

Oregon State Agricultural Program

To Meet the Impacts of War
and National Defense



PREPARED BY
OREGON STATE LAND-USE PLANNING COMMITTEE
May, 1941

O R E G O N

STATE AGRICULTURAL PROGRAM

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FOREWORD

The Oregon Land Use Planning Committee, in common with the other states, at the request of the United States Department of Agriculture undertook to develop a program for the state to meet the impacts of national preparedness. Plans for the preparation of this report were initiated at a regular meeting of the committee in early January. The impacts of the preparedness program upon agriculture, including forestry, call for speedy action; first, from the standpoint of the contribution that this state could make toward the preparedness program, and second, to determine in what way the welfare of agriculture could be safeguarded during the rapid adjustments that are taking place. From the long-time viewpoint there is a great need to consider how the detrimental effects of the post-preparedness period can be cushioned.

The preparation of this report was undertaken by four principal subcommittees: (a) forestry, (b) range livestock, (c) general farming, (d) farm home and rural life. Through the active and energetic cooperation of farm men and women, members of the State Land Use Committee, and technicians in various fields this report has been made possible. All too short has been the time available for this undertaking. It is recognized that additional research, study, and consideration will need to be given to the various parts of this report and to other problems that will arise during the coming months. Recommendations or conclusions that seem sound at this writing may need revision in the light of rapidly changing national and world conditions.

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THE STATE PROGRAM AS IT RELATES TO THE IMPACTS OF WAR AND DEFENSE

Adjustments in Oregon agriculture to meet the impacts of war and to fill the needs of an all-inclusive national defense fall into two closely related classes. One class includes measures to meet changed and changing needs in the field of production. The other class includes measures for improving the welfare—including the health, nutrition, security and morale of the people, so that they may meet the problems of defense with renewed vigor and with new confidence in the democratic way of life.

Today, in preparing for defense we have heavy public spending and investing. Temporarily, it helps to solve the problem of unemployment and of purchasing power. But we look forward to the time when the necessity of heavy spending for defense is over, and the demand for lower taxes may be stronger than the demand for public spending. Then, we will need a plan to prevent large-scale unemployment and failure of markets. Therefore, cooperative agricultural planning in Oregon is concerned, both with the problems of producing goods and of building morale for immediate defense needs and with the long-time problems of making democracy effective in the broad field of rural economy and its relation to the total economy. The major contribution which the cooperative agricultural planning program hopes to make in these two closely related fields is to pool the knowledge and judgment of public agencies and representative farm people in developing and in getting action on plans for the agricultural and rural economy aspects of the total planning job. This is a continuing and long-time job. The plans projected in this report are but a continuation and adaptation of work that has been carried on for many years by farm people and public agencies. But in another sense these plans are but a beginning in the development of an effective and adequate unified program.

In the main, the plans outlined in this report are a series of recommendations. If they are carried out, and the committee will continue to work with the agencies and groups concerned in arranging to have these proposals carried out, they will contribute substantially to the defense effort and to the internal strengthening of democracy.

Defense production will be aided by carrying out the proposals for adjustments in wheat and other export crops and in the livestock industry and the recommendations regarding import types of crops and farm labor. In a different manner the proposals for meeting the increased risk and hazard of fire in Oregon forests would safeguard defense production of timber, of which Oregon is a major source of supply.

Increased confidence and vigor of the people in meeting the demands of defense and in facing the internal problems of democracy would

result from carrying out the proposals for nutrition, sanitation, health, housing and recreation.

Opportunities afforded by the present situation can be utilized by following the recommendations for conservative financing, reduction of indebtedness and adjustments in farm organization and management during the period of good prices for livestock and certain other farm products, and for placement of "surplus" rural youth in industry through vocational training programs.

Help in minimizing adverse effects of the war and its aftermath would be obtained by carrying out the proposals for adjustments in the wheat-producing area, for curbing forest destruction, for developing rural works programs which can absorb labor when defense production is shut down, and for cushioning after-war adjustments in farm markets.

