

***Report of Crook County
Long-Range Planning Conference
1970***

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Cover Photo—Crook County Courthouse, built in 1909 of natural stone quarried from rim one mile west of Prineville. It was dedicated as a Historical Monument in 1963.

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CROOK COUNTY EXTENSION STAFF

- E. L. Woods, county Extension agent (staff chairman, retired October 31, 1969)
 Richard Brown, county Extension agent (4-H club work—replaced Harold Kerr, April 7, 1969)
 Tom Bunch, area Extension agent (range management—serving central Oregon, transferred to chairman, Crook County, January 19, 1970)
 Joyce Herold, county Extension agent (home economics)
 Harold Kerr, county Extension agent (4-H club work, transferred to chairman, Morrow County, March 17, 1969)
 Frank Porfily, special agent, Bureau of Reclamation project (project ended, April 30, 1969)

Crook County, Oregon

Crook County was named after George Crook, a major in the United States Army, and was formed from part of Wasco County in 1882. It has an area of 2,892 square miles, or 1,907,200 acres. In 1966 the population was 8,950. The average temperature in summer is 60.2 degrees; in winter, 34.5 degrees. The average yearly precipitation is 11.7 inches. Lumbering, agriculture, and mining compose the principal industries.

Prineville, the county seat, is situated at an elevation of 2,868 feet and is 148 miles east of Salem, 147 miles south of Portland, and 145 miles east of Eugene.

Points of interest are the pine mills at Prineville; Crooked River Canyon and the lava formations; the Ochoco Mountains; thunderegg and agate beds; and a petrified forest.

Crook County ranks 12th among counties in area. The county is situated in the geographical center of Oregon and lies on the broad, high plateau of this part of the state.

Certain sections have very rugged terrain. The northern boundary contains portions of the Blue Mountains and Ochoco Mountains; in the center lie the Maury Mountains. The Crooked River and its tributaries have cut deep, jagged canyons over the years.

The county has a semiarid climate with low streamflow in the summer months and high, flooding streamflows in the later winter and spring months. The amount of precipitation varies, with an average annual rainfall of 8 inches in some areas. Precipitation, in general, increases with elevation. Normally, the air movement over Crook County is from the west and is mostly marine in origin. Frost has been recorded every month.

The settlement of Crook county began in the 1800's. The history of agriculture in the county is one of grazing and livestock. It is now geared to livestock and the production of alfalfa hay and pastureland. Small grains, mint, and potatoes are important cash crops.

About 49.4 percent of Crook County is privately owned, and 50.6 percent is publicly owned. Located in the center of the state, east of the Cascades, it is bounded on the west by Deschutes County, on the north by Jefferson and Wheeler counties, on the east by Grant and Harney counties, and on the south by the panhandle of Deschutes County. Ninety-six percent of the county lies within the Deschutes River Basin.

PHYSICAL ASPECTS

Geology

The geology of Crook County consists mainly of layers of sedimentary formations or lava flows. The rocks are mainly rhyolites, andesites, and basalts.

In general, rhyolites and andesites are older than basalts. The Crooked River probably flowed through basalt and, after cutting the basalt, gained the soft beds beneath the surface layer and widened its canyons into the valleys around Prineville.

In some areas where lava flows have filled depressions, the Crooked River has cut deep, narrow canyons. The City of Prineville lies at the head of an alluvial plain formed by the Crooked River.

Topography

Crook County lies on the high plateau in the center section of the state. The surface relief presents a well-marked contrast. It ranges from nearly level, featureless surfaces of the desert valleys, where elevation is nearly 4,000 feet, to the rugged, snow-clad summits of the Ochocos. A series of peaks and ridges occurs in the county.

The topography may be divided into two classes—hills or mountains and plateaus due to upheaval and hills or mountains produced by eruptions. The plateaus near Prineville were produced by upheaval, their surface has been trenched by streams that form deep canyons.

Climate

The climate of Crook County is semiarid, with cool nights throughout the year and precipitation during the winter. The air mass movement is westerly and is marine in origin. However, because of the Coast Range and the Cascades, much of the moisture is released before it reaches Crook County. As the elevation increases, the precipitation increases over the Ochoco Mountains.

The average annual precipitation for the county varies from 8 inches on the Deschutes plateau to more than 19 inches in the high valleys used for agriculture. Half of the precipitation falls during the months of October through February. Thunderstorms produce a substantial amount of this. During the winter, much of the precipitation is in the form of snow in the higher valleys.

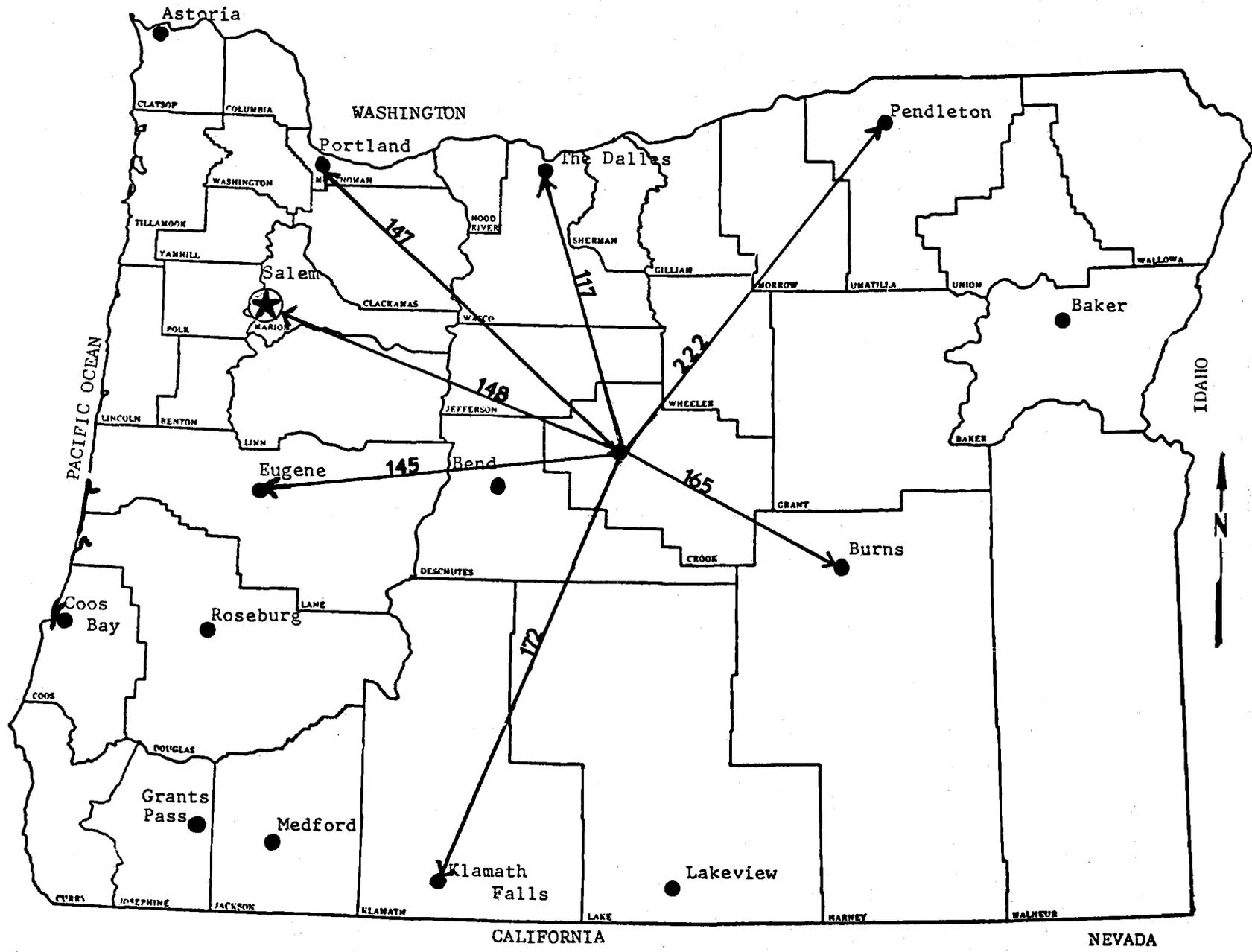
Extremes in temperatures have a range of -35° F. at Prineville to 104° F. Freezing temperatures can be expected in any month out of the year.

Soils

The Crook County soil survey, issued February 1966 by the United States Department of Agriculture, covers the Prineville area only. This area lies between the Cascade Range and the Ochoco Mountains and covers 275 square miles. It is drained by the Crooked River and Ochoco, McKay, Lytle, Johnson, and Mill creeks.

There are nine soil associations in the survey area. A soil association is a general soil area con-

LOCATION MAP - CROOK COUNTY



taining two or more soils in a pattern that is characteristic although not strictly uniform. Soil Survey reports including soil maps of the Prineville area are available at the county Extension offices.

AGRICULTURAL LANDS

The land base for agriculture consists of 826,635 acres of pastureland, 68,055 acres of grazed woodland, and 85,809 acres of cropland.

Pastureland and grazed woodland constitute about 47 percent of the county area, or 894,690 acres. Pastureland is defined as noncropland pasture, and grazed woodland as land that is at least 10 percent stocked with trees and grazed by livestock.

About 4 percent of the county area, or 85,809 acres, is cropland. The major uses of cropland are the production of small grains, hay crops, and grass seed.

LANDS IN FARMS, 1964

Item	Acres	Percent
Total land	1,907,200	100.0
Proportion in farms		51.9
Acres in farms	989,597	100.0
Cropland harvested	57,034	5.7
Cropland pasture	14,893	1.5
Other cropland	13,882	1.4
Woodland pastured	68,055	7.0
Woodland not pastured	279	.4
Other pasture	826,635	84.0

Source: U.S. Census of Agriculture

FOREST LAND

Forest stands

Ponderosa pine is the predominant wood species in Crook County. The other species are Douglas-fir and lodgepole pine. Most of the commercial forests in Crook County are located in the Ochoco National Forest and the Maury Mountains.

Climate and topography have divided the county into three principal vegetation zones. The northeastern quarter and the Maury Mountains area make up the conifer forest zone. This area has been classified as commercial forest zone.

The western two fifths of Crook County is in a western juniper woodland zone. The stands are generally sparsely stocked and consist of low-quality timber suitable for fence posts and fuel wood. This area has been classified as noncommercial forest land and contains 563,000 acres.

The nonforest zone lies in the southeastern section of the county. It contains mainly sage brush and desert flats.

Forest land ownership

About 23 percent of the forest land in Crook County is privately owned. This is 107,620 acres of commercial land. Approximately 77 percent, or

352,680 acres, was under federal ownership in 1952. Most of this was in the Ochoco National Forest, administered by the United States Forest Service.

Less than 1 percent of the forest commercial land, or 600 acres in 1952, was owned by the State of Oregon.

No data were available for ownership by the county.

Forest land use

The major uses of forest land in Crook County are production of crops of commercial timber, outdoor recreation, and watershed protection. Wildlife habitat and grazing are also important.

The national forest land is managed under the "multiple use-sustained yield" concept. This means the management of the forest and related areas in a manner that will conserve the basic land resource itself while at the same time producing high-level sustained yields of water, timber, recreation, wildlife, and forage in the combination that will best meet the needs of the people.

On many private holdings the only management is that related to the harvesting of mature timber, while on other private holdings considerable attention is given to measures that will maximize the continuous production of timber. Tree farming is gaining some acceptance in the county.

FIELD CROPS

General

Agriculture in Crook County consists of three main practices: (1) general irrigated farming, (2) dryland farming, and (3) rangeland farming. Areas of irrigation are intermixed with range-type farming in the area below Prineville. Most of this irrigated land lies near the Crooked River Project, receives water from gravity irrigation systems.

Most of the agricultural land in Crook County is devoted to livestock and cash-grain farming. Few vegetables are grown in the county; however, substantial acreage is devoted to potatoes. Livestock dominate the agricultural economy of the county. Some poultry and poultry products are produced.

Characteristics

Crook County has a semiarid climate, which limits the type of agricultural crops that may be produced. From the total value of products sold in the county in 1969, livestock and livestock products accounted for \$5,530,000 out of a total of \$8,458,000. This is nearly 66 percent of the total value of farm products sold. The remainder of the value of farm products falls into the generalization of all crops. Very few vegetables or berries have been recorded in the last few years.

The general crops section of this report has to do with cereal grains, hay crops, and irrigated pastures.

The following is the estimated income from the production and off-farm sales from these crops for a total return of \$1,404,000.

CEREAL CROPS

Wheat	\$231,000
Barley	247,000
Oats	59,000
Rye	14,000
<hr/>	
Total	\$551,000

Irrigated pasture on an average rents for \$5 per Animal Unit Month and stocked at 1½ to 2 AUM per acre.

HAY

Alfalfa	\$819,000
Clover and grass	11,000
Small grain	14,000
Wild and other tame hay	9,000
<hr/>	
Total	\$853,000

Agri-Business Report

A major portion of the nonagricultural sector of Crook County's economy is centered in the forest and forest products industry. Other industries in this sector of the economy include retail trades, government, services, transportation, utilities, and miscellaneous smaller businesses. In several of these industries major portions can be linked, either directly or indirectly, to the forest products industry. Therefore, the major emphasis of this committee's report will be concerned with the forest and forest products industry. Land and water uses as they relate to industries will also be discussed.

FOREST AND FOREST PRODUCTS

The raw timber resources of the county are the basis for this major industry and total approximately 426,000 acres of commercial forest lands with an esti-

barely sufficient for present mill operation requirements and has not allowed for any expansion. Research indicates that the allowable cut of publicly owned timber could be substantially raised and that unless this takes place a distinct possibility exists of a timber shortage in the area.

The absence of any manufacturing plant utilizing chips and wastes further handicaps lumber producers. All chips and wastes are presently shipped outside the county. Manufacturing employment in the forest products industry could be increased if some provision could be developed for use of these by-products within the county. Stud and chip operations can also use logs too small for saw logs and salvage timber. Also, as wood technology expands, the use of juniper as a source of wood fibers is a future possibility, and the county boasts a total of 528,000 acres of juniper land.

Table 1. Ownership of Commercial Forest Land and Sawtimber Volume, 1968

Ownership	Commercial forest land		Sawtimber volume	
	Acres	Percent	Mil bd ft	Percent
Total	426,161	100	4,588	100
National forest	333,000	78	4,267	93
BLM	9,879	2	96	2
State forest	120	a/	a/	a/
Private	83,162	20	225	5
a/ Less than 1% & 0.5 MBF				

Source: Oregon State Forestry Department.

mated net volume of live sawtimber in 1968 of 4,588 million board feet, log scale, Scribner Rule. The net volume of growing stock in the same year was estimated to be 939 million cubic feet.

Ownership of commercial forest land and sawtimber volume in the county is primarily public, with the United States Forest Service controlling 78 percent of the total commercial forest acreage and 93 percent of the total sawtimber volume.

Seventy-six percent of the total sawtimber volume in 1968 was ponderosa pine, 13 percent Douglas-fir, and the remainder primarily other softwood species.

Six mills in the county furnish a variety of products from rough lumber to finished moulding, plus a plant specializing in box shoo. Approximately half of the county's wage and salary workers are employed in these mills in addition to approximately 140 year-round employees in forest management with the United States Forest Service, the Bureau of Land Management, and the State Forestry Department.

The allowable sustained timber cut has been

Recommendations

The committee recommends that:

- ◆ The allowable cut be raised in line with the needs of the people, yet consistent with the principles of sustained yield and multiple use.
- ◆ Specific people-oriented goals be adopted for public forest management.
- ◆ The United States Forest Service management be adequately financed along the patterns of BLM-county cooperation, with forest management guaranteed a share of forest revenues.
- ◆ National forest management policy be consistent with the national forest timber policy of "even-flow."
- ◆ Funds be allocated to speed up development and testing of fertilization, genetic improvement, thinning, and other such practices that promise economically increased forest yields.
- ◆ Serious consideration be given to the establishment of a chipboard plant in the area and the installation of equipment to handle small logs.

- ◆ Emphasis be increased on research involving the use and control of juniper.
- ◆ Decisions involving public land use, including forest industry, be based on the wants and needs of the people rather than on crisis, expediency, and departmental power struggles.

WATER RESOURCES AND INDUSTRY

The total surface water supply within the county, approximately 221,000 acre-feet, for all purposes comes from two primary drainage basins: Crooked River and Ochoco Creek. Additional surface water is provided the county in the Powell Butte area from the Deschutes River system.

Ochoco Creek and Crooked River are typical desert streams that flow heavily in the spring from March to June and are almost dry the remainder of the year. Therefore, flow control by storage of these two stream systems must be adequate enough to provide a reasonable supply of water during low-flow years.

The Deschutes River, on the other hand, because of its origin in the high Cascades and the geological formations of the soils in the watershed area, is one of the most constant-flowing streams in the West. Consequently, the Powell Butte irrigated area in respect to water resources is the most stable farm area in the county.

Irrigation for farming is the primary use of water in Crook County, but both Ochoco and Prineville reservoirs have become important recreational areas. The largest amount of water for industrial purposes in the county is used by sawmills. Other important uses of water include domestic and municipal supplies.

The Ochoco Reservoir has not completely answered all the flow control problems of the Ochoco Creek system, but it has been most economically feasible control situation. Additional storage reservoirs above both the Ochoco and Prineville feed-canals would provide supplemental benefits.

The Prineville Reservoir, with an active capacity of 153,000 acre-feet of storage, furnishes a large portion of the water used by the Ochoco Irrigation District. At the present time, however, there are approximately 40,000 acre-feet of excess storage, of which about 15,000 acre-feet are available for industrial purposes.

Recommendations

- ◆ Installation of more small-scale private dams in upper country with state aid.
- ◆ More and better snow survey stations and reports providing information both for water use and release regulation for flood control.
- ◆ Use of more Prineville Reservoir water to supplement that normally drawn from Ochoco Lake to prevent low levels detrimental to multiple-use factors.
- ◆ Use of more pipelines in laterals to cut down loss and for pickup of water for reuse.
- ◆ Retention of a sufficient amount of present un-

- located waters for future industrial expansion possibilities.
- ◆ Approval by the state engineer of high-line irrigation ditch application for water.
- ◆ Immediate action for the protection and planned use of all unallocated waters.
- ◆ Expansion of studies of drainage problems and solutions.

LAND USE: PRESENT AND FUTURE

Crook County has a total area of 2,892 square miles (1,907,200 acres). Productive land use is primarily devoted to agriculture and forestry, with recreation a secondary use of much of the forest land. Non-productive land comprises approximately 70 percent of the county's total land area.

Approximately 50 percent of the county is in federal ownership, 1½ percent is owned by the State of Oregon, and the remainder is privately owned.

Growth and development in the county have been centered around the Prineville area and, not unlike any other county in the state, have taken place without any real plan of direction or purpose. The results of this type of growth are apparent in the number of outlying housing developments not served by public water and sewage disposal systems.

Recommendations

- ◆ Establishment of an active county planning commission.
- ◆ Development of a comprehensive land-use plan for the county.
- ◆ Establishment of an adequate public relations and educational program throughout the development and implementation of a comprehensive land-use plan.
- ◆ Employment of the land-use plan as a guide in future zoning of the county.

OTHER BUSINESSES

Other businesses in Crook County cover a wide range of interests from retail trades to real estate and banking.

Retail trades employ approximately 17 percent of the total wage and salary workers in the county, but this is not a true criterion of the importance of trade in the county because of the number of small family-owned or family-operated businesses. The service industry, like the trades, also is composed of many small, owner-operated establishments.

The combined industrial group of transportation and utilities accounts for only 2½ percent of the total nonagricultural employment in the county. And, without expansion in the timber industry, expansion here is unlikely.

All of the other businesses are primarily dependent on the three major industries of the county; agriculture, forestry, and recreation. The existence and expansion of these businesses depend on expansion in other industries.

INDUSTRIAL EXPANSION

The City of Prineville, in conjunction with the City of Prineville Railroad, owns several industrial sites within the city limits. These are zoned for industry and available for lease or purchase.

Within a one-quarter mile radius of the city limits there are approximately 70 acres of industrial property available in various-sized lots. All industrial sites have railroad spurs, water, power, drainage, and access roads. There are also several commercial business sites available in the downtown area of Prineville, under a long-range plan of development of the commercial district.

Actual expansion, however, depends largely on the implementation of recommendations vital to the expansion of agricultural and forest products industries in the county. Comprehensive long-range planning is another important factor in the expansion of present industries or the acquisition of new ones. This planning should not only consider the efficient, orderly use of those natural resources land, water, and timber, but should also include consideration of the elimination of air and water pollution and the maintenance of the environmental quality available in the area.

Crops Report

Cereal Crops

More information is needed in the general field of cereal crop production, including such information as rates of seeding of fall and spring-planted grain, selective weed control, fertilization of cereal grains, harvest dates, and improved storage facilities. The committee submits the following recommendations.

Wheat

- ◆ New and higher yielding varieties of winter and spring wheat should be tested for quality and yield under the climatic and soil conditions on Crook County irrigated lands.
- ◆ Greater emphasis should be given to the value of locally grown wheat as a livestock feed.
- ◆ The importance of early fall planting of Nugains wheat should be recommended to growers.
- ◆ Burt or Gains for late winter or very early spring planting of fall grains is recommended.
- ◆ Research people should give special consideration to a higher yielding good quality spring wheat to replace Federation.
- ◆ Since leaf rust continues to be a problem in spring wheat, a variety with resistance to this rust problem is needed.
- ◆ Growers should be encouraged to grow Galgalus wheat, desirable variety for wheat hay production.

Barley

- ◆ The committee recommends further use and testing of Luther as a barley to replace Alpin.
- ◆ There is a need for a high-yielding spring barley to replace Trebi on Crook County soils.
- ◆ More information should be made available for better fertilization of both fall-planted and spring-planted barley for maximum yields under the soil climatic conditions in Crook County.
- ◆ Seed of a good hooded barley is needed to be used as a hay crop. This barley is used as a hay crop in thin stands of alfalfa or as a grain hay crop.
- ◆ It is recommended that these seed lots be cleaned up and a premium be paid growers for producing clean seed of this variety.

Oats

Oats produced in Crook County are in short supply, since oats are imported annually into the county to be used as stock feed.

- ◆ This committee recommends that more oats be grown in Crook County.
- ◆ The committee also suggests that varieties yielding higher than the present varieties, Cayuse and Park, be introduced.

- ◆ To develop a high-yielding oat for grain, a high-test weight for the best rolling quality be kept.

Rye

Approximately 10,000 acres of rye hay is grown each year in Crook County for livestock feed, and only 1,000 acres threshed for grain.

The rye for hay is mostly fall planted and only approximately 15 percent spring planted. The seed used in most plantings is a mixture of spring and winter varieties. This practice is not desirable for either hay or for production of seed grain.

This committee recommends that the research station make every effort to make available a good fall high-yielding hay and grain variety as well as a good spring variety.

Alfalfa

- ◆ Because alfalfa weevil control is very important to the future production of alfalfa for hay and pasture, urgent requests for a stepped-up research program, both public and private, to find a suitable insecticide for adult control is urged.
- ◆ Crop researchers should be asked to intensify their work in producing a weevil-resistant and good-yielding variety.
- ◆ Since for the last 20 years alfalfa yields, locally and nationally, have not improved much above the 3-ton-per acre average yield, every effort should be made to make available a new high-yielding variety with good forage quality.
- ◆ Researchers, both public and private, should be requested to accelerate their programs on alfalfa production in order to better emphasize cultural methods, including higher yielding varieties, fertilization, seed-bed preparation, planting, irrigation, insect and disease control, and harvesting.
- ◆ It is recommended that for a long-time program a stand of alfalfa should not be left in longer than 5 years (?).
- ◆ Hay producers could increase yields by chemical control of annual weeds and grass in fields.
- ◆ Noxious weeds in alfalfa fields must be controlled.
- ◆ Commercial producers and local cattle feeders should take advantage of hay-testing services offered by the OSU forage testing service.
- ◆ Where feasible, green chop for summer feeding of beef cattle and sheep can be beneficial.
- ◆ Alfalfa hay silage has its advantage in a local feeding program.
- ◆ A total management program will have to be improved to increase yields.

Pastures

Approximately 20,000 acres of irrigated cropland in Crook County are used exclusively for pasture; many of these pastures need improved management for maximum forage yields. The committee submits the following recommendations for pasture improvement:

- ◆ Better use should be made of adapted and high-yielding grass and legume varieties.
- ◆ Grass pastures must be replanted at least every 5 or 6 years for best forage returns.

- ◆ Pastures should be corrigated and cultivated with a rotary cultivator every year.
- ◆ The fertilization of pastures must be controlled to encourage greater forage yields, yet keep a good balance between grass and legume.
- ◆ For best return from pastures more information on pounds of beef or lamb per acre is needed.
- ◆ More attention should be given to total pasture management.
- ◆ Proper application of grazing pressure to pastures is very important for continued high production.

Specialty Crops

The production of a number of profitable crops in Crook County is limited because of the general climate of this high plateau area just east of the Cascade Mountains. The entire area of Crook County is subject to frost any night of the year. It is very common to have a 50° or more spread in daytime to nighttime temperature.

For this reason many specialty crops should be investigated as to production problems and possible markets.

RECOMMENDATIONS

- ◆ **Grass seed production.** Growing and testing of new and improved varieties of grass for seed production should be encouraged. These include orchard grass, blue grass, perennial rye grass, tall fescue, crested wheat, intermediate wheat, and timothy, as well as any other grass available with possibilities of seed production in Crook County.
- ◆ **Legume seed production.** Both white and red clover acreages could be increased profitably in Crook County.
- ◆ **Vegetable seed crops.** The committee recommends that further investigation be made for a market so ranchers could produce vegetable seed in Crook County. At this time the committee suggests seed for carrots, turnips, sugar beets, onion, lettuce, or any other crop where there is a demand for seed production.
- ◆ Seed companies entering into contracts with ranchers to grow new untested strains of grass, legume, flower, or vegetable seed should be required to assume their fair share of the risk of growing their seed crops until the crop has proven itself under Crook County growing conditions.
- ◆ It is recommended that an investigation be made into the possibility of growing carrots for canning at western Oregon canneries. Crook County is only three hours' travel by truck from Salem.
- ◆ Red raspberries make a good small-fruit crop for Crook County, and the acreage could be increased.
- ◆ Possibilities of growing cane fruit stock material should be further investigated.
- ◆ Growing of dill for seed or the plant should be tried with possible commercial plantings.

- ◆ Onions have been and could again be grown as an alternate row crop.
- ◆ Garlic and horseradish both do well in Central Oregon, and some grower could profitably grow a small acreage of one of these crops commercially.
- ◆ Rhubarb is a crop for a limited acreage, as it does well in Central Oregon.
- ◆ Asparagus could be a crop for someone interested in a high return crop if a market could be developed.
- ◆ Other field crops which should be further investigated for production are cabbage, brussel sprouts, broccoli, and lettuce.
- ◆ **Peppermint production.** The committee recommends an increase in peppermint production only in line with market demand for the oil to make a profitable enterprise.

Future peppermint producers should use only root-stock material grown locally so as not to introduce disease into the area.

Local peppermint rootstock growers should be encouraged to continue the certification program to maintain a local supply of clean roots.

Rootstock growers should keep up their certification program by purchasing nuclear plants every few years from the certification department, Oregon State University.

A quick method of testing oil for impurities should be developed.

The fertilization research program with Oregon State University should be continued.

More general information on management including, rootstock material, planting, irrigation, fertilization, weed control, etc., should be made available to growers.

Growers are in need of more and continued information on use of sinbar for weed control in peppermint.

It is recommended that a local warehouse be bonded so peppermint and spearmint oil could be stored and warehouse receipts be issued so growers could borrow money on their unsold oil.

- ◆ **Spearmint production.** Spearmint could be another oil crop for Crook County and should be grown only where the grower can handle the crop in an area where peppermint is being grown. Since

there is a shortage of good clean Scotch spearmint plants, growers are warned not to go outside the area for their plants. Plenty of clean certified roots will be available in the county within two years.

If interest develops by growers in any other specialty crop such as safflower, dry peas, beans, etc., market outlets should be well investigated.

- ◆ **Alfalfa seed.** Alfalfa seed could be a profitable seed crop in Crook County to the grower who establishes colonies of leaf cutter or alkali bees to pollinate their fields. It is recommended this crop be grown where growers will propagate their bee colonies.

Potatoes

The potato industry represents approximately a gross income of \$1½ million annually. In 1968 2,800 acres were planted to potatoes. Good cultural practices and management have resulted in an increase of production over the past several years. However, with still more production per acre, the potato industry will continue to grow in Crook County.

RECOMMENDATIONS

Marketing

- ◆ Support organizations that are striving to increase the bargaining position of the farmer.
- ◆ Enact legislation giving the farmer more bargaining power.
- ◆ Exercise the use of the marketing order.
- ◆ Establish a more accurate means of reporting production.
- ◆ Enact legislation to regulate processing plants.

Fertilization

- ◆ Develop a quick field test for plant nutrients and correlate with cropping history and yields.
- ◆ Extend and expand the plot work of the Central Oregon Experiment Station to more farms.
- ◆ Request Oregon State University to develop nitrate nitrogen soil tests on a commercial basis.
- ◆ Apply part of fertilizer in irrigation water throughout the season as determined by tissue tests.

Diseases

- ◆ Plant disease-free seed.
- ◆ Employ a person for research in potato disease.
- ◆ Return results of seed certification greenhouse tests sooner.
- ◆ Use press-wheel planter to reduce Rhizoc problem.
- ◆ Develop programs to help reduce leaf-roll virus.

Irrigation

- ◆ Develop solid-set sprinkler irrigation for better distribution, frost control, and temperature control.
- ◆ Use an offset when using hand-move sprinkler systems.
- ◆ Determine the best irrigation interval to correct blight and mildew problems.
- ◆ Use drains at the end of laterals in solid-set irrigation.
- ◆ Use one Extension service person to work with potatoes in the Central Oregon area.
- ◆ Provide information to growers on all aspects of solid-set irrigation.

Storage

- ◆ Use correct handling procedures in harvesting and storing.
- ◆ Use good storing facilities with adequate ventilation and temperature control.
- ◆ Establish a processing plant in the Central Oregon area.

Soil and Water Report

Soil and water are two of the most important elements in producing the \$7½ million income for the farmers in Crook County. Development and management of the soil and water is necessary to maintain productivity of crops and livestock.

Developments such as the Prineville Reservoir, the Ochoco Reservoir, the COI project, the Lone Pine project, and Ochoco irrigation project have stimulated the economy of the county. Additional land and reservoirs are available for development. Also, some good soil and water management practices need to be developed.

RECOMMENDATIONS

Atmospheric sources

The Prineville Reservoir was established for irrigation, recreation, and flood control. The dam is regulated under certain limits established by a record of the Crooked River flow. Water cannot be stored in the reservoir beyond 93,000 acre-feet until after a certain date, regardless of the snowpack and the soil conditions in the watersheds. It is recommended that the filling date be adjusted forward or backward, as determined by more extensive snow surveys in the watersheds. It is also recommended that the practice of cloud seeding be used in certain areas to provide water to fill reservoirs and to irrigate crops.

Surface sources

Several of the small watersheds are not developed; also, conservation practices could be used on some of the larger, more developed watersheds. If these watersheds were developed, runoff water would be slowed, erosion would be controlled, water would be available later in the growing season, better forage for game and domestic animals would exist, infiltration rates would be increased, and more water would be available to feed the ground-water supply.

It is recommended that the upper portions of the watershed be developed as follows:

- Construct detention reservoirs near the head of all watersheds.
- Incorporate a good weed-control program in the management of the reservoirs.
- Establish grass, using pure grass seed, on ranges and stream banks.
- Clear juniper trees away from springs. As an incentive to the clearance of juniper trees, the committee recommends that economic uses be developed. Suggested uses are presto logs, pressboard, firewood, fence posts, scenting, and decoration. Until a use is developed, effective economical means of defoliation or poisoning should be developed.

For development of the lower portions of the watersheds, the committee recommends the following: The feasibility of the diversion of McKay, Johnson, Lytle, and Dry creeks into the Ochoco Reservoir should be studied. If this solution does not prove feasible, then the possibility of constructing dams in these creeks should be studied.

As an alternate plan for supplementing the water in the Ochoco Reservoir, the operation of existing pumps at the Barns Butte pumping station to fill the reservoir by winter pumping from the Crooked River water should be studied. Support should be given to studies concerning the construction of reservoirs on the south and north forks of the Crooked River, Beaver Creek, and Bear Creek.

The irrigation of land up to 200 feet above the existing water levels in the Crooked River should be studied. Some of this land is found in the Juniper Canyon in the Post-Paulina area.

Emphasis should be placed on the formulation of a readily workable plan for use of the water now stored in the Crooked River Reservoir.

Subsurface sources

It is suggested that the present data gathered from wells drilled in the Crook County area should be consolidated and compiled in a manner that might reveal more information about the ground water in Crook County. Possibly this could be a good topic for study by a graduate student. It was also suggested that more wells be constructed for the use of the underground water in Crook County.

Water management

The committee suggested that early irrigation be used when needed to fill the soil profile in areas of short water supply. The moisture-holding capacity of soils, depth of soils, rooting habits of crops, and water measurement should be considered in this early irrigation.

Educational programs should be centered on water application in both flood and sprinkler irrigation.

For better distribution of water, it was suggested that the canals in irrigation districts be lined with concrete, or other material to prevent seepage. In particular, canals should be lined at the Crawford place on the Ochoco Irrigation Project and spots to be determined in the COI Canal. Also, individual farmers should make use of the local ACP program in lining their farm ditches.

Soil classification

Recently a soil classification was made of the Prineville area in Crook County. The committee sug-

gests that a soil survey be completed for the remaining part of the county and that an extensive type of soil sampling involves digging one sample for each one-quarter section of land. The zoning committee could use these soil classification reports in considering a potential development of land classification for farm use, industrial use, housing, hobby farms, and recreation. A economic feasibility study of soil reclamation should be conducted on the salty soils and saturated soils. The economics of incorporating bark dust and soil admendments should be included. It is suggested that salt-resistant crops be planted on these problem soils. A search of gypsum or other general soil admendments should be made in Crook County.

Soil management

Private industry and public institutions are requested to conduct research to develop and standardize quick workable field tests for plant nutrients in plant tissue. This would enable the farmer to apply fertilizer through sprinkler systems throughout the season as it is needed by the plant. Field data and cropping history should be accumulated to determine adequate levels of nitrogen, phosphorous, and potassium. These plant tissue tests would be used in conjunction with soil tests.

Livestock Report

The following table shows the estimated numbers of livestock and poultry in Crook County. The number of milk cows in the county has decreased significantly since 1940, consistent with a national trend. The decline in consumption of dairy products per capita and the rapid rise in milk production per cow are two of the most important factors contributing to this decrease.

Sheep and lamb numbers since 1940 have shown a dynamic decrease. The number of cattle other than milk cows has increased from 30,000 in 1940 to approximately 59,000 in 1965. The total number of poultry has decreased gradually since 1940, with chickens decreasing and turkeys remaining constant.

1965 — Crops	\$2,681,000
Livestock	4,723,000
	<u>\$7,404,000</u>
1966 — Crops	\$2,919,000
Livestock	5,168,000
	<u>\$8,087,000</u>
1967 — Crops	\$2,940,000
Livestock	5,167,000
	<u>\$8,107,000</u>

Livestock and Poultry Numbers, Crook County

Category	1940	1950	1955	1960	1965	1969p
All cattle	30,000	37,000	56,000	60,000	59,000	53,000
Dairy cattle	2,700	1,500	1,600	1,000	600	500
Sheep and lambs	52,000	9,000	12,700	12,200	7,000	5,000
Hogs, all ages	3,000	2,000	1,000	2,000	1,000	500
	1963r	1964r	1965r	1966r	1967r	1969r
Chickens, Jan. 1	20,000	20,000	18,000	16,000	15,000	14,000
	100	100	100	100	NA	NA
p—preliminary	r—revised	NA—not available				

INCOME

Agriculture contributes to the economy of Crook County in two ways: it provides income not only to the farmers, but also to the workers employed for harvesting and processing. Income from the sale of crops and livestock in the county in 1965 was estimated at about \$7.2 million as reported by the Oregon State University Extension Service and the United States Department of Agriculture.

Income from the sale of crops accounted for 33 percent of the agricultural income and livestock for 67 percent. Field crops such as small grains, grass and legume seeds, and hay accounted for 21 percent of the agricultural income. There was no income from vegetables and berries. Dairy products accounted for 1 percent; poultry products, 1 percent; cattle and calves, 60 percent; sheep and lambs, 1 percent; and hogs, 2 percent.

**Value of Farm Products Sold
Crook County, 1964-1969**

1964 — Crops	\$2,892,000
Livestock	3,994,000
	<u>\$6,886,000</u>

1968 — Crops	\$3,343,000
Livestock	4,414,000
	<u>\$7,757,000</u>
1969 — Crops	\$2,928,000
Livestock	5,530,000
	<u>\$8,458,000</u>

Crook County Gross Farm Income 1969

Livestock and Livestock Products

BEEF

Beef herd	\$4,946,000
Fed cattle	208,000
	<u>Total \$5,154,000</u>

DAIRY

Dairy herd	26,000
Dairy products	85,000
	<u>Total 111,000</u>

SWINE

Swine herd	40,000
	<u>Total 40,000</u>

SHEEP

Sheep and lambs ..	116,000	
Fed lambs	20,000	
Wool	24,000	
		Total 160,000

POULTRY, RABBITS, BEES

Honey	3,000	
Rabbits, geese, ducks	3,000	
Chickens	2,000	
Eggs	37,000	
		Total 45,000

HORSES

Horses	20,000	
		Total 20,000

Total Livestock \$5,530,000

RECOMMENDATIONS

Range livestock and public lands

- ◆ The general public could be better informed regarding livestock use of the federal ranges, both United States Forest Service and Bureau of Land Management.
- ◆ Costs per AUM month and average season costs per head should be recognized as well as the continuing reduction in numbers on these ranges and its effect on the ranch operation as an economic unit.
- ◆ Stockgrowers using public ranges recommend that every effort be made now and in the future to have a greater percentage of the grazing fees paid returned to the lands for range improvement.
- ◆ The Oregon State Game Commission, BLM, USFS and private-range livestock growers should cooperate in a long-range program of game management on these lands.

Range livestock and recreation

- ◆ Boundaries of all public lands should be well identified to eliminate hunters trespassing on private lands.
- ◆ The State Game Commission should continue its program of cooperation with ranchers for access and hunting on private lands. The same principle applies to BLM for access across private property.
- ◆ A continuing fund should be established by the game commission to compensate livestock owners for livestock killed and property damaged by hunters, these funds to come from license fees.

Predator animal control

- ◆ Stockgrowers individually and as members of livestock organizations are advised to continue the support of the predatory-animal control program in Crook County, being certain that the program is

adequately financed each year and by cooperating with trappers to assure them that they have meat for bait. Stockgrowers should also cooperate in locating bait stations in desirable locations.

The Bureau of Sport Fisheries and Wildlife Division of Wildlife Services should consider seriously a minimum of 85 bait stations in Crook County in the future.

Dog control

- ◆ Stockmen are encouraged to lead an effort for greater dog control. Such an endeavor could include a county-wide lease law; much higher dog license fees; employment of a dog-control officer for all of Crook County; and more liability on the part of the owner of dogs caught harassing or killing livestock or poultry.

PRODUCTION AND MANAGEMENT OF LIVESTOCK

- ◆ It is recommended that all livestock growers give special consideration to their efforts in selecting better bulls, bucks, or boars to use in their herds.
- ◆ Since the livestock industry as a whole lacks information concerning the general health of livestock, the committee recommends that more animal health information be made available to stockgrowers, particularly information on blackleg and malignant edema, white muscle, red water, pinkeye, calf pneumonia, and scours. The face fly is becoming a serious pest to cattle owners. More research on control is requested.
- ◆ The general public needs information about the problem of loss in weight or shrinkage between the live weight and the weight of a roast or steak ready for the table. This is especially true of families buying live animals or buying halves or quarters for their home lockers.
- ◆ All trucks hauling cattle and other livestock to central markets or to auction yards must be subject to cleaning and complete disinfection immediately after unloading.
- ◆ The county sheriff should be requested to take more responsibility for local livestock and property thefts as well as vandalism.
- ◆ The committee asks that the Oregon Cattlemen's Association continue indefinitely its \$1,000 reward program for a convicted livestock thief.
- ◆ Range livestock owners are asking for more information on preconditioning calves before selling them especially as it concerns the buyer. Will the buyer pay more for preconditioned calves?
- ◆ OSU and livestock organizations are asked to supply producers with more market information, including information on the effect of imported beef and lamb on the domestic markets.
- ◆ To strengthen the culling process in livestock herds, stockgrowers are advised to be sure their cull stock (including cull cows and ewes, cull bulls and bucks) to be sold for slaughter only. This is a program of cooperation with livestock producers, sales yards, etc.

Dairy

Dairying in Crook County has had a steady decline for the past 10 years, until on January 1, 1969, only four commercial dairies were in business.

Since economic studies have shown dairying in central Oregon and Crook County can compete with other areas in the state, the committee feels there still is opportunity for a successful dairy enterprise in the county.

The big problems are marketing and a desire of ranchers to milk cows.

- ◆ This committee recommends that anyone interested in dairying be encouraged to investigate further the possibility of going into business in Crook County.

Sheep

Sheep numbers continue to decline in Crook County, especially in range operations. On January 1, 1969, only one range operator was in business. The reason for this decline in range operations is labor and availability of summer and winter pasture on public and private land.

The recommendations for continued sheep production are as follows:

- ◆ Maintain farm flocks of sheep.

- ◆ Continue control of predators and better protection from dogs.
- ◆ Step up the research work on Central Oregon irrigated pastures for liver fluke control.
- ◆ Maintain sheep production records.

Swine

Production of swine on Crook County farms remains about the same as of January 1, 1969.

Recommendations for swine production:

- ◆ Keep either a few brood sows for a small farm enterprise or go all the way by building a large producing plant.
- ◆ Maintain and grow a desirable meat-type hog.
- ◆ Investigate further the marketing of swine from small producers.
- ◆ Support a swine-testing station as a source of breeding stock.

Poultry

Only two commercial poultry producers were in business in Crook County on January 1, 1969.

- ◆ Since Crook County is an egg-import county six months or more each year, the committee would like to see more poultry raised.

Range Management Report

Private rangeland accounts for approximately 50 percent of Crook County's 1.9 million acres. This rangeland is grazed by over 52,000 head of cattle at some time throughout the year. These cattle spend approximately 7 to 9 months of the year grazing on rangeland. This gives an indication of why the range-livestock industry is the largest agricultural enterprise and accounts for more than \$4 million income per year. Federal land ownership, both Bureau of Land

Management and United States Forest Service, plays a very important part in this industry, with approximately 912,000 acres controlled by the government.

Management of both domestic and wild animals is of upmost importance in maintaining and/or improving plant and animal production. Deferred grazing periodically during a plant's active growing period will help in maintaining and building up plant vigor.

Problems

Sagebrush and rabbitbrush cover over 500,000 acres of privately owned rangeland. Nutrients, moisture, and space are being used by these undesirable shrubs that could be used by desirable plants. Brush control would increase production from 2 to 10 times the present production. Where a perennial understory of desirable plants is not present in sufficient quantity, the areas will need seeding following brush control. Methods and organization are available for economic and beneficial brush control.

Many thousands of acres of rangeland are sick to the point where seeding is a necessity if they are to become productive. Seeding of rangeland can be accomplished economically where capital improvement funds are available. Treatments prior to seeding are usually needed to control competing undesirable plants. Spraying sagebrush and rabbitbrush is one method and cheaper than plowing or mechanical control. Mechanical control can bring good results every year where conditions are not ideal for spraying or chemical control.

Juniper is another weed problem on thousands of acres of rangeland. Usable production is greatly reduced where heavy stands of juniper are present. At this time, the economics of juniper control is questionable.

There is a continual desire and need for new grasses and legumes for use in range seedings. On range sites with a low effective environment (shallow soils, low precipitation, exposed slopes, etc.). Crested wheatgrass is the most widely used species at present. On better sites (deeper soils, higher precipitation) intermediate wheatgrass is being used. Creeping alfalfa also have limited use on the better range sites where other than spring use is desired.

Water is needed for domestic livestock, wildlife, and recreationists on rangelands. With plastic pipe available at economical prices, water can be distributed over large acreages that were not economically feasible in the past.

Fences are a necessity in the control of domestic livestock. Through proper fencing, areas can be

grazed that may have gone unused. In livestock management, fencing provides a tool whereby livestock can be made to graze a given area at a time that is desirable for animal production and maintenance or improvement of range forage species.

Wildlife is not controlled other than through harvest. Time of use on a range cannot be controlled by man and presents a problem at times in improving rangelands. With very few exceptions range improvements for domestic livestock also improve the range for wildlife use.

Increased capital is needed by private landowners to accomplish the needed range improvements. The Agriculture Stabilization Conservation Service offers monetary assistance through their ACP program. Financial institutions provide assistance with loans. Many times there is not sufficient assistance for a desired program.

Range-livestock operators have been pinched for income to offset the rising costs of purchasing and operating a ranch. A potential income from rangelands, other than use by domestic livestock, could be realized by involvement in recreational services. The greatest opportunity appears to be charging fees for deer hunting. Increased income would provide the opportunity to improve and better manage rangelands.

RECOMMENDATIONS

- The committee recommends that:
- ◆ A program be implemented to spray at least 30,000 acres of private rangeland each year.
 - ◆ Each rancher evaluate his situation and consider plowing as an alternative to spraying for brush control.
 - ◆ Continued effort be given to testing grass and legume species for seeding rangelands.
 - ◆ Research be implemented immediately to determine a practical and economical method for controlling juniper.
 - ◆ The forest products laboratory at OSU be contacted

and encouraged to do research on the possibility of using juniper as an economic resource.

- ◆ Fencing be given more consideration as an improvement and management tool.
- ◆ Considerable effort be given to water development and distribution.
- ◆ Grazing programs be adapted that will provide for improved production or maintain present high production.
- ◆ Long-term range improvement and management programs be considered, with the realization that survival in the short term is a necessity in reaching a long-term goal.
- ◆ Oregon State University make a study to determine the possibilities of and procedures to follow in recreational leasing of private lands.
- ◆ A short course be offered for financial institutions covering the economics of range improvement and management practices and if possible involving persons ranking above the local branch level of lending personnel.
- ◆ ACP funds be increased for range improvement and the limitation per rancher be held up to \$2,500.

- ◆ The Oregon State Game Commission continue with its range improvement and be commended for past improvements.
- ◆ The Oregon State Game Commission lease private lands for deer hunting.
- ◆ The Bureau of Land Management speed up processing of application for exchanging and blocking of rangelands. If necessary allow emergency funds to handle the processing of land exchanges.
- ◆ Any increase whatsoever above the present grazing fees on public ranges be returned to the local district (BLM and USFS) for range improvement.
- ◆ The Bureau of Land Management refrain from publishing the location of small isolated tracts of public land surrounded by private land and cooperate with landowners in maintaining control, therefore reducing the never-ending problem of trespass on private lands.
- ◆ Where state lands have been and are being leased and used by a ranch unit, that this ranch ownership be given the first opportunity to purchase the state land (if ever put up for sale) at a reasonable price.

Weed Report

Weeds are a \$1½ million problem in Crook County. The control of noxious weeds has been a long-time goal of the Cooperative Extension Service and the landowners in Crook County. The following weeds are classified as noxious weeds and infest a sizeable land area in the county: Canada thistle, Russian knapweed, white top, quackgrass, puncture vine, leafy spurge and field bindweed.

These weeds are more prevalent along the Crooked River than in any other area. The irrigated farmlands are fairly clean of noxious weeds.

The county road rights-of-way have been sprayed by the county weed control district for many years, and generally the roads are free of weeds. A cooperative arrangement in 1968 between the county and the State Highway Department has made it possible for the county to spray the state highway rights-of-way, which have some large areas of infestations.

The flooding which occurred during 1964 has spread weeds to new areas and increased the need for more effort in weed-control work.

RECOMMENDATIONS

The recommendations made by the committee are that:

- ◆ The weed committee sponsor a public meeting on weed control practices. OSU specialists would be asked to attend the meeting and review the State Weed Law.
- ◆ The irrigation districts give greater attention to weed control. It is recognized that the districts are doing more all the time, but more effort is needed along all irrigation canals and fenced-off drainage areas.
- ◆ Demonstration plots be established by the Extension Service along tributary streams and the river to determine better the most practical control measures to use for noxious-weed control in these areas.
- ◆ Research be undertaken to determine the best weed-control practices for selective weed control in specialty crops, and in new agricultural practices for selective weed control in specialty crops, and in new agricultural practices, such as solid-set sprinklers under our soil and climatic conditions.
- ◆ Ranchers and farmers be encouraged to control weeds along fence rows, headlands, and irrigation ditches.
- ◆ An additional piece of weed-spraying equipment be purchased by the county to help cover more area during the crucial spray season.
- ◆ An effort be made to provide more financial assistance to landowners to cover the cost of weed-control work.
- ◆ A weed advisory committee be established to follow through on recommendations and to determine priorities for attention in the future.
- ◆ A special project through ASCS be obtained to do weed control work on the river and other serious infestation of noxious weeds.

Recreation Report

Tourism and recreation form part of Crook County's three major industries, the others being forestry and agriculture. Recreational opportunities that bring tourists to Crook County include: fishing, hunting, camping, boating, swimming, picnicking, horse-back riding, rock hounding, fossil hunting, and nature study. Special events, such as the Paulina and Crooked River Rodeo, and the Crook County Fair attract many recreationists. Historical monuments, scenic attractions such as Crooked River Canyon, Steens Pillar, Owl Hollow, and Logan Butte, and the opportunity for a breath of good, clean, fresh Crook County air are enjoyed by visitors.

Tourists spend dollars in ways which benefit every person in the community. The American Automobile Association found that the typical automobile vacationist spends his dollars this way:

Retail stores other than food20
Entertainment and recreation08
Tires, parts, and repairs03
Gasoline and oil19
Food28
Lodging22
TOTAL	\$1.00

Tourist money reaches most types of local businesses and indirectly benefits them all. For example, it goes to payrolls, materials, supplies, utilities, retail purchases, and taxes. Thus, nearly every person gains from the tourist business, and this makes courteous hospitality well worth while.

The Ochoco National Forest and the Bureau of Land Management have many natural attractions, including lakes, fishing streams, scenery, wildlife, and wilderness.

Most of the public recreational facilities in the county are adjacent to lakes and streams. The Crooked River and reservoir are used for a wide variety of activities such as boating, swimming, fishing, and other water sports. The Ochoco River and reservoir comprise another area of attraction for water sports. The lakes and streams in the county are visited by fishermen, campers, and sightseers.

Facilities

The developed public recreational facilities of Crook County consist of national forest and Bureau of Land Management recreational areas, state parks, county parks, and city parks. The two largest state parks are the Ochoco and Prineville Reservoir parks. The two largest privately operated recreational facilities are the Prineville Reservoir Resort at Jasper Point on Prineville Reservoir and Lakeshore Lodge and Marina on Ochoco Reservoir. The Prineville Reservoir resort and state park has tent campsites and trailer

campsites. The largest United States Forest Service park is Cougar Park, and the largest Bureau of Land Management park is Table Rock on the Crooked River. All parks and resorts have picnic facilities.

WATER FOR RECREATION

The committee recommends the following:

- ◆ The unassigned water stored in the Prineville Reservoir should be held there for multiple-use purposes.

Such a plan would be a safety measure for users of water for irrigation on the Ochoco and Crooked River projects when there is a shortage of water, which could occur with a series of short-water years.

It would provide a supply of water for industrial development in the vicinity of Prineville.

This plan would also add greatly to the recreational potential of the Prineville Reservoir by providing adequate water late in the season for boating and fishing.

An adequate supply of water would be present in the reservoir at all times, and fishing potential could be maintained during seasons of high water demand.

A request should be made to the Bureau of Reclamation and to Congress, through our legislators, to bring about a program of offsetting repayment to the Department of Interior for holding this storage water without the cost becoming a burden to the water users.

- ◆ The Oregon State Game Commission is asked to continue its program of cooperation with owners of water storage ponds to work out a usage program similar to that now in effect at the Antelope Flat Reservoir belonging to Bill McCormack.
- ◆ The Oregon State Game Commission should continue maintaining a fishery in the Ochoco Reservoir.
- ◆ The Game Commission is urged to continue work in maintaining a fishery in the Crooked River below the Prineville Reservoir and on the other free-flowing streams in the county. South Fork, where at present there is no fishery, should be included.

LAND FOR RECREATION

- ◆ It is recommended that the United States Forest Service, Bureau of Land Management, the State Forestry, the State Land Board, and private owners of land continue their cooperative program in developing and maintaining a large animal population for hunting in all parts of Crook County.
- ◆ The Bureau of Land Management, in particular, is requested to put more emphasis on identification of public lands where hunting is permitted.

- ◆ The Bureau of Land Management, and the United States Forest Service are encouraged to cooperate with private individuals where there is an access problem to public lands.
- ◆ It is recommended that additional sanitary facilities be established on public and private lands which are open to public use.

Private hunting areas

This committee endorses the principle of establishing private hunting areas and supports the program of ranchers leasing out hunting privileges on their ranch lands when they plan to harvest deer annually in relation to forage supplies on the range.

Rock hunting

The Chamber of Commerce is commended for its efforts in designating free pits where rockhounds can dig for gems. The chamber should go even further in working with private individuals regarding the designation of areas open to the public and those where digging privileges are charged for.

Future rock hunting should be planned for and programmed in order to control sanitation and rehabilitate the land.

Scenic areas

Prineville and Crook County have many points of interest which, if developed, could bring in many

tourists and sightseers just to take advantage of these attractions.

The United States Forest Service should be encouraged to establish a scenic route for a circle trip through the Ochoco National Forest. The Bureau of Land Management could establish the same type of circle tour so that tourists could visit scenic points of interest on both public and private lands.

LOCAL CITIZENS AND RECREATION

The committee suggests that:

- ◆ A study committee be established to continue to look into the possibility of a sports center at Prineville.
- ◆ It be recognized by all government agencies as well as by service clubs and individuals that the main problem of expanding recreational facilities within the county is that of sanitation. Special effort is needed to isolate this problem and seek answers and suggestions from all sources.
- ◆ Encouragement be given to our legislators to limit or prohibit use of nonreturnable cartons or bottles in Oregon, especially soft drink and beer containers.
- ◆ The citizens of Crook County commend the Chamber of Commerce on the recreation brochures they have published. We suggest they go even further and emphasize that no place has more good, clean, fresh air per cubic foot of space than Crook County.

Human Resources Report

Nearly half of Crook County's 9,220 population lives within the incorporated city of Prineville; an additional 3,000 live in unincorporated areas near the city, which are not included in the city's water and sewage systems. The county's population includes nearly 700 people who are 65 years old or older.

A modern hospital and two newly built nursing homes serve the county's health needs at the present time and are large enough to fulfill foreseeable future needs. Public health facilities in the county are a part of the Tri-County Health district in cooperation with Deschutes and Jefferson counties. Although the Tri-County Health Department includes a family counseling clinic, the services of a psychiatrist are on a part-time basis, with a psychiatrist commuting to Central Oregon from another part of the state.

Enlargement of facilities for marriage and family counseling and mental health care should be encouraged, and a resident psychiatrist should be acquired for the tri-county area.

In 1960, 13.2 percent of the persons 25 years and older had completed less than 8 years of formal education. Retarded children from all three central Oregon counties are eligible to attend the Opportunity School in Redmond, but not all children who are eligible are involved in this program.

Fire protection in the city is provided by an effective volunteer department. Outlying areas, however, are without this protection.

Housing

Certain needs in housing are evident: present and potential homeowners must be more aware of state sanitation requirements; more rental housing should be available to working people and their families; and increased concern for and appreciation of outdoor beautification are desirable.

The committee recommends that county and tri-county sanitarians publish a list of sanitation requirements and make it available to homeowners and builders. Planning for beauty in landscaping, architecture, and parks, both in town and rural areas, should be encouraged. Countywide clean-up campaigns should be sponsored and encouragement given to local garden clubs, service organizations, and chambers of commerce for their efforts in these areas.

Senior citizens

Elderly residents need contact and communication with other individuals. In order to avoid unforeseen problems in their later years, younger residents should be made to realize that Social Security alone will not provide sufficient income.

The committee requests that the Golden Age organization keep in contact with nonmembers in their age group, perhaps on a "buddy system" basis.

Financial planning classes in which younger people are taught guidelines for developing a realistic savings plan for their retirement years should be established.

Health and welfare

Sound, scientifically based nutrition is necessary for people of all ages and income levels. Training for parents to help them foster development of sound lifelong attitudes towards food and weight control should begin in the child's early years.

Every person is entitled to facilities and personnel for mental health diagnosis and treatment.

Sanitation

Since more modern and efficient means of garbage disposal and air and water pollution control are necessary, the committee suggests the following:

Use compaction and cover for county garbage disposal. Increase the awareness of rural residents of disposal facilities available to them.

Control air from combustion engines and burners.

Increase the city's water supply system so that it will be sufficient for present unincorporated areas near the city and foreseeable future population, thus eliminating the need for private wells in the area.

Abundant Foods Program

Recipients of Abundant Foods need to know how to use all the types of food provided by the program. Training sessions on the use of Abundant Foods and food buying on a limited budget should be prerequisites for prospective recipients. This plan could be a cooperative effort between the Extension Service and the Welfare Department.

Food training workshops could provide younger recipients with exposure to people who enjoy food preparation. However, any work done in cooperation with the program should not involve actual food preparation at the center when food is being distributed.

Education

A need exists for enrichment of opportunities in continuing education for dropouts, noncollege-bound students still in school, and retarded children. The committee therefore recommends the following:

Offer opportunities for people no longer in school who are nonreaders or have low reading ability.

Provide courses for adults via mass media to upgrade and modernize knowledge of family living subject matter such as consumer competence, especially for individuals with low to moderate incomes.

Encourage enlargement of library facilities and increase bookmobile service.

Put emphasis on classes to fit the needs of non-

college-bound students who are still in school. Increase and provide more adequate facilities for vocational and technical courses. Probably the most efficient method of achieving these goals lies in cooperation with neighboring communities.

Encourage continuation of the Central Oregon Association for Retarded Children's Program. Publicize available programs for the parents of handicapped children.

Commend the efforts of church organizations for their continuing efforts to make this community a wholesome place to live.

Rural development

Year-round fire protection should be available in outlying areas. The county court might study this situation and attempt to enlarge areas covered by fire protection.

Youth Report

The youth committee recognizes that the problems facing youth today are often the same as those faced by youth of other generations. However, the changes brought on by the technological advances and pressures of today's society seem to place greater pressures and more stress on today's young people. Their job opportunities are limited, and many are not prepared for a work experience.

Many come from broken homes and are not prepared for the role of parents and the responsibility of marriage. Today's youth are faced with greater challenges than ever before: they have more information available and are forced to learn more to prepare them for their chosen careers. Because of the pressure, many drop behind their classmates and lose interest at an early age. Providing the incentive and tools to work with these youths so that they can become productive citizens is one of our greatest challenges.

Organizations such as 4-H club work, Boy Scouts, Campfire Girls, church youth groups, and related school activity groups are active in the community. There were as of January 1, 1969, 2,496 youth in grades 1 through 12 in the Crook County schools. The 4-H enrollment for 1967-68 was 485, or nearly 26 percent of the potential enrollment.

All of the youth groups and organizations serve an important role in developing the youth of the community. The main problem is providing an opportunity for more young people to participate in these activities.

RECOMMENDATIONS

The committee submits the following recommendations:

Youth employment and vocational training

- ◆ A job application training program for youth and adults should be offered by the employment service or by high school counselors.
- ◆ A training program for youth on the safe use and operation of equipment should be continued in central Oregon.
- ◆ School districts could provide a work-training program for youth of our community by developing cooperative agreements between local businessmen and the high school. Trainees would receive school credit for work experience.
- ◆ A study of the possibility of exchanging facilities between the high schools in central Oregon would be valuable, for it might result in a wider variety of vocational training for the youth without the expense of each high school building its own facility.

Teenage morality

- ◆ Parents need to realize that a better understanding of teenagers is their responsibility.
- ◆ Family life education in the schools is desirable if properly presented and the right material used.
- ◆ A place for youth to get together to talk, listen to records, and have snacks is needed in the community.
- ◆ The juvenile court system was discussed and it was felt that the Family Life Court with a circuit judge servicing juveniles as in the larger counties would be desirable.
- ◆ It was recommended that an advisory council for the police and juvenile court be formed. The use of lay people to council first offenders was also suggested.

Youth's role in the community

- ◆ The committee recommends that the ministerial association encourage more youth study groups in their churches.
- ◆ Youth should be encouraged to take part in school release time.
- ◆ It is recommended that the school officials and law enforcement officers work closer together to provide an educational program in the schools.
- ◆ Enforcement of laws should be more consistent. Examples: curfew, shoplifting, cigarettes.
- ◆ A program should be started in the schools to provide the students an opportunity to learn more about our local government.
- ◆ An investigation of the feasibility of a youth council to work with youths who are in troubled is advised.
- ◆ Since family background and training have the most effect on the youth of our community, family activities should be advocated.
- ◆ Youth organizations should emphasize the development of leadership.

Youth recreation

- ◆ Existing facilities should be used, with greater cooperation between the schools and the city recreation program. Volunteer help from service clubs and other interested adults would be of great value.
- ◆ Young people should be permitted to partake in planning recreational activities.
- ◆ An outdoor basketball facility which could also be used for ice and roller skating could be enjoyed by our young people.
- ◆ Commercial recreational facilities, such as miniature golf and teenage bowling leagues should be investigated.

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