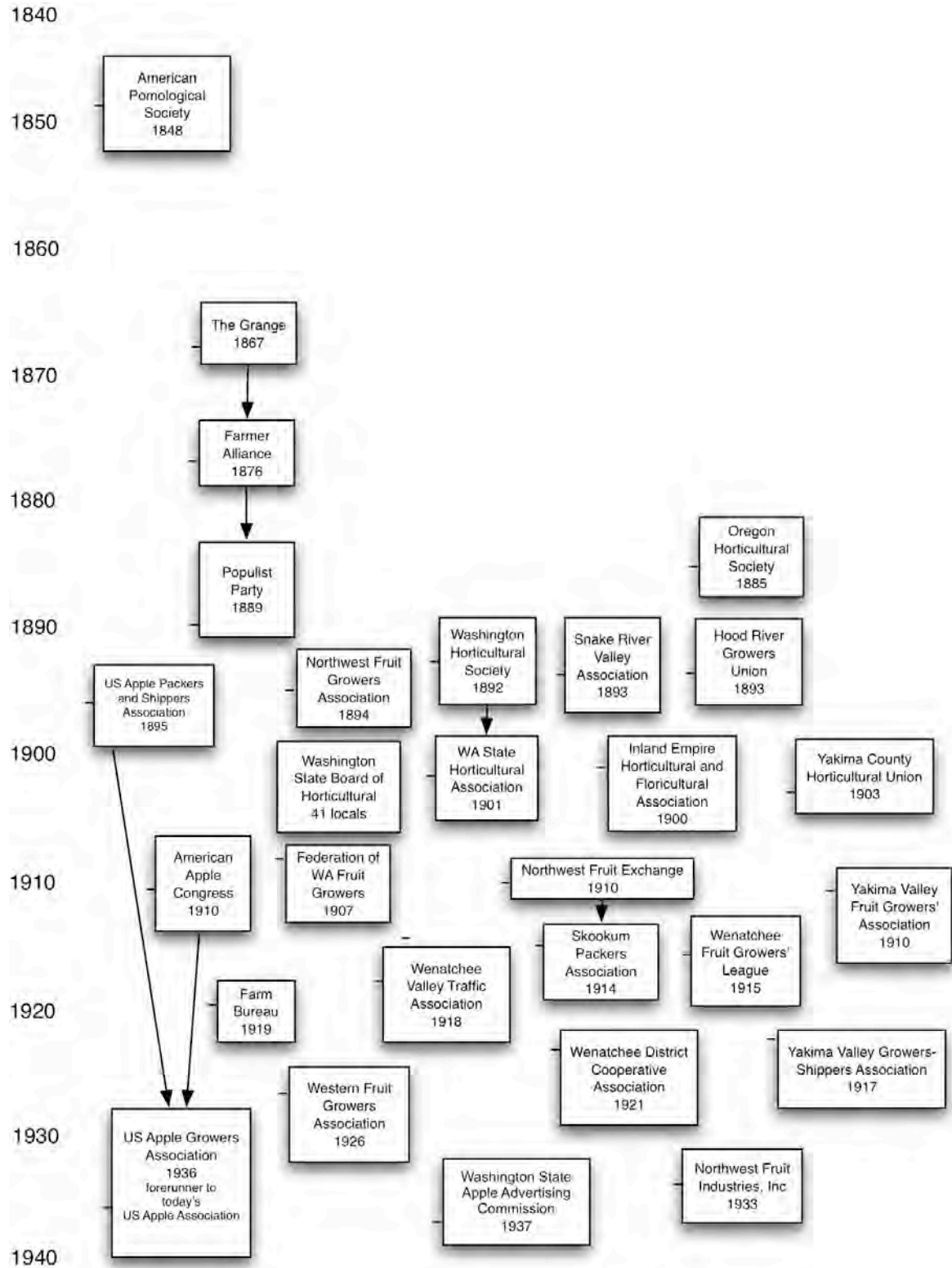
³² For more on the political economy of the late nineteenth, early twentieth century see Du Boff, *Accumulation and power*, Hobsbawm *The age of empire, 1875-1914*, McCormick *America's Half Century*, Wilkins *The emergence of multinational Enterprise*.

³³ For more information on populism and the cooperative movement see Goodwyn, *The Populist moment*; Morgan, *Merchants of grain*; Rodgers, *Atlantic crossings*; and Tax, *The rising of the women*.

³⁴ Through out *Better Fruit* there are advertisements for land and orchards but in a January 1911 ad, "Profits Without Worry," The Oregon Apple Company of Hood River, Oregon offers to sell shares in an orchard that "lets you have orchard profits without the care, worry and work of operating [...] [and] with out the usual large cash purchase price of a high grade orchard" (31).

businessmen who worked long difficult hours with their hands and minds. The price squeezes apple growers were experiencing and the fact that there was no guarantee they would get their investment back encouraged most growers to develop a more conservative business mindset. As orchards grew in size orchardists became bosses who hired and fired, gave orders, etc. a farm labor alliance was no longer even remotely possible.

Figure 3.4. Key Apple Commodity Organizations Connected to the Pacific Northwest.



Sources: *Better Fruit*, Mabbott, Luce, and Bright.

The earliest effort to cooperate across the Pacific Northwest was the formation of the Northwest Fruit Growers association in 1894. Eight hundred were in attendance at the first convention of Northwest Fruit Growers Association in 1894, which met in Music Hall in Spokane February 14-16, including fruit growers and horticulturists from the three states and one province, representatives of the traffic departments of Northern Pacific, Union Pacific, and Great Northern Railroads, representatives of fruit dealers in St. Paul, Omaha, Chicago, and Kansas City. (NWFGA 1894, 3) The purpose of the convention was “bringing together this great and representative body for conference and for promotion of the fruit growing industries in the Pacific Northwest.” (NWFGA 1894, 3) This gave growers an opportunity to meet other growers from across the region and to connect the industry more closely with other aspects of apples including the railroads and wholesalers of fruit. Together participants discussed how to build and grow the apple industry in the Pacific Northwest.

The conference began with a social gathering of 2500 people featuring speeches from the various representatives to open the convention with a spirit of enthusiasm and cooperation (Luce 1985, 4). In their various speeches “it was shown that how the different states had increased in values of fruit products for the past few years, and that in the near future, if properly directed and guarded, the annual crops of this industry will be one of the principal sources of wealth to each state and province. Each speaker pledged hearty support as representative in all undertakings which will increase interests of fruit growing in the entire Northwest” (NWFGA 1894, 4) The railroad representatives stated that, “their companies were interested in building up this entire section; much of their investments centered here, and therefore, wanted to confer with this convention, with the view of doing their share to aid and increase fruit culture by giving suitable service and satisfactory rates, both to the through and local markets” (NWFGA 1894, 4).

Building on this SL Moore, a Northern Pacific freight agent informed those gathered that 2,000

copies of the pamphlet “Fruit Growing in Washington” was being distributed in Midwest and East³⁵ (NWFGA 1894, 5) The commission merchants referred growers to the fact that “the Pacific Northwest was nearer to many of the large markets than other fruit sections, and that they are looking to these states for a large portion of their future fruit supplies” (NWFGA 1894, 4). These assurances of transportation and markets for Pacific Northwest apples signaled to growers, potential growers, and investors that the potential to make money on apples in the Pacific Northwest was good and would continue to grow.

This first regional conference also allowed growers to share knowledge to build their industry. Two key messages to enable industry success that would form core ideas of growers associations in the coming decades were quality control and marketing the fruit. One speaker at the convention, Walla Walla horticulturalist, grower and association president-elect Dr. N.G. Blalock, advised growers not to ship poor fruit but to feed it to hogs. He also allowed people to come to the orchard to pick through the fruits for drying³⁶. He advised growers to keep quality up and not to deceive traffickers and retailers. Connected to quality control and not shipping poor fruit, Blalock emphasized, “strive to build your reputation” (NWFGA 1894, 10) His message to growers was to maintain credibility to build up the industry over the long term and not look for quick easy profit on bad fruit. (NWFGA 1894, 11). He also encouraged growers to not only learn from one another but to look to other fruit growing regions, “You, gentleman, should, in the infancy of your industry, attempt at least emulate older and more extensive growers. [...] My advice to you growers would be to profit by their experience, extending over a

³⁵ As noted in chapter one these pamphlets helped build the image of Washington as a fruit growing region which increased sales and helped encourage settlement, which increased the value of land.

³⁶ In years to come would give rise to an offshoot byproducts industry as apple commodification was intensified as noted in chapter one.

period of twenty-five years.” He also advised them to put a good emphasis on packaging: “To say that the package does not help sell the goods is erroneous. It has as much to do with its mercantile value as the blush of the peach, the absence of rust from the orange, and the solidity and plumpness of the pear and apple” (NWFGA 1894, 11). As an example of the ways growers could learn from one another, he mentioned the Snake River Valley Association who “banded together for mutual benefit during the winter and employed a man from California who was experienced in business, to come to that country and show them just how their fruit should be packed for proper transportation and sale in the eastern market.” Blalock brought with him a sample of packages from California to show growers what was possible. He ended his talk by extending out to the gathered growers his desire to work together (NWFGA 1894, 11). This cooperative sentiment and the cooperative movement in the industry would continue to grow over the following decades as various other voices in the industry would continuously call for organization.

Prescriptions for Cooperation

Better Fruit was a key proponent of associations and showered its readers with examples of the needs and benefits of cooperative associations. *Better Fruit* was in fact itself the result of these early cooperative associations; one of the first growers associations in the Pacific Northwest, the Hood River Growers Union was organized in *Better Fruit*'s hometown, Hood River, in 1893 (*BF* Feb 1911, 48). A few Hood River growers in conjunction with the Northwest Fruit Growers Association, parleyed their organizational efforts in 1906 into the creation of the trade journal *Better Fruit* instructed growers on the most “up to date” methods for fruit growing, featured the latest products available to growers, and took as its special mission the organization of the fruit industry in the Pacific Northwest and throughout the country.

The inaugural issue of *Better Fruit* featured several testimonies from growers associations from around the Pacific Northwest. The lead testimony, “The Importance of Fruit Growers Associations,” was offered by W.H. Paulhamus, esteemed grower from Puyallup, manager of the Puyallup and Sumner Fruit Growers Association, and future state senator who congratulated the growers of Hood River for their journal and for the reputation they had across the U.S. due to the efforts of their associations (*BF* July 1906, 3). Paulhamus emphasized “organization, which was very much more important than how to cultivate the fruit” and the importance of associations for marketing fruit. He explained, “No difference how much you produce per acre, if you cannot market it at a profit per pound, the industry is a dead one” (*BF* July 1906, 3). For Paulhamus and *Better Fruit* marketing and organization went hand in hand. According to Paulhamus, it was due to the ten years of association work that growers in the Puyallup were able to realize prosperity and expansion. Another testimony on the need to form growers associations came from Ed M. Foy, General Manager of the Wenatchee Fruit Growers Association. Foy wrote, “Last year realizing the benefit of association we organized a union in a rather primitive way, and this year have perfected the same. It is now in splendid working order and its membership embraces nearly every fruit grower in our valley” (*BF* July 1906, 3). While Paulhamus discussed marketing, Foy’s testimony rested on the fact that the “association method” paid growers the best profit as it avoided “dividing this profit between the grower and the middleman” and “any market from being overstocked and glutted.” Testimonies like Paulhamus’s and Foy’s showed that growers needed to and could form associations for very clear reasons: making more money in order to survive.

The project of *Better Fruit*, to organize growers into associations, took a wide variety of forms, and the editors weaved the need for organization throughout the journal over its first five years. Writers and editors promoted organization in articles directly on the topic in every issue.

One article assured growers that because associations do the marketing of fruit, growers could focus on producing better fruit (*BF* Jan 1907, 15). This kind of specialization employed the marketer to study the markets and allowed the grower to master his orchard. In addition to collective marketing associations also enable growers to have collective warehouses and packing factories. The associations loaned money to members, assisted in developing credit, collected and disseminated “information and statistics,” and helped “to establish uniformity in methods of grading and packing” (*BF* March 1907, 3). Other benefits of associations, according to *Better Fruit*, came from the economy of scale they afforded, “the object of such institutions is to conduct a big business at a minimum expense and handle it so as to pay the greatest profit possible on the dollars invested” (*BF* Sept 1909, 40). Lowell Judson told growers that associations could even get a better price on boxes (*BF* Sept 1906, 4). The industry could also use its publications and conventions to coordinate pricing (*BF* Nov 1910, 16). What was more, some argued all these efforts for cooperation would ultimately “eliminate self-competition” (*BF* Feb 1911, 48).

Better Fruit amplified arguments for associations based on their theoretical benefits with examples of their actual proliferation and concrete gains. There were brief reports from associations (*BF* Sept. 1906, 18-20), ever expanding lists of associations across the region, and articles and photos in each issue showing the benefits and possibilities of organizing. For example the March 1907 cover photo had a picture of the Yakima Valley Horticultural Union warehouse. (*BF* March 1907). Such photos showed how individual growers, who alone could not afford a warehouse, could collectively get what they needed. *Better Fruit* reported on the many new associations and emphasized how quickly they were increasing, giving a sense of momentum to the organizing (*BF* Feb 1908). The growth of associations marked a genuine success for *Better Fruit* and the industry organization, and by February 1911, *Better Fruit* estimated that there were around 75 associations total in Idaho, Oregon, and Washington.

The goal of industry leaders and *Better Fruit* was not only to encourage fruit growers to form unions and associations, but also to form a broader organization, a network that connected those organizations. The first issue of better fruit made this clear to the growers across the Pacific Northwest: “We believe that all districts, all associations and all managers should be in as close touch as possible, both by correspondence and by occasional visits. If they do each will be benefited and much can be done towards avoiding any market being overstocked or glutted” (*BF* July 1906). The editors told growers that “*Better Fruit* took up the work of promoting associations, and has kept dead persistently from the initial number. That good work has been done, and that success is crowning the efforts of *Better Fruits* to put the growers in the way of realizing the better prices through better work and associations is evidenced by the large number of letters we are receiving for general information along this line.” (*BF* March 1907) An ultimate goal was to move beyond a network of association to a larger form of organization: “when we have a good association in every district, we can organize one grand association, composed of the managers from district associations which can create a harmonious policy that will not only be for the good of all, but a power in the land” (*BF* Jan 1907, 18). This power would help to enable further growth in the industry, enable them to negotiate more strongly with railroads and retailers, and ultimately make more money for growers.

As the initial phases of the apple industry in the Pacific Northwest were fully realized, after the massive plantings, and after the organization of many districts into associations, there was, in some quarters, the hope of a united industry-wide association. There were various attempts to pull together and unite the various groupings within the industry and build the infrastructure for a larger, consolidated organization. One such effort to build a Pacific Northwest-wide marketing agency was the Northwest Fruit Exchange modeled after the California Fruit Growers Exchange. This effort began in earnest in 1909 with a meeting of 300-

400 growers at the National Apple Show in Spokane with a follow up meeting in Portland organized by H.C. Atwell of the Oregon Horticultural Society (*BF* Dec 1910, 44). According to *Better Fruit*, this was an important step for growers in the Pacific Northwest to take but many agreed would require an exceptionally knowledgeable, “fair and square,” and broad-minded man to head it up (*BF* Dec 1910, 44). In other words growers sought someone who would not favor one group of growers or one district over another.

The debate over a Northwest Fruit Exchange took place in the pages of *Better Fruit* and in industry gatherings. The growth that the industry experienced was a key aspect of the argument for a region-wide marketer. In January 1911, *Better Fruit* predicted the growth of the industry in the Pacific Northwest anticipating the amount of fruit that would be produced by the millions of trees being planted (*BF* Jan 1911, 85-92). Based on the experiences of California, Georgia, and Florida growers who went through a similar growth phase and were caught off guard and took some losses due to a surplus of product, *Better Fruit* argued that growers in the Pacific Northwest needed to prepare for their industry’s forthcoming growth by developing markets in the US and globally instead of crying “overproduction.” One way to prepare was to form and develop the large Northwest Fruit Exchange, which was organized officially in July 1910 (*BF* June 1911, 46). This argument was amplified by grower C.E. Whisler of Medford, Oregon who argued that each apple was in competition with every other apple and apples were in competition with every other food product and that growers needed to “regulate competition among fruits of the same kind and to overcome competition of food products of other kinds is within the realm of good business.” He went on to say that “competition among products lowers the price of the product. To regulated the price is to first regulate the competition” (*BF* May 1911, 68-69). Clearly the growers understood the necessity of associations.

The fact that growers recognized the need to cooperate did not always mean that such cooperation was indeed possible. Prosser, Washington grower Luke Powell expressed his frustration with the inability for the industry to fully cooperate, “Co-operation is a word that is very obnoxious to many of us because we like to fool ourselves into believing and feeling that we live independent of our community interests [...] even the I.W.W.’s and the hobos have an organization and cooperate” (*BF* March 1914, 9). Powell chided his fellow growers into checking their competition and opening up to cooperation by telling a story of how Native American groups fought over the blue grass fields of Kentucky: “they couldn’t co-operate so they proceeded to destroy each other and that beautiful land became known to the Indian as the ‘Dark and Bloody Ground.’ Now we are not as bad as the Indian, however some of his traits bob up occasionally, and so long as we fail to organize a co-operative fight against the blight and other orchard pests just so long will these things flourish and our business be a failure.” (*BF* March 1914, 10). In addition to reproducing the anti-Indian sentiment that flourished in the Pacific Northwest, Powell expressed his fears that the industry would suffer greatly if they could not build stronger region-wide organizations that could sell their fruit and compete against other commodities during a time of enormous growth when so much had been invested in tree plantings. At the same time, the forces of rail and retail that were attempting to pull more profit from apples in their tug of war with growers, which will be discussed later in the chapter.

The Northwest Exchange was an effort to regulate that competition among growers, while also having more leverage with buyers, but Fahey argues that egos and rivalries got in the way of organizing an industry-wide central organization, but economic interests played the decisive role. Growers felt they needed to cooperate, but also desired local control to ensure their specific interests would be protected. What emerged were various syndicates, and there emerged four marketing groups of enormous power in the industry. These four—Yakima Horticultural

Union, Yakima Fruit Growers Association, Skookum Packers, and the Wenatchee District Cooperative Association—sold 25 percent of all fresh apples eaten in the U.S. and sold over 85 percent of Washington apples (Fahey, 1986, 124). In this way, growers had to play at both competition and cooperation. Despite all the encouragement and need for cooperation, the cooperation could only be taken so far because of inherent rivalries and competitions of a profit-driven market system.

Cooperation and Class Formation

The formation of cooperative associations was larger than just to share the burden of production, share technical insights, and market the fruit. The formation of growers' unions, cooperatives, and associations emerged from the material conditions in which growers found themselves; it was economically and politically necessary for growers to survive: "The department store, the big corporation and the trust are all the results of conditions, not creatures of the individual, as supposed by many. [...] the object of such institutions was to conduct a big business at a minimum expense and handle it so as to pay the greatest profit possible on the dollars invested. The ideas underlying the association of fruit growers parallel these lines in meeting the requirements of present conditions." (*BF* Sept 1909, 40). The spirit that *Better Fruit* tried to instill in growers was demonstrated by slogans "in unity there is strength," and "united we stand, divided we fall" (*BF* Sept 1909, 40). Such slogans indicated a push for cooperation, even class unity, in a world of cutthroat competition. The class sought to have leverage over political decisions that impacted them, a common vision for the future around common interests, and internal organization to meet common needs. In addition to the basic needs outlined in chapter one, growers also needed law and order to protect property rights and control workers, mediation to regulate commerce domestically and internationally, and scientific information and newer and

newer technologies. The apple industry was made up of thousands of owner operators who were subject to the power of growing monopolies especially the railroads, and thus needed some protection from these monopolies.

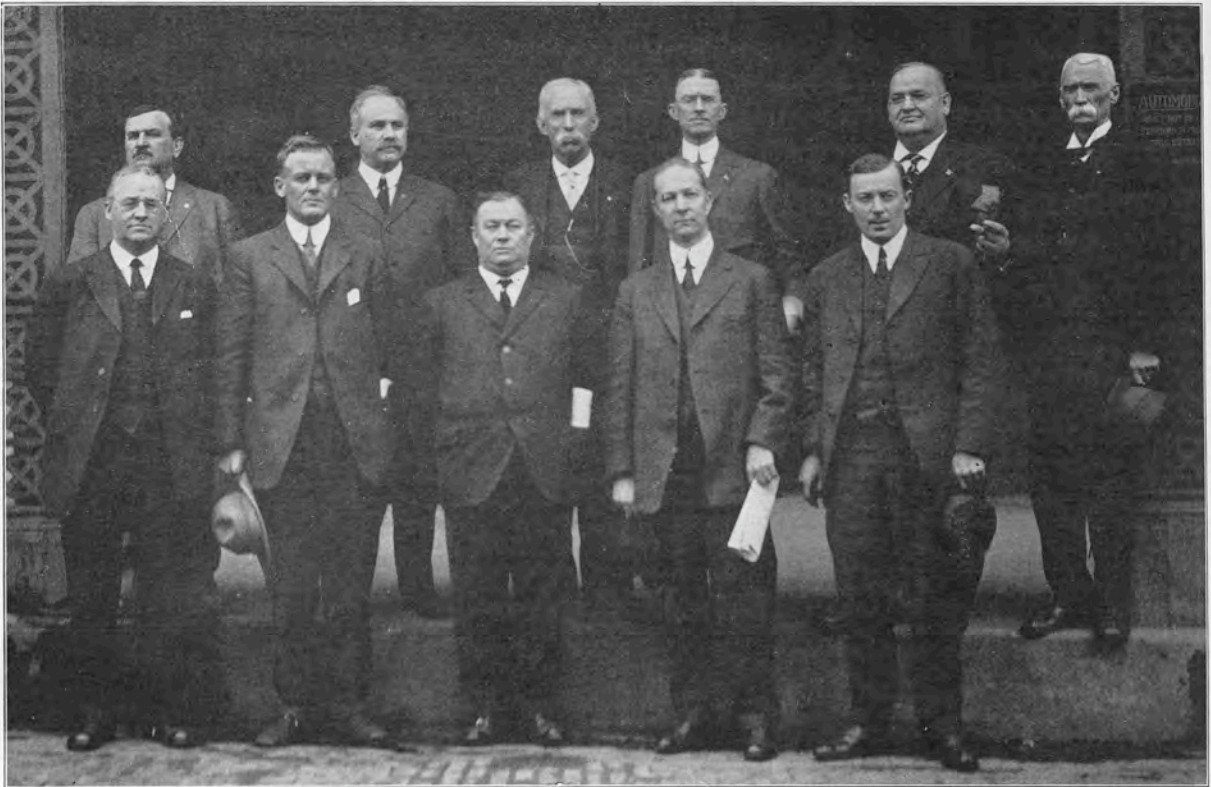
The Pacific Northwest apple industry developed in the context of growing monopoly capitalism through the last quarter of the nineteenth century and first quarter of the twentieth (Sweezy 1987). As railroads consolidated in the 1880s, J.P. Morgan sought greater class unity amongst railroad magnates seeking “communities of interest.” DuBoff explains that these communities of interest were “agreed-upon spheres of corporate influence to replace competitive rivalries” (Duboff 1989, 45). Apple producers like other segments of the U.S. economy agitated against the railroads, but they also organized associations with economic strength to counter monopoly power and work to wield some of their own. The organizing of Pacific Northwest growers and packers was part of national trend of moving toward more sophisticated forms of commodity organizations. The only way to counter the economic muscle of monopolies was to form monopoly-like organizations that could wield some defensive and offensive power.

Cooperative commodity associations provided mutual aid and protection through what could be called class unity. Industry leaders pushed all growers to join associations and also wanted the various associations connected and working together. They described it in this way “we believe every fruit District can help every other fruit District. We believe it a duty to help our fellow man, a duty which all people who are not selfish will admit; and, moreover, it is a matter of business” (*BF* Jan1908, 26). Here *Better Fruit* provided an understanding of class and class unity that entailed benefits and duties and sought to move growers as a group from class-in-itself to class-for-itself. A class is a group of people with common needs that with consciousness can work in common interests. Whereas a class-in-itself is made of individuals with common interests, a class-for-itself becomes conscious of itself and its common interests and works to cooperate with

each other for the sake of these common interests while competing against other classes. Growers began in the 1880s and 1890s as a class-in-itself with common interests. But a substantial number of growers made the transition to class-for-itself quickly through the formation of cooperative associations and class education and propaganda provided by such organs as *Better Fruit*. This class-for-itself, an entrepreneurial class on the land made up of petit bourgeois producers, worked to unite and find strength in numbers despite the fact they were competing in the market place. Their common needs encouraged them and in many cases necessitated them to find common cause and cooperate in significant though not total ways.

In an effort to build class identity and consciousness by linking lifestyle, experience interest, and aspiration, *Better Fruit* laid out what was required to become a successful grower and an upstanding member of the fruit growing class: “Any successful, industrious, observant, painstaking man, who will discuss matters with other growers, attend horticultural meetings, read the experimental station bulletins, keep posted for one or two first-class, reliable, up-to-date fruit papers, should certainly grow good fruit” (*BF* July 1906, 15). The editors sought to establish a growers network hub and center for class education. As part of this, *Better Fruit* sought growers’ experiences and knowledge to share with each other (*BF* July 1906, 15). The creation and organization of this class of growers was further developed through the creation of what one might call a “middle class” aspirations or desires for luxury goods and a refined sensibility that one was able to display with these commodities as well as through one’s good taste. The class clearly was deeply racialized and gendered. This is clear from the industry and the structure of their organizations from the beginning as can seen in numerous photos, such as fig. 3.5 below.

Figure 3.5. Industry Leaders: The Northwest Fruit Board of Control, 1915.



THE BOARD OF CONTROL

Top row, left to right: E. C. S. Brainerd, Payette, Idaho; A. D. Moe, Hood River, Oregon; A. W. Simmons, Freewater, Oregon; W. M. Sackett, Hamilton, Montana; J. A. Westerlund, Medford, Oregon; Harry Jones, Wapato, Washington. *Front row, extreme left:* John F. Davis, Spokane, Washington. *Extreme right:* E. C. Chase, Brewster, Washington. *Front row (Executive Committee), second from left:* C. T. Haskell, Wenatchee, Washington; W. H. Paulhamus, President and Manager, Puyallup, Washington; Truman Butler, Hood River, Oregon.

Source: *Better Fruit*, April 1915, 6.

Class cohesion and Class enemies

The cooperative efforts of fruit growers to form a kind of class-for-itself with a common identity and common program can most strongly be seen in the formation against a class “enemy.” The three clearest class enemies of apple growers were the three groups that apple growers were most dependent on to produce and sell their commodity: railroads, retailers, and workers. These three groups vie with growers in the vertical competition for the income generated by apples. Rail and retail are frequently named in lists of industry “problems” (*BF* Feb 1915, 7-8; April 1921, 5). Problems with labor emerged later and involved getting and controlling workers. Labor did not

have the consolidated power over growers that rail and retail did. The labor question will be taken up fully in the following chapters.

As was shown in chapter one, railroads helped create and nurture the apple industry in Washington. Washington growers needed railroads to get their crops from distribution points in central and eastern Washington to the major trading centers in Seattle, Chicago, LA and New York. But growers also felt resentful at their treatment by the railroads. At the Northwest Fruit Growers convention E.H. Shepherd, editor of *Better Fruit*, offered that grower grievances “could be divided into four divisions; the lack of cars, lack of the right kind of cars, lack of proper service in the time of delivery at the other end, and the rates” (*BF* Jan 1908, 10). These had been issues for producers throughout the second half of the 19th century and were a key factor in the widespread organizing among farmers in populist, farmer alliance and grange movements. Though these movements dissipated, much of the need to unite farmers around common interests did not, though as farming became more of an industry/business the ways in which farmers organized and the goals they pursued changed.

Railroads responded to grower anger and agitation, by attempting to explain its side of the story, to reinforce what growers and railroads have in common, and to remind growers of its power. Howard Elliot, president of Northern Pacific, lectured on the importance of rail to business interests in the country. He quotes the Commerce Commission “our railroads should be kept in a high state of efficiency, and railroad charges should be sufficient to permit this” (*BF* June 1911, 59). Elliot goes on to plead for “a breathing spell” for railroads and “to eliminate useless and unnecessary restrictive law under which they are compelled to work . . . [to eliminate] constant friction and bickering” (59). Elliot made similar speeches around the country, and in fact had made a speech at the third (SNAS) reminding the apple industry of the role of the railroads in creating the wealth in apple districts. He especially focused on how transportation raised the

value of land: “Let us suppose, for example that there was no railway in [between Ellensburg and Pasco], and the only means of transportation was by team or river; what would be the land, and how would the products from it be marketed” (Elliot 1910, 9). Growers had no alternative until after the Panama Canal was built and even then still needed the railroad to get apples to port.

Problems persisted and broke out into open hostilities again in the early 1920s. Growers continued to organize nationally, regionally, and locally to reform their relationship with railroads. Growers frequently complained about rates and agitated for them to be lowered (*BF* June 1921, 7). *Better Fruit* also reported car shortages, as in after the 1921 growing season, “again this season, as has universally been the case when heavy fruit crops have been grown, shippers of the Pacific Coast section have been confronted at the height of the shipping movement by an apparent inability on the part of the railroads to supply sufficient cars” (Nov 1921, 16). Growers in Yakima and Wenatchee formed traffic associations and used their commercial clubs to pressure railroads to secure cars for particular areas (*BF* July 1920, 12).

A decade after Howard Elliot’s speeches, the Association of Railway Executives in October 1921, took out a full-page ad using the same arguments that were designed to convince *Better Fruit* readers of the necessity of raising rail rates. The banner headline asked, “How can the farmer prosper unless the Railroads Prosper?” The ad explains to its readers “The development and prosperity of farming in the United States have in the past gone hand in hand with the growth and development of the railroads. [...] The railroad is dependent on the farmer for the tonnage that enables it to live and conduct its business. Likewise the farmer is dependent on good and adequate service by the rail way as the means of getting his products to the markets” (*BF* Oct 1921, 3). The relationship was presented as equal and mutual when it was not. Railroads were a monopoly and had significant wealth and concentrated power and showed it. Similar ads appeared throughout the decade. One from the Western Railways’ Committee on Public

Relations entitled “What western railways do with their earnings” offered the small rate of return on invest 3.9 percent that investors receive in an effort to justify rate hikes (*BF* May 1928, 27).

Growers, breaking even the same year, would have been glad for such a return and workers who owned no property at all may have been overjoyed. The tug of war over profits was relentless.

Ultimately, though growers and railroads had at times a tense relationship that flared up when growers were feeling squeezed by rail rates; these were secondary struggles between capitalists with a mutual and parallel set of goals. The opportunities for large numbers of farmers uniting with labor were disappearing. Farmers were in both an objective and subjective position in which they had to unite with big capital and as long as some government body would mediate this relationship, growers and railroads were allies. Elliot and the Rail Road public relations ads were not inaccurate when they spoke of mutual dependence. In a capitalist economy, they knew what was good for them. For example, when rail unions demanded and then struck the railroads for shorter hours and better pay, *Better Fruit* editorializes on behalf of rail: “Railroads have been criticized by the public very extensively; while perhaps some of it has been just, much has been unjust. The railroads have been great developers of communities; they are creators and builders of business. [...] The Interstate Commerce Commission has regulated rates. [...] With the income reduced and the expenses increased, many railroads have found difficulty in maintaining the equipment, trackage and good condition.” *Better Fruit* has no problem sympathizing with rail, being in solidarity with them, and teaming up against workers who had used exactly the same arguments as the growers had previously.

Though there were times when *Better Fruit* defended the railroads against their workers, congratulated them for their good service (despite the fact that this was usually qualified with “though the service could be improved”), and times of peaceful coexistence and mutual profit, the same cannot be said for the grower and the retailer. Throughout nearly thirty years of *Better*

Fruit, no group was held up for as much criticism, scorn, and agitation as the retailer. This division only got worse over the years, especially as retail chains began to emerge and take over the retail market. The August 1910 issue of *Better Fruit* showed a great example of how growers saw their class interests in relation to vertical competition with retailers. The editorial cartoon shows a “Retail Dealer” sitting on an apple barrel and resting his feet on an apple box. The retailer was holding an apple with a giant bite taken out of it as the “Fruit Grower” and “Commission Man” looked on. The caption read “The biggest bite of all” (*BF* Aug 1910, 60). In another issue E.H. Shepard, editor of *Better Fruit*, at the Annual Fruit Jobbers Convention, expressed a similar sentiment “the jobber or commission man is not making an unreasonable profit. I am convinced, however, that the retailer is. I know of many instances where the retailer’s profit is not only exorbitant but outrageous” (*BF* June 1911, 35). He also argued for greater cooperation between the fruit jobber and the grower—a kind of alliance against the retailer—and to increase consumption of apples. Shepard went on to argue five years later that “exorbitant retail price is the biggest stumbling block in the apple business today and is doing more than all other features to prevent the fruit grower from realizing a just price for his box of apples” (*BF* Feb 1915, 7). *Better Fruit* summed up its thoughts on the apple industry in one succinct sentence: “Everybody knows the grower gets too little and the consumer pays too much” (*BF* May 1915, 22). U.S. Dept. of Agriculture statement exclaimed “distributive costs on are fruit too high” which continually caused growers much “bitterness” and was examining how to reduce such costs (*BF* Dec 1925, 9). *Better Fruit* repeatedly documented retail profit rates, their percentages of apple profit and their rate of return. There was much agitation in *Better Fruit* against retailers, but there were also some solutions to the problem put forward by growers. E.H. Shepard argued again and again for retailers to lower their prices to increase consumption. One solution that *Better Fruit* offered growers was to use as much of the fruit crop that was not sold

retail in the byproducts industry. But another key outlet for Washington apples was the global market.

IV. Global Trade

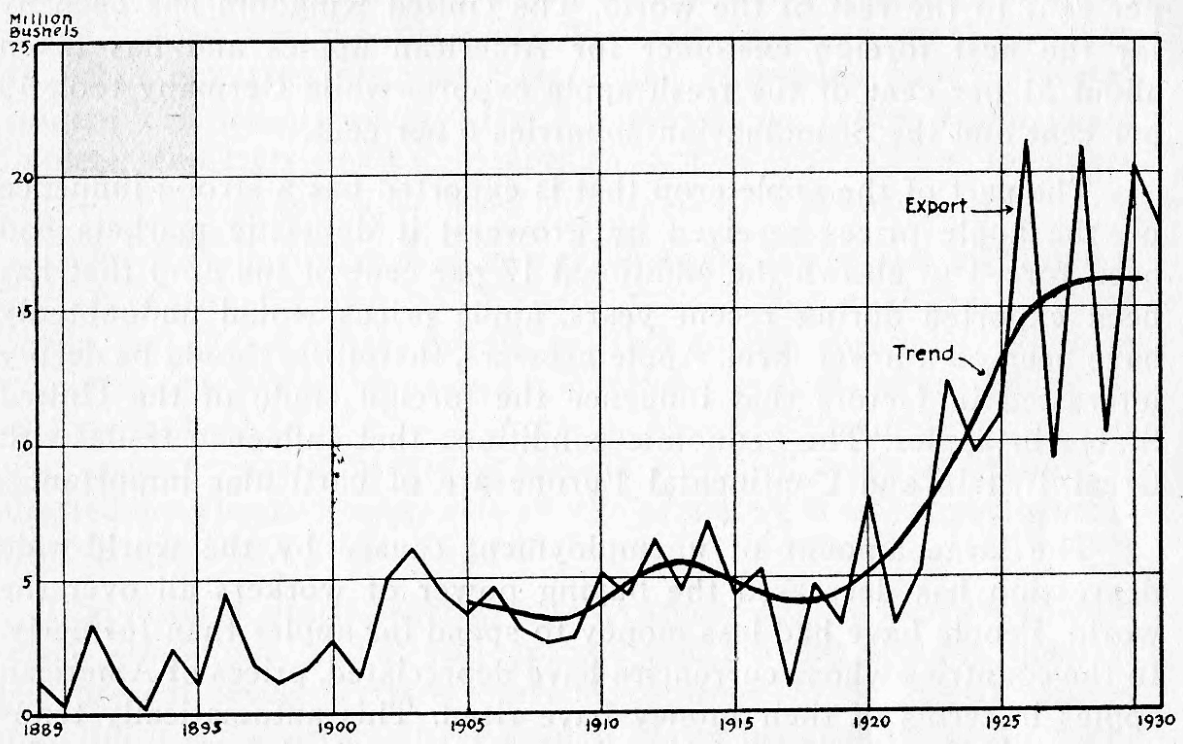
A world market began early in the history of the NW apple industry (Mabbott 1940, 29). In fact Sonnenfeld, et. al. and Jarosz and Qazi argue that the Washington state apple industry was global from its inception. The growth of apple crops in the Pacific Northwest, especially the bumper crops of 1912 and 1914, created the need to find outlets for the commodity. As has already been outlined many in the industry emphasized the need to find markets, to market fruit, and to get more consumers to demand more apples. The ongoing push for new markets led the industry to look for markets outside the U.S., to increasingly ship their commodities around the world, and to actively and aggressively develop access to global markets³⁷.

The primary foreign market for Pacific Northwest apples, as for Eastern apples, was England in the first three decades of the 20th century. Apples from the eastern areas of this land had been first sent to England in 1758 to Benjamin Franklin and exported as a commodity in the 1760s. But exports of apples began in 1741 (perhaps before) to the West Indies. The first exports to Asia were in 1830 to India and China (*BF* Aug 1915, 7). According to Luce Pacific Northwest apples were shipped to Hawaii and Hong Kong in 1898 and to London in 1899 (1972, 5). But Shepard boasted in 1908 “Today Oregon apples are acknowledged as having no superior in the world. They are found in the markets of London, Hamburg, Paris, Hong Kong and every other city where the educated palate of the consumer demands the best that are grown” (*BF* Aug 1908,

³⁷ For more on global trade and economic history during this period in addition to Du Boff and Gordon see Hobsbawm, *The age of empire, 1875-1914*; Leach, *Land of Desire*; McCormick, *America's Half Century*.

19). In comparison the U.S. began importing fresh fruit in 1804 when the first bananas arrived from the West Indies; later oranges and lemons were imported from Sicily in 1832, and it was not until 1867 that transcontinental trade was possible when “green fruit” from California fruit reached New York (*BF* July 1914, 9). Transatlantic exports of U.S. apples grew over the nineteenth century and were vigorous by the 1880s. Nearly five million bushels of the 1896 bumper crop and six million bushels of the 1903 crop of apples are exported. Exporting of apples from the U.S. began to increase and stabilize in 1908 and the growth of shipping and anticipation of the Panama Canal accelerated apple exports through 1914. World War I caused global trade to stagnate and U.S. apple exports reached a twenty-year low in 1917. With the end of the war apple exports boomed through the twenties reaching a temporary plateau in 1930.

Figure 3.6. Fresh Apple Exports, United States, 1889-1931.



Source: Chester C. Hampson, “Trends in the apple industry,” *State College of Washington, Agricultural Experiment Station Bulletin*, Feb. 1933.

The anticipation itself of the Panama Canal had great impacts on the industry. The February 1908 *Better Fruit* included an article from the *Minneapolis Tribune* from December 1907 on the construction of the Panama Canal, which had begun in 1904 (*BF* Feb 1908, 18). According to the article the canal was scheduled to finish in 1915, and already growers were beginning to anticipate the great changes this new shipping route would mean for the industry. In an effort to scout some of the possible markets, apple industry leader H.M. Gilbert, an enthusiastic proponent of global trade, traveled with his wife Marion, and their seven children around the world setting out from San Francisco in February 1913. This business trip gave the orchardist, marketer an opportunity to examine the world market for apples, scout potential importers, and to deliver sample boxes to apple merchants around the world. Gilbert visited Japan, China, the Philippines, Hawaii, Europe, and the Mediterranean. He learned innumerable things about the apple market while traveling, but most of all he learned that there was immense potential for Washington apples on the world market. Throughout the voyage he found apples competing with the Pacific Northwest. He found California and Missouri apples in Hawaii, the Philippines and across Europe, Australian apples in Hong Kong, Java, and Singapore, and Japanese apples in China. Japan had small industry, but good orchards, and placed a \$.25 per box tariff on U.S. apples to help protect their industry. Gilbert encouraged Pacific Northwest growers to imagine what their high quality apples would be able to do on the world market, once growers began to aggressively enter the global market. He stated clearly, “Heretofore our apple exports excepting to Australia and the Orient, have traveled across the continent and often been delivered in a bruised condition to the steamships in New York, and at a freight and icing cost [...]. With the opening of the Panama Canal this spring, Virginia and New York apples can no longer take advantage of this handicap” (*BF* Feb 1914, 10-12). The big steamship companies assured Gilbert that they would soon be adding Seattle lines with good rates.