Both current and long-time needs for production and for improvement of rural welfare can be served by carrying out the various proposals for adjustments and betterments in the different lines of agricultural production, land use and conservation. The recommendations for classification of cut-over lands are important both from the standpoint of increased production during the defense period, in case it continues for several years, and also in connection with post-war adjustment when many people may be seeking opportunities on the land. Oregon desires: (1) to guide farm development to those lands which are suited to cropping, pasture, range and multiple use; and (2) to establish sound management practices and development either for recreation, watershed protection or forestry, on other lands. For that purpose land classification is essential.

Most of the proposals and recommendations are inter-locking insofar as their relation to the defense effort and war impacts is concerned. Measures which will help utilize the opportunities afforded by the present situation or minimize adverse effects will generally contribute in some ways to defense, preparedness and national unity, either directly or indirectly, by increasing the security and well-being of the people and hence their belief in the democratic way of life.

SUMMARY OF SPECIFIC RECOMMENDATIONS

RECOMMENDATIONS FOR THE ATTENTION OF FARMERS, LOCAL ORGANIZATIONS, COUNTY LAND USE PLANNING COMMITTEES, AND COUNTY AGENCIES.

General Expansion Unwise

All farmers are cautioned against engaging in a general expansion program at this time. This is especially true where such expansion will result in increased indebtedness or larger capital investment. There are certain definite exceptions to this generalization. It is felt that certain crops may well be increased; on the other hand, there is need for a definite curtailment in four major fields of production.

Providing suitable contracts can be secured or markets otherwise assured, producers suitably located might consider expanding the production of certain seed crops, such as vegetable seeds heretofore imported and a limited number of specialty crops such as fiber flax. In the general field of crop production, expansion should be strictly limited to present plant facilities. Primarily, any expansion should result from increased production per unit by the utilization of the best known cultural practices.

Livestock operators and other agencies interested should make every effort to maintain proper balance between the numbers of livestock and game and the feed resources of the area, and when increased demands for livestock products justify and such practices are economically feasible, feeder type of livestock may be fattened on grain and hay surpluses. Further demands for this increased production to meet national defense needs may be met through increased unit production by improving the quality of the breeding stock, which will increase calf and lamb crop percentages. In this same connection, utilization of the grass growing on diverted wheat lands will enable the livestock industry to more nearly maintain numbers and improve the economic returns of the state.

In the surplus grain-producing areas, particularly the Columbia Basin and parts of the Blue Mountain region, increased swine and poultry production appear to be justified. Feeder livestock such as steers and barren cows now on the ranges could be moved into the surplus crop-producing areas such as the Columbia Basin and handled on a combination pasture and feed lot basis or feed lot alone until they reached the desired weights. This practice would make it possible to increase the number of breeding females on the range.

For Western Oregon livestock operators should undertake an intensive program looking toward the control of brush on lands which have been classified as suitable for grazing and agriculture. In connection with these developments, areas suited for production of winter feed should be carefully developed. Local land use committees and land classification committees established under Chapter 381, Oregon Laws of 1937, should closely coordinate their work looking to the classification of cut-over lands for their best use. These operators will need to pay particular attention to management practices which will insure maintenance of grass and a constant animal unit carrying capacity. To county land use committees, county courts, and to all individuals interested in the development of grazing on deforested land in Western Oregon are recommended studies in the problems of burning, seeding, and grazing.

Definite curtailment should be undertaken by the producers of wheat, apples, pears and prunes. First, attention should be given to the elimination of these crops on the least desirable sites; in the field of fruit production, varieties that are undesirable should be eliminated, and trees that are diseased or otherwise inefficient should be pulled out.

Economic impacts make this a period when the attention of every individual farmer should be given to the efficient use of his producing plant and to the preparation for change in a physical and financial manner for whatever may come.

Soil Conservation

Educational programs by the State College Extension Service and other interested parties to acquaint farmers with erosion problems and erosion control practices should be conducted in every county in the state where such problems exist.

In such areas where farmers are not using adequate protective measures to prevent the occurrence of erosion, special programs available through the agricultural conservation program should be adopted which will provide that on allotment farms before wheat payments will be made approved conservation practices must be carried out, and on all non-allotment farms agricultural conservation program practice payments will be dependent upon the completion of needed erosion control practices. In developing such special programs the material available on classification of land according to use capability from the Soil Conservation Service can be used.

After determining areas in which the organization of soil conservation districts is deemed necessary, county land use committees should take the initiative in bringing such needs to the attention of the district and then to the State Land Use Committee.

Sales to Government Preparedness Purchasing Agencies

County land use committees should take the lead in coordinating the activities of individual producers and cooperative associations in the pooling of available supplies of agricultural products. Such information should then be provided to regional representatives of the federal agencies engaged in the preparedness program.

Fire Protection

The accelerated activity in forest industries to meet the demands of the defense effort will bring about greater hazards, particularly in the cut-over areas. Therefore, local fire patrol associations should be prepared to vote extra levies for fire protection. All operators should take extra precautions on their operations to decrease anticipated fire hazards.

Forest Practices

The increased demand for timber products with the corresponding increase in prices for these products will result in benefits which should be used to eliminate all wasteful wood practices and make it possible to refrain from cutting second-growth stands, or if economic necessity demands cutting of these stands this should be done on a light selective basis. In areas where partial cutting is practiced the quantity of timber removed should be restricted in order to prevent the creation of unmanageable slash hazards. In both Eastern and Western Oregon, extreme care should be used in fall burning of slash to prevent escape from the area under treatment and to insure the maximum amount of reproduction and seed tree preservation. In Eastern Oregon light partial cutting should be practiced on all areas in order to harvest the maximum amount of mature pine which otherwise would be killed by insects. It is particularly important that during this period of accelerated forest harvest all operators give particular care to leaving mature trees to insure an adequate seed supply for reforestation.

Nutrition

To all rural people and rural organizations this four-point program on nutrition is recommended:

1. That all forces be joined in a broad fundamental educational program;
2. That school lunches be extended to all schools;
3. That a live-at-home program based upon home-grown and produced foods be undertaken; and

4. That 4-H clubs and FFA boys contribute their part by adopting projects that will produce more of those things needed in the rural family diet.

Home Management

The need for family budgeting, bookkeeping and cash basis for spending is pointed out, along with needs for educational programs in the study of housing, sanitation and general participation in the national program for the utilization of surplus commodities, including the cotton mattress and comforter program.

Education

All rural youth in the state should receive, as a minimum, a high school training in standardized schools, with recognition of the need for general vocational curriculum in such schools, and the recommendation that training in home economics be required of all girls. To further these objectives in rural life, it is recommended that the school plant be made available for 4-H club activities and for the use of other rural organizations, particularly in the youth field. Specifically, it is felt that the 4-H club activities should be extended to include all rural youth of that age group.

Recreation

A sound program of community recreation and social life is recommended to all rural civic, educational and religious organizations, and including the development of facilities and trained leaders for the conduct of such activities.

Citizenship

The home, school, church, and all organizations are urged to place emphasis on good citizenship training for our democracy through panel discussions, group discussions and talks.

RECOMMENDATIONS FOR THE ATTENTION OF STATE AGENCIES AND STATE REPRESENTATIVES OF FEDERAL AGENCIES.

All research and educational agencies should closely coordinate their programs in order to answer questions arising from recommended land use adjustments. The range research programs of all agencies, including the Grazing Service, Forest Service, Soil Conservation Service, Agricultural Adjustment Administration and others dealing with range land

adjustments or with livestock production practices, should be closely coordinated, and research programs should be directed toward assisting in the present national defense emergency by: (1) encouraging the shifting of land now used for production of winter feed or other crops to pasture, to be used to supplement public ranges or to shorten the period of use on the latter; and (2) encouraging the production of better quality and heavier weight animals so that increased demand for meat products can be met without increasing numbers.

The range improvement programs of the above agencies on both public and private lands should be coordinated through: (1) greater participation in county land use planning committees; and (2) periodic meetings of representatives of these agencies with the Oregon State College School of Agriculture. It is particularly important both from the state and from the national viewpoint that care be taken to utilize our ranges on a basis of long-time sustained yield and in view of the multiple use demands upon the ranges governmental agencies should render every possible assistance for maximum improvement and development of these lands.

Game Management

Present indications are that the mule deer are in sufficient abundance but are poorly distributed. There is need for increasing the numbers of small game forms such as the black-tailed deer, ring-necked pheasant, etc. The larger forms of game animals such as the elk should be limited to wilderness areas or other areas presenting little or no present or potential conflict with other primary land uses. The Oregon State Game Commission is commended for its research program looking toward the restoration of black-tailed deer in areas west of the Cascade Range.

In order to maintain the proper relationships between game animals, domestic livestock and feed resources, the following organizations--the U. S. Forest Service, Grazing Service, Fish and Wildlife Service, State Game Commission, State Land Board and the Oregon State College--should each designate one person who will either independently or in collaboration with the other representatives make annual inventories of wildlife and domestic stock and appraisals of forage conditions, including trends, and report to each respective organization recommendations for changes in range management, including adjustments where necessary, in numbers of domestic or game animals. The Oregon State Game Commission should call a meeting of the above agency representatives, with representatives of the livestock and wildlife associations, for the purpose of developing such program as appears necessary to maintain the proper balance of forage, wildlife and domestic animals. The Oregon State Game Commission should also effect an alliance with the Extension Service, the State Department of Public Instruction and other educational agencies for initiating a program of education in conservation and sportsmanship.

Fire Protection

In order to meet the increased hazards due to accelerated cutting in forested areas, the Governor should be prepared to declare an emergency and allocate extra funds for fire protection from the general funds of the state that the state and federal forest agencies may prepare a special protection plan to meet the hazards and risks particularly in those areas adjacent to important industrial developments.

In order to provide adequate protection for forest areas, the State Forester, the State Fire Marshall and the State Tax Commission should promptly investigate and prepare a report on the feasibility of a general levy on all real property by hazard zones with the exception of city and federal property. In order to insure a future supply of forest products, the state should appropriate funds for this purpose, since utility bonds are not an entirely satisfactory vehicle for raising money to secure merchantable timber. It is urged that both state and federal agencies initiate promptly a program of acquisition of second-growth and old-growth timber. In order to permit the maximum utilization of the timber values on farm lands, the State Forester and the State Extension Service should cooperate in securing the necessary legislation with accompanying appropriations in developing a desirable program looking toward the establishment of county foresters.

Land Classification

Proper utilization of our land resources for agriculture and grazing, forestry and recreation depends upon adequate classification of these lands. There is need for an immediate guide for the formulation of policies for the development of programs applicable to these areas. Therefore, state and federal agencies such as the Oregon State College School of Agriculture, Oregon State College School of Forestry, Bureau of Agricultural Economics, Soil Conservation Service, U. S. Forest Service, State Board of Forestry, Oregon and California Revested Lands Administration and other interested agencies should pool their resources to the extent of each furnishing one man for a period of approximately a month or more during the field season of 1941. This group should, by extensive field work, determine the outer boundaries of those areas needing immediate attention.

In the problem areas delineated in the above procedure, these same organizations should each contribute one man with the requisite skill for the period required to complete detailed work within the area. Steps should be taken by the Governor's Economic Council to explore ways and means of establishing a state land classification organization. In order to prevent unwise use of the natural resources of the State of Oregon, the Oregon State College and the State Board of Forestry should immediately initiate a study of restrictive land use regulation applicable

to Oregon's land use problems as a basis for suggestions to the State Legislature for necessary legislation. The State Land Use Planning Committee and state and federal agencies should keep in close touch with the development of state regulations of practices on private forest land and make such suggestions from time to time as appear desirable to strengthen the state system or to secure cooperation with any federal regulatory laws which may be enacted designed to cooperate with the states and counties in necessary regulations of this character.

The Oregon State Experiment Station, the Northwest Regional Forest and Grazing Experiment Station, the Soil Conservation Service and other agencies are urged to pool their resources in fundamental research looking toward the determination of what lands, where they are located, how they can be developed, and how utilized for grazing in the Douglas fir region of Oregon. In addition, the coordination of grazing with forest fire control should be studied and ways and means for county and state governments to develop publicly owned tracts of such land for grazing or forestry should receive immediate attention.

Forest Land as a Work Reservoir

In anticipation of the end of the present defense effort and the need for work reservoirs to serve as a cushion to absorb employees of defense industries, the State Forester, the Oregon and California Revested Lands Administration, the U. S. Forest Service and other agencies should promptly inventory possible work projects on both public and private forest lands and develop plans and schedules for employment on these projects.

Taxes

The accelerated rate of liquidating forest properties will increase the problems associated with tax resources of the timbered counties. In order to meet these problems the Governor's Economic Council should take the necessary steps to secure prompt action on a study of state and county fiscal relationships.

Purchases by Surplus Marketing Administration

With the exception of wheat, which is otherwise provided for, it is strongly recommended that purchases of surplus commodities be made at a level based upon grades and price history that will enable the enterprise to remain in business. Such purchases should be made when surpluses develop, either because of disrupted international trade or because of production fluctuations on normal acreages, or induced by decreased consumer demand that could not be anticipated. Such purchases should therefore be made to encourage the production of the most desirable grades and varieties rather than encouraging the reverse.

Grades and Standards

The cooperation of all agencies on the state level is solicited toward strengthening the grades and standards of Oregon products so as to enable them to successfully compete on out-of-state markets. This is particularly true in the fields of milk, eggs, and prunes, as well as a wide variety of specialty crops.

Agricultural Conservation Program

The production control features of government programs applying to wheat should be closely correlated with the land use and conservation features of such programs in order that conservation practices will be adopted by wheat growers along with acreage reduction. In the horticultural field the AAA practice payment for removal of trees should be extended to pears and prunes in addition to apples, and wherever a study of soil erosion and production factors indicates the need, the payments should be increased so as to stimulate the removal of such undesirable orchards. In all cases the soil-building practices such as cover crops should be continued. The need for all agencies at the state level to adapt their programs to the fundamentals of soil and water conservation is emphasized.

Wind Erosion on Army Fields

To the officers of the U. S. Army the Oregon committee recommends immediate attention to ways and means for controlling wind erosion problems developing on the Morrow County bombing range, the Hermiston ammunition dump and the Camp Clatsop sand dune area.

Farm Credit

All sources of credit, public and private, are urged to cooperate in the further financing of agricultural and forest enterprises to the end that unhealthy expansion is avoided and exploitation of the resources of the state does not occur. It is specifically pointed out that the committee considers most expansion in the field of agriculture at this time as being unwise, particularly where it is based upon increased indebtedness. Credit should only be extended for the production of such crops the supplies of which are definitely curtailed by war conditions, or in individual cases to round out the family type of a farm unit.

Educational agencies such as the State College Extension Service, Smith-Hughes agricultural teachers, and others are requested to carry on a continuing program that will bring these facts constantly before producers and credit agencies throughout this emergency period.

Farm Labor

It is recommended that:

1. The federal and state employment offices, Farm Security Administration, Oregon State Extension Service, and any other agencies that might be of help, collaborate in appraising the labor demands, the periods when they will be needed, and means of locating them promptly and efficiently.
2. Publicity concerning labor demands be carefully supervised, and efforts should be made by these cooperating agencies to make the most efficient use of the available supply throughout the periods of need.
3. To release all possible labor supplies the WPA projects, except those directly connected with the preparedness program, be closed down during such emergency periods and that steps be taken to divert such labor to the harvesting, processing or transporting of these crops.
4. The selective service boards throughout the state give full consideration to temporary deferment of such selectees as to enable them to make their contribution to the farm labor supply during this acute period before being called for active duty.

Government Contribution in Lieu of Taxes

It is recommended that every agency interested in the economic welfare of Oregon cooperate with the Association of Oregon Counties in supporting suitable federal legislation that will provide an adequate annual contribution by the federal government to the several counties on federally owned land in lieu of taxes.

RECOMMENDATIONS FOR THE ATTENTION OF THE NATIONAL OFFICES
OