FOREWORD

The land is our most valuable resource. From it comes the new wealth that sustains our economy. From the homes on the land comes the new blood that sustains our cities. Planning the wise use of the land to maintain and improve those homes and communities is the privilege and responsibility of each succeeding generation.

The Crook County agricultural planning conference of 1947 was held to exercise that privilege and responsibility. This conference was a continuation of the planned agricultural development that has characterized the county for many years. Similar sessions had been held in 1938, 1942, and 1946.

The 1947 conference originated from a request by the county agricultural planning committee that the Extension Service of OSC cooperate in a reappraisal of agricultural conditions and outlook following the close of the war. Members of the Extension Service staff of Crook County who assisted with the conference are: Anna Cordes, Crook County Home Demonstration Agent; Everett Cornett, Assistant County Agent of Crook County; Allan Hunt, Jefferson County Agent; and E. L. Woods, Crook County Agent. Cooperation of all other agencies servicing agriculture in the county also was sought.

Six committees were established several months in advance including one hundred seventy eight people representing every section of the county. Each of these committees collected data and considered all facts obtainable in preparing a report. These committee reports were presented to the one-day county-wide conference which all farm people were invited to attend, and this booklet comprises the reports as discussed and approved by the conference. They represent the considered judgment of active farmers and farm leaders counseling with Extension Service specialists in the various fields. They are published here with the thought that they may serve as a guide to the trends that are probable and desirable in development of the farming industry and rural home life in the years immediately ahead.

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E. L. Woods, County Agent and General Secretary
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Neva McCaffery, Powell Butte
Art Maxwell, Powell Butte
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Lynn Fischer, Powell Butte
John Bozarth, Powell Butte
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Mrs. John Patton, Prineville
Grain Acreage Doubles in 20 Years

The total small grains harvested for grain averaged about the same for a long period of years, running from the first World War up until 1934. From then on there was a sudden increase as shown by the acreage listed herewith:

<table>
<thead>
<tr>
<th>YEAR</th>
<th>ACRES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1934</td>
<td>5,450</td>
</tr>
<tr>
<td>1939</td>
<td>8,300</td>
</tr>
<tr>
<td>1941</td>
<td>10,575</td>
</tr>
<tr>
<td>1945</td>
<td>9,600</td>
</tr>
</tbody>
</table>

There are thus about twice as many acres in grain in the county as was the case 20 years ago.

As it stands now, barley leads in acreage with 3,200, followed by wheat at 2,500, oats 2,300, and rye 1,600 (1945 figures).

New Varieties Are Needed

There has been little change in the varieties in the county the past 20 years or more. At present, the leading varieties are Baart 38 and Federation wheat and Trebi and Hannchen barley. The straw of these varieties is excessive in some cases when grain is wanted solely for a nurse crop for clovers. In order to determine more adaptable varieties, we recommend that experimental nurseries be established in the county, including trials on new varieties. We especially see the need for a high-yielding, rust-resistant wheat for irrigated conditions.

More Storage Facilities Recommended

Under the present system of bulk handling of grain used in the county the storage facilities are inadequate. This results in shipment from the county at harvest time of grain supplies needed the following spring. This necessitates an import of grain during that season at a substantially higher price. We recommend that additional storage facilities be developed for the retention of adequate grain supplies in the county for the year's use.

Favor Slight Increase in Alsike Clover

The Alsike Clover acreage reached its top in 1939, with 2,400 acres in the county. There are now only 1,153 acres, but this is an increase, in turn, over 1943 when a low of 800 acres was reached. The committee believes that an acreage equal to that of potatoes might well be produced.

Reduction in production of Alsike clover for seed is due, in a large part, to almost complete failure to get any seed the second year. When clover was first grown here, costs were less because it was a two year crop. In most years, the second year did not give as good yields as the first year, but it still paid to cut it for the second year. It is almost impossible now. Three factors probably contribute to this situation.
1. Weeds: The committee believes that most successful time of weed elimination is from the grain crop preceding the clover seeding. We recommend that chemical spraying trials be conducted using low concentrations of 2,4-D in the spring as a selective spray. We further recommend that all possible precautions be taken to sow only seed as free as possible from troublesome weeds.

2. Fertility: We recommend that a series of well laid-out fertilizer trials be conducted in cooperation between farmers and the county agent to determine plant nutrients that may be low.

3. Bees: There has been some increase in recent years in bees brought in from the outside, but home-kept bees have been decidedly on the decrease. The committee recognizes the need for more bees to the extent of a stand to the acre, but also believes better usage of those present could be obtained through the cutting of sweet clover along fencerows and ditchbanks, since bees prefer the flowers of that plant to Alsike. Bees brought in should be here by July 1 to serve the pollination needs. We recommend that the Extension Service review and develop plans for improving the bee situation.

Ladino Seed Certification Gives Oregon Advantage

Ladino acreage declined for a time, due principally to depredation of insects, but, since these have been controlled pretty well, the acreage is now increasing. There were only 100 acres in 1942, 115 in 1943, 165 in 1944, and 300 in 1945. Acreage in 1946 was 350. During the war years, the market for Ladino was exceptionally strong, and the high price called into production numerous acres, especially in California. For more than 20 years, Oregon was the principal source for Ladino seed, but in 1945 and 1946 California produced more seed than Oregon. As the price goes down, it is likely that some of this California acreage will go out of production.

The demand in the East is mainly for certified seed, and the new uncertified product has to sell as a rule at quite a discount. Most of Oregon's seed is certified, whereas most of California's is not. As a result, the Oregon price to growers has consistently been around 25 cents higher than in California. This was not so much of an object with the price around $2.00, but if the price drops to $1.00 or less, this difference alone may keep up the acreage here and reduce it in California.

Two Areas Well Adapted to Ladino

The committee believes that especially Lone Pine and Ochoco Flat are well adapted to the production of Ladino clover seed, due to less danger of mixtures with Alsike.

It is recommended that cooperative trials under the direction of the county agent be conducted, using low concentrations of 2,4-D as a selective spray to reduce weeds from Ladino clover stands. This utilizes the known fact that Ladino clover is more tolerant to this chemical than many weeds.

Good Rotation Crop on Potato Land

Hairy vetch acreage in the county has been fairly stable for the past 5 years, hovering around the 400-acre mark. This crop offers labor and harvesting difficulties, but on some farms it has some advantages. On a farm where the farmer wishes to keep a high acreage in potatoes, it offers a way to rotate with a legume crop without growing any grain. The grain, for a potato man, is somewhat of a waste
here in that the grain does not in any way help to yield potatoes. The year of clover helps the potatoes because of the opportunity to plow down legume straw. Hairy vetch helps in the same way. It offers a crop with a very large amount of straw to turn down, increasing the organic matter in the soil to the advantage of the ensuing potato crop. The committee wishes to point out that volunteer vetch can be easily controlled through the application of a light concentration of 2,4-D spray.

Better Adapted to Ochoco Project

At times the county has grown some Austrian field pea seed, and in 1945 this totaled about 125 acres. Also, some seed peas have been grown at times. The seed peas produced on an experimental basis in 1946 seem to be, on the whole, much better adapted to the Ochoco project than to Powell Butte, perhaps due to the slightly heavier soil on the Butte. In any case, the Ochoco growers reported yields of 1,100 pounds or more, whereas yields at Powell Butte were in the main very disappointing.

It is recommended that definite experiments be carried out in the area to determine proper methods of growing and fertilizer needs as a guide in the future production of this crop.

Newer Varieties of Alfalfa Seed Favored

Alfalfa seed acreage has been increasing rather steadily and it was larger in 1945 than in any preceding year on record. Average was estimated as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>1939</td>
<td>50</td>
</tr>
<tr>
<td>1940</td>
<td>15</td>
</tr>
<tr>
<td>1942</td>
<td>70</td>
</tr>
<tr>
<td>1944</td>
<td>85</td>
</tr>
<tr>
<td>1945</td>
<td>300</td>
</tr>
<tr>
<td>1946</td>
<td>25</td>
</tr>
</tbody>
</table>

Alfalfa can be pollinated to some extent by honey bees, but wild insects do most of the pollination and are practically always responsible for cases of extremely high alfalfa yields. If this crop is to develop in the county, attention should be given to the production of the new varieties that command higher prices than common. Ranger, Atlantic, and Buffalo are all new varieties that sell at premium prices. Ladak is an old proved variety of which the state has never had an adequate supply. We, therefore, recommend standardization, for the time being at least, on Ladak and Ranger for any people interested in alfalfa seed production.

Midland Variety of Red Clover Favored

Somewhere around 191 acres of red clover are always grown in the county. This needs pollination by bees just as so alsike and Ladino. We recommend concentration upon the Midland variety, at least for the time being.
Growing Sugar Beet Seed Being Tried

A trial is being made in the county this year with sugar beets for seed. We advised growers to watch this carefully. If successful, there would be a good place in the county for a few hundred acres of these sugar beets. They have the advantage that, if they can be grown at all, the yields are rather consistent and the price is rather high. Beets for the 1947 harvest were planted a little too late for best results. It is likely that earlier planting would give higher yields than those to be obtained in 1947. If this crop is to be carried on permanently in the county, there should be a few date-of-planting trials, starting about the middle of July and planted every 10 days for about a month.

Hay Acreage Steady for 10 Years

Acreage in hay crops has been steady for more than 10 years but has declined since 1919, when the census listed 42,821 acres in the county. In 1945, the production of alfalfa hay in the county is now being sold from the county. This was formerly feed. Reasons for greater sale now are reduction in sheep numbers, reduction in feeding of both lambs and beef cattle, and, of course, the recent years of relatively high prices that have kept the hay acreage up while hay-eating animals were going down in numbers. It is also felt that, during the war years, less hired labor was necessary in growing hay than in producing most other kinds of farm products.

Study Needed on Cost of Production

With land renting at $50 per acre and with baling and piling charges at $7 per ton, it is felt that even at present prices, there is very little money to be made in hay as compared with either renting the land for potato growing, or growing the potatoes by the owner. The committee recommends that a new cost-of-production study be made with modern costs and modern methods included. They recognized that this hay should either be used locally by more diary cows or by more feeding, or else that some of the alfalfa should be plowed up. Out of the above hay figure, 11,000 acres are devoted to alfalfa, and it is the alfalfa that is mostly sold.

The committee recognizes that there is some advantage in having the land in alfalfa occasionally, even though one has no particular need for the hay himself. It puts organic matter into the soil that can be sold in the form of succeeding potato crops, and it is the best crop of all for cleaning up annual weeds.

Ladak is the leading local variety with some Grimm and some common. Stands, especially of Ladak, seem to be lasting 10 years, whereas occasionally a field of common will be very short-lived, and on wilt-infested land the same is true of Grimm.

Improvement Needed in Wild Hay Production

The committee recognizes the need for improvement in yields of the approximately 20,000 acres of wild hay meadows in the county and recommends that this be done through the seeding in of clovers and better grasses. Successful seeding will require seedbed preparation but, if successfully carried out, yields could be easily doubled.
Potato Acreage Has Shown Increase

Acreage of potatoes as grown are as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>1924</td>
<td>175</td>
</tr>
<tr>
<td>1929</td>
<td>423</td>
</tr>
<tr>
<td>1934</td>
<td>1,846</td>
</tr>
<tr>
<td>1939</td>
<td>1,760</td>
</tr>
<tr>
<td>1944</td>
<td>3,538</td>
</tr>
<tr>
<td>1945</td>
<td>4,251</td>
</tr>
<tr>
<td>1946</td>
<td>5,000</td>
</tr>
</tbody>
</table>

The potato acreage is, therefore, getting up to the point where many growers are running out of suitable land. Counting out land on livestock farms, such as wild hay meadows and necessary alfalfa, pasture, etc., it is likely that there are only about 10,000 acres in the county available for potatoes. It is not very satisfactory to grow potatoes more than once in 3 or 4 years, although following alfalfa it is sometimes satisfactory to grow them as long as 3 years at a time. When the length of the life of the stand of alfalfa is figured in, this still allows potatoes on the average of 3 or 4 years.

The committee recommends that in view of the high income from potatoes and the fact that they are really the big money crop in the county, there be no particular reduction in acreage except as needed on individual farms to bring back soil fertility. These factors should probably call for a slight reduction in the 1946 acreage down to approximately 4,000 acres.

Normal Potato Acreage 4,000 for County

It is likely that the present water supply in the county cannot be depended upon to grow any more than the present acreage and, unless there should be in some future time additional water developed here, the committee recommends that 4,000 acres should be about the normal potato acreage in the county. This year, for the first time in years, the crop materially exceeded storage facilities. With normal yields, the committee estimates that there is storage for about 3,500 acres. The recommendation is that any grower who wishes to grow potatoes should first construct adequate storage and that no potatoes at all be grown beyond the ability of the grower to put them in permanent storage. It is pointed out that without storage, the grower was faced with only the possibility of selling at digging time or pit or field storage.

Selling at digging time, when practiced by too many growers, results in depression prices for everyone, and pit or field storage is unsatisfactory on at least two counts. In the first place, the pitted potatoes sweat and are usually dark and unattractive and, in the second place, it is often impossible to get at them at the time that the grower wants to sell.
Potato Fertilizer Experiments Recommended

Quite a number of different kinds of fertilizer have had to be used during the war because it was necessary to buy whatever was available. Sometimes individual growers used as many as three or four different fertilizers on different portions of their fields in the same year. Some very good fertilizer trials were conducted by the county agent's office about 10 or 15 years ago, and fertilizers have since then been used on the basis of those trials. These mostly showed that potash was not necessary and, since then, the favorite fertilizer has been 16-20. In using numerous complete fertilizers in recent years out of necessity, it has seemed to some growers that they got good results by including a little potash. At the first opportunity, the committee recommends another set of fertilizer experiments for the county.

Need For Good Seed Potatoes On Increase

With an increasing disease problem in the area, the need for good seed will be increased but certified seed growers will require a higher price for their crop since the cost of production will also be higher.

The committee recommends that the Central Oregon Potato Growers' Association consider building adequate facilities and with the assistance of the college, or a qualified pathologist, make studies on local problems. Support to the association should be 100% enrollment.

Central Oregon Experiment Station Wanted

This committee concurs in the recommendation of the Land Use Committee requesting that a Central Oregon Experiment Station be developed through the cooperation of farmers, farm organizations, county courts of the three central Oregon counties, and the State and United States Departments of Agriculture.

It is agreed that no existing station is adequately handling the problems confronting central Oregon farmers.
REPORT OF SOILS, DRAINAGE, AND IRRIGATION COMMITTEE

Fifty-five Thousand Acres Irrigated

There are about 72,000 acres of cultivated land in Crook County, of which about 55,000 acres are under irrigation and nearly 18,000 acres used for the production of dry land crops. The irrigable acreage is further divided into separate irrigation systems. These include: 28,300 acres under private ditches, 12,000 acres in the Central Oregon Irrigation District, 4,800 in the Lone Pine District, and 8,500 acres under the Ochoco Irrigation District.

Irrigation is important and soil management basic to our agricultural production. Sound soil management and the proper use of water are usually profitable to a farm owner, and, obviously, would affect the economic position of the county's agriculture. As production is increased through the application of improved production and management practices, including irrigation and conservation farming, the returns from the land, labor, and capital will tend to increase.

Conclusions reached and the recommendations included in this report are based upon experience gained by the committee members in this and other areas, experiments carried out on these lands, and advice from representatives of the Oregon State College Extension Service.

Land Preparation For Irrigation

Nearly all irrigated lands can stand leveling to the extent of removing minor irregularities on the land surface. A few cases of extensive leveling may be practical where it would facilitate utilization of more suitable lands. Land leveling operations can be accomplished most efficiently when the soil is relatively dry and free from straw or stubble. It is difficult to secure leveling equipment to meet all needs and many farmers are not interested in renting equipment because of the additional expense to their operations. The financial assistance provided by the AAA program for land leveling is a factor that should be encouraged and used to the fullest extent; payments up to $7.50 per acre can be realized.

Water Utilization

Proper utilization of available water is essential from the standpoint of both soil and water conservation. In areas where an unlimited amount of water is available, it is recommended that more attention be directed toward water requirements of the soil and crop in order to prevent souring. In areas where the water supply is limited, this is also important from the standpoint of securing maximum value of water available.

Experiments are recommended on water application under field conditions. These should be continued with the cooperation of farmers in establishing practices which will conserve our soil and water.

The committee recommends that technical assistance be used by the Extension Service and other agencies to develop an effective and efficient method of using chemicals to combat the moss and weed problem in irrigation ditches.
The committee feels that utilization of available subterranean water should be developed through an experiment carried out by the Extension Service in cooperation with one or more farmers, to determine the economic feasibility of using this water source in parts of the Ochoco and Crooked River valleys.

The committee recommends that suitable engineering assistance be provided by the Extension Service to aid and encourage interested farmers in irrigation layouts and surface waste water management. The assistance is valuable in determining type of structures and length of runs desirable under the many variable conditions in this area.

This committee concurs with the recommendation of the Land Use Committee that the Crooked River Basin Project be developed as soon as possible.

Maintaining and Improving Soil Fertility

Soil maintenance includes protecting the soil against both wind and water erosion, and retaining or increasing its productivity. The committee believes that too often lowered yields are attributed to weather and other causes, rather than impaired fertility.

The committee recommends that proper use of commercial fertilizers be encouraged through trial demonstrations, especially in the lower Crooked River Valley. Sulphur and phosphate are now being used on leguminous crops in some parts of the county. The committee further recommends that experiments for the proper time of application should be carried out.

Many tons of potential fertilizers are being shipped out of the county in hay and grain crops sold. The committee recommends that local feeding of our crops be encouraged and by this means additional barnyard manure made available for fertilizer.

Crop rotations and legume cover crops are necessary in establishing sound soil management practices. The committee recommends that the Extension Service encourage the use of approved green manure crops on suitable land and encourage a fallow program on dry lands. It is also felt that burning of grain stubble should be discouraged since more damage is done in destruction of organic matter or available humus.

There is a considerable acreage of alkaline and swampy lands in the county that could be reclaimed into highly productive soils through drainage and proper soil treatment. The committee recommends that appropriate public agencies be requested to establish demonstrations and furnish information on the proper treatment of reclaiming these alkaline soils. Reports indicate that this type of program has been successfully carried out in Idaho.

Not all of the answers are known to the many questions involved in maintaining soil fertility. Research and experience, however, have developed a long list of sound practices, many of which are directly concerned with soil type or condition. The committee recommends that all reasonable effort be expended toward the completion of a county soils analysis. County soil maps will prove to be of the greatest practical value to farmers in planning an effective soils and water management program.
Weed Infestation Serious

In viewing the weed problem, the committee realizes the seriousness of the present weed infestations of the county. During the war years, weed acreages increased greatly in the irrigated areas, due in a large part to the heavy use of land for crops, until at the present time the committee estimates the following are thriving in the county:

- Whitetop............. 2,000 acres
- Morning glory........ 1,200 acres
- Canada thistle........ 150 acres
- Russian knapweed..... 125 acres

We view this with alarm inasmuch as the county's lands must also serve agriculturally for generations to come. No longer is it possible to deplete the soils of an acre and move to virgin lands "on west."

Unless measures are taken immediately to curb this rapid spread of weeds and start work toward eradication, the committee believes that large areas of now fertile cropland will revert to weed pastures, greatly lowering the wealth of the county.

However, with the development of the new hormone-type weed killers, the committee believes control of large weed areas is possible where never before feasible. We wish to point out, though, that these weed-killers are not perfect and retreatments will be necessary in many cases to produce eradication.

Weed Control Recommendations

With the foregoing as a basis, the committee makes the following recommendations:

1. We believe that in order to start a successful weed control program, weed control districts should be formed on a community basis, separate districts being set-up for the irrigated areas.

2. In order to carry out the provision of the weed control district law, it will be necessary to have equipment available for carrying out control measures. We recommend that such equipment be obtained for farmers' use by the county and be supervised by the county agent.

3. We recommend that the Extension Service, in cooperation with the farm organizations, carry out an educational program on weed identification and control measures. We believe that a number of weed identification boards prepared and displayed in prominent places throughout the county would aid greatly in weed identification.

4. To reduce livestock losses due to poisoning from wild parsnip (water hemlock), we wish to point out the high degree of effectiveness that 2,4-D has shown in killing that plant. Results from the use of 2,4-D dust have been outstanding.
5. We recommend that an intensive weed control program be developed on the irrigation canals and laterals. We feel that otherwise a weed control program in the fields would be futile.

6. We believe that a few demonstrations of the use of 2,4-D as a selective weed killer for the control of annual weeds in grain should be conducted, through the cooperation of farmers and the Extension Service. Likewise, we believe that trials should be conducted on the use of chemicals as a selective spray for the controlling of annual weeds in Ladino clover.

7. We urge that all farmers make every effort to seed only the best and most weed-free seed available. We believe that the seedlings of clean seed will pay huge dividends in the quality of seed produced from such seedlings, as well as increasing production due to less weed competition with the growing crop.

REPORT OF THE LAND USE COMMITTEE

Cropland Only 7% of Farm Land

Crock county contains 1,907,200 acres of land. Only forty-three percent of the land in the county is in farms, about three-fourths of which are operated by owners. Less than seven percent of the land in farms is cropland, the remainder being pasture and waste. The acreage of cropland has remained relatively stable for the last several decades. Fifty-seven percent of the county area is not included in farms, most of it being public land owned either by the Federal or State government.

Stock Water Development Needed on Range Land

Since a high proportion of the agricultural resources of Crook County is in the form of grazing land, maximum utilization of such land, with due regard to its long-time productive capacity and its water-producing capacity for the irrigated sections of the county, is important. Additional stock water developments and fencing, particularly on public lands, would greatly facilitate better utilization of such land. This committee recommends that public agencies give more attention to water and fencing requirements on public range land.

Oppose Reducing Grazing Permits

This committee recognizes that it has been a long-time policy for the National Forest Service to reduce grazing permits upon the transfer in ownership of ranch units. It is believed that permits have been reduced in some instances below the numbers that could adequately be carried on the range available. The committee recommends, therefore, that the policy of reducing grazing permits upon the transfer of ranch properties be discontinued except where it can be demonstrated clearly that such reduction is justified for watershed or forage restoration.

This committee recommends that this conference go on record as favoring the manufacture of timber products in this area and that the Forest Service in sales require that timber for sale be processed locally.
In view of organizational changes in the administration of Taylor Grazing Lands from the Grazing Service to the Bureau of Land Management, this committee wishes to go on record as favoring the continuation of policies that will promote the maximum long-time utilization of the range land, will give maximum stability to ranch operations using public range lands, and that will provide maximum development of such lands with respect to water, roads, fencing, and forage production.

Many thousands of acres of public land in Oregon have been set aside as game reserves or primitive areas. Although this committee recognizes that recreation and the use of land for recreational purposes are important both from the social and economic point of view, it believes that the use of land for recreation is not necessarily competitive with livestock grazing and therefore, recommends that no further reservations of public land be made for that purpose.

Maintaining Soil Fertility

One of the principal problems in the utilization of cropland in Crook County is the maintenance of fertility. In general, maintenance of fertility will require the use of proper crop rotations, feeding of more livestock, proper use of irrigation water, and the use of commercial fertilizers where necessary.

One of the most significant trends in the use of cropland in the county during the war years is the increase in potato acreage. The committee believes that for potato production to continue on a long-time basis in the county, the crop must be grown in proper rotation with pasture, hay, seed, and grain crops. It is recommended that not over one-fourth of the cropland on any one farm be planted to potatoes.

At the present time a high percentage of the hay and grain raised in the county is sold as a cash crop and shipped out of the area. The committee believes that the maintenance of soil fertility and consequently the attainment of long-time best use of the cropland requires that all feed produced in the county be fed in the county. According to present prices of commercial fertilizers, the fertilizer value of the manure from one ton of alfalfa hay is worth about $9.00. To keep that fertility on the farm is believed to be good business in the long run.

Much feed and pasture annually goes to waste on farms in Crook County. This committee recommends that considerable expansion be made in farm sheep to utilize feed and pasture that otherwise would go to waste. The committee also believes that some expansion in the dairy industry is justified on the grounds that the utilization of home-grown feed would go far toward maintenance of the productive capacity of the farm. The outlook seems good for expanding markets for milk and milk products with the increase in the creamery industry in Central Oregon.

Better Utilization of Irrigation Water

In order to attain maximum conservation of soil fertility and at the same time maximum crop yields, proper utilization of irrigation water is necessary. Much improvement can be made in the location and construction of farm ditches and in leveling of fields. Technical assistance to help farmers plan and lay out such work is badly needed in the county. Community ownership of floats and other equipment would facilitate this type of improvement. The committee recommends that increased attention be farmers, by the Extension Service and by other agencies be given to improvement in land leveling and farm ditch layout.
Irrigation of New Land Favored

Although the acreage of improved land in Crook County has been relatively stable for many years, there is opportunity for the development of several thousand additional acres of cropland in the county through irrigation. In view of the fact that the population of Oregon has increased about 25 percent in the last decade and the demand for new farms and for employment opportunities on farms is high at the present time, the committee believes that efforts should be made to obtain additional irrigation development as rapidly as is feasible to do so. Especially is this development justified through the needs and desires of war veterans for suitable farming opportunities.

Proposals have been made for the additional storage of water for the Ochoco Project that would serve approximately 11,000 acres. About 11,500 acres of this total is now in farms; the remainder or 2,500 acres would be new farm development. Additional water supply to serve 8,800 acres of the Crooked River Project has been proposed, of which 5,100 acres is now in farms and 3,700 acres would be for new farms. An additional 25,000 acres, none of which is now farmed, could be developed in the southwestern part of the county.

Surveys and plans for part of this development have been made. For much of it, however, additional surveys and cost estimates are needed. This committee recommends that studies for the further development work be started as early as seems practical, in view of the costs of such projects in relation to the benefits that may be expected. The committee also believes that study should be given to the possibility for shifting the use of irrigation water from land that is now submarginal to more productive land.

More Farm Labor Housing Needed

About one-third of the production expenses on Crook County farms is for labor. The assurance of an adequate supply of competent labor would do much to stabilize the agriculture of the county. One of the major difficulties in getting and keeping good labor is the inadequacy of housing for workers on farms. The committee believes that it would be good business for farmers to provide adequate housing for labor on their own farms.

In addition to better housing on farms, the county needs a camp for transient workers. The committee does not believe that a permanent central housing project for workers is desirable, but recommends that a rest camp be provided where workers may find comfortable quarters while awaiting assignments to farms.

Specialty Crops Offer Promise

The committee believes that promising possibilities exist in Crook County for the production of specialty crops that would be profitable and would help to diversify the county's agriculture. It is recommended that further investigation be made of the production of sugar beets in the county and of the establishment of a sugar refinery in Central Oregon. It is recommended that investigations be made on the production of small fruits, strawberry planting stock, and forage seed crops.
More Emphasis on Individual Farm Problems

The Land Use Committee recognizes the excellent record of the Extension Service through county agent work in the production of the huge food supplies marketed during the war time years. However, with the return of more normal conditions, it is recommended the trend in county agent work be away from directing the federal agricultural programs and toward a closer contact with the problems of the individual farmer.

Central Oregon Experiment Station Favored

The committee recognizes the urgent need for a Central Oregon Experiment Station and recommends that a committee be formed to cooperate with like committees from Deschutes and Jefferson counties in obtaining enabling legislation. This committee recognizes that no such existing station is located under similar conditions nor does any existing station work to any extent on the principal problems of this area, such as potato diseases and clover seed production.

Influx of Tourists Predicted

This committee also recognizes the benefits that could be derived from proper attention directed toward the youth and tourist crops of the community. We believe that most important is our crop of boys and girls, who should be encouraged and guided through 4-H training. Special attention should be directed toward beef cattle projects.

Another crop which is of growing importance to the economic welfare of this community is the crop of tourists. With the completion of the highway to the east, we are on the eve of an influx of tourists. We believe that certain preparations should be made to take care of tourist trade, such as improvement or enlargement of hotel, restaurant, and camp facilities. This will reflect back in sales of farm produce and in tax relief. Since we are in an area where the finest beef and potatoes are raised, we believe that these items should be featured in the local eating places.

Ending Subsidies Recommended

This committee recommends that government subsidies on all farm produce be discontinued as soon as possible and concurs with the view that continuance of such support would cause surplus of many farm crops, with subsequent huge loss to the government and a consequent return of controls on production.
REPORT OF LIVESTOCK COMMITTEE

More Cattle, Fewer Sheep

The range livestock industry of Crook County, as it entered the post-war period following World War II, had the greatest number of range cattle in the history of the county since the first World War, but by far the smallest number of sheep during the same period. On the basis of animal units (five sheep equaling one cow), the number was fairly constant during that entire period, with the exception of a definite drop in 1940 after a series of drought years, but building up to nearly normal by 1945.

The change from sheep to cattle is regarded by the committee as being due to two main reasons. 1. The cost of production of range sheep proving uneconomical due to high prices of labor and feed, and 2. To a shortage of suitable summer pasture for sheep. Especially were the changes evident in the 1940-1945 period, during which range cow numbers increased 31% while sheep numbers were decreasing 56%.

The relationship of livestock numbers to available feed supplies has remained fairly constant, as shown in the following tables prepared by the Oregon State College Extension Service.

<table>
<thead>
<tr>
<th>LIVESTOCK NUMBERS</th>
<th>1920</th>
<th>1930</th>
<th>1935</th>
<th>1940</th>
<th>1945</th>
</tr>
</thead>
<tbody>
<tr>
<td>All cattle</td>
<td>36,249</td>
<td>21,244</td>
<td>31,830</td>
<td>27,409</td>
<td>38,845</td>
</tr>
<tr>
<td>Beef cows</td>
<td>13,826</td>
<td>7,409</td>
<td>10,164</td>
<td>11,108</td>
<td>17,512</td>
</tr>
<tr>
<td>Dairy cows</td>
<td>1,074</td>
<td>1,842</td>
<td>2,284</td>
<td>2,218</td>
<td>1,701</td>
</tr>
<tr>
<td>Hogs</td>
<td>1,178</td>
<td>2,284</td>
<td>1,179</td>
<td>1,465</td>
<td>1,825</td>
</tr>
<tr>
<td>Sheep</td>
<td>50,908</td>
<td>75,034</td>
<td>67,431</td>
<td>44,172</td>
<td>19,405</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FEED ACRES</th>
<th>1920</th>
<th>1930</th>
<th>1935</th>
<th>1940</th>
<th>1945</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alfalfa hay</td>
<td>11,539</td>
<td>11,621</td>
<td>5,889</td>
<td>12,730</td>
<td>11,870</td>
</tr>
<tr>
<td>Grass hay</td>
<td>20,079</td>
<td>8,640</td>
<td>13,394</td>
<td>9,373</td>
<td>15,152</td>
</tr>
<tr>
<td>Grass hay</td>
<td>4,976</td>
<td>9,227</td>
<td>8,874</td>
<td>3,948</td>
<td>3,275</td>
</tr>
<tr>
<td>Small grain harvested</td>
<td>5,830</td>
<td>6,405</td>
<td>5,450</td>
<td>8,072</td>
<td>10,087</td>
</tr>
</tbody>
</table>
Livestock Prices Expected to Remain Favorable

The committee feels that the prices for livestock and livestock products will remain favorable for some time to come, although prices will probably drop to a lower level. However, it is realized that one of the big questions as to the future concerns strikes and a general stabilization of production.

In view of these existing conditions, the committee makes the following recommendations:

1. It is necessary that proper balance be maintained between livestock numbers and available feed, both range grasses and winter hay supplies. We recognize a reasonable carryover of hay during normal years as a desirable practice. By so doing, the operator will not be forced into the position of having either to sell stock under unfavorable market conditions or buy at a high price, should there be a severe winter or drought.

The committee believes in general that the average winter hay supplies are ample for local livestock but feels that there is not sufficient quantity to put more stock on feed as long as present demands for outshipment of hay from the area continue. Moreover, it should be emphasized that, with the hay shipped out, goes soil fertility which would cost approximately $9.00 per ton of hay sold if it were to be purchased in the form of commercial fertilizers at present prices.

Range Development Program Recommended

2. The controlling factor in livestock production in Crook County at present is undoubtedly carrying capacity of range lands. The committee recognizes that the past several years have been excellent from the standpoint of range feed production and wishes to point out that, even during these years, pastures were fully utilized. Should less favorable conditions arise, a shortage of range feed might occur that could impair the entire livestock industry of the county.

However, the committee believes that if ranges were fully developed, even during less favorable times, sufficient range feed could be produced to prevent over utilization. Therefore, the committee recommends the following program:

a. Proper range management should be practiced. Overuse of many pastures today is resulting in brush and juniper, as well as poor grasses, taking the place of many good types of grass. Deferred and rotational grazing are recognized as good management practice.

b. Development of stock water facilities, including wells, ponds, and springs, is recognized as development of one of the greatest assets possible for proper range use. Such facilities make for a better distribution over the grazing area, thus enabling a more even utilization of forage.
c. The grazing capacity of many lands can be multiplied through the clearing of sagebrush and scrub juniper and reseeding to adapted grasses.

The committee recommends that a brush clearing practice be included in the AAA program, together with reseeding, to increase pasture yields. Reseeding should be completed before payment is allowed.

d. Range fencing is recognized as a means of improving carrying capacity through better control of livestock and better utilization.

It is recommended that an AAA fencing practice be included to allow the use of old wire, provided a minimum of four wires are used on new posts. The committee believes that much available old wire is sufficiently sound to give many years of service and that the removal of old wire from abandoned fences removes a livestock hazard from the range lands.

Continuation of Taylor Grazing Service Favored

3. The committee feels that the Taylor Grazing Service has been of great importance in improving range conditions on lands controlled by it in the county. A continuation of Taylor Grazing and National Forest lands for 5 years in advance.

Coyote Menace Increases

4. The coyote menace is recognized as increasing in the county, with packs of these predators running in some up-county areas, in addition to the wide-spread depredations of individual animals. To combat this menace, the committee recommends that a combination of the bounty and government trapper system be put in effect through the cooperation of the County Court, the State, and the Fish and Wildlife Service of the United States Government.

It is recommended that the losses in game animals and birds in the county be brought to the attention of the State Game Commission in order to enlist its support in predator control.

Farm Sheep Outlook Promising

5. The committee believes the outlook for farm sheep to be especially promising at the present time and highly commends the cooperative marketing set-up operating in the irrigated sections of the county.
REPORT OF THE FARM HOME AND RURAL LIFE COMMITTEE

Better Rural Living is Good

Making a success of rural living depends as much on a good home and a progressive community as it does on the technical development of the rural farm or ranch. In order to achieve this, long time planning goals have been formulated to develop these standards.

A continuous effort to improve rural living and community facilities is still the ultimate goal of Crook County families. With this in view the following recommendations have been made as desirable for Crook County.

Much Housing Information Needed

In view of the fact that construction and repair of housing units was difficult or impossible during the war, there is at present a considerable housing shortage and as a result many people are interested in building new houses or in remodeling and repairing old ones. So many advances in construction and equipment have been made as a result of findings in war industries and research that it is felt this information should be made available for home builders. We recommend that the following information be presented:

1. House plans--ways of arranging work areas and living rooms for greatest convenience, especially planning of storage space. Make full use of bulletin from Oregon State College, "Plans for Oregon Farm and Acreage Homes", available for loan at Extension office.

2. House structure--information on selection and use of new construction materials for greatest economy, beauty, and insulating properties.

3. Home freezing units--information on selection of factory-made units and on construction of units made at home.

4. Running water campaign for greater number of water systems, both hot and cold, in rural homes, in view of the fact that census figures show that in 1945 only about 269 rural homes had running water in the house as opposed to 39% that did not.

5. Indoor plumbing--wide dissemination of information on construction of septic tanks suitable for indoor toilets, by means of distribution of bulletins and demonstrations.

6. Electricity--as soon as equipment is available, that lines be extended all over the county.

7. Heating systems--information be given to farm families on construction of modern heating systems, including a practicable method of radiant heating.

8. Wall finishes--types of wall finishes that may be used, including comparative costs, insulation values and appearance.
9. Fire hazards—elimination of fire hazards in construction, shown through demonstrations and discussions.

10. Insulation materials—comparative insulating values and costs.

11. Soft wood floors—methods of finishing that will be durable, practical and attractive.

12. Selection and care of linoleum type floor coverings most satisfactory in areas where there is much dust and sand.

Furnishing and Equipping Houses

1. Demonstrations related to house furnishings that will help make the home more attractive and comfortable for minimum expense. These should include:
   a. Use of color as applied to home interiors.
   b. Window curtains—new and familiar fabrics, styles, and methods of making.
   c. Slip covers—measuring, selection of fabrics and making.
   d. Renovation of furniture, including wood refinishes.

2. Landscaping—basic ideas for use in planning home gardens and decorative plantings about the home in community or county demonstrations.

3. Electrical equipment and appliances—information of selection and use, especially such equipment as washing machines, vacuum cleaners, refrigerators, roasters, stoves, dish washers, mixers, and mangles.

4. Safety—demonstrations of what to do in case fire strikes farm homes and buildings, including use of fire extinguishers.

More Information on Clothing Needed:

Clothing supplies have been much depleted during wartime and post-war shortages. Now is an opportune time to place much information before the consumer concerning clothing buymanship and construction, and it is also the time to make consumers' wishes known to the manufacturer. With these points in mind the committee makes the following recommendations:

1. That women make known their desire for greater standardization of sizes by discussion with retailers, especially of such garments as children's clothing, shoes, ready-to-wear dresses and lingerie.

2. That the Extension Service present information on the new fabrics (plastics and synthetics) their selection, use and care.

3. That demonstrations and practice under supervision be made available to the women of the county on clothing construction with the purpose in mind of improving styles of home-made clothing, since home construction of clothing effects considerable saving. It is thought by the committee that more home sewing will be done as materials become available.

4. That the women of the county be given an opportunity to study color as applied to clothing selection for the individual.
Community Center Favored

The only recreational facilities in Crook County are gymnasiums and theaters. Since the gymnasiums are in use only during the school year and by those in school, the committee recommends:

1. That a community center be erected on land owned by the city in the proposed park area. In connection with this center provide:
   a. place for community meetings.
   b. playground.
   c. swimming pool.
   d. tennis courts.
   e. skating rink.

2. That leader training for family recreation in the community be conducted in a series of county meetings, annually.

Home Gardens Encouraged

The 1945 census shows that farm products produced for garden purposes were worth $315.00 on an average per family. Present prices will considerably increase the value of a home garden. The committee recommends that:

1. Raising of more home gardens be encouraged as a means to supplement the family income and insure a variety of good meals for the family throughout the year.

2. A community cannery be established in Crook County.

3. There be closer relations between home and 4-H food projects and practices.

4. A study be made of kinds of small fruits and berries that are suitable to Crook County and encourage the development and raising of such.

More Health Facilities Needed

A survey of health conditions in the county shows that the following conditions exist:

1. There are doctors and dentists to serve a population of 6100.

2. There is only one hospital, which is inadequate in size to take care of the large number of cases.

The committee recommends that:

1. More adequate hospital and clinic facilities be provided.

2. More support be given to the development of the health association.

3. More health examinations be given in the schools.

4. There be a full-time school nurse. At present there is a tri-county nurse who spends two days a week in the county checking and visiting health cases.
5. A greater use of Blue Cross or similar group health insurance be encouraged through an educational program on rural health problems.

6. Sanitation in rural and urban areas be improved.

7. Adequate local testing equipment be made available for testing home water supplies and until that time that families avail themselves of the free service for testing water handled through the health service.

8. Provisions be made for care of aged people through nursing home and hospital.

9. Provision be made for regular county-wide testing of milk cows for Bang's disease and T.B.

Enlarging 4-H Club Program Favored

In Crook County there are 1,111 boys and girls between the ages of 9 and 21. Of this number there were 399 enrolled in the 4-H program in 1945, with 29 active 4-H leaders. Since there is a need for something to keep young minds and hands busy and provide wholesome recreation for the youth, it is important that the 4-H Club program in this county be enlarged. The committee makes the following recommendations.

1. That a more active leader's association be organized, which should hold regular meetings.

2. That a leader training school be held to give assistance.

3. That more information be given to parents about the 4-H work through news letters and radio programs.

4. That the excellent summer camp be continued, with capable leaders assisting with the program and chaperoning both boys' and girls' groups.

5. That the annual 4-H Fair be enlarged and improved wherever possible.

6. That provision be made for a combined county and city recreation program. That there be further development of this program by a committee representing rural, city, and urban population.