As he recounted the journey, in an article in the February 1914 *Better Fruit*, he alluded to the promise of the Panama Canal and how much growers would save getting their fruit to the East Coast, New Orleans, South America, England and Continental Europe. Not only would it be cheaper he argued, but the fruit would arrive in better condition. Gilbert argued further that for U.S. global trade to succeed, the U.S. needed to emulate the British and have trade representatives in every country: “If we are to be a world power, and we cannot dodge it—if the world’s commerce is important to the greatest success of our apple industry, and I believe it is, we should take lessons from England. A little island—she controls a big part of the world’s commerce. Her commercial experts are in every port. [...] Little things like this change the tide of the world’s commerce.” (*BF* Feb 1914, 10). He concluded, “I hope America gets the world-view. In any event our apple growers must get it. We grow an apple which the entire world wants.” Gilbert was one among many global trade enthusiasts traveling the globe seeking possibilities for his products.

The May 1914 cover of *Better Fruit* featured the Panama-Pacific International exposition and accompanying the majestic picture was the caption “the completion of the Panama Canal, signifying development and prosperity for the entire Pacific Coast. This new water route will open up the export markets of the world to the Pacific Coast at greatly reduced freight rates. It means much to the fruit grower because the rate on boxed Apple’s to European points will probably be less than half of the present rate.” The lead article then offered a guide to “Foreign Fruit Markets,” a compilation of counselor reports from markets around the world, as the Pacific Northwest apple industry began to strategically prepare to market to the world. Global trade seemed to be the answer the apple industry was looking for. Less than a year before the Panama Canal would open in August 1914 a year ahead of schedule, E.H. Shepard wrote in a paper delivered to the International Shippers’ Convention in August 1913 that Shepard looked forward

to the opening of the canal not only as a competitive foil to the increasing rail rates, but also for its ability to open up NW apples directly to the markets of Europe. Shepard's and Gilbert's views would prove prescient, though the war would put it on hold for a few years.

The growth of global trade of apples happened simultaneously with the emergence of new technologies and the need to find new markets. The Pacific Northwest apple industry began its qualitative growth in global trade in the years immediately preceding World War I. This was not a coincidence. Railroads crisscrossed the continental United States, and the Panama Canal offered a new monumental opening for global trade. U.S. and European capital was expanding beyond their borders in a new search for spheres of influence, raw materials, investments, and markets. With this expansion imperial rivalries and tensions emerged. The same forces that pushed the apple industry out in search of markets were also pushing a global economic struggle that erupted in war in 1914.

Impacts of World War I

When the war broke out in July 1914, it created “uncertainty” in the apple trade; imports decreased and exports decreased over the first months of the war. *Better Fruit* advised growers too that “every expense connected with harvesting and marketing the apple crop should be done at a minimum” and that they should act with great care in grading fruits, selecting marketers, and economically handling all business affairs (*BF* Oct 1914, 14). The 1914 U.S. apple crop was the largest in this entire period (1890-1930). According to *Better Fruit*, Germany had been eliminated from the export of NW fruits, but still 1914 exports were the highest they had been up to that year and would only be higher again in 1920 (Hampson 1933, 39). Prices were so bad for the large 1914 crop that *Better Fruit* included a joke section to “Forget 1914 Apple Prices.” The economy was able to emerge from being “depressed from late 1907 to the spring of 1915.” The

economic recovery during the war was caused “by the frantic demand for war supplies emanating from France and Great Britain. U.S. sales of arms and ammunitions, metals and machinery, horses clothing and food rose spectacularly” (Duboff 1989, 72). The apple industry attempted to take advantage of this: “It is believed that conditions warrant a rapid revival of business, and if this comes prosperity will follow. On account of the war prices on many commodities are advancing. In view of this it seems good judgment to suggest that now is a good time to purchase. [...] If the wheels of commerce once start it means prosperity for the country and success for everybody” (*BF* Feb 1915, 12). *Better Fruit*, like other capitalists, recognized immediately that while war was destructive it could also be economically beneficial.

This economic optimism of creative destruction expressed itself in various ways among industry thinkers. First, growers recognized that the destruction of European apple fields created opportunity for the Pacific Northwest apple industry. As Washington State College extension agent W.S. Thornber recognized, “the great European struggle now in progress has practically destroyed the best orchards of Europe. Thousands of acres of orchards and vineyards are completely obliterated, and after the struggle has ceased it will require twenty years to replace these lands and them as productive of fruit as they were before the war” (*BF* Jan 1916, 41). Then optimism continued after the US entered the war in April 1917, *Better Fruit* encouraged growers to prepare to get into foreign markets after the war: “One element very much in our favor will be the fact that European orchards have been neglected during the war, and those that have not been entirely destroyed will show a low efficiency of production.” (*BF* Jan 1918, 21). This created opportunities for growers to expand exports and *Better Fruit* encouraged growers to organize collectively to develop overseas markets through “one big export corporation” (*BF* Jan 1918, 21).

In a speech entitled “The question of fruit marketing after the great war,” Executive Secretary of the Seattle Chamber of Commerce and Commercial Club Gordan Corbaley at the

Tenth and final National Apple Show in Spokane addressed the industry telling his audience that despite initial global uncertainty during the transition to peace, the minor export segment of the industry would be able to grow significantly. The export trade would no longer be as dependent on foreign shipping lines as the U.S., through the war shipbuilding program, would create a “great tonnage afloat in foreign trade” that would develop U.S. shipping lines. It was not optimism alone that allowed Corbaley to say with conviction, “The United States has become the financial and industrial center of the world. We have shown ourselves much too big to ever be able to again stay within our own boundaries” (*BF* Aug 1918, 16). Corbaley quoted global trade enthusiast H.M. Gilbert, “The world is going to be much more of a family of nations after the war. In rebuilding and reconstructing, I look for a very active demand for fruit.” When the war ended, the optimism continued. The editors of *Better Fruit* informed their readers that the wartime embargoes and clamping down of apple exports resulted in growers working hard to find a “wider market for American fruit at home” (*BF* May 1919, 14). In the end, it seemed the war would be beneficial to growers in various ways and all of the destruction that happened “over there” can be seen as the cause for great optimism for the grower class in the U.S. The war destroyed the orchards of European competitors, gave occasion to build U.S. new modern shipping boats and lines, forced growers to further develop domestic markets, crowned the U.S. as the dominant hegemon, and brought the world closer together. Exports of U.S. apples boomed after the war, and Pacific Northwest apples were ready to take advantage of the opportunities presented.

Shipping Apples

As demonstrated in the growth in production, exports and industry organization, by the early 1920s, the Washington apple industry was no longer a small provisional enterprise streaming

fruit down river or trucking it by horse carriage to Seattle and Portland. It had become global big business shipping apples around the world on ocean liners. *Better fruit* wrote in November 1921, “Experience has taught fruit growers of the Northwest that dependence on railroads alone as a means of transporting their crops to market in this country brings both disappointment and loss at times. It is encouraging, then, to find that water transportation is fast becoming a means of moving Pacific Coast fruits” (*BF* Oct 1921, 3). The article came out a month after rail rates were raised. Growers used trucking in a similar if smaller way during this period though trucking would begin to replace rail more fully in the 1940s. The industry had organized itself to find ways to begin to lessen the power that rail had over them.

Figure 3.7. Unloading from Railcars, Loading onto Ships, c 1924.



Source: *Better Fruit*. Aug 1924, cover.

By 1921 “shipment of fruit by water routes is safely past the experimental stage and is to be more and more a factor in the distribution of fruits” grown in the Pacific Northwest (*BF* Nov 1921, 5-6). Markets were strong in England and growers hope to expand in the rest of Europe as well as to South America (*BF* Nov 1921, 5-6). Though the Panama Canal did not prove to relieve the “transportation difficulties of the industry” as immediately as hoped (*BF* Jan 1922, 25), it did offer the growers a viable alternative and more importantly it helped develop the shipping industry which in turn helped enable a global market to develop for Pacific Northwest apples. Growers could ship apples to San Francisco, Los Angeles, New Orleans, Charleston, Boston and New York. Through the 1920s many if not most of the issues with shipping were worked out, and by the end of the 1920s the REO Speed Wagon and International trucks along with an emerging highway system allowed a new overland competitor for the rail route.

V. Competition

A key aspect of a market driven economy is competition for profit to accumulate wealth in order to better compete in the market. The new approaches that developed and the ever constant (near obsessive) striving for improvement were driven to a large extent by the need to survive in the industry based on a kind of economic Darwinism. This competition involved reducing the cost of production, it involved creating new markets, and finally it involved getting the best possible price. As Luke Powell warned in *Better Fruit* in March 1914, “There are thousands of acres of orchards coming into bearing and there are still more to follow. Competition is loudly knocking at our doors” (9-10). By 1924 Horticulturalist Gordon Brown encouraged those not producing quality crops to get out of the industry as poor orchards were dumping “junk” fruit on the market and doing “other such unbusiness-like practices,” which were hurting business-minded growers

by lowering prices (*BF* March 1924, 7-8). The competition and pressure to produce efficiently was by no means solely among growers. Often there were various levels of competition occurring simultaneously in the industry. And of course apples competed with other foods. As A. Millard pointed out, “apples compete decidedly with every other fruit on the market, literally from mangoes to hickory nuts” (*BF* Sept 1915, 10), but none more so it was felt than with the banana.

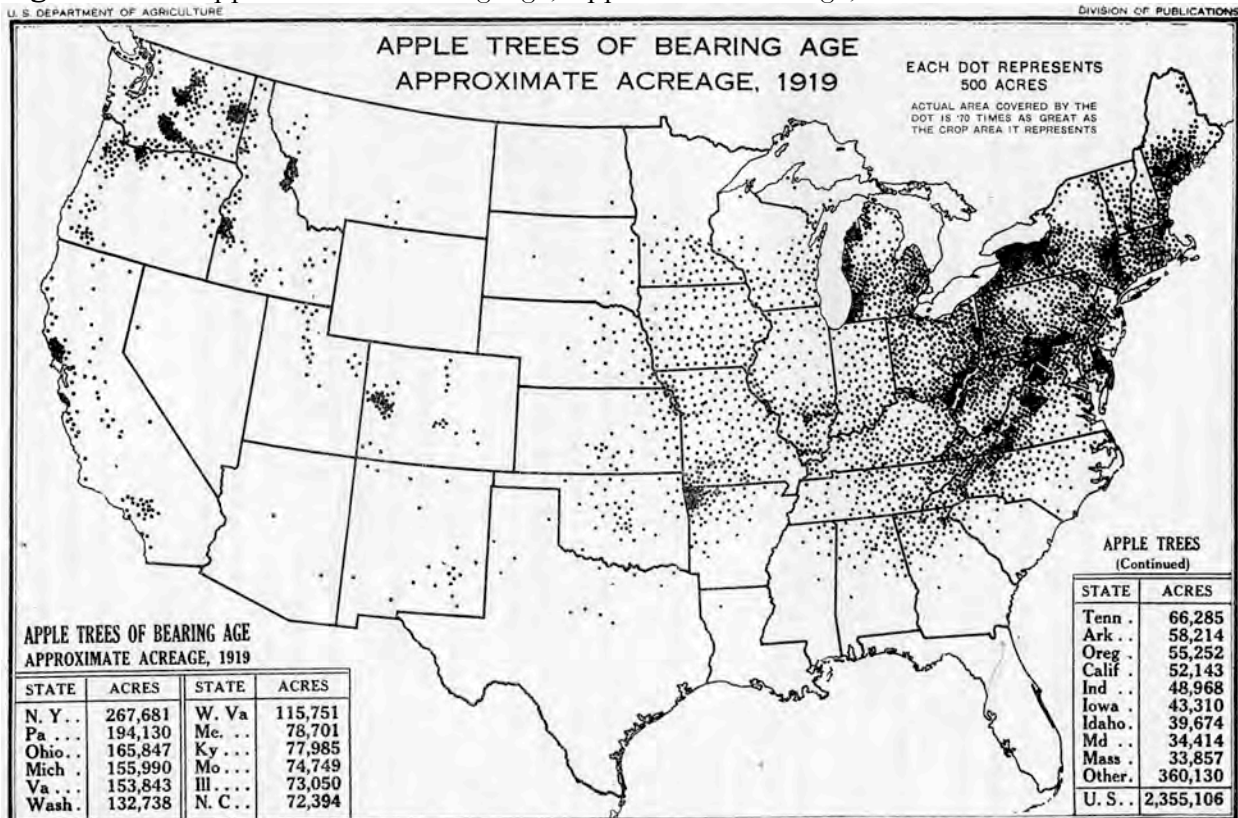
For apple growers in the Pacific Northwest, this competition existed in various dimensions and at multiple levels. One dimension might be called “vertical competition” in the vein of vertical integration and vertical monopoly³⁸. Vertical competition involved the tug of war over who will get what portion of the surplus value of apples. This competition happened along the commodity chain from acquiring trees through consumer consumption of the fruit, taking place between growers and workers, between growers and retailers, growers and railroads, growers and suppliers, growers and bankers, between retailers and jobbers, and between retailers and consumers. Some arenas of this vertical competition were less antagonistic than others, and the various forms of competition increased and decreased in intensity based on the conditions of production and the market.

Another dimension of competition was horizontal competition, or competition among apple producers. This competition happened on many different levels: between nations (during this period especially between U.S., Canada, and Europe), between geographical regions within the U.S. (such as the East and the West), between states in the Pacific Northwest, between districts within states (such as Wenatchee, Yakima, Spokane, Walla Walla, and White Salmon as well as other districts that would not last through the 1920s), and of course among individual growers within districts and across these many levels.

³⁸ Vertical integration is meant to reduce vertical competition and vertical monopoly is meant to eliminate it altogether.

The competition between the five districts remained until the early 1920s, but as has been noted earlier, between the period from 1921-1931 Spokane, Walla Walla and White Salmon further declined while Yakima and Wenatchee, both having been the premier districts beginning with the large scale reclamation projects, continued to grow, expand and consolidate their control over the state's industry. As Fahey notes, "The irrigated orchards and ideal climates of Yakima and Wenatchee-Okanogan drove other Washington areas out of the apple business." (Fahey, 1986 117). The largest growers such as James S. Crutchfield were able to get their fruit into new markets, but many growers had to fold their businesses and the 1912-1914 "apple glut forced marginal districts out of the trade" (Fahey, 1986 113). The apple industry was thus consolidated around Yakima and Wenatchee.

Figure 3.8. Apple Trees of Bearing Age, Approximate Acreage, 1919.



Source: R.W. Rees, *Apple Survey of the United States and Canada*. Dept. of Agricultural Relations of the New York Central Lines, 1926.

Pacific Northwest apples also competed with the Midwest's apples and with the East's. Since the beginning of the 20th century Hood River, Oregon and Washington already had a reputation for good fruit in other parts of the country. The competition that was fiercest was between East and West. In 1912 competition continued to increase as apple growing shifted from East to West. In 1917 Washington became the leading apple state surpassing New York. Growers also realized that they were competing on a global level with China, Canada³⁹, and Europe and according to the editors of *Better Fruit* the key to this competition was better methods and better technology, which will be discussed at length in Chapter 4 (*BF* March 1911, 89).

Competition with Global Fruits: The Banana War

As shipping of fresh fruits was made more possible with refrigerated ships and as apples became global commodities and were exported throughout the world, other fruits were imported into the U.S. market. At the same time U.S. citrus fruits also became a growing part of the U.S. diet. At its height in 1912 annual fresh apple consumption was 76.1 lbs per capita. This fell over the following decades to 37.8 lbs in 1933⁴⁰. At the same time total per capita fresh fruit consumption rose and fell slightly, but stayed generally the same over the years. Consumption of citrus fruits rose from 18 lbs per capita in 1912 to 39.8 lbs per capita in 1933 (Lemons 1945). Also, as the industry became more competitive and growers faced more market pressure, they must attempted to get every last dollar out of their orchards and began to increasingly send the portion of the crop that was not marketable as fresh fruit to the byproducts industry. Canned fruit, dried fruit and fruit juices goes up tremendously over the same period. Not only are fruit byproducts a

³⁹ As part of a minor trade war, in 1911 then State Senator Paulhamus called for reciprocity with Canadian trade barriers that blocked Washington access to the early season Canadian market, advocating a 30 cent tariff on all boxes of apples from Canada (*BF* June 1911, 54).

⁴⁰ Today per capita consumption is under 20 lbs per person and per capita consumption of corn syrup is over 60 lbs.

good way of using non-fancy fruit, they were also easier to ship in this form as they are much less perishable.

Beginning in 1913, there was a growing feeling in parts of the apple industry that apples were in direct competition with bananas and that bananas had various unfair advantages, such as cheap labor and duty free entry into the U.S. market. A kind of early trade war was declared on the banana in the pages of *Better Fruit*. Despite the fact that at the time citrus fruits were just beginning their ascent in route to taking over apples as the number one fruit in the U.S. and bananas still at this time a distant third (though bananas would over take both later in the century), banana imports were targeted for grower action. Banana imports began to take off around 1880 and at that time apple growers “began to feel the pressure of competition with the banana” (*BF* July 1914, 9). In 1912 “the continental United States alone consumed 44,520, 539 bunches, or over sixty bananas for each man, woman and child in the union” (*BF* July 1914, 9). Bananas were imported from Jamaica, Honduras, Costa Rica, Panama, Cuba, Guatemala, Colombia, and Mexico among other countries, and the U.S. consumed at this time about 85 percent of the global banana crop (*BF* July 1914, 10). Also at this time “one immense Yankee company controls nearly the entire banana trade of the world” (*BF* July 1914, 10). Apple growers resented the monopoly power of bananas just as they resented the monopoly power of railroads.

According to some apple growers, bananas were harming American fruit growers. Bananas were referred to by many of the authors of *Better Fruit* as “the poor man’s fruit.” As noted in chapter two this was a phrase used by United Fruit Company to mass-market bananas. Apple growers, who felt that their fancy and extra fancy apples were superior fruit, repeatedly used the phrase in their writings about bananas despairingly. Banana growers even had to remarket the banana in the 1920s. The attacks on bananas heated up as global trade in apples accelerated in the 1920s. Bananas were criticized by the apple industry for its use of “the cheap

low-grade labor of the tropics.” In fact the Harding-Coolidge Republican presidential campaign ad in the September 1920 *Better Fruit* indirectly taps into apple anger at bananas “The Democratic platform reaffirms the tariff for revenue only policy which will open the American market to the invasion of cheap farm products of foreign lands (the resultant of cheap labor)” while also promising “the encouragement of our export trade” (11). Besides being an “economic” term, “cheap labor” here rings of white supremacy and nationalism, and apple growers in one sense think of apples as superior because they were produced in the U.S. using (still for the most part) European American labor.

In April of 1928 the trade war against bananas intensified with the banner headline “We need a tariff on bananas” (*BF* April 1928, 11). In the article *Better Fruit* told readers, “We think it fair to assume that these bananas displace an equal quantity of American grown fruit. [...] no boxes or crates, washing, grading or packing are required. They can and will be sold much below present prices whenever necessity demands it.” Despite the fact that apples were marketed as high-class luxury items, it was also argued that bananas were not “a necessity to the American diet” and as a “luxury” fruit and that “it has been the policy of the United States to place the burden of taxation upon luxuries [...] and also to encourage home industries by a protective tariff” (*BF* April 1928, 11). The *Better Fruit* editorial column fully endorsed the tariff, “*Better Fruit* [...] is glad to assist in doing all possible toward securing the enactment of a tariff on bananas” (*BF* April 1928, 18). To support the argument for tariffs, U.S. domestic fruit growers exposed the working conditions and stressed that money spent on foreign fruit was money that could have supported U.S. families (*BF* Aug 1929, 18). Amidst the push for a tariff on bananas and despite their rancor against bananas for taking consumers, *Better Fruit* again held up the success of the banana industry as one that apple growers should work toward, holding up the high rate of dividends as enviable.

Explaining why the banana plantations of Central America did not benefit the white farmer and complaining about competition from bananas, Carroll D. Bush wrote, “Cheap labor, tremendous production per acre, the perfection of shipping and distribution agencies have brought the sales of bananas up to those of the apple. Bananas have paid no duty. Just how much home grown fruit they are displacing would be a matter of conjecture” (*BF* Oct 1928, 12). The push for a tariff on bananas because of its access to cheap labor among other factors was happening at the same time that growers were looking to reduce the costs of their own labor and to replace as many workers as possible with the new technologies that were becoming available. This was perhaps a confirmation of the idea of “cheap labor” for apple growers and the realization that such “cheap labor” needed to come to the orchards. For some, no doubt, the exposé of banana labor, did not just cause resentment at an unfair advantage, but perhaps encouraged the idea that such cheap labor was necessary for the domestic apple industry to survive and compete—an indication of the broader stirrings for “cheaper,” in this context read darker, workers. The article, then, for some may have provided an example for what was possible: a glimpse at the direction the industry felt it needed to go in.

VI. Conclusion

The industry grew from scattered small plots carved out of sage “scrub land” into a global agricultural enterprise that generated billions of dollars of revenue circulating through the Washington and U.S. economies. As the industry grew and developed into a powerhouse, it became comprised of a class of growers many of whom developed into agricultural capitalists of world-class standing. Small orchardists were able to continue to stay in the industry by joining cooperatives that enabled them to compete and cut costs by sharing production equipment. At

the same time, many growers who were not able to compete in the highly competitive industry were forced out, especially those outside of Yakima and Wenatchee.

Though the industry attempted to hold together growers as a class and to maintain unity among growers large and small through the organization of cooperative associations, the desire for class unity was undermined by tensions caused by competition and the drive for profit. Some unity was formed around race and class and created a situation in which racialization and gender division of labor thrived, as we will see in chapter four.

The agrarian populism of the 19th century that helped spawn the cooperative movement in the United States based on opposition to “big business” and monopoly capital was transformed into another kind of business organization that might be called “small big business” or “business unions.” Cooperatives attempted to consolidate power of apple growers as an industry to defend their interests against other parts of the commodity chain. Growers had to get the best deal possible from rail on transportation costs, from wholesalers, etc. on one end, and with workers on the other. One of the key aspects of growers organizing under associations was to reduce competition between growers so that they might together have the power and leverage to compete for a high portion of the profit made on the apples they grew. But these two impulses, competition and cooperation, under the pressures of survival in the market shared a tense coexistence that sometimes worked and sometime did not.

After establishing the political economic context of apples as a commodity in chapter two and growers as a class in this chapter, the next three chapters turn to the three solutions growers employed to cut production costs and maintain the profit margins—profit margins that were being eaten into by the various competitions outlined here for shares of apple profits, money on fruit consumption, and the disposable income of a growing consumer society.

CHAPTER FOUR

WORK AND WORKERS

I. Introduction

In Washington developments in the agricultural industry, and some of the work force characteristics followed what was happening in California agriculture. But the apple labor force in the Pacific Northwest was unique in many ways. This uniqueness was the result of various factors: the secluded geographic position of the apple growing regions in Pacific Northwest, predominance of small scale farms and the relatively late and slower development of the apple industry followed by a rapid boom from 1910-1920 contributed to the uniqueness of growing and working in apples districts in Washington. In California⁴¹ by the 1920s, according to Mae Ngai, few white workers were left in the field, having moved on to packing sheds and foreman positions (2004, 93). But the Washington apple labor force was predominantly European Americans, and they remained a significant portion of the apple labor force through as late as the 1970s (Sonneman 1992, 33).

In California the established pattern was according to McWilliams “to bring in successive minority groups; to exploit them until the advantages of exploitation have been exhausted; and then to expel them in favor of more readily exploitable material. In this manner the Chinese, the Japanese, the Filipinos, and the Mexicans have, as it were, been run through the hopper” (McWilliams 2000, 305-6). Similarly, geographer and historian Joan Qazi argues, “As in many

⁴¹ Some key works centered on California farm workers include Cletus Daniel’s *Bitter Harvest* and Richard Street’s *Beasts of the Field* ; Devra Weber’s *Dark Sweat, White Gold: California Farm Workers, Cotton, and the New Deal*, and Don Mitchell’s *The Lie of the Land: Migrant Workers and the California Landscape*.

other regions of the U.S., North Central Washington's history of waged agricultural labor is one marked by a succession of different racial-ethnic groups—Native Americans living on the Colville Reservation situated in Okanogan county, Asian immigrants trucked in from Seattle, Anglo American migrants 'dusted out' from Oklahoma and Arkansas, Mexican nationals and Mexican Americans based in Texas and California” (Qazi 1998, 85). But in the early Washington apple industry this was not the case consistently across up through the 1930s.

Throughout the early history of the apple industry in Washington, from 1890 through 1930, various racial/ethnic groups performed apple harvest work, but the overwhelming majority of workers were European Americans and European immigrants. Migrant workers of color were used by the industry in small numbers during the major expansion from 1910-1920, but due to segmentation of agricultural work in the state during this period, the apple labor force was predominantly poor and working class whites, born in the U.S. and from Washington. This period, however, marked the beginning of labor trends that would grow over time: an increasing reliance on migrant labor and the introduction of nonwhite labor. At the same time a gender division of labor emerged in the industry.

In 1890s and 1900s, orchards were generally smaller and depended on family labor and labor exchanges along with local labor (Euro-American and Native American and in some places Chinese-American and Japanese-American) and newly arrived orchardists who were waiting for their trees to reach bearing age (Landis and Brooks 1936, 8). During the years of immense growth in the apple industry after 1910, orchardists and their organizations had to figure out how to obtain and maintain a larger labor force. Growers supplemented local labor with in-state migrant workers, mostly Euro-Americans. Then growers expanded their recruitment to include in-state Filipino-Americans migrants and interstate migrant workers and Mexican immigrant workers. As growers worked to cut costs in the face of growing competitive pressures, they looked

for ways to find a reliable, efficient, and consistent workforce while also cutting the costs of production by finding cheaper consistent sources of labor. These trends were not simply driven by the demands of growers for steady access to cheap sources of labor, nor by the search among workers for some American dream. Fundamentally, the trends of using migrant and immigrant labor begin with a new wave of proletarianization that comes with the global restructuring of labor due to the expansion and invasion of capitalist social relations of production via the emergence and strengthening of monopoly capital, especially U.S. monopoly capital. As political economist Gilbert González, building on his work with Raul Fernandez, argues this process of “colonial labor exploitation” begins for the U.S. with its underdevelopment of and colonial relationship with Mexico in the second half of the nineteenth century. But this concept of colonized labor can be used to discuss other labor groups also colonized, dissettled and thus made available as migrant workers for agricultural labor including apple work.

Apple production was a labor-intensive for a short period during the year. Early in the history of the apple industry (and less and less as time went on) much of the orchard work—maintenance, harvest, packing, and transport of apples—was done by the grower and his family on a five to ten acre orchard and through labor exchanges especially with new settlers who had planted their orchards but were waiting the three to five years it takes for them to produce fruit. Such families, though briefly for most, were attempting to live out the Jeffersonian “American Dream,” which as Guerin-González has pointed out “hid deep economic splits along class, gender, ethnic and racial lines over who had access to economic security and freedom” (1194,8). As wealth accumulated and some orchards grew in size, more people were needed to do the work necessary to get the crop to the retailer, and large crews were hired to complete these tasks. By 1930, “ten thousand individuals in addition to resident workers are required in the

Wenatchee Valley” (Hathway 1934, 18); some of them were perhaps former orchard owners, but it is safe to say that most had never owned any property.

II. The Work

During the period from 1890-1930, for an apple to get to market required the labor power of dozens of people working long hours sometimes as much as seven days a week. The vast number of types of jobs indicate not only the expense, complexity and labor-intensive nature of apple production, but also the division of labor that emerged. There were nursery workers, planters, irrigators, ditch clearers, limb trainers, pruners, brush clearers, harrowers, cover crops tenders, mowers, thinners, sprayers, orchard bin distributors, pickers, crew leaders, foremen, haulers, sorters, segregators, boxmakers, wipers, packers, (box lid) nailers, packing supervisors, teamsters, railroad loaders, dock workers, jobbers, railway workers, ship hands, unloaders, and shelvees—not to mention those who provided reproductive labor and cooked, cleaned, laundered, cared for children and other services to make all the other work possible. Some of these jobs overlapped and sometimes one person might do more than one of these jobs over the length of the year. For example, haulers might also sort or pack. Also, most women who worked at an orchard had double duty at home. In addition, long before the orchard and packing work could begin, those who cleared the stumps, plowed the ground and dug the irrigation ditches performed some of the hardest and most invisible labor in the apple industry.

Each job had its own dangers that would accumulate on the bodies of workers or would create conditions for sudden accidents. For example, sprayers worked in clouds, mists and rains of various “poisons,” as termed by the industry, such as lime sulfur and lead arsenate putting

their lungs, skin, and eyes at risk from exposure to the chemicals. Pickers climbed ladders with up to forty pounds of extra weight hanging from their necks while reaching for apples with both hands, risking falls. Haulers lifted and dragged heavy boxes all day long risking back injury. These accumulated burdens and dangers were costs that workers, not growers bore.

The vast majority of the workers involved in getting the apple to market were part of the process only during the apple harvest. Those workers, depending on their situation, may have been coming off another job in another crop and off to another crop after apples, or they may have been coming from home only to go back to their town or country of origin when the season is over. Over the years, the nature of the work changed as the structure of the industry changed. Likewise, those who did the work changed as the U.S. and global economy changed and how the work was done changed with the introduction of new techniques and technologies. The organization of work also varied from orchard to orchard and region to region, but the basic flow of orchard maintenance, harvesting, packing, and transporting apples remained similar.

In the orchards, employment would peak in the late summer and early fall during harvest time and would fall back down to orchard maintenance over the winter⁴². Work in packing sheds followed and overlapped with picking work, but as the industry improved storage facilities with the introduction of new technologies the packing work season was expanded. To a lesser extent work in processing plants such as fruit canneries, cider mills, and vinegar factories rode the tail of the fruit seasons. Because most fruit work was seasonal and based on the harvest of the fruit, orchard owners required large groups of workers needed to work at different seasons. In most years, the first week in June through the first week in November would require migrant workers,

⁴² The season itself varied depending on the latitude and local climate as well as the particular apple being picked. Many growers planted a combination of varieties so that pickers could go from one crop to the next. In Yakima thinning employment occurred through June and July and harvest employment lasted from the third week of September to the first week in November, peaking in the third week of October.

and the largest number of workers was needed from the last week of September through the last week of October⁴³.

III. Early Apple Labor Force (1890-1910)

During the period from 1890-1910 Washington agricultural labor was primarily U.S. born European-Americans or Northern European immigrants, including Swedish, Norwegian, German-Russians, Canadians, English, and Irish. There were many instances in which Native Americans from both U.S. and Canada, as well as Chinese and Japanese immigrant workers were part of the Washington apple industry especially in the seasonal labor force over this period. Because of the nature of immigration restrictions the Chinese and Japanese workers were almost entirely men, whereas both European-American and Native American women and men worked in apples.

Immigration overview

Growers in the U.S. West understood early in their industries the relationship between immigration and agriculture⁴⁴. The Chinese Exclusion Act of 1882 and the terror displayed

⁴³ According to Reuss and Fischer's Yakima study, growers' needs for labor grew beyond the local resident supply during September and October in 1936, though Paul Landis in his Yakima study of 1935 shows that migrant labor was needed in June, July and August as well. It could be that some of the labor that was considered transient in 1935 settled in Yakima and was considered resident labor in 1936 (10). This would be consistent with the Yakima school survey which showed a large number of families settling in Yakima in 1935 (Reuss and Fisher 1941, 12).

⁴⁴ For more on the history of immigration during this period in addition to Ngai, Cardoso, Chin, Garcia and Nomura, see San Juan, *From exile to diaspora: versions of the Filipino experience in the United States*; Cordova, *Filipinos, forgotten Asian Americans: a pictorial essay, 1763-circa 1963*; Kanstroom, *Deportation Nation*; Scheuerman and Trafzer, *The Volga Germans: pioneers of the Northwest*.

against the Chinese and other Asian immigrants and Asians Americans born in the U.S. had a significant impact on California growers as well as growers in the Pacific Northwest. Nativist Anti-Asian movements emerged to violently oppose Japanese and Chinese immigration especially based on limiting and eliminating Japanese and Chinese land ownership. In an editorial column about the "Labor Question" in June 1910, *Better Fruit* encouraged growers to secure workers in advance of the harvest and warned of the problems the Exclusion Act and Gentleman's Agreement created: "California has experienced more or less difficulty in procuring sufficient help since the passage of the exclusion act with reference to Chinese. The Japanese have not come in insufficient numbers, and where sound and sufficient help can be secured is at the present time an unsolved problem." This indicates that growers in California had come to depend on Chinese and Japanese labor and would have to find another labor force, and as it appeared in *Better Fruit* most likely meant that some Chinese and Japanese workers worked in fruit growing in the Pacific Northwest as well. This was also the first mention of a labor problem of any kind in the pages of *Better Fruit*, as the size of the industry and the size of farms were too small to require the vast number of workers that would be needed in the coming years as the large number of trees being planted between 1912 and 1914 would generate a much greater need for workers.

In 1907, the United States Senate, under intense pressure from groups like the Immigration Restriction League, formed the Dillingham Commission to study the origins and consequences of immigration. In a series of reports published in 1910 and 1911, the Commission claimed that a crucial shift in European immigration patterns corresponded to the rise of festering social and economic problems in the United States. Before the 1880s, according to the Commission, most migrants to the United States had arrived from northern and western Europe. After the 1880s, however, "inferior" migrants from places in southeastern Europe, such as

Austria--Hungary, Russia, Italy, Turkey, Lithuania, Romania, and Greece, increasingly dominated European immigration. In the end, the Commission's 42-volume report placed the blame for the nation's festering problems on these new migrants and recommended that the federal government use literary tests to prevent poor and uneducated immigrants from entering the nation and causing further social unrest.

As a direct consequence of the Dillingham Commission, congress passed the Immigration Act of 1917, which especially targeted Southern Europeans and all Asians for restriction using a literacy test and a head tax, but it also specifically restricted the immigration of those “who have come in consequence of advertisements for laborers” (quoted in Cardoso 1980, 46). Immigration plummeted and growers warned that agricultural labor shortages would hamper the war effort and lobbied for Mexican workers to be allowed to enter the country. With the passage of the Ninth Proviso of the Immigration Act of 1917, a Western Hemisphere special exemption to the quota system had been enabled by the exemption of Mexicans from the head taxes and literacy test required by the Immigration Act of 1917. U.S. growers, tapped into Mexico as burgeoning labor colony of the U.S., which had been established by ongoing economic domination of Mexico to make up for the labor shortages caused by the immigration restriction combined with World War I. Jerry García shows that the explicit use of Mexican foreign labor began with the labor shortages of World War I when the Temporary Admissions Program (TAP) of 1917 was enacted, will be discussed in detail later in the chapter (2005).

The Immigration Act of 1924 (Johnson-Reed Act) further restricted immigration and sought to maintain Northern European American dominance by restricting immigration to 155,000 with quotas assigned to countries based on that country's percentage in the U.S. population in 1890 (Ngai 2004, 22-23). Albert Johnson, described by Kristofer Allerfeldt as “mono-maniacal restrictionist,” served as a congressman from Hoquium, WA. These

restrictionist pieces of legislation shaped the form that agricultural labor would take in the U.S. by changing the emphasis from Southern and Eastern Europeans to Filipinos and Mexicans. For Johnson⁴⁵ the motivation behind his restrictionist agenda was to prevent Japanese immigration and to limit the influence of what he saw as foreign labor radicalism such as the IWW (Allerfeldt 2003, 28, 123).

Settled European-American Workers in Washington Apples

Throughout photos in *Better Fruit*, archival photographic collections, and industry and regional histories apple workers that appear in the photos are nearly all, what most today would call, “white.” Many of this segment of the labor force were settlers whose aim, if not actual ability, was to own their own orchards. Because it took three to five years for an orchard to bear fruit once planted, new settlers would work the farms of their neighbors to learn the business and to earn some money. These workers would most likely work in the year round positions as hired hands.

Especially early in the industry and on smaller orchards the orchard owner worked in the orchard along with the workers. Though some owners were merely stockholders most others were at least present at the orchard as administrators or overseeing the whole operation or managing the labor or managing the managers. On smaller orchards some growers and their families worked right alongside hired workers, there were labor exchanges between farms (Channing 1926, 6; Landis and Brooks 1936, 7-8).

⁴⁵ Representative Johnson was also a fervent supporter of protecting domestic apple producers through tariffs on Canadian apples and Central American bananas (United States Congress 1921).

Figure 4.1. “Harvest Crew at Wawawai, 1898.”



Source: William Delbert Barkhuff Photograph Collection. Manuscripts, Archives, and Special Collections (MASC). Washington State University (WSU). Pullman, Washington.

Some European American workers picked apples to supplement their income or to make money in between jobs. In the early part of the apple industry, most workers were locals and not migrant workers. There were also at this time Euro-American hobo workers traveling on railroad boxcars between the Midwest and the Pacific Northwest and between industrial jobs, logging, mining, and agriculture. Toby Higbie, in his history of early twentieth century seasonal workers *Indispensable Outcasts*, catalogues the movement of such workers, “the young, immigrant and American-born men—often called floaters or hoboes—who worked in logging, crop harvesting, construction, and other season industries” (2004, 2). Though Higbie’s excellent study does not necessarily discuss Washington or apple workers specifically, he gives life to a group of workers who, like a small but significant portion of apple workers were seasonal employees who were

“scattered across the American countryside in work camps and on farms, subject to exploitation at the hands of employers and employment agents” (Higbie 2003, 3).

Native American (Indian) Workers in Washington Apples

The lives of the many tribes, bands, and families of Native Americans from the region now known as Washington were forever changed by the colonization of the Pacific Northwest. White settlers transformed the land and brought with them new conceptions of land based in private property and individual ownership that were concretely established with fences and legal deeds and enforced by courts of law and police and military force. With this military, social, economic, and political disruption, Native American ways of making a living became more and more impossible as a means of survival, and Natives were forced to increasingly enter into the capitalist wage labor system that was springing up all around. As historian Kenneth Tollefson explains, “with the passing of the years and the influx of substantial numbers of settlers drawn to donation land claims, Indians of necessity became more eager to supplement their livelihood with wages from white agriculture, and the settlers increasingly depended on Indian labor” (Tollefson 1994, 40). In a sense, many of the Yakama were proletarianized, forced to work wage labor in order to survive because they were forced out of their traditional ways of economic survival. Barbara Leibhardt argues that the “Yakima fought to retain control over subsistence resources that Euro-Americans sought to channel into capitalist markets” (1990, 1) and that “in order to support themselves [Yakima] necessarily became tied to the larger capitalist economic structure. Taxes on land, cash for farming tools, materials, and food all required money. In order to obtain cash, then, Indians sold whatever they had, including land, their labor, and crafts” (166).

Native American farmers did grow apples on orchards throughout the state of Washington both on and off reservations, but especially in the Yakima Nation reservation

(Leibhardt 1985, 450; Luce 1972 5). Yakama Chief Kamiaken was one of the first to irrigate in Central Washington and his gardens included apples (Pfaff 2002, 4). Through the Allotment Act the Yakama were forced off the land that had been reserved for them and were also taken. According to Mchorter (1913), Schuster (1990, 83), and Leibhardt (1990, 166), whites acquired the most productive and best-irrigated lands. Schuster adds, “many Indians became day laborers, picking crops, freighting, and performing other types of seasonal work” (83). Leibhardt documents the ways in which Whites used the legal system and vulnerability caused by onerous debts to obtain land and water rights on the Yakima Reservation. She also shows that the most valuable commodity crops including apples were grown primarily, if not exclusively, on white-owned land (449-451).

There is also substantial significant evidence that Native American labor was used in the hop fields and berry patches of Washington (Leberg 1968; Raibmon 2006; Tollefson 1994; Reuss, Landis, and Wakefield 1938; Sidel 1939; Schuster 1990; Leibhardt 1990) and for a time even “as many as 500 to 1,000 in a season, were the chief berry pickers” (*BF* July 1920, 9). The few references to Native Americans in *Better Fruit* were to berry pickers, irrigation workers, and the supposed riches all natives now had (July 1920, 9; June 1926, 20; July 1926, 13). All the *Better Fruit* comments display the arrogance and disdain of indigenous peoples often showed by European settlers⁴⁶.

There is evidence, though less complete, that a significant number of apple harvest workers in the early part of the industry were Native American workers from a number of

⁴⁶ For example the widely held European American belief that Natives were lazy (a stereotype conveniently transferred and applied to various groups: W.E. Zuppann of North Yakima describing “Yakima Valley’s Great Irrigation Projects” writes, “The Wapato canal is being built on the Yakima Indian reservation, and is being constructed by Indian labor. To see an Indian at work is generally considered a novelty, but to see hundreds of them digging the canal directed by Major Lynch and the federal engineers is a sight well worth witnessing” (*BF* April 1908, 8).

different bands and tribes. It is highly likely that Native men and women from the Colville Reservation were contracted to work in the orchards of Chelan and Okanogan counties. A photo from the Frank Fuller Avery Collection documents Colville apple pickers. In the photo two girls stand in a fully laden tree with a pickers bucket to the side (Avery 1905). According to Hathway the Yakama constituted “an important source of labor supply in the region” (1934, 29) and Gibson offers a photo ca. 1890 of a Yakama man picking hops with a child taking care of a baby accompanied by the caption: “Yakama Indians from the local reservation supplied much of the labor for picking crops” (Gibson 2002, 14). First Nations peoples from Canada also traveled south to work in berries, hops and apples among other crops (Leberg 1968, 70; Reuss, Landis, Wakefield 1938, 39). In 1926 a “special ruling” by the U.S. Department of Labor “allowed” Natives from British Columbia to continue to travel to Puget Sound district to work the “record strawberry crop” (*BF* June 1926, 20). Around Spokane, Spokane tribal members worked as pickers. In the Puget Sound region, various bands of Native Americans worked in apple orchards as well. The LaFollette Ranch, which grew apples, strawberries, and soft fruits around the turn of the nineteenth to the twentieth century, required hundreds of workers including Native and Chinese workers (Crithfield 1968, 35). The evidence suggests that Natives did work in the orchards but only occasionally, preferring other subsistence activities, and those who sought work in agriculture were not hired by apple growers, but instead by other industries.

Chinese Apple Workers

Throughout the nineteenth century, China was economically and socially disrupted by outside forces that pulled China into deeper capitalist relations especially beginning after 1820 and through the 1830s as the British pushed “to open” China (Chesneaux, Bastid, Bergère 1976, 53-57). Two wars by Britain to maintain its addictive trade of opium in China led to Chinese defeats

in 1842 and 1858, which opened China up further to the invasion of capital and the disruption of the livelihoods of many Chinese people (Chesneaux, Bastid, Bergère 1976, 61-80). In addition to England various other imperial powers began seeking markets and mineral resources in China including France, Germany, Japan, Russia, and later the U.S. The U.S. sought to “open” China to its goods in 1899 to ensure that Chinese markets were not dominated by Europeans (Chesneaux, Bastid, Bergère 1976, 61-80). Throughout this period during the second half of the Nineteenth century, Chinese peasants and workers whose lives were disrupted by economic and social turmoil brought by imperialism and economic transformation sought economic stability, resources and opportunity by becoming “Coolie labor” including searching for gold in the Western U.S. These workers came predominantly from Southeast China through the two main ports of Hong Kong and Macao as part of the deceptive and brutal “credit-ticket system” that conned and coerced workers to board ships for the “unmistakably miserable” voyage across the Pacific Ocean while these contractors and the eventual employers made enormous profits from the labor power of these workers (Chin 1977, 1-13). Thousands of Chinese workers came to Washington during this time.

Chinese workers were the earliest extensive nonwhite immigrant labor force in Washington⁴⁷. Chinese workers in Washington, however, did not work extensively as pickers or packers of apples, though there is little doubt that they worked in pockets of the industry, most likely around Walla Walla and Spokane. The majority of contracted Chinese workers were recruited in the 1860s for work in mining, both for gold and coal and in building the

⁴⁷ Though on a much less extensive basis Hawai’ians were recruited as sailors and laborers in the fur trade as early as the 1780s (Nomura 1989, 116).

transcontinental railroads (Chin 1977, 16-17)⁴⁸. Chinese miners worked throughout the riverbeds of Eastern Washington, at one time becoming the largest population in North Central Washington (Chin 1977, 18). In Washington, beginning in 1864, Chinese miners were required to each pay \$24 per year for the “Chinese Police Tax,”⁴⁹ had to follow behind white miners, and mine abandoned claims (Chin 1977, 24). The Chinese railroad workers played “a key role in building the railroad network in the Washington region, as along most of the transcontinental lines in the western United States” (Chin 1977, 26). During the 1870s, 1880s, and 1890s, crews of Chinese workers were the major labor source building the Northern Pacific and Great Northern Railroads. There was great competition between Chinese and White workers. With the finishing of the transcontinental railroads, thousands of Chinese workers who had labored long days and years and had survived this dangerous employ began looking for work in other industries (Chin 1977, 26). Many Chinese workers in California turned to agriculture. and around 1870, Chinese workers assumed the majority role in California farmwork (McWilliams 2000, 66-67). But in Washington Chinese workers were recruited into timber camps, lumber mills, fishing, and canneries, the most stable employment for Chinese workers from the 1870s into the 1910s (Chin 1977, 43-44). Chinese workers did work on farms and orchards and also as truck farmers—if they could lease or rent land—selling produce, especially vegetables, door to door in Walla Walla, and Spokane. Chinese workers picked hops in the Puget Sound region as well as in the Yakima Valley (Chin 1977, 49), but did not work in apples extensively. Though Chinese workers were not a large portion of apple harvest, their labor as railroad workers helped to build the apple industry, as well as timber, mining, and fishing industries, in unseen and unacknowledged ways.

⁴⁸ Prior to this in 1788 a crew of Chinese workers was brought to Vancouver Island to build a large oceanliner, the *Northwest America* (Chin 1977, 16).

⁴⁹ This was the “Act to Protect Free White Labor Against Competition with Chinese Coolie Labor, and to Discourage the Immigration of Chinese in the Territory.”

Figure 4.2. Bing Ah with Three other Chinese Workers, 1907.



Source: *Better Fruit*. March 1907, 8.

Very few non-Whites appear in the pages of *Better Fruit*, but one of the first was in March 1907 with a picture of Chinese workers presumably cherry pickers and packers. The caption reads “J.H. Reid’s packing house, Milwaukie, Oregon. 570 baskets of grapes one day’s pick. Chinaman on the left is Bing the originator of the Bing cherry” (*BF* March 1907). Ah Bing worked with nurseryman Seth Lewelling in Salem, Oregon. This picture appears again in *Better Fruit* in April 1908 without reference to Bing (9). Bing’s story is repeated again some years later, but altered significantly by E.H. Shepard in a talk given at the International Apple Shipper’s Convention in Cleveland in 1912, “To Oregon belongs the credit of originating ... the Bing cherry, named by the originator after a Chinaman who had served his master faithfully for some forty years or more (*BF* Nov 1913, 12). Shepard emphasized the importance of loyalty in workers while suggesting that Chinese workers are particularly talented and cooperative when serving as workers. Shepard also took credit away from Bing and bestows it on Bing’s kindly “master.”

Credit for the discovery of the successful cherry seems important here for Shepard in his talk with shippers bestowing prestige on the Oregon industry, but Shepard denied this for Bing who would have been considered in this context to be a foreigner, a mere worker⁵⁰.

Although anti-Chinese racism flourished beginning in the 1860s, growers fought the 1882 Chinese Exclusion Act. Chinese workers taught the growers much. So why were Chinese workers not a large part of the Washington Apple industry? The anti-Chinese racism that existed throughout the West Coast was a key factor in curtailing Chinese labor recruitment in agriculture, as well the fact that apple work during this period was considered and defined as “white” work done on small orchards by owner operators, their families, and neighbors. Ultimately, the period of Chinese immigration and labor recruitment occurred and was curtailed by nativists before the major growth in the apple industry and the need for migrant labor developed.

Japanese Apple Workers

Similar to China, Japan was “opened up” by capitalist nations looking for markets. This also disrupted the internal social and economic relations in Japan, forcing many Japanese workers to seek their livelihood abroad. In 1852 Commodore Matthew Perry sailed with a U.S. Naval armada to Japan with hopes of “opening Japan” carrying a letter to the Japanese government from Millard Fillmore requesting a trade treaty. Perry was at first refused but threatened military force if he was not allowed to present the letter. The Japanese relented and allowed him to

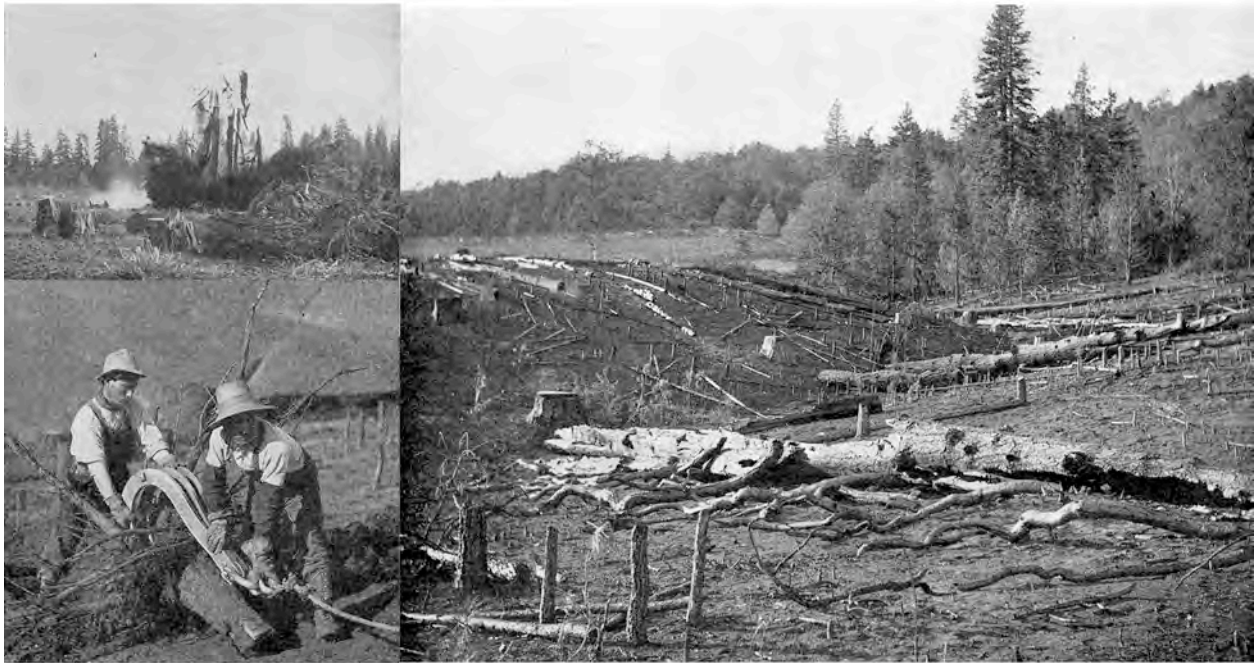
⁵⁰ This controversy lives on today. According to the Arbor Day Foundation “The exact details of Bing's origin are not clear, but it was named in honor of Lewelling's co-worker and nursery foreman, a Chinese man by the name of Ah Bing. Some believe that was Bing who developed the new cultivar and should receive more credit.”

present Fillmore's letter. Upon returning Perry in 1854, he brought twice as many ships and after various threats, signed a trade treaty.

In the wake of Chinese exclusion growers in California, canneries in Washington, and sugar beet growers throughout the West sought a new labor source and recruited Japanese workers. Japanese workers immigrated to Washington State directly from Japan and also from Hawai'i beginning around 1880, and by 1890 there were 360 Japanese and Japanese Americans in the state, and by 1900 5,617. Despite the Gentleman's Agreements of 1907, which sought to exclude Japanese immigration, Japanese Americans in Washington rose to 13,000 in 1910 and reached 17,387 by 1920. Japanese workers came to the Pacific Northwest to work in agriculture, timber, and railroads, and became an important segment of cannery workers after the exclusion of Chinese workers (Nomura 1989, 123). Many soon began establishing their own farms and businesses around Wapato, Spokane, Bainbridge Island, and Vashon Island (Nomura 1989, 117).

Japanese families first settled in the Yakima Valley in 1891 and began farming there in 1906; many became prominent farmers in the state (Nomura 1986, 100; Normura 1989, 124). Because of the Alien Land Acts barring Japanese ownership of land passed beginning in 1913, these farmers, according to Nomura, found it much easier to lease land on the Yakima Reservation than in any section of the state (1986, 100). Japanese farmers had to lease land because they were not U.S. citizens and not eligible to be U.S. citizens. But beginning in 1922 after the U.S. Supreme Court's decision concerning Japanese ineligibility to become citizens, they were no longer eligible to even lease land (Nomura 1986, 100). As a result many Japanese left the reservation, though some stayed and subleased from whites and Native Americans.

Figure 4.3. Clearing the land: dynamite, grubbing hook and fire in White Salmon.



Source: Assembled from three images in *Better Fruit*, Dec 1910, 25, 26.

Aspiring orchardists and land clearing businesses recruited some of the earliest Japanese workers in the Yakima Valley. In the White Salmon Valley on the North side of the Columbia River just across from Hood River, Bryan Dorr established a reputation for “thorough land clearing unsurpassed in the valley” using Japanese labor (*BF* Nov 1910, 44). Many of these Japanese workers must have stayed on purchasing and clearing their own land for according to Nomura the White River Valley had “by far” the “highest concentration of Japanese farmers” many of whom sold their crops in Seattle’s Pike Place Market (Nomura 1989, 124). Some orchardists in the Pacific Northwest relied for a time during the first decade of the twentieth century on Japanese workers to pick and pack crops especially in Hood River, Oregon, and White Salmon, Washington (Tamura 1993, 76). Hood River in 1905 had “several hundred Japanese laborers” working in timber, lumber, and apples (Yasui 1987, 7). Many of these workers cleared stump land around Hood River and went on to start their own orchards (Yasui 1987, 7-

8). Japanese workers were never a significant portion of the apple harvest work force in the Pacific Northwest except in pockets such as Hood River or around Wapato.

The Japanese did not become a primary labor force for the apple industry. Like the Chinese and Native Americans before and Filipinos and Mexicans after, the Japanese faced legal and political discrimination as well as violent opposition as workers and farmers. The Asiatic Exclusion League of North America lobbied Washington Governor Albert Mead in 1908 to “save America for the American people and their posterity” (quoted in García 2005, 97). This same sentiment is echoed by U.S. Senator James Duval Phelan (CA), “The state is [...] obliged, as a simple matter of self-preservation, to prevent the Japanese from absorbing the soil, because the future of the white race, American institutions, and Western civilization are put in Peril” (quoted in Mears 1928, 48). In 1921 the Japanese were declared “ineligible for citizenship” because not legally “white,” and ineligible to lease, purchase, or inherit land (García 2005, 97; Chin 2002, 109). The Japanese formed various protective societies and agricultural associations such as Japanese Growers Association of Hood River and assimilation clubs like Japanese Association and Japanese American Citizens League (Tamura 1993, 83; Nomura 1989, 138).

Gender Division of Labor

European Americans remained the dominant labor force in apples and early on a gender division of labor emerged: men pick, women pack⁵¹. This division of labor paralleled various dominant essentialist narratives about women and men: women inside and domestic, men outside and public; women delicate and detail oriented, men strong and agile; women take orders, men give

⁵¹ For more on the gender division of labor and women workers see Kessler-Harris, *Out to Work: A History of Wage-Earning Women in the United States* and *Gendering labor history*; Jones, *Labor of Love, Labor of Sorrow*; Orleck, *Common Sense and a little Fire*; Baron, *Work engendered: toward a new history of American labor*; and Ammott and Matthei, *Race, gender and work, a multicultural history of women*.

them. These sweeping assumptions about public gender roles contributed to the structure of work. There is abundant photographic evidence that women did pick apples, especially on family orchards and in times when not enough men could be acquired such as during World War I, but between 1890 and 1930 the overwhelming majority of apple pickers were men. At the same time there were also men who packed apples especially before 1915 when it was considered a highly skilled and respectable trade, but overwhelming photographic evidence shows that women sorted and packed apples, while men nailed boxes and hauled full orchard bins from the orchard to the packers and moved stacks of packed fruit from the packers to the shippers.

From the beginning, there were jobs industry-wide for which growers did not hire women, and men were nearly always the packinghouse overseers managing the work of women. Men were also nearly always, if not always, the hired hands who did the year-round work, such as cultivating, spraying, pruning, and thinning, though on family orchards women did do this work. For example, Eula Fisher in the 1920s, carried her son with her in the orchard as she pruned (Blackwelder 1997, 75). Fisher also had to find employment in packing factories supplementing the family income with wage work. Women were generally not given positions of authority especially authority over men. They were kept in subservient positions with signs hanging over their heads saying “Don’t Talk” (figure 6.1). Joan Qazi emphasizes the farm work that women did in the orchards of North Central Washington, and the gender division of labor she describes in her work was present since the beginnings of the industry. As the industry evolved, the gender division of labor continued and became more pronounced: from orchard packing (figure 4.4. and 4.6.) to orchard sheds (figure 4.5) to central packing warehouses⁵² (figure 4.7).

⁵² The gender division of labor can still be seen in industry today (Qazi; Maldonado).

Below in Figure 4.4, we see orchard packing that preceded central packing, and the gender division of labor. The women in the foreground on the right, center, and left sorted, graded, and packed the fruit. The man with his hand on his hips, most likely the orchard owner or manager, oversaw and coordinated the process and gave orders. The men in the background bring freshly picked fruit to the women. The man and boy in ties on the left may be visitors to the orchard.

Figure 4.4. “Packing Yakima Apples,” 1908.



Source: *Better Fruit*. Feb 1908, 8.

Though there were exceptions, these photos show how commonly across the industry, women sorted and packed and men picked, hauled, and managed. In the early industry, young men were

packers, and through the course of this history men were haulers and drivers. Gender divisions varied from place to place and over the years depending on labor conditions. For example, during World War I many women picked fruit. But the consistency of the gender division of labor is unmistakable. Figure 4.5, below, is a good example of women packing inside the packing shed and men outside, probably hauling fruit. The men inside were managers. The photo also shows the spatial dimension of the gender division of labor as women worked inside standing in one position under constant supervision and men worked outside moving around from orchard to packing house or from tree to tree.

Figure 4.5. “Snake River Packing House Bishop Bros., 1898.”



Source: William Delbert Barkhuff Photograph Collection. MASC. WSU. Pullman, Washington.

Packers were also predominantly white women, though in various places Native women were part of the apple labor force. Qazi also adds that, “historically, the majority of women orchard workers in [North Central Washington] were Anglo or native American” (1998, 84). Because of immigration history and policy, Chinese, Japanese, Filipino, and Mexican workers

were predominantly male during this early part of the apple industry, and of these groups, only Mexican women would become a significant part of the Washington apple labor force after the 1960s.

Figure 4.6. Washington Picking and Packing, ca. 1925.



Source: MASC. WSU. Pullman, Washington.

Figure 4.6 offers a good example of the gender division of labor in the same immediate location. Women sort and pack, men climb and pick. This was reflected in a study done by Marion Hathway, professor of social work, which she conducted in Yakima and Puyallup in 1929 and 1931. Hathway sums up over a quarter century of the gender division of labor “logic” based upon “natural” differences such as body type:

Ordinarily a tall angular man makes the most efficient picker because he can climb the ladders and work more rapidly than the others. These men can usually reach quite a distance into the foliage of the tree and does not have to move his ladder as often as the man of shorter stature. Many orchardists will not employ women as pickers because of the climbing and reaching that is necessary. (Hathway 1934, 83)

Sorting and later packing were generally considered women’s work. “Sorting is a process in which women are employed almost exclusively” (Hathway 1934, 36). Hathway adds, “women

are not employed as box makers” (1934, 83). But they were employed as fruit graders because “grading and sorting “requires the utmost concentration and is highly specialized due to frequent changes in the grading rules” (Hathway 1934, 36).

Women often excelled at the work and won packing prizes at apple shows or became part of expert packing crews. For example, in November 1920, *Better Fruit* reported “A special car with 25 women apple packers arrived during October at Fairfield, 25 miles south of Spokane, direct from California, to pack the apple crop of the Commercial orchard containing 1,000 acres. It is estimated the crop of this orchard will be around 100,000 boxes” (21). Apparently, sufficient workers could not be found in and around Fairfield, Spokane, or Washington for this large crop, and the orchard was recruited female labor from California. Exactly a year later, a similar notice appeared: “Twenty-five girls, expert apple pickers and packers, were brought to the Spokane district by the Palouse corporation, to handle the 150,000 boxes of apples from the corporation’s orchards. It was estimated that the girls would average net earnings ranging from \$150 to \$200” (*BF* Nov 1921, 23). Another set of “young women” received attention at the inaugural Spokane National Apple Show, “seventeen young women of the domestic science department of Washington State College, under Miss L. Gertrude Mackay, were in attendance the entire week and taught housewives how to prepare apples in 125 different ways [...] the young women fed ten thousand persons during the week” (*BF* Feb 1909, 13). In this way women were “accomplished” for being good at what they were “supposed” to do, and not for stepping out of bounds of the roles assigned to them by the very male apple industry leadership. This practice mirrored what happened on many orchards where women were also expected to cook for seasonal and year-round work crews (Blackwelder 1997, 73). The wives of orchard owners in addition to orchard labor and domestic labor canned fruit and made jams with unsellable cull apples.

European American women, like other groups in society, were also increasingly proletarianized. This was especially true for women in rural areas in Washington where women were pulled into the growing factory like packing sheds, as below in Figure 4.8. “Although farm labor had declined steadily since the late nineteenth century, agriculture remained a major source of income for women in the 1920s. In rural regions farm labor occupied the majority of married women after World War I” (Blackwelder 1997, 73).

Figure 4.7. Washington Packing Factory, ca. 1925.



Source: MASC. WSU. Pullman, Washington.

According to Blackwelder, seasonal jobs facilitated married women with children to combine market labor with work in the home (1997, 75). And for single women, “After 1920 employment became an expectation of single adult women of all classes coincident with the rising employment of married women” (Blackwelder 1997, 74). As the economy changed women were given contradictory messages. Many women were expected to work and others had to work, but during

hard economic times resentment about men's unemployment caused the apple industry to question the employment of women. In the March 1925 *Better Fruit* an article "Do Fruit Men Hire Too Many Women?" by Max Fultz and a *Better Fruit* editorial "Employment of Women" (10, 14). Though he felt women should be allowed "freedom of employment as well as suffrage," Fultz argued that the industry should rethink the number of women it employed. Fultz explained, "With the World War came the advent of woman labor to take the place of men in a large number of industries. [...] Box packing, labeling and sorting are tasks light enough to be accomplished by women." According to Fultz, during the 1924 season many men were unemployed because of a labor surplus due to women seeking employment simply to buy "expensive finery and the latest style of bobs." The industry was also to blame: "A great many operators of fruit packing houses actually desire the woman laborer. She will never complain about low wages because she considers wages as money to be spent on luxuries. [...] Is it right that [men] be crowded out by girls who will work just enough cheaper to get the employment?"

Figure 4.7.b Detail from 3.8 Washington Packing Factory.



Figure 4.7.b Detail from 3.8 Washington Packing Factory.



According to Fultz, women who were working to help support their families were acceptable, but single women working for “pocket change” should not be allowed. Fultz stereotyped single woman throughout the article as having short attention spans, spending money foolishly, apt to rest on the job once their money was made, and dependent on men such as fathers and husbands for their “actual support.” His conclusion also rests on his argument that women were less efficient and prone to distraction and “from the standpoint of the employer, woman labor will never be as satisfactory as man labor.” His article was mildly endorsed by the Better Fruit editorial, which called Fultz’s article “an interesting field for discussion” while arguing that surplus labor would most likely not be a problem again and if it were to be the industry should “give preference in engaging help to those who must earn in order to support families or dependents.” According to this logic, in terms of labor control, a need to earn made for more effective leverage for capital than desire to consume. Regardless Fultz article shows how women as a group like other non-dominant groups such as immigrants and people of color could be

targeted as economic scapegoats. U.S. agriculture had been undergoing a depression since 1921, and the economic slow down in agricultural production and the implementation of laborsaving technology caused there to be fewer jobs. As the Great Depression set in, many growers apparently followed Fultz's advice: "During 1929 and 1930, it was reported that very few women were at work in the orchards. Unemployment was prevalent in the region and orchardists were yielding to the demands of pickers to employ men only" (Hathway 1934, 36).

IV. Transition to a Migrant Labor Force (1910-1930)

According to historian Erasmo Gamboa, success of the area's agricultural industry has always depended on "an extensive supply of farm labor" and because of the perishable nature of crops a "labor shortage was the most serious obstacle encountered by farmers" (2000, 2). At harvest time apple districts swelled with workers who came from other parts of the state, from other states as well as migrant workers from other countries, like Native groups from British Columbia and some migrant workers from Mexico. In 1919 some 5,000 workers labored in the apple orchards in Wenatchee alone (*BF* Dec 1919, 19). In Yakima harvest season began in August with pears and ended in November with apples (Channing 1926, 17). Though the workers in apple orchards were predominantly European-American, there were many instances in which growers recruited new workforces in major apple regions while looking for cheaper, more reliable labor to do seasonal work such as Filipino and Mexican workers but also families who could supplement their income orchard harvest work.

As the industry matured, during the harvest season well over half of the apple labor force consisted of migrant workers and migrant workers were used to a much greater extent in apples

than most other crops (Landis and Brooks 1936, 19). For example, in 1929 91 percent of all fruit farms in the Yakima Valley hired workers (Reuss and Fisher 1941, 9). Of the fruit crops in Yakima valley, apples were by far the dominant crop in terms of the number of people employed and number of hours worked. Of the total number of days worked on fruit crops nearly three quarters of them were in apples (Landis and Brooks 1936, 22). Throughout the photos in *Better Fruit* through the 1920s readers still only saw European-American workers in the orchards and packing sheds. There was a large number of European immigrants, around one third of the work force, though less in apples than in other crops (Channing 1926, 47).

By the 1930s, clear interstate (and to a lesser degree international) migrant routes had been established and documented that included the apple harvest in Washington State. The routes that migrant workers took developed and changed over the course of the twentieth century. The “coastwise migration” documented in Wakefield’s 1937 study followed the interior agricultural belt from the Mexican border to the Yakima Valley (23). These workers wintered in cities of Southern California or found work in the Imperial Valley or Southern Arizona. They started north following the San Joaquin and Sacramento Valleys during March, April, and May, doing a little planning and tilling although not working steadily. They reached the Willamette River Valley in May or June where they often trained hops or they went on through to pick berries, peas and cherries along the Columbia River, arriving in Yakima during July or August. When the November slack season came, the workers drifted back to California (Wakefield 1937, 25). Because of the distance, cost and difficulty of timing peak labor needs for this route it was traveled almost exclusively by single men (Wakefield 1937, 25). This route encouraged by the relatively high agricultural wages of Washington. According to Wakefield this may be caused by the competition in California between white, Asian, and Mexican farmworkers (25). According to Wakefield then, “the influx of Mexicans from their native country into California during the

harvest seasons tends to drive the white workers northward” (1937, 25). Mexican American workers also had been making the journey north from Texas and California, and Filipino workers also traveled to apple growing regions east from Seattle and north from California, but were small compared to the number of Mexican and Filipino workers in California.

The migratory agricultural work force began in the mid-nineteenth century in mono crop bonanza wheat farms of California, the Midwest, and Eastern Washington (Taylor 1971, 6259). These workers had established routes using railroads. This meant that those who couldn’t find stable employment in other areas had to move around to find work. Hours, conditions and job stability were less favorable in agriculture than in other industries and therefore was harder work for less money. Researcher and Professor of Social Work Marion Hathaway in her extensive study *The Migratory Worker and Family Life* examines the causes of farm labor migration and its impacts on migratory workers and their families. She cites various reasons why workers migrate for work including “among economic forces are the shifts in industry, technological changes, business failures, industrial disputes, prolonged cyclical depressions and seasonal fluctuations in single industry communities” (Hathway 1934, 1). As in many places, social disruption caused by economic transformation required workers to seek opportunities to make a livelihood where it could be found. Individuals and families, even whole communities often must respond to the economic situation of an ever-evolving and profit-seeking system of wage labor. Hathway also cites the social and psychological desire to “look for more favorable conditions and greater security” as well as a great ability to move based in automobile travel.

Migrant workers were a growing part of the apple labor force from the early 1910s, and many pickers worked on multiple crops going from one to the next, as they were able. By the 1920s and perhaps even before 1910, but much more after, apple growers tapped into existing migrant routes and patterns in Washington and those already established in California as

well as in the sugar beet industry. Channing found that in 1922 nearly half (47 percent) came from outside of Yakima county and over a decade later Landis and Brooks found that in 1935, 38 percent of migrant workers came from Washington but outside of the Yakima Valley, 23 percent were from drought states, and 19 percent came from Oregon and California (1936, 64). Growers were also able to tap into migrant workers' need for work as well as a vulnerability caused by their lack of steady work and stability. As Landis and Brooks show "perhaps no laborer is further removed from security" than the migrant farm worker (44). Growers also tapped into local labor pools. Workers having intimate knowledge of the fruit seasons would be able to target areas and crops. But would have to find work by driving along roads that passed fields and orchards looking for signs indicating that workers were needed in (Landis and Brooks 1936, 45). Landis and Brooks also show their data "seem to indicate that the farm laborer obtains the various jobs he receives during the course of the year in a rather hit-or-miss fashion" (45).

Hathway documents that according to leading growers a ten acre orchard required two year-round men, 3-5 more men in the early spring for orchard maintenance and harvest preparation work, and then in the fall for harvest "a large army of transient workers appears" (1933, 35). Hathway estimates that over 15,000 workers were needed during the harvest season for picking alone (35). Growers sought access to even more workers so that they would have a surplus: "Agricultural labor demands can fluctuate widely from one year to the next because of weather, market and other conditions" (Washington 1967, 3). This meant that in order for growers to feel secure in their ability to harvest they would have to have access to the maximum possible number of workers that might possibly be needed, in most cases this would be an over supply of workers.

Migratory workers in the West, not surprisingly, came from different backgrounds than in the East:

Unlike migratory workers of the Eastern States, most of them were Italian, Polish, or other foreign-born parentage, the migratory workers in both the Willamette and the Yakima Valley are chiefly of native white parentage—the families who make a practice of “following the fruit” as well as those who make but one migration. No Japanese were found working in either of the districts surveyed, and only 3 per cent of the families included in the study in the two areas were Indian or Negro. In one-fourth of the families interviewed (slightly larger proportion in Yakima Valley than in Willamette) the father was of foreign birth. In the Yakima Valley these families were chiefly Russian German. (Channing 1926, 19)

The expectation that Japanese workers might be present suggests that significant Japanese farm work presence did exist in apples in other areas and/or other crops in these districts. The study also does not mean that African American or Native American individuals did not pick, only that no families were found in this study on the farms surveyed.

According to Channing during the 1920s “few migratory families depended on harvesting fruit or hops” for their only source of income and many of the family’s Channing interviewed said they sought “to supplement their regular incomes, and some added that hop picking was an opportunity for “all the children to work to” (1926, 19). Because these families could not make a living on their primary jobs they needed to find supplemental labor to carry them through the year. Hathway found that the families she interviewed were from a wide variety of occupations, but that the three largest groups considered themselves fruit workers, farmers, and loggers. The migratory farm labor “class” was in formation through the 1920s and consisted of workers who could not make a sufficient income to sustain themselves or who were laid off from work either temporarily or permanently (Hathway 1934, 46). White migrants moved to the Pacific Northwest for the “greater employment opportunities in agriculture” as it didn’t have a surplus labor pool

that had accumulated as it had in California (McWilliams, 1942, 53). Though employment opportunities existed in the Yakima Valley, workers arrived poor and lived in shantytowns outside of town. White migrants who attempted to resettle were also subject to being taken advantage of by land and development companies eager to make money by selling cheap subdivisions. Resettlement to the Yakima Valley often resulted in only temporary stability (McWilliams, 1942, 53).

As the industry grew to the point where the labor pool was insufficient and during then just after with the beginning of World War I, one solution for growers was to recruit poor and working class European American men who rode the rails and found work where able including the apple orchards of central Washington. Another solution orchardists found was to recruit single women, women with children, and whole families to do seasonal work to supplement their income. Children made up a significant portion of this segment of the apple labor pool during the 1920s.

Children working for the apple industry worked on their parent's orchard, were local kids, or were children in migratory families. In 1926 families that worked in the apple orchards were local workers and migrant workers. Many of both groups had other work but used the harvest to supplement the family's income. Migrant workers, also called transients, either followed crops regularly over a period of years or worked one particular crop. Families had different reasons for migrating and did so for different lengths of time. According to Channing's 1926 study, families who "followed the fruit," going from one crop to the next as they came into season, tended to come from longer distances than families that worked one crop (18). Often families working a specific crop came from another part of the same county (Channing 1926, 17). Most children (54 percent) worked more than 30 days a year and over a quarter (27 percent) of children worked more than 60 days a year (Channing 1926, 13).

According to Channing the work children, especially migrant children, did was long and hard: “the migratory children, like other hired workers, work long hours in both the Willamette and Yakima districts” (1926, 23). In most of the Yakima Valley, this meant at least a ten hour day – from 7:00a.m. to 6:00p.m. with an hour for lunch (Channing 1926, 23). Boys and girls worked the same hours, and older children worked slightly longer than younger children (Channing 1926, 24). These children created significant value for growers. They were not simply playing in the fields as their parents worked: “On the whole, however, younger as well as older children worked steadily, and a considerable number of children under ten years in each Valley had worked a 10-hour day” (Channing 1926, 12). Occasionally children in migratory families worked for their parents by caring for other children while their mothers worked (Channing 1926, 10).

Despite the fact that apples were the principle fruit crop in the Yakima valley, only a third of children surveyed had picked apples as it was regarded as requiring too much skill to grade and sort, too much strength to move the ladders for children under fourteen, and too much care to handle the fruit (Channing 1926, 10). Generally, this sack was considered too much for children under fourteen (Channing 1926, 10). In the Yakima Valley Children did thin apples, but they were usually at least twelve years old (Channing 1926, 10). Channing also found that some thinned fruit on the lower branches by standing on the ground while their parents thinned on the higher branches. Additionally she found that “other orchard work, such as pruning, spraying, whitewashing trunks, propping up limbs, or cutting sprouts either requires skill or is considered too heavy for children.” Only 6 percent of children who took part in Channing’s study reported doing orchard maintenance work (Channing 1926, 11).

Nearly all of the families that migrated to work in the apple orchards were European American, though over one third of the fathers were European immigrants. Channing documents,

In the Eastern States the majority of the children who work on truck or fruit farms have foreign-born fathers or are Negroes. In the fruit and hop raising districts of the Yakima and Willamette Valleys, on the other hand, the majority are of native white parentage. In only 20 per cent of the families in the Willamette Valley, and in 36 percent of those of the Yakima Valley, the fathers were foreign born; these represented at least ten nationalities, among which the German, Russian German, and French Canadian predominated. No Indian or Negro families with children of school age were found in the districts studied, and only one Japanese family. In neither valley were the foreign born recent immigrants. (Channing 1926, 47)

The expectation that Japanese workers might be present suggests that significant Japanese farm work presence did exist in apples in other areas and/or other crops in these districts. The study also does not mean that African American or Native American individuals did not pick, only that no families were found in this study on the farms surveyed.

African American Apple Workers

When slavery was abolished in the South, plantation owners developed sharecropping and Jim Crow, the brutal legal, social, political, and military political economic system. Through the Black Codes, the legal building blocks of Jim Crow, former slave owners and the ruling class in the South were able to restrict the civil and economic rights of African Americans (Frankel 2000, 247). Northern industrialists and bankers reaped huge profits from their “first colony”—the Black Belt South (Peery and Haegerty 2000, 23). Black plantation workers were no longer chattel

slavery, but their labor power was now purchased on a contractual basis that in many instances led to de facto slavery. Many African Americans who were able to escape sharecropping and Jim Crow headed north and west to make a living and avoid the terrorism of the Klan and super-exploitative economic conditions. They followed the path of African Americans who had escaped prior to the Civil War and who were looking for “economic opportunity and refuge from racial restrictions” (Taylor 1998, 81), “autonomy, a life independent of power brokers in any guise..., [and] landownership (Jones 1992, 14).

Evidence suggests that many African Americans came to the Pacific Northwest as homesteaders, but the vast majority worked as coal miners. Mine owners recruited some of these black miners to break strikes (Hall 1989, 81). The first settlement of African Americans in Washington began with George Washington Bush in 1845, who chose to settle north of the Columbia River in Washington Territory because laws in Oregon would not allow African Americans to own land (Hult 1962). George Washington Bush and his wife Isabella were able to buy a piece of land near what is now Centralia, Washington. Though Washington was not as important of a destination for African Americans as Oklahoma, Kansas, California and Colorado in the West, over the last half of the nineteenth century African American families journeyed across the plains to Washington territory and after 1877 to Washington State (Taylor 1999, 135). In 1870 there were 207 African Americans counted as residents of Washington; by 1900 there were 2,502 and in 1930 6,840 (see Appendix C) (Rosenberg 1964, 79-82). Some African Americans did work in agriculture, but few worked specifically in the apple orchards. Peter Barrow and other African Americans, working to develop land in the tradition of Tuskegee And Booker T. Washington, established an agricultural colony at Deer Lake near Spokane that grew apples (Taylor 2006).

Though African Americans did not live in significant numbers in the Pacific Northwest, racist representations of blacks did find a home. Through this period of *Better Fruit*, only two images of African Americans appeared. There was a photograph of a black youth about ten years old holding a saw ready to cut a barrel into portions. He looks earnestly at the camera and the caption underneath says “What does yo’ want, Cap – quarter or half box?” The image is one of a series advertising the “Stokely Crate,” a lightweight, perforated barrel, which was designed to not let fruit move around. The image puts the white reader firmly in charge, evoking white supremacy and putting both the young man and the crate at the service of the orchardist. It seems that Stokely Crates were meant to replace the need for a solid well packed box of apples (*BF* May 1907, 12). African Americans were few in Wenatchee over this period. In fact African Americans did not register on the census for North Central Washington⁵³ until 1900, when one Black man was counted in Chelan county. By 1930 thirty-four black men and thirty-three black women lived in Chelan county by census count. Blacks were, however, represented in Wenatchee, as in other towns across the country, on the Minstrel Stage. “Hearts in Dixie” had a three night run offering the white audience “100% Talking, Singing, Dancing Comedy” (*WFG* June 20, 1929).

The other image of African Americans in *Better Fruit* during this period showed black train workers. The first electric fruit demonstration train on the Inland Electric Railroad traveled the Palouse during the spring of 1908. The caption reads “In the group are horticulturalists, prominent railroad men and employees who accompanied the train on its tour of instruction.” The three black men worked as a cook and two waiters (*BF* May 1908, 23). The apple industry did not actively recruit African American workers, though clearly African Americans worked in

⁵³ This was Okanagon County, which consisted of present day Chelan, Okanagon, and Douglas counties.

agriculture in the South and the Northeast and growers sought to maintain an African American labor force east of the Mississippi. But apple growers instead turned to labor sources that were more readily available such as European Americans coming to Washington in far greater numbers and then later to populations that were closer such as Mexican and Filipino workers.

Filipino Apple Workers

The U.S. first assisted Filipino liberation from Spain and then turned on the Filipinos making war in 1898 and declaring sovereignty over the Philippines in 1902, extending the concept of “Manifest Destiny” across the Pacific. While William McKinley may have sought to “uplift and Christianize” the Filipinos (San Juan 2002, 2), the U.S. military’s assault on the people of the Philippines was far from uplifting. The brutal invasion, the extreme force used to quell the Filipina/o resistance, and the massacre of Filipinas and Filipinos of all ages, slaughtered over one third of the Filipino population (Fujita-Rony 2003, 14-15) and plundered the Philippines (San Juan 1998, 5). In the wake of the slaughter, the U.S. government recruited pensionados to travel to the U.S. where they received education and instruction in Christianity as part of the consolidation of comprador bourgeois to maintain this relationship (Fujita-Roy 2003, 55).

Not only did the U.S. see the Philippines as a source of cheap raw materials and strategic naval stronghold, but also shortly after colonization, Filipinos began to be recruited as colonized labor. In 1906 Filipino contract workers, called Sakadas, began traveling to Hawai’i to work on sugarcane plantations (Ngai 2004, 101). Filipinos were recruited to work in the fields and orchards of Washington during WWI (Ngai 2004 102; Nomura 1986, 100; Pascua 1976, 9). Though Filipinos were a much bigger portion of hops and sugar beet workers, they did work in apples (Ngai 2004, 108). During the harvests of hops, sugar beets, and apples during WWI, Filipinos numbered 1500 strong (Nomura 1986, 101). Like the Japanese before them the

Filipinos subleased land or wrote labor contracts with Native and White land owners (Nomura 1986, 100). In the late 1920s and 30s, Filipinos came from Western Washington to work the apple harvests of Wenatchee, Cashmere, and Okanogan (Qazi 1998, 86). According to Qazi growers desired and sought Filipinos for low wage farm work. Like various Native American families and tribes, Filipinos were recruited for the difficult job of hop harvest throughout the Yakima Valley (Ngai 2004, 108).

Filipinos in the Yakima Valley were subject to persecution and hostility by whites beginning in the late 1920s (Nomura 1986, 100). In 1927 an anti-Filipino riot erupted in Yakima Valley near Wapato (Nomura 1986, 104; Pascua 1976, 9), and Filipinos were “generally harassed in most of the towns in the Lower Yakima Valley” (Pascua 1977, 9). During the Wapato riot, an apple orchardist who had hired a crew of 11 Filipino workers in Sunnyside took the workers to the city jail for, in his words, “safekeeping,” when he was informed that a white mob was coming to deport workers (Ngai 2004, 105). Whites threatened Filipinos with violence and then locked Filipinos up as animals so that their labor power could still be extracted. But no whites were locked up for threatening or performing violence. Then in 1928, an even larger anti-Filipino riot broke out in Wenatchee against the Filipino workers, many of whom were students. The local paper prior to the attack on the Filipinos had “warned” them to leave (Mitchell 1992, 37). These were part of a wave of anti-Filipino violence that began in 1926 in Stockton, CA, continued through the riots in Washington, and culminated in the 1930 Watsonville riot against Filipinos in 1930 (Ngai 2004, 113). Bruce Mitchell relates a story showing the anti-Asian action in Wenatchee especially strong during the 1920s in which a truck from Seattle bringing in 25 Filipinos for the Cashmere harvest was turned around by a group of white migrant workers; Mitchell mentions that similar scenes also happened in Wenatchee, Yakima, and Okanogan

(1992, 37)⁵⁴. A.C. Bright tells of a group of Filipinos forced to leave Wenatchee in 1933 because they “underbid the local help for the available work” (1988, 76). As these examples demonstrate European Americans fought to protect jobs for themselves in apples and to help maintain apples as employment for European Americans⁵⁵.

Like other groups, direct references to Filipinos in *Better Fruit* and other industry sources were rare, though the few references that were made were revealing. For example in 1928 *Better Fruit* did not comment directly about Filipino labor in Washington apples, but Carroll D. Bush in “The Little Brown Farmer in our Markets” complained about the “fostering care” that sugar and coconut farmers in the Philippines received that “displaces” US goods and dampens U.S. agriculture (*BF* Oct 1928, 12-13). As part of his argument, Bush pointed to the poor working conditions of Japanese and Filipino farmworkers in Hawai’i and of the poor living and working conditions of Chinese walnut workers in China. He concluded that this cheap labor was hurting U.S. industries. This protectionism in the guise of labor standards also found its way into arguments against bananas from Central America, and also showed a clear racialization of “cheap labor” that suggested the higher quality of goods grown with European American labor.

Mexican Apple Workers

Despite the fact that during the period from 1890 to 1930 (though this began to change between 1920 and 1930) Mexican and Chican@ migration to the Pacific Northwest was much smaller

⁵⁴ Mitchell adds, “The fact that the Filipinos were American citizens seems to have been ignored by the vigilantes.”

⁵⁵ Filipinos organized in various ways to secure their livelihood, to form community and ensure their safety. Filipinos workers organized unions in various places in Washington (Ngai 2004, 107) and social clubs in the Yakima Valley in the 1920s (Pascua 1976, 9). Filipinos in Cashmere contacted the representative of the Philippines government in Washington, D.C. upon hearing that workers coming to join them had been turned around. Gibson displays a photo of the Filipino Club at Yakima High School 1928 and notes a similar club in Wapato (2002, 47).

than other groups during this time, their growing presence was significant because by the 1970s they had become the predominant labor force in the apple industry. The roots of this labor regime involved a slow and uneven transformation of the apple labor force beginning in the first decade of the twentieth century, accelerated through the 1920s only to be cut short with repatriation in the 1930s, and began again with the Bracero program of the 1940s. Changes in Mexico were created by U.S. imperial domination, railroads drawing workers North and disbursing them around the U.S., immigration laws that made exceptions for Mexican workers to come to the fields, labor agents who rounded up and recruited workers to come to the NW, and Mexicanos and Chicanos working on the railroads put them in contact.

According to Erasmo Gamboa, “the bracero program helped initiate the present-day migratory labor flows from Mexico into the Pacific Northwest. More important and over the long run, agribusiness has repeatedly cited ongoing labor shortages to plead for a modern ‘bracero-type’ labor agreement between Mexico and the U.S.” (Gamboa 2000, 131). The Bracero Program did “help initiate the present-day migratory labor flows” but only as a larger step in a process that had begun many years prior. Earlier aspects of this process enabled and formed the historical basis for the World War II bracero program as a viable policy option. Like NAFTA and the Border Industrialization Program, the bracero program institutionalized, amplified, and modified already existing phenomena and the relationships and routes that had been formed. Gamboa discusses the Bracero program as a “watershed” of Mexican immigration to the Pacific Northwest and notes that after the Bracero program ended it was replaced by the migration of Chican@s from the Southwest. This watershed was based on established patterns of migration and of agricultural labor that began in the period from 1905 to 1930. But began even earlier. Carlos Maldonado describes three movements to Washington prior to the Great Depression. The first involved Spanish explorers and crews from Mexico. The second was the cattle drivers,

vaqueros, and mule packers and drivers, apaqueros, who from roughly between 1850 and 1900 drove cattle or mules loaded with equipment for mines or supplies traveled routes up from California and the Southwest. The third was between 1900 and 1930. Agriculture grew enormously in the three decades prior to the turn of the nineteenth to the twentieth century as total farm acreage tripled and irrigated lands went up 20 times (Maldonado and Garcia 1998, 4). During this time, the need for farm labor grew and the pattern of Mexican and Chicano farm labor to the Pacific Northwest began.

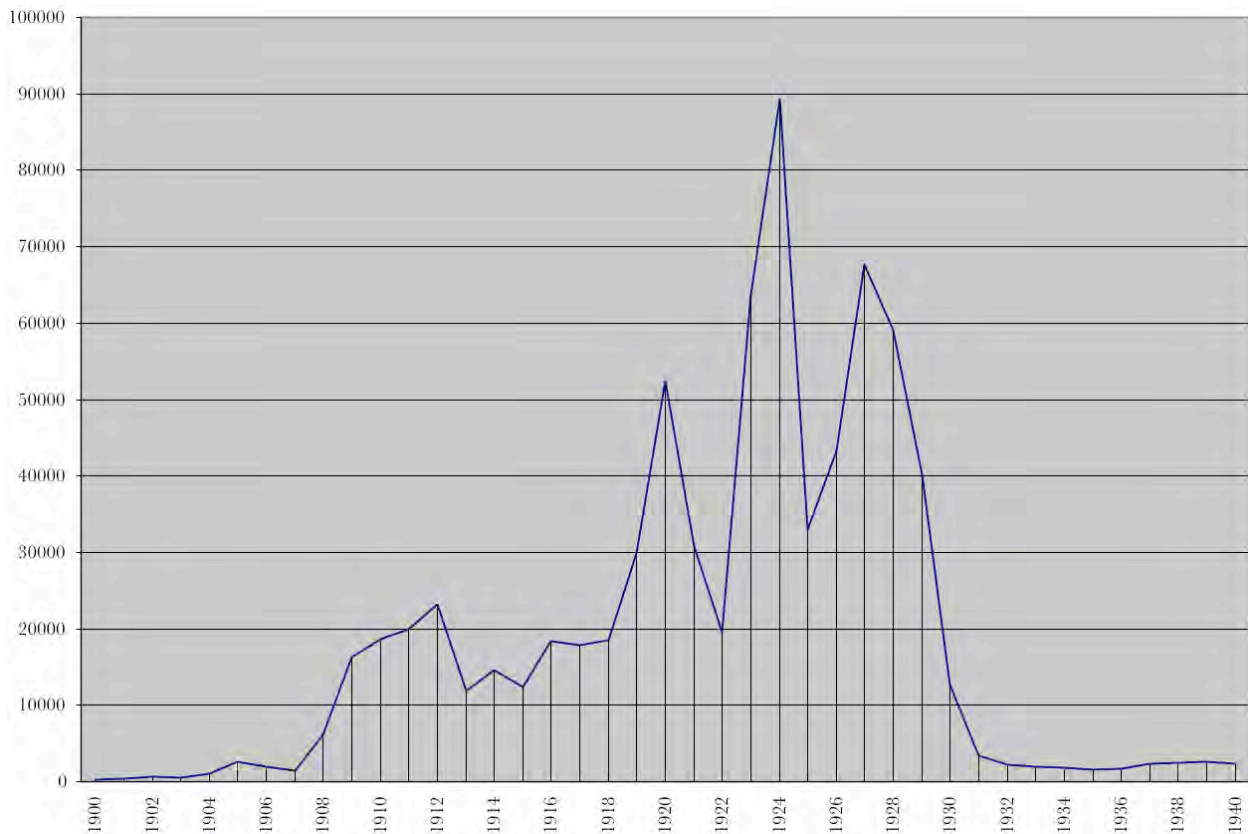
Mexican immigration is often thought of in terms of pushes and pulls, which is a form of supply and demand where immigrant labor is needed and conditions are better in the receiving country and there happens to be instability and poor conditions in the sending country. Many authors have noted that Mexican immigration to the U.S. was catalyzed by the political, social, and economic turbulence of the Mexican Revolution 1910-1921—the push, and the need for labor during the labor shortages of World War I—the pull. For example Paul S. Taylor lays out some of the key push-pull factors for the large increase in Mexican immigration to the U.S. including “political and economic insecurity in Mexico, and with war labor shortage, restricted European immigration, and expansion of intensive agriculture in the United States” (Taylor 1930, 609). Scholars since have for the most part accepted this framework with slight modifications, if any. González and Fernandez argue, however, that the push-pull explanation is ahistorical because it does not put these phenomena in political economic context, often separates the push from pull, and ignores larger forces at work that are creating the conditions in which people try to live their lives (2002). González and Fernandez also examine some of the critiques of push-pull theory and conclude that such responses as social capital theory, segmented labor theory, among others are only modifications of push-pull that maintain its basic premises. In contrast to push-pull arguments, González and Fernandez argue that Mexican internal

migration, Mexican immigration, and the establishment and migration of Chicano in the U.S. “signifies a Mexican national crisis, reflecting Mexico’s economic subordination to the United States and the limitations placed upon its national sovereignty by that domination.”

Furthermore, the U.S. “process of imperial expansion” through ongoing economic domination of Mexico continually creates the conditions causing migration (González and Fernandez 2002, 19).

The US invasion of Mexico in 1848 and the military conquest of half of the land area of Mexico codified by the treaty imperial domination of the U.S. government politically and U.S. capital economically over Mexico from the 1850s through 1920s was the context in which Mexican industrial and agricultural development and social upheaval took place (González and Fernandez 2002). Lawrence Cardoso details how the “unrest, insecurity and geographic mobility” increased over the last few years of the Díaz regime and its booming capitalism and established patterns of emigration from Mexico prior to the revolution as can be seen in figure 4.8. Mexican workers traveling to the U.S. in search of economic opportunity beyond the border region made journeys to work especially in agriculture and railroad construction prior to the revolution (Clark 1908, 473).

Figure 4.8. Mexican Immigration to the U.S. 1900 – 1940.



Data Source: U.S. Census Data from John C. Elac. 1972. *The employment of Mexican workers in U.S. agriculture, 1900-1960; a binational economic analysis*, 5.

Railroads that U.S. railroad companies in league with the Diaz regime built to bring to the US Mexico's precious resources, were also used by Mexicans to ride north to employment in the U.S. (Galarza 1964, 53-55; Cardoso 1980, 14-17). Over the time of the Porfiriato 1876-1910 communal lands were expropriated, the peasants diet suffered as the increases in the price of rice, corn, and beans outpaced the price of wages, and hacienda production became predominantly export oriented (Gonzalez and Fernandez 2002, 21). The economic domination of Mexico by foreign capital resulted in immense internal migration—from village to town to city and later from south to north—and proletarianization—from hacienda to miner, factory worker, domestic worker, etc. (González and Fernandez 2002, 38). Another outlet for former peasants was on the foreign controlled railroads. Workers were actively recruited for rail work, as well as other work,

from the growing cities. Mexican workers' construction of these northward railroads as well as the many spurs that branched out from the Mexican Central Line and the growing agricultural employment in large agribusiness plantations along the railroad corridor also offered the first slow and gradual training, economically, socially, and culturally, of a segment of Mexican workers to work for long periods away from their own homes, to become dependent upon the cash earned, and to spend it on the wares of the train stores (Clark 1908, 476; Cardoso 1980, 54).

The railroads were built south to north primarily to bring raw materials from Mexico to be used in industrial centers in Northern U.S. cities, such as Mexican copper ore, silver, gold, and zinc. U.S. capital invested in Mexican railroads as an appendage and extension to extract wealth from Mexico (González and Fernandez 2002, 15). The trains also encouraged the idea among Mexican workers of going North and provided a means by which workers searching for survival could attempt to move to distant mines, fields, or factories (Gil 1989). The process of industrialization that the building of railroads in Mexico was part also led to a growth in the accumulation of wealth, economic polarization, and vast social changes not only within Mexico but also between Mexico and the U.S. The Mexican Revolution, 1910-1921, was an attempt by anti-imperial forces to reverse decades of growing subordination. According to González and Fernandez, the war created upheavals that caused migration and may have added to emigration but were not the primary cause (2002, 24-36). Rather, emigration from Mexico to the U.S. was caused primarily by the economic and social instability caused by the previous half century of U.S. economic domination and social and economic transformation that gave further incentive for many Mexicans to have no choice but to find stability and work outside of their home locations. This was enabled, not caused by the railroads, and encouraged by the hacendado class who helped pay the way for many emigrants (González and Fernandez 2002, 44).

The trains became a pipeline to the U.S. that blazed a trail for Mexican workers from the

countryside to the border towns. From there U.S. railroads also distributed Mexican workers. Workers began to seek economic opportunity in small groups or were recruited by enganchadores, labor agents, in their hometowns, en route or in El Paso, Kansas City, LA, Denver or along the way come to U.S. mines, fields, and rail construction sites (Clark 1908, 476). Little by little, season after season, more Mexican workers would come into Texas and the Southwest and venture farther north along rail routes and into new agricultural endeavors especially in sugar beets. By 1908, as far as Clark is able to trace it, Mexican farm workers reached as far north as the sugar beet fields of Colorado Utah and Wyoming. Workers sought to find a means of making a living by traveling north to the U.S. for work thus pushing more workers still further north into new territory such as the Pacific Northwest (Clark 1908, 520-521). Among the populations of Northern Mexico and the Southwestern United States, and specifically among Mexicans and Mexican Americans in Texas, New Mexico, and Arizona, the arrival of large numbers of immigrant workers from Mexico brought tighter competition for work and for the necessities of life. Additionally, hatred of Mexicans so deeply ingrained in Texas culture, the racist treatment of Mexican workers and their families, and the significant presence of the Ku Klux Klan in Texas agriculture⁵⁶ (especially in cotton) also created a colonized atmosphere that many Mexican and Mexican American workers wanted to leave or choose to avoid (Vargas 1993, 17). These factors put increasing pressure on workers to venture beyond or bypass the Southwest, fanning out to begin and augment the many paths throughout the country in search of economic opportunity.

⁵⁶ The Ku Klux Klan is often regarded as a cultural phenomenon of a racist, white supremacist, U.S. culture needing to defend the sanctity of white womanhood and maintain a segregated southern society, but the Klan is an economic and political force within the U.S. The example of Texas cotton plantation owners' use of the Klan to control its workers is one example of this.

The Temporary Admission Program that was mentioned in the beginning of this chapter was the first bracero program and paved the way for the World War II bracero program. Through the TAP 50,800 workers were brought to work in the U.S. from Mexico from 1917-1920 of these workers 17,186 returned to Mexico, 22,637 were still employed and 10,691 had deserted to find other employment, and 327 were dead (*Monthly Labor Review* 1920, 223). According to Jerry García, “By the end of the 1920s, U.S. experimentation with imported foreign labor also had caused a substantial growth in the Mexican population beyond the Southwest” (García 2005, 89). Mexican workers were brought to various parts in the West including the Pacific Northwest as part of the TAP’s Farm Labor Emergency program during World War I. Between 1920 and 1930, the Mexican population of the U.S. roughly doubled, so that by 1930 almost, 1.5 million people who were born in Mexico or whose parents were born in Mexico lived in the U.S. (Alvarez 1966, 472).

During the period from roughly 1905-1930 two major migrant workers routes to Washington from Mexico and the U.S. Southwest were formed. One migrant route that workers established was on the east side of the Rockies following the route north from Texas through New Mexico, Colorado, Utah, Idaho and over to Washington, Oregon, Arizona, Nevada, Eastern Oregon, to Washington. This route north began with the building of the railroads and the harvesting of sugar beets (Valdés 1993, 538). According to Dennis Valdes “between the turn of the century and the 1920s the [sugar beet] industry created an agricultural proletariat, composed almost entirely of Mexican beet workers” (1993, 538). This proletarianization process, then, extended to apples in the following decades culminating with the WWII bracero program in Washington beginning in 1942. According to Gil, these beet workers pushed up from Texas through the Rocky Mountain States following the sugar beet harvests of Utah, Colorado, and Idaho (Gil 1989, 167). “From places like Idaho and Wyoming, Mexican Americans began to find

their way into eastern Washington” (Gil 1989, 169). Sugar beets were grown throughout the Yakima Valley especially around Toppenish.

The second migrant worker route to the Pacific Northwest involves following crops north from Arizona through California and Oregon. Wakefield emphasizes that this was a route used predominantly by white migrant workers who were pushed north feeling competition with Mexican and Filipino labor in California (1937, 25). For Mexican@s and Chican@ this route was much more recent than the sugar beet route on the east side of the Rockies. Central California growers began openly considering Mexican workers as replacements for Japanese and Sikh workers in the summer of 1908 and used extensively as far North as Sacramento sugar beet fields in 1909 and 1910 (Street 2004, 285). The route north from Mexico was in fact augmented by Japanese workers who in an effort to skirt around the “Gentleman’s Agreement” emigrated to Mexico and the crossed over by the thousands in 1909 (Street 2004, 489).

Railroad workers developed a third route to Washington State. From 1910 to 1920, according to Gamboa, railroads were a key factor in bringing Mexican workers to the Pacific Northwest (2000, xix). Taylor presents “data which measure the penetration of Mexican labor” in the U.S. by showing the increase in the number of Mexican workers who were working on U.S. railroads in the West including the three main lines that service Washington—Oregon Railroad and Navigation Co., Northern Pacific and the Great Northern (Taylor 1930, 611). From 1909 to 1928-29 Mexican workers on railroads in the West went from nearly 5,972 to over 22,824 or from 17.1 percent to 59.5 percent (table 4.1). Over a twenty-year period, a period in which increasing numbers of Mexican@s were working and living in the U.S., Mexican workers replaced Greek, Japanese, Korean, Chinese, and Italian workers on Western railroads. The number of African Americans, Native Americans, and Filipinos also increased. But it was the

staggering near quadrupling of Mexican workers on the railroads that was so significant of the changes taking place in the West.

Table 4.1. Changes in Race Among Common Laborers in Maintenance of Way Departments of Nine Western Railroads between 1909 and 1928-29 *

RACE	1909		1928-29	
	Number	Percentage	Number	Percentage
American and miscellaneous white	10,944	31.3	12,020	31.3
American colored			481	1.3
American Indian	35	0.1	149	0.4
Chinese	406	1.2	119	0.3
East Indian	73	0.2	1	
Filipino			287	0.7
Greek	7,653	21.9	767	2.0
Italian	5,941	17.0	1,337	3.5
Japanese and Korean	3,895	11.2	384	1.0
Mexican	5,972	17.1	22,824	59.5
Total	34,919	100.0	38,369	100.0

* The railroads, or portions thereof, and dates of reporting in both 1909 and 1928 or 1929 are: Southern Pacific, May 1; Atchison, Topeka & Santa Fe, west of Albuquerque, May 31; San Pedro, Los Angeles & Salt Lake, July; Union Pacific, July; Oregon Short Line, May 31; Denver & Rio Grande, July 1; Oregon Railroad and Navigation Co., April; Northern Pacific, west of Paradise, Montana, June 1; Great Northern, Spokane and Cascade divisions, July.

Source: Paul S. Taylor, "Some Aspects of Mexican Immigration" *The Journal of Political Economy*, Oct. 1930, 611.

Mario T. García points out that according to the 1911 Dillingham Commission, 58.2 percent of Mexican railroad workers had their wives with them, which was much higher than other immigrant groups (1980, 317). Cardoso reports 450 Mexicans living in Eastern Washington by 1920 (1980), and Carlos Maldonado reports that 1930 census recorded 562 people of Mexican descent living in Washington (1998, 95). Agricultural workers out of season during this period had three options settle in rural areas, move to cities, or return south for the winter (Valdés 1993, 560-561). Valdés notes "deteriorating conditions of work in the 1920s" as

employers tried to cut production costs, sped up production and as more and more Mexican@s and Chicanos are working in U.S. agriculture (1993, 555). “The beet companies like the braceros and pushed to extend the contract program after the war ended. They succeeded until the postwar depression of 1920-21 drew European workers back to the fields” (Valdés 1993, 551). But this did not last for long as Mexican immigration jumped again in 1922-1924 (See Figure 4.8).

In addition to the basic labor exploitation of all workers in a capitalist system and the superexploitation and race to the bottom in wages that is part of industrial capitalist agriculture, Mexican and Mexican Americans worked, traveled and settled amidst competing and complimentary forms of racism. Though not the same combination or same expression everywhere, these different forms of racism included but were not limited to daily xenophobic discrimination and hostility, race-based exploitation of a segmented labor force, the feelings of interracial labor competition and a divided working class, the outright terror of a fascist labor control, and nationalism and national identity tied to whiteness. These forms of racism also impacted other workers of color and to different degrees impacted racialized “white” and immigrant workers.

But these phenomena did not immediately bring a large population of Mexican@s to Washington. Washington was far removed from the Southwest, Texas, and Mexico. Some Mexican@s did arrive to working on the railroads, in mines, and on farms of Washington. But this period did allow the first migrants to push beyond familiar territory and begin the migrant routes that would develop more fully later. There was an initial push of workers up from the South during the 1910s through the 20s. This took off through the 1920s but was reversed through “repatriation” during the depression that follows 1929. Then by the end of the 30s and especially with World War II and the Bracero program a huge push was made to bring Mexican

workers to the field of Washington and around the country. Some workers were also recruited to come to Washington by enganchadores, or labor agents (Estrada and Santillán 1997, 196).

By the 1920s Mexican@s were working in the fields of Washington (Maldonado and García 1998, 5). At this time and even for the next three decades whites primarily did these agricultural jobs. Prior to the arrival of Mexican@s, as we have seen, white labor was supplemented in some places by Native workers and Filipinos workers and to a lesser extent by Chinese workers, Japanese workers, and African American workers.

Labor Segmentation and Class Formation

Just as there was a gender division of labor that emerged in apples, there was also a racial hierarchy in agriculture in Washington⁵⁷. Qazi argues that “race and gender have always been significant in constructing North Central Washington's agricultural labor force” (1998, 84) and there was no reason to believe that this differed in Yakima, Spokane, Walla Walla, White Salmon, or any other apple district in Washington. Sugar beets, hops, and berries had a much more multiracial work forces than apples. According to Landis and Brooks at the time of their study, Native Americans from the Yakima reservation and Filipinos predominantly worked in hops but though a smaller percentage worked picking apples (1936, 40n3). At the same time Reuss, Landis and Wakefield found that in 1938, “it is white people, native-born Americans, who offer by far the largest supply of of labor for picking hops (38-39). This may be due to the fact

⁵⁷ Though lesbian and gay farm workers were of course part of the workforce and ownership in apples, to my knowledge no studies exist of lesbian and gay farmworkers and lesbian and gay owners. Much more specific research needs to be done concerning the lives of these workers and owners. In fact there is very little mention of gay farmworkers even today let alone any historical treatments. There are a few studies of farmworker life that mention either the harassment gay farmworkers may face from co-workers and managers (Strochlic et al. June 2003) or mention programs “to educate young gay farmworkers about aids/hiv” (Farmworker Justice Incorporated 2006).

that for sugar beets, hops, and berries the pay was slightly less, the work slightly harder, the work, season shorter, standing work as opposed to stoop labor in sugar beets, and apples, which as a luxury crop may have had more prestige. Apples were thus a more desirable job, which white workers sought and were hired for. Native Americans, Filipinos, and Mexicans worked in agriculture in Washington, but during this period were not hired in significant numbers in apples. Wakefield notes, “During September, which is the peak season as far as labor is concerned, Indians come from nearby reservations to pick hops. There are also a number of Filipinos and other Orientals working at this season. In spite of the number of these racial groups employed at picking hops, September is still the month demanding the most white labor in agriculture” (1937, 9). During the period from 1890 to 1930 hops, berries, and sugar beets was becoming defined as work that whites did not do, but apples remained white work. A segmented agriculture labor force developed. “Agricultural labor has its own hierarchy and hop picking is universally regarded as about the lowest form of field labor” (McWilliams, *Ill Fares the Land* 60).

While there was the development of segmentation of labor, European Americans who were doing migrant farm labor were being racialized as different from locals and managers in orchards⁵⁸. As has been noted the largest group of workers in apple production was European Americans, but people falling into this category were broken down in various ways. Ethnic distinctions played a role, but clearly European Americans who worked as farm workers were not fully accepted. They also were not treated like workers of color such as Filipinos who were chased from town, threatened, and beaten up for not being white. But they were stigmatized and placed lower in the local hierarchies than other workers. According to Reuss, Landis and Wakefield there was the development of an “inferior caste” of workers who are stigmatized and fallen into

⁵⁸ As will be seen in the next chapter, managers were encouraged to down play differences to enable more effective management.

“disrepute” as evidenced by the implied inferiority of “pea picker,” “hop picker,” and “fruit tramp” (1938, 63). These workers were often not welcome at churches, lodges, and other organizations and were segregated from the rest of the community. The children were stigmatized in school and were not able to associate on an equal level.

There was, at this time, the formation of a class of migrant workers. Thirty-eight percent of the farm laborers studied by Landis and Brooks “considered farm labor their usual occupation,” while at the same time 28 percent considered manufacturing their “usual occupation” (52). This is consistent with Wakefield’s analysis that migrant farmworkers were of three basic “types”: “drought refugees,” “unemployed industrial workers,” and “usual agricultural laborers” (1937, 6-7). They were considered usual agricultural workers because that was the work that they had been doing for years if not decades. Wakefield presents a disparaging and elitist view of “usual agricultural laborers” while also speaking to their objective conditions: “The masses of these workers are generally inferior social types. To a large extent this usual agricultural labor group was the personification of modern failure. The breakdown of the agricultural ladder has destroyed practically all hope of their advancement in agriculture. The occupation has no future and the present offers but a scanty hand-to-mouth existence” (7). But as poor and working class whites sought to leave farmwork for other hired paid, more stable and more respected forms of work especially in industry (this would certainly take off during World War II), various forms of farm labor became increasingly associated with workers of color as had been the case in California decades earlier. This was a process by which migrant work itself was racialized as exclusively non-white. This racialization process made the class of farm workers much more recognizable and identifiable as a “race-class.” In the same way that whiteness was constructed against African slaves as way to distinguish agricultural workers in the South in the seventeenth century so that class was made visible as Ted Allen outlines in *The Invention of the*

White Race. Part of the need to racialize or form a class of farm work was another form of control of the workforce. It was easier to whip up hatred and mob violence against people of color or “foreigners,” “radicals” or “fruit tramps” who were seen as different or associated with foreign ways of being or ideas.

V. Conclusion:

It is clear that during the period from 1890 to 1930 there developed a need in the industry for a large work force during the harvest season that the local communities could not meet. The immense growth of the industry, especially between 1910-1920 combined with labor shortages during World War I, caused growers to look for a steady and reliable supply of workers. At the same time, competition forced growers to find a labor force that would work cheaply, which also changed how workers were treated and what apple jobs meant in the larger community. Growers were looking for an ideal labor force: cheap, reliable and, due to circumstances, controllable. It may be possible that the idea for cheap labor began with the apple growers’ complaints about the banana industry’s and sugar industry’s use of cheap labor on far off plantations. This was not necessarily a principled argument based on the dignity of human labor and human beings, but rather against an unfair advantage that bananas and sugar had over the apple industry. There was perhaps even envy in the arguments against the banana industry.

The long legacy of anti-Asian racism and exclusion based in European American fears that Japanese, Chinese, and Filipino workers were taking jobs, buying up land, and pursuing white women created an obstacle to these groups satisfactorily filling the role of farmworkers. As further demonstration of this as the depression deepened Filipino farmers and Japanese farmers employing Filipino workers were targeted for arson and bombings in the early 1930s (Nomura

1986, 100). These violent tactics gave way to legal attacks in the strategy of ridding the valley of Filipino workers. The forms that white anti-black racism and white anti-native racism took would also not permit these groups to work in the apple fields. Blacks were not recruited to come to Washington and Native Americans were not recruited to work in apples.

Various material conditions of Mexicans workers compounded by stereotypes about them encouraged U.S. growers to associate Mexicans with cheap labor. John N. Garner, Congressional Representative from Texas and future two-term Vice President of the U.S., under Franklin Roosevelt, summed up the argument for Mexican workers before the 1926 hearing on Season Agricultural Laborers from Mexico,

Here is the whole situation in a nutshell. Farming is not a profitable industry in this country and in order to make money out of this, you have to have cheap labor. You cannot take it like any other industry and pay \$5 or \$6 or \$7 a day and make a success of it. In order to allow landowners now to make a profit on their farms, they want to get the cheapest labor they can find, and if they get the Mexican labor it enables them to make a profit. If they have to pay a higher price for labor this is a loss instead of a profit.

(Committee on Immigration and Naturalization 1926, 188-189)

Again “cheap labor” was used as a loaded racialized term to denote nonwhite populations who would, because of circumstances caused by racism, colonization, and on going exploitation, work at lower wages. As capitalism expanded in the early twentieth century, it sought flexibility for profitable production and demands flexibility from its work force that would enable it to put the right pieces in the right places to respond to market forces and quick profit taking. The apple industry like other agricultural industries such as sugar beets sought to take advantage of a labor force “flexible” by necessity that was uprooted and mobile and could meet labor demands

quickly and smoothly as such demands arose. The ideal situation was to create a permanent subclass of workers who have no choice but to go where the work was.

Because Mexico had effectively become a colony of the U.S., many Mexicans needed to find work, and because they were stereotyped as willing to work dirt-cheap and were easily controllable, the trend of growers using Mexican workers crept northward. Mexican workers had proven themselves a reliable labor force that would work for low wages to survive in the Southwest. The agricultural industry in the Pacific Northwest also assumed that Mexicans would act like “homing pigeons” and leave when the season was over. Paul S. Taylor referred to Mexican workers as the “most mobile element of our national labor supply” whereby Mexican workers gave U.S. owners and growers a malleable labor pool that could meet labor needs where necessary (Taylor 1930,). Workers established routes and came to the fields especially drawn north by work in the sugar beet crop, but Mexican workers were discouraged from settling in the Pacific Northwest by lack of employment in the winter and federal and state welfare policies (Gamboa 2000, 13). Thus the homing pigeon ideal was structurally maintained. “On top of this must be added the anti-immigrant propaganda and violence that met displaced workers, putting them between unstable social and economic relations in their home country and hostile social and economic conditions in the U.S. creating a developing workforce that was isolated, trapped, and dependent.

The years of the Great Depression and the dustbowl of the early thirties uprooted many families, almost entirely white, from the land they had been farming in the Midwest. This added to the many already migrating groups who worked the fields according to season and crop (McWilliams 1976, 1). During the early years of the Great Depression, especially 1931 and again in 1933, Mexican workers were sent to Mexico through encouragement, intimidation, and small inducements such as train fare or cash payments. The depression marked the end of the

beginning of Mexican labor in Washington agriculture. Repatriation of many Mexicans and Mexican Americans cleared the orchards for a group of migrants fleeing the dust bowl and depression in Oklahoma and Arkansas. These migrant workers replaced Mexicans as the new burgeoning labor force. Mexican workers would again become a significant part of the farm labor force during the Bracero Program of World War II, as Oklahoma migrant workers were absorbed into booming war industries, and Mexican workers replaced white migrants in the 1970s (Sonneman 1992, 32).

CHAPTER FIVE

LABOR MANAGEMENT

I. Introduction

E.H. Shepard, Hood River orchardist and editor of *Better Fruit*, urged his audience in 1914 at the seventh National Apple Show in Spokane that, “You should know the cost of harvesting, making boxes, hauling empty boxes to the orchard, picking, packing, grading, cost of paper, cost of nailing up the boxes and hauling to the depot. [...] If we are going to reduce the cost to the consumer we must begin at home and make home costs as economical as possible” (*The Apple Annual* 1914, 71). In order to compete, according to Shepard and other leaders in the industry, apple growers needed to calculate, monitor, and reduce costs, especially the cost of labor required to produce apples. Throughout the 1910s, articles focusing on “economic,” “scientific,” and “business thinking” began to appear in *Better Fruit* and in books on orcharding that underscored similar approaches to orcharding. Equivalent sentiments were proffered in speeches at growers’ conferences and conventions and encouraged by university research stations. Each shared with growers strategies for saving money in all facets of production, especially labor.

By the 1920s, competition and the pressures of capitalist production inspired a business Darwinism in the leading voices of the industry, as expressed by Horticulturalist Gordon Brown:

Unless the present situation is changed and better prices are secured, it is obvious that the law governing the ‘survival of the fittest,’ will obtain. Evidently the man growing ‘odd varieties’ and those, whose production is below the average, will be the first to feel the results of this inexorable law. It is well that it should be so. This law has always worked to

the ultimate benefit of any industry and to those who conduct their agricultural enterprises along strictly business lines. (*BF* March 1924, 7)

According to such arguments growers needed to conform to the pressures on capital and the demands of the market—demands for cutting the costs of production, for profitable varieties, for the highest quality fruit carefully packed for distant shipment.

A new emphasis also emerged in the industry on information, inventory, and detailed calculations of profit and loss for each segment of production. This new approach was a further extension of the “progressive” fruit growing advocated by the leaders of the Pacific Northwest fruit industry (especially *Better Fruit*). A good progressive grower was understood to be one who “has combined scientific and business methods and knows practically to the cent what it cost him to raise the fruit and put it on the market” (*BF* March 1914, 10). As chapter two detailed, this business-driven, market mindset grew out of a unique set of competitive pressures in the apple industry; but this set of pressures paralleled other profit-driven industries. The approaches to becoming the fittest, or a survivor, assumed common characteristics across the capitalist landscape of the U.S. economy. As we saw in chapter three, growers also began to look for a cheap and flexible labor force—workers willing to do difficult, seasonal work at low wages and live in often-squalid conditions in temporary housing. Initially, in addition to reducing the labor costs the two other key strategies growers attempted and promoted involved Taylorization, or the implementation of “scientific management” in picking and packing, and also Fordization, or the development of assembly line production centered on the implementation of technology as part of the labor process. Chapter five will detail the technological side of this equation. This chapter focuses on the detailed, scientific management of workers based on studies of the labor process and the reconstruction of the work place to promote business efficiency. Such industrial efficiency, known as Taylorism after Frederick Winslow Taylor, is more associated with industrial

factories than agriculture. But the industrialization of agriculture emerges at around the turn of the twentieth century along with the overall industrialization of U.S. society and the economy. As industrialization and scientific management of workers intensifies, the struggle between owners and agricultural workers also becomes more pronounced.

II. The Science of Apple Business: Reduce Costs and Improve Quality

Pressures on Growers and Pressure on Workers

Historian John Fahey details the many pressures on growers during the consolidation of the industry in Washington during the 1912-1929 period: as Washington State became number one in apple production and number one in the sale of fresh fruit, a growing competitive pressure mounted from commission buyers and retailers for consistent, top quality fruit⁵⁹. As we saw in chapter two growers had to respond to pressures from various levels of competition: among growers (despite constant calls for cooperation), between districts (as they became brands in themselves), between regions (East vs. West), between countries (as an international apple industry and market developed), between fruits (as with bananas), competition over other uses of land, and competition for larger portion of surplus value (with rail, marketers, retailers, workers).

As the pressures being felt within the industry grew, as it became more competitive and as prices for apples declined, due to the number of producers as well as national and global economic turmoil, the industry also put additional pressures on workers in the form of increasingly sophisticated organization of work, supervision, and scientific management. In 1910,

⁵⁹ Much has been written recently on consolidation within agriculture and the birth of agribusiness. *American Agriculture* by R. Douglas Hurt shows the long-term tendencies in US agriculture toward bigger farms; *Conquest of Bread* by Richard A. Walker; *The Corporate Reapers* by Albert Krebs; and in 1999 the U.S. House of Representatives Committee on Agriculture held hearings on Agribusiness Consolidation.

growers in the Pacific Northwest “had the first jolt in the way of lesser prices” and “high prices realized in previous years would not continue to maintain (*BF* March 1917, 18). Apple prices peaked in the early 1910s (*BF* April 1922, 16). At a 1915 joint meeting of the Washington and Oregon State horticultural societies, E.H. Shepard told his audience, “A few years ago apples commanded such a high price, with a ready sale, that economy in the orchard was little thought of. As a matter of fact, the fruit grower could make money no matter how great his expense. [...] in these last few years when low prices have prevailed, with no immediate prospect of higher prices, fruit growers have realized that in order to make money it would be necessary to reduce the cost of production both in growing and harvesting” (*BF* Dec 1915, 13). Shepard detailed how he had divided up the separate costs so that he could pinpoint and target each place he might reduce costs, especially labor costs. From one year to the next, he was able to save \$.04 a box and then \$.045 more each year feeling he had reached the minimum cost per box, “but by careful work [...] I succeeded in reducing the cost of harvesting” again \$.04 a box over the previous year. This breaking down the production process and reducing costs were the initial impulses of scientific management.

By 1924 the pressures on growers (and in turn of course on workers) became an everyday reality in the minds of the leading voices of the industry. Ernest C. Potts, editor of *Better Fruit*, reemphasized in his lead column what many growers had been feeling for ten years: “From where the industry stands today there are two direct avenues to profit for the grower—higher prices and heavier production” (*BF* March 1924, 7). Whichever avenue the grower chose, more pressure was placed on workers. Higher prices meant being more selective and exact in thinning, picking, sorting, and packing while working at the same speed. Heavier production meant workers must work even more quickly and efficiently to get more quality apples to market. This caused growers to develop a system of management in the packing shed and fields that structured

work time for increased productivity and quality in production at lower overall costs. Over the period from 1910 to 1930, apple production was completely revolutionized.

Developing Scientific Management in Apples

Frederick Taylor's book *The Principles of Scientific Management* appeared in 1911. With the book and the many lectures, beginning around 1895, that he gave prior to its publication, Taylor introduced and popularized the concepts that would come to be called "Taylorism." He looked to convince his audiences of "the great loss which the whole country is suffering through inefficiency," that "the remedy for this inefficiency lies in systematic management, rather than in searching for some unusual or extraordinary man," and that "the fundamental principles of scientific management are applicable to all kinds of human activities" (Taylor 1911, 7). These principles sought a "one best way" to accomplish the work task including measurement and calculation of the labor process, breaking down production to the slightest operation, planning work to eliminate interruption, putting responsibility on management for production, and the "scientific selection" of workers based upon perceived abilities (Taylor 1911, 43). Elements of Taylor's principles began, as Braverman illustrates, in the last two decades of the nineteenth century (1975, 252), but through Taylor these principles became a common systematized business framework that swept American business from steel manufacturing, where Taylor began, all the way through the picking and packing of apples⁶⁰.

⁶⁰ Many studies on Taylor and his impact are available, though very few looking specifically at Taylor's impact on agriculture. An excellent book on Taylorism in agriculture is Fitzgerald, *Every Farm a Factory*. For the impact of Taylor and scientific management on the labor process, workers and the accumulation of capital see Braverman, *Labor and Monopoly Capital*; for the rise of the new factory system see Nelson, *Managers and Workers*; for the social and cultural impacts of scientific management see Banta, *Taylored Lives*; for a broad history of management including Taylor and scientific management see Chandler, *The Visible Hand*.

Though they had been talking about progressive and scientific fruit growing from the beginning of the journal, *Better Fruit* began to refer to and introduce the concept of “scientific management” by name in June 1911 (85). Apple growers hoped that through scientific production they would be able to reduce the cost of production by reducing the cost of labor, increasing the efficiency of production, and improving the quality of the commodity. In order to achieve these goals, Grower Luke Powell insisted that “science and business must go hand in hand; they are practically speaking Siamese twins. [...] Competition is loudly knocking at our doors. [...] If we are going to succeed there are two underlying facts that we cannot get away from, i.e., we must have a thorough scientific and business knowledge of the profession and know how to use it.” Growers achieved this knowledge by studying, itemizing, and measuring all aspects of production, and used this knowledge by 1) systematizing production through an evolving division of the labor process into distinct jobs, and 2) developing a system of management to maintain and enforce the principles of science and business.

Following the lead of Taylor, in the early 1910s, growers began to pay closer attention to the production process to reduce the cost of production. The editors of *Better Fruit* encouraged their readers to realize that “when the fruit grower gives the matter of picking, grading, packing and proper conveniences a thorough study it will result in handling our fruit and growing it in such a way as to make a saving of probably 20%, or 10 cents per box” (*BF* March 1911, 49). Immediately following the 1910 harvest, the editors of *Better Fruit* offered the first of many examples of itemized accounting of the harvest and scientific studies of production in an effort for readers to understand a baseline cost of production as well as the technique of breaking down and studying the production process: materials cost \$.15 per box and labor costs \$.35 per box. Picking and packing cost the growers the most at 6 cents for packing and \$.07 for picking (*BF* Dec 1910, 44). In the same issue “Method of Determining Profit and Loss” by Professor Bexell of

Oregon Agricultural College instructed growers on basic accounting and economics. In this way *Better Fruit* as well as other growers' venues sought to teach the class basic skills for operating under scientific management and organized book keeping. Again in a December 1914 editorial, *Better Fruit* published an itemized accounting of even more detail encouraging growers to find ways to get more apples picked at lower wages. Picking cost \$.0863 per box paying by the day, but the editors felt that "the picking cost is especially high in this case, as the crop was scattered over a large acreage and the yield was light" and the editors informed the readers that it could be reduced to \$.04 per box. Grading cost \$.0468 cents per box, which the writer told his readers "can easily be reduced under favorable conditions to 3 cents per box, and possible may be done for 2 1/2 cents per box." The column reported on one grower who paid packers \$2.50 per day, but required workers pack 100 boxes—over 4000 lbs of apples. For growers to ascertain the cost of labor and develop a system of scientific management to get the most out of their workers "a perfect record should be kept of each man's time" (*BF* Dec 1914, 26). They could then use this record to determine how to organize and manage production. These exhortations by Shepard revealed how within a few years growers became consumed by methods of accelerating production by measuring work times and labor costs.

Once growers had a sense of the costs of each task, they could begin to devise methods of organizing and reshaping the work to further reduce those costs. At the 1914 Spokane National Apple Show's plenary on "Methods of Organization," C.I. Lewis, professor of horticulture at Oregon State College and a grower in his own right, discussed with his audience the two overarching practices of scientific management as applied to apples: division of labor and system of management that go beyond simply pushing the workforce harder. In arguing for the need to approach growing scientifically, Lewis reminded his audience "money is lost in handling the crop by not systematizing the work" (Fruit Products Congress 1914, 69). According to Lewis and other

leading industry thinkers growers needed to handle their labor more efficiently by creating systems and spaces that maximized output and minimized time requirements and costs.

Itemizations of the production process as Shepard's above offered a record of the division of labor: picking, hauling, wiping, grading, nailing, orchard hauling, picking, help in packing house, box making were all listed as job categories. Such divisions were ever-evolving and varied across the landscape of the industry, but the pages below will provide an examination of the basic evolution of the packinghouse and orchard "arrangement" or the reorganization on a rational basis of packing and picking based on ever-finer divisions of labor.

According to the philosophy of scientific management that Lewis, Shepard and others were introducing, division of labor helped enable management of workers, but management also required keen observation of workers and planning the work based on these observations. In the same speech Lewis also encouraged growers to consider how "enormous sums are lost by the poor handling of labor. To get the best results the owner or foreman should be a student, one who plans his work carefully, who has planned out the work for each man for the entire day as much as it is feasible to do so." (Fruit Products Congress 1914, 69). Lewis argued that a good manager should not only keep record of each man's time and provide workers with systematic instructions for the work, but also be a judge of each worker's character: "Above all [the owner or foreman] should be a good student of human nature and understand men" (Fruit Products Congress 1914, 69). The grower or manager also scientifically managed workers by placing them in the division of labor according to workers' perceived skills, abilities, and temperament. After examining the division of labor, I will show the various ways that workers were managed in order to improve the efficiency of production and quality of the commodity as part of struggling in an increasingly competitive industry and global economy.

III. The Main Divisions of Labor

For worker and grower, clashing interests were sown into the labor process itself, which resulted in a brief coexistence for a short period during the apple season, which lasted for most workers little more than a month. As Paul Landis and Melvin Brooks put it the introduction to their 1936 study “Farm Labor in the Yakima Valley,”

From the farmer’s point of view the immediate harvest of a mature crop, especially fruit and hops, is of great economic importance. Mature fruits deteriorate rapidly if not picked promptly [...] The work is necessarily seasonal in character, and the farmer must depend upon laborers who are willing to work when they are needed and to be laid off when their services are no longer desired. The laborer on the other hand is faced with the problem of making a living for himself and often for his family from these piece-meal jobs. (5)

As competitive pressure of the industry to reduce costs and improve quality intensified, the clashing interests of workers and growers became an ongoing battle that sometimes resulted in strikes by workers who demanded pay raises and guaranteed work (*BF* Dec 1917, 15; Hall 2001, 126-133). This battle sometimes also resulted in growers panicking and scrambling to find the necessary labor wherever available (including school children, transients, and unemployed urban workers), and often encouraged growers to find ways to produce and move more apples with fewer workers. Workers and their families usually wanted what any worker would: a living wage, a safe job, and stable means of making a livelihood without unnecessary inconvenience. Taylor theorized that scientific management was intended to alleviate labor strife of this kind by enabling workers and managers to improve production together and increase the surplus to the point that both sides would benefit through higher wages and higher profits (Cooper 1990, 164). In reality, however, because production did not occur in a vacuum but was subject to the

pressures of the market, most gains in productivity and efficiency increased competition with the increase in surplus value being split between growers, retailers, railroads, and banks who sold new technologies, such as the fruit grader, complimented new divisions of labor.

The kind of work people did and the size of the operation, the technology that was used, and the competitive pressures of capitalist commodity production conditioned how the apple industry was organized and managed. The three main areas of work were orchard maintenance, which was year-round, and then picking and packing, which were both seasonal. Picking and packing evolved to be very separate and very different types of workplaces and each was further subdivided into various kinds of jobs, but these were the main jobs in each and which most people were employed. The divisions of labor within these three main categories grew over time and a specialized set of skills for each particular job in the apple industry developed.

Orchard Maintenance

Typically growers bought apple trees from a nursery, and workers planted and maintained them by cultivating and taking care of the orchard. This work included pruning the trees, clearing brush and keeping the orchard well groomed, maintaining the irrigation system, and tending to the cover crops like clover and alfalfa. In the spring, the orchard occasionally required warming to avoid frost on the newly forming apples. During this period of the season, only a small crew that worked year-round or nearly year-round was required. Often family members or hired hands did these jobs and were usually from and/or lived in the community in which the orchards were located. Or if the orchard were small enough, the farmer would do this work.

During the winter, spring, and summer workers took care of the other two major jobs, pruning trees and spraying for pests. Pruning began in the winter and continued through spring. It was a complex science that required years of experience and intimate knowledge of tree types

and topography in order to skillfully wield the heavy sheers to shape the trees to allow air to flow through them, and to aid spraying, thinning, and picking (*BF*, March 1914, 11). Pruners also trimmed dead branches and gave the tree its shape. There were various shapes and methods pruners had to learn depending on the age of the tree, the variety of apple, the skill level of the pruner and the preferences of the orchardist (Folger and Thomson 1921, 258-261). Pruning not only required workers to possess knowledge and experience about trimming and shaping a tree, but also the strength and balance to use the shears while extending from the highest rungs on the ladder (as in figure 5.1).

Figure 5.1. Pruning and Managing.



Source: *Better Fruit*. Dec 1910, 19.

Spraying for pests began in the 1890s as codling moth and other pests were seen as the first major inhibitor to profitable production (Melander 1907, 4). In fact, the first paper at the first meeting of the Northwest Fruit Growers Association in 1894 was titled “Our Insect

Enemies” which foretold of the yearly battles growers would have with “wormy” apples over the next decades (and century) (Luce 1985, 4). To combat codling moth and other insect pests growers and workers sprayed, beginning in the spring and going through the summer, on a regular cycle of four sprayings of lead arsenate to control a wide range of pests in any particular orchard and involved a complex operation using a large spraying apparatus. Workers would mix a slurry of pesticide such as lead arsenate in a large drum or tub that would then be hauled by horse or tractor around the orchard. Using long tubes and spray poles the workers applied the pesticide in large plumes into the trees (Folger 1917, 22).

An average spray crew used two men and two horses (Melander 1907, 5; Folger 1917, 19). A third and fourth man worked driving the horses, and then later the tractor. Though gas powered sprayers were used as early as 1904 (Melander 1907, 4), in the mid-1910s hand pump and steam-powered sprayers were more fully replaced by lighter and more maneuverable gas sprayers (Folger 1917, 18). According to Folger, in 1915 the most expensive piece of equipment on the orchard was the power sprayer (1917, 18). A sprayer could cost from \$200 to \$350, as compared to from \$125 to \$250 for a packinghouse grader. Melander’s codling moth study testified to the importance of spraying despite the cost in equipment and labor, “Your trees can be protected by spraying, no matter how many wormy apples you have previously had [...]. The cost of spraying is trifling as compared with the gain” (1907, 3). Following Melander’s findings growers could be sure to harvest at least 90 percent of their fruit, but without spraying often had no crop to sell.

Lead arsenate was a common pesticide used in Washington from the early 1900s through the 1950s to combat the codling moth and other pests⁶¹. Extensive gas exhaust fumes and lead arsenate spray clouds permeating the orchard filled the lungs of workers. According to a Washington State College Agricultural College Experiment Station Bulletin in 1907 by A.L. Melander, an effective solution in the first decade of the twentieth century one pound of lead arsenate per forty gallons of water (5). The spray calendars from the college experiment station at Washington State College listed dozens of different pests, which crops they lived on, and what and when to spray (*BF* Feb 1910, 41). In the second decade of the twentieth century, an effective solution required “two to three pounds of lead per fifty gallons of water” (Folger 1917, 20). Workers sprayed twelve hundred to fifteen hundred gallons of spray solution over a typical ten-hour day, which meant 50-90 pounds of lead arsenic were sprayed during a typical day (Folger 1917, 20). Over the next twenty years, growers found they needed to make spray solutions increasingly more concentrated, as pests evolved and became resistant. One result that developed was that by the 1920s the soil was becoming so contaminated that cover crops could not be grown in many older orchards (Luce 1972, 25; Overly 1950). A 1908 study by Colorado Extension Agent William Parker Headden had warned of impacts of lead arsenic on apple tree bark, branches and leaves, which appeared in the January 1909 *Better Fruit*. An article E.D. Ball Utah extension in the May 1909 *Better Fruit* raised serious questions about the study’s findings and disagreeing with its results. Despite the study the industry continued to use lead arsenic for nearly forty more years.

⁶¹ Other common sprays prior to lead arsenate included Bordeaux mixture (copper sulfate), lime-sulphur, and Paris Green (another arsenical); after lead arsenate the industry switched to organophosphates such as DDT in the 1950s (Luce 1972, 31-32).

Figure 5.2. “Spraying in Mr. Lownsdale’s Orchard.”



Source: *Better Fruit*. Nov 1907, 14.

In figure 5.2 workers sprayed in an orchard on a platform hauled by eight horses with two men on the top platform wielding fifty-foot long spray hoses. The barrels of spray slurry were carried on the lower platform of the wagon (*BF*, Nov. 1907, 14). Workers used long twelve-foot poles to maneuver the spray mist around and into the trees (Folger 1917, 19). The gloves and thick rain gear such as hats and slickers indicate that workers would become drenched in the solution. This was probably even more the case when workers sprayed the lead arsenic into tall trees from the ground (figure 5.3). Gas masks and goggles were easily available by the 1920s and were advertised in *Better Fruit* under slogans like “Don’t expose your throat and lungs to this danger. Judging from photos of sprayers workers were not provided with such equipment indicating an emphasis on production rather than the health of workers and judging from the

absence of any studies, experiment stations did not realize or care to investigate the consequences on workers' health of such saturation of orchards.

Figure 5.3. Orchard Spraying – c.1915.



Source: Manuscripts, Archives, and Special Collections (MASC). Washington State University (WSU). Pullman, Washington.

In figure 5.3 workers spray using a gas powered sprayer. With these new powerful sprayers, they were able to spray to the very top of the tallest apple tree. Such distance spraying

rained down the pesticide solution more heavily and created greater mist and spray drift. As tractors began to be implemented in the orchard, sprayers began to be powered by the gasoline engine of the tractor and became still lighter, more maneuverable and more powerful. The growing sophistication of orchard, as well as packing, technologies will be discussed in chapter six.

The costs of orchard maintenance were primarily from pruning and spraying, and consisted of labor, tools, pesticides, horses and/or gasoline (Melander 1907, 5). Skilled and experienced workers could save growers money using their knowledge to work efficiently and spray the minimum effective amount while moving quickly through the orchard. These workers had year-round work, and during the harvest season often worked as crew bosses in the orchards saving the grower money by maintaining a disciplined and efficient picking workforce.

In the early summer more workers thinned the crop, performed another spray cycle, and continued the orchard maintenance. During the first three decades of the twentieth century, there was a lengthy debate about whether thinning trees was a productive practice because of the time and labor cost involved (Luce 1972, 31). Not all growers used the thinning technique in the early industry. As Mabbott points out, “The adoption of this policy was slow, however, because many ranchers could not see that the removal of up to half the apples would result in nearly if not just as high a yield in the fall and of much better marketing quality” (Mabbott 40). Growers were skeptical about the payoff of thinning because it added labor costs and benefits in fruit quality had not been fully confirmed. Growers thought they were not only losing fruit, but thinning also required time and labor, thus increasing the cost of production⁶². Growers gradually adopted thinning because it did improve the quality of the fruit, and helped control codling moth and the

⁶² A USDA study conducted confirmed the benefits of thinning in the late 1930s. (Luce 1972, 59).

overloading of branches (Luce 1972, 59). Competition played the key role in the adoption of thinning as growers looked to produce the highest-quality fancy fruit possible in order to get the highest price. Pickers thinned the fruit in the early summer months by going through the orchard and reducing bunches of apples to a single apple. This work required a skillful and quick eye to see the best fruit and choose which among two to six adjacent apples was the best combination of biggest, best shaped, flawless, and best positioned fruit among the bunch. The thinner then carefully removed all the other apples without removing the apple chosen to develop.

This process was *time* consuming and required skilled and experienced workers, but yielded higher quality fruit, which fetched a higher price on the market. According to horticulturist F.W. Power, “much time and care must be given to thinning the fruit. This is practiced too little by most growers, but the prices received by those who do proves that it is a good investment” (*BF* May 1909, 30). Thinning usually involved “considerable expense of labor,” according to Folger, who estimated that “three ten-hour days for one man per acre to thin a crop each year” though this varied greatly (Folger 1917, 22). This seemed to be one advantage small orchards had over larger orchards: “The man who has a small orchard and a large family can come pretty near doing his own thinning while the large orchardist will find it difficult to secure enough men for this line of work in a short period” (*BF* June 1910, 47). But the fluctuations in prices made it harder for small orchards to survive, whereas larger operations based on volume sales saved money through large-scale operations that included central packing, orchard management and professional workers.

Harvest: Picking and Hauling

Except on the smallest orchards, growers needed workers from outside the family to help with harvest, but they could avoid these labor costs by relying heavily on “unpaid family labor of

women and children” (Qazi 1988, 88). According to Channing, and her findings were confirmed by Landis and Brooks, for hired workers (and family workers as well), a typical work day in the orchards during the harvest season was ten hours long beginning at 7am and ending at 6pm with an hour for lunch (Channing 1926, 11; Landis and Brooks 1936, 8), but farm workers were often required to work longer than the theoretical ten hours based on the 1909 demands of the Industrial Workers of the World⁶³ for a standard ten-hour work day and an end to days as long as 14 to 17 hours in some wheat areas (Hall 2001, 62). As Channing found, not only would adults work the ten-hour day but the majority of children who worked in the orchards also worked ten hours per day (1926, 11). Pickers went from tree to tree with ladders and a canvas “apron bag,” burlap sack, bucket or some other receptacle that would hold the apples as picked. Pickers would carry up to a bushel of apples (42 lbs.) as they moved up and down the ladder⁶⁴ (*BF* July 1916, 14). The weight of a bag full of apples made it hard for some workers to be involved in picking apples; according to Channing “one mother said that neither she nor her 15-year-old boy could pick apples because the sack was so heavy that the pressure on the strap hurt the back of the neck” (1926, 9). Most children under fourteen did not work at picking as it was considered too skilled, required too much strength and was too dangerous for these children to do (Channing 1926, 9).

⁶³ The Industrial Workers of the World, or IWW, was founded by workers in 1905 and organized timber, mine, and agricultural workers among others in across the U.S. but especially in the Pacific Northwest and Midwest under the banner “One Big Union.” They will be discussed more in chapter six. According to Paul Buhle, the IWW “averaged, in its best years, perhaps a hundred thousand members. Yet it brought together, for a time, the poorest and most downtrodden working people from every race and group, while its bards wrote some of the most moving and funniest songs mocking the rich exploiters and their willing slaves” (2005).

⁶⁴ The “Wenatchee” Picking Bag was made up of an elongated metal tub curved to fit the body with a cloth lining and bottom that tied around the neck and waste (*BF* 1916, 11). It was patented in 1915 and a version of this bag made by Wade and Wells has been an industry standard since.

The work was strenuous and difficult and if picking by the piece (a common practice) pickers were forced to push themselves through the pain in order to increase the amount of money they could earn. But not only strength and the willingness to withstand pain were required: greater efficiency meant balancing on the ladder and balancing fewer trips to the collecting bin on the one hand with carrying a sustainable and safe weight on the other. This required a thoughtful approach and picking experience in order to work out what was best for the working conditions. Growers realized that it was cost effective and improved the quality of the fruit to have the same pickers back each year. *Better Fruit* advised growers repeatedly to keep this as a priority in hiring workers (Sept 1915, 17).

During the first thirty years of the industry, growers brought in pickers to do one sweeping pick of the trees (Mabbott 1940, 42). Then beginning in most districts in the 1920s growers instructed pickers to pick in waves in which workers picked the most mature and most colorful fruit each time they worked through the orchard (Mabbott 1940, 42). As more fruit matured, workers would go back for another wave or two in the following weeks. This caused the industry to become even more labor intensive. Marketing and the need to compete for sales of high quality fruit induced growers to find ways to get the best fruit to market in the timeliest ways. “Color picking” as this was called and other new techniques helped the industry to sell more profitable fruit while also expanding the need for labor and raising the costs of production. As the industry developed its byproducts wing to sell surplus fruit, growers also hired workers to gather and haul the windfall and wormy apples to the cider mill or other processor (Folger 1917, 27).

In photos one can get a sense of the nature of harvesting. In a photo from a Walla Walla Valley orchard, a male picker stands ten feet off the ground on the second rung from the top of a twelve-foot ladder. Two other men pick apples from the top of a six-foot ladder. The danger of

the work was *apparent* especially in the wind. Apples are all over the ground making it tricky to walk without stepping on an apple and rolling an ankle especially while carrying a ladder (Portland Young Men's Christian Association. 1911). Similarly the scenes of picking in the early 1920s (figures 5.3 and 5.4) offer a glimpse at the hot, back-breaking, dangerous orchard work: workers climbing tall ladders, reaching for the fruit with heavy bag in tow, and need for a hat in the long day in the sun.

Over this period growers also developed systems of breaking the picking work down into various parts. Whereas early in the industry pickers would pack their own fruit and haul it out, over time picking became more specialized, and growers developed divisions of tasks in the orchard. First, growers divided the orchard work into pickers, packers, and haulers. Eventually, many growers even began to break picking down, based on picking height within the tree (figure 5.4) below where some pickers picked from the ground and others from a ladder. Orchard management broke this down still further (figure 5.5) in which there was a ground picker, short ladder picker, and long ladder picker. Though advocated as a scientific “system” early, three-tier picking took time to spread through Washington orchards (*BF* Sept 1907, 6).

Figure 5.4. Picking – c.1920.



Source: MASC. WSU. Pullman, Washington.

Figure 5.5. Picking c.1920.



Source: MASC. WSU. Pullman, Washington.

Harvest: Sorting, Packing, and Moving Packed Boxes

There were significant differences between the work of picking and that of packing. They required very different skills. Whereas picking required quick movement and the strength to put up, take down, and haul the ladder, packing required a keen eye, quick hands, good balance, and the ability to judge sizes and arrange objects in space. As the industry developed the work became more specialized. Sorters and packers, like orchard workers, also worked for ten hours a day (Folger 1917, 27), but instead of moving up and down the ladder and from tree to tree, sorters and packers stood in one position with hands rapidly moving among apples, turning them, scanning them, sizing them and placing them gently, precisely and quickly in wooden

boxes. There were also haulers who moved the packed boxes around the packing shed and foremen who maintained order and discipline and organized the work.

Early in the industry packing was considered a more highly skilled job and paid much better than sorting fruit. In fact, in many places packers attended a packing school and had to be certified in order to get work as a “union” packer—for the Hood River Growers Union not a union of workers (*BF* Feb 1911, 57). Work in the apple harvest often was paid better than work in other crops, which may explain why local and European American workers continued to dominate the apple labor force as other agricultural industries increasingly began to use immigrant and people of color labor (Landis and Brooks 1936, 25). The packing school in Hood River, as in other places such as Yakima, was an annual affair with “lectures everyday on grading and packing apples by experts” (*BF* Oct 1919, 18). However, as more grading and sorting technology was introduced, the packing schools diminished.

Over the period from around 1890 to 1930, there was a trend toward centralized packing with an increased reliance on mechanization. Centralization meant packing materials did not have to be moved around the orchard, and all materials, such as boxes and labels, could be kept free of the dirt and grime of the orchard; packing in a centralized shed would not be interrupted by the weather (Folger and Thomson 1921, 299); central packing sheds enabled the further ordering of divisions of labor for efficient production; and in the end, most importantly, centralization enabled the adoption of more advanced technology such as graders, sizers, and gravity conveyors. Centralization also made it easier to recruit and retain workers at a particular orchard or packing shed, as Mabbott shows: “The labor problem, which had been increasingly difficult for the short job ranch shed, was simplified, since working gangs were much easier to secured and held, when the prospects of a large job and better working conditions were offered” (Mabbott 1940). As large packing sheds grew into giant factories that packed multiple fruits,

packing became more of a career for local women and growers were able to reduce the cost of production due to economies of scale, efficient assembly line production, and scientifically designed operations that fit perfectly with the principles of scientific management.

Figure 5.6. Decentralized Packing in the Orchard, c1905.



Source: *Better Fruit*. Feb 1908, 8.

Between roughly 1890 and 1910, it was common for picked fruit to be taken by pickers directly to the packers and packed right in the orchard (figure 5.6). Packers packed apples on light wooden structures that could be easily assembled and moved. Some pickers even packed their own picked fruit. At this point the Northwest Fruit Growers Association in 1894 advocated for an “inspector” to separate the fruit into sizes and grades (9). The job of this inspector became the more specialized jobs of sorter and packer. Decentralized orchard packing was not as efficient

as centralized packing due to constant moving of equipment and supplies, and picking up packed fruit from multiple locations to be hauled out constantly interrupting the flow from picking and packing. Orchard packing made it harder for growers to consistently manage or oversee, and workers retained a greater sense of autonomy, skill and variety in their work. Orchard packing continued through the twenties and beyond on smaller orchards (Folger and Thomson 1921, 297), but became less common especially after 1910.

Figure 5.7. Centralized Packing on the Orchard – c.1910.



Source: *Better Fruit*, Oct. 1924, Cover.

As growers became more conscious of the efficiencies of the packing process they embraced more centralized packing to reduce costs (figure 5.7). During this period fruit was yarded out,” or hauled to a central location on the orchard for the packers to process (Mabbott 1940, 43). Though packing was still outside, it was centralized, making the operation more efficient through the reduction of redundancies: supplies such as boxes, labels, stamps, etc. could

be kept in a central location and quickly brought out as needed, transportation of freshly picked or packed boxes could be hauled in or out from the central location, and packing managers could supervise one central spot and not have to travel around the orchard. Precious time was not wasted moving packing tables and equipment and more labor could be devoted to packing while a specialized hauler brought picked apples in and packed apples out. At the 1914 Spokane National Apple Show C.I. Lewis reminded growers that they were wasting time and money “by not studying the proper location of the packing house and its best arrangement” (Fruit Products Congress 1914, 69). Over the following year, growers increasingly set out to remedy this fact.

Figure 5.8. Centralized Packing Shed, c. 1915.



Source: MASC. WSU. Pullman, Washington.

Packing next moved inside to covered central packing sheds, or packinghouses, which began to take on a more industrialized organization. Figure 5.8 shows a highly organized central packing shed, which was neat and orderly and designed for efficiency in an assembly-line fashion: the manager stood in overalls watching the process of four women and a young man packing, and an orchard hauler dumping apples on to the mechanical grader. These sheds developed as

early as the 1890s, but because they were a substantial investment, not all growers could afford to build one. But sometime after 1912, they began to be absolutely necessary in order to survive in the industry, as they were able to reduce costs substantially again reflecting the increased capitalization of apple production. Two important advantages were the fact that packing could be done regardless of the weather, and growers could introduce mechanical grader/sizers (more on graders in chapter 5). Taking advantage of new technology, the shed ceilings had large windows to let in ample daylight, and many sheds were also equipped with electric light so that packers would be able to work into the evenings for the full ten-hour shifts on autumn workdays. Improvements in apple storage connected to these sheds also increased the length of time apples could be stored before being packed shipped. Haulers brought bins of apples to the workers who were packing, and dumped the apples in at one end of the grader. Packed boxes were hauled out to storage or if the packing shed had the technology, the boxes could be sent down a long gravity conveyor (figure 5.9) to the storage room of the shed (more on gravity conveyors in chapter six).

Figure 5.9. Large-scale Packing Plant, c.1925.



Source: MASC. WSU. Pullman, Washington.

By the mid-1920s packing sheds looked more like packing factories than sheds and took on an even more industrial and gendered character seemingly far removed from agriculture. Gradually central packing factories were built by district grower cooperatives and associations, which packed the fruit from multiple orchards (figure 5.9). The economy of scale and shared expenses helped growers substantially reduce costs and increasingly became the norm in the industry. The larger and more intricate grader and sizers could quickly sort apples by weight or circumference, and packers increasingly sorted one size and grade of fruit. Line managers, such as the man in the center of figure 5.9 with arms folded, could monitor the packers on his immediate segment of the line, and a floor manager could perch above the multiple packing lines allowing him to oversee the entire operation. Haulers brought fruit from nearby orchards using a team of horses or truck. In some instances haulers would transport the fruit to the packing shed as it was loaded into bins throughout the day. Operations became further streamlined as packing became further centralized into megawarehouses and enormous packing and shipping complexes as in figure 5.10 below, and night crews worked from ten at night to three in the morning picking up fruit from orchards and trucking it to the central warehouse to be packed the next day. The night crew would segregate the fruit and prepare it for packers who arrived in the morning (*BF* May 1916, 19).

As figures 5.6-5.9 demonstrate, an evolution in industry packing occurred in which the labor process has been broken down to the smallest possible units through growing specialization and deskilling of the workforce. By 1925 in the large packing factories, line packers were no longer sizing, no longer packing multiple sizes and only double checking the grading of the fruit. When packing was done with less technology, packers needed to not only be fast but also to know how to determine sizes, pack dozens of different size apples in myriad configurations, and have a keen eye for blemishes. This once highly skilled job was now broken down into many smaller,

more efficient and more repetitive jobs using Taylorist principles with layers of management. The Taylorist revolution in packing significantly reduced costs of production per box of apples.

Figure 5.10. Packing Complex, c.1927.



Source: *Better Fruit*, Jan. 1927, Cover.

IV. Growers, Managers, and Workers

Managing a Profitable Commodity—The Pack

As this chapter shows, growers used an increasingly sophisticated division of labor as one means to introduce scientific management into the production process, in an effort to increase the quality of fruit and to increase efficiency of commodity production to enhance profits. As we

have seen, Taylorization in the apple industry involved the detailed study of the workplace to understand each segment of the production process as a narrowly defined, specialized series of tasks with the aim of increasing the efficiency of each task. But Taylorization also involved removing skill, knowledge and responsibility in each job segment and replacing these with detailed instructions and strict rules (Taylor 1911, 39).

An important part of the new form of organizing work in this management system, as Taylor put it, was to “scientifically select and then train, teach and develop” workers. A key element of the development of workers, according to Taylor, was to assign the worker tasks that are “fully planned out by the management” and given to workers in the form of “complete written instructions, describing in detail the tasks” (39). Growers’ associations implemented guidelines such as the “Instructions for Picking and Packing Apples” adopted by Hood River Growers in 1907 and the “Instructions to Packers” of the Yakima Valley Fruit Growers Association. These instructions were repeated often in *Better Fruit* as models for other associations and growers to follow to standardize packing across the industry. Articles and photos that reemphasized the importance of organizing packing in a “scientific way” accompanied them.

Hood River growers realized early that one strategy to make money in the apple industry to send their finest fruit to distant luxury consumers in the best condition. Not only did these growers sell in far-off markets, but they had a clear advantage in local and domestic markets as well: “No matter how good a product may be, unless it is packed in such a way as to reach the market in good condition, and at the same time be attractive, it will not bring the highest prices. But a good product, handled in an attractive package, is sure to be the first in demand and to command a good price even when the market is glutted” (*BF* Sept 1907, 8). Growers began to realize that producing better fruit meant not just growing the better fruit but making sure it got to

its destination in better condition. The fruit not only had to be unblemished and unbruised as a result of how it was packed, but the package itself had to also project an image of quality apples.

The Yakima Valley Fruit Growers Association made similar claims and explained that the reputation of the district and the association rested on packing for shipping purposes: “unless instructions are carefully followed with fancy fruit, it cannot be shipped East, as our labels are guaranteed that the fruit is as we’ve presented it” (*BF* Feb 1908, 14). Instructions to packers were a key strategy emphasized in the early years of *Better Fruit*. E.H. Shepard, *Better Fruit*’s editor also encouraged this managing strategy wherever he spoke. *Better Fruit* issued a yearly “Special Packing Number,” as their September issue⁶⁵ that was dedicated almost entirely to packing. In the “special packing numbers,” *Better Fruit* included and reinforced the “Rules issued to growers for packing apples.” For example some of the rules were

3. The packinghouse should be so arranged as to let in plenty of light, and keep out as much wind as possible. Provide sufficient lamplight for late in the afternoon, as it gets dark early.

4. Boxes—Have a sufficient number on hand. Keep them clean. Do not pack fancy fruit in dirty boxes. Buyers will not receive dirty boxes.

...

9. Apples on the packing table—Growers will be expected to see that the packing tables are kept properly filled for the packers.

The final rule restating Shepard’s position emphasized the importance of “the pack” and explained the reasons behind it: “We grow fancy fruit. Our reputation and prices this year and in

⁶⁵ According to *Better Fruit* the September packing issue was always a great success “at least we are justified in this conclusion on account of the great demand for extra copies. Big growers, shippers and associations are sending in orders, so as to get a copy for packers in their employ. *Better Fruit* was the first paper to publish a complete and fully illustrated paper on packing apples in boxes.” (*BF* Nov 1907, 15)

the future depend upon our pack...Definite sizing and absolute grading are the first essentials for a perfect pack of apples.” Following these rules to rationalize and standardize all aspects of production led to greater uniformity in quality. These rules came from the cooperative association to member growers, and the growers in turn made rules for workers, which will be discussed later in this section. As the Hood River Fruit Growers Union rules made clear, sorting and packing became the key place where the quality and reputation and thus profit of a given apple operation were made and maintained.

Prior to the turn of the century, however, Pacific Northwest growers found their reputation to be quite the opposite: according to one grower, in the 1890s eastern merchants acknowledged the high quality fruit of the Pacific Northwest, but complained about how poorly it was packed (Northwest Fruit Growers 1894, 9). It became very important to find ways to implement an industry-wide respect for quality packing of quality fruit. In his talk “Picking and Packing Fruits for Through Markets” J.R. Willis, fruit trafficker, reminded the Northwest Fruit Growers Association convention “the reputation of packers was a guarantee of fair dealing” (NWFGA 1894, 11). The beginning of the importance of packing emerged at such early association meetings, but growers needed to learn and develop a quality packing system. The associations and industry publications, led by *Better Fruit*, drove the movement toward quality packing. Over time packing became subject to improved standards set by the cooperative association, packing shed, or grower. The strategy of high standards that was emerging became known in the industry as “The Pack,” and erased any prior poor reputation the region may have had.

“The Pack” strategy and management focus enabled the industry to get the best fruit into the box and packed so that the least amount of damage or spoilage occurred on a cross-country train ride to New York City or a trans-Pacific sea voyage to Hong Kong. Getting fancy and

extra-fancy fruit to the market in the best possible condition relied on well trained, highly skilled, and experienced sorters and packers who followed packing house rules. The sorters made the initial grade of the apples taking out the apples that were obviously not sellable as fresh fruit, namely the culls. As the industry developed these fruits would be sold to fruit processors who made juice, sauce, vinegar, or dried fruits. Packers took the fancy fruit and organized them according to size and arranged them in the apple boxes. Some in the industry wrapped their fruit in paper to help maintain the fruit, and more and more sophisticated packing patterns were developed to fit fruit in such a way that it was protected over its long shipment to market. In order to learn and best follow packing rules, packers took packing classes. In fact, packing rules were incorporated into the bylaws of the Hood River Apple and Fruit Growers Union stated in article 14 that “each packer will be held responsible for his own work by system of fines. No fruit will be received unless put up by a packer employed by the union.” Article 15 says, “the union will have no packing house foreman, except those employed by the union.” The growers union had no articles on picking or shipping or anything else concerning workers except these two rules on packing indicating how seriously the industry took packing.

Though early in the industry there were different views and practices on grading standards, over time, grades were standardized as growers moved into associations and central packing warehouses that were owned and controlled by cooperative associations (Luce 1972, 49-50; Mitchell 1992, 98). Growers agreed on the very first set of standards in Washington in 1909 at the Spokane National Apple Show (Mitchell 1992, 99). Grades became U.S. law in 1912 and a grading code was agreed on by the Washington State Horticultural Association in 1913 (Luce 1972, 49). The Northwest Fruit Shippers Council, representing growers, shippers, and dealers in the Pacific Northwest, adopted rules governing grades in 1915 (International Apple Shippers Association 1915, 18), and by law (endorsed by cooperative associations) the Washington

Commissioner of Agriculture held a hearing each year called the State Grade and Pack Conference held at the State Horticultural Society Meeting to decide on any changes in grading rules and procedures (Maynard 1923, 80-81). They determined how fruit would be sold, and packers had the responsibility of sizing fruit and placing them into fancy or extra-fancy categories. Some in the industry would feed culls to their hogs or dump them in the river. But there were a few growers who, resenting retailers who many felt were profiting off the toil of the growers, would even try to hide fruit of lower quality under fruit of higher quality and pass them off at the same price. The industry associations and publications, however, came down hard on these tactics as they undermined the grading system and impacted all growers and the price they received. Eventually the industry went so far as to have state laws passed making it illegal to market fruit under an inappropriate grade (*BF* Sept 1916, 27). C.I. Lewis also encouraged growers not to waste money on packing bad apples and to put them in cull piles for byproducts. This way bad apples would not lower the price of the rest of the fruit (*BF* Sept 1907, 9). This would also maintain the quality of the apples that were packed.

Scientific packing not only had fruit grades and rules for growers, but also organizational principles and rules for packers that were built into the design of the packing house (as seen in the section on the division of labor) and was enforced by managers, a class of workers who supervised the packing operation and enforced the rules. Grower Lowell Judson described scientific packing management by encouraging growers to rationalize production for speed by examining the size of the table, its height, etc (*BF* Sept 1906). At the same time, Judson emphasized the importance of management of packers: apple producers must be sure that packers “are under complete control of management, who directs them daily where to go” (*BF* Sept 1906, 6). Horticulturalist C.I Lewis emphasized the need to divide workers into different tasks as well as the need to have managers supervising them: “Ever lasting vigilance must be the watch word; [...] I believe that

with close supervision better packing and more of it can done” (*BF* Sept 1907, 9). In a section on packing entitled “handling the packers” Lewis advised growers who wanted to improve their pack to “allow only the best packers to do this work, and try to retain the same man from year to year so far as possible.” In this way packing managers selected and trained those workers whom they felt could best fit into the packing system.

Figure 5.11. Central Packing Factory, c. 1920.



Source: MASC. WSU. Pullman, Washington.

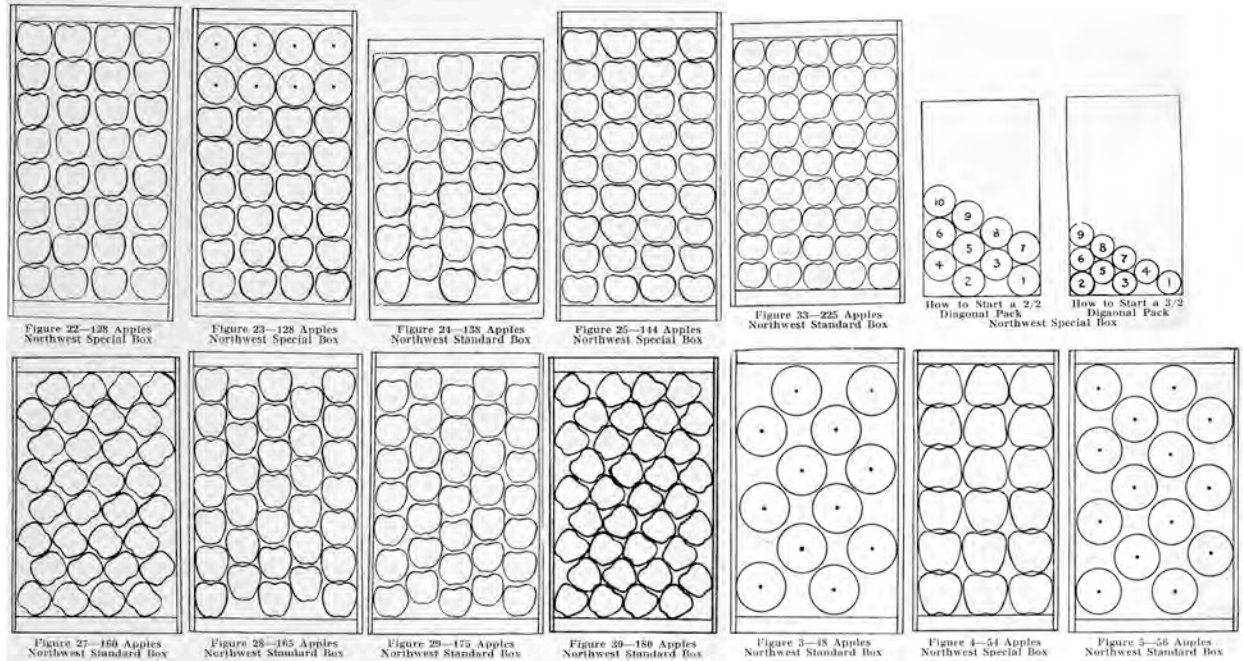
Not only did packinghouses manage workers through the selection of packers as Taylor recommended, they also had strict rules and instructions packers had to follow. A sample of instructions to packers that was held up as a model came from the Yakima Valley Fruit Growers Association:

Packers, before starting work, will go to the office and leave their names. Each packer will be given a number, and a rubber stamp with which to stamp each box of fruit packed, in the indicated by the foreman. This stamp becomes an identification mark showing who packed the fruit. In case a box is inspected at any time and found not up to this standard as to the grade of fruit and proper pack, a repack will be required without additional pay. Any tendency to slight the work will merit discharge. Packers will inform themselves as to

requirements in regard to grade and pack, the foreman giving all instructions necessary. Strict attention will be given the work during business hours and no one will be permitted to disturb or interfere with the packers while at work. Bear this in mind, as it will be to our mutual interest. (*BF* Feb 1908, 18)

These rules exemplified the emphasis in scientific management emerging at the time on increased productivity by regulating the workplace, providing workers with clear and strict instructions, and monitoring the pack. Rules about “strict attention” and not disturbing the work were emphasized around packing plants by signs reading “Don’t Talk” or “Do not talk to Packers,” which reinforced the subordinated positions of packers; for example, see figure 6.1 where the sign above the door reads “Don’t Talk.” Line supervisors and packinghouse managers enforced these rules through overseeing the work and inspecting boxes as they came off the assembly line, and penalties, such as repacking, gave them immediate power over packers. Prominent grower E.L. Stewart offered a good description of what the supervisor or manager did, “for the past four years our packers have worked under the personal supervision of the packing foreman, the same man having filled this position during that time. It is his work to instruct and direct the packers, inspect the apples as they come on the table, and to inspect each box before it leaves the packing table for the nailing press” (*BF* May 1907, 5). Figure 5.11 shows a good example of a packing house made up of about a dozen lines each with a line supervisor overseeing from the end of the line. Those who wanted to manage in the industry could go to the Oregon State Agricultural College at Corvallis with “horticulture classes in pruning, graphing, packing and Apple harvesting” (*BF* Oct 1908, 19). Packers also had to learn dozens of packing arrangements to situate each of various sizes of apples tightly in the box for shipment. Figure 5.12 below offers a small sample of the dozens of arrangements packers needed to learn.

Figure 5.12. Packing Diagrams, 12 packing variations out of 40.



Source: Roy C. Brock, “The Science of Grading and Packing—Diagonal Pack” *Better Fruit*, Sept. 1912, 15.

Competition and efficiency meant speed was paramount and managers pushed their pickers and packers to get fruit from the tree to storage as quickly as possible to improve the quality of shipped fruit. As a *Better Fruit* editorial puts it: “Everyone knows that the quicker an apple is packed and shipped and put under ice after it has been picked the longer it will hold up in cold storage” (*BF* March 1911, 46). At the same time growers were cautioned against packers and pickers being too fast and thus roughly handling the fruit (*BF* Sept 1915, 18). For this reason the piece rate pay method lost favor among growers (*BF* Sept 1915, 18), though it was not fully eliminated. The pressure on workers for speed and efficiency on one hand, and for delicacy and accuracy on the other created the need for a tense balance that packers had to maintain every day for ten hours a day.

Because marketing the fruit and receiving high prices rested fundamentally on a quality pack and reputation, packing was a high-pressure job. Early in the industry packing workers faced enormous pressure, but they were also highly skilled and valued (*BF* March 1908, 17).

Many *Better Fruit* writers refer to packing as “a high art,” that it had in since the 1890s improved to become “more businesslike” (*BF* Jan 1910, 30; *BF* Dec 1910, 66). Packers went to school for packing and attended packing classes; they had packing charts (figure 5.12), they had to learn and they gained immense knowledge and experience with each season. There were packing competitions at the fairs and apple shows and some of the winners had their names printed in the pages of *Better Fruit*. Growers were often encouraged in the pages of *Better Fruit* to get the same packers back each year because of these skills. Also during this period prior to 1915, according to Folger “In the picking and sorting some female labor is employed but the bulk of the fruit is handled entirely by male labor” (Folger 1917, 24). This varied across the industry landscape, but as the more apples were produced causing a greater need for more workers, as graders were installed decreasing the necessary skills, and as the industry increased the supervision of packers creating employment for men, packing increasingly becomes gendered as women’s work.

Not all growers practiced stringent rules and industry advice. There were other strategies, but survival in an industry that was growing more competitive meant that growers constantly had to create and maintain markets and find an edge in those markets. In order to survive in the high-end fresh fruit market, by far the most profitable, growers had to get their best fresh fruit to market in the best condition possible. As the pressure increased on growers, many growers did learn the way of “the pack” along with intense marketing and cooperative associations. But industry leaders were constantly pushing for growers to further advance their industry. In 1916 C.I. Lewis called for a “vigorous campaign [...] to be waged in the Pacific Northwest to improve the physical handling of fruit.” He chided the growers of the Pacific Northwest to do better: “we have become famous because of the quality of our pack, but ...we are resting on our oars. Many of us do not realize the terrific loss that our growers are sustaining because our methods are not what they might be.” He listed the points of pressure necessary as if they were direct instructions

to managers and foremen: “we are beginning to learn that our fruit must be moved much more rapidly than formerly; that we must make a supreme effort to get this fruit from the tree to the cold storage plant in the shortest possible time; that unnecessary delay means that we will suffer enormous losses. We are just beginning to realize that we have been wasting too much money” (*BF* Oct 1916, 5). In this way Lewis and other industry leaders pushed growers to cut out as much “waste” as possible through scientific management in packing sheds, and as we shall see, in the orchards as well.

Picking and orchard management

Early management in the orchard, at the most basic level, involved understanding what was important in fruit production and giving instructions to workers on how to do the work in the best possible way. N.G. Babcock emphasized an early concern for fruit handling and managing workers, “Never let pickers pour fruit from one pail or basket into another; that bruises the fruit and cuts down the price” (Northwest Fruit Growers’ Association 1894, 9). As has been noted with respect to packers, there were various guidelines for growers on how to instruct workers. For example “All fruit must be handled carefully, and the grower that does not exercise great care in picking, packing and shipping his fruit cannot expect to be successful” (*BF* Aug 1910, 21).

Grower E.L. Steward maintained that when pickers were bringing apples from the tree to the orchard bin “that no pouring is permitted; the pail must be set down and apples removed by hand as a grocer would remove the eggs.” Like for packers, the antagonistic emphasis on both speed and extreme care, made picking demanding work.

As has been noted, packing was considered extremely important to maintaining the quality and thus the reputation of a grower, association, or district, but as A.I. Mason argued “a good pack begins in the fields with picking” (*BF* Sept 1906, 14). Growers emphasized to their

pickers the need to balance speed with the careful handling of fruit. Lowell Judson encouraged his fellow orchardists to have someone keeping a close eye on pickers at all times. And in discussing types of bags, Judson argued against “the bottomless bag,” a picking bag that opens at the bottom was never considered appropriate because “the average picker could never withstand the temptation to stand up and let them shoot into the box the moment the foreman’s back is turned” (*BF* Sept 1906, 9). Judson’s conception of his work force seemed to be one of mistrust, revealing the tensions between growers who wanted unbruised fruit picked as quickly as possible and pickers who sought higher wages through their own forms of efficiency. The key to managing the harvest, though, was timing when to begin. Picking management first and foremost meant having the necessary workforce available and ready to pick when the apples were ready. Picking too soon or too late could ruin a crop.

Recruitment and retention of workers was directly connected to pay, and growers had to think carefully about how to control workers using wages. An editorial column by E.H. Shepard in September 1915 advised growers that “while the situation looks reasonably good for fair prices, it will be necessary for the grower to endeavor to save as much as possible in every way. [...] Growers should aim to secure careful pickers and good packers, paying them fair prices for the work, endeavoring to be economical as possible in every way” (17). The message to growers was not to anger a significant portion of the work force by keeping wages low but reasonable. Another way wages were used to control workers was that growers sometimes paid bonuses at the end of the season to induce workers to stay all season and thus reduce the number of new hires a grower would have to make.

Though orchard management had been a topic and concern prior to the 1920s, it continued to develop increasingly elaborate iterations of scientific management in response to increasing needs for efficiency, and in response to labor organizing. For example in 1924 when

Curtis R. Gilbert of Gilbert Orchards in Yakima wrote about “labor problems” in his article “Efficiently handling Orchard Crews,” he noted that labor problems had become “so numerous” that “one is appalled when given the task of analyzing them” (*BF* Sept 1924, 9). Gilbert shared his vision for labor management in the apple orchards with the readers of *Better Fruit* while encouraging growers to emulate “great organizations such as the Standard Oil Company, The National Cash Register Company, and the Ford Motor Company, labor has been systematized until it is as fixed as a standard commodity.” Gilbert was not addressing the labor problem for growers with 10 or 20 acres, but more at growers with 100-200 acres, who had to recruit, retain, and manage large crews of workers.

Of primary concern to Gilbert was the orchard hierarchy and organization. First, Gilbert offered a method for organizing the work of pickers; in addition to the owner, there was the “orchard boss,” the regular year-round men, and the seasonal employees. He told his readers that the orchard boss “must not be of the white-collar type,” but instead “must dress roughly like his men, he must not drive a fastidious car, he must be able to talk with them in their own vernacular” (*BF* Sept 1924, 9). The orchard boss also must be a leader, steady and reliable and able to inspire a “spirit of loyalty which works only for the good of the owner.” By appearing like the workers but thinking like the growers, the orchard boss could gain the trust of workers while pushing them to work, monitoring for labor organizing, and building loyalty among workers for the grower. The orchard boss also organized the work season, hired and fired, and needed to be able to do every job on the orchard. According to Gilbert, the year-round employees must be carefully chosen and be specialists in one or more types of orchard work and to become the “nuclei of the seasonal employees.” The year-round employees became the crew bosses during the harvest season. When harvest came and the seasonal workers filled the orchard, the orchard boss “can set the pace by his enthusiasm and leadership just as truly as an army officer can lead

his troops best in battle” (*BF* Sept 1924, 9). The connection between orchard efficiency, labor management, and war reveals the deep competition in the industry as well as the strict top down command growers felt was required in the orchard, not to mention the emerging militarization of U.S. society following World War I. A good example of what Gilbert encouraged the orchard boss to be can be seen in figure 5.13. In the center of the photo, the orchard boss stood in similar clothes and hat as the pickers, but like a drill sergeant stood giving orders and monitoring and overseeing the work. His presence created the atmosphere of management that served to enforce the interests of the orchardist.

Figure 5.13. Orchard Picking, c.1926.



Source: MASC. WSU. Pullman, Washington.

Gilbert recommended orchards hire as many of the same seasonal workers as possible each year, to hire preferably men, and to get “neighbors, residents of the valley, or campers” (*BF*

Sept 1924, 9). Gilbert reinforced the gender division of labor that had long been in practice, but that had been disrupted during the war. His emphasis on locals and men in families who camped as opposed to single male migrants also reveals the subtle forms of developing control over workers and encouraging their loyalty to the grower and the industry. Locals would have had more immediate ties to the industry, and families would be more dependent on wages to feed their children. The hierarchy on the orchard meant that the seasonal workers reported to the year-round workers, crew bosses, who in turn reported to the orchard boss, who in turn reported to the grower. The orchard boss gave the seasonal workers their orders, and the crew bosses enforced them in the orchard. The crew bosses managed 10-15 pickers, emphasized and reemphasized the instructions from the orchard boss and reported to the orchard boss if anyone should be fired for inefficiency. According to Gilbert, wages had to be even for seasonal employees; therefore, faithful workers should be compensated with a house to live in on the orchard, running water, or even a bonus at the end of a good season. Year-round workers should be paid “a living equal to the average independent farmer” (25). These wages were meant as another aspect of management whereby an orchard could sustain its best workers and managers and not easily lose them to ambition. Good workers and especially good managers were an investment in the orchard that growers did not want to lose.

By investing money in quality managers, growers strived to lower the overall cost of harvest and packing by keeping wages under control and increasing efficiency. Growers sought further efficiency by determining the cost of each step and minimizing the work required. They increased productivity by creating a picking process modeled on an assembly line and by eliminating labor through the use of laborsaving machines. The manager or crew boss held this system together by collecting the necessary information and encouraging efficiency. A key

emphasis of scientific orchard management was of analyzing the work place, and based on this analysis growers worked to create an ordered structure and architecture of efficiency.

Wages became a significant concern for growers during World War I, and stayed an important consideration through the 1920s because they remained high relative to the years before the war and the immense growth in the industry. Wages fell significantly in the Great Depression through the 1930s. Grower Luke Powell encouraged his fellow growers to use reason in thinking about their labor and the cost of production, “when people buy our fruit they try to get it at the lowest possible price; then it behooves us to get our labor done at the lowest possible price” (*BF* March 1914, 10). This was a message that was echoed over the decades in *Better Fruit*. As E.H. Shepard wrote, “The cost of harvesting a crop of apples can be reduced in proportion to facilities afforded, through economy in material and the wages paid the workmen” (*BF* Dec 1915, 26). Growers also cut labor costs by coordinating to the extent possible a prevailing wage that was suitable to growers’ needs. When wages went down, growers were sure to inform each other: “A report from Hood River district is to the effect that wages of orchard labor there will be considerably reduced this year. Help that last year received \$100 per month, it is stated, this season will receive from \$65 to 75\$ per month” (*BF* May 1921, 23); “Packers of pears and apples in the Yakima district will receive five cents a box for the season of 1921, instead of six cents, the prevailing wage last year, according to a statement issued by the Yakima Fruit Growers’ Association” (*BF* Sept 1921, 23); and “Fruit prospects of the Northwest for the present season are uniformly good. Labor costs are down...” (*BF* June 1922, 16). Having this information enabled growers to have a better sense of how to deal with workers on a local level.

One method that the industry developed was to share news of labor supply through industry publications. For example in the pages of *Better Fruit*, if it was a big crop in some locations, growers are advised so they could plan on when to get their labor (*BF* Oct 1919, 18). If

labor was predicted to be oversupplied and thus cheaper (*BF* March 1914, 10), growers were advised so that they could use the cheap labor to get as much done on the farm as possible. If there were strikes, growers were advised (*BF* Dec 1917, 15; July 1919, 29; Nov 1921, 25), so that they could work with other grower to fight the labor agitation. If there was a labor shortage it was reported; for example in November 1919 one was reported, “A labor shortage in many of the apple growing districts in Oregon was reported during the month. In some of these districts a large number of packers arrived in the various towns with the expectation that they would make for \$6 to \$8 per day. When they found that they were unable to do this many of the pickers refused to work” (20). When wages were announced, growers were able to reduce competition against each other in terms of wages for workers, and workers would not be able to play one grower off another for better wages. Prior to the season, *Better Fruit* announced that the prices of commodities had been falling, as were wages, and growers needed to strategize together to decide, “how much reduction there should be in wage rates” (*BF* April 1922, 16). *Better Fruit* ultimately concludes, “Labor prices this season will be below those of last season, but to seek to force them too low will entail only dissatisfaction and trouble” (*BF* April 1922, 16). Such statements reveal the contradictory relationship between growers and their workers. On the one hand they needed to pay workers as little as possible while getting the maximum work out of them, and on the other they were so dependent on their workers they must be sure not to jeopardize angering a significant number of them.

V. Conclusion

As this chapter has shown, scientific management through the division of labor and supervision of workers became spatially, culturally and architecturally institutionalized during this period. A key change between 1890 and 1930 was the skills that workers needed to perform their work. Though growers valued the skills of pickers and packers, they also did not want to be in the position to have to depend on them. Beginning in around the mid-1910s growers began to use an additional method to increase the efficiency and quality of packing workers—the implementation of labor saving equipment. As we have begun to see in figures 5.6-5.9 new technologies aided the industry in evolving the divisions of labor, but we will see in much more detail in chapter five how important technology would become. At the same time growers also cut costs by finding pickers and packers who would work for less: “The cost of harvesting a crop of apples can be reduced in proportion to facilities afforded, through economy in material and the wages paid the work men” (*BF* Dec 1915, 26). As the industry implemented grading and packing equipment that deskilled workers and divided the work process still further, the potential labor pool of who could do the work increased. These strategies worked well together and were an essential part of the “supreme effort” C.I. Lewis emphasized in his rallying call to growers to continue to improve how apples were produced.

CHAPTER SIX

TECHNOLOGY

I. Introduction

Following a U.S. business tradition, early leaders in the apple industry sought technological solutions to solve their labor problems and increase profits. In 1903 at the Third Annual Meeting of the Inland Empire Horticultural and Floricultural Association T.R. Tannatt in his presidential address told growers and state dignitaries present, “You cannot follow in the mere groove of manual labor, research and the lights of Science become agents you call under command to render sure material reward” (Tannatt 1903). The pressure to produce better apples more quickly at less cost grew considerably over the next ten years as growers began to realize they needed the latest most up-to-date equipment in order to compete. Luke Powell of Prosser, WA urged growers to realize “Poor horses, poor machinery, poor wagons and poor farm tools coupled together with poor management are sending many ranchers down the long avenue of bankruptcy” (*BF* March 1914, 10). According to such industry leaders, growers had to have good horses, good workers under good management and the latest technology to succeed. Powell like other industry advocates emphasized the need to lower costs using technology.

By the time Powell’s article appeared, Henry Ford and the Ford Motor Company were producing 250,000 cars a year using a moving assembly line and interchangeable parts as keys to production. Ford did not invent the assembly line or the use of new technologies to facilitate it. Rather, Ford helped to further develop and popularize the idea of the assembly line. The

company's production methods of quick and efficient assembly became known as Fordism. Ford and his engineers were able to further develop the assembly line by taking established production ideas and combining them with new experiments to mass-produce automobiles as cheaply as possible⁶⁶. Early apple growers also attempted to take up these ideas and apply them to their industry. For apple growers, like for many commodity producers across the U.S. and the world, Fordism went hand in hand with Taylorism and scientific management to streamline production.

As has been noted in chapter five, the industry's key strategies to reduce the cost of production and to maintain an adequate seasonal work force involved Taylorization and Fordization. As part of the Fordization, growers rapidly implemented labor-saving and labor-replacing technology to save costs—in fact, technology ads for packing machines prominently touted their ability to reduce labor costs and eliminate as much need for workers as possible. Using scientific management and technologically driven assembly lines, many growers successfully reduced the production cost per box. According to E.H. Shepard, these approaches to reorganizing apple production on his orchard paid off significantly, as he was able to reduce his harvest cost per box from \$.415 in 1910 to \$.3197 in 1915 after “introducing methods of efficiency including grading machines.” Other growers followed suit (*BF* March 1917, 18). These technologies benefited growers in other ways as well, helping to deskill and control the labor force, and reducing the dependency on workers.

⁶⁶ For more on Fordism, see Bak, *Henry and Edsel: the creation of the Ford Empire*; Matthews, *Fordism, flexibility, and regional productivity growth*; Shiomi & Wada, eds, *Fordism transformed: the development of production methods in the automobile industry*; and Doray, *From Taylorism to Fordism: a rational madness*. Ford did not invent the assembly line, but increased its use; for a history of the evolution of production processes see Hoke, *Ingenious Yankees: the rise of the American system of manufactures in the private sector*; Hounshell, *From the American system to mass production, 1800-1932: the development of manufacturing technology in the United States*; and Mayr, *Yankee enterprise, the rise of the American system of manufactures: a symposium*. For the conditions of assembly line work and workers' relationship to assembly line work see Blauner, *Alienation and Freedom* and Linhart, *The assembly line*.

Growers introduced technology and the principles of Fordism wherever it would benefit the efficiency of production and lower the cost. But reducing costs was not the only attraction of new technology. Sometimes these steps actually increased costs, revealing a powerful urge to eliminate the human element in production, the worker. Figure 6.1 below provides a good example of an apple assembly line for the mass production of commodity apples. The fruit graders organize the space into a linear beginning from the back windows where men haul in fruit to the mostly women workers who sort and pack while men haul away the boxes from the line. The grader assembly line was centered in the photo, not necessarily the workers or the apples. In advertisements for the equipment people hardly appeared at all as in figures 6.4-6.8.

Figure 6.1. Assembly Line with Cutler Fruit Grader, c.1925.



Source: *Better Fruit*. Aug 1925, cover.

II. The Role of Agricultural Technology: Definitions and Background

Technology⁶⁷ is a broad concept, but nineteenth century scientist and philosopher Jacob Bigelow, who popularized the term, offered a simple but foundational understanding of it. He defined technology as the “practical applications of science” (1829, iv). In this way technology under capitalism has involved the practical application of science to solve problems for profitable production and to use this knowledge to create new machines to improve the efficiency of production to benefit competing producers to facilitate further accumulation of wealth⁶⁸. In addition to new machinery, technology also applied scientific thinking and experimentation to techniques, processes, and relationships that would also increase the profitability of production. Therefore technology in U.S. capitalist agriculture involved all of the scientific disciplines, including, physics, chemistry, biology, geology, and especially engineering, chemistry, and botany

⁶⁷ As could be imagined the literature on technology is extensive. For general history on technology and its evolution see Cutcliffe & Reynolds, eds., *Technology & American history: a historical anthology from Technology & culture*, MacKenzie & Wajcman, eds. *The social shaping of technology*; Pacey, *Technology in world civilization: a thousand-year history*. Pursell, *The machine in America: a social history of technology*; For the role of technology in agriculture see Hurt & Hurt, *The history of agricultural science and technology: an international annotated bibliography*; Hurt, *Agricultural technology in the twentieth century*; Mazoyer & Roudart, *A history of world agriculture: from the neolithic age to the current crisis*. For connections between technology and imperialism see Headrick, *The tentacles of progress: technology transfer in the age of imperialism, 1850-1940*, and *The tools of empire: technology and European imperialism in the nineteenth century*. For connections between technology and capitalist production in addition to Noble, *America by Design*, see Davis and Hirschl, eds. *Cutting edge: technology, information capitalism and social revolution*; Hugill, *World trade since 1431: geography, technology, and capitalism*; Noble, *Progress without people: new technology, unemployment, and the message of resistance*; Teitelman, *Profits of science: the American marriage of business and technology*; Tunzelmann, *Technology and industrial progress: the foundations of economic growth*. For studies of relationships between gender and technology see Green, *Race on the line: gender, labor, and technology in the Bell System*; Jellison, *Entitled to power: farm women and technology, 1913-1963*; Lerman, Oldenziel, Mohun, eds., *Gender & technology: a reader*.

⁶⁸ Of course technology is also used to maintain the system and give capital the advantage in the struggle between classes. Marx and Engels wrote extensively on the use of technology in competition for profit and accumulation. For instance see *Capital*, Vol. 1 and *The Grundrisse*.

applied to solve any problem or issues that growers, managers or workers noticed in the production process.

Though the roots of modern capitalist technology appear before the nineteenth century, it really accelerated in the middle of the nineteenth century. The U.S. emerged as a growing industrial powerhouse whose industrial might was further accelerated by the Civil War, in many respects the first industrial war. The 50-year period following the war saw mass industrialization across the country, where industrial science was applied to all aspects of life. Assembling mass produced goods through what was called the American system of manufactures, enterprising industrialists, especially in watch and arms manufacturing, began to use interchangeable parts, turn assembly rooms into assembly lines, and perfect machinofacture (Marx 1894; Hoke 1990; Tunzelmann 1995). At the dawn of the twentieth century, a technological and organizational revolution transformed capitalist production as Ford further elaborated the American system of manufacture by reorganizing the entire production process to coordinate the complex flow of goods down the line with new technologies and by tying mass production to mass consumption (Hounshell 1984).

Industry was not the only sector of the economy transformed; agriculture underwent profound changes, too. Various technologies were developed and implemented in the same spirit of industrial capitalist efficiency and productivity. There were major advances in row crops such as wheat and corn (Hurt 2002, 43-62). Combined mechanical harvesters and threshers began to be used on a wide scale in wheat during the 1880s and 1890s (Hurt 2002, 45). These reduced the number of workers needed and the work burden of farmwomen who had to cook for work crews (Hurt 2002, 45). Carey McWilliams also tied the drive to mechanize to insufficient labor beginning in the 1870s in California (2000, 274-275), but it is also clear that mechanization added vast benefits for growers even in the presence of a sufficient labor force. Though

mechanization and technological innovation had been impacting agriculture in the West for decades especially wheat and corn, it came later to apples because of the three-dimensional variety of the growth of apples and the delicateness of the fruit itself.

Once the apple industry began to take up and use technological solutions, their importance was immediately felt throughout the industry. Beginning around 1910 the yearly blitz of new equipment was paraded out in advertisements, articles, and experiment trains. Technology impacted all segments of production, though most notably in transporting and packing apples. Many different types of new inventions of equipment, techniques and experiments across all aspects of production and distribution of apples including heavy industrial machines such as fruit graders, conveyor systems, tractors, spray pumps were advertised in *Better Fruit* and brought into the production process. Fordist assembly line production and Taylorized organization influenced orchard and packing plant management and design facilitating the implementation of large-scale technological innovation. Throughout the industry technological solutions could be found in the irrigation, pesticide application, harvest, packing and the storage and transportation of fruit. We might categorize technology into three different areas that enabled and aided the apple industry: technologies of domination, technologies of production, and technologies of communication. Technologies of domination and communication will be briefly discussed, but the focus of the chapter will be on technologies of production.

Technologies of domination—domination over Native Americans, land, distance, water, apples themselves, and pests—were a key topic of chapter two, though also covered in chapters three through five; they included weapons, railroad, irrigation, dams, and pesticides. They involved applying science to improve domination and control of people and nature. Growers had to clear land in order to plant apples and it was reported that the “heaviest expense in clearing land is manual labor” (*BF* Dec 1910, 25-27). These growers experimented with various

technologies to clear stumps including using horses and many types of mechanical stump pullers as well as methods of burning stumps out or blowing them out with dynamite (*BF* Dec 1910, 25-27); see figure 4.5.

Irrigation involved the domination of nature, both water and land, and involved deep assumptions about what land was for and how to relate to it. Irrigation was also one of the most important and basic aspects of apple growing in Central and Eastern Washington. David McGinnis emphasized his vision of a techno-agro civilization: people teeming where orchard and concrete coexist and the land enables profit (*BF* Aug 1907, 5-6). The concept of human “improvement” of land by investing in property to make it produce goods for market was argued extensively by John Locke, and the founders of the U.S. looked to him to provide the ideological foundation of the new settler republic. According to his chapter “On property” in the *Second Treatise of Government*, if land and nature were not being “improved,” i.e., being used for commerce and profit, they were being wasted. Mechanical engineering for irrigation demonstrated this in the apple industry; one ad for a “Phillips Hydraulic Ram” noted “It is a simple and easy matter to utilize the water-power going to waste in flowing streams” (*BF* Jan 1911, 93). Irrigation pumps were constantly being improved to better improve the land. Irrigation began with simple canals, and then scientifically engineered canals, pipes and tunnels based on employing gravity. As growers spread across the valleys and built orchards on arid lands, new equipment such as hydraulic pumps and later gasoline motor pumps were used to move water (*BF* Aug 1907, 5-6).

Storage technology was key to the growth of the industry as it allowed fruit to be shipped over long distances in good condition. Cold storage warehouses and refrigeration cars kept fruit in condition and held off the natural processes of rotting.

Technologies of communication enabled growers to be in contact with markets and retailers on the other side of the country. An important early device for commerce was the telegraph and later the telephone for cross-continental communication. Duboff emphasizes the important business advantages during the second half of the nineteenth century that came with the telegraph, “widespread and often spectacular reduction in inter-market price differentials, information costs, and transaction costs” (1989, 21). The telephone superseded the telegraph around the turn of the century, and the amount of information that could be communicated directly between points without special training continued to increase. Advances in marketing, public relations and psychology were also important in encouraging demand for apples. One inventor even found a way to sidestep the retailer by coming up with a vending machine to sell apples on demand for a nickel. The “appleveda” was invented in 1926 and tested at first in Portland and the mid-Columbia region. Another model was tested two years later in “the largest Pacific Coast cities and also in several eastern cities, such as Chicago and Detroit.” It was hoped that the “appleveda” and other apple vending machines would find a home in railroad stations, office buildings, hotels, factories, pool halls, bowling alleys and schools across the country as a permanent channel for direct marketing of apples and a foil to retailers (*BF* March 1926, 10; Oct 1928, 8). Though the appleveda did not catch on, the spirit of marketing and making products available to consumers steadily persevered.

Technologies of production involved orchard maintenance, harvest, packing and transportation. The maintenance of the orchard was a year-round set of tasks that became more specialized and employed new equipment whenever growers could afford to buy it. For example, farmers were constantly looking for new methods to protect against the damage of an early freeze. In 1908 Bolton’s electric frost alarm system was announced (*BF* Dec 1908, 33). To fight off cold temperatures, growers also used smudge pots, and eventually, some growers installed

mini kerosene stoves to heat the orchards on cold nights. Tree maintenance also saw many technological advances; hand pruning shears became specialized and sold in hardware stores and mail-order catalogues, and long-pole pruners were also developed. Advances in horse-drawn weeders, harrows, and wagons over two decades of the twentieth century gave way to tractor-powered equipment. Harvest occurred only for short seasons each year but involved enormous amounts of labor. Orchard developments included orchard design such the layout of trees, the ways trees were pruned and the density that trees were planted. Technological advances in picking equipment could be found in fruit receptacles, ladders, wagons, and boxes. Special packing tables were built, followed by mechanical graders and sorters. Gravity conveyors were introduced in the first decade of the twentieth century and became increasingly complex over the next years. Box-making and nailing machines also saw early introduction and improvements.

A major segment of what Fahey refers to as the “structure of service and manufacturing businesses” that became dependent on the apple industry were the technological equipment manufacturers. This segment of businesses began early in the history of apples in Washington constantly pushing the latest invention on the industry. Some of the new machines and ideas became the foundation of the industry such as the gravity conveyors, tractors, and the mechanized graders and sorters. Other new inventions seemed to vanish as quickly as they appeared like the backpack pesticide spray system, rotating packing table, or the use of electricity, oil sprays, or bats to handle pest problems⁶⁹. At the same time that a segment of technological producers became dependent on and grew with the apple industry (and other commodity industries), much of the apple industry became dependent on the latest inventions that gave them

⁶⁹ Though these did not become useful in the apple industry, though do reflect the amount of thinking that was occurring to solve the problems of the industry and some of these ideas caught on in other places. For example electricity to kill bugs became the backyard bug zapper and back pack pesticide sprayers have been used in other crops such as coffee

a competitive edge or means to squeeze every last drop of profit out of the production process. Growers became dependent not only on the new technologies, they also became dependent on the banks that loaned them the money to buy the machines and equipment. Ultimately, the real beneficiaries of the technological revolutions were the banks, which by the time of the depression were able to profit on recollecting debts by taking the land of many farmers.

III. Apple Technology Examples

Growers implemented new technologies in every aspect of apple production and in all parts of the orchard, packing shed, and all processes between. But various technologies have proved to be key in revolutionizing the industry by reducing labor costs and the amount of labor needed per box produced. The industry was able to save labor costs with picking equipment like ladders and picking vessels, packing equipment especially graders, and moving equipment such as conveyors, tractors, and trucks. It is important to look at a few of these technologies in depth to see the impact that technology had. Every five years or so a different phase of production saw a wave of new technology sweep in and change how apples were produced. From 1905 to 1930, waves of new technology appeared and appealed to the grower seeking to cut costs. First, between 1905-1910 manufacturers introduced packing tables, box presses, farm wagons, and specialized ladders, then 1910-1915 gravity conveyors, power sprayers, fruit graders, and tractors, then between 1915-1920 trucks, next-generation graders, sprayers, and finally, from 1925-1930 fruit washers.

Picking Technology: Ladders and Vessels

Improvements in picking equipment such as receptacles and ladders began with the first “progressive” growers in the 1890s and saw some of the earliest significant technological (and managerial) changes. As in orchard maintenance tools such as pruning shears, early picking equipment often consisted of common equipment for general use that was adopted for orchard use, but as the apple industry developed these items quickly became specialized devices specifically redesigned for the apple industry. Two early examples in the harvesting process were picking receptacles and ladders.

Early receptacles were unwieldy, rigid wicker baskets or metal pails that pickers held across the forearm. Orchard workers used them throughout the state in the 1880s and 1890s, and even up through the second decade of the twentieth century they could be found in orchards. They limited the mobility of the picker and the amount of apples the picker could reach and pick. Canvas or cloth sacks tied around the neck and waist were also used. But the combination bucket-sacks also tied around the front of the picker but with a sturdy central oblong pail portion for protection of the fruit became popular in the early twentieth century. These new receptacles increased the mobility of pickers, allowed both hands to be free to pick, put the weight of the fruit on the torso and legs instead of on the arm, and reduced the amount of bruised fruit. An advertisement for “Ogburn’s Fruit Gathering Vessel” of Wenatchee (see figure 6.2 below) emphasizes the amount of time and money their product saves growers and shows the “old way” with basket and the “new way” with bucket-bag vessel (*BF* Feb 1911, 64). The ad tells growers “money saved is money made” and shows the gold medal display from the 1910 Spokane National Apple show. A variation of this bucket-bag vessel became was introduced by Wells and Wade Picking Bucket and was used widely; later it became the standard in the industry.

Figure 6.2 “Ogburn’s Fruit Gathering Vessels: The Latest Invention.”

A Number of these Vessels Given Free

Every reader of “Better Fruit” should write at once and advise number of vessels he can use in 1911. This information is solicited to secure estimate of how many vessels to manufacture, so your orders can be filled promptly. All fruit growers writing not later than April 1, 1911, will receive special order blank with terms upon which a number of these vessels will be given free. Don’t fail to write now.

Special terms granted to dealers and agents in their respective trade districts. **Secure your territory for 1911 now.**

ALL GOODS SHIPPED DIRECT FROM FACTORY

Manufactured by
WHEELING CORRUGATING CO.
 Wheeling, West Virginia
 For J. H. OGBURN, Patentee

For territory and terms, address all applications to

J. H. OGBURN
 WENATCHEE, WASHINGTON

The Old Way
25% Bruised

The New Way
Less Than 5% Bruised

"Ding The Luck
25% Bruised"

"Ah There
Less Than 5% Bruised"

ILLUSTRATING OPERATION, OLD AND NEW WAY

Source: *Better Fruit*. Feb 1911, 64.

Ladders began as common stepladders, but because of the need for mobility and quick stability manufacturers designed and built specialized picking ladders with wide bases and lighter materials. Photos from the first decade of the twentieth century show a wide variety of ladders from the common stepladder, to ladders that leaned in the trees to tripod ladders. Tripod ladders from Paoina, Colorado had steps of shorter length tacked to a central leg are promoted in *Better Fruit* in its first issues. These ladders were light and maneuverable and pickers could avoid knocking fruit from the tree (*BF* Sept 1907, 6). Such new equipment saved money but also cost money and required an investment that not all growers could afford. But even the purchase of the simplest and most common equipment could create a competitive edge. Another approach to picking that avoided extensive ladder purchases and saves time during harvest is offered by

Lowell Judson. Judson encouraged growers to recognize how costly it is for pickers to have to go up and down ladders, and advised pruning in such a way that increased ground picking. But Judson reminded growers that ladders were necessary, and that climbing trees should be absolutely avoided so as not to damage the trees or to make apples fall to the ground (*BF* Sept 1906, 8). Another grower encouraged his fellows to be sure to have plenty of ladders around and to replace ladders with new ones as they get old (*BF* Sept 1915, 17). Over time the light and well-built tripod ladder with a wide base and a short flat top platform became the standard throughout the Pacific Northwest and the U.S. Additionally, a cornered top instead of a step became an important compliment that could be maneuvered into the crotch of a branch for climbing into the middle of the tree. Though ladders were basic pieces of equipment that required some investment, good ladders were an easy way to save on picking labor costs because they saved time and effort on daily basis during harvest as they were stable, easy to move between trees, maneuver within trees, and easy to climb quickly.

There were various attempts to modify or replace the ladder to save time and labor. One short-lived solution⁷⁰ that helped to avoid going up and down ladders and allowed for hands free picking was Galligan's orchard cart. This combination ladder and cart was a platform supporting picker and boxes that could be wheeled around the orchard. The picker would by-pass the bags and bruises of dumping the fruit in the boxes by putting apples directly in the box, and the box could then be loaded from cart to wagon (*BF* Sept 1907, 18). There is no other mention of the orchard cart beyond this photo, perhaps because it is not as flexible as a ladder and was probably much more expensive. Another version of Galligan's orchard cart was Swengel's Portable

⁷⁰ Though perhaps this was an idea waiting for its time to come. Beginning around 2000 some growers started using tractor-pulled carts with pickers standing on three different tiers of the cart while being driven down specially designed orchard rows. Instead of having an assembly line pass in front of them, workers are actually on the assembly line.

Orchard Ladder. It was taller and had a longer platform to stand on, but the point was the same: “Fruit gathering directly into the boxes; no pouring and bruising...Picker stands comfortably on the top of the ladder, making a wide range at once. This enables him to do twice the amount of work usually done on an ordinary ladder” (*BF* July 1911, 68). Another attempt to make picking more efficient by replacing the ladder was the “fruit picker” Bastion Pole Picker (*BF* Aug 1920, 23). It was made by the manufacturer of the successful pole pruners, Northwest Fence and Wire Works of Portland. The pole picker was not widely adopted, but these attempts to develop new orchard equipment showed how serious growers were becoming about cutting costs and how interested inventive entrepreneurs were in making money from apples as well.

The key changes that were made in the orchard that were taken up across the industry combined the new ladders and picking bags mentioned above with sophisticated divisions of labor as noted in chapter five. With the sturdy but maneuverable bucket-bags and a variety of ladder sizes and shapes growers were able to organize a system of production that was scientifically managed based upon different tree heights. The bucket-bags enabled easy movement and allowed pickers to have both hands free to climb the ladder and pick the fruit. Different pickers would use different size ladders for different heights and different shaped ladders for the interior or exterior of the tree. In larger orchards that could afford the equipment, growers found this to be the most economical means of picking the fruit. But even smaller grower found that getting quality orchard equipment was cheaper than the more high-tech machines that were beginning to arrive in the packing sheds.

Packing Technology: Grader/Conveyor Assembly Line

The most dramatic changes of technology in the apple industry over the period from 1890-1930 (but especially 1910-1925) were in sorting, grading and packing. Unquestionably, these forty

years saw an absolute revolution in the process of packing apples for shipment. Over this period the main industry trajectory moved from workers packing directly on the orchard to centralized packing sheds on or near an orchard to cooperatively-owned regional packing plants or factories made up of a vast assembly lines of mechanical graders, mechanical washers, packing stations, and mechanical box presses, which were all connected by conveyors.

Growers organized packing in the early industry right in the orchard with limited and flexible divisions of labor and very little use of technology. Packing was labor intensive and involved going through mounds or bins full of apples finding apples of the same size and of the proper grade and organizing them quickly into the boxes so that they fit tightly in the boxes. The first equipment growers introduced to make the process more efficient was the specialized packing table. The earliest attempts at sorters was alluded to by NG Blalock who in a speech before the North West Fruit Growers Association mentions “an automatic grader” (NWFGA 1894, 11) These did not catch on in an any practical way for another generation. Packing tables were the principle piece of packing equipment used in the orchards and packing shed up through 1910. But the tables were hard to move around and became more useful as permanent sheds were developed. These specialized tables were designed with a cloth surface to hold the fruit and arms on each side of the table held the apple box being packed. Pickers and haulers would dump a load of apples on to the cloth surface and the packers would grab apples from here and pack in the boxes. Major technological change in packing came about as packing was centralized on the orchard. Apple box assembly machines, label pressing equipment, and lidding machines were all available for purchase prior to 1910 (*BF* Aug 1908, 37). Graders and sorters became industry standards between 1910 and 1920, and apple washers became widely used after 1925. As Lavern Mabbott points out “Methods and machinery in use in the packing sheds under went revolutionary change in the era. The transformation was achieved to meet the necessity of

greater economy in time and labor, and to meet the factor of increasing production” (1940, 52).

Figure 6.3 shows the revolutionary changes in the packing process over a twenty-year period.

Figure 6.3. The Evolution of the Apple Packing Assembly Line.



Source: Composite of Figures 4.5-4.8: c.1905, c. 1910, c.1915, c. 1925

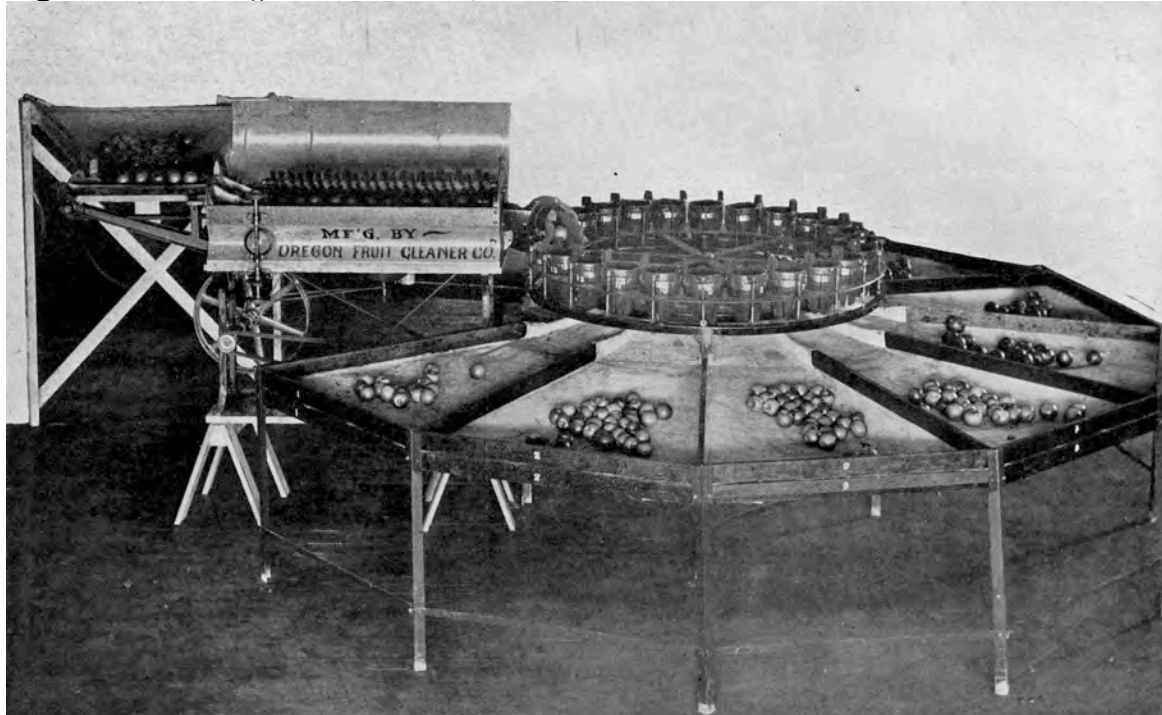
The creation of a stationary location where packing was done facilitated the incorporation of various technologies. One interesting invention was “Parker’s revolving packing apparatus” that rotated around a central spindle (*BF* Sept 1907). This allowed packers to pack different sizes at one time and when a box was filled it could be spun away and removed by another worker. Though the rotating packing table was a novel idea and other variations on these round packing tables appeared, the industry moved to a more linear model of packing in which apples moved down a line where packers could grab them and around 1910 the first graders were being installed. In 1910 and 1911 packing machine catalogues began appearing and by 1912 packing machines were advertised regularly in *Better Fruit*. An early grader, the Manville, won the gold medal at the Spokane National Apple show in November 1911 and was

advertised in *Better Fruit* the following month. It promised to “reduce the cost of grading and packing” and its maker was sure that “all growers are planning to install this grader in their packing sheds the coming season” (*BF* Dec 1911, 52). The Manville graded apples by passing them down a long cloth belt and measuring them using holes that sized the apples by allowing them to fall through onto a cloth-lined table where the packer of that size grabbed all the apples and arranged them in the box. A more advanced model came along from Schellenger in 1912 that required one worker to spin a “check to check” sizer that sorted the apples through holes into six different sizes (*BF* July 1912, 20). Six different packers would then pack each separate size. The sizers moved apples quickly along to packers who were arranged in semi-circles around the sizer, but they also deskilled packers by doing the work of sizing that packers used to do. This made the packing quicker as packers didn’t have to hunt for similar sized apples and packers only had to learn a limited number of packing arrangements (see figure 5.10) for the packing sizes the grower assigned them to pack. As growers increasingly settled into using central locations to pack fruit, grader designs began to be developed that were more attuned to the new conditions and advantages of larger and more centralized indoor locations.

From 1910-1915 new brands and new innovations were constantly appearing. May, June and July in each of these years were especially big months for advertising fruit graders as it gave growers enough time to order and have the machines installed before the heavy picking season in began in September and October. The years of the biggest advertising for technology and the biggest editorial push coincided with the years of the largest crops 1912-1914 when the millions of new trees that had been planted in years prior began to bear fruit. In October of 1912 the Oregon Fruit Cleaner and Grader introduces its motor powered machine. In the May 1913 *Better Fruit*, the first ads for the Cutler Manufacturing Company (established 1912) automatic fruit grader appears and continue to appear nearly each month over the next years. The Cutler Fruit

Grading Machine Co. of Portland, Oregon, was one of the most important companies in fruit grading machine manufacture—by the mid twenties Cutler’s labor-saving machinery was used in New Zealand, South Africa, Europe, and South America besides the U.S. and Canada. The 1913 model was a basic assembly line grader and sized apples as they are pulled by conveyor belt down the length of the grader. Like the Manville, the Cutler graders sized apples based on measurement. But the Cutlers were more precise and could be set to ten sizes (as opposed to six). As the apple reached the calibrated size, it dropped through onto cloth netting where the packer grabbed it. The Cutler grader, like the Manville was also a long line with a conveyor belt that moved packing one step closer to an assembly line. The advertisement appealed to “businesslike fruit growers” and promises that the grader will save packinghouses “5 to 7 cents per box.” A testimony in the ad proclaimed, “ The two regular packers whom I employed averaged 121 boxes each in 10 hours through the entire season. These same packers working for me the previous year did not average over 65 boxes each per day” (*BF* June 1912). With various graders on the market promising to reduce labor, and to pay for themselves within the first year or two, the technology began to be installed widely. According to Mabbott, “The continuous improvement in machinery made it possible to pack and sort continuously, to get greater uniformity in size, and at the same time to segregate the apples into different grades” (1940). The “Oregon Grader” in figure 6.4 below was popular when it first came out, most likely because it could easily fit in a smaller packing shed. But this design did not last very long as it did not fit the assembly line model as did the Cutler grader in figure 6.5. The Cutler graders and other assembly line style graders continued to grow in length and sophistication over the next twenty years.

Figure 6.4. Oregon Fruit Grader, c. 1912.



Source: *Better Fruit*. Aug 1912, 12.

Figure 6.5. Assembly Line with Cutler Fruit Grader, c. 1913.

If you are growing apples for profit you will be interested in the saving in grading, sizing and packing which is possible with a

CUTLER GRADING AND SIZING MACHINE

*Reduces
the cost
of
every
packing
house
operation*



*Invest
your money
in a
Cutler
machine
ONCE
instead of
unnecessary
labor
each year*

The grading, sizing and packing of the fruit are combined into one continuous operation. Two grades of fruit and ten sizes of each handled at once. One commercial size only is delivered to each bin so that an unskilled packer becomes quickly proficient, no further selection for size being necessary. Floating bins of large capacity prevent overcrowding and make *continuous packing* possible. It doubles the output of your sorters and increases the packers capacity from 25% to 50%. *Right Now* is the time to commence planning for packing house economies for next season. Write today for descriptive circular and prices.

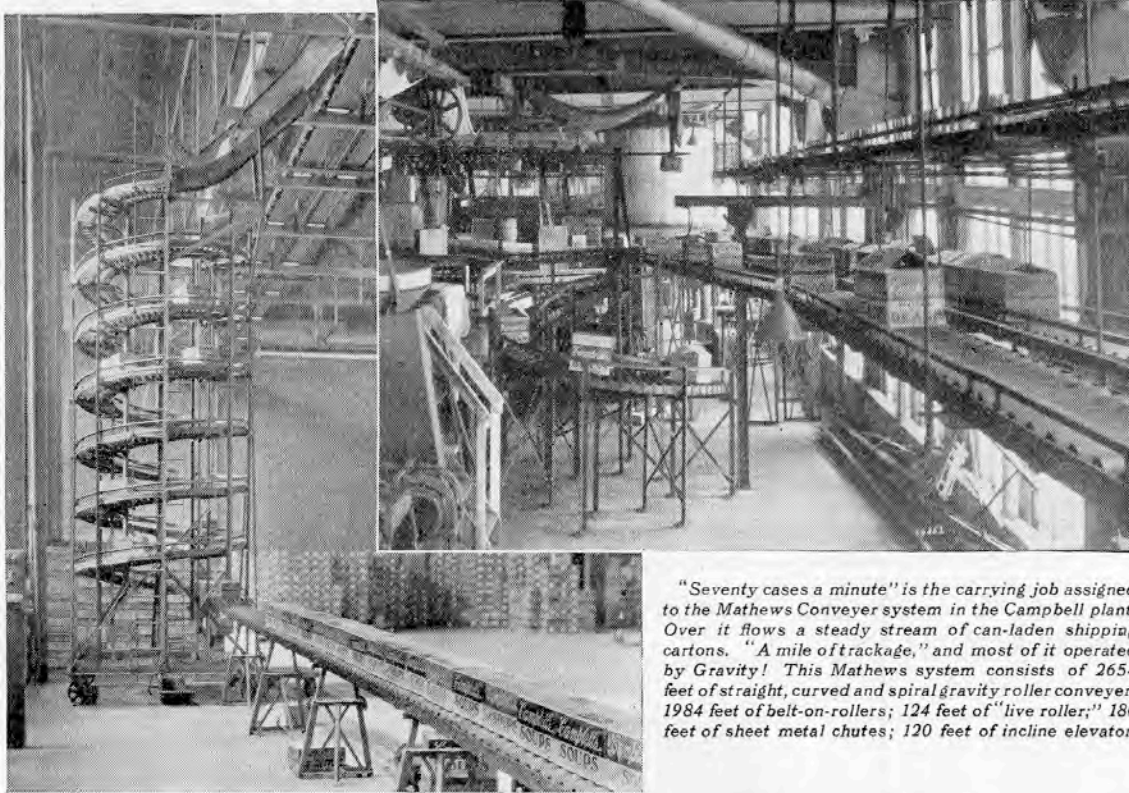
The Hardie Manufacturing Co., 49 North Front Street
Portland, Oregon

Source: *Better Fruit*. July 1913, 30.

Manufacturers worked to improve graders and sorters each year so that there was always an advantage to having the latest equipment. For example, new models began to rotate the apples as they came down the line so that a packer could look for any blemishes before she picked up a piece of fruit saving her from having to inspect it as she packed it. At this point, mechanized graders still remained autonomous line units. But according to S.V. Beckwith, general manager of Rogue River Fruit and Produce Association, studies of “community packing houses, and their general efficiency” and the industry began to see the packing house as a whole unit, a factory, in which “as is true in commerce and manufactures, effort must be made to reduce hand labor to the minimum. Not only must there be good equipment, but it must be so arranged that it allows for speed, system and lack of confusion.” Beckwith goes on to say “the fruit grader, or what had better be termed the fruit sizer, and the gravity carrier have come to stay” (*BF* Oct 1916, 7).

Gravity carriers, also called gravity conveyors, were simple machines that used rollers to transport boxes, both full and empty, from one place to another, as in figure 6.6 below. These conveyors helped the packing factory become a seamless unit that could be organized for maximum efficiency with minimal handling labor.

Figure 6.6. Assembly Lines with Mathews Gravity Conveyers, c. 1920.
Parts of the Mathews Conveyor system in the Joseph Campbell Company plant at Camden, N. J.



"Seventy cases a minute" is the carrying job assigned to the Mathews Conveyor system in the Campbell plant. Over it flows a steady stream of can-laden shipping cartons. "A mile of trackage," and most of it operated by Gravity! This Mathews system consists of 2654 feet of straight, curved and spiral gravity roller conveyor; 1984 feet of belt-on-rollers; 124 feet of "live roller;" 180 feet of sheet metal chutes; 120 feet of incline elevator.

From the cars, through the plant, and back again—via Gravity

Source: *Better Fruit*, July 1920, 17.

On gravity conveyors boxes were placed on one end where the rollers were slightly higher, and they then traveled "downhill" sometimes across great distances, through curves and down corkscrews to the next station of the line. This eliminated the need for handling labor that would cart, carry or scoot boxes around the warehouse, from orchard truck into the warehouse, or from the end of the packing line to the truck. With the introduction of gravity conveyors around 1910 the packing plants began to take on the feel of packing factories that over the next ten years developed in some places into a seamless and colossal packing complex. These centralized packing factories developed and spread throughout the apple regions of the Pacific

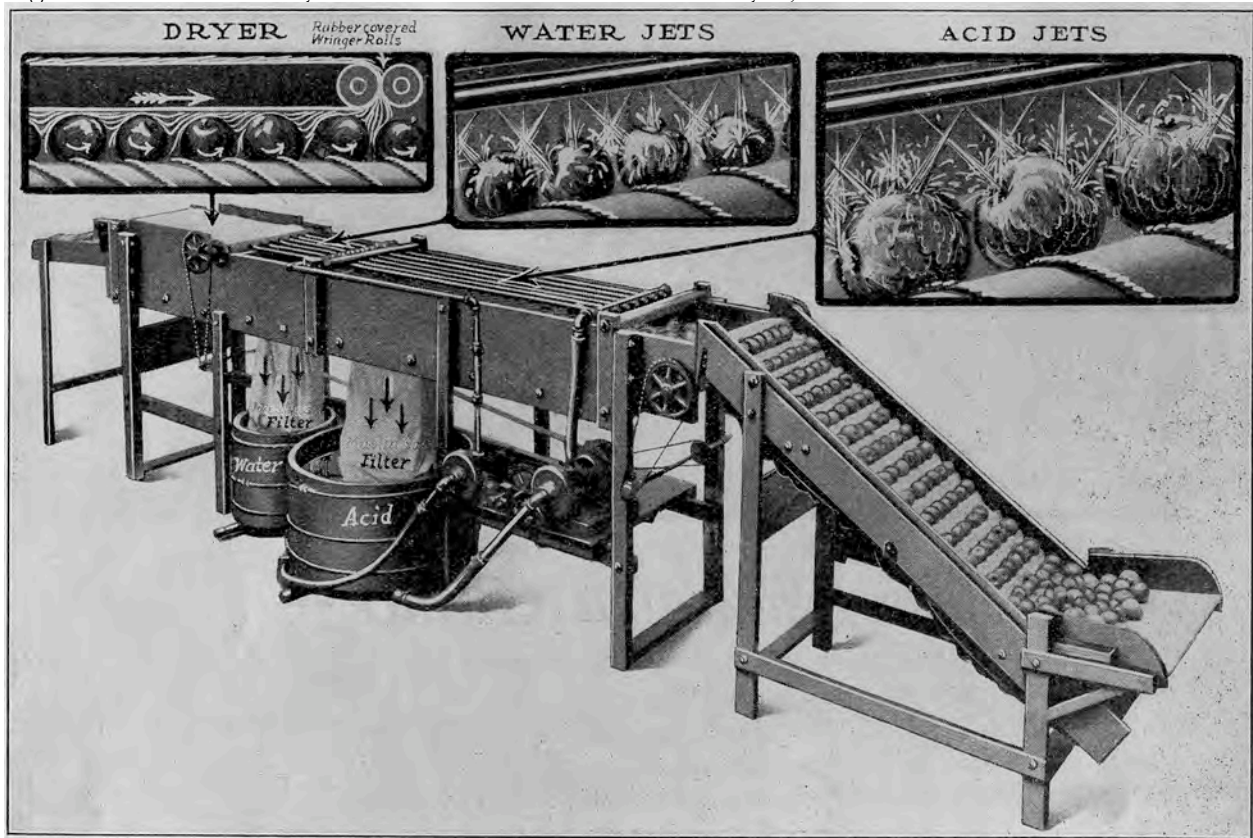
Northwest, making it harder and harder for smaller independent growers to compete, but significantly reducing labor costs and the number of workers needed.

Lead Arsenate Controversy

In the mid-1920s, English apple merchants and consumers began to object to the lead arsenate spray residue on apples shipped from Washington. As was noted in chapter five, orchardists used this pesticide spray to combat the codling moth. Over the second decade of the twentieth century with the growth in the number of apple trees planted in Washington came a growth in codling moth and other pests. As the problem grew extension stations and horticulturalists sought new remedies but in the meantime many orchardists resorted to what they knew, which was to spray more lead arsenate. Similar warnings about spray residue on fruits had gone out before as in June 1920 when *Better Fruit* warned growers about complaints of spray-covered apples in Eastern U.S. markets. At the time *Better Fruit* advised wiping or being more careful about how spray was applied. But in January 1926 when *Better Fruit* began discussing the lead arsenate controversy in England, *Better Fruit* had a different reaction and called the controversy the “poison canard abroad.” But pressure mounted as the presence of spray residue impacted trade with England. In August of 1926, *Better Fruit* relented and stopped denying the problem. Though *Better Fruit* maintained that British regulations were too stringent, *Better Fruit* stated, “adoption of careful wiping practices is the only solution” (*BF* Aug 1926, 12). Economizing in the orchard directly caused this and other such problems—due to both the speed of spraying as growers used heavy sprays powered by the might of gas engine sprayers to quickly blanket trees and to the elimination or neglect in wiping to reduce labor costs. Growers had to get fruit to market as quickly as possible with the lowest labor costs possible to have an advantage over other growers in the market.

In response to the crisis and in effort to have a consistent industry-wide response that would prevent any grower from having an advantage, the industry adopted new standards for itself. But growers feared these new industry standards would require more labor—labor that rail and retail would not fund but that the growers themselves would have to pay. This explains why the industry was always resistant to regulations—costs to growers. But immediately as the controversy erupted in the winter of 1925-26, the top fruit grading machine manufacturers began building new automated washers and advertising washers and washer components for packing assembly lines. Mechanized cleaners had been around before but demand increased overnight with the outbreak of the lead arsenate controversy. Those who purchased or leased these machines hoped they would reduce the costs to maintain the industry's reputation through wiping the fruit. Moe Iron Works of Toppenish, Washington built the Moe Fruit Cleaner which “fits any sorting table” Moe advertised it in February of 1926, the month after the *Better Fruit* editorial board called the controversy “a canard” and six months before *Better Fruit* relented. Despite the fact that the industry itself first attempted to deny the seriousness of the lead arsenate controversy, equipment manufacturers recognized its seriousness and saw in it a real opportunity to make money. Ideal Grader came out with its Bristle Brush Cleaner under the slogan “They must be cleaned!” Cutler, a leading manufacturer of packing equipment developed its own Chemical Fruit Washing and Drying machines (see figure 6.7). Many of these washers used a boric acid solution to take off the lead arsenate. These machines worked well to remove lead arsenate and became standard across the industry.

Figure 6.7. Assembly line chemical fruit washer and dryer, c. 1927.

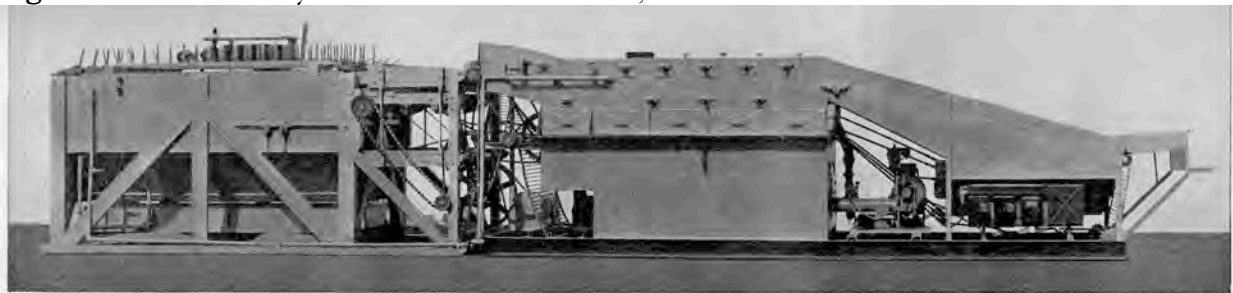


Source: *Better Fruit*, March 1927, 5.

The solution to the problem of lead arsenate sprays—the acid wash machines—caused another problem as the acid in the washing process removed the natural wax of the apple, which was necessary to prevent early rot. The Northwest Brogdex Company solved this problem by adding a waxer to its washer. Figure 6.8 below shows the Brogdex washer/waxer combo. The ad for the Brogdex waxer informs readers that after being washed the apples are sprayed with “a colorless, odorless, tasteless coating” that helps to preserve the “keeping quality” of the fruit (BF July 1928, 23). According to David Hall fruit industries experimented with various formulations of wax including “formulas calling for paraffin, beeswax, carnauba, spermaceti, and other ingredients” (2003, 371). These washers and waxers became yet another part of the assembly line in the apple packing factory. In this way companies offered a direct solution in response to an immediate

problem the industry was facing. It was, however, a technological solution designed to deal with the surface symptoms of the problem and thus further enabled an expanse in the problem—an increase in the use of lead arsenate. The solution offered by capitalist technology was to treat the symptoms with a technological commodity, like selling cough syrup to treat a smoker’s cough. This also points to the tremendous faith that the industry put in technological “solutions.”

Figure 6.8. Assembly Line Cleaner and Waxer, c. 1925.



YOU CAN PUT YOUR APPLES UP IN FRONT

BROGDDEX
COATING PROCESS
KEEPS IT

It's Application:
A colorless, odorless, tasteless coating sprayed onto the apples after cleansing.

Padded fingers on endless chains separate the apples to avoid stem punctures and propel them under this spray and over revolving soft brushes. The brushes spread the coating uniformly over every part of the apple, and remove all excess. The amount of coating is constantly under control of the operator.

It's Results:
Replaces any natural wax of apple removed in cleansing process and gives additional protection.
Prolongs keeping quality, especially after fruit is removed from cold storage.
Prevents scald, seals punctures, preserves color, retards ripening and development of internal breakdown and canker, retains original flavor and juicy crispness.

All the way from the sorting belt to the consumer's hand, by packing under

BROGDDEX SERVICE

Brogdex Service represents the most complete solution of the problems involved in removal of spray residue.
A total of \$75,000 was spent in experiments before this service was offered to apple packers. Since then two years commercial operation under severest conditions, in packing over 2,000,000 boxes of apples, have brought Brogdex Service to a high degree of efficiency in two essentials:

Mechanical Operation

Perfected machines handle fruit without injury, wash, dry and coat it, assure unbroken large scale operation at definite low cost per box.

Chemical Action

Definite control of formulas, temperature and application under varying conditions of fruit assure practically 100% removal of residue to meet world tolerance.

Brogdex Service consists of the application of two formulas and processes by the machines shown here, which are not sold but leased by the company which assumes responsibility for successful operation.

Send for Booklet

Brogdex Service is fully described in this booklet which contains also the comments of both shippers and buyers upon their experience with Brogdex Service and Brogdexed fruit.

NORTHWEST BROGDDEX COMPANY
YAKIMA, WASHINGTON

BROGDITE
WASHING PROCESS
CLEANS FRUIT

It's Application:
Apples are carried from padded tray onto endless chain-rod conveyors, passing first over a chute for pre-sorting and elimination of leaves, twigs, etc.

Brogdite Solution, principally borax, kept at constant effective temperature by approved automatic oil burner, is sprayed from both above and below upon the apples, which are rolled over several times in passing through the opposed sprays.

Similar sprays of fresh water in rinse compartment remove cleaning solution, and final spray gives double rinsing and constantly renews water in rinse tank.

It's Results:
Spray residue is effectively removed. Fruit sterilized against blue mold decay and canker spores.

Source: *Better Fruit*. July 1928, 23.

In the uproar over lead arsenate, ads and articles encouraged growers to spend more money on new technological equipment, but this was a common mindset through the apple industry and throughout the capitalist system. As problems arose the market’s invisible hand supposedly coaxed entrepreneurs to develop the necessary market solutions. Because this equipment was often expensive, such solutions favored the biggest growers who had the most

money to solve the problems facing the industry. Smaller and midsized growers also used their cooperative associations to purchase equipment. Thus, the regulations that industry leaders put in place on acceptable amount of lead arsenate spray residue caused an even bigger push toward central packing sheds as it was much easier to wipe and wash apples in a facility designed for such tasks and small orchard operations were not capable of such tasks on an economic basis (Mabbott 1940, 54). This pushed the industry toward deeper capitalization and the willing also to take on debt in order to finance the latest technologies.

Hauling Technology: Tractors and Trucks

Tractors began to be commonly used in orchards in the 1910s and trucks began to appear on a wide basis in the apple industry in early 1920s. The tractors replaced workers and animals in orchard hauling, spraying, and cultivating; Trucks offered a transport alternative to horse-drawn wagons and rail. Tractor hauling on the orchard and truck hauling between orchard and packing plant, like conveyor belts, helped to move the larger wealthier segments of the industry toward a more seamless “assembly line” from tree to packing plant to cold storage, railcar or ship.

Figure 6.9. Early Tractors as they appeared in advertisements, 1912-1915.

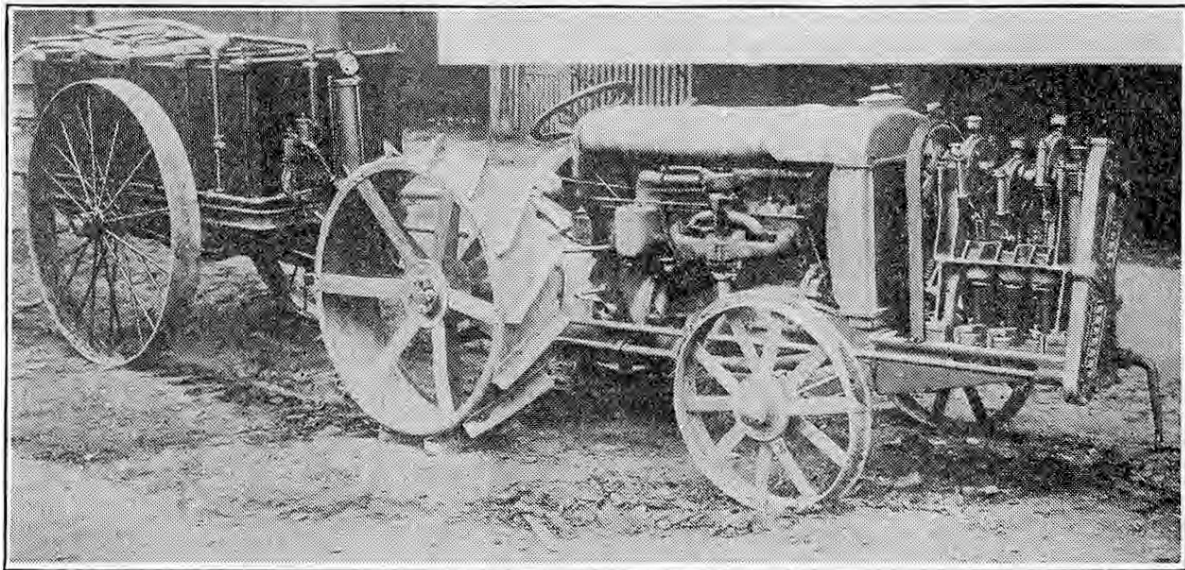


Source: *Better Fruit*. (top left and around clockwise: Caterpillar, Sept 1912, 12; Yuba, Dec 1914, 18; Rumely, March 1913, 26; Yuba, March 1915, 22d).

Because of its expense, the tractor did not get introduced into the orchards right when they first came out, but once larger fruit growers started to implement it, the tractor became widely used. In 1915 EH Shepard announced, “the small auto tractor has arrived, one that is suitable to the small farmer and orchardist. It has definitely been determined by actual practice that the auto tractor is a money saver for any man who has 100 acres to cultivate. There are many who believe it is a money saving proposition where the acreage is considerably smaller. [...] Everything which the farmer did by horse power can be done with motor power” (*BF* Feb 1915, 8). Tractors helped replace human labor and were seen as the next key piece of equipment since the fruit grader. Tractors worked much more quickly than a team of horses doing the cultivation work, thus saving more time to do spraying (*BF* March 1917, 18). Also, with a tractor fewer workers were needed as tractors could carry more weight than horses and fewer teams were needed. Tractors also helped to enable the implementation of other new technologies such

as larger and more powerful sprayers as in figure 6.10. In this way tractors not only did the work of replacing human and animal labor, thereby reducing labor costs, they also, like trucks, had a ripple effect of transformation throughout the industry by changing how the industry was structured.

Figure 6.10. Tractor, 1921, Hauling and Powering Sprayer.



Source: *Better Fruit*. Feb 1921, 7.

Trucks also promised to reduce costs for the grower. The first truck ads for the International Commercial Car began in 1911 promising to save “work, time and money” (*BF* March 1911, 81). The truck was rather small and was shown holding about thirty boxes, but as time passed trucks grew in size to a capacity of over 150 boxes in the early 1920s. As can be seen in figure 6.11, two horses would be required to pull this size load, which a small truck could do easily too. But the top speed on the truck was much higher than the top speed of the horses and the transition to truck was inevitable. In the 1920s International Harvester Company advertised its trucks by encouraging “modern” growers to consider horses to be “slow-plodding” and “an extravagant waste” whereas trucks were “the surest way to increase [farmers] productive time” (*BF* Oct 1922, 32). The trucking interests also positioned themselves as a technological solution,

like other “modern equipment,” to the problems of the grower. In one ad the truck solved the “hauling problems” with rail (*BF* July 1920, inside front cover). International Harvester Company marketed the truck under the banner of the “rail-less railroad,” and offered farmers a renewed sense of freedom and independence not found with freight carriers. Though of course a fleet of trucks at this time could not compete with long haul railroads and there were many hidden costs in truck maintenance and gasoline, they did offer a short haul solution from orchard to central packing factory.

Figure 6.11. Early Truck by International Commercial Car Company, c. 1910.



Source: *Better Fruit*, May 1911, 81.

Figure 6.12. Transition: Motor-Powered Truck and Horse Drawn Trucks, c. 1925.



Source: Manuscripts, Archives, and Special Collections (MASC). Washington State University (WSU). Pullman, Washington.

Whereas tractors were seen as a “requirement” by 1916, roughly ten years later trucks were seen the same way. There were too many advantages to each of them. Growers were compelled by competition to buy tractors. This compulsion increased in the industry not only due to the need to reduce labor costs and save time but also by the constant advertisements and a bandwagon appeal. An advertisement for the Yuba Ball Tread Tractor reminded growers that tractors not only replaced human labor, but they also replaced animal labor: “It takes up but little more road space than a two-horse team, yet has the power of twelve or of eighteen horses [...] it is easier to control than one horse” (*BF* March 1915, 22d). Replacing animals in this way had transformed the entire industry. It meant that instead of needing workers who looked after horses, orchards needed a mechanic. Instead of horse feed and stables, orchards needed gasoline, oil and garages. And instead of being able to get a horse through breeding or from a local stable, orchards needed to buy equipment made in far-off factories such as in Stockton, California or

LaPorte, Indiana. Mechanized orchard equipment further pushed farms toward industrial factory-like set-ups and toward still further monocultural orchards. It changed the nature of the local economy and further deepened local dependence on distant resources such as oil, steel, and rubber. Moving the fruit from the orchard quickly to central cold storage and packing plants, auto trucks further enabled the centralization of packing sheds beginning around 1914 in Yakima and Wenatchee (*BF* May 1916, 19), as well as the building of roads. Tractors and trucks, like bucket bags and fruit graders, encouraged the industry to move more fruit into expanding markets while reducing the costs of labor and carrying the industry toward becoming an agribusiness.

Figure 6.13. Unloading a Truck onto Gravity Conveyors at the Packinghouse, c. 1925.



Source: MASC. WSU. Pullman, Washington

IV. The Technology Compulsion

The key reasons for bringing technology into apple production are similar to other capitalist endeavors: increase profits by reducing costs and improving efficiency, control workers, and increase sales by standardizing the product. These reasons expressed themselves differently in different phases of the industry's development and different conditions of production. The reasons for bringing technology into apple production did not necessarily change over time, but over the first three decades of the twentieth century the rationale and urgency of implementation evolved based on the changing demands and pressures on the industry. As has been noted competition and the needs to find ways to compete and survive in the industry drove many of the decisions growers made. Competition and the drive for profit pushed growers to become more efficient. The push for efficiency and profits in turn drove the push for certain kinds of technology. An August 1919 editorial insisted that, "The fruit grower who adopts the latest labor saving appliances these days will accumulate the biggest bank roll" (*BF* Aug 1919, 16). The initial impetus was to save the time of the grower and his family and to solve common problems on the orchard, but as a price squeeze set in on growers and competition between growers increased they sought to reduce the cost of production and increase efficiency. The push to economize through technology on the orchard that had been accelerating from 1910 to 1915 merged with the need to solve these two simultaneous labor crises during World War I, labor shortages and labor agitation. The result was an even greater push for technology in the 1920s. Later as workers made wage and time demands growers sought to reduce the number of workers. Also as labor scarcity and worker organizing hit Pacific Northwest orchards in World War I and the 1920s, growers increasingly hoped to replace as many workers as possible with technology. Technology also gave growers more control in the work place by reducing the skills needed.

Along with other industry voices and leaders, *Better Fruit* was a key promoter of technological solutions. *Better Fruit* announced its purpose to serve “in the interest of up-to-date, progressive fruit growing” and this became its mantra. *Better Fruit* tapped into the ideology of progress and commercially applied science. The ideology of progress is both a sales pitch in conjunction with advertisements selling new products in *Better Fruit* as well as a frame through which growers understand and work to solve the pressures and problems they face. Notions of “progress” and “the progressive” are representative of the time but also a timeless aspect of capitalist production. Throughout the initial years of *Better Fruit* new machines and methods are reviewed, reported on and advertised usually tied to profits and labor costs. For example, *Better Fruit*'s editors review a new booklet, “a delightful allegory on the uses of farm machines” by International Harvester Company. The moral of the story is “The farmer in Thrift-Land [...] saves time and expense and preserves himself to enjoy in his old age his rapidly growing wealth by using the peerless I.H.C. farm machines and implements” (*BF* Oct 1909, 42). Within several pages of each other a common set of advertisements tempted growers with great savings and profits. An advertisement for Deere and Mansur Co. displayed their latest cultivators, orchard harrows and loaders and announced, “improved machinery and methods increase profits” (*BF* March 1911, 84). Fairbanks, Morse & Co. announced their “New Power Sprayer,” which was now much lighter 1300lbs as compared to the previous model at 2000lbs, which required less labor (horse and human) and was much more maneuverable and efficient. A full page ad for The Baker Manufacturing Co. showed readers how their new irrigation tool the “20th Century Grader Saves Time, Horses, Labor, Money—Gets Water on your Land.” Technological commodities called out to growers not only from the pages of *Better Fruit*, but across the scene throughout the industry as the drive to save labor, time, and money became pervasive.

Accompanying the ads in *Better Fruit* are economic analysis and editorial encouragement for farm machinery and labor-saving equipment. One article reminded growers, “Labor costs money, and it is possible that with any system that requires a large amount of labor to handle that the necessary number of men may not be secured when needed” (*BF* March 1911, 86). Another article (contributed by an anonymous reader) compared the U.S. with China, calling China “probably the richest agricultural region on the globe.” But because, according to the author, China was using “wasteful methods” and lacks “improved implements” the Chinese people are only eating rice. The author continued, “the same lack of progress is also to be found in many other countries” and the success of U.S. agriculture was due to “progressive methods and the adoption of improved time and labor saving implements.” All growers were encouraged by the author not to be backwards like China but to continue to improve their methods and buy the latest labor-saving machines (*BF* March 1911, 89). Efficiency, profit, and fear of labor scarcity and the discourse of progress (combined with U.S. exceptionalism and white supremacy) were the ongoing concerns of growers that both fed and were fed on by the manufacturers of farm implements and the competition in the industry.

Reducing Labor Costs

Efficiency in production saved growers money by reducing per unit labor costs. In 1910 as the price of apples on the market began to drop and became unstable, E.H. Shepard called on growers to itemize their costs and begin to chip away at their expenses. He told growers that they should aim to cut their picking expenses from 7cents to 4 cents and packing from 6 cents to 3 cents (*BF* Dec 1910, 44). Seven years later Shepard commented on the many changes he has seen in the industry due to technology, “The editor started the ball rolling with investigation of this subject...which commanded universal attention and resulted in many growers introducing

methods of efficiency, including grading machines, so that the cost has been greatly reduced (*BF* March 1917, 18). He went on to say that after grading machines the next big cost reducer will be a tractor, “by the use of tractors the cost of cultivating can be materially reduced” (*BF* March 1917, 18). These two pieces of equipment, the grader and the tractor, were two of the most important technologies on orchards from 1910 to 1930. Because of their potential to save money by reducing labor costs and improving efficiency they received significant attention and were constantly improved.

E.H. Shepard encouraged growers to implement any new equipment that would reduce the cost of labor and eliminate waste. He wrote, “with the increasing cost of living labor is demanding [...] it is important that every fruit grower should introduce efficiency methods to the fullest possible extent to make up for increased costs so far as possible” Shepard explained that handling, moving boxes both packed and empty, is a waste of labor and pointed out that a key new device, that “some few up to date ...packing houses have introduced,” was the gravity conveyor, “if our warehouses had been equipped with gravity carriers last season the work would have been done much easier” (*BF* July 1917, 12). An anonymous “experienced fruit handler” wrote, “In packing out the 1919 crop of apples, labor-saving devices will play a more important part than in former years.” There were various reasons, the writer explained from labor shortage to new acreage producing fruit, but the “main reason” for the widespread adoption of “modern equipment by the progressive orchardist” was its efficiency and economy, “the latest and best makes of picking ladders and utensils, wiping and grading machines, packing tables, box presses and conveyors have demonstrated so thoroughly to the grower that greater profits will follow their use that few orchardists who have crops large enough to establish a packing house now attempt to market their crops without having most of these appliances” (*BF* Sept 1919, 7). With analysis such as these *Better Fruit* made it clear to all readers the absolute necessity of technology.

Deskilling and Controlling Workers

By implementing new technologies growers created a bigger labor pool by reducing the skills workers needed to work in the industry. A larger labor pool gave growers more control over wages. Before the full implementation of grading machines, packers often took special classes that some districts such as Hood River required of its packers. Packers had to be able to quickly grab the best fruit of uniform size and gently pack it into the box in one of a dozen or so patterns. A packer had to have a good eye, careful hands, consistent judgment and two quick hands even before getting to the ability to spatially arrange the assortment of the apples packed into the boxes. Retailers and markets demanded uniformity and apple organizations mandated various standards for packinghouses (*BF* May 1916, 6). Packers were prized for their skills in the industry.

Machine graders and sorters eliminated the need for some of the key skills packers developed, and the machines were considered more consistent and thus maintained a higher standardization. An ad for an early grading machine invoked deskilling as a great reason to buy, “With this machine the inexperienced packer can do as good work as any of the most professional packers” (*BF* Dec 1911, 52). The Cutler grader in figure 6.4 made a similar claim, “an unskilled packer becomes quickly proficient,” and therefore there is no need for training and workers can easily be replaced. According to *Better Fruit*, the best way to standardize fruit was with a grading machine, “There is no one factor that is so much help in securing uniformity of size in grading and packing as the grading and sizing machine” (*BF* Sept 1915, 17). E.H. Shepard concurred writing, “Grading machines have become a big factor in developing more uniform packing.” Machine grading devalued the skills of human packers and further enabled standard market commodities. As the emphasis on efficiency and cutting costs increased, growers expected more of their workers, and introduced new scientific management methods as seen in chapter five. New technologies facilitated control of workers and their time. As packing plants became

more like assembly lines with stations connected by conveyors, workers were made to be increasingly stationary. This decreased the spaces for interaction between workers; in fact many packinghouses did not allow talking while packing (see figure 6.1 where the sign above the door reads “Don’t Talk.”). It also increased the sense of isolation and monotony of work.

Labor Shortages

Because of the perishable nature of crops any possibility of a labor shortage was seen by the industry to be the most serious obstacle growers encountered (Gamboa 2). Various labor shortages real and suspected caused panic in the industry. But the shortages in the seasons during World War I were some of the most severe the industry was to see during this period. These shortages were not something the industry ever wanted to experience again and thus shifted in a major way how growers looked at labor. Growers used technology to deal with labor shortages and potential labor shortages caused by bumper crops, industry growth or labor agitation. In addition to increasing efficiency and saving money there were other reasons to reduce the necessary labor and thus to reduce the industry’s dependency on workers. Labor shortages and labor agitation pushed growers to find alternatives to labor. In the summer of 1917 as the U.S. entered World War I and workers were required for industrial war preparations, growers began to feel the shortages of workers for harvest. Growers found workers in schools or prisons. The federal government helped recruit workers, including immigrant Filipino workers from urban areas and out of state workers from California, Texas, and Mexico. At the same time, labor organizers and workers began to agitate for higher wages and better conditions. Growers looked to solve this problem by organizing themselves and using various methods to crush workers’ attempts at improving their situations.

Early in the industry there were a few basic approaches to labor supply. E.H. Sheppard in the first years of *Better Fruit* offered one idea, to keep orchards small thus eliminating the need for extra-family labor (*BF* June 1910, 46-47). The Jeffersonian dream of “the pursuit of property” and small agrarian landholders as the backbone of the republic acted as a fundamental driving force at the dawn of the apple industry. The idea usually advocated by *Better Fruit*, of small orchard holdings of five, ten, and twenty acres put the grower in a position to give the orchard individual care and attention, which is necessary in order to produce fine fruit. Having a family on every ten or twenty acres would prevent labor problems (*BF* June 1910, 47). If farms are smaller the orchard family could do all the work necessary to harvest and pack the crop. Another piece of labor advice began to emerge for growers with larger orchards around 1910: they should seek to secure workers early: “it behooves fruit growers to give this matter just and due consideration, with a view to engaging in advance of the harvest time sufficient help to harvest the crop” (*BF* June 1910, 46). But such notions could not help the industry as a whole as it grew. Not only was the industry itself mushrooming from 1910 through 1920, but also large-scale orchardists continued to acquire land and build up vast apple estates and centralized packing factories developed outside of the orchards for massive production. As orchards grew and as large orchards prospered, more workers were needed and the two basic approaches to labor quickly proved insufficient.

Rumblings about securing labor began mid-decade with the large crop of 1914, which growers could not adequately harvest. In the fall of 1915 the US Department of Labor dispatched R.P. Bonham to assist growers in securing “the necessary amount of competent help” (*BF* Oct 1915, 16). and informed them of the U.S. Department of Labor’s Immigration Service in Portland. Dr. Suzzallo, president of the University of Washington, was also made state Chairman of the State Council of Defense and he recommended to growers, “let every method

of economizing labor be put into effect. This applies mainly to the grain farmers, where machinery can be used to economize labor” (*BF* Feb 1918, 8). Though it did apply in large part to wheat growers, this advice was also considered in apples and other tree fruit production. For example in 1918 sufficient labor was not available to growers, and *Better Fruit* advised, “This year it will be necessary for growers to equip their packing house with every possible labor-saving device, and any grower who has once used a grading machine would not be without it if it cost him twice the sum. [...] We would strongly urge every grower who has not already a good fruit grading machine to lose no time in sending for a catalog” (*BF* June 1918, 14). In August of 1917 the U.S. Department of Agriculture announced its “Farm Labor Organization Plans.” According to the USDA, the federal government was working for “nation-wide co-operation” to solve the farm labor problem acquiring “emergency labor” through the “existing employment service of the U.S. Department of Labor” by mass mobilizing in cities and population centers. The plan was subject to local need and local control and local officials considered retired farmers, college students, schoolboys, women and girls acceptable labor for recruitment. The plan met with only marginal success as Suzzallo noted in Feb 1918, “the last season was difficult because of a shortage in labor supply and strikes.” 1918, in Suzzallo’s opinion would mean even deeper labor shortages due to the two rounds of military draft and the need for workers in industrial war production. Suzzallo announced early planning for the 1918 crop and federal funding to extend the U.S. Employment Service. Suzzallo called on the use of labor-saving machines and on prioritizing labor sources: family first, stable community members second, and migrant labor, “least dependable at the present time” third. Finally, Suzzallo advised that growers find a common standard wage, to avoid competition among growers, and build standard but cheap housing, as some city workers refused to return due to “unsanitary conditions” (*BF* Feb 1918, 7-8). By 1919 the labor supply was more plentiful in some areas but still short in others (*BF* Oct

1919, 20; Nov 1919, 20). One article predicting widespread use of packing technology in 1919 cited a shortage of “expert labor in the fruit industry,” as well as a need for “better grade and pack,” for crops handled more quickly and economically. The article added “growers made a sufficient profit last year to allow them to invest in up-to-date orchard and packing equipment” (*BF* Sept 1919, 7).

Labor unions presented another kind of “labor crisis.” The Industrial Workers of the World (IWW or Wobblies) and other unions, such as the AFL’s Agricultural Workers Organizing Committee, attempted to organize apple workers. According to Greg Hall, the IWW was active in organizing agricultural workers in Washington fields and orchards as early as 1905, the year in which the IWW was founded. The IWW believed in uniting workers across craft and industry into “one big union.” The IWW was far better than most other white-led unions on the questions of race and immigration; many white-led unions did not allow workers of color to join and fought workers of color entering their industries. The IWW took an official position in support of Asian immigration, invited workers of all colors to join their ranks, and use their newspaper, *Industrial Worker* to cultivate a common sense of solidarity across racial lines, all in an effort to build “a multi-racial” union (Hall 2001, 57). But despite the sincere efforts of the Wobblies workers of color hesitated to join the IWW because it would mean abandoning “their own successful labor associations which were culturally their own” and because of lingering racist attitudes of some white workers (Hall 2001, 57-59). Immigrant and people of color groups formed community organizations such as Japanese, Filipino, and Mexican associations, mutual aid societies, and even unions.

In the West, Wobblies sought to “recruit the region’s class of largely unskilled, underemployed, seasonal and migrant laborers who worked in agricultural harvests, fruit packing, canning, construction, logging, and milling” and believed “seasonal workers, but

especially migrant laborers, represented a revolutionary class of workers who lived and worked at the margins of the labor movement despite their indispensable role in the West's major industries" (Hall 2001, 8). Workers had many reasons for a union (often wretched working conditions, long hard hours, short opportunity to make money) and advantages for building unions (perishability of crops and strong urban labor movement). But the IWW faced many challenges in recruiting agricultural workers, especially migrant workers; these included militant opposition from growers, the wide diversity of labor force along racial, cultural, and lifestyle lines, constant movement of workforce in myriad directions, shortness of work season and thus organizing season (McWilliams 2000, 264).

Despite these challenges, the IWW worked diligently to organize workers in Washington. The fight of the IWW in Washington included the famous free speech fights beginning in Spokane in 1909 and continuing in Wenatchee in 1910 (Mitchell 1992) and among other towns in Washington through 1916. The large number of available harvesters in 1909 and 1910 allowed growers to lower wages and prompted the IWW to set up a Harvest Committee to work on organizing and limiting the number of workers by setting up new locals and by convincing non-union harvesters that collective action was necessary to affect wage levels (Hall 2001, 136-137).

In order to achieve demands for improved working and living conditions, better pay, and a standard workday in apple work, Wobblies led and participated in various strikes: a 1918 strike in Yakima (*BF* July 1919, 29), a 1919 apple strike around Missoula, MT (*Spokesman Review* Oct 5, 1919) and a 1921 strike against mega-grower American Fruit Growers, Inc. Wobblies also used the tactic of sabotage, "striking on the job," to fight for better conditions sometimes by ruining boxed apples by digging a thumbnail into some of the apples or sometimes by ruining equipment (Hall 2001). Various suspicious acts of "vandalism"/sabotage occur 1919-1926 including the

blowing up of an irrigation standpipe which then flooded 700 acres in Yakima Valley ruining the crops (*BF* Aug 1919, 23), large scale thefts of apples (*BF* Nov 1921, 23-24) and numerous warehouse fires (*BF* Nov 1926, 20). It may be that many if not most of these acts of “vandalism” were coordinated by workers generally or segments of the IWW particularly.

At the entrance of the US into WWI, *Better Fruit* informed its readers of a government publication called *American Industry in War Time* and its leading article, “Stop the Strikes or Lose the War,” which emphasized the need for patriotism, for winning the war and the need for full cooperation between capital and labor. *Better Fruit* emphasized that “no differences should be permitted to arise if possible to avoid that will interfere with success” (Dec 1917, 15). An example this was reported in July 1919: “Quick action by a determined group of Hood River strawberry growers stopped a recent strike among berry pickers. Organizing themselves into what they called a body of ‘vigilantes,’ they went to the camps of a number of pickers who had been visiting ranches in that district and endeavoring to get the pickers to strike and [the vigilantes] ordered them to leave the valley” (*BF* July 1919, 29-30). *Better Fruit’s* November 1919 issue named the IWW in a news brief and informed growers that in response to fears of IWW organizing in apple districts. Grandview growers were reorganizing the “Home Guard” and in Hood River “prompt action by the authorities nipped a proposed IWW campaign in that section in the bud” (*BF* Nov 1919, 21). In Washington growers used several tactics as part of widespread and comprehensive anti-union and specifically anti-IWW strategy: raids on IWW halls and meeting places, infiltration by spies, arrest campaigns, tar and feathering of organizers, legislation and the use of law including the use during World War I of the Sedition and Espionage Acts, the spreading of rumors of biological warfare and an imminent invasion and the formation of “homeguard units,” the “Harvesters League,” and assorted vigilante groups often in conjunction with local law enforcement (Hall 2001, 131-133). In order to coordinate efforts to demolish the IWW,

Washington Governor Ernest Lister held meetings with other state governors and formed the Washington State Secret Service to develop “a cadre of spies” to fan out across the state to monitor the Wobblies and infiltrate where possible (Hall 2001, 141). The opponents of the IWW instigated infamous moments such as the The Bloody Sunday Everett Massacre on the city docks in 1916, the 1919 raid of the IWW Hall in Centralia and subsequent lynching of Wesley Everett. Class differences and conflicting loyalties between migrant workers and so-called “home guard” workers were also important hindrances to the success of the IWW. Home guard workers were residents of the community who would get regular and sometimes year round employment from a grower. These workers had a special relationship with the grower that in most cases they did not want to jeopardize and the grower used them as the first line of defense against labor organizing. This homeguard was what Gilbert was referring to in chapter five when encouraging growers to cultivate crew bosses who answered directly to the orchard boss.

Advertisers used the threat of the IWW and labor agitation generally to sell labor-replacing equipment. The IWW slogan “One Big Union” was mimicked in 1920 by the Mathews Gravity Roller Conveyor ad slogan, “One Big Labor Problem Solved” (see figure 6.13 below) (*BF* Aug 1920, 11). Such ads discussed reducing the number of skilled workers. The machines that came in replaced those workers. The “One Big Labor Problem Solved” ad, assured growers that, “Gravity conveying saves in a way that can be plainly seen—in smaller payrolls, lower costs, greater production” (*BF* Aug 1920, 11). The photos accompanying the text reinforce the idea of less labor, even the fantasy of labor-less production, by showing vast warehouses and long conveying lines with no human beings present—just boxes of commodities smoothly gliding and corkscrewing through warehouses and production plants. Mathews seemed to be responding directly to the threat of the IWW and workers organizing with this ad explaining “Gravity costs

nothing—draws no pay; consumes no fuel. Gravity reports every morning; no hands short. Gravity stays on the job; lives forever and never goes on strike” (*BF* Aug 1920, 11).

Figure 6.14. Mathews Gravity Roller Conveyor, "One Big Labor Problem Solved."



With a Mathews Conveyor system the California Associated Raisin Company can fill or empty this warehouse in one-fourth the time and with one-fourth the labor it would require to do it by wheeling, trucking or carrying. And note the floor space saved! Mathews Conveyers are just as practical in your line of business—indoors or out.

One Big Labor Problem Solved

YOU can't cut down productive labor without cutting down production. But you can cut down handling labor and thereby actually *increase* production. Here's how:

Convey by Gravity—to and from cars, floor to floor, operation to operation, warehouse to shipping platform, etc. Gravity conveying speeds up production by keeping the lines of supply and output open; hands busy; machines "fed".

Gravity costs nothing—draws no pay; consumes no fuel. Gravity reports every morning; no hands short. Gravity stays on the job; lives forever and never goes on strike. Gravity works most anywhere and carries most anything—boxes or bales, barrels or buckets, bundles or bags, cases or crates, cartons or cans, lumber or bricks, castings or pig, etc.

Gravity conveying saves in a way that can be plainly seen—in smaller payrolls, lower costs, greater production. Look into it. A letter or postcard brings further information and, if desired, a nearby Mathews branch sales engineer qualified and glad to discuss your particular problems. No obligation.

Mathews systems are the most thorough exponents of gravity conveying on the market. They are engineered systems. Each is specially adapted to the requirements of the business, plant, layout, handling routes of the concern it is to serve. Portable single units for light work, short hauls, etc.

Patented drawn-steel, ball-bearing rollers balanced true and shaped to hold objects to their course. Special rollers for brick and tile, bundled shingles, etc.

MATHEWS GRAVITY CARRIER CO.
133 Tenth Street, Ellwood City, Pa.

Branch Factories:
Port Hope, Ontario London, England

Member of Material Handling Machinery Manufacturers Association

MATHEWS
SPEED ECONOMY
GRAVITY ROLLER CONVEYER

Source: *Better Fruit*. Aug 1920, 11.

Filling and Creating a Need

Clearly, as seen in the “one big labor problem solved” advertising campaigns attempted to tap into the reality of labor crises. In July 1918, the Cutler Manufacturing Co. spoke directly to the grower in an ad devoid of the usual photos and drawings of Cutler’s equipment, “Mr. Fruit Grower: The 1918 apple crop will, in all probability, be the largest yet recorded. Also, there is certain to be the greatest scarcity of labor yet experienced, especially of experienced packers and sorters. With a Cutler Fruit Grader you can teach inexperienced help to pack and sort and handle your crop quickly and at the least cost. Write now for circular and prices” (*BF* July 1918, 16). And 1918 was a big crop, there were labor shortages, and workers organized to strike in Yakima and Hood River (*BF* July 1919, 29). Another Mathew’s ad alludes to labor scarcity, “Today’s supply of labor is far too precious—and uncertain!—its cost too great, to be consumed in such non-productive details as carrying or wheeling materials” (*BF* July 1920, 17). Fully in synch with the views of leaders in the industry such as E.H. Shepard and horticulturalists such as CI Lewis, reducing labor costs was a key theme in many advertisements. The Cutler Company’s earliest ads (see figure 6.5) for their grading and sizing machines declared, “Reduces the cost of every packing house operation.... Invest your money in a Cutler machine ONCE instead of unnecessary labor each year” (*BF* May 1913, 33). Mathews Gravity Roller Conveyor Company a major manufacturer of gravity conveyers announced, “Better profits with gravity conveying...by reducing labor costs. It enables two men to do the work of several. [By] Raising the market value of fruit. Less handling is required; consequently fruit reaches the buyer in better condition. [By] speeding work and eliminating delays” (*BF* June 1919, 20). Notably this ad, like many of Mathews’ ads, had no workers or nearly no workers in them, thereby reinforcing the message of labor saving and labor replacement. Other advertisers went even farther than reducing labor to the idea that it was possible to eliminate labor altogether. Price Manufacturing, a Yakima maker

of mechanized graders and sorters, for example announces, “The ladder to profit is the elimination of Expense. The steps of the ladder are the appliances that efficiently eliminate labor.” Next to the text is drawn ladder with the names of the labor-saving devices on each rung: sorters and sizers, nailing benches, box presses, elevators, conveyors, ladders (*BF* June 1920, 15). The ad communicated that the way to climb to success was built on eradicating the need for labor altogether.

Taken as a whole, advertisements for new technology created an overwhelming atmosphere in which buying the latest technological solutions seems normal, natural and perhaps even unquestionable. The advertisements throughout *Better Fruit* and other journals, the many catalogues, and the peer pressure in the industry did create technological momentum and created an atmosphere for most growers of feeling an absolute need for technology and for updates to it. No doubt, also, that *Better Fruit* and others in the industry were paid handsomely for their endorsements. However, most of the new machines did help growers save money and reduce their per-unit labor needs, which allowed them to compete. Many advertisers played on competition to entice growers to purchase their equipment. The advertisements facilitated the purchase of particular models or brands, but given the need to “economize” the subjective factors merely aligned with objective conditions were not the primary reason growers bought machines.

V. Conclusion

Though the use of technology was not even throughout fruit districts in the Pacific Northwest, there were general trends toward centralization, implementation of labor-saving technology, and toward the growth of large technological packing factories. Some of the most “up-to-date”

factories became the model of the entire industry. Other cooperatives in other districts hoped to achieve their levels of productivity and labor replacement. One was the Peshatin Fruit Growers' Association (between Wenatchee and Leavenworth), a division of Skookum Packers' Association. In 1922 Peshatin had nine electric graders and electric conveyor belts moved fruit in and down to cold storage, over to grading and then to packing. The plant was divided into two units and also had dormitories for the 225 seasonal employees. The packing plant had the capacity of packing 7500 boxes in a ten-hour day (*BF* Jan 1922, 8). The Spokane Valley Growers Union packing plant at Opportunity, Washington was a "mammoth modern fruit packing plant" stocked with fruit graders. These mega-packing factories were enabled by the new technologies, while they in turn drove new developments in machinery. Technology did not determine the path of the industry; the pressures of competition created the conditions in which growers, workers and others around the industry had to make decisions. Each drove the other.

Growers did get many of the promised returns from technology as has been noted throughout the chapter, but an additional bonus that was often emphasized in ad and article was that the machines paid for themselves. The ad for the Cutler grader in figure 6.5 announced that the grader would reduce packing by reducing labor costs because the machine required growers to invest their money once "instead of unnecessary labor every year." What was not mentioned was the maintenance and need to constantly upgrade. In 1920 in a minor news item, *Better Fruit* announced that the Yakima Horticultural Union bought four new graders (3 Cutlers and 1 Price) to replace some of their old graders (*BF* July 1920, 12). In this way the latest technologies were addictive—once they began to be implemented growers could not stop using them or risk losing the competition with other growers. Growers had to get the latest equipment to keep up and once one large association implemented a new device others felt they had to also in order to survive. Dependency on technology was created. This dependency could be quite disastrous. For

example, the Gilberts, according to the WSU biography introducing the Gilbert Collection, “hit hard by the Great Depression, as were most growers in Yakima. By the time of Gilbert's death in 1934, the family business had acquired substantial debts. This was due in part to large investments in capital goods and commodities with little liquidity, e.g., orchards, equipment and warehouses.” H.M. Gilbert died in 1934 bankrupt after nearly becoming a millionaire (Gilbert Box 6, Folder 78). The technology offered some growers an opportunity to make good profits, but for others it became a trap or rat race they could not win and it worked to shake many growers out of the industry.

CHAPTER SEVEN

CONCLUSION

This dissertation shows the roots of the Pacific Northwest apple industry as part of settler colony that moved from small five or ten-acre sagebrush tracts to large heavily capitalized orchards and industrial packing cooperatives. The production of apples, along with other commodities, in the Pacific Northwest has thoroughly transformed the land and population of the region since Stevens first surveyed the railroad. The maps, reports, and vision of his team of surveyors, deeply rooted in manifest destiny, created commercial agricultural potential for while colonizers by clearing the land of the indigenous inhabitants and enabling cross-continental rail transportation from the Mississippi to the Puget Sound. During the period from 1890 to 1930, the apple became a vital Northwest commodity. Emerging out of the populist tradition apple growers organized themselves into cooperative business associations to protect themselves from monopoly capital. Based on federally funded irrigation projects, these associations of growers developed into a powerful industry with vast national and international trade. Many key features of the industry today began during this period: a definite gender division of labor, Taylorized management, the beginnings of racialized and segmented labor force, and a heavy dependence on technology.

As competition among growers increased and as rail and retail vied for significant segments of apple revenues, the apple industry was compelled to find all possible means to increase markets and reduce costs. Many of the attractions used to lure new settlers west to become orchardists, such as a relaxed lifestyle on the land, independence, and escaping the grind of city business, were either completely illusionary or lasted for only a very short time. These values and visions had been used in pamphlets, advertisements and circulars to promote the

Northwest. Under the competitive pressure that growers began to face, new values of competition and efficiency of production become the key values. Fordization and Taylorization of the production process become main ingredients of the grower's life. Year after year growers had to acquire, manage and maintain a ready and reliable labor force. Growers found two solutions to the question of reliable cheap production. One, as we saw in chapter four, was to lower the cost of labor by finding new populations to work cheaply and be dependably available at thinning, harvest and packing times. This drive marked the very beginnings of the transformation away from a predominantly European American labor force and the deep roots of mexican@s as the primary seasonal labor force for the industry. The second solution used by growers to reduce labor costs, covered in chapter five, was to divide the labor process into smaller well-defined tasks that could be organized around the principles of scientific management known as Taylorism. The third solution, which is the subject of chapter six, was to reduce the number of necessary workers as much as possible through the use of technology and labor saving devices. These devices both reduced the number of workers needed per acre harvested and per box shipped. They also reduced the amount of skill and special training necessary to perform various jobs thus increasing the potential labor pool.

The apple industry in Washington achieved a more advanced stage of capitalist agriculture in terms of its industrial and scientific production without the fetters of older forms of production. From the ground up it was created as an industry designed to produce profitable commodities, which out-competed the established apple industry in the eastern U.S. due to the many advantages of government subsidies and investment from large rail corporations. In the East, apple growers may have had ideas about commodity production and industrializing agriculture, but because of limits of space, size of farms, age of trees, available technology and competing values, Eastern growers quickly fell behind their new competitors in the West, because

in the West these limitations could easily be superceded. Once commodity production in the Pacific Northwest began, the apple industry like other industries in the West had infrastructure specifically geared toward production and distribution of their products. The competition in the Northwest pushed growers to intensify and extensify the commodification of apples.

On this foundation the producers in the industry developed cooperative associations that banded together and acted consciously as a class-for-itself. This group of producers became conscious of themselves as needing to work together for common interests while competing against other classes. They developed a powerful and well-organized industry capable of national and international trade. Though it was not as well organized as many hoped and worked for it to be and though growers still competed against one another, the industry was capable of coordinating on many significant levels including marketing, wages, standards, pest control, and the development of international markets. Cooperative associations gave the Pacific Northwest apple industry significant advantages over other apple-growing regions. As competition increased the pressure to reduce costs of production also increased.

Though the apple industry attempted to cooperate in an effort to counteract the monopoly power of the railroads and to fight against the point of sale advantage of retailers, they could not leverage significant profit out of those who had more power. But they did find three interlocked and mutually beneficial ways to build power and make profit off of those with less power—the workers. The search for workers who would work more cheaply, the scientific management of labor, and the introduction of labor saving technologies all gave growers significant power in the workplace. Because of the massive growth in the industry, growers required many more workers after 1910. A key driver of labor-replacing technology was the need to lessen the impact of a potential labor crisis caused by the extremely rapid expansion of apple production in the Pacific Northwest and then later by a labor crisis caused by the movement of

workers to fight in World War I and to work in industrial war production as well as by labor agitation and organizing during and after the war. The vast expansion of apple plantings was also a factor in the need to recruit more settlers to come to the Pacific Northwest, which also helped raise property values, sell land, and acquire labor.

In addition to lessening the need for labor, technology also served to shake some out of the industry by serving a financial and productivity gatekeeper mechanism. Simultaneously cooperatives enabled smaller growers to stay in business and gave some means of protection against larger growers. Technology intertwined with cheap labor and with scientific management. During this period each reinforced the others. With the growth in the division of labor and the deskilling of work, the loss in prestige and degradation of work allowed growers to begin to exploit immigrant workers and workers of color based on white supremacy. The deskilling and division of labor would eventually cause European Americans to flee the industry for better pay during World War II and then again beginning in the 1960s.

Because of the vast growth of the apple industry and the inability to fully mechanize as had been accomplished in corn, wheat, and sugar beets, apples needed to acquire a large seasonal labor. According to Stephen Nottingham, “The first mechanical harvesters for cultivated beets were introduced in the 1930s in the USA. By the 1950s, the entire US sugar beet crop was harvested mechanically” (Nottingham 2004). After World War II, the mechanical cotton picker and other mechanical harvesters transformed the South. In less than 100 years, all that the Southern plantocracy fought to maintain in the Civil War, especially the slave labor and then sharecropping labor it was dependent on, was no longer economically necessary. Rural blacks were thrown off the land they farmed and terrorized if they did not leave. A mass exodus of African Americans from the southern countryside began. The lowest level of industrial job awaited them in the cities of the South and the North. Because of the nature of apples

comparable labor-replacing harvest technology was not possible until only recently. Beginning in the late 1990s various technologies have been developed and implemented in the same spirit of capitalist efficiency and productivity that would fully eliminate the need for human labor.

Through its Treefruit Research Commission, the industry has developed a “technology road map,” a blue print for implementing a wide range of new technologies. The roadmap’s goal is to reduce costs by automating orchard and fruit handling (McPherson 2006, 2).

Not only did the strong reliance on technology begin with the origin of the Pacific Northwest apple industry, but the seeds of apple agribusiness lie in its origins in the Pacific Northwest as well. The current agribusiness controlling our food now did not emerge out of nowhere. What we see now is a consequence of traceable lines. It began with development of the industry, but more importantly agribusiness emerged out of the competition within the industry and between the industry as production and monopolies involving transportation (rail) and distribution (retail). This includes the impacts on the farmers themselves: less ability to survive on a smaller farm, smaller share of the apple dollar, enormous dependence and control based on debt leverage especially through the constant need to update through technology. Over the decades the cooperative associations that began early in the industry became specialized business associations pushing for federal research dollars (such as tree fruit research commission), performing public relations (such as Apple Commission), lobbying government (such as the Horticultural Association). New journals also emerged, such as *The Good Fruit Grower*, to replace industry organs such like *Better Fruit*.

Immigrant workers, workers of color, women and poor workers generally are forced to work some of the hardest, dirtiest and most dangerous jobs at low pay. This is especially true in labor-intensive agriculture. Throughout the history of agriculture for profit in the U.S., owners and growers needed cheap labor: from slaves and indentured servants to sharecroppers to

undocumented agricultural workers. A population with limited access to rights and who have very few other choices than to work for long hours for low wages in difficult and dangerous conditions must be on hand. Whereas local skilled workers did the work in earlier years, apple labor became gendered, non-local and more deeply racialized. Growers have claimed extensively the dangers of labor shortages to their industry while also claiming that whites or “Americans” will not do this work. But if these jobs were given double the pay and benefits while being infused with the dignity they deserve, all workers would have more of a choice. At the same time, if the new technologies were used for cooperative, as opposed to competitive, ends, the whole society would benefit.

Ultimately, the development of the industry and its drive for profits and lowering costs helps us understand another dimension of labor history often neglected. Most scholars, it seems, are attracted to how people as actors struggle against the structures of capital—but fully understanding the role of structure is equally necessary to understanding human agency. At the same time understanding how growers have made their decisions concerning labor, management, and technology helps workers better understand and analyze the situation growers face. This understanding improves workers ability to organize and choose strategies based on the objectives, strengths and strategies of the industry.

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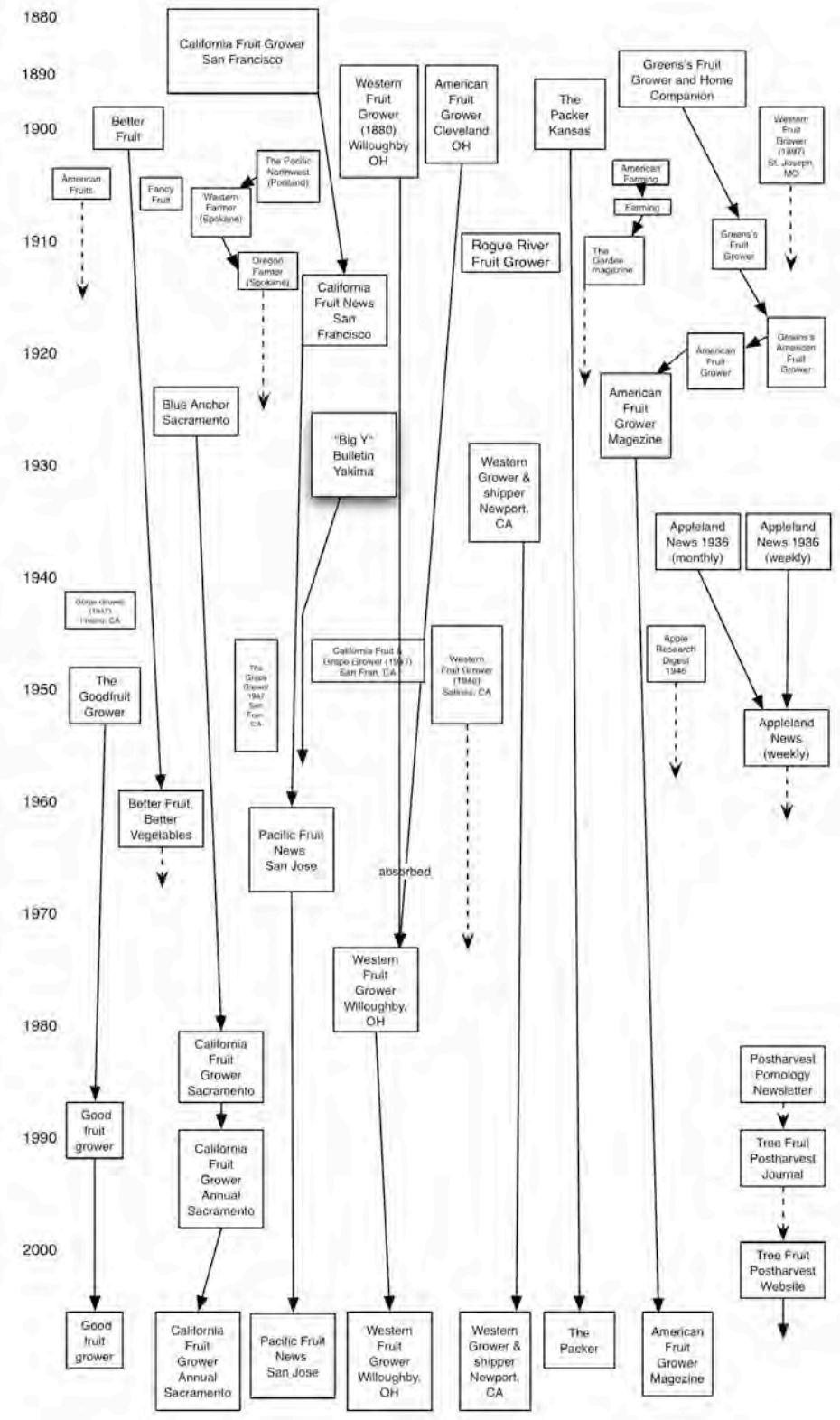
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Appendix A. Fruit Industry Commodity Journals

Figure A-1. Timeline of Industry Commodity Journals.



Appendix B. Orchard Architecture, Monocrops and Commodification of Land

Figure B-1. The Hexagonal Orchard System.



Photo Source: Frank Matsura Photograph Collection. Manuscripts, Archives, and Special Collections (MASC). Washington State University (WSU). Pullman, WA.

Diagram Source: R.H. Weber, "Directions for the Planting of an Orchard" *Better Fruit*, Dec 1908, 24.

Figure B-2. The Triangular Orchard System.



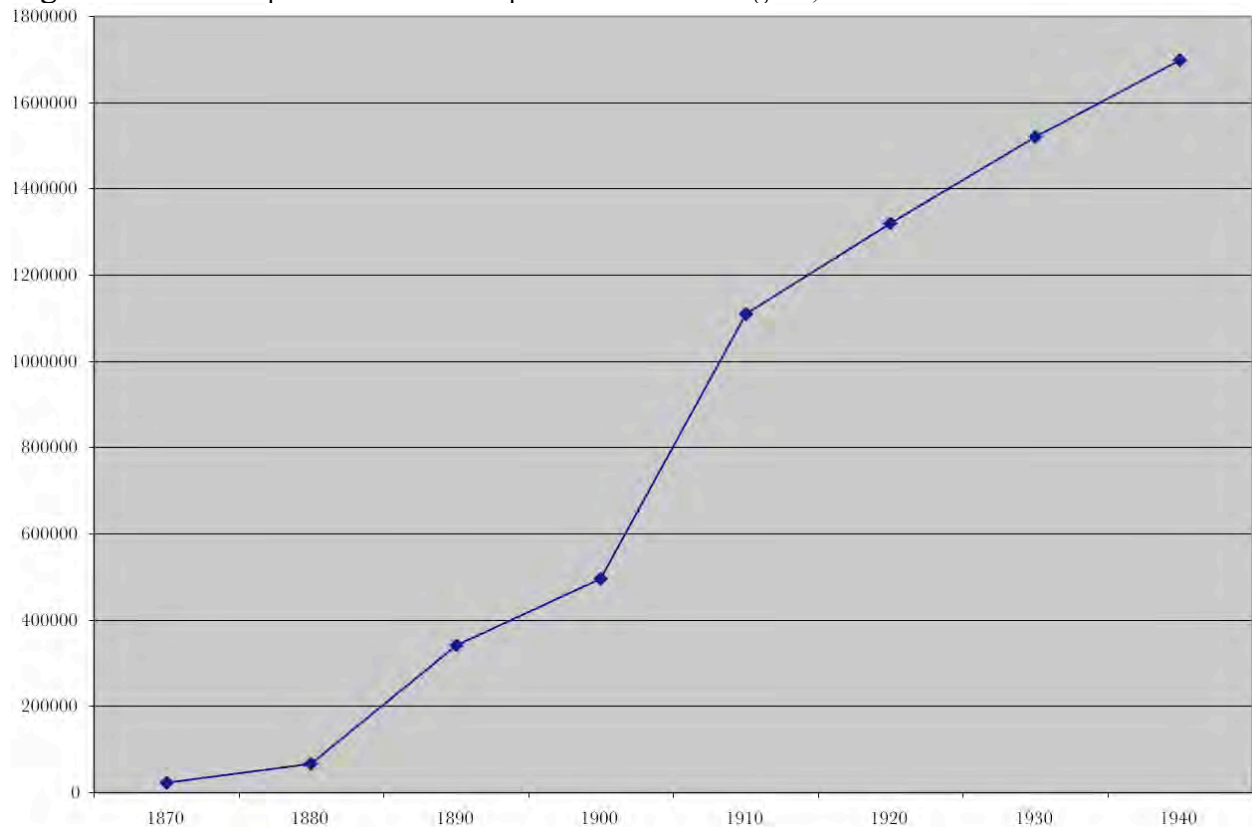
Photo Source: Frank Matsura Photograph Collection. Manuscripts, Archives, and Special Collections (MASC). Washington State University (WSU). Pullman, WA.

Diagram Source: R.H. Weber, "Directions for the Planting of an Orchard" *Better Fruit*, Dec 1908, 25.

Appendix C. Population Trends in Washington 1890-1930

Over the course of the nineteenth century European Americans and Europeans steadily overtook and replaced the native peoples of what is now called Washington. The treaty of 1855, the railroads, and irrigated farming accelerated the process of European American settlement. By the time that Washington became a state in 1889, it had become a predominantly European-American geographical unit within the greater United States. In 1900 European Americans outnumbered Native Americans 518,103 to around 10,000-30,000; 111,364 (over 20 percent) of these European Americans were born in Europe. The decade from 1900 to 1910 saw the white population of the state double. By 1930 Washington was 97 percent white (Landis 1942, 28).

Figure C-1. European-American Population in Washington, 1870-1940.

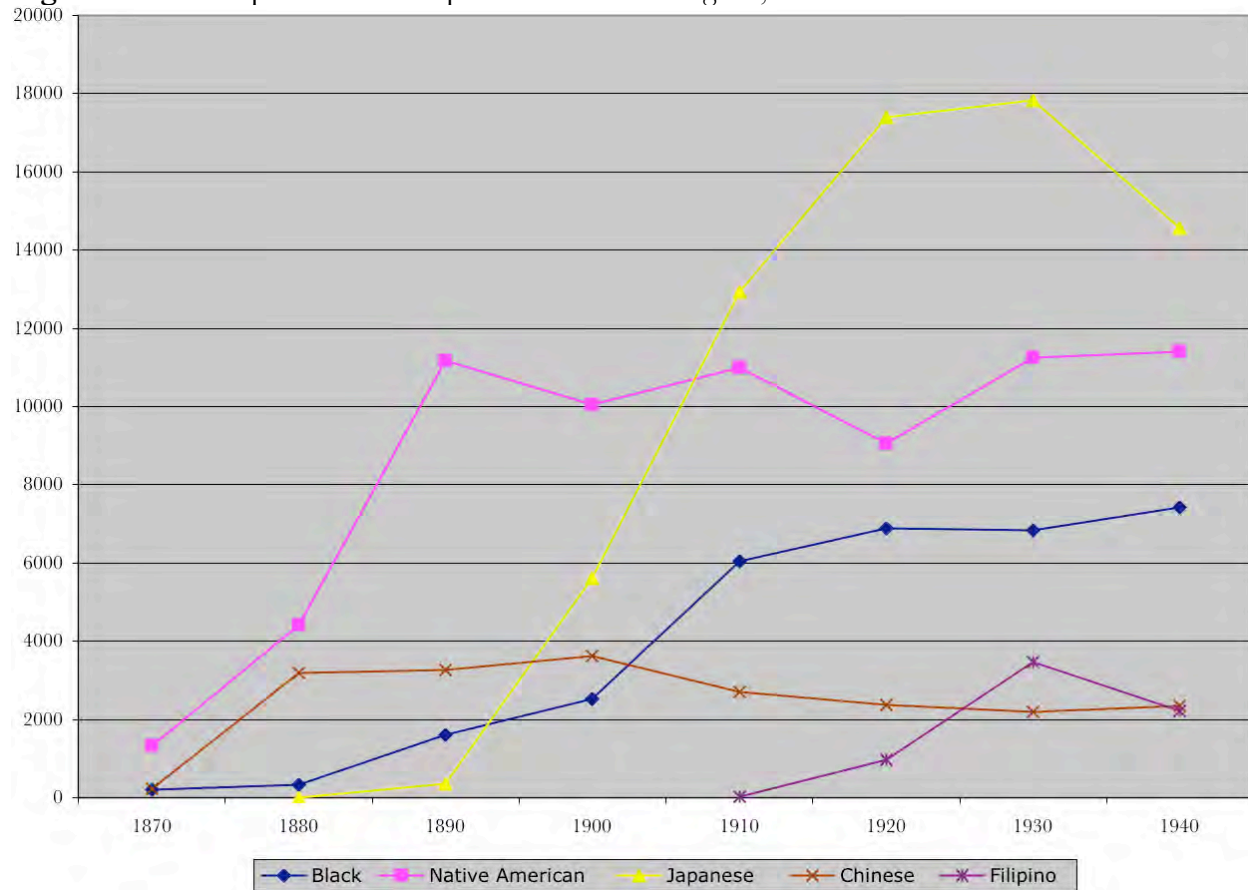


Data Source: U.S. Census Data from Rosenberg, Robert. *Origins of the peoples of Washington and British Columbia; a comparative study of ethnic, racial, and religious groups from 1870 to 1961*. 1964.

According to Wakefield and Landis, settlers moved to the Pacific Northwest to take advantage of “the vast unexploited resources of the the West,” which was they argue especially true during the “great migration of the decade 1900 to 1910” due to the expansion of the lumber and agricultural industries, which provided important “opportunities for newcomers” (11-12).

Wakefield and Landis also explain that between 1910 and 1920 “the irrigated lands of the Yakima Valley and the Wenatchee district were opened for settlement,” and then after the First World War high prices for many agricultural items encouraged “the clearing of cut-over areas for farm use” (12). It is clear that as the irrigation projects after 1900, especially those of the National Reclamation Act, were a significant enticement to settlers to move to Washington State.

Figure C-2. People of Color Populations in Washington, 1870-1940.



Data Source: U.S. Census Data from Rosenberg, Robert. *Origins of the peoples of Washington and British Columbia; a comparative study of ethnic, racial, and religious groups from 1870 to 1961*. 1964.

Not only did the European American population accelerate in the first decade of the twentieth century but the decade 1900-1910 saw the doubling of the Japanese population and the tripling of the black population, while the Chinese population declined. It was not until 1910 that other groups were recognized and accounted for in census data. By that time 73 people who were born in Mexico lived in Washington (Rosenberg 1964, 69). Over the period from 1870 to 1930 in the United States agricultural workers go from 50 percent to 20 percent, and in Washington state, the percentage remains more steady from 1890 near 30 percent to 1930 around 22 percent (Landis 1952, 53).