

1946

The
Agricultural Program
of
Jefferson County

As adopted at
The 1946 Farm Program Conference

Containing Reports of Committees
Submitted and Adopted
February 15, 1946

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FOREWORD

The Jefferson county agricultural program conference of 1946 was a continuation of the planned agricultural development that has characterized the farming activities for many years. An earlier planning conference that contributed to this development was held in February of 1938. Many committee meetings to deal with specific problems were also held in the intervening years.

The 1946 conference had its origin a year earlier when the Land Use committee agreed that such a conference should be held as soon as practical after the war to deal with the problems of reconversion to peace-time farming at the same time as the changing of the central area of the county from dry land to an irrigated type of agriculture. The O. S. C. Extension Service agreed to cooperate in the program through furnishing the counsel of specialists and the acting of the county agent as general secretary.

At an initial meeting held late in the fall of 1945 plans for the conference were made with seven committees being set up to make studies and formulate reports to be presented at the conference. All committees spent much time on their respective work, obtaining all information possible, sifting the more valuable material and formulating their reports after a series of meetings..

This bulletin contains the reports of these committees adopted February 15, 1946, at a general meeting known as the Jefferson county agricultural program conference and forms a guide for the future development of Jefferson county agriculture.

The printing of this bulletin was made possible through the financial cooperation of the Jefferson county court and the Extension Service.

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Jefferson County Farm Program

Report and Recommendations of LAND USE PLANNING COMMITTEE

Land use in Jefferson county has in the past been based principally on two agricultural enterprises, dryland wheat farming and range livestock production. Now with 50,000 acres of the better agricultural lands in the heart of the county expected to be irrigated by the spring of 1948 the pattern will be changing. However, the committee in preparing these recommendations has taken the following factors into consideration:

1. Following a severe drought period in the early nineteen thirties the Resettlement Administration purchased over 100,000 acres in the county of which approximately 40,000 acres were at that time or had been cropland. These lands representing nearly 10 per cent of the appraised valuation of the county were removed from the tax rolls and combined into a project used only for grazing purposes on a permit basis.

2. Trading of stumpage to private interests for an unspecified acreage of cut-over timber lands by the United States Forest Service of the Department of Agriculture has further reduced the tax base of the county and increased the tax burden on the remaining land owners.

3. Agriculture together with all other industries is entering a post-war period during which the transition to peace time production may be expected to be much more difficult than the gearing to the war food effort.

4. The construction on the North Unit of the Deschutes Irrigation Project has proceeded to the point where initial water deliveries on some sixteen thousand acres are expected during the early summer of 1946 and completion of the 50,000 acre unit might be anticipated during 1947 under favorable conditions. This will greatly increase the population of the county and multiply the county farm income but the committee wishes to point out that in any such development the revenue from taxes must also be greatly increased to cover the additional governmental functions, including roads, schools, and other facilities.

The committee has also considered trends in the agriculture of the county as shown in the following tabulations of data compiled by the Oregon State College Extension Service from U. S. Census reports.

LAND USE: Trends by Major Uses

ITEM	1925	1930	1935	1940	1945
1. Total Land Area	1,148,160	same	same	same	same
2. Land not in Farms	656,970	527,593	556,283	450,928	590,273
3. Total Land in Farms	491,190	620,567	591,877	697,232	557,887
3a Crop Land	123,799	113,982	110,967	81,619	
3b Pasture Land*	362,104	498,920	464,888		
3c Woodland not Pasture	76	1,830	159	615,613	
3d Other Land in Farms	5,211	5,835	15,863		

*Includes plowable pasture land.

TRENDS IN FARM NUMBERS AND ACREAGES

Year	No. Farms	Av. Total A. per farm	Imp'd As per farm
1920 -----	572	770.8	232.2
1925 -----	463	1,060.9	267.3
1930 -----	335	1,852.4	267.9
1935 -----	323	1,832.4	456.3
1940 -----	227	3,071.5	384.6
1945 -----	275	2,028.7	

NOTE—Jefferson County was organized from part of Crook in 1915

FARM MARKETINGS

	1926-1930 Average	1936-1940 Average	1942
Average cash farm income for county	\$2,177,000	\$997,000	\$1,646,000
Percent from sale of animal products	35.4%	48.3%	45.1%
Livestock -----	31.4%	42.5%	38.0%
Dairy Products -----	3.5%	3.5%	4.1%
Misc. Animal Products -----	.8%	2.3%	3.0%
Percent for Sale of Crop Products	64.6%	51.7%	54.9%
Grain and Hay -----	64.2%	49.8%	53.5%
Other -----	.0%	1.9%	1.4%

Since 1942 the committee estimates the average yearly farm income for the county to have risen to well over \$2,000,000 due to the intensified war food production during excellent crop years and a high price level for products marketed.

With the foregoing as a basis the committee makes the following recommendations.

1. **Lands purchased by the Resettlement Administration**, now controlled by the Social Conservation Service as a Grazing Project, which are **suitable for irrigated farming** and which lie under the canals of the North Unit of the Deschutes Irrigation Project should by the passage of effective legislation be made available for return to private ownership, preferably to war veterans, for homes and agricultural production. However, we recognize a possible shortage of irrigation waters and believe the water needs of better lands lower on the project should be satisfied prior to deliveries on these lands. The minimum size of such units, we believe, should not be less than 80 irrigated acres.

2. **Legislation should be passed** which would result in return of all other lands purchased by the Resettlement Administration to

private ownership. Areas suitable for dry-land farming should be made into units, with a minimum size of 2,000 acres of which at least one-half be suited to profitable cultivation, the balance to be used for pasture. The remaining areas should go into private ownership for grazing purposes only.

The accomplishments of such action would be (1) Additional homes, (2) Private management of pastures to fit the individual livestock operation, and (3) Added property on the tax rolls to aid in bearing the tax burden..

3. To compensate for loss of tax revenues suffered by the county government due to the trading of stumpage to private interests for legal title to properties lying within the boundaries of the National Forests by the Forest Service of the United States Department of Agriculture, we approve of pending legislation which would require payment of 2 per cent of the appraised value of

such lands yearly to county funds by the Federal government.

4. With regard to the established fact that lands suitable and available for irrigation within the boundaries of the Jefferson Water Conservancy District are in excess of water facilities now being developed, and in recognition of possible water shortages during certain "dry" years on the 50,000 acre unit under construction we recommend the establishment of the proposed **dam at Benham Falls** to furnish additional irrigation waters to the North Unit. We believe that **studies should be undertaken immediately to prove the feasibility of this addition** to the project and promote its development.

5. We recognize that the new settlers on the irrigation project lands will greatly influence the future development of Jefferson county. Since many of the "ways of life" of people of Japanese descent are of different nature than those of the normal white population we urge that all legitimate means should be emphasized in discouraging those of Japanese ancestry from coming into the project as laborers, tenants, or owners.

We wish to point out that the successful entrance of a single laborer will result in the coming of additional laborers, then farm tenancy, and finally farm ownership.

6. The construction of the irrigation project and the intensified cropping program thereon may be expected to greatly increase the labor requirements of the county, both on the full-time basis and of a seasonal nature. To satisfy these demands we recommend that every effort should be made to use only local and normal white help.

We believe that with the transition to peacetime production many persons formerly working as farm laborers will return to that occupation, thus greatly enlarging the number of normal white workers available.

7. To facilitate proper development of many individual farm units on the Reclamation Project we recognize the need for suitable credit sources, both prior to and following initial water deliveries. We therefore recommend **that development loans should be made available** through local banks, other credit organizations, and governmental agencies.

8. In the development of the project added and **better roads**, and other facilities by the county government are necessarily a part. To properly finance these functions we believe **bonds should be sold with an extended period of time for repayment**. This would lighten the tax burden until future years when the completed project more easily could stand the added costs.

9. We recognize that in the construction of the irrigation project owners of individual farm units are sometimes in disagreement with plans of the Bureau of Reclamation regarding ditches, structures, and other facilities affecting their units. In order that such "**grievances**" might be settled on **an impartial business basis** we recommend that a **committee of three members be formed to act in a liaison capacity** between the farmer and the Construction Division of the Bureau.

Membership of the committee should consist of the Assistant County Agent, the Project manager and one farmer member to be appointed.

10. To aid in the proper preparation of lands for irrigation, including land-levelling and establishment of suitable structures, we urge that incentive payments be made available to farmers of Jefferson county under provisions of the Soil Conservation and Domestic Allotment Act by the State AAA Committee. We believe that funds expended would be far more than justified by the soil and water conservation practices performed.

11. Shortage of housing and of

materials for the construction of additional facilities are recognized as limiting factors in rapid development of the project. To aid in alleviating this condition we believe that excess buildings of the Madras Army Air Field should, as soon as possible, be made available to local people through sale by bids on an individual item basis.

12. We recommend that the excess irrigable lands in the Madras Army Air Field be made available to purchase at the appraised values by returning war veterans. The minimum size of unit, we believe should not be less than 80 acres. The estimated 1040 such irrigable acres would permit the establishment of thirteen 80 acre units.

13. As a matter of more stable land use we believe that the individual farming operation should be of a balanced diversified type. We wish to point out that this would (1) reduce the hardships due to the failure of any one crop, (2) minimize the effect of price slumps of any commodity (3) maintain a more even distribution of labor throughout the year, and (4) permit a rotation of crops on the soils to maintain fertility.

While on occasions exceedingly high returns are received from certain speciality crops, we recognize the element of chance is very great and recommend that these crops only be grown in amounts where failure will not undermine the financial condition of the farming unit.

14. In order that the fertility of our soils may be retained we believe that as **nearly as possible all feeds produced should be fed locally**. We realize that this would necessitate the development of a substantial livestock feeding program, but believe the excellent marketing and feeding conditions would well warrant it.

15. We believe that adequate farm records should be kept to

show the cost of each year's operation and to prove the expense of total farm development. We wish to point out that on the irrigation project lands as well as for yearly income tax purposes these records could be used as proof against low appraised values should the owner at some future time desire to sell his farm.

16. As a necessary part of the irrigation project development the need for construction of additional roads by the County Court is an established fact. We recommend **these roads be laid out as soon as possible** in order that the necessary road crossings over the irrigation system laterals be constructed simultaneously with the ditches.

17. We approve of the proposal of dividing the county into road districts. Under this law the taxes collected for road maintenance and construction in any one district would be expended only in that district. This would allow different rates of taxation for roads in the various districts depending upon their needs.

18. As a means of constructing better all-weather roads we recommend that when funds are available the county purchase a portable rock crusher. Following that time, we further propose that crushed rock be made available to farmers for farm use at cost.

19. As a means of better training the farmers and homemakers of the future we believe **all possible emphasis should be placed on the 4-H Club program conducted by the Extension Service of Oregon State college** and on the manual training and home economics classes taught in the schools.

We feel that development of this interest in youth will retain many outstanding young people in rural life that might otherwise migrate to the cities. The leadership developed together with the added knowledge should prove an invaluable asset in future living.

Report and Recommendations of FARM CROPS PLANNING COMMITTEE

The agricultural cropping history of Jefferson county has been based primarily on two crops, dry land wheat for grain, and alfalfa together with grains, for hay. These systems have been relatively independent of each other with the central area producing almost entirely wheat and the eastern part of the county being devoted almost exclusively to the production of hay for winter livestock feed.

With the coming of irrigation on 50,000 acres of the wheat lands in the central section of the county the pattern will be completely changed, and the committee has considered the future cropping of this and of the other areas and the expected relation between them.

In planning of the cropping of the irrigation project lands, the basis for the program is an expected delivery of 2.5 acre feet of water for each acre irrigated.

It is realized however this amount is an estimate and may be revised when actual data based upon field measurements under operation have been compiled.

Low Organic Matter Content

The committee has also recognized that soils on the project area are generally somewhat low in organic matter and will require building up to maintain an intensive cropping type of agriculture. It should be noted that some infestations of dry land wire worms are present that might be troublesome to certain crops. However, these might be expected to disappear within two years after irrigation starts.

The following data compiled, by the Extension Service of Oregon State College showing trends in the county's agriculture was considered by the committee especially in relation to future trends of crop lands not included in the reclamation project.

TABLE I—Jefferson County Cropland Trends

	1919	1929	1939	1944
Total Cropland -----	127,000	114,000	88,000	92,000
Small grains -----	41.8%	41.3%	24.4%	38.7%
Hay crops -----	22.4%	10.6%	6.3%	17.6%
Other crops -----	.1%	.0%	.1%	.2%
Fallow, Edle, Etc. -----	33.3%	48.1%	69.2%	43.5%

TABLE II—Harvested Crop Acreage*

	1919	1924	1929	1934	1939	1945†
Total small grains** ----	52,891	28,878	47,076	5,118	19,080	35,000
Wheat -----	42,201	28,422	45,542	4,807	18,325	33,000
Rye -----	9,311	194	852	179	265	1,400
Barley -----	474	149	520	23	419	900
Oats -----	731	113	1 62	109	58	200
Other grains -----	562	13	22	2	13	20
Total Hay Crops** ----	28,587	13,979	12,113	6,400	5,440	14,250
Alfalfa -----	2,233	2,277	4,544	1,944	2,067	3,000
Grain Hay -----	25,015	11,494	7,199	4,267	3,255	11,000
Other Hays -----	1,339	208	370	189	96	250

*Acreages of some crops maybe partly duplicated in some areas when used for more than one purpose.

*Compiled from U. S. Census reports except as noted.

†Estimated acreages, subject to revision, used only to show trends.

