

Airview of Ashland, Looking Eastward Toward the Cascades. (Courtesy Ashland Chamber of Commerce)

THE ASHLAND AREA AND

ITS ENVIRONS

by

G. BYRON BACKES

A THESIS

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PPROVED		

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CHAPTER I

INTRODUCTION

1. Regional Focus

The Ashland Area,¹ a well-settled agricultural subdistrict, is the southeastern-most segment of the arable valley lands of the Medford District² of Jackson County, Oregon (Fig. 1). The city of Ashland and the Ashland Area function as an important commercial and industrial section of the Medford District, although the Area lies in close proximity to the Medford focus of province³ and district life and is a part of the same contiguous valley system. The Area is set apart by natural physical features but its significant regionality lies in its nodal character.

²The Medford District comprises the valley lowlands and adjacent hill land that is commonly referred to as the Rogue River Valley (Fig. 2).

³The term "province" here, refers to Jackson, Josephine and Curry counties, a geographic region, whose boundaries are fairly clear cut since they are in sparsely settled areas and generally follow or approximate the drainage divides. The province thus defined was first delineated by Samuel N. Dicken in "The Rogue River Country of Oregon: A Study in Regional Geography," <u>Yearbook of the Association of Pacific Coast Geographers</u>, Vol. XIV (Cheney, Washington: By the Association) pp. 3-18.

¹In this study the term "Area" is used to identify the nodal subdistrict focusing on the city of Ashland. In the accepted hierarchy of regions (Derwent Whittlesey, "The Regional Concept and the Regional Method," <u>American Geography: Inventory and Prospect</u>, ed. Preston E. James and Clarence F. Jones [Syracuse: Syracuse University Press, 1954], pp. 48-49) this Area is larger than a "locality" and smaller than a "district." It is for this reason that the author has chosen to use the locally accepted and much used term "Ashland Area."



Fig. 1

Approximately one-sixth of the 65,790¹ inhabitants of the county dwell within the Area, and upon it focuses the greater part of the economic activity of the sparsely settled mountain area of the county's southeastern portion.

2. Definition and Location of the Area

The Area Defined.--The Ashland Area comprises the valley lowlands and adjacent hill land of upper Bear Creek Valley² of Jackson County. It is the southeastern-most section of the Medford District and may be defined as lying within the bounds of the irrigation laterals, below which the preponderance of activity takes place. The laterals provide an almost continuous boundary except for the narrow valley connection approximately two and one-half miles northwest of Ashland. Here residual ridges and hills, extending from the Siskiyou and Cascade mountains, form a natural boundary that tends to set the Ashland Area apart from the rest of the district (Fig. 2). This natural boundary is in no way a barrier to transportation but field research indicates that it does

¹Oregon, Secretary of State, <u>Oregon Blue Book</u>, 1957-58 (Salem, Oregon: State Printing Department, December 31, 1956), p. 181.

²It has been the custom since pioneer days to refer to the valley as Rogue River Valley even though the main stream of the valley is Bear Creek. Naming of the valley can apparently be attributed to the facts that (1) the Rogue is the only large stream within the valley lowland; (2) it flows across the widest section of the main valley (the northern portion); (3) in pioneer days the main-traveled route between the Willamette Valley and California passed through the main valley, which is the largest section of level land in the Rogue River Basin. Because the greater portion of the valley area of the Medford District and all of the Ashland Area is drained by Bear Creek it is deemed more appropriate, here, to refer to the valley as Bear Creek Valley instead of the popular name of Rogue River Valley. A precedent for this change in nomenclature has been established by the U. S. Bureau of Reclamation, Boise Regional Office, <u>Talent Division, Rogue</u> River Basin Project, Oregon, (Boise, Idaho, December 1953), p. 2.

influence the focus of retail trade.

The mountains which lie on all sides of the Area, except for the narrow valley connection to the northwest, are cut by many small tributary streams which have small flood plains, terraces, and gentle slopes that are utilized for agriculture. These small valley areas have not been delineated as a part of the Area for they are sparsely populated and are for the most part occupied by small marginal farms or isolated hay or grain fields. However, they are considered in the study for they play an important role in the livestock industry of the Area.

The Ashland Area as defined and delineated on the maps has an area of approximately twenty-six square miles. It is crudely rectangular in shape, being about two and one-fourth miles wide and twelve miles long; orientation is in a northwest-southeast direction. All of the Area lies above the 1800-foot contour and below the 2200-foot contour. The related small valleys and gentle slopes above 2200 feet comprise about ten square miles in all; these small areas having some arable land are widely distributed within the drainage basin of upper Bear Creek.

Locational Relations.--With respect to the section of the United States west of the Cascade and Sierra Nevada mountains the Rogue River Country is one of the provinces most remote from an important regional center of population and trade (Fig. 1). Isolation has been the keynote in the development of the basin and progress has been made only as transportation facilities have improved.

In common with all of the Rogue River Basin, the Ashland Area is isolated from all major market centers and from the interior of the country. The Cascade Mountains, which are a continuous barrier from the Columbia River southward into California, form the eastern barrier, cutting the entire region off from free commercial intercourse with the



continental interior (Fig. 1, p. 2). Even the best passes across the Cascades from the basin afford but difficult routes for highway travel and there are no direct rail connections. The most used route is State Highway 66 which branches eastward from the Pacific Highway at Ashland. Another route, State Highways 62 and 230, mainly of tourist and local access value, crosses the Cascades in the vicinity of Crater Lake, thence to Bend, Oregon and the interior.

Adjacent to the Ashland Area on the south are the Siskiyou Mountains, extending westward from the Cascades to the Pacific Coast, a formidable barrier to transportation, coincident with the forty-second parallel and the Oregon-California border. Two important passes through this barrier afford access to the markets in California. The more important of these is the Siskiyou Pass through which Pacific Highway (U. S. 99) and the Southern Pacific Railroad pass. Ascent to the pass begins at the city of Ashland. The other route across this barrier is the Redwood Highway (U. S. 199) that branches from the Pacific Highway at Grants Pass and connects with U. S. Highway 101 near Crescent City, California. As an outlet for products of the Rogue River Basin the Redwood Highway is as yet of limited value, for the port at Crescent City has not been developed to any appreciable degree. Recent developments in the lumber industry in the coastal region tributary to the port may bring about harbor improvements and increase the significance of this route as a commercial outlet for the Rogue River Basin. At present its greatest value lies in attracting an increased number of tourists to the basin's vast recreational area. No roads of commercial significance cross the coastal mountains from the basin.

The Rogue River Mountains, a series of rugged east-west trending ridges, form the northern barrier of the Rogue River Basin. The

Pacific Highway and the Southern Pacific Railroad cross this barrier to give the basin access to the markets of the Willamette Valley and to the port city of Portland. At Portland connections are also made with main transcontinental rail lines.

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The Ashland Area is favored by its position adjacent to two important passes leading from this walled-in basin, the Greensprings Mountain Pass of the Cascades across which State Highway 66 passes to Klamath Falls and the Siskiyou Pass which affords a route for the Pacific Highway and the railroad into California. The origin of Ashland has little connection with this nodal situation but subsequent development can certainly be attributed, at least in part, to this focus of transportation routes that makes Ashland the "gateway" of southwestern Oregon.

3. The Physical Setting

The Ashland Area Proper. -- The most striking feature of the relief of the Area is the absence of level land. Here the valley is narrow and the terrace and bench lands reach virtually to the bisecting stream, leaving only small patches of floodplain. Above the terraces and benches gentle to steep slopes extend to the irrigation laterals that bound the Area. Near the eastern extremity of the Area several residual hills (Fig. 3), originating from intrusive dikes and sills, stand out as prominent features of the landscape.¹

Underlying this varied relief are steeply dipping beds of sedimentary sandstones, shales, and limestones that were laid down during the Cretaceous and Eccene periods, and were subsequently tilted to their

¹Francis G. Wells, <u>Geologic Map of the Medford Quadrangle</u>, Oregon and California (Washington: U. S. Geological Survey, 1956), map GQ-89.

present position by the second uplift (late Cretaceous) of the igneous intrusion of quartz diorite¹ in the Siskiyou batholith² (Fig. 6).

As a result of this subterranean structure little ground water is available. Most wells produce little more than enough water for a family's domestic needs and perhaps a small garden plot.³ There are, however, a few exceptions. Another factor of importance associated with this structure, particularly to the south of Bear Creek where the soil mantle is quite porous, is the rapid and deep drying of the soil which necessitates frequent irrigation. Most farmers and gardeners in this section must irrigate at least every other day and most lawns are watered every day.

Another phenomenon associated with this geologic structure is the occurrence and wide distribution of mineral springs.⁴ Three of these springs in the Ashland Area have been utilized for commercial enterprises, two as swimming resorts and mineral baths of reported medicinal qualities; and one is the site of a dry-ice plant that utilizes the natural discharge of carbon dioxide. This latter spring is also the

Francis G. Wells formerly classified this igneous intrusion as granodiorite on the <u>Preliminary Geologic Map of the Medford Quadrangle</u>, <u>Oregon</u> (Washington: U. S. Geological Survey, 1939), but he reclassified it as quartz diorite on map GQ-89, <u>Ibid</u>.

²Thomas Condon makes reference to this second uplift, following the elevation of the Cascades, in <u>The Two Islands and What Became of</u> them (Portland: J. K. Gill Company, 1902), p. 44

³Interview with Mr. Richard Young, Geologist, U. S. Geological Survey, who was conducting a ground-water survey in the Ashland Area, July 10, 1953. Results of the Survey confirmed by letter of Mr. R. C. Newcomb, District Geologist, U. S. Geological Survey, Portland, Oregon, July 28, 1958.

⁴Oregon, Department of Geology and Minerals, <u>Oregon Metal Mines</u> <u>Handbook</u>, Bulletin 14C, Vol. II, Section 2, (Salem, Oregon, 1943), p. 34.





Fig. 4.--Residual Hills of Intrusive Origin. View southeast, along longitudional axis of Ashland Area.



Fig. 5.--Prominent Residual Hill, an Intrusive Diorite Sill. View southeast.



source of the famed Lithia water that has been piped to the city of Ashland and adds much to the city's tourist attractions.

The soil mantle that covers the Area is extremely varied, and the 1911 soil survey of the Medford Area made fourteen separate classifications for the Ashland Area.¹ However, for practical purposes in the consideration of occupance patterns they may be grouped into four major classes based on texture and parent material: (1) recent alluvium; (2) clay adobes, derived principally from lavas (rhyolite and andesite) and sedimentary rocks; (3) coarse sandy loams, parent material largely quartz diorite and sandstones; (4) fine sandy loams, parent material mostly sandstones, shales, and limestones (Fig. 9).

The soils of the floodplains and lower terraces along Bear Creek and its tributaries are recent alluvium, varying greatly in depth, from a few inches to several feet. Some of the slightly higher terraces have a mantle of old alluvium with a slightly more mature profile. Most of the land having an alluvial soil mantle is utilized for truck farming, dairy pastures, and to some extent for irrigated forage crops.

To the south of Bear Creek on the upper terraces and slope lands, extending from the northwestern boundary almost to Neil Creek, the soil mantle is of the coarse sandy loam type. Near the surface there is considerable admixture of recently decomposed quartz diorite wash. This recent wash packs very hard but under cultivation it remains loose and porous and is a material aid to the friability of the soil. Erosion is a problem of considerable consequence in this generally loose siliceous soil as is evidenced by the deep washes in the unpaved roads during the

¹A. T. Strahorn, <u>et al.</u>, <u>Soil Survey of the Medford Area</u>, <u>Oregon</u>, U. S. Department of Agriculture, Bureau of Soils (Washington: U. S. Government Printing Office, 1911), pp. 46-64.



Fig. 7.--Pompadour Bluff, a Cuesta Remnant. Looking to the northwest along the Cascade front.



Fig. 8.--Road-cut Revealing Dip of Sedimentary Strata. View southeast.



Fig. 9



winter. This soil is particularly well suited to the growing of stone fruits and apples and was largely devoted to this pursuit during the early settlement years. Today this soil type is almost entirely taken up with urban subdivisions, small part-time farms, and industrial sites.

Fine sandy loams predominate in the Neil Creek locality and extend to the southeastern limit of the Area. Grain and forage crops have continuously occupied this section since it was brought under cultivation. Grain was the principal crop during the pioneer period but has gradually given way to the major emphasis on forage crops of the present.

Practically all of the soils lying north of Bear Creek are of the clay adobe type. They are very immature and show definite relationship with the rhyolite and andesite lavas that lie on the higher slopes of the Cascades. Like the other soils of the Area, they vary greatly in depth, ranging from a few inches to several feet. Several farmers report that they have dug through as much as fifteen feet of the soil without encountering a change of profile. Much of this land is quite rocky and a few areas are boulder-strewn and unfit for cultivation.

This clay adobe soil type is very well suited to the growing of pears where the soil is of sufficient depth, four feet or more. Unfortunately, in the Ashland Area, soils of this depth are generally limited to very small areas, and most of the land is utilized for forage crops, dairy pastures, and to some extent for specialized truck crops. In the northwestern section of the Area, however, there is a considerable acreage of pears and other fruits. In the greater valley area of the Medford District a large percentage of the pear orchards are on this type of soil.

Prior to 1907 this clay adobe soil land was almost unused for

other than grazing.¹ The soil is very difficult to work; when wet, it is sticky and clings tenaciously to the farm implements; when dry, it is extremely hard. Both conditions made plowing a near impossibility during the days of horse agriculture. Today, with their modern machinery, most farmers work the soil when it is dry. The early use of this land can apparently be attributed to the above conditions and to the fact that the native vegetation of grass was a natural incentive to its use for grazing.

South of Bear Creek the native vegetation of the lower terraces was also grass but the upper terraces and slope lands were covered with a dense growth of manzanita (<u>Arctostaphylos viscida</u>), wild lilac (<u>Ceanothus integerimus</u>), madrona (<u>Arbutus menziesii</u>), and scrub-oak (<u>Quercus garryana</u>). Near the mouths of Ashland and Neil Creek canyons there were dense stands of Douglas fir (<u>Pseudo-tsuga taxifolio</u>). These furnished the raw materials for Ashland's first industry, sawmilling. Through the years most of this brushland within the Area has been cleared but the nature of this vegetation cover can be seen on the lower slopes of the Siskiyou Mountains.

Consideration of the patterns of occupance has been presented with this physical section not only because it was convenient, but also because the early land use which was so closely associated with the physical factors of soil and vegetation is reflected in the present day patterns of occupance. Actually, all of the soils of the Area are adaptable to a wide variety of crops with the application of scientific farming methods and adequate water for irrigation. As the markets

¹Interview with Mr. D. M. Lowe, resident of the Area since the turn of the century and graduate of the School of Agriculture, University of Michigan, July 15, 1954.

change so will the patterns of occupance.

The Cascade Mountains.--The sections of the Cascade and Siskiyou mountains that lie in close proximity to the Ashland Area have a direct functional relationship with the occupance patterns within the Area and are extremely important in the total economy of Jackson County. From these mountain areas comes approximately one-fifth of the log supply for the sawmills of the county and they provide summer range for about onefifth of the county's beef cattle. In addition these areas attract many tourists and sportsmen, making a significant contribution to the growing tourist industry. For these reasons it is deemed essential to discuss the two mountain areas in considerable detail.

Adjacent to the Area on the north and east are the Cascade Mountains. This southern Oregon section of the Cascades is composed largely of Tertiary volcanics (andesite flows, breccia, and tuff; and some rhyolite tuff) overlying Eocene sedimentaries.¹

To the north of the Area the mountains rise gently through a narrow belt of cuesta formed foothills, then rise abruptly over a series of lava escarpments to culminate in the western crest of the Cascades (Fig. 7, p. 13). To the east they rise more abruptly from the valley floor for here the cuesta formations have been covered by lava flows and volcanic breccia. Concordance of summit elevations is marked, being generally about 4,500 feet. The highest point on this western crest, overlooking the Ashland Area, is Grizzly Peak (5,921 feet) which lies almost directly north of the central section of the Area. From Grizzly Peak northward the summit elevations are lower--3,500 to 4,000 feet-then rise abruptly to culminate in Mount McLaughlin from whence the most

Wells, op. cit.

recent lavas flowed outward over the original plateau. "McLaughlin," locally called Mount Pitt, has an elevation of 9,497 feet. It is a near perfect example of a conical peak.

From Mount McLaughlin south to the Klamath River in California the Cascades have two crests, separated by a plateau varying in width from two to twenty miles. Physiographically this plateau is divided into two natural divisions by relief and drainage and by an east-west trending chain of volcanic residuals. The northern section is a rolling hill land dotted with rounded volcanic monadnocks that rise one to two thousand feet above the general level of the plateau. Drainage is to the west. On the plateau proper the streams are not deeply incised but their rapid descent to the valley floor is in steep walled canyons.

The relief of the southern section of the plateau is more varied. The northern and western portions of this section are rugged and dissected by the deeply incised streams. The southeastern portion, however, is a high undulating upland plateau with only moderate dissection, except for Jenny Creek. Drainage, here, is to the south with the main stream, Jenny Creek, receiving its tributaries from both the east and west crest of the Cascades. Jenny Creek is a major tributary of the Klamath River.

The native vegetation patterns of the Cascades coincide closely with the four generalized subdivisions used in the discussion of the physiography. For convenience, they are used as a frame of reference in the vegetation discussion.

The cuesta-like foothills and adjoining slopes of the Cascade front, to the north of the Area, have a cover of foxtail grass (<u>Vulgare</u> <u>vubatum</u>) interspersed with occasional patches of wild lettuce and native bunch grass. Along the intermittent streams and in other favored places are small patches of scrub oak (<u>Quercus garryana</u>). Exposure to wind and sun and the rain-shadow effect of the Siskiyou Mountains are, perhaps, the major factors contributing to this sparse vegetation. Near the western crest of the Cascades this vegetation pattern gives way to a dense growth of timber, mostly Douglas fir and White fir (both <u>Abies grandis</u> and <u>Abies concolor</u>). A variety of other plants are also found here, such as slickleaf (<u>Ceanothus velutinus</u>), wild lilac, manzanita, chinquapin (<u>Castanopsis chrysophylla</u>), and White oak (<u>Quercus garryana</u>). This crest area is high enough to escape most of the rain-shadow effect of the Siskiyou Mountains and it is also the scene of frequent convectional showers during the summer months. Estimates place the annual rainfall of the crest area near forty inches while the lower slopes receive less than twenty.

The Cascade front that lies east of the Ashland Area has much the same pattern of vegetation as the area just discussed except that scrub oaks cover most of the slopes and many of the canyons and ravines have dense growth of willow (<u>Salix sp</u>.) and slickleaf. There is, however, a marked difference in the vegetation near the crest. Here, ponderosa pine (<u>Pinus ponderosa</u>) is one of the prominent species, growing in more or less open stands.

Dense growth of commercial timber interspersed with many open meadows and glades typify the northern section of the plateau. The commercial timber stands are comprised of several species: Douglas fir, white fir, Shasta fir (<u>Abies Magnifica shastensis</u>), Engleman spruce (<u>Picea</u> <u>englemanni</u>), western hemlock (<u>Tsuga heterophylla</u>), western white pine (<u>Pinus monticola</u>), and minor stands of ponderosa pine. Generally the timber is in mixed stands except for the ponderosa pine which is for the most part in pure open stands. Occasionally, too, there are pure stands of white fir. Many of the low lying meadows have a luxuriant

growth of native grasses; many of them have been fenced and the grass cut for hay. Most of this section is within the National Forest and logging and grazing are closely supervised by the U.S. Forest Service.

The Oregon portion of the southern section of the plateau is also heavily forested, except for occasional small areas where soil or exposure limit the vegetation to one of scrub oak and grasses. Here, in this floral transition zone, ponderosa pine interspersed with sugar pine (<u>Pinus lambertiana</u>), becomes a prominent species, although Douglas fir predominates. Generally the timber is open, with little or no underbrush, but there are sheltered areas where manzanita, slickleaf, wild lilac, and a wide variety of smaller shrubs grow in profusion. Other commercial species of timber found in this section include incense cedar (<u>Libocedrus decurrens</u>), and white fir.

The California portion of this section has a vegetation cover, largely because of exposure, that is predominately scrub oak and grasses. However, the more protected slopes support fine stands of ponderosa pine.

The Siskiyou Mountains.--The Siskiyous, a rugged mountain chain made up of igneous and metamorphic rocks,¹ extending westward from the Cascades to the Pacific Coast, border the Ashland Area on the south. There are no intermediate foothills. The slopes rise steeply from the Area and culminate in several of the highest peaks in southern Oregon: Mount Ashland, 7,530 feet; Wagner Butte, 7,265 feet; McDonald Peak, 7,222 feet; and Siskiyou Peak, 7,147 feet. Summit elevations, adjacent to the Area, excluding the above peaks, average about 6,000 feet.

¹ Joseph S. Diller, <u>Mineral Resources of Southwestern Oregon</u>, United States Geological Survey, Bulletin 546 (Washington: U. S. Government Printing Office, 1914), pp. 12-22.

Siskiyou Pass (elevation 4,467 feet) affords the only appreciable break in this natural barrier.

This section of the Siskiyous is geologically known as the Siskiyou batholith, a quartz diorite intrusion, that was once overlain with Creteaceous and Eocene sedimentaries.¹ Erosion has removed most of the sedimentaries and deeply dissected the batholith, making it an extremely rugged area of steep walled canyons, sharp ridges, and high peaks.

Ashland Creek, one of the main tributaries of Bear Creek, has cut deeply into the batholith, forming its own drainage basin. This basin is the restricted watershed of the city of Ashland, under the strict supervision of the U. S. Forest Service (Fig. 33, p. 90). The source of Ashland Creek is the snow-melt from the protected northern slopes of Mount Ashland and Wagner Butte. Slow melting of the snow (the snow-pack lasts into late summer) and the retarding effect of the porous granitic soil operate to give Ashland Creek a remarkably consistent discharge throughout the year. These facts materially contributed to the origin of the city of Ashland.

The natural vegetation of the Siskiyou batholith is extremely varied and luxuriant. The southern exposures of the mountains receive copious precipitation but also receive the brunt of wind and sun, hastening evaporation during the critical growing period of spring and summer. These southern slopes are heavily forested. The more exposed areas support a predominately ponderosa pine forest, while the protected canyon slopes have dense growths of mixed stands that include Douglas fir, white fir, noble fir (<u>Abies nobilis</u>), Shasta fir, western white pine, and ponderosa pine. The floor covering of the exposed slopes is generally

¹Condon, <u>op. cit.</u>, p. 43.

light, mostly grasses; in the protected areas there are often dense growths of underbrush.

The protected northern slopes, overlooking the Area, receive abundant precipitation, a spill-over from the orographically induced precipitation of the southern slopes. Protected from the direct impact of wind and sun, evaporation is minimized, giving rise to a very luxuriant growth of vegetation of much the same general character as that found in the protected areas of the south slopes. On the lower slopes of the mountains, immediately adjacent to the Area, the forest cover is largely deciduous trees and shrubs. Growing in dense profusion are found madrona, broad-leaf (Oregon) maple (<u>Acer macrophullum</u>), manzanita, wild lilac, bitter brush (<u>Purshia tridentata</u>), black oak (<u>Quercus californica</u>), and white oak.

<u>Climate</u>.--The Ashland Area and the whole of the Rogue River Basin lie in a climatic transition zone, being influenced by the west coast marine climate (Koppen "Csbn" verging on "Cfb") of the coastal region, the arid continental climate (Koppen "BSk") of the region east of the Cascades, and the Mediterranean subtropical climate (Koppen "Csa") of the central valley of California. The interior location of Bear Creek Valley and the high surrounding mountains greatly modify the influence of the three adjoining climatic types, resulting in a "Csb" verging on a "Csa" climate. This climate may be characterized as having mild winters with moderate rainfall (17 to 25 inches), and considerable cloudiness and fog. The summers are warm with little or no rainfall, clear skies, and moderate to low relative humidity.

Winter is the rainy season. Precipitation is heaviest in January and February, and more than eighty per cent of the twenty inches received annually in the Ashland Area falls during the eight months period from

early September through April (Fig. 10). During these months the weather is extremely changeable, alternating between periods of wet, chilly weather and mild sunshiny days. Infiltration of cold air masses from the interior are not uncommon, bringing short periods of cold, freezing weather or resulting in a heavy blanket of radiation fog. Fortunately, the Ashland Area is generally above the fog. Occasionally the cold air intrusions come late in spring, doing great damage to the fruit and vegetable crops and generally retarding plant growth. In the Ashland Area and other valley lands of the Medford District, temperatures are such that snowfall is light and seldom remains on the ground more than a few days, but the snowfall is heavy in the surrounding mountains.

Summer rain is limited chiefly to infrequent convectional thunderstorms. Hail and strong gusty winds occasionally accompany these storms, causing severe damage to the fruit and vegetable crops and sometimes doing damage to other properties.

Rainfall is not only relatively light but it is also unpredictable and highly variable from year to year (Fig. 11). This variability often reaches extremes; for example, in 1948 Ashland recorded 29.33 inches of precipitation and in 1949 the record shows 11.35 inches. Of great concern to those pursuing dry-farming is the erratic fluctuation of the spring rains (Table 1), often causing reduced yields from retarded growth and occasionally complete loss of crop.

Another aspect of climate that is of concern to the farmer is the extreme fluctuation in the length of the growing season. The average period of frost-free days in Ashland is 182. To the farmer this average is of little significance for the period is often much shorter, with spring frost coming as late as June 12, and the first in fall coming as early as September 29 (Table 2).

	April	May	June
1946	.82	1.20	•55
1947	1.19	1.32	2.55
1948	2.92	2.39	2.12
1949	•39	1.38	.48
1950	1.18	.41	1.16
1951	•33	.87	.00
1952	•37	.86	1.75
1953	•95	3.78	1.80
1954	•93	.19	2.05
1955	1.03	•57	.00
1956	.44	4.61	1.00

SPRING RAINFALL, ASHLAND, OREGON a

^aU.S. Weather Bureau, <u>Climatological Data</u>, <u>Oregon</u>, <u>Annual Summaries</u>, <u>1946-56</u> (Kansas City; 1946-56).

TABLE 2

	Last Spring Frost	First Autumn Frost	Frost-Free Days
1944	4-27	11-13	200
1945	4-22	10-22	183
1946	4-30	10-15	168
1947	5-10	11-19	194
1948	4-29	10-25	179
1949	5-4	10-13	162
1950	5-19	9-29	1.33
1951	4-21	10-17	179
1952	6-12	10-26	136
1953	5-24	10-3	132
1954	5-1	9-29	151
1955	4-29	10-6	160
1956	4-30	10-14	167

FROST DATA FOR ASHLAND, OREGON 2

^aU. S. Weather Bureau, <u>Climatological Data</u>, <u>Oregon</u>, <u>Annual Summaries</u>, <u>1944-56</u> (Kansas City; 1944-56).

The lower elevations of the Medford District have shorter growing seasons than does the Ashland Area, due largely to local conditions of air drainage. Mountain and valley breezes are almost constantly in motion in the Area, minimizing the frost danger and moderating the summer temperatures.



Fig. 10. Climatic Chart



Fig. 11

Although in the latitude of Chicago and central Wyoming, the average winter temperatures of the Ashland Area are like those of central North Carolina. In January the average temperature is 38.1 degrees, with an average minimum of 29.3 degrees. Severely cold weather occurs only five or six times each winter, when cold dry air from the interior invades the low-lying valleys of the Rogue River Basin. Temperatures as low as -1 degree have occurred at Ashland, and Medford has experienced a low of -10 degrees.

The summers are warm but not hot, the July average temperature being 69.4 degrees with an average maximum of 86.8 degrees. High temperatures seldom occur but a 106 degree temperature has been recorded in Ashland. Cool nights offset the sometimes enervating temperatures of the day; the average diurnal range for Ashland is 34.8 degrees. From May to early September rainfall is light; relative humidity is moderate to low, and the long days are amply sunny.

Ashland, with its moderately warm summers and high percentage of clear days in winter, has become a favorite retirement center and an inviting dormitory city for those whose activities take them to the lower valley lands that are often hot in summer and foggy in winter.

3. The Pattern of Settlement

<u>Native Settlement</u>.--When the first white settlers entered the valley they found a land almost unused by human beings.¹ The few Indians who occupied Bear Creek Valley and its vicinity were fishermen and hunters,

¹ Just prior to white settlement the population of all Rogue River Indians was estimated at about 500 by Charles Wilkes in his "Report on the Territory of Oregon," reprint in <u>Quarterly of the Oregon Historical</u> <u>Society</u>, Vol. XII (1911), p. 291.

their main sustemance coming from the many streams of the area and the abundant game of the forested mountains.¹ This diet of meat and fish was supplemented by berries, nuts, and roots from the forest and by locust from the grass covered valley floor.² Their great reliance upon fish (salmon, steelhead, and trout) held their main villages near the Rogue River; temporary camps were usually within the valley proper, on the spawning streams where salmon and steelhead were easily taken. The rugged expanse of forested mountains, away from the streams, was virtually uninhabited and served the aborigines only as breeding grounds of game animals. The few trails that led away from the valley were trade routes to neighboring tribes, principally to the Klamath Indians on the east, to the Shasta Indians on the south, and the Tu-tut-ni Indians on the coast.

Exploration and Immigration. -- The first white men to come to the area were fur traders and trappers of the Hudson's Bay Company, searching for furs or lucrative trade with the Indians.³ The first official expedition through the valley was made by a branch of the Wilkes' expedition in 1841.⁴ In subsequent years several parties passed through the Rogue River

¹Leslie Spier in "Tribal Distribution in Southwest Oregon," classifies the Indians of the Rogue River Valley as the Walumskni, a branch of the Takelma, sometimes referred to as Upland Takelma, <u>Quarterly</u> of the Oregon Historical Society, Vol. XXVIII (1927), pp. 361-363.

²Huston T. Robinson, "The Rogue River Indians and Their Relations With the Whites," (unpublished Master's thesis, Department of History, University of Oregon, 1943), pp. 2-9.

⁵Alice Applegate Sargent, "A Sketch of the Rogue River Valley and Southern Oregon History," <u>Quarterly of the Oregon Historical Society</u>, Vol. XXII (March, 1921), p. 1.

⁴A. G. Walling, <u>History of Southern Oregon: Comprising Jackson</u>, <u>Josephine, Douglas, Curry and Coos Counties</u>, (Fortland: By the author, 1884), p. 301.
Basin enroute to the Willamette Valley from California; others traveled south to obtain cattle in California to be driven to the Willamette Valley.¹ The development of the South Trail from Burley, Idaho, by Jesse and Lindsay Applegate in 1846 greatly increased the travel through the valley, but little was thought about settlement because of the extreme isolation of the area.² Prior to the discovery of gold, the only white men to take up residence in the Basin were the few associated with the construction of three ferries across Rogue River in the spring of 1851.³

<u>Mining</u>.--The first permanent settlement in the Rogue River Basin was near the present site of Jacksonville following the discovery of gold in 1851, some time after the establishment of the ferries.⁴ For several years placer and some lode mining served as the principal attraction to the area.

In the years following the discovery of gold, other minerals (coal, silver, chromium, manganese, quicksilver, clay, granite) were discovered, but either because of low-grade ores or the small extent of the deposits, little development has taken place.⁵

⁵North Pacific History Company, <u>op. cit.</u>, p. 381. ⁴Sargent, <u>op. cit.</u>, p. 4.

22.

⁵Oregon, Department of Geology and Minerals, <u>op. cit.</u>, pp. 20-

¹North Pacific History Company (ed.), <u>History of the Pacific</u> <u>Northwest, Oregon and Washington</u>, (Portland: By the editor, 1889), p. 370.

²Lindsay Applegate, "Notes and Reminiscences of Laying Out and Establishing the Old Emigrant Road into Southern Oregon, in the Year 1846," <u>Quarterly of the Oregon Historical Society</u>, Vol. XXII (March, 1921), pp. 12-45.

<u>Agriculture</u>.--The first farms were near Jacksonville, but in a few years activity had extended to all sections of the Medford District. As in most pioneer areas, the emphasis was placed upon staple crops of grains and the raising of beef animals. It was discovered early that the valley was well adapted to the production of many deciduous fruits such as pears, apples, cherries, and peaches, but large scale development of the horticultural industry had to wait until faster and more adequate transportation facilities were available. Completion of the railroad in 1887 marked the beginning of this development and many other changes in the form, function, and pattern of occupance.

Today, the agricultural economy of Jackson County is dominated by three major industries: fruit growing (principally pears), dairying, and the raising of beef cattle. The average value of agricultural production in the county is approximately \$30,000,000 annually; fruit growing usually contributes about 53 per cent of the production, dairying 8.5 per cent, beef cattle 8 per cent, and all others 30.5 per cent.¹

Farmlands occupy practically all of the rural land considered suitable for agriculture in the Medford District and many farms extend into or have additions in the surrounding highlands. Within Jackson County 472,739 acres are held in farms (26.2 per cent of the county's total acreage) but crop and prepared pasture land occupies only 96,904 acres,² with 335,511 acres (197,305 acres of woodland and 138,206 acres of grassland) of the remaining land held in farms being utilized mainly

Lestimated from "Gross Agricultural Income and Informative Statistics for Jackson County," Annual Reports, 1951 thru 1957, compiled by Jackson County Agricultural Agent (Mimeographed).

Report of Jackson County Program Planning Conference: 1957, (Medford, Oregon: By the Conference, March 1, 1957), p. 3.

for grazing.¹ Approximately 80 per cent of all crop and pasture land is devoted to the three dominant agriculture industries of the county.

Agricultural production in the Ashland Area makes a significant contribution to the total economy in all three of the basic agricultural industries, particularly in dairying and the raising of beef cattle. In the Area 85 per cent of the approximately 7,400 acres of crop and pasture land is utilized in the dairy and other livestock industries. Fruit growing is less important in the Area than in the Medford District as a whole, with less than 800 acres in orchards.²

<u>The Lumber Industry</u>.--Jackson County is one of the most richly endowed timber areas in the state and the lumber industry is its most important economic base. Lumber was first produced in Jacksonville and Ashland in 1852. Subsequent development, however, was slow and annual production did not reach 100 million board feet until 1937. From that date on expansion took place rapidly and for the past decade the annual production has been greater than 400 million board feet. Approximately one-fifth of the annual cut is produced in the mills of the Ashland Area.

Although the present level of production cannot be maintained, the twenty-five billion board feet of standing timber³ that is tributary to

¹U. S. Bureau of Census, <u>United States Census of Agriculture: 1950</u>, Vol. I, Part 32, pp. 270-271.

²Acreages for the Ashland Area calculated from Talent Irrigation District maps and aerial photographs.

³Volume for Jackson County estimated at 17,305,500,000 board feet by F. L. Moravets, <u>Saw-Timber Volume Estimates for Oregon and Washington</u>, <u>1948</u>, U. S. Dept. of Agriculture, Forest Service (Portland: Facific Northwest Forest and Range Experiment Station, 1948), Table 2. In addition to the county volume, foresters and lumbermen estimate at least another eight billion board feet to be tributary to the mills of the county. the mills of Jackson County assures a stable industry for the future. Current estimates for all saw-timber reserves of the county place the annual allowable-cut at about 285 million board feet, approximately one-half the present cut.¹ The effects of timber depletion are already evident in the gradually decreasing number of sawmills. Impetus to this adjustment is given by the fact that privately owned mature oldgrowth timber now occupies less than one-third of the commercial timber stands in the county and most of the balance is either under the jurisdiction of the U. S. Bureau of Land Management or the U. S. Forest Service. Both are committed to a sustained yield program, a fact that will ultimately bring stabilization to the lumber industry of the county.

Settlement and Population.--Jacksonville was the first of eleven settlements to be established in the county, followed shortly by the milling center of Ashland; formerly called Ashland Mills. Medford, the largest of the settlements, had its beginning in 1883, the year prior to the railroad's reaching the valley from the north. The superior nodality of Medford has operated to make it the commercial and political hub of the valley. Medford displaced Jacksonville as the county seat in 1927 and has since captured most of the urban-commercial activities of the county. However, Ashland with its own favored nodal situation as a focus of both local access roads and of inter-regional transport lines has been able to retain a share of the county's urbancommercial activities and attract industry.

¹These estimates consider the government and privately owned timber within the county and do not take account of the total timbertributary area. It is anticipated that "closer-utilization" and more complete forest inventories will raise the estimated allowable-cut considerably. Interview with Mr. Calvin Smith, District Forester, Industrial Forestry Association, Medford, Oregon, August 15, 1958.



Fig. 12

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According to the 1956 census estimates, there were 65,790 inhabitants in Jackson County, most of whom lived in and about the eight towns of the Medford District.

As shown in Figure 12, the largest cluster of population is in and around the city of Medford, which has a population of over 25,000 (1958 estimate) within the city limits. Ashland is the center of the next largest cluster, with a population of 8,597 (1956 estimate) and with one-fourth that number living in the immediate suburban areas.

The population of the county is predominantly of white Anglo-Saxon stock. In 1950 it included only 12 negroes, 23 Indians, 18 Japanese, and 6 Chinese. Foreign-born inhabitants numbered 1,678 and were predominantly of Canadian, British, Scandinavian, or German descent. The proportion of foreign-born is somewhat less in Jackson County (approximately 3 per cent) than for the rest of the State (5.5 per cent).¹

Population change in the county has not been a continuous process of numerical increase. Table 3 shows a period of accelerated growth from 1900 to 1910, a decline from 1910 to 1920, and a second period of very rapid growth from 1940 to 1950.

The first period of accelerated growth (1900-1910) is generally referred to as the "pear boom" for this was the decade of rapid pear orchard expansion in the Medford District. Many "high-pressure" promotion schemes and a flood of "shangri-la" type brochures on Rogue River Valley engulfed the cities of the eastern United States, resulting in a sudden and premature growth of the area.

¹U. S. Bureau of Census, <u>United States Census of Population</u>: <u>1950, General Characteristics</u>, Oregon, preprint, Vol. II, part 37, Chapter B, pp. 71 and 79.

In the decade of 1910 to 1920 repercussions of the premature growth set in. Many hundreds of families, "broke" and disheartened, left the valley. Another factor that apparently influenced this exodus was World War I, lucrative jobs associated with the war effort and the call to the Colors furnishing the incentive.

TABLE 3

GROWTH OF POPULATION IN JACKSON COUNTY AND SELECTED CITIES a

	Jacksonville	Ashland	Medford	Jackson County
1.890	743	1,784	967	11,455
1900	653	2,634	1,791	13,698
1910	785	5,020	8,840	25,756
1920b	489	4,283	5,756	20,405
1930 ^b	706	4,544	11,007	32,918
1940°	761	4,744	11,281	36,213
1950°	1,193	7,739	17,305	58,510
1956°	1,166	8,597	20,083	65,790

^aU. S. Bureau of Census, <u>Thirteenth Census of the United States</u>: 1910, Abstract with Oregon Supplement, pp. 576 and 583

^bOregon, Secretary of State, <u>Oregon Blue Book: 1935-36</u> (Salem, Oregon: State Printing Department, 1935), pp. 201-202.

^COregon, Secretary of State, <u>Oregon Blue Book: 1957-58</u> (Salem, Oregon: State Printing Department, 1957), pp. 180-183.

The second period of accelerated growth (1940-1950) might well be called the "lumber boom", generating from the international demand for lumber during World War II and continuing through the rehabilitation period.

The continuing rapid growth of population since 1950 can apparently be attributed to the further expansion and diversification of the lumber industry and general increase of population throughout the Pacific Northwest. Medford and Ashland are the only towns in the county that have sufficient population to be classed as urban under the census definition of the term. The small towns function almost entirely as locality trading centers with Medford and Ashland providing the industrial services, wholesaling, banking, and other indispensable services that cannot profitably operate in a small community. Both Medford and Ashland have facilities relating to all four of the major activities of the county.

<u>Transportation and Communication</u>.--Transportation and communication have always been, and no doubt will continue to be, vital factors in the economic and cultural progress of the Rogue River Basin, as is true in most all locations. Much of this dependency arises from the isolation of the region in the long distances to major markets and the circumscribing mountain barriers discussed earlier under "Locational Relations." In addition to the great reliance on inter-regional transport routes, the existing and ever expanding network of secondary and mountain-access roads is essential to the economy in facilitating the extraction of logs and forest fire prevention and in serving the agricultural industries. The principal access roads are shown on the "Forest Type" map (Fig. 33, p. 90). Also the importance of good highways and adequate access roads to attract tourists and sportsmen cannot be overlooked for recreation and "tourism" are significant adjuncts to the Basin's economy.

Most through highway traffic is on the nationally important interstate route of the Pacific Highway (U. S. 99). Bus and truck traffic east to Klamath Falls (State 66), west to Crescent City (U. S. 199), and north to central Oregon (State 62 and 230) is surprisingly light. However, all three highways are extremely important as timber-access

roads and tourist routes.

Both Medford and Ashland have daily service from two major bus lines (Pacific Greyhound and Continental Trailways) and several interstate trucking companies.

The Ashland Area and the whole of Rogue River Basin is served by only one railroad, the Southern Pacific. Since the construction of the "Natron Cut-off" in 1926, the Basin has been on a branch line, the bulk of north-south traffic following the less tortuous route east of the Cascades (Fig. 1, p. 2). Although now on a branch line, freight service is generally adequate with four to six trains daily and more are available for the peak lumber shipping period and the fruit harvesting season. Railroad passenger service, however, is non-existent. Bus service is provided by the railroad to the main rail line at Klamath Falls, Oregon, or Dunsmuir, California.

From the standpoint of service, the Basin was not materially hurt by the loss of mainline rail traffic, but to Ashland, the railroad "division-point",¹ it was a severe blow. Fewer trains meant fewer crews and less activity in the yards and round-house and consequently a decreased payroll.

Air service, both passenger and freight, is quite adequate for the Medford District of the Basin with three airlines providing daily service to the Medford Municipal Airport, three miles north of that city. Charter service is also available and a special "Mercy Flights" airplane is on a twenty-four hour stand-by for emergency medical cases. Airport facilities are unusually complete with a large modern passenger terminal,

¹A "division-point" or "division-station" is the place where locomotives and railway cars are serviced, train crews changed, and trains made up or reorganized.

numerous hangars, and small aircraft maintenance facilities. The Civil Aeronautics Authority maintains a radio range station and communications service and the U.S. Weather Bureau operates a complete weather station at the field.

Jackson County is covered by a fairly complete telephone network, operated by two utility companies. Working together, the two companies have incorporated all the towns and most of the rural area of the Medford District in a new dial system with the main exchange in Medford. The new dial system is still in the process of development and it is still necessary to rely on the traditional operator for many calls within the District and for all long-distance calls.

Mail service for Jackson County is organized and administered from Medford and is satisfactory except for the fact that mail for eastern points must move either north to Portland or south to Sacramento, California, before being routed to eastern destinations. Airmail service is excellent with numerous departures daily from the Municipal Airport in Medford.

CHAPTER II

AGRICULTURE

1. General Considerations

In the Ashland Area, as it is for all Jackson County, agriculture is second only to the lumber industry as an economic base.¹ Approximately 7.6 per cent of the county's crop and improved pasture land is within the delineated boundaries of the Area,² from which significant contributions are made to all three of the county's major agricultural industries: fruit growing, dairying, and the raising of beef cattle (Fig. 13, folded in back).

<u>Natural Conditions</u>.--Though the valley is narrow and little level land is available, the small floodplains and gentle slopes of the terrace and bench lands offer considerable land adaptable to mechanized agriculture. The steeper slopes are also valuable assets being actively exploited; but, here the problem of erosion is acute. The soil mantle, too, varying from heavy adobes to porous granitics, presents many challenging problems, but with the use of fertilizers and scientific methods of cultivation, they constitute one of the most valuable assets of the Area.

¹In 1950 the number directly employed in agriculture was 2,700, in lumbering about 3,760. U. S. Bureau of Reclamation, op. cit., p. 77.

²Acreage percentage calculated from Talent Irrigation District maps, aerial photographs and the statistics presented in the "Report of Jackson County Program Planning Conference": 1957, op. cit., p. 3. Extremely variable climatic conditions, particularly with regard to rainfall, make dry-farming a hazardous undertaking, but under irrigation a great variety of crops can be grown. The average frost-free season of 182 days is somewhat restrictive, excluding some crops and cutting the yields of others. Fortunately, however, the damaging effects of spring frost are minimized by the elevation and locational situation well above the main valley floor, thus giving the Area excellent air drainage and freedom from low-lying frost pockets.

The greatest restriction to expansion and increased intensification is the insufficient water supply for irrigation. Stream flow and groundwater sources are wholly inadequate and the storage reservoirs, when filled to capacity, cannot supply sufficient water for the land now under irrigation.¹

<u>Cultural Conditions</u>.--For the Ashland Area transportation is, perhaps, the most direct cultural factor deterring greater agricultural diversification and intensification. Transportation costs are high, due to distance and terrain, and the result is excessive production and marketing costs. As an indirect effect, high living costs foster high labor costs that must be added to the other high cost factors of production.

Though both natural and cultural conditions place many restrictions on the agricultural possibilities of the Area, the available resources, through a program of effective planning and wise use, can provide a sound basis of economy for the present rural population and possibly a limited expansion.

<u>Irrigation</u>.-- Need for irrigation in the Area was recognized when the early settlers planted their first crops. Free water-right claims

LU. S. Bureau of Reclamation, op. cit., pp. 78-81.

date from 1851. Early irrigation development was limited to individual projects, watering the lower terraces from simply constructed contour ditches. This led to pooling of resources to bring some of the higher terrace and bench lands under irrigation. Formal organization came in 1916, when the Talent Irrigation District was formed and subsequent construction culminated in the completion of the present system in 1926.¹ The portion of the district that serves the Ashland Area is shown in Figure 14.

The Ashland Area comprises about one-fourth of the irrigation district and obtains water from the district for some 3,300 acres of land.² There are no statistics available on the exact amount of private water-rights within the Area but a conservative estimate would be 550 acres. Irrigation water for an additional 150 acres is supplied by the city of Ashland for crop and pasture land within the city limits. These 4,000 acres of irrigated land represent about 25 per cent of the total farm land that lies within the bounds of the irrigation laterals, i.e., the Ashland Area. Approximately 60 per cent of the irrigated land is in crops, the balance in pasture. Irrigated crop and pasture land occupies approximately 54 per cent of the total crop and pasture land of the Area (Fig. 15).

Irrigation has meant success for the farmers of the Ashland Area, but with increased population and land subdivisions, the demand for water has far surpassed the capacity of the existing facilities. A considerable acreage of non-irrigated land could become more productive, and the land now under irrigation could be more intensively farmed when

¹Ibid., p. 83.

²Irrigated acreage calculated from Talent Irrigation District maps and assessment records.





Fig. 15



more water is available.1

As a part of a long range development program for the Rogue River Basin the U. S. Bureau of Reclamation completed a survey and proposal for development of the Talent Division of the project in 1953. This proposal, which includes power, flood control, and irrigation development, has been approved and is now under construction. Completion of the Talent Division of the project, scheduled for 1959, will bring supplemental water to 9,250 acres of land now irrigated in the Talent Irrigation District and fully irrigate 8,640 acres of land now dry farmed.² The Ashland Area as a part of the Talent Irrigation District will be a recipient of these benefits particularly with regard to irrigation; additional water for the presently irrigated land and water for perhaps 1,500 acres of the now dry farmed land.

2. Distribution and Type of Farms

<u>Distribution</u>.--Today practically all rural land considered suitable for agriculture is held in farms. Farm holdings occupy nearly 80 per cent and crop and pasture land 46 per cent of the twenty-six square miles of the Ashland Area. Practically all land that is usable either for crops or grazing has been cleared and is being actively utilized except for about 18 per cent of the total farm holdings that is wasteland with little or no utilization.³ The wasteland is generally restricted to the

LU. S. Bureau of Reclamation, op. cit., pp. 81-82.

²Ibid., p. 74.

⁵There are no statistics or records available to determine exactly the acreages or percentages utilized in agricultural pursuits. Those used are estimates derived from field research and intensive study of aerial photographs. very steep terrace, bench, and cuesta escarpments and to the extremely rocky residuals of intrusive origin.

<u>Types of Farms</u>.--Farm operations employ both irrigation and dry farming methods and are both intensive and extensive. Field investigation revealed that each of these much used classifications overlap, many of the farms operating under all four types in practically all conceivable combinations. With these existing conditions a discussion of the Area based on either of the two classification groups would not give a realistic picture. For this reason the author has chosen to classify the farms by type of operation, based on the major source of income for the farm. With this criteria as a basis, the farms of the Area have been classified as being of five major types: (1) crop and livestock farms, (2) dairy farms, (3) horticultural farms. (4) poultry farms, and (5) part-time farms.

This classification, though workable, is not entirely satisfactory for many of the farms included in a specific group are actually part-time farms. Fully two-thirds of the farms of the Area are part-time farms. However, justification for their inclusion in a specific group lies in the fact that they are an important contributor to a major agricultural industry of Jackson County, and that the farmer derives a considerable portion of his income from the farm.

3. Crop and Livestock Farms

Other than the separately classified poultry and dairy industries, livestock operations are limited almost entirely to the raising of beef cattle and a small number of sheep. Therefore, as considered in this study "crop and livestock" farms are those farms that specialize in the raising of beef cattle or sheep and pursue cropping as an adjunct to the livestock enterprise.



Fig. 16.--Hereford Cattle Grazing on Native Grass.



Fig. 17.--Shocked Hay Curing in the Field. View south.

From its early beginning the cattle industry has continued to prosper. But the raising of sheep has declined greatly since reaching its peak in 1830. In relative importance beef cattle production has declined to third place among the agricultural industries of the county, but in volume and value it has steadily increased (Table 4). For the Ashland Area, located on the periphery of the valley lands, it is still the major agricultural pursuit, occupying more land and having a greater gross value than any other form of agriculture. Approximately 6,000 head of beef cattle are raised within or immediately adjacent to the Area.

TABLE 4

	Beef Cattle	Sheep	Dairy Cows
1880	8,273	31,729	2,187
1890	12,220	15.812	3.149
1900	14.124	13,381	3.167
1910	12,912	18,622	3,824
1920	25,661	20,267	6,304
1930	24,371	18,189	7,948
1940	26,655	9,384	8,951
1950	27,304	10,694	9,041
1954	41.638	11.618	9.683

LIVESTOCK NUMBERS, JACKSON COUNTY, OREGON a

⁸U. S. Bureau of Census, <u>Tenth Census of the United States: 1880</u>, <u>Agriculture</u>, Table 9, p. 167; <u>Eleventh Census of the United States: 1890</u>, <u>Agriculture</u>, Table 10, p. 303; <u>Twelfth Census of the United States: 1900</u>, <u>Agriculture</u>, Vol. V, Part 1, Table 35, p. 470; <u>Thirteenth Census of the</u> <u>United States: 1910</u>, <u>Agriculture</u>, Vol. VII, Table 1, p. 410; <u>Fourteenth</u> <u>Census of the United States: 1920</u>, <u>Agriculture</u>, Vol. VI, Part 3, Table 2, p. 322; <u>Fifteenth Census of the United States: 1930</u>, <u>Agriculture</u>, Vol. II, Part 3, Table 4, p. 486; <u>Sixteenth Census of the United States: 1940</u>, <u>Agriculture</u>, Vol. I, Part 6, Table 4, p. 632; <u>United States Census of</u> <u>Agriculture: 1950</u>, Vol. I, Part 32, Table 4, p. 282; <u>United States Census of</u> <u>Agriculture: 1954</u>, Preliminary, Jackson County, Oregon, p. 2.

<u>Distribution</u>.--Crop and livestock farms occupy approximately twothirds of the Area and are found in an almost contiguous pattern that includes most of the area north of Bear Creek and the entire eastern one-half of the Area (Fig. 13, folded in back). The only disruption of the pattern is a few dairy farms and an occasional truck or parttime farm.

Locally these farms are called "ranches" and perhaps with justification, for many of them are quite large. One such ranch with headquarters in the Area, has fourteen contiguous sections (8,900 acres) of land under fence, and several others have from three to five sections. However, these large ranches are not the only "crop and livestock" farms for there are many entirely within the Area that have from fifty to two hundred acres. These smaller farms with a primary interest in livestock are a relatively new addition to the pattern of occupance resulting largely from the great influx of population and the subsequent subdivision of land. Irrigated pastures and forage crops have made success possible for these small livestock farms.

<u>Natural Conditions</u>.--Though a general analysis of the physical environment of the Area has been presented, certain factors directly affecting the livestock industry need further consideration, particularly with regard to the large ranches. The major portion of these large ranch acreages, which are utilized for grazing and an occasional field of grainhay, reach far back in the Cascades where natural conditions are particularly favorable. The native grass cover of the western slopes, adjacent to the Area, and the numerous meadows, glades, and open stands of timber found in the high mountains and plateau section afford excellent grazing. The carrying capacity of this range is generally considered to be one cow per fifteen acres.¹ In contrast the steep, densely forested

¹Interview with Mr. Harold Thomas, District Ranger, Ashland District, Rogue River National Forest, July 11, 1954. slopes of the Siskiyou Mountains offer poor grazing and few cattle from the Area range this section.

Climatic conditions are generally quite favorable for the livestock industry. Mild winters and moderate summers make year-around grazing possible, but supplemental feeding is necessary in winter. The building of wind-breaks is not necessary.

The greatest problem climatically is the rainfall. Most of the cropping of the large ranches is dry farmed grain-hay and the great variability in the spring rains makes every year's hay yield an uncertainty. The average yield per acre for grain-hay is between one and one-half and two tons per acre, but a dry spring season often cuts this in half.

Another serious problem, coming as it does with a low hay yield, is the retarded growth of range grasses associated with a dry spring. This combination compels the cattlemen to begin winter feeding early and usually means heavy expenditures for imported hay. Very few farmers produce a surplus of hay and many of them always purchase a part of their hay needs. The Medford District as a whole is a hay deficient area.

Administration and Organization. -- Land administration is also more favorable for the cattle industry in the Cascades than in the Siskiyous. In both mountain ranges a large percentage of the land is within the Rogue River National Forest under the jurisdiction of the U. S. Forest Service; and outside the National Forest there are large acreages of former Oregon and California Railroad land under the management of the U. S. Bureau of Land Management. Both agencies have granted range permits, mostly in the Cascades, some of them dating back to 1916.¹ In the Siskiyous a considerable portion of the land adjacent to the Area has been set aside by Congressional action as the "Ashland Watershed." The watershed is restricted to all grazing and recreation to protect the water supply of the city (Fig. 33, p. 90).

Until the organization of the Rogue River National Forest in 1916 there were no restrictions on grazing. At that time ranchers were required to obtain range permits, but the U. S. Forest Service had no effective plan of range management and little was known about the carrying capacity of the range, consequently too many permits were issued and over grazing continued. There was little change in the situation until the depression of the 1930's, when many permits were made void by nonuse. These permits were never reissued and since that date the U. S. Forest Service has been able to organize an effective range-management program.

The government owned range has been divided into administrative allotments on the basis of grazing capacity and the permit quotas of the cattlemen using the different areas. In most cases the cattlemen of each allotment have organized their own association and work closely with the U. S. Forest Service and the U. S. Bureau of Land Management

¹The Oregon and California Railroad "revested" lands are part of original grants made in 1868-1869, every other section (checker-board style) extending twenty miles on both sides of the railroad. The "O and C" "controverted" lands are from another grant (never deeded to the railroad) in 1870, every other section (checker-board style) of a strip ten miles wide adjoining the original grant on both sides of the railroad. In 1916 it was proven that terms of the grants had been violated, and all the "O and C" lands in Oregon were returned to government ownership. For interesting accounts of the "O and C" controversy see: U. S. Bureau of Corporations, <u>The Lumber Industry</u> (Washington: U. S. Government Printing Office, 1913), Part I, pp. 230-250; John Tilson Gance, "History of the Oregon and California Railroad" (unpublished Master's thesis, Department of History, University of Oregon, 1924).

in maintaining "drift-fences", cattle "salting", and general range supervision.1

Other important factors in the range administration are: (1) the U. S. Forest Service requirement that loggers seed "skid-roads" and "clear-cuts" with approved range grasses, and (2) the establishment of experimental range re-seeding plots by the U. S. Forest Service in cooperation with the cattlemen.²

Until recently the effectiveness of the range-management program was hampered by the overlapping administration of the U.S. Forest Service and the U.S. Bureau of Land Management. However, this is no longer a significant problem. Congressional action in 1954 placed all controverted "O and C" lands within the National Forest under the supervision and administration of the U.S. Forest Service. In the same act provision was made for an exchange of lands between the two government agencies, value for value in acreage by counties, to eliminate the checker-board pattern of land management.³ This exchange was completed in 1956.

<u>Operations</u>.--In operation the large ranches practice transhumance, grazing and feeding within or near the Area during the winter (October 15 through April 1), then gradually moving the stock to the mountain areas as range grasses develop during the spring and summer. For summer

¹Richard E. McArdle, <u>Grazing on the National Forest</u>, U. S. Department of Agriculture, Excerpt from Report of the Chief of the Forest Service, 1953 (Washington: U. S. Government Printing Office, 1953), pp. 5-6.

²Interview with Mr. Harold Thomas, District Ranger, Ashland District, Rogue River National Forest, August 4, 1954.

³U. S. Congress, <u>An Act Relating to the Administrative Jurisdic-</u> tion of Certain Public Lands in the State of Oregon, and for Other <u>Purposes</u>, Public Law 426, 83rd Cong., 2d Sess., 1954, Sec. 2.

grazing most of the ranchers have range permits with the U. S. Forest Service and/or the U. S. Bureau of Land Management and from June first to October thirty-first graze all or a part of their herd on these publicly administered lands.

The herds, just as the ranches, vary greatly in size, from 150 head on the smaller ranches to 750 head on the larger ones. Most of the cattle are "grade" Herefords, but a few have mixed herds of Herefords and Short Horns. Practically all of the bulls used for breeding purposes are registered Herefords.

Until recent years it was the practice to let the bulls range with the herds but the trend now is toward controlled breeding; keeping the bulls separated from the herd except for a period of one to three months. The contact period is planned so that the cattle will be near the home ranch for closer supervision during "calving." February is the preferred month. Ranchers following this practice usually realize an 80 per cent calf crop and occasionally even more. Marketing is also improved for the cattle, when sold, are of a more uniform size.

Cropping in conjunction with the grazing operations is almost entirely forage. However, some of the ranchers occasionally plant grain to be threshed either for supplementary feed or for cash sale. The principal forage crops are dry-farmed grain-hay, usually cats and vetch or rye and vetch. Planting is generally in the fall, to take full advantage of the early spring rains. Harvesting is in June, and it is not unusual for fresh-cut hay to be ruined by late spring rains. To better the yield fertilization is necessary, and most of the ranchers apply 100 pounds of either super-phosphate or phosphate of ammonia per acre each year.

In addition to the dry-farmed acreages most of the ranchers have

a considerable acreage of irrigated land devoted to forage, usually alfalfa. Several varieties of alfalfa are grown but the most common is the relatively new Talent alfalfa that was developed locally at the Agricultural Extension Service Experiment Station, located near the town of Talent. Its main points of superiority are: a heavier, more luxuriant growth and greater freedom from weeds. Climatic conditions generally limit alfalfa to three cuttings, but occasionally four are possible. The average yield is from four to five tons per acre for the three cuttings.

Another form of cropping is the harvesting of native hay from the high mountain meadows owned by several of the ranchers. Some of these meadows have an exceptionally heavy verdure of fine forage grasses, yielding as much as two and one-half tons per acre. In some instances the value of this native grass hay has been enhanced by broadcast seeding with adaptable domesticated grasses.

Operations on the smaller "crop and livestock" farms is much more intensive than that of the "ranches". The base here is irrigated pasture, and irrigated forage with perhaps a small acreage of dryfarmed grain-hay. The cattle are pastured the year-around with supplemental feeding of hay during the winter. Usually the acreage of irrigated pasture and irrigated forage is about equal, but acreages of grain-hay vary greatly.

Herds on these farms range from ten to eighty head of stock, with four head per acre of pasture being the usual number. In most instances these small herds are of much better quality than the range cattle of the large ranches. "Grade" Herefords are the most common but registered herds of Herefords and Black Angus are also represented.



Fig. 18.--Hereford Cattle on Irrigated Pasture, Bear Creek Floodplain. View south.



Fig. 19.--Cherry Trees Killed by Albino Virus. Looking to the north from near the northwest corner of the city of Ashland.

Sheep. -- In the Ashland Area only a small number of farmers raise sheep. One large ranch has a joint cattle and sheep operation, grazing 750 head of cattle and 900 head of sheep. Aside from this one large operation there are only a few farms with small flocks of forty or fifty sheep. The total number of sheep within or near the Area is approximately 1,200, about one-tenth of all the sheep in Jackson County.

Most of the "bands" are made up of ewes from a cross of the Corey, Rambly, and Merino breeds, good wool producers of fair meat quality; and Sheffield-Hampshire rams, excellent meat animals. The lambs from this cross are very hardy and like their sires they are fine meat animals.

In general the raising of sheep closely parallels the cattle industry, the one large operation following the transhumance pattern and the smaller farms' operation much like the small cattle enterprises. However, two problems of major importance confront the sheepmen that do not affect the cattlemen. The first and perhaps the greatest problem is shortage of grazing range. There are no range permits issued for sheep on any of the publicly administered lands adjacent to the Area except for a ten-day "trail-grazing" permit that allows the one large operator to move his bands across a corner of the Rogue River National Forest to "permit-range" in the Siskiyou National Forest, along the Oregon-California border. The lack of public range and the greater return realized from cattle on private range are significant factors in the decline of sheep raising in Jackson County (Table 4, p. 46). The second major problem, perhaps contributing to the decline, is the difficulty in getting replacement ewes for range "bands". Replacement of ewes must be from "range bands" for "pasture" ewes will not flock well and are poor foragers. To obtain the desired cross breed for replacements the ranchers often must travel into Utah, Nevada, and

other distant sheep areas. A third problem, though of lesser importance, is the difficulty in obtaining experienced herders. As the number of sheep declined, the Basque herders drifted to other areas and, perhaps, further hastened the decline in Jackson County. ¹

<u>Marketing</u>.--Marketing is about the same for both the large "ranches" and the smaller farms. In former years the cattle were grazed and grain-fed to be sold as two and three year-olds, but the practice in recent years has been to sell yearling "feeders", except for the few head fattened for the local market. Buyers from outside the area, principally from California, purchase directly from the individual cattlemen. Practically all of the cattle are shipped by truck directly from the ranch or farm. San Francisco and Portland market quotations set the price received by the cattlemen.

Marketing of sheep is handled in an entirely different manner. Because of the limited production, "fleece" and lamb buyers seldom visit the Area, making it necessary for the farmers to do their own marketing. Practically all sheep are sold as "butcher" lambs or "feeders", except for a few unproductive ewes sold as "mutton". Shipment is usually direct to the San Francisco market by the farmer. The wool too, is either shipped or delivered personally by the farmer to this same market.

4. Dairy Farms

In the agricultural economy of Jackson County dairying is the

¹Since the writing of this section, the one large "crop and livestock" ranch having a combined sheep and cattle operation has changed ownership and the new owner has discontinued the sheep operation. This action tends to support the author's conclusion that the raising of sheep will continue to decline in the Area.

second most important industry, being surpassed only by the fruit growing industry.¹ Nine of the county's seventy-five grade "A" dairies are in the Ashland Area.² These nine grade "A" dairies, along with several grade "B" dairies, occupy about twenty per cent of all crop and pasture land within the Area. Thus it is apparent that dairying in the Ashland Area, though not large in itself, is an important contributor to one of the county's major agricultural industries.

Growth of the dairy industry in Jackson County has been gradual but continuous from the earliest days of settlement. At no time has there been a sudden influx of dairying people, and the industry has grown only as population has increased (Table 3, p. 34; and Table 4, p. 46). However, the stimulus of World War II and the past tendency for dairymen to raise surplus dairy cows for sale outside the county, for which there was a limited market, have resulted in a too rapid growth of the industry. The county is now a surplus milk area handicapped by the great distance to major market centers and too little surplus to warrant more intensive milk processing. This situation is being alleviated somewhat by the rapid influx of population and the efforts toward herd control by the local dairymen's association and the Milk Producers League.³

<u>Natural Conditions</u>.--Climatic conditions in the county are in no way similar to the great dairying regions of the world but are such

¹Supra, Chap. I, p. 29.

²Interview with Mr. Richard Westerberg, President, Jackson County Milk Producers League, September 9, 1958.

³Interview with Mr. Earle Jossy, Assistant County Agricultural Agent, Medford, Oregon, August 21, 1958.

that man, with his technological and engineering skills, has been able to develop a successful dairy industry. Year-around grazing is possible under the conditions of mild winter temperatures and moderate summers, but during the winter months pasture growth is negligible and heavy supplementary feeding is necessary. During the summer months when little or no rainfall is experienced, it is necessary to irrigate pastures and some supplementary forage crops.

Distribution and Size of Farms.--Dairy farms of twenty to over 400 acres are located throughout the Area with no particular pattern of distribution (Fig. 13, folded in back). The only noticeable concentration is along Bear Creek, within and near the city of Ashland, where the farms occupy the lower terraces and floodplains.

Milk is sold from approximately one-fifth of the farms in the Area but less than 7 per cent are classed as dairy farms. Most of the farms that sell milk not classed as dairy farms are part-time farms and will be discussed under that heading.

Dairying in the Area is often done in combination with fruit growing or other agricultural pursuits. A typical combination is a dairy-fruit farm having twenty or thirty milch cows and fifteen or twenty acres of pears or apples. However, about 50 per cent of the dairy farms operate solely as dairies with all cropping having a direct connection with the production of milk.

The Dairy Herds.--Guernseys and Jerseys are the dominant breeds in the Ashland Area. Guernseys are the more popular because they are heavy producers, and are generally considered to be easier to milk and care for than the sensitive Jerseys. Moreover, the Guernseys give the rich yellow-colored milk preferred in the local market. The big Holsteins, so widely used in many dairying regions, are found on only



Fig. 20.--Registered Jersey Herd on Irrigated Pasture. Looking to the southeast across a small floodplain of Emigrant Creek near Emigrant Dam.



Fig. 21.--Modern Milking Barn on Grade "A" Dairy. Steel pipes form walk-ways for the cows. Doors and gates are controlled automatically from within the milking room.

two major dairies in the Area. Holstein herds, however, are numerous in other sections of the county. Most of the dairy herds are composed of select "grade" animals, but there are a few herds of mixed breeds, and two herds are registered stock, a Guernsey and a Jersey herd.

Herd improvement has progressed but slowly in recent years. The psychological effect of the per-pound method of purchase with little additional compensation for high butterfat content, and the quota system imposed by the local Milk Producers League, because of surplus production, have apparently brought about a general feeling of apathy toward herd improvement.¹ There are, however, indications of a change in this attitude, apparently being brought about through the National Guernsey and National Jersey clubs and their efforts to develop a market for premium quality milk.

Most of the dairymen maintain their herds with Hereford or other beef breed bulls and sell their calves as veal. Practically all replacement stock is purchased from other "grade" herds in the county. However, there are a few conscientious dairymen who, regardless of conditions, continue to improve their herds by selective breeding and artificial insemination.

The diseases of dairy cows are well controlled through enlightened methods of medication and strict supervision by government agencies. Tuberculosis and Bang's disease have been nearly eradicated. Mastitis, the worst cattle disease in the Area, is not particularly prevalent, no more so than in other areas of similar development.

Interviews with many dairymen and Mr. Richard Westerberg, President, Jackson County Milk Producers League, pointed up these facts.

<u>Crops for Dairying</u>.-- Irrigated pastures ranging in size from five to forty acres dot the landscape. The most generally used pasture planting is a combination of English rye-grass, alsike clover, ladino clover, and a small amount of timothy grass. Other grasses and legumes often included are orchard grass, Kentucky blue grass, oat grass, red clover, and cow-peas. The choice of legumes and grasses and the proportions of each in the pasture "mix" is governed more by the preferences of the farmer and the type of soil than by the use to be made of the planting. Red clover is a preferred legume for the excessively drained soils of the terrace and bench lands south of Bear Creek where porous granitic soils prevail. Alsike clover is emphasized on soils that have a natural tendency to hold water, such as the adobe soils north of Bear Creek.

Since about 1945 there has been a trend toward the use of altafescue and Parker lotus grass. Both are relatively new to the Area and are deemed superior by the Agricultural Extension Service. Each may be planted in combination with older legumes and grasses, or used separately. Altafescue grass is particularly well adapted to the Area for its long roots enable it to remain green during the dry summer season even when water for irrigation is in limited supply. Parker lotus grass needs more moisture than altafescue but adapts readily to irrigated pastures. One excellent feature of Parker lotus grass is that cows will not bloat from heavy feeding as they often do on clover. For these reasons a number of the dairymen are doing away with clover entirely and reseeding with Parker lotus and altafescue.

Irrigation of practically all of the pastures is by sprinkler system but a few still use the older method of flood irrigation. Frequency of irrigation depends largely on exposure and soil testure. Some areas



Fig. 22.--Hay from Irrigated Field Shocked for Curing, Bear Creek Floodplain.



Fig. 23.--Mowing a Field of Irrigated Hay. Looking to the north, western Cascade front in background.

must be irrigated as often as every other day and others only twice each week.

Most dairymen of the Area have a portion of their acreage devoted to the production of forage, either irrigated or dry-farmed or both. A few, however, grow no forage and depend entirely on purchased hay for supplemental feeding. Crops associated with dairying are about the same as those of the beef cattle industry. Alfalfa dominates the irrigated land and oats and vetch in combination on the dry-farmed acreage. A small acreage of the irrigated land is devoted to other hay crops preferred by some dairymen. There is probably no typical "mix" for these "personal preference" hay crops but most farmers include the usual meadow grasses and legumes such as vetches, timothy, oat grass, and blue grass.

Crop rotation is practiced in a very limited way on the dairy farms because the bulk of the cropland is in permanent pasture or dryfarmed forage. Prior to 1940 the method of pasture management that prevailed made it necessary to plow the legumes and grasses under about every five years. When this was done those who had available land usually planted other crops such as potatoes, corn, or truck crops for one or two years. The land was then re-seeded to pasture using a nurse crop of oats which was cut for forage, leaving the new pasture ready for grazing. The present method, which has almost eliminated crop rotation is a result of finding that the "legumnous population" of nitrogen fixing bacteria can be increased year after year if the field is fertilized generously with phosphates. One hundred pounds of superphosphate with twenty-five per cent sulphate of ammonia is the usual application. Nitrogen and potassium are also added by some farmers, a practice highly recommended by the Agricultural Extension Service.

Dairy Farm Facilities and Operations.--The dairy farms differ greatly in acreage, size of herd and in facilities. In particular, there is a great difference between the grade "A" and grade "B" dairies. All grade "A" dairies are required by law to maintain a milking room separated from the hay and feeding barn. This milking room is usually a very substantially built structure, often of stone or concrete and in every instance having a concrete floor. Some of these milking rooms have the best of modern equipment, including automatically-operated stanchions and entrance and exit doors. The majority, however, are more conventional with hand-operated stanchions and grain bins so that the cows may eat grain during the milking.

The hay and feeding barn is of the more conventional type containing a hayloft or central hay storage area, feed storage room, a passageway for handling feed, and a row of feeding stalls. On many of the grade "B" dairies the milking is also done in this barn. Due to mild year-around temperatures heating is unnecessary in either the milking room or feeding barns. In fact most of the barns are of single-wall construction.

Electric lights are usual, for during the short days of winter, milking is usually done during the hours of darkness. Also, electric power is commonly used for pumping water, running the feed cutter, and operating the milking machines. All of the grade "A" deiries use milking machines and most of them pipe the milk directly from the machines to "aerators" where the milk is chilled to stop bacterial action; from the cooler it is either piped to a refrigerated tank or spigoted into cool milk cans. On most farms facilities for washing the cows have been installed at the entrance of the milking rooms and within the room water outlets are numerous in order to facilitate the almost


Fig. 24.--Dairy Herd on Irrigated Pasture. Looking to the southeast across Bear Creek floodplain from a point northwest of Ashland.



Fig. 25.--Sprinkler Irrigation of Pasture on a small Emigrant Creek floodplain.

constant scrubbing of the floor during milking operations. Cream separators are seldom found on the grade "A" dairies since most of the milk is sold as whole-milk and the dairy farmers buy the butter they use. Milking on the grade "B" dairies is both by machine and by hand and since much of the milk is sold as factory-milk, cream separators are common.

Even though pasture grazing is possible throughout the year, rather heavy feeding of hay is necessary during the winter months when legume and grass is slow. Most dairymen commence hay feeding about September 1, and continue until about April 15. During this period each cow will consume on the average of about 1,000 pounds of hay each month. A few farmers feed hay throughout the year, but the summer feeding is generally light. About fifty per cent of the dairymen chop the hay before feeding.

Grain is fed throughout the year, usually on the basis of one pound to five pounds of milk. However, due to the limiting quota system many dairymen feed less grain. In some instances no grain is fed during the period when the pastures are good and hay of high nutrient value is available. Grain prices are high for most of it must be shipped in from distant areas. It is for this reason, coupled with the per pound sale of milk and the quota system, that many deem it unprofitable to feed heavily on grain.

<u>Marketing</u>.--Approximately 50 per cent of the milk produced in Jackson County is sold as fresh whole milk. In 1950, whole milk was sold from 567 of the 949 farms selling dairy products, 437 sold separated cream, and only twelve sold skim milk and/or butter.¹ Separated cream is

¹U. S. Bureau of Census, <u>United States Census of Agriculture</u>: 1950, Vol. I, Part 32, Table 4, p. 283.

sold primarily by grade "B" dairies and individual part-time farmers. Milk is collected daily by the trucks of the major milk purchasing agencies or by the Milk Producers League. Most of the grade "A" milk and considerably more than half of the factory-milk is received in Medford.

With the exception of the milk sold by the several producerdistributors virtually all the grade "A" milk is sold to distributors through the Milk Producers League. The League, as it is usually called, was organized at a time when dairymen were particularly incensed against the large distributors of the Area, whom they believed were exploiting them through the payment of unfairly low prices and unfair discrimination. In operation the League acts as a "pool" for most of the grade "A" milk production and bargains with the distributors for quantity and price and assigns equitable production quotas to the individual dairies. In this way the grade "A" producers are protected both from unfair prices and discrimination, although it does hinder expansion of individual dairies as long as there is a surplus of milk.

At present the League handles about 51 per cent of the milk sold from farms in the county, the bulk of it being delivered to the two major distributors in Medford, and to one small creamery in Ashland. Outside markets for grade "A" whole-milk or surplus factory-milk are limited, but the League management often secures short term contracts with firms in Grants Pass, Eugene, Coos Bay and Klamath Falls, Oregon, and Smith River and Crescent City, California. Recent establishment of a small dry-milk plant and a cheese factory in Grants Pass make it the most important outlet outside Jackson County. Obtaining of these contracts has been one of the significant achievements of the League.

About 40 per cent of the factory-milk is purchased as whole-milk

by the Rogue River Valley Creamery, located in Central Point. This creamery's primary production is blue cheese, cottage cheese, and butter for the Borden Milk Company. Only a small portion of the production is sold locally, most of it moving into Borden's nationwide system of distribution.

5. Horticulture Farms

Horticulture has long been important to the economy of Jackson County. Although it has declined in the Ashland Area, it has steadily increased in the county as a whole and for several years it has ranked first among the agricultural industries. Cropland in the county now devoted to horticulture is over 13,000 acres, approximately 25 per cent of all irrigated land.¹ Acreage in the Ashland Area is only a minor portion of this total. Nevertheless it is important both to the Area and to the county. Including approximately 160 acres within the city limits of Ashland there are about 780 acres (less than one-half the 1900-1910 peak) devoted to horticultural crops in the Ashland Area.²

<u>Development</u>.--Horticultural farming in Jackson County had its beginning with the planting of small family orchards and gardens during the early years of settlement. Most of these small plantings were large enough to provide a small surplus and their combined production supplied the local market. As the local markets increased

[&]quot;Estimated from "Gross Agricultural Income and Informative Statistics for Jackson County," annual reports, 1953 through 1957, compiled by Jackson County Agricultural Agent (mimeographed).

²Acreages estimated from Talent Irrigation District maps and assessment roles and from aerial photographs. Estimate for 1900-1910 obtained through interviews with several men who were associated with the fruit industry during that period.



Fig. 26.--Remnant of Old Orchard within City of Ashland. Part of this orchard is still operated on a commercial basis.



Fig. 27.--Small Peach and Apple Orchards within City of Ashland.

and improved roads made possible the shipment of relatively nonperishable products, the plantings increased and many farmers began specializing. Apples and prunes were the principal fruit crops, and potatoes and cabbage were the main vegetable crops grown for export. Shipment was primarily to the California gold fields.

These early orchard and vegetable plantings were remarkably successful, particularly in the Ashland Area where soil and climatic conditions were unusually favorable and water for irrigation was readily available. With the advent of the railroad in 1887 and the development of the refrigerator car a wider variety of crops could be shipped and orchard plantings increased at a phenomenal rate, keeping pace with the rapidly growing West. The new plantings were almost entirely of apples and peaches in the Ashland Area, and apples and pears in other sections of the Medford District. During this period, however, other producing areas were being developed, and between 1900 and 1910, outside competition brought about a decline in peach acreages, most of which were growing in the Ashland Area.

By 1920 apple growers also began to feel the effects of production in other areas and a rapid reduction of acreage began, and is still continuing.

Pears which were particularly well adapted to natural conditions in the Medford District were not materially affected by competition. New plantings continued to be made until approximately the present acreage was reached during the 1940's.

Jackson County is one of the three leading pear producing counties in the nation and sets the standards of quality for the Bartlett, Comice, Winter Nellis, and Bosc varieties.

TABLE 5

DEVELOPMENT		OF	FRUI	TF	'ARM	ENG
	Jackson	Coun	ty,	Ore	gon	a

and the second secon		Number of Bearing Trees					
	Year	Apples	Peaches	Pears	Cherries	Prunes & Plums	
	1890	43,061	34,117	2,772	816	14,390	
	1900	127,273	59,731	25,997	2,582	54,418	
	1910	126,291	45,448	45,891	4,295	17,812	
	1920	229,909	61,011	365,841	7,098	15,995	
	1930	126,135	25,090	568,314	6,163	6,928	
	1940	38,663	31,663	543,114	8,604	3,102	
	1950	22,374	70,774	631,601	5,533	7,083	
	1950 ^b	27,039	83,118°	672,148d	7,662	Personal States of States	
	1954 ^b	22,206	69,288	670,228	4,053	6,656	

⁸U. S. Bureau of Census, Eleventh Census of the United States: 1890, Agriculture, Table 24, p. 526; Twelfth Census of the United States: 1900, Agriculture, Vol. VI, Part 2, Table 2, p. 674; Thirteenth Census of the United States: 1910, Agriculture, Table 4, p. 418; Fourteenth Census of the United States: 1920, Agriculture, Vol. VI, Part 3, Table 4, p. 328; Fifteenth Census of the United States: 1930, Agriculture, Vol. II, Part 3, Table 8, p. 500; Sixteenth Census of the United States: 1940, Agriculture, Vol. I, Part 6, County Table 14, p. 662; United States Census of Agriculture: 1950, Vol. I, Part 32, County Table 5, p. 302; United States Census of Agriculture: 1954, Preliminary, Jackson County, Oregon, p. 4.

^DAll trees regardless of age.

^CThe great increase between 1940 and 1950 is mostly new plantings outside the Ashland Area.

^dThe non-bearing trees represent replacement rather than new orchard developments.

Natural Conditions.--Soil, climate, and relief are generally favorable throughout the Medford District for the production of horticultural specialties. But, in the Ashland Area, located on the valley periphery, the acreage of adaptable soils is limited. Soils of suitable texture and fertility are abundant but areas having sufficient depth of soil and/or degree of slope adaptable to irrigation and machine cultivation are restrictive. A small acreage of fruit trees is dry-farmed in the Ashland Area. The light siliceous soils lying south of Bear Creek are particularly well adapted to the stone fruits, apples, and a variety of truck crops. But, the high erosion index and porosity of soils limit the degree of slope that can successfully be cropped.

The heavy-textured clay adobe soils that mantle the terrain north of Bear Creek have through experience proven to be ideally suited for the production of pears; in fact, a major portion of the District's 10,000 acres of pears is grown on this soil type. Unfortunately in the Ashland Area most of the soils of this type are shallow and only small scattered acreages can be successfully utilized for tree fruits. Slope and erosion are of little consequence but soil depth and the low level of the irrigation laterals have limited plantings to small stream terraces and a few broad benches. Practically all of the clay-adobe soils having sufficient depth for the growing of tree fruits lies in the northwest corner of the Area.

Climatic conditions are generally more favorable in the Area than in the District as a whole. The long, warm, sunny days help produce fruits of high sugar content and of exceptionally fine flavor. And the Area's peripheral location affords excellent air drainage, freedom from low-lying frost pockets, and a longer growing season (180 days compared with 160-170 days of the lower valley). "Smudging" (orchard heating) to prevent spring frost damage is necessary in practically all sections of the District except in the Ashland Area. Occasionally fruit is damaged but orchardists believe it to be more profitable to take the risk than to invest in expensive orchard heating equipment. One peach grower reports that in the period from 1926 to 1958 he lost only one entire crop and had serious damage on only two other occasions.

Distribution, Size, and Types of Farms .-- All of the horticultural



Fig. 28.--Apple Orchard in the City of Ashland. (Courtesy U. S. Forest Service)

farms in the Area are small, five to twenty acres, and are centralized in and immediately adjacent to the city of Ashland and in the northwest corner of the Area. Many of the small orchards are remnants of once larger plantings. This is particularly true for those within the city limits, where urban encroachment and industrial mill sites have taken over the land. In addition to the small orchards many of the part-time farms have plantings of one-half to four acres, which contribute materially to the horticultural production of the Area. Actually about 50 per cent of the horticulture farms are part-time farms and another 25 per cent have other activities contributing to the total income of the farm.

Tree Fruit Farms. -- Apples, which were among the first fruit trees planted in the District, are now grown on about 145 acres in the Ashland Area. The present acreage is only about one-sixth of what it was thirtyfive years ago and a further decline seems likely. Average production is 12-15 boxes per tree, which compares very favorably with the ten bushel per tree yields in the commercial apple areas of Hood River, Oregon, and eastern Washington. Yellow Newtons, red delicious, and Spitzenberg are the most popular varieties and are for the most part juicy and highly flavored and have market appeal with their firmness and deep color.

About 75 per cent of the total apple production of the Area is sold to retail stores within a 150 mile radius; local truckers purchase the remaining 25 per cent as a speculation investment for delivery to San Francisco and Los Angeles markets.

Peaches, which first gave the Ashland Area prominence as a fruit growing area, are still the most numerous kind of fruit tree. Although the present acreage (about 200 acres) is only about one-fifth that of the 1900-1910 decade, they still play an important role in the local economy. This acreage has been quite stable in the Ashland Area since 1930 but in

recent years numerous new plantings have been made in other sections of the District.

J. H. Hales and Elbertas are the most popular varieties, replacing the earlier emphasis on Early Crawfords. These varieties produce well in the Area with a general average of five to six tons per acre and exceptional yields of ten tons per acre are not uncommon. Owing to the high percentage of clear sunshiny days during the growing season and the ideally suited siliceous soils, the peaches grown in the Area have an unusually delicious flavor and beautiful coloring. Both are attributes assuring appeal on the fresh fruit market, for which practically all of the peaches are grown. The emphasis on fresh fruit, when considered with the Area's location and the perishability of fresh peaches, points up one of the major causes of the decline in acreage.

As in the case of apples, peaches are grown and handled primarily for the local and relatively close markets. However, their exceptionally high quality gives rise to a great demand and perhaps 30 per cent of the production moves to distant markets, namely San Francisco and Los Angeles.

Pears, the leading fruit crop of the county, rank third in the Ashland Area with about 100 acres of producing trees. With the exception of a few "home-use" plantings, all of the pears of the Area are grown on the clay-adobe soils of the northwest corner of the Area. Acreage of pears has been limited in the Area largely because of the small extent of adaptable soil of sufficient depth. Bartlett, Comice, and Bosc varieties are grown in the Area and the yields are high compared with other producing areas, averaging four to five, 52-pound packed boxes per tree, or 280-320 boxes per acre.

Pears are grown both for the fresh fruit market and for the

canneries of the District. Most of the pears grown in the Ashland Area move into the world market via the many packing houses located in Medford. However, some are packed for shipment in the one large packing house in Ashland and a small percentage of the crop is processed by the two District canneries, one in Ashland and one in Medford. In most instances the growers commit their crop to packers or canners well in advance of harvesting.

Cherries, once an important fruit crop in the Area, are now of little significance and are still declining in acreage. At the highest point of production there were about 100 acres of cherries in the Area but owing to the invasion of the cherry fruit-fly and the "albinovirus" the acreage has declined to about twenty-five. The Bing and Royal Ann varieties are the most common and the entire production is sold to local stores or directly to the public at fruit stands or in the orchards. No new plantings are being made but some farmers replace old or diseased trees in an effort to maintain their small acreage.

The Small Fruits.--Like cherries the small fruits make only a minor contribution to the horticultural industry of the Area. In all, there are about thirty-five acres in berries: twenty-five in raspberries, boysenberries, and youngberries; and about ten acres in strawberries. All the berry plots are small, ranging from one-fourth acre to two acres, mostly on part-time farms. The entire production is sold to local stores or directly to consumers.

<u>Truck Farms</u>.--The climate and soils of the Area are favorable to the production of a wide variety of mid-latitude vegetables, but isolation and a limited local market operate to keep the industry small. Within the Area about seventy-five acres are utilized for the commercial



Fig. 29.--Truck Crop on Bear Creek Floodplain. Small sawmill in background. View north.



Fig. 30.--Sprinkler Irrigation of Truck Crop. Looking to southwest across the field in above photo.



Fig. 31.--Truck Crop Farm on Adobe Soil North of Bear Creek. Onions (grown for dry onions) and garlic in foreground.



Fig. 32.--Truck Crops on Ashland Creek Floodplain within the City of Ashland. View northwest.

production of truck crops. About 60 per cent of this acreage is devoted to general truck crops (beets, cabbage, lettuce, green onions, carrots, etc.) on two farms catering primarily to the local markets. However, a small surplus often exists which is moved to major markets by produce wholesalers. The remaining 40 per cent of the acreage is devoted to truck crop specialties: dry onions, radishes, garlic, and rutabagas.

Onions of exceptionally fine quality are grown on the heavy clay-adobe soils found north of Bear Creek. Sweet Spanish, fiesta, and bonanza varieties are grown for the dry-onion market and their particularly fine keeping quality places them in high demand. Most of the production moves to distant markets, particularly Los Angeles. Within the Area there is considerable land adaptable to this crop and expansion seems likely as the population of the western states increases.

Radishes of fine quality are produced on the lighter siliceous and alluvial soils south of Bear Creek, both for local and outside markets. Practically all the commercial radish production is by one farmer who leases small tracts of land in addition to farming his own. From year to year the acreage varies depending on the anticipated market and the availability of land; about twenty acres is the average.

6. Poultry Farms

Jackson County is an area deficient in the production of poultry products, particularly eggs. Eggs in large quantities are shipped into the Area throughout most of the year excepting for a short period in the spring when a considerable local surplus exists. Chickens, which are the most numerous type of poultry, number only about

117,006.¹ Poultry and poultry products are sold from about one-third of all farms in the county but only eighty-five farms specialize in poultry production.² In the Ashland Area specialization is confined to three full-time chicken ranches, with emphasis on egg production. The combined total of laying hens for these ranches is approximately 10,000.

<u>Development</u>.--The poultry industry, like dairying, has been an integral part of the local economy of Jackson County since earliest settlement. Until recently its growth has been relatively equal to and simultaneous with the growth of population. Owing to the great distance from major market centers and the high cost of importing grains, the industry has never attempted to expand beyond the local market.

Another factor affecting expansion is the great fluctuation in egg production. As in most poultry regions there is a decline in egg production during fall and winter but unfortunately this decline is extremely severe in the District. This apparently is due partly to climatic factors and perhaps to some extent to methods of operation.

The poultry farms in the Ashland Area are all relatively small, ranging in size from two to ten acres; there is no localized area of dominance. The farms are found on both fertile arable land and on sterile land. Land quality having little or no bearing on the success or failure of the poultry farm, practically all feeds are purchased.

Facilities and Operations. -- The poultry farms, depending on the number of laying hens, consist of from one to six frame-construction laying houses (700-1,000 chickens per house) that have wood or concrete

¹U. S. Bureau of Census, <u>United States Census of Agriculture</u>: 1954, Preliminary, Jackson County, Oregon, p. 3.

²Ibid., p. 2.

floors and are insulated and equipped with heaters. The south exposures or gable sky-lights are screened for the summer months but are covered with glass windows or glass-cloth shutters during the cool, damp winters. Equipment within the houses consists of roosts, nests, feeding trays and water fountains. One poultryman uses wire cages and trap nests exclusively.

One or more brooder and several colony houses are maintained by each poultryman, either on the poultry farm proper or on other property. Some of the colony houses are constructed on skids so they can be moved to avoid keeping young chickens on soil that has been contaminated. Other poultrymen prefer a colony house set well above the ground with a wire net floor, never allowing the chickens to range.

Young chicks are usually purchased from commercial hatcheries during February, March, or April, the peak of the hatchery season. Two of the poultrymen purchase White Leghorns and the third Isandorf Nelsons.

All operations on the poultry farm are directed toward a maximum production of pale yolk eggs. The scientifically designed diet stimulates egg production to the utmost, and green feeds containing chlorophyll, though perhaps necessary for good health, are almost entirely eliminated to get the desired pale yellow-colored yolks preferred by the consumers. Practically all feed is purchased in prepared form from nationally known poultry feed companies or from the Oregon Egg Producers Co-operative.

Aside from the three farms specializing in egg production the poultry industry of the Area is limited to part-time farms and sideline operations of other farms. Chickens, raised either for egg production or as fryers, are the main pursuit of many part-time farmers but some raise turkeys, ducks, or geese in small numbers. All of the

flocks are small, rarely numbering more than a few dozen but the very number of flocks (perhaps 35 in the Area) makes these part-time or side-line operations important in the local supply of poultry products.

<u>Marketing</u>.--There is little marketing problem for the producers since all of the poultrymen in the Ashland Area have their own customers: stores, hotels, restaurants, and a few call customers. In each case the producer makes his own delivery. During the surplus period in the spring the producers sell their surplus to either the Oregon Egg Producers Cooperative or to the one local poultry wholesale house. Through these outlets the bulk of the surplus moves to California markets. Throughout the year both the Co-op and the wholesale house purchase eggs, hens, and fryers from the part-time farmers who have no regular clientele. During the low production period of fall and winter the poultrymen often buy eggs from the Co-op or the wholesale house to supplement their production so that they can keep their regular customers.

The Co-op and the local wholesale house along with other wholesalers in the county play an important role in maintaining high prices for eggs for the producers. Any existing surplus is quickly moved out and the imported eggs are naturally high in price because of added cost of shipment. Fryers as well as eggs are generally in short supply in the county and the wholesale poultry houses import large numbers from outside the Area, principally from the grain-growing areas of Klamath County.

7. Part-time Farms

Part-time farming often becomes a major factor of economy in regions where the basic industries are of a seasonal nature and diversification is limited. And such is the case in Jackson County, where

activities related to the two leading basic industries, fruit-farming and lumbering, are largely seasonal. This seasonality leaves many of the inhabitants inactive a large part of the year and their efforts are turned to part-time farming to augment their income with home-produced foods or with cash sale products.

Of the 2,778 farms in the county, 54 per cent are operated by individuals or families that have a greater income from other sources than from the farm.¹ Approximately 200 of these part-time farms are located in the Ashland Area and their contribution to the local economy is extremely significant. There are no statistics available for this small section of the county but estimates derived from intensive field work indicate that on part-time farms are located approximately twothirds of the 780 acres of the Area's bearing fruit trees, 300 head of grade "B" dairy cows, 1,000 head of beef cattle, and 6,000 chickens.

<u>Development and Distribution</u>.--Growth of part-time farming was first given impetus during the depression years of the 1930's when all activity was slow and full-time employment was scarce. The second period of rapid growth came with the advent of World War II and the greatly increased activity in the lumber industry. The population increased rapidly, filling the needs of the peak production season and at the same time increasing the number of people needing supplementary income or subsistence. The seasonal nature of employment not only affected those engaged directly in the fruit or lumber industries, but also affected employees of retail and service organizations, who found their periods of employment uncertain. Many in these employment groups turned to part-time farming. Another group commonly associated with

¹U. S. Bureau of Census, <u>United States Census of Agriculture</u>: <u>1950</u>, Vol. I, Part 32, County table 6, pp. 310-311.

this type of farming is the semi-retired people, found in considerable numbers in the Area, who have need to augment their savings or income.

The conditions that have operated in the past to develop "largescale" part-time farming are still in operation today and there is considerable evidence that the number of part-time farms is increasing rapidly. During the years between 1945 and 1950 the total number of farms in the county decreased from 2,936 to 2,778, but during the same period the number of farm operators working off the farm (at least part-time) increased from 1,413 (1944) to 1,631.¹ Furthermore, the population is continuing to increase rapidly (Table 3) and much rural subdivision is in evidence.

Landforms and cultural developments have operated to concentrate part-time farming in the area immediately to the east of the city of Ashland. To the south and west of the city the mountain slopes are steep; to the north Bear Creek is a barrier; but to the east there are terrace and bench lands of gentle slope that invite occupance. These same factors have influenced the direction of urban development and the direction of main arteries of travel. Over the years three highways and the railroad have been constructed across this land, breaking the continuity of ranch lands, inviting ribbon development, and bringing about small-acreage subdivision. To be sure, there are other part-time farms, a small number dispersed throughout the Area. However, fully two-thirds of the part-time farms are concentrated in an area one and one-half miles wide and extending two miles east of the city. On the whole these farms are from one to ten acres in size but a few are larger, depending somewhat upon the quality of the land and/or the

¹<u>Tbid.</u>, pp. 310-311.

nature of the farming activity.

The Nature of the Part-time Farms.--Diversity is the keynote in practically all forms of subsistence or part-time farming but generally one or two activities dominate. In the Area the farms fall into four main categories of major emphasis: (1) irrigated pasture (beef cattle), (2) irrigated pasture (grade "B" dairy), (3) small orchards, and (4) combination orchard and dairy. In almost every instance the main activity is directed toward a crop or product that will bring a cash return, while other activities are largely subsistence but may also supplement the cash income. Gardening and the raising of chickens are undoubtedly the most common secondary activities and are found with all four types of part-time farming, in various combinations and with varying degrees of emphasis. In a few instances gardening or chicken raising may be the dominant pursuit of the farm.

Practically all of the products of the part-time farms are sold locally with some exceptions in the case of beef animals. Most of the beef animals are sold to individuals with cold storage facilities or directly to local butchers. The animals not disposed of in this manner are either sold to slaughter houses within the county or sold through auction to both local and outside buyers. Eggs and fryers, as has been mentioned, are sold locally to individual customers, the stores, or to the Oregon Egg Producers Co-operative. Fresh fruit and vegetables are handled in several ways: sale from roadside stands, direct sales to stores, and in some instances, where the amount of one product is considerable, by sale to fruit packers or produce wholesalers. Milk and cream are sold to individual customers and to the dairy products companies as factory-milk or cream.

CHAPTER III

THE LUMBER INDUSTRY

1. General Considerations

Lumbering, today, is the dominant economic activity of Jackson County. It employs more people¹ and its products have a greater value² than any other industry. Since its establishment in 1852 the industry has steadily grown in importance as a basis of income and employment for residents of the county and in supplying a substantial share of the nation's finest timber products. Unfortunately, however, stability in the industry has not been achieved. Lumbering depends upon a natural resource that is easily exhausted in any specific place and which requires many years for replenishment. Expansion has far surpassed the allowable limits for a sustained yield program and its relative importance in the

¹In 1950 there were 3,756 workers employed in the lumber industry in Jackson County. This was about 18.5 per cent of the total employed labor force. In agriculture, the next largest group, 2,707 persons were employed. U. S. Bureau of Census, United States Census of Population: 1950, Oregon, General Characteristics, Preprint, Vol. II, Part 37, Table 43, p. 73.

²As estimated by the Industrial Forestry Association (lumber value from West Coast Lumberman's Association; plywood value from plant capacities and industrial average unit value) the value of lumber products produced in Jackson County in 1952 was \$45,291,439. Agricultural production for 1953 (1952 was a freeze-out year for fruit) was estimated by the County Agricultural Agent to be nearly \$30,000,000. Approximately the same relationship exists for other years since 1945.

economy will decline as the supply of privately-owned timber is diminished unless the trend toward more complete wood processing keeps pace with the inevitable decrease in log production.

Development.--The initial establishment of the lumber industry was to supply the needs of newly arrived settlers and the booming mining communities. For many years it remained purely a factor of local economy with operations carried on in numerous small mills close to accessible timber. Until about 1900, when the first carload of lumber was shipped from Ashland, growth was limited to the needs of a slowly increasing population. Subsequent growth continued to be slow for the county's isolation from markets precluded profitable competition with other more favored areas. It was not until World War I that a significant volume of commercial production was attained, and the real "lumber boom" was delayed until the advent of World War II. Nevertheless, the total volume of timber removed and the "cut out and get out" philosophy (which a few lumbermen still practice) are significant factors that will result, in the future, in a lower stable production base than would otherwise have been possible.

Present day lumber production is continuing at an extremely high rate, nearly twice the estimated allowable rate of cut of 285 million board feet annually. It is quite apparent that early federal legislation, embodying efforts toward conservation, has not yet been fully effective. Prior to the Congressional action of 1893, which set aside the Cascade Forest Reserve and provided for the later organization of the National Forests, an estimated 65 per cent of the timber reserve of Jackson County was transferred from the Public Domain to private ownership. Fortunately, about 15 per cent of this was returned to

government ownership in 1916.¹ It is the resources of this large block of privately owned timberland that is maintaining the present high level of production. But it cannot continue, for today, only about one-third of the remaining timber reserve is in private ownership. Thus it becomes evident that current inventories and the growth potential on the lands set aside by early government legislation will ultimately set the level of production and preserve the resource base that will provide economic stability for the lumber industry and its dependent communities.

2. Timber Resources and Their Administration

Present Timber Situation.--In 1947, when the latest timber inventory was made, there was available for exploitation on unreserved lands in Jackson County 973,000 acres of old-growth timber. Of this, 661,000 acres were untouched and the balance only partially cut.² This acreage was estimated to contain 17,301,500,000 board feet of live saw-timber (Table 6). Revised estimates by the Industrial Forestry Association (January 1, 1957), with more complete inventory data and taking into account the log harvest since 1947, placed the live saw-timber reserve for Jackson County at 16,781,742,000 board feet (Scribner rule).³

¹Supra., Chap. II, p. 49.

²F. L. Moravets, Forest Statistics for Southwest Oregon Unit, U. S. Department of Agriculture, Forest Service (Portland: Pacific Northwest Forest and Range Experiment Station, Nov. 1951), Report 104, Table 3, p. 5.

⁵Interview with Mr. Calvin Smith, District Forester, Industrial Forestry Association, Medford, Oregon, August 15, 1958.

TABLE 6

ESTIMATED SAW-TIMBER VOLUME ON UNRESERVED LANDS IN JACKSON COUNTY, BY SPECIES ² (In board feet, Scribner rule) ^b

Species	January 1, 1943	January 1, 1947
Douglas Fir	10,174,000,000	9,416,000,000
Western hemlock	81,000,000	81,600,000
Balsam firs C	3,595,000,000	3,522,000,000
Other conifers d	4,557,000,000	3,681,200,000
Cedars e	and the second	580,500,000
Hardwoods	21,000,000	20,200,000
Total	18.428.000.000	17,301,500,000

²F. L. Moravets, <u>Saw-Timber Volume Estimates for Oregon and</u> <u>Washington</u>, U. S. Department of Agriculture, Forest Service (Portland: Pacific Northwest Forest and Range Experiment Station, [two reports], 1944 and 1948), p. 3 of each.

^bScribner rule is used by the Forest Service to convert log measurements to board feet. It allows $\frac{1}{4}$ inch for saw kerf, rejection of fractional inches, and utilization of narrow boards.

^CPacific silver fir and small quantities of grand fir and alpine fir.

^dWestern white pine, ponderosa pine, sugar pine, Englemann spruce, lodgepole pine, western larch, etc.

eWestern red cedar and a small quantity of incense cedar.

In addition to the unreserved lands, the county has considerable stands of saw-timber on reserved lands. These include municipal watersheds, recreational areas, and small state parks. There are no statistics available on the volume of saw-timber thus reserved, but liberal estimates place the figure at no more than one billion board feet. Selective logging is being planned for some of the reserved lands but the volume thus exploited will be small.

In considering the timber resources for the mills of Jackson County, account must be taken of the actual timber-tributary area. This extends into all the neighboring counties, Klamath, Douglas, and Josephine, and into northern California. The boundaries of this timber-tributary area are never static and hence no accurate volume estimates can be made, but lumbermen and foresters believe eight or ten billion board feet of saw-timber outside the county may be considered tributary to the mills of the county. Thus, the commercially significant timber resource base, adjusted for the commodity drain since 1947, is considered to be between twenty-four and twenty-seven billion board feet.

Owing to the location of the county in a region of climatic transition, most of the saw-timber stands are of mixed species. Practically all of the commercial species can be found throughout the timber-tributary area. Douglas fir is the dominant species throughout the area. However, in certain sections some prominence of other species may be noted. In the Greensprings and Prospect areas relatively pure stands of ponderosa pine are found; and in the Dead Indian area white fir is often found in near pure stands. (Fig. 33).

<u>Timberland Ownership and Administration</u>.--The present high level of lumber production and possible future stabilization of the industry is directly related to the distribution of timberland jurisdiction and ownership. Therefore, some knowledge of the manner in which the present pattern of ownership and jurisdiction evolved is necessary in order to understand fully the present situation of the lumber industry.

The initial alienation of timberlands from the Public Domain to private ownership was in the form of land claims of early settlers and miners: mining claims, donation land claims, timber claims, and homesteads. Unfortunately, laws governing these claims were loose and much of this land was consolidated through dummy claims by large timber





Fig. 34.--Typical Stand of Douglas Fir in Rogue River National Forest. (Courtesy U. S. Forest Service)

and land firms. Lumber production in the county was for many years limited entirely to timber resources alienated in this manner.

The only large tract of timberland was alienated in 1870. This was a land grant to the Oregon and California Railroad Company.¹ It is not known exactly how much of the original grant was in timber, but it was a large amount. Land sold from this grant during the interim period from 1870 to 1916 constitutes a major portion of the privately owned timberland of the county.

By 1908, when Congressional legislation created the Rogue River National Forest, from reserve and other lands, a large portion of the county's timber had already been transferred to private ownership, much of it within the newly established boundaries of the National Forest. Oregon and California Railroad lands occupied the largest acreage, from which sales to other private owners continued to be made until 1916, when they were placed under the jurisdiction of the U. S. Government Land Office, Department of the Interior. In 1947 the U. S. Department of the Interior created the Bureau of Land Management that now has jurisdiction over the "O and C" lands. As a result, two government agencies were responsible, until the Congressional action of 1954,² for the administration of lands within one National Forest: the U. S. Forest Service and the U. S. Bureau of Land Management. The unit consolidation of lands provided for in the 1954 legislation eliminated many of the administrative problems and opened the way for more effective planning and forest management by both agencies.

¹Explanation of the Oregon and California Railroad land grants, Supra., Chap. II, p. 49.

²Supra., p. 50.

At the time of their organization both agencies were given authority to dispose of timber by sale to private operators, and to acquire additional lands by exchange or purchase. Both agencies are now committed to the sustained yield program.

State, county, and Indian owned lands comprise a very small portion of the total land of Jackson County. In 1947 their acreages were as follows: state 2,150 acres, county 31,685 acres, Indian 240 acres. Since that date 31,085 acres of county land, much of which was tax delinquent cut-over timberland, has been transferred to private ownership. This points up the growing demand for cut-over lands for the establishment of Tree Farms, a topic that will be discussed in a later section. The total saw-timber volume on the combined acreages of the three agencies was estimated to be 42,976,000 board feet in 1957.¹

Much of the land formerly granted to the schools of Oregon, generally sections 16 and 36 of each township, has also been transferred to private ownership. When the Cascade Forest Reserve was created, the state lost claim to all the included school lands, but received as compensation adjacent lands, known as "indemnity tracts" which also were often in timber. Later another exchange was effected, which consolidated all Oregon school lands into one State Forest. Prior to this consolidation, however, many of the "indemnity tracts" were sold to individuals and timber companies.

Today, over 50 per cent of the privately owned timberlands in Jackson County are controlled by timber companies. After 1900 and

¹Interview with Mr. Calvin Smith, District Forester, Industrial Forestry Association, Medford, Oregon, August 15, 1958.

the first lumber shipment from the county, free-lance buyers and timber company agents began purchasing and consolidating small tracts of timber in anticipation of future operations. Consolidation and expansion of company holding by purchase and private exchange is still continuing. Private owners now control nearly a half million acres of the remaining saw-timber and pole-timber reserve of over 1,200,000 acres.¹ The balance of the reserve is for the most part under the jurisdiction of the U. S. Forest Service and the Bureau of Land Management, their acreages of timberland in Jackson County being approximately 400,000 and 325,000 respectively.

Forest Management.--Both government agencies and private industry have long recognized the need for a practical and effective program of forest conservation. Government agencies have for many years protected the public forest and in more recent years managed them on a sustainedyield basis, but many changes had to take place before private industry would or could take part in the development of a truly effective conservation program. The hard facts of forest depletion brought about the most basic of the changes, this being the realization and frank recognition by lumbermen that effective conservation was essential to their future interest. The changed attitude of lumbermen, along with the fact that approximately two-thirds of the remaining timber reserve of Jackson County is publicly owned, are resulting in the development of a cooperative long-range forest management program based upon scientific methods to produce a "perpetual yield" from our forest.

The sustained-yield program is the scientific management of the

^LRemaining timber reserves include un-cut, partially-cut, and pole-timber stands (F. L. Moravets, <u>Forest Statistics for Southwest</u> <u>Oregon Unit</u>, <u>op. cit</u>., Table 3, p. 5).

forest in an effort to equate the normal forest mortality and commodity drain with the normal forest growth and the ability of the forest to reproduce. Under such a program, efforts are made to reduce the normal mortality through fire protection and combating infestations of diseases and insects and the rate of forest growth and reproduction are aided by tree planting, direct seeding, controlled grazing, and scientific planning of logging operations.

In Jackson County and other sections of southwestern Oregon three methods of logging are common: (1) taking all merchantable timber except for selected seed trees; (2) "clear-cutting" in checkerboard pattern (Fig. 35), taking everything, including brush, off the land so that young trees from natural seeding or plantings will have a better chance; (3) "selective-cutting," the taking of only one species or taking only "ripe" or diseased trees. In planning the method to be used, the age and species of the forest, rate of growth, reproduction possibilities, relief, and climate must be taken into account. Government foresters do the planning and make the decisions concerning the cutting of publicly owned lands. Many companies now employ trained foresters to supervise their "Tree Farms" and plan their logging operations.

"Tree Farming" is a relatively new element in enlightened forest management that is being practiced by an ever increasing number of lumber companies. A Tree Farm is an area of forest land devoted primarily to the continuous growth and production of merchantable forest products under consciously applied forest practices. It applies to privately owned forest land. Owners of timber lands are eligible to apply for certification of forest areas as a Tree Farm, if they meet the following requirements: (1) assure a willingness to maintain the



Fig. 35.--Aerial View of Clear-cut Logging Plots, Rogue River National Forest. Each Plot is 12 Acres. (Courtesy U. S. Forest Service) land designated for the production of forest crops; (2) provide reasonable protection from fire, insects, disease, and from danger of excessive grazing; (3) harvest timber crops from the area in a manner which will assure future crops. In Jackson County registration in the American Tree Farm System is under the sponsorship and direction of the Western Pine Association and the Industrial Forestry Association.¹

The increasing emphasis on this type of forest management is indicated by the following quotation:

Cut-over land is no longer a drug on the market or a large item on delinquent tax rolls. Everywhere such lands are in active demand. Whenever a lumber company follows the old philosophy of "cut out and quit" to the bitter end, its sawmill goes to the junk yard but there are usually three or four bidders for its land.²

Such is the case in Jackson County where many of the lumber companies are purchasing "cut-over" and "partially-cut" lands and placing them in their Tree Farm system. The rate of growth of this phase of forest management is indicated by the fact that in 1953 there were only seven certified Tree Farms, occupying 130,000 acres in the county. As of June 1, 1958, there were twenty-eight, with a total acreage of 258,728 acres. For the whole of Oregon there are now (June 1, 1958) 4,002,002 acres of forest land which are certified in 327 Tree Farms.³

¹Interview with Mr. Calvin Smith, District Forester, Industrial Forestry Association, Medford, Oregon, August 15, 1958.

²W. B. Greeley, "Forest Industry in Midst of a Major Evolution," West Coast Lumberman, Vol. LXXV, No. 4 (April, 1948), p. 80.

³Data obtained in an interview with Mr. Calvin Smith, District Forester, Industrial Forestry Association, Medford, Oregon, August 15, 1958.



Fig. 36.--Typical "Log-Deck." Logs are stored in this manner for future sawing. Lumber drying-yard on right.



Fig. 37.--Transferring Logs from "Deck" to the Mill Pond.

3. Timber Utilization

Log Production .-- Following the establishment of a sawmill in Ashland (1852), the history of the industry has been one of almost continuous expansion.

Prior to 1925 there are few records available on the volume of timber removed, but the reported log cut of 1,690,000 board feet in 1915,¹ when compared with the 61,615,000 board feet cut in 1925, gives some clue to the rate of the industry's growth in the county.

After 1925, production continued to steadily increase until the economic depression of the early 1930's brought about a sudden decline. Beginning in 1935, production again moved upward with only slight fluctuations until the stimulus of World War II brought about a phenomenal increase. Production jumped to 310 million board feet in 1941. Since that date the trend has been irregularly upward and an all time production high of 709 million board feet was attained in 1955 (Table 7).

The statistics quoted, which account for about 99 per cent of all timber cut, are based on the Scribner rule scale of all logs produced for sawmills, plywood plants, tie mills, and corporate plants. The remaining 1 per cent is timber cut for fuel-wood, posts, piling, and other minor forest products.

¹In 1915, District 12, which included Jackson County and a small portion of Klamath and Josephine Counties (Klamath County west of the Cascade crest), cut 1,690,000 board feet of lumber. Howard B. Oakleaf, <u>Character and Distribution of the Lumber Pro-</u> duction of Washington and Oregon by Producing and Consuming <u>Regions</u>, U. S. Department of Agriculture (Portland: Forest Service, 1915).
TABLE 7

ANNUAL LOG PRODUCTION: JACKSON COUNTY 1925 to 1957 (Log scale, Scribner rule)

Year	Thousand board feet	Year	Thousand board feet
1925 a	61,615	1942	282,034
1926	67,395	1943	341,199
1927	56,165	1944 b	
1928	81,785	1945	290,565
1929	93,840	1946	339,597
1930	74,135	1947	409,179
1931	43,948	1948	590,596
1932	19,920	1949 °	327,056
1933	38,782	1950	439,036
1934	32,851	1951	471,932
1935	47,537	1952	495,596
1936	79,848	1953	455,611
1937	115,134	1954	669,068
1938	86,372	1955	709,247
1939	127,067	1956	562,306
1940	128,847	1957	431,310
1941	310,355		

^aStatistics for years 1925-1948: F. L. Moravets, <u>Forest Statis</u>tics for Southwest Oregon Unit, op. cit., Table 13, p. 20.

^bProduction statistics for 1944 not available.

^CState of Oregon, <u>Approximate Acres Logged and M.B.F. Volume--</u> <u>State of Oregon</u>, State of Oregon, Board of Forestry annual reports 1949-1957 (Salem, Oregon: By the Board).

Note: Log production is not necessarily compatible with lumber production for the county. Much lumber is processed from logs from outside areas, and many logs are "cold-decked" and are not sawed until future years. Also a few logs are shipped out of the county for processing.

Logging Operations.--Early logging was restricted by lack of equipment to operations near the sawmills. For many years logging was done entirely by man and horse-power. Felling and "bucking" (cutting logs to desired lengths) was accomplished by hand tools and the logs were "skidded" (dragged directly to the mills by horses). In a few instances logs were transported several miles on heavy wagons drawn by six and eight-horse teams. Loading of the wagons was accomplished by "cross-hauling." In this operation the logs were rolled up pole "skids" onto the wagon "bunks." This method of logging continued to be important in the county well into the 1930's, though trucks had long since replaced wagons as a means of transportation.

The stimulus of World War I brought the introduction of mechanical power to the logging operations of the county. The great demand for lumber and the successful consolidation of large tracts of timber influenced the construction of a large mill and an access railroad by the Owen-Oregon Lumber Company. To supply the mill's daily capacity of 250,000 board feet, "donkey" logging was employed.

The "donkey" (a large steam-powered winch) was utilized to replace horses in the skidding operations. Through a complex system of cables and pulleys, the powerful "donkey" pulled the logs from the woods to a central "yard" near the railroad, where they were loaded by means of a steam-powered "jammer" (a large, specially equipped crane) onto railway cars. Clear-cut logging was almost mandatory in these operations, for small trees and saplings and even large unwanted trees were relentlessly mowed down as the logs were dragged through them to the "yard." This system of logging, though efficient in terms of cost and quantity of production, was grossly wasteful of the forest resources. Fortunately, "donkey" logging as the principal method of yarding was rather short-lived.

Early in the 1920's the industry was revolutionized by the introduction of "cat-logging" and trucking. Technological achievements in transportation equipment had been phenomenal during World War I, and post-war improvements had by this time advanced caterpillar

tractors and trucks to a high degree of efficiency. With the source of logs gradually retreating beyond economical limits for horse drawn vehicles, the lumbermen were quick to adopt these new machines.

In "cat" and truck logging operations the main access roads are usually state, county, or Forest Service roads. From these, private roads are bulldozed into the timber. In many instances, where the tracts of timber are large, the private roads are constructed as permanent access roads with temporary "feeder" roads leading from the main arteries. Private access arteries constructed on government land, supervised by the Forest Service or Bureau of Land Management, must generally meet quite rigid specifications. When logging operations cease on the road, it is often retained and maintained by these agencies as fire prevention and/or recreation access road.

Upon completion of the initial road building, trees are felled and "bucked" (sawed) into desired lengths and "skidded" to a "landing" near the road where they are loaded onto trucks with an improvised "jammer" or especially designed log-loader. In going about the job of bringing logs to the "landing," the caterpillar tractors establish rough roadways called "skid-roads" along which the logs are moved whenever possible for ease of operation and to minimize the destruction of small trees. In this respect "cats" are much less destructive and more versatile than was the older "donkey" system with its maze of cables and single line of action.

A few of the sawmills own their own trucks, but by far the greater percentage of the log hauling is done by trucking contractors and by "gyppo" truckers who own one or more "log-trucks." The "gyppo" rarely hauls under written contract, but hauls whenever and wherever he can make the most money. Payment for practically all log hauling

1.02



Fig. 38.--Loading Logs in the Woods. This is a heel-boom loader with a clam-shell grapple.



Fig. 39.--Caterpillar Tractor Skidding Logs. Tractor is equipped with winch and bull-dozer.

is by the thousand board feet, and averages about forty cents per thousand board feet per load mile. The average load is about 5,000 board feet.

The typical "log-truck" is a 200 or 300 horsepower tractor, diesel, gasoline, or butane powered, with fifteen speeds ahead, dual rear axles, and a dual axle trailer. Such a "rig" meets both the requirements of speed and power to handle efficiently and economically the heavy loads (up to 76,000 pounds, gross weight) on long hauls over steep grades. All are equipped with compressed air or vacuum brakes and most have water cooling systems installed which will permit faster descent on long grades without burning the brakes.

Another aspect of logging that has recently undergone a radical change is the felling and "bucking" of the trees. The power chainsaw has almost entirely replaced the "cross-cut" saws of the years past. Formerly, with hand tools, a team of two men could fell and "buck" from fifteen to twenty thousand board feet of logs a day, but now with power equipment the same team can fell and "buck" about eighty thousand board feet.

Large logging camps were never an important element of the industry in Jackson County. The only large camp ever developed was in connection with the one railroad operation, and it is still in existence. Small temporary camps of tent-houses were most common, but they have almost disappeared since the coming of fast motor transportation and better timber access roads. Today, most of the loggers commute from their homes in the valley, where they live in the cities and towns or on part-time farms.

Practically all phases of the logging operation demand skill and stamina, for the work is hard, specialized, and dangerous. Wages are



Fig. 40.--Typical 200 Horsepower Diesel Logging Truck.



Fig. 41.--Loaded Logging Truck. The logs are quite typical of the area.

high and the working day long because the year's production must be obtained within a short season. The length of the logging season varies, depending on the snow in the mountains, the spring rains, and the dryness of the summer. Generally, it lasts about seven months, from the first of May to the first of December. The wages paid vary greatly due to the many criteria used as a base, such as per hour, per thousand board feet, per trip, or percentage of daily gross. But regardless of the base, skilled workers generally receive \$25 to \$40 per day and unskilled laborers \$16 to \$25.

<u>Sawmilling</u>.--During the years of World War II and the post-war building "boom" many new sawmills were established to meet the forceddraft demand for lumber and forest products. The rapidity of expansion is indicated by the fact that in 1938 there were nineteen producing sawmills in Jackson County; by 1945 there were forty-nine; and by 1948 the number had increased to eighty-eight.¹ Most of these new mills were small (capacity, ten to forty thousand board feet per eight hour day) and equipped only for the production of "rough" (unplaned) lumber, which was either shipped rough or sold to milling plants for further processing. During the leveling-off period of 1948-1952, the demand for rough lumber dropped markedly and many small mills without this market or sufficient capital to install planers were forced to suspend operations. Lack of ready capital also prevented many small mills from making purchases of government timber or private tracts as they became available. Furthermore, operators of small sawmills are

¹F. L. Moravets, <u>Lumber Production in Oregon and Washington</u>, <u>1869-1948</u>, U. S. Department of Agriculture, Forest Service (Portland: Pacific Northwest Forest and Range Experiment Station, Dec. 1949), Table 1, pp. 4-5.



Fig. 42.--Typical Moderate-size Sawmill. (Courtesy Fir Milling and Planing Company, Ashland, Oregon)

generally unable or unwilling to pay the high "stumpage" (standing tree) prices demanded in this area of declining resources. These and perhaps other minor influences are believed to account for the reduction of the number of sawmills to thirty-seven by 1952. It is significant to note, however, that only a temporary decline took place in the total volume of production. This is attributed to the fact that many of the moderate size sawmills increased production by "double-shifting" or by plant enlargement.

Most of the principal producing mills are located near railroads in the vicinity of the two main commercial centers of the county, Medford and Ashland. Within or directly tributary to the Ashland Area there are eleven sawmills that produce about one-fifth of the county's annual lumber production. Eight of these mills are within or in the near vicinity of the city of Ashland. The three small sawmills located outside the Area proper are in the Cascade Mountains. They are included as contributors to the Area's production because the major portion of their "cut" moves to Ashland for "surfacing" and/or shipment.

In operation, the mills of the Area are typical of those throughout the Pacific Northwest. When logs are received at the mill, they are unloaded into a "pond" for immediate sawing or "cold-decked" for the future. The "pond" is a small artificial lake adjacent to the mill which facilitates the selection of log species, the cutting of logs to milling lengths, and movement of logs into the mill. The "cold-deck" is simply an area where logs are accumulated for sawing during the winter months when weather conditions curtail logging operations. "Cold-decking," for financial reasons, is a practice generally limited to the larger mills.

Sawmill operations in the Area are almost entirely limited to the



Fig. 43.--Unloading Logs into Mill Pond. Sawmill and waste-burner in background.



Fig. 44 .-- Sorting Logs in the Mill Pond.

sawing, surfacing, and shipment of lumber. Approximately 35 per cent of the lumber shipped from the Area is surfaced. Seven of the eleven mills have their own planers and some of these do custom planing for the smaller mills. Also there is one large planing mill specializing in custom work. None of the mills have facilities for further processing lumber or other parts of the log. The few mills that still utilize steam power (most are powered by electricity or diesel) use a small amount of the "waste" as fuel and in a few instances a portion of the log "slabs" (board ends) and sawdust is salvaged and sold for further processing or as fuel-wood. But, outside of these minor exceptions, from 10 to 15 per cent of every log goes to the "burner" (a large cone shaped incinerator), a practice that militates against the wise use of our forest resources.

In addition to the sawmills, there are three other operations associated with the lumber industry in the Area: a planing mill, a moulding factory, and a box-shook plant. The largest of the operations is the planing mill, employing twenty-five men throughout the year, that specializes in custom work. Annually this mill surfaces about eight million board feet of lumber that has been produced by the small mills in the Rogue River Basin.

The remaining two operations are both small. The moulding factory employs only four men and operates largely on salvage pine slabs and "edgings" (narrow strips trimmed from the boards in the sawmill) obtained from the mills of the county. However, the plant does have a small sawmill and re-saws for cutting base moulding stock from small logs. The box-shook plant employs three men and operates entirely on salvaged "planer-ends" (short boards trimmed from the lumber after surfacing).



Fig. 45.--Modern Electrically Powered Sawmill. Typical waste-burner beyond the mill.



Fig. 46.--Lumber Handling Yard. Lumber drying-yard and log-deck in background.

CHAPTER IV

THE CITY OF ASHLAND; RECREATION AND TOURISM

1. The City of Ashland

Situation and Site.--The city of Ashland is situated in the southeastern part of the Bear Creek Valley where a major north-south route is joined by a route eastward across the Cascades. This meeting of routes is marked by the junction of U. S. 99 and State 66. The site of initial settlement was in the picturesque setting near the mouth of Ashland Canyon, but subsequent growth has pushed the limits of city occupance both to the northwest and to the southeast of Ashland Creek. Early expansion was to the northwest, but here relief and later the inhibiting influence of the railroad were limiting factors that resulted in greater expansion on the inviting terrace and bench lands southeast of the original settlement site.

Subsequent Development. -- Ashland, as mentioned earlier, had its beginning as a sawmilling and flour milling center. It was around these basic industries and its situation at the beginning of the ascent to Siskiyou Pass that it grew to be the leading commercial center of the valley, a position it retained for a number of years. Here people came to have their grain ground into flour and to purchase lumber and other goods from the retail establishments that had taken advantage of the attraction to the mills. Here, too, the teamsters organized their wagon loading for the difficult and arduous trip over



Fig. 47.--Ashland's Main Street. This is now a one-way thoroughfare for southbound traffic.



Fig. 48.--New Residential Subdivision. Typical of new developments in the City of Ashland.

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the mountains, and drovers organized trail herds of sheep and cattle for the drive to California markets. Weary travelers also found Ashland a haven, for here was a resting point before departure on the long stage journey south, and the first settlement to be reached after the tiring mountain trip from the south. Business men of Ashland profited handsomely from this transient trade and facilities for catering to it were among the early prominent features of the city. Nor has this changed with the coming of modern means of transportation; catering to transients is still one of Ashland's major functions. It is worthy of note that Ashland is situated approximately half way between San Francisco and Portland, a comfortable day's drive either Way.

In the period between 1887 (the year the railroad was completed) and about 1910, Ashland continued to be the leading commercial center of Jackson County. However, just as the railroad had stimulated Ashland, it had also stimulated Medford, and by 1910 Medford had forged ahead and had become the leading focus of county affairs. Nevertheless, Ashland retained a measure of importance as a trading center and as a shipping point for fruit and livestock. Also the Southern Pacific Railroad continued to maintain its "division-point" at Ashland.

About 1910 another important function of the city became evident, that of a retirement center. Many of the early settlers of the valley were retiring from active business during this period and because of the picturesque setting and the favorable climatic conditions, many of them selected Ashland as the site for their retirement home. The city has retained its attraction as a retirement center and in recent years it has increasingly become a dormitory city for many commuters who work in other sections of the county, particularly in Medford.



Fig. 49.--The City of Ashland and the Siskiyou Mountains.



Fig. 50.--The City of Ashland and the Cascade Mountains.

With the gradual shift of commercial activities to Medford and the loss of payroll that accompanied the construction of the Natron Cut-off by the Southern Pacific Railroad in 1926 (Fig. 1, p. 2), Ashland reverted largely to the functions of local trade, retirement dormitory, and transient catering. It almost became the haven of peace desired by many.

World War II and the international cry for lumber awoke the sleepy little city to activity, and in subsequent years it has become an important lumbering center, revived its importance as a commercial center, and like the whole of Jackson County, it has more than doubled in population (Table 3, p. 34). Today it has functions related to all of the four major industries of the county, in addition to being an important institutional center, a significant focal point for the growing tourist industry, and retaining a measure of importance as a railroad "division-point."

Pattern and Function. -- The pattern of settlement that has evolved is a greatly modified gridiron pattern that clearly reflects the influence of landforms, stream courses, railroad location, and main arteries of travel. This pattern and the land-use types associated with the city's major bases of economic support are best pointed up by reference to the city land use map (Fig. 51).

Perhaps the most striking aspect of the map is the large portion of the area in residential use in comparison with the extremely small commercial district for a city of over 8,500 inhabitants. This relationship reflects the city's nearness to the larger and more diversified District center of Medford (13 miles to the northwest) and the functional aspects of commuter dormitory and retirement center.





Four of the Area's eight sawmills are located within the city limits of Ashland. These mills produce approximately 47,000,000 board feet annually and provide year around employment for about 162 men. During the peak season this number jumps to about 210. The largest of these mills cuts about 31,000,000 board feet annually and provides steady employment for 132 men. The large mill and two of the smaller ones occupy land with railroad frontage and all three have planing mills in connection with their operations. The fourth mill, off the railroad, is a small operation that produces only rough lumber. Like all of the mills of the Area, logs are received by truck and most of the lumber is shipped by rail, after surfacing.

The valley's fruit industry is represented in Ashland by two plants: a cannery and a packing house. The cannery generally operates from July to November, during which time it employs about 200: fifty men and 150 women. Pears and tomatoes grown in Jackson and Josephine counties, and peaches from the Red Bluff area of California are the principal fruits that are canned. However, jellies, pickles, preserves, and sauerkraut are prepared in small quantities. Annual production is generally about 120,000 cases, equally distributed among the three major fruits. Approximately 50 per cent of the peach and pear production moves to the eastern states, 25 per cent to the Mid-west and West, and 25 per cent locally. All of the tomatoes are marketed in Oregon.

The fruit packing house handles about 60,000 boxes of fruit each season, mostly pears and a few apples. Eighty per cent of the fruit handled is from the company's own orchards, the balance being contracted from growers in the Ashland Area or other sections of the county. During the packing season about seventy people, twenty-five

men and thirty-five women are employed. In connection with the fruit operation, the company maintains a cold storage service for both fruit growers and butchers and a freezer-locker service for the general public.

The livestock industries are represented by two feed stores within the city and a small slaughter house operation just outside the city limits. The slaughter house butchers and cures meat primarily for the local market, both retail and wholesale. The feed stores cater to all phases of the livestock industry with their primary function being the importing and mixing of feed grains. One of the stores is operated by the Grange Cooperative which has a mill in Central Point for processing local grains.

One creamery, operated by a producer-distributor, represents the dairy industry within the city of Ashland. However, four other producer-distributors deliver milk within the city. The creamery is primarily devoted to the processing of milk for the fresh milk trade but does manufacture some ice cream. When in short supply, additional milk is purchased from the Milk Producers League.

Catering to transients has long been an important function of the city and today facilities to accommodate them are among the prominent features of the urban landscape. Two of the city's four hotels cater primarily to tourists and other transients. Within or near the city twelve motels, with a total of 104 units, and four trailer courts, with a total of 140 spaces, provide additional accommodations for the tourist. The number of restaurants and service stations, eleven and fifteen respectively, also reflect a great reliance on the transient trade. Practically all of these facilities are located along the main artery of travel, U. S. 99, convenient to both local and transient trade.

Even though the construction of the Natron Cut-off reduced the activities of the railroad in Ashland, what remains is important to the city's economy. At this "division-point" crews are changed, trains are made up or reorganized, and in the roundhouse light repairs are made on both engines and cars. Aside from the service function it performs for the entire Rogue River Basin, it provides employment throughout the year for about 115 Ashland residents.

As the home of the rapidly growing Southern Oregon College, Ashland is becoming increasingly significant as an institutional center. Several attempts were made, beginning as early as 1869, to establish an institution of higher learning in the city. Each of these attempts failed, after a brief existence, until Ashland College and Normal School, originally sponsored by the Methodist-Episcopal Church, received state aid in 1926. At this time the school became a part of the state system of higher education and was renamed Southern Oregon Normal School. Subsequent growth was slow until the post-World War II period brought about phenomenal expansion. In 1940 the school's enrollment was approximately 200 on a campus of only two buildings: a combination administration and classroom building and a gymnasium. By 1957 the enrollment had increased to approximately 1,000 on a greatly enlarged campus that will soon boast eleven buildings, and plans have been laid for more construction.

The school is now known as Southern Oregon College and offers a curriculum leading to the Bachelor of Science and Master of Science degrees, both in elementary and secondary education, as well as the Bachelor of Science degree in General Studies. The curriculum also provides a well-rounded two-year program for pre-medical and preengineering students.

Although most of the wholesaling, heavy service, financing, and government administration activities are conducted in the District center of Medford, those conducted in Ashland are worthy of mention. Wholesaling is represented by one grocery firm, one produce distributor, one poultry house, and two auto-parts stores. Heavy service is limited to two operations: a moderate size machine-shop, and a tank and steel fabricating plant. Two banks and two loan firms facilitate the handling of financial business within the Area. Government administration is represented by the headquarters of the Ashland Ranger District of the Rogue River National Forest. Administration of much of the range and forest land directly tributary to the Ashland Area is through this office.

2. Recreation and Tourism

<u>Tourism</u>.--Ashland, situated as it is, adjacent to two of the most important mountain passes leading from the Rogue River Basin, is literally the "gateway" of southwestern Oregon and its vast recreational resources. The natural endowments of this large area (approximately 4,700 square miles) that include a great diversity of landforms, large areas of mountainous timberland, and an inviting diversity of water resources make it one of the West's most attractive vacation lands. Catering to the ever increasing sportsman and tourist clientele has developed into one of the Basin's leading industries.

Traffic counts conducted by the Oregon State Highway department in 1953, estimated 1,725,000 vacation-bound visitors in the Upper Rogue River Valley. Surveys by the National Park Service and the U. S. Fish and Wildlife Service indicated the average length of stay within the region was one and one-half days. In the same survey it was found that the average visitor spent approximately \$5.43 per day. Compiling the information gathered by these agencies, the average annual

expenditures by visitors in the Upper Rogue River Valley may be computed...(it) equals approximately 14 million dollars annually...Based upon the 1955 census of Jackson and Josephine counties (approximately 100,000), the recreation income represents about 140 dollars per capita annually.¹

Recreation Attractions and Development.--The city of Ashland is not only the "gateway" to a great recreational area, but is in itself a significant attraction, with its picturesque setting, rich historical past, magnificent Lithia Park, and the renowned Shakespearean Festival. Climate too, helps to make it an ideal recreation center and headquarters for vacationists who wish to visit other attractions in southwestern Oregon.

Lithia Park is one of the most beautiful parks in the whole of the Pacific Northwest and is one of the most unusual in the nation for a city of Ashland's size. The park was originally laid out by John McLaren, designer of San Francisco's Golden Gate Park. Nestled in the mouth of Ashland Canyon, the 144 acres of the park are beautifully landscaped and adorned with exotic plants from the four corners of the earth. During the summer months thousands of Jackson County residents and tourists are attracted to the park, its excellent playground and picnic facilities and its restful beauty.

Another great attraction is the Shakespearean Festival, founded by Angus Bowmer, professor of speech and drama at Southern Oregon College. Originally the festival was planned as a community and college function, but it soon won international attention and today it attracts actors and visitors from many different countries. Each

¹Bob Dolan, "Resources for Recreation in the Upper Rogue River Valley" (unpublished Master's thesis, Dept. of Natural Resources, Oregon State College, 1958), pp. 52-53.

year from July 28 to September 4, four plays are performed in rotation, in the open air, on the nation's most authentic Elizabethan Stage. Many colleges now recognize the grant credits to students participating in the festival productions or for attending the recently inaugurated, college sponsored, Institute of Renaissance Studies.

The significance of the festival is pointed up by the attendance of over 24,338 people in 1957. Of the number attending, 72.5 per cent were from outside the local area, 46 per cent from other states, and 1 per cent from foreign countries. Most visitors stay at least four days in order to see the complete repertoire of plays.¹

Emigrant Reservoir, seven miles southeast of Ashland, is popular for boating, water skiing, and angling during the spring and early summer. Numerous speedboat races are held here that attract boat enthusiasts from all the Pacific coast states. Unfortunately the irrigation needs of the valley require the lowering of the lake and limit its recreational value.

Among other attractions within or near Ashland are the three fine swimming pools, one of which utilizes hot water from natural mineral springs. The scenic Ashland-loop road to the top of Mount Ashland (7,530 feet elevation) affords an interesting side trip through beautiful forests and a spectacular view of the surrounding country. Two fine ski-runs are available for the winter sports fan, one accessible via the Ashland-loop road; the other, the larger of the two, being twelve miles southeast of Ashland near the summit of Siskiyou Pass.

From Ashland fine highways and improved secondary roads afford

¹Data obtained in an interview with Mr. William W. Patton, General Manager, Oregon Shakespearean Festival Association, Ashland, Oregon, May 25, 1958.

access for the sportsman and tourist to the many other outstanding attractions of southwestern Oregon. Noteworthy among these attractions are Crater Lake National Park, Oregon Caves National Monument, and historic Jacksonville.

Crater Lake National Park, world renowned for its scenic beauty and geologic history, is in the high Cascades ninety-one miles north and east of Ashland. This indescribably blue lake, 1,000 feet below the crater rim (elevation 7,000 feet), occupies a giant caldera that is generally believed to have been formed by the collapse of the volcanic cone of Mount Mazama. The park, established in 1902, has gradually been developed into a superb summer recreation area, and some portions of the park are accessible for winter sports. Three excellent highways afford access to the park: State 62 from Medford, State 62 and 232 from Klamath Falls, and State 230 from the northeast.

The Oregon Caves are located in the south central section of Josephine County, ninety-three miles west of Ashland. These magnificent limestone caverns were set aside in a 480-acre National Monument in 1909 to preserve this subterranean wonderland for the public. Within the caverns are found impressive formations of stalactites, stalagmites, pillars, and large dome chambers. Colorful indirect lighting greatly enhances the natural beauty of these and other phenomena of the caverns. The caves are accessible throughout the year via an improved secondary road that branches from U. S. 199 at Cave Junction, thirty miles south of Grants Pass.

Jacksonville, southern Oregon's oldest settlement, is an interesting side trip for visitors. Its old buildings, constructed during the gold-rush days of the 1850's, and the unusually fine collection of historic artifacts in the free museum that occupies the old Jackson County Court House are the principal attractions. By way of Medford, Jacksonville is eighteen miles from Ashland.

Perhaps the greatest attraction for tourists and sportsmen is the water resources of the Rogue River Basin and the adjacent highland areas (Fig. 52). Rogue River has long been renowned as a sport-fishing stream where excellent catches of game fish are taken in season. The principal species of native fish are the anadromous Chinook and silver salmon (<u>Oneorhynchus tschawytscha--Oncorhynchus kisutch</u>); steelhead trout (<u>Salmo</u> <u>gairdnerii</u>); and the resident rainbow and cutthroat trout (<u>Salmo</u> <u>gairdnerii g.--Salmo clarkii</u>). In addition, eastern brook trout (<u>Salwelinus fontinalis</u>) and German brown trout (<u>Salmo fario</u>) have been propagated in the headwaters and some tributaries of the Rogue.

Fishing is not the only attraction to the Rogue for many sections of the river afford excellent boating, water skiing, swimming, and camping. Numerous resorts, motels, boat docks, and public camp grounds provide facilities for the sportsman and tourist.

Many of the tributaries of the Rogue River also provide excellent fishing and camping and are particularly attractive to those who like to get away from the crowds and "rough it."

Aside from Crater Lake, the more important lakes that attract many thousands of tourists and sportsmen for all types of water sports are Diamond Lake, Fish Lake (reservoir), Lake of the Woods, Four-Mile Lake (reservoir), Hyatt Lake (reservoir), and Willow Creek Reservoir. Most of these lakes are periodically stocked with game fish and the angler who knows how can usually be successful. Three of the most popular of the lakes have been restocked recently after being treated by the Oregon Fish and Game Commission to rid the waters of scavenger and other unwanted species. Diamond Lake was restocked with the famous



Kamloops trout (<u>Salmo gairdnerii kamloops</u>) from British Columbia; Fish Lake and Lake of the Woods were restocked with rainbow trout (<u>Salmo gairdnerii g</u>.). Since this rehabilitation program, anglers report that fishing has been greatly improved and the lakes are receiving a greater "play" than ever before.

In addition to these easily accessible lakes, there are literally dozens of small lakes in the high Cascades that can be reached only by trail. Many of these lakes are in more or less segregated groups such as the Blue Canyon Lakes, Seven Lakes Basin, Sky Lakes, and the Mountain Lakes Wild Area. The Mountain Lakes Wild Area is a full township (T. 37 S., R. 6 E.) near Lake of the Woods that has been set aside by the Forest Service as a recreation area.

Wildlife, a valuable asset to any recreation area, abounds in this southwestern Oregon region. Abundant water resources and large acreages of mountainous timberland provide excellent natural habitats for a great variety of wildlife.

Of the big game species, the black-tail deer (<u>Odocoileus colum-</u><u>bianus</u>) is the most numerous. In recent years the Roosevelt elk (<u>Cervus canadensis roosevelti</u>), re-introduced to the region, have multiplied rapidly and are often seen in large numbers in the area near the headwaters of the Rogue River. Black bear (<u>Euarctos americanus altifrontalis</u>) are found in isolated mountain regions and in many of the park and recreation areas.

Predatory animals are not particularly numerous but occasionally a coyote (<u>Canis latrans</u>), mountain lion (<u>Felis concolor</u>), or a bobcat (<u>Lynx rufus</u>) are seen in remote mountain areas.

Several species of rabbits and squirrels abound in both the lowlands and mountains and in some areas beaver (<u>Castor canadensis</u>),



Fig. 53.--Lake of the Woods. One of southwestern Oregon's finest recreational areas. Mount McLaughlin in background. (Courtesy U. S. Forest Service)

raccoon (<u>Procyon lotor</u>), mink (<u>Mustela vison</u>), and muskrat (<u>Fiber</u> <u>zibethicus</u>) are found along the mountain watercourses.

Bird-life in general abounds in the region but the species and numbers of game birds are quite limited. Ring-necked pheasants (<u>Phasianus torquatus</u>) and valley quail (<u>Lophortyx californicus</u>) are the most abundant upland birds. Mountain quail (<u>Oreortyx picta picta</u>) and ruffed grouse (<u>Bonasa umbellus sabini</u>) inhabit some areas of the mountains. A few ducks and geese nest in the Basin and a small number rest here during migration. Mallard ducks (<u>Anas platyrhynchos</u>), wood-ducks (<u>Aix sponsa</u>), pintail ducks (<u>Anas acuta tzitzihoa</u>), and Canada geese (<u>Branta canadensis</u>) are the most common species observed in the Basin.

Hunting has never equaled fishing as an attraction to the area. The shorter seasons and the difficulty of hunting in heavily forested areas have undoubtedly been influencing factors. However, pheasant, quail, and deer hunting do attract considerable numbers of sportsmen to the Basin. Deer hunting is by far the most popular and although the kill does not compare with other hunting areas of Oregon, many hunters do have success. According to the Oregon State Game Commission, 8,078 hunters bagged 2,894 deer in Jackson and Josephine counties in 1956.¹

The value of natural resources for recreation depends very largely on the degree of development. In the Rogue River Basin and adjacent highland areas federal, state, and county agencies all have progressive programs of recreation area development and private enter-

¹Oregon, State Game Commission, Annual report, game division, Portland, 1956, pp. 44-45.

prise makes many major contributions. Figure 54 points up many of the major aspects of these programs.

The U. S. Forest Service is perhaps the most active of all the agencies contributing to recreation development in southwestern Oregon. This stems from the fortunate circumstance that a major portion of the mountain and timberland of the region is within the bounds of three National Forests (Fig. 54). As a part of the multiple-use policy of the Forest Service, hundreds of miles of access roads and trails have been built for the three-fold purpose of timber access, fire protection, and recreation use. Another facet of this program is the setting aside of recreation areas and the establishment and maintenance of forest camps and picnic areas.

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CHAPTER V

CONCLUSIONS

Since the first permanent settlement was established in the Rogue River Basin in 1852, the region has been transformed from a virtually uninhabited wilderness to a well settled agricultural area. Unfortunately, however, diversification is limited and the principal economic bases--lumbering, agriculture, and tourism--are largely seasonal in nature.

The initial transformation began with the discovery of gold near the present site of Jacksonville and for a few years mining provided the principal economic base. Agriculture, which had its beginning near the mining town of Jacksonville and the sawmill town of Ashland, rapidly expanded as the markets of California were made accessible and more people moved into the area. In a short time agriculture became the leading industry. The advent of the railroad in 1887 brought specialization and further expansion of the industry, which remained the principal economic base until about 1940, when it was displaced by the lumber industry.

Today, the agricultural economy of Jackson County is dominated by three industries: fruit growing, dairying, and the raising of beef cattle. Agricultural production in the Ashland Area makes a significant contribution to the total economy in all three of the basic agricultural industries, particularly in dairying and the raising of beef cattle. In the Area 85 per cent of the approximately 7,400 acres of crop and pasture land is utilized in the dairy and other livestock industries. Fruit growing is less important than in Jackson County as a whole, with less than 800 acres of the county's 12,000 acres of orchard land.

Since earliest settlement, cattle and sheep raising have been important, but significant changes have taken place and the industry is now in the process of further adjustment. The number of beef cattle has steadily increased in the county (Table 4, p. 46), but the number of range stock has declined, being replaced by the more intensive operations of the smaller farms. When completed, the irrigation project now under construction, will bring water to a considerable acreage ideally suited for pasture and forage crops and thus open the way for further expansion of the industry through an increased number of small "crop and livestock" farms.

It appears likely that the number of sheep in the county will continue to decline. The problems are many for the rancher that "ranges" his sheep, and a reduction in the number of small "crop and livestock" farms that raise sheep seems inevitable due to high land values and possibilities of greater returns per acre under other uses.

The dairy industry of Jackson County, though not particularly favored by natural conditions conducive to large scale dairying, has developed into a profitable industry capable of supplying the local market and providing a limited export. With additional water for irrigation, a considerable expansion of the industry would be possible. There is much land that could be converted to pasture or seeded to high-yield forage crops. However, regardless of water supply conditions, the limited local market, the great distances

to major market centers, and the high production cost appear to preclude any great expansion of the industry.

Soil and climatic conditions are favorable for the growing of many horticultural specialties. As in the case of dairying, however, the limited local market, isolation from major markets, and high production cost appear to operate against any appreciable expansion. With the exception of the declining cherry and apple acreages, it appears likely that horticultural production will continue at about the present level, with perhaps a small increase in the acreage of dry onions.

Climatic conditions are not particularly favorable for the poultry industry, but with the use of scientific methods and wellconstructed houses it can be successful. The present deficiency in egg and fryer production for the local market will probably operate to bring about an increase in the industry, and with better application of scientific methods, the condition of extreme surplus and deficiency can possibly be corrected.

Expansion of the poultry industry above and beyond the local market appears unlikely. The county's remote location with regard to the major markets and the high cost of imported feeds are conditions that will probably keep the industry within the confines of the local market except for the small surplus of eggs during peak periods of production.

The seasonal nature of the major economic activities and favorable climatic conditions that are desirable in retirement have operated to create a large rural population of part-time farmers, and it appears likely that the number will increase. Individually, these farms are small but their combined production is significant both in terms of home produced foods and in products sold to local and distant markets.

The timberland of southwestern Oregon is the region's major resource. Today it supports the leading industry of Jackson County and for that matter all of the Rogue River Basin. And, even though there have been dire predictions of economic dislocation and decadence of industrial plants, the industry will probably continue to be the principal factor of economy. It is true that present production exceeds the allowable rate of cut, but the trend toward more complete utilization of forest products and the rapid development of enlightened forest management practices will result in stabilization of the industry without any prolonged decrease in employment. In fact, it is anticipated that more "close-utilization" of the timber resources will ultimately bring about an increase in employment even though log production will decline to the limits of the "allowablecut" under "sustained-yield" forest management.

The city of Ashland, although secondary to the District center of Medford, is important as an industrial and commercial center in Jackson County. Favorable nodal situation and climate are the major factors contributing to its retention of a portion of the county's commercial and industrial activities and to its continued growth as a retirement and dormitory city. Site and situation are favorable for further expansion of the lumber industry, through diversification, and subsequently further growth of the city. With this anticipated growth, the quantative significance of the city's commercial and industrial activities will increase, but its relative position in the total economy will likely remain in approximately its present position.
The Rogue River Basin and the adjacent highland areas are endowed with an abundance and great diversity of natural resources that invite recreational use. Federal, state, and county agencies, along with private enterprise, are contributing to the development of these natural endowments and are immeasureably increasing their value for recreation. Each year many thousands of sportsmen and tourists visit the region to enjoy its many attractions and to revel in the uncrowded freedom of the many lakes, streams, and forests. As a result, tourism has become one of the major industries of the Basin, and it will undoubtedly continue to be so. For it is said, "Once you visit the Rogue River Country, you will return."

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Typed by:

Helen J. O'Neil