These data indicate a great variation of harvested acreages due principally to crop failure from drought. With the coming of irrigation on the 50,000 acre unit a high degree of stabilization may be expected on those lands but continued uncertainties due to weather must be recognized for other areas.

It should be noted that the large decrease of croplands as shown in 1939 data resulted largely from purchases by the Resettlement Administration in the late nineteen thirties and not to natural trends alone.

* * *

In view of these existing conditions our committee makes the following recommendations.

1. Balanced Diversified Agriculture. A balanced diversified type of agriculture should be followed on irrigation project land to (1) minimize the effect of losses on any one crop and make more stable farm income (2) better distribute the labor throughout the year, (3) better maintain soil fertility, (4) balance high with low water requirement crops to aid in preventing water shortages.

When the 50,000 acre project is fully completed we believe such a balanced agriculture would be:

Alfalfa -----	20,000 acres
Pasture -----	10,000 acres
Clover seed ---	8,000 acres
Row and specialty crops and grain	12,000 acres

This should maintain or even build fertility and assure sufficient irrigation water for all crops when used in a rotation farming system.

2. LOCAL FEEDING. We recommend that as far as possible all hays should be fed locally. We wish to point out the fact that for each ton of alfalfa hay sold off the farm it would cost approximately \$8.00 to replace the fertilizer lost by purchase of commercial brands.

3. HAY CROPS. We believe

that whenever such seed is available **Ladak and Ranger varieties of alfalfa should be grown.** These are highest yielding, disease resistant, produce fine quality hay, and in the case of Ladak, quite winter hardy and drouth resistant. In any event only seed produced in northern states should be sown.

The seeding of adapted grasses such as smooth brome with alfalfa is recognized as a good practice. This results in increased yields, less weed encroachment, and an excellent quality of mixed hay.

It is felt that trials in the production of alfalfa seed should be conducted by farm operators adjacent to waste lands in cooperation with the county agricultural agent to determine seed possibilities in this area.

4. PASTURES. On the irrigation project we recommend a **pasture mixture of smooth brome, orchard and alta fescue grasses together with a clover.** We recognize Ladino clover as being the heaviest producer for pastures but wish to point out the increased danger from bloat as compared with slower growing clovers.

We believe that all ditch banks should be seeded to Kentucky blue grass and fenced for sheep pasture. This practice will control weeds and make a profitable area of ditch banks that otherwise would be an expense.

The continued use of crested wheat grass for dry-land pastures is recommended. We wish to stress the importance of proper methods of seeding in order to obtain the best results in securing stand.

5. WHEAT VARIETIES. Continued use of the present varieties of wheat including Turkey, Baart, and Golden is advised on dry lands. On irrigated acres we believe Federation and Rex are well adapted.

However, we recommend that the **Moro Branch Experiment Station** be requested to do test

wheat planting in Jefferson county after water comes. We wish to point out the advantage in concentrating on only a few wheat varieties to facilitate seed exchange, marketing, and prevention of mixtures.

We believe there is an excellent opportunity for a few farmers having clean fields to secure and produce certified wheat seed to supply this and outside areas.

6. BREWING BARLEY. We wish to point out the excellent opportunities for the production of brewing barley in this area. Such barley in addition to high feed value brings a substantial premium in price when placed on the market.

7. CLOVER SEED PRODUCTION. The production of high quality clover seed is regarded as an excellent opportunity on the North Unit project. We believe Alsike and Ladino to be especially well adapted but recognize the danger of mixing between the two. As a partial solution to that problem we suggest that farmers agree by areas as to what to produce.

Extreme care should be taken in obtaining seed free from weeds that might be objectionable in any sales area. We believe that whenever possible 100 per cent pure seed should be obtained as the basic stock for this county's seed production. As a means of carrying this out a seed committee should be formed to arrange for the procurement of such stocks.

In the production of clover seed we wish to emphasize the necessity of establishment of one hive of bees for each acre of clover to assure maximum production. It has been shown for best results hives should not be located over a half mile from the clover field.

8. POTATOES. We recommend that potato production on the wheat lands of the project be discouraged until after the organic matter in the soil has been suit-

ably built up. We also wish to point out that in some areas "dry land" wire worms are present that could cause extensive damage. These might be expected to disappear in a few years time.

Following this period we believe an extensive potato industry should be developed. The excellent conditions for potato production and marketing should make for little concern as to competition from other areas.

We endorse the provisions of the act whereby Central Oregon has been declared a bacterial ring rot free area and believe every potential potato grower should acquaint himself with its regulations.

9. GREEN MANURE CROPS. In the growing of green manure crops we wish to point out the possibilities of Hubam clover.

When sown broadcast at the time of the first irrigation of an early seeded grain crop this clover will be below the level of the cutting bar at grain harvest time. Following this, an irrigation will bring on a rapid growth of clover making an excellent top growth to be plowed under as a green manure crop later in the fall. This permits both grain and green manure crops on the same field in one year.

10. VEGETABLE SEEDS. The development of an extensive vegetable seed industry is believed to be warranted and it is felt a goal of 5,000 acres could be reached.

We propose that a state certified vegetable seed program be initiated with immediate steps taken to start action. It would be necessary for the State Experiment Station to designate foundation stock and for the Extension Service and State Department of Agriculture to agree on certification.

One or two growers would be required to continue the foundation stock of each variety. It would be necessary to build up for one or two years surplus of the basic stock as a precaution

against crop failure on the farms producing these stocks.

Especially adaptable vegetables are peas, onion, radish, cabbage, and lettuce.

The formation of a grower cooperative to handle the vegetable seeds would be recommended and would be necessary to the seed distribution and marketing phases of the industry.

11. **WEED COUNCIL.** The formation of county weed council is recommended as an aid to the carrying out of the Weed Control District Law. Membership should include representatives of property owners, farm organizations, U. S. Forest Service, Soil Conservation Service, railroads, State Highway Department, State Land Board, County, and any others with possible weed lands.

12. **WEED CONTROL.** Every farmer should acquaint himself with the provisions of the County Weed Control District Law and the noxious weeds regulated by it.

Extreme care should be taken in obtaining crop seeds free from these weeds and any others, either perennial or annual, that might be troublesome later. We wish to

point out that in some states small quantities of certain weed seeds not generally considered noxious will cause a shipment of crop seeds to be prohibited from sale.

We recommend that the Jefferson County Court purchase a power sprayer for use in weed control work in the county. Use of the machine should be made available to the individual farmer at cost.

12. **SPECIALTY CROPS.** We believe there are fine possibilities in the production of many specialty crops including strawberries, lettuce, sweet corn, carrots, and onions. Trial plantings should be made and the results noted.

13. **JAPANESE DESCENDANTS.** We concur in the recommendation of the Land Use Committee that all legitimate pressure be used to prevent people of Japanese ancestry from coming into the area.

14. **PERMANENT COMMITTEE.** One meeting of this committee should be held each year, preferably during the winter seasons, to consider developments and changes in the cropping program of the county.

Report and Recommendations of LIVESTOCK PLANNING COMMITTEE

Past history of livestock production in Jefferson county shows an industry controlled largely by two factors, carrying capacity of ranges and availability of suitable winter feed supplies. These have been quite closely related due to the yearly moisture conditions similarly affecting both. The majority of hay fed has been

grains cut for hay together with some alfalfa irrigated by spring runoff waters both largely dependent upon the annual precipitation as are the range pasture plants.

Livestock numbers are shown in the following table compiled by the Oregon State College Extension Service:

ANIMAL NUMBERS AS OF JANUARY 1

	1 1920	1 1925	2 1930	1 1935	3 1940	3 p 1944
Cattle (all) -----	15,224	9,631	10,925	9,932	12,000	15,000
Beef cows (over 2 years)	4,079	3,087	3,677		4,000	5,800
Dairy cows (over 2 yrs)	1,315	815	763	4,529	550	600
Sheep (all incl. lambs)	22,121	33,467	49,747	24,785	40,000	22,000
Ewes (1 year or over)---	13,734	23,087	35,789	21,872	32,000	19,000
Horses and mules -----	5,536	4,616	3,406	2,034	1,550	1,250

1—Source, U. S. Census Reports.

2—Inventory numbers enumerated as of April 1 are converted to January 1 basis for comparability with other years. (U. S. Census Reports).

3—Estimated.

p—Preliminary.

Since 1944 the committee believes the number of cattle to have decreased, slightly and the number of sheep to have been reduced sharply to not over 15,000 head. We believe the number will increase in the future and recognize this as a good trend.

In analyzing these figures we note marked decreases first shown in 1935. We attribute these to a series of extremely dry years which materially reduced the carrying capacity of ranges and production of the winter feed supplies. It was following these years the Resettlement Administration purchased approximately 100,000 acres of the county's privately owned lands, some 40,000 acres of which were at that time or had been cropland. These lands were made into a Land Utilization Project operated by the Soil Conservation Service for grazing purposes only.

Since that time cattle numbers have slowly increased but sheep after a gain until 1940 have dropped off rapidly to the lowest figure in many years. This we believe has been due principally to poor marketing conditions and to a general reduction of permitted numbers for grazing on National Forest lands during the summer season.

With the coming of irrigation of 50,000 acres on the North Unit, the situation will be materially changed. An abundance of ex-

cellent winter feed may be expected as well as many acres of high yielding irrigated pastures. We note the recommendation of the crops committee for 20,000 acres of alfalfa hay and 10,000 acres of irrigated pastures.

With this as a background the committee makes the following recommendations:

1. It is necessary that a 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 hay at high prices should there happen a severe winter or drought year.

2. Range management should be carried out whereby grass stands will be preserved and maintained. In order that this may better be done we recommend the construction of additional water facilities emphasizing the possibilities of stock water ponds in addition to springs and wells. Such facilities make for a better distribution of livestock over the grazing area, thus enabling a more even utilization of forage.

We recognize reseeding of depleted range lands as a desirable practice. However, the operator

should acquaint himself with and use methods that have proven successful.

3. As a means of obtaining more meat per range land acre we believe in many localities grazing by both sheep and cattle of adapted pasture areas would increase utilization without overgrazing. We wish to point out sheep generally prefer broad leaved type range plants while cattle largely utilize grasses.

4. We recognize control of predatory animals as of utmost importance to the county as a whole. At the present time probably the largest single loss of sheepmen is by predators, principally coyotes, and the loss of calves is frequent. With the development of the North Unit extensive chicken and turkey enterprises could be expected and losses to predators increased.

In order to combat this situation we recommend the County Court cooperate with the state and federal governments in maintaining a government hunter in the county. We believe an agreement should be made whereby farmers, poultrymen, and livestock men having losses could list their names in the local County Agent's office and the hunter following regular visits to that office to obtain the information would make every effort to eliminate the pests.

5. With the development of the North Unit we recognize the increased importance of control of Bangs Disease and tuberculosis in livestock. We wish to emphasize the existing state law requiring all dairy animals to be tested for these diseases and for all animals both beef and dairy to be tested in counties where dairy numbers exceed beef. We believe the County Court should enforce this law and make arrangements for veterinary service.

For further control, we recommend that all cattle coming into

the county have a clean bill of health and that all cattle entering the Soil Conservation Service Land Utilization Project pastures be so required including those from other counties. We recognize added danger of disease spread in these lands due to intermingling of many owners' livestock.

In the beef herds of the county we recommend vaccination of calves for Bangs Disease where infection in the herd is known. This necessitates a rigid test and slaughter program to rid the herd of the small percent of heifers not showing clean when two years old. Vaccination of calves should not be initiated on herds showing "clean."

6. In view of the fact that many dairymen on the North Unit will need additional pasture, for dry cows and heifers, we recommend that the Soil Conservation Service be requested to set aside a separate pasture unit for such stock as soon as demand is sufficient to warrant. No bulls of any breed should be permitted in this area.

7. We believe there is an opportunity for the production of a limited number of purebred bulls and rams in the county for sale to the livestock operators throughout the Central Oregon area. An estimated 200 bulls are needed each year and at the present time these are being largely purchased at outside points as also are the rams. Animals produced here would have the distinct advantage of being acclimated to Central Oregon conditions. Breeds produced should be in accordance with the desires of the stockmen buyers.

8. With the development of the North Unit Project we believe conditions will warrant the establishment of an extensive industry of fattening livestock for market. We call attention to the recommendation of the farm crops committee that a balanced agriculture would include 20,000 acres of alfalfa for hay with an

expected production of 80,000 to 100,000 tons yearly. This together with an expected grain production of approximately 7,500 tons per year should make a fattening industry of 25,000 steers or their equivalent very profitable although some additional grain would probably be required.

According to information published by the OSC Extension Service a yearling steer will consume 24000 pounds of hay and 800 pounds of grain in a 100 day feeding period, a weaner calf will consume one ton of hay and a 100 pounds of grain in a 150 day feeding period, and likewise a lamb will fatten on 200 pounds of alfalfa hay and 100 pounds of whole grain.

We wish to point out the excellent marketing situation where, by livestock can be transported from fattening pen to the Portland yards in approximately three hours following completion of the highway through Warm Springs.

We recommend these favorable

conditions be publicized to induce cattle feeders into the area and to aid in making feeder stock available to local operators.

9. We propose the establishment of a cooperative fattening yard whereby small operators would have an outlet for surplus animals and feed. Under the present conditions these operators have little choice except to sell at largely non-competitive prices as offered.

Under such a fattening plan profits would go to the cooperators both in feeds consumed and livestock marketed. The purchase of either feeds or livestock probably would be necessary to balance the operation.

Requirements would include construction of facilities and the hiring of a competent operator for the organization. Initial costs might be raised following incorporation by the sale of shares of stock and a loan from the Bank for Cooperatives.

Report and Recommendations of DAIRY PLANNING COMMITTEE

Dairying in Jefferson county has in the past been limited because of shortage of suitable hay and pasture. With the coming of irrigation waters on 50,000 acres of the county's farmland the situation will be completely changed. The committee in preparing these recommendations has taken the following factors into consideration.

This area is expected to be a heavy producer of good alfalfa hay, and good alfalfa is almost synonymous with good dairy production. The same can also be said to be true of the production of irrigated pastures.

Dairying is an excellent means of keeping fertility on the farm through use of the manure. By selling hay off the farm, the fer-

tility of the soil is being sold.

The sale of milk and butterfat is always a guarantee of a steady income and a good basis for credit. With the post-war trends away from row crops this is an essential item.

Milk cow numbers in the county could be expected to reach 5000 head following the completion of the project. This is a vast increase over previous totals as indicated in the following table compiled from the United States Census Report:

Cows and Heifers Milked Farms		
Census	Reporting	No.
1930	215	841
1935	182	707
1940	132	528

Since 1940 estimates by the O. S. C. Extension Service show numbers to have fluctuated very little except for perhaps a small increase up to approximately 600 head.

The committee also considered data obtained from dairy herd improvement association records showing the sharpness with which income over feed cost rises as the production level increases. These are tabulated in the following chart:

Production—Income Data

Level of Butterfat Production (lbs.)	Value of Product (\$)	Feed Cost (\$)	Income Over Feed Cost (\$)
100	94	83	11
200	176	98	78
300	258	114	144
400	338	130	208
500	411	142	269
600	493	159	334

the committee makes the following recommendations:

1. Good foundation stock would do much to insure the production of the herd. Several methods may be used to obtain this basic stock.

(a) Buy calves from high-test producing herds. It may be necessary to have nurse cows to raise these calves.

(b) Buy young cows of proven high-test production stock. This method would insure immediate production but would be more costly.

(c) Buy aged cows of proven high-test production. The purchase of these cows would not only mean immediate production, but would insure high-quality calves.

2. A bull stud associatoin will have a definite place in the future. It will give small herds a chance for better service than they could otherwise afford.

3. A cow testing association would help in ascertaining the

productivity of each cow, enabling an operator to know income over feed cost for each cow and eliminating guess work in getting rid of low producers. For the present Jefferson county might combine with Crook and Deschutes counties to form an association, and later, when the dairy herd population warrants, form an independent cow testing association.

Until such an association is formed, daily record sheets will help to keep a check on individual cows. Butterfat tests should be made frequently if possible.

4. The state law requires that all dairy cattle be tested for T. B. and Bangs Disease, and that all beef cattle be tested in a county where one half the total cow numbers are dairy cattle.

If a herd is infected with Bangs the calves should be vaccinated, and the reactors should be disposed of. The committee feels that beef cattle in this county should be tested as they will on some occasions mingle with the dairy stock.

It is felt that keeping the cows in the best of condition will lessen their susceptibility to disease.

Efforts should be made to have a good veterinary set up a practice in Jefferson county.

5. All those who intend to sell milk should construct a barn meeting all requirements of the state Department of Agriculture. A small barn, properly built, can meet these requirements at a fairly low cost. Because of the favorable weather conditions in this area a large barn is not necessary because the cows do not have to be kept indoors throughout the winter season.

6. Grade A products should be the aim of every dairyman. An educational program pointing out the desirability of Grade A products over lower grade products, and the nutritional value of better over substitutes should be supported.

Steps should be taken to make the price differential between Grade A products and inferior products substantial enough to discourage haphazard milk production.

7. One of the best markets now available is the Central Oregon Cooperative Creamery at Redmond. They have agreed to handle Jefferson county butterfat, and will start picking cream up when it is economically feasible. Until that time it would be necessary for the producer to deliver to Redmond. Plans are being made by the Co-op to handle whole milk, but until they have agreed on a plan and added necessary equipment skim milk must be used for farm consumption.

8. We believe that the Soil Conservation Service in the management of their Land Utilization Project should maintain a separate fenced pasture for dairy cattle. No bulls should be permitted in this area and its use confined to dairy cattle that have been proven by test to be disease-free.

9. Hogs and poultry will provide an outlet for skim milk. Additional feed can be expected to be readily available in this area.

The cost of fattening spring hogs will probably be about half that of fattening fall hogs.

10. Chickens should be held down to a farm flock, for consumption on the farm, or a large enough commercial flock (400 birds or more) to warrant the care that they need.

A poultry co-op should be formed when conditions warrant.

11. Active support should be given 4-H Dairying projects in Jefferson county. Successful 4-H ventures will do much to encourage the youth of this area to stay on the farm, and it is the responsibility of the adults to help in any way possible.

12. The dairy committee should continue to function as a Dairy Advisory council to help in the development of the dairy industry. Quarterly meetings should be held with all those interested invited to attend.

Report and Recommendations of SOILS, DRAINAGE, & IRRIGATION COMMITTEE

Fifty thousand acres of Jefferson county lands, heretofore devoted to the production of dry land grain, will receive irrigation water for the first time during the years, 1946, 1947 and 1948.

Irrigation farming, a new experience to many of us, will present problems which if not understood and correctly solved, are sure to have lasting detrimental effects upon our social and economic welfare. Sound soil management and the proper use of water will lay the foundation on which a prosperous agricultural program may be built in Jefferson county.

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

A. PREPARATION OF LAND FOR IRRIGATION. Practically all project lands will require levelling to an extent that minor irregularities in the land surface are removed. Extensive levelling which would involve the movement of large quantities of soil

may be necessary and practical on portions of a limited number of farms. Land levelling operations may be accomplished most satisfactorily when the soil is relatively dry and free from straw.

1. Levelling operations will be accomplished with most satisfactory results during the fallow season. Difficulty encountered in levelling operations due to the presence in the soil of excessive amounts of straw may be eliminated by plowing all the straw under to a depth of seven to 10 inches. The practice of burning straw may be a necessity in some cases; however, this practice should not be followed if levelling can be accomplished otherwise.

2. **EROSION CONTROL.** Special precaution should be taken to prevent erosion of the soil following levelling operations. A regular or special cover crop should be planted immediately after leveling operations. However, if this practice is not feasible, shallow furrows should be marked into the land crosswise with the general wind direction.

3. **LEVELLING EQUIPMENT.** Various types of levellers and land planes are considered satisfactory for land levelling. However, during some seasons operations may be suspended due to excessive soil moisture. Replacing the plane or leveller blade with tandem row shovels may permit levelling operations to proceed.

4. **RENTING EQUIPMENT.** Since heavy levelling equipment cannot be economically owned by individual settlers, this committee recommends that the Bureau of Reclamation, the Jefferson Water Conservancy District, and the County Court provide equipment to settlers on a rental basis.

B. IRRIGATION PRACTICES, DITCHES, AND STRUCTURES. Since project soils are devoid of sod and limited in organic matter content, extreme care must be taken to prevent erosion

through irrigation. Strong, properly located, farm ditches and structures are essential in delivering to and distributing irrigation water over each field.

1. Construct farm ditches and structures far in advance of the irrigation season.

2. Seed ditch banks to blue grass.

3. Concrete checks and drops are considered to be cheaper and more practical than the same structures built of wood.

4. A few checks and drops should be established to serve as patterns. It is recommended that this demonstration be accomplished through the cooperation of a settler, the Extension Service and the Bureau of Reclamation.

5. Laterals and ditches should be pastured as a means of controlling weeds.

6. Corrugations spaced approximately 30 inches apart are recommended as the most practical means of distributing water on most project lands. Steep lands may require corrugations as close together as 24 inches.

7. Strip-border irrigation is a practical method of distribution on flat lands or on lands where strip leveling is economically practical.

8. Oregon State College and the Bureau of Reclamation are requested to continue irrigation studies. Irrigation experiments under field conditions with the cooperation of farmers should be our guide in establishing practices which will conserve our soil and water. Experiments carried out to date have demonstrated that North Unit soils take water readily. These same experiments indicate that the length of run should average 400 feet and not exceed 660 feet.

9. Special precautions should be taken to provide turn outs which will insure the proper distribution of water and protection of ditch banks from erosion.

(a) Concrete pipes approximately four inches in diameter are considered to be the most practical means of diverting water from farm ditches to the field.

(b) Turnout pipe should be set well into the ditch bank if damage is to be avoided during cleaning operations.

(c) Siphon tubes may be found practical where plugging with foreign material is not a problem.

(d) Heavy, treated paper or discarded burlap may be used in water distribution until sod is developed.

C. DRAINAGE. Drainage of project land is not expected to reach major importance; however, we recommend that this problem be studied and necessary action taken to prevent impairment of soil fertility.

1. Settlers are urged to use every means at their disposal to reduce surface water waste to a minimum.

2. Surface waste water disposal is expected to present a problem since county roads are not graded and culverts installed. The Jefferson County Court is hereby urged to provide culverts in eliminating this problem.

D. MAINTAINING SOIL FERTILITY. An annual precipitation of only 8.5 inches and dry land grain production has limited the development of organic matter in North Unit soils. The development of organic matter in these soils is of paramount importance in building up and maintaining fertility, increasing its water holding capacity, and preventing soil erosion.

1. Fifty per cent of a farm unit should normally be devoted to a sod crop.

2. Feed all hay crops on the farm. According to Arthurs S. King, extension specialist in soils and irrigation, "one ton of alfalfa sold off the farm carries with it approximately \$8.00 worth of fertilizer."

3. Green manure crops should be included in the soil building program of every farm.

(a) Hubam, an annual sweet clover, is recommended since it can be grown with a grain crop and turned under after the grain harvest. When planted in grain fields just prior to the first irrigation, the grain will maintain its lead in growth which will permit harvest without interference from the clover. Early bloom is recommended as the most desirable stage in which to plow this crop under.

4. Alfalfa, clover, and pasture crops should be established on all project lands as soon as possible.

5. Commercial fertilizer requirements should be determined through trial applications.

(a) Fertilizer trials should be established as soon as possible through the cooperation of the settler and the Extension Service.

(b) Sulphur and phosphorus are expected to be required on most pastures and legume crops, while combination of nitrogen and phosphorus is expected to give favorable results on row crops.

6. Row crops such as potatoes should be preceded by a legume. At least one crop of Hubam clover should be turned under before potatoes are grown on new lands.

E. DIVISION OF EXCESS LAND INTO FARM UNITS. The division of excess land into farm units should be planned with the assistance of the County Agent and the Bureau of Reclamation. Reduced costs in farm management, land levelling, road construction, and irrigation will result if farm unit boundaries are established after careful study has been given to the land topography, lateral location, roads, and domestic water supply.

F. AAA PAYMENTS. Soil erosion and water use problems are certain to develop unless adequate provisions are made for the proper distribution of water before

or during the first crop season. Insufficient capital at the beginning of development may be limiting factor in preparing for these problems. We recommend that encouragement be lent this program by the Agricultural Adjustment Agency through inclusion of practice payments in their docket covering land levelling and preparation of ditches and structures for irrigation.

G. CREDIT. We recommend that all local and federal loan agencies cooperate in the development of irrigation farming through the provision of credit for preparing land for irrigation and constructing farm irrigation systems.

The Farm Security Administration is urged to provide this type of credit to farmers who cannot secure it otherwise.

H. PROVISIONS FOR FARMERS TO PAY EXCESS CONSTRUCTION COSTS. Construction of the Irrigation District lateral system encounters problems among which are those particularly related to individual farm units. These problems may involve relocation of the lateral, additional structures, or the elimination of a borrow pit by hauling dirt over long distances. A correction of these problems cannot be accomplished without the expenditure of funds in excess of the sum determined feasible for the project and in excess of the amount of money appropriated for the project by Congress. Therefore, we recommend that provisions be made wherein a settler can secure a correction of his problem by paying for the excess cost through the Bureau of Reclamation.

I. FARM TOUR. Numerous soil

management and irrigation practices will be developed and adopted by individual settlers. We recommend that farm tours be conducted under the direction of the County Agent, beginning in 1946, for the purpose of encouraging the adoption of the most desirable practices.

J. SETTLER ASSISTANCE. The Oregon State College Extension Service, the Jefferson County Court, and the Bureau of Reclamation are to be commended for having provided assistance to settlers in laying out their farm fields and irrigation systems, land levelling, and farm advisory program. We recommend that this service be continued indefinitely.

K. SOIL CORRECTION PRACTICES FOR DRY LANDS. The dry land farmers of Jefferson county should continue their programs of conservation and erosion control.

1. Cultural practices should be followed which will conserve all the straw.

2. Steep or shallow land should be planted to Crested Wheat Grass.

L. CONTINUOUS FUNCTIONING OF SOILS, IRRIGATION, AND DRAINAGE COMMITTEE. Since 50,000 acres of Jefferson county lands will be irrigated for the first time during the years 1946, 1947, and 1948, we may reasonably expect new problems to arise. Reappraisal of our soils, irrigation, and drainage problems is considered to be a necessity as we develop new information through experience and study. Therefore, we recommend that this committee continue to function annually.

Report and Recommendations of FARM and RURAL LIFE COMMITTEE

Farm families in Jefferson county as throughout the world have been geared to wartime activity. High production and conservation of all materials have been the keynotes. Living in a peacetime world will require adjustments. The close of the war has brought many new problems. The committee has made studies to determine what the new problems are and how they can best be solved, and has this report to submit.

The Farm Home and Rural Life committee is a permanently organized group which has as its purpose the improvement of farm living conditions throughout the county. The opportunity is especially great in 1946, since this is the year that the irrigation project will bring water to a large portion of the irrigable land in the county. As a result of the dividing up of large land holdings into farms of from 80 to 160 acres, it is estimated that from 500 to 800 new farm homes will be established as soon as materials and labor are available for buildings. It is also expected that the close of the war will increase the marriage rate, and houses must be built for these new families. It is the committee's desire that these recommendations make for better living in both the new and the already established homes of Jefferson county.

HOUSING

The 1940 census shows that the entire county had a total of 771 dwelling units, of which 437 were non-farm and 334 farm. Of these about 200 had electricity from the power company and several had power plants. Since that time the Pacific Power and Light company reports that 117 new services have been added so that probably about half of the homes have electricity. The new REA de-

velopment will bring electricity to many more farm homes in almost all sections of the county as soon as it is completed.

The 1940 census reported that 375 of the 771 dwellings had running water. Many of these were in the water district, and since that time more homes have running water. New homes that are built in the water district will have running water as the facilities are enlarged, and the water district will also be enlarged to include other homes. At the time of the census, 120 homes reported no water supply closer to the house than 50 feet; (1) 76 homes reported running water within 50 feet but not in the house; (2) 110 reported water supply, not running, within 50 feet of the house.

Because of the rapid increase in population brought on by the development of the irrigation district, many new farm homes will need to be built where large farms have been divided. This building is being held up at present by lack of materials.

The 1940 census showed that less than a third of the entire dwellings of the county had bathtubs and other sanitation facilities, and that only about a fifth of the farm homes had such facilities. There has probably been little change since then, since such equipment has been almost impossible to secure during the war time.

Reports indicate that there are no vacant dwellings in Jefferson county and that new families are undergoing great hardship in finding shelter. At this time it is estimated that from 500 to 600 new dwellings will be needed. At the time of the last census only a little less than a third of the homes needed major repair. Since little could be done during the war, probably more homes need it now.

**COMMITTEE
RECOMMENDATIONS:**

In order that the needed new homes may be built and needed repairs be made as soon as materials are available, and that families may get the greatest satisfaction and benefit from their homes, the committee recommends:

1. That plans be made available for houses, especially plans for storage space and labor-saving arrangements. Oregon State College has plans for 24 farm houses. These may be borrowed from the County Extension Office at any time.

2. That the water district be enlarged to take in all homes where practicable, especially on farms bordering on the water district.

3. That since many homes are without sanitation facilities, such as bathtubs, and flush toilets, that these be given first consideration in remodeling, repairing and building.

4. That sewage disposal on individual farms be taken care of by septic tanks, this being the most sanitary and satisfactory method now known.

5. That plans be made available to individual families for building the walkin type of home freezing plants, and also for the chest type of plant, since the cost of the walk-in may be prohibitive.

6. That landscaping plans for farms in this area be secured for the use of individual families, and that the assistance of all groups, as the garden club and the State College, be enlisted in learning the kinds of trees, lawns, etc., that will grow in this section.

7. That REA Service be extended to sections of the county not yet being serviced by a power company.

8. That telephone service be extended to rural homes in the county which do not have it.

HEALTH

A survey of health conditions in the county shows that the health

and even life of the people are being endangered by the following conditions:

1. There is only one doctor in the county to serve a population of 1870. Nearest other practicing physicians are at Redmond, 28 miles distant from Madras.

2. There are no dentists in the county, the nearest being at Redmond.

3. There are no hospital facilities whatever in the county, except for the Warm Springs Indian hospital.

A report from the County Health Association indicates that Christmas Seal sale money is being used in the county to bring the Mobile Survey Unit to the county, making it possible for all the people to have free chest X-rays and larger pictures if need is indicated. This was done in 1945 and will be done again in 1946. The county Health Nurse spends one day a week in the county, visiting any one sick, and holding clinics for children of all ages.

**COMMITTEE
RECOMMENDATIONS:**

In view of the fact that the population of the county is increasing rapidly and that accidents and illness are so great that the present medical personnel and the time devoted to the county for medical attention entirely inadequate, the committee makes the following recommendations:

1. That doctors and dentists be encouraged to come to the county and take residence. The offer made by a group of the county's citizens to give money or services for the building of a clinic could well be encouraged.

2. That home nursing and first aid courses be made available to the residents of the county so that emergencies may be met.

3. That studies of existing systems of medical insurance such as (a) socialized medicine, (b) Public Health Service, (c) a community doctor and dentist on a

salary basis, be made to see if they apply to the Jefferson county situation.

RECREATION

The latest school census, in 1945, reports a population of 506 between the ages of 4 and 19. The 1940 census figures show a population of 335 between the ages of 15 and 24. While both of these figures, especially the latter, have increased and will continue to increase as the population grows, no further recreational facilities have come into the county, and none were here previously except a motion picture theater which is open 5 nights a week. The need for wholesome recreation for the young people is acute, especially for those out of high school who have not yet established homes of their own, since they are no longer eligible for school activities and are not yet interested in the clubs and organizations of their elders.

COMMITTEE RECOMMENDATIONS:

In order to provide the much-needed recreation for these young people, the committee recommends:

1. That facilities be made available for such activities as swimming, bowling, and skating, through community or commercial enterprise. The plan to build a swimming pool and park as a living memorial to those who lost their lives in World War II receives the committee's strongest support.

2. That older youth be organized into groups of a type that they may conduct progress themselves. For some young people clubs such as 4-H, scouts, Juvenile Granges and Y. G. A., and F. F. A. should be started as soon as leaders and equipment are available.

3. That parents and communities assume the responsibility of leadership for youth groups.

4. That parents be encouraged to promote family recreation, including picnics, pot-luck suppers,

taffy pulls, when sugar is available, parties, etc.

5. That adult groups sponsor parties for the young people, especially those in age groups which have previously been neglected.

6. That recreational training meetings for leaders from all organizations be conducted by the Extension Service to aid leaders in directing community recreation.

7. That Family Life and Recreation specialists be added to the state extension staff to assist county extension workers and local leaders in recreation problems.

FOODS AND NUTRITION

In an agricultural county the minimum requirement should be that every person in the county be well fed. It has been found that only one school in the county, at Grizzly, with an enrollment of 5, has any form of hot school lunch. Reports show that children who eat an inadequate lunch cannot make up the lack at other meals of the day, and also that it is difficult to make carried lunches attractive to children. The 1940 census shows that in Jefferson county the individual farm furnished 59.2 per cent of the family living. At 1940 prices this would amount to \$156.77 per farm family per year at present prices it would be worth a great deal more.

New agricultural methods and new uses of the land will soon be adopted in the county, and since it is up to both the individual families and the communities to see that every one is well fed, the committee makes the following recommendations:

1. That each family grow a home garden, family orchard and such small fruits as will grow in the area, and the surplus be preserved by the **latest approved methods** which will insure safety and the greatest preservation of food values. Group meetings giving food preservation information should be held each summer.

2. That each family have a flock of chickens at least large enough to produce the eggs needed by the family, and to furnish some meat for variety in daily meals.

3. That each family have enough cows to furnish each child with a quart of milk and each adult with a pint of milk a day, and to furnish some other dairy products needed by the family.

4. That arrangements be made for hot lunches in the schools to help all children in the community to secure an adequate diet.

5. That a community cannery be established if the demand by the people warrants it.

CLOTHING

Since the inability to get new clothing, especially men's and children's, during the war has depleted the supply of clothing needed in many families, since many women construct much clothing worn by the family will continue to do so, and since it is expected that many new fabrics will appear on the market as a result of scientific advance during the war, the committee recommends:

1. That supplies of clothing be increased as soon as possible.

2. That information about the use, care and content of the new materials be widely publicized.

3. That homemakers require from the stores where they trade that labels be dependable and contain all essential information about the article, and that sizes of shoes, underwear, dresses, and other garments be standardized, since only through consumer demand will this be done.

4. That classes be made available for the homemakers of the county in clothing construction,

information on new materials, uses of sewing machine attachments, pattern alterations, professional details, care of the sewing machine, and remodeling of clothing.

ECONOMIC SITUATION

Since only through records can a family have any true knowledge of its economic situation or be able to make out an accurate income tax statement, it is recommended that farm families keep some form of records, and that help be given them in keeping these books.

CONCLUSION

The recommendations for improving the living conditions in the homes of the county may be carried out by cooperation with Granges, the schools, churches, and public utility companies, and much good can come to the county through the development of new business, such as building, plumbing, feed, hardware, etc., and by the establishment of professional men in the county.

The committee suggests that its recommendations be given wide publicity through the newspapers and through reports and discussion in farmers' organizations.

Information for improving homes and working conditions in the home is available from the Extension Service upon request, and classes in any phase of homemaking desired can be given at the request of the women, within the limits of the time of extension workers in the county and state.

It is expected that several years will be required to carry out the recommendations of the committee, but it is strongly urged that changes be begun as soon as possible.

Work for H. D. C. L. S.

Report and Recommendations of 4-H CLUB COMMITTEE

The 4-H club committee is convinced of the value of 4-H club work to young people, both in the fields of agriculture and home economics. Members gain not only information and skills but also personality and character development.

Available records show that the 4-H club work was started over 20 years ago in Jefferson county with clubs located in the central dry land wheat producing area and in the Warm Springs Indian Reservation. From that time on 4-H was continued except for short lapses and expanded to take in nearly all areas of the county until the start of World War 11 when a rationing of travel and a suspension of the annual county fair made further club work impractical.

In 1945 the work was reinstated with an enrollment of approximately 150 club members in 185 projects. This year the participation may be expected to be increased considerably over 1945.

Past conditions have been such as to largely limit the projects carried over most of the county. Especially is this true on the "dry land" where production of suitable feeds to carry on livestock projects has been impractical. Likewise crop projects in this area have been limited by the moisture shortage.

With the coming of irrigation the conditions on the North Unit Project lands will be greatly changed. The profitable production of excellent livestock feeds and of various crops especially suitable as 4-H club projects may be expected. Likewise a large increase of population will add many potential club members to the county rolls.

Other areas also may be expected to be benefited due to the

close relationship of all 4-H activities and the added markets and other facilities.

Considering this background and in order to improve the 4-H club work in the county, so that more boys and girls may receive the benefits of more and better club work, the committee has considered the program under these five headings: Education, Leadership, Projects, Fairs and Exhibits, and Recreation.

EDUCATION

Education of the parents, teachers and general public as well as of the boys and girls is the basic need in the development of a strong 4-H program. The interest of adults in the projects of 4-H members is necessary for successful club work. In order to develop interest the committee recommends:

1. That **programs** be given before Granges and other organizations. These may be demonstrations by 4-H club members, movies dealing with 4-H club work, or outstanding speakers.

2. That **exhibits** of articles completed by 4-H boys and girls be made in windows about town as well as at any 4-H shows and the county fair.

3. That **newspaper publicity** be gained through an annual 4-H news writing contest of club activities through a column in the local newspaper.

4. That a **4-H advisory board** of business men be organized to work with the 4-H leaders organization to acquaint the business people with the program and obtain their backing.

5. That **4-H meetings** be held at the homes of different members to show parents about the club work. This may also be accomplished by each child bringing parents to a meeting.

6. That demonstration, judging and showmanship contests be held with scholarships to the 4-H summer school at Corvallis as prizes.

7. That an occasional radio program by 4-H members or others concerning the club work in the county be worked up and broadcast over the radio station at Bend.

8. That public achievement meetings be held for the purpose of presenting awards to members.

LEADERSHIP

Since leadership for clubs is an important controlling factor on 4-H club work and enough good leaders are essentially needed, the committee made the following recommendations:

1. The sources of leaders are teachers for health and other similar clubs, older boys and girls that were formerly in club work, parents or other adults who are interested.

2. Methods of obtaining leaders may be by personal visits of 4-H leaders and workers and by requests of club members themselves. When possible club members should select their own leaders.

3. A County Leaders Organization should be organized with regular meetings to be held every two months and special meetings when necessary. This will give club leaders opportunity to discuss mutual and individual problems and methods.

PROJECTS

Projects should be decided upon in the district where they are to be carried. The varied condition of the different communities of the county make this necessary. Especially adaptable projects include:

1. Health and art clubs in the schools with the teacher as club leader.

2. Home economics clubs including canning, cookery, clothing, including bachelor sewing, and homemaking throughout the county.

3. Livestock clubs with beef clubs throughout the county, and hog, dairy, and sheep clubs on the irrigation project.

4. Garden, poultry, and rabbit clubs throughout the county. The last named are for members without facilities for livestock.

5. Forestry and home beautification clubs especially on the irrigation project.

FAIRS AND EXHIBITS

Fairs and Exhibits are a necessity for a successful 4-H program, since they are the climax of the club year. The committee makes these recommendations:

1. That county fair be held annually with suitable prizes for entries. A separate building especially for 4-H exhibits and demonstrations should be constructed as a part of the county fair grounds. Judging of all entries should be by competent persons from outside the county having no direct interests.

2. That community field days be held prior to the fair, to result in better exhibits and more community interest.

RECREATIONS

Summer activities should be emphasized and arrangements for as many club members as possible to take part in them should be made. The committee makes the following recommendations:

1. That 4-H Summer School participants be increased by means of scholarships donated by banks, granges and other organizations, business firms, and individuals. Scholarship winners should be decided on merit.

2. That 4-H Summer Camp be made available to as many club members as possible and attendance encouraged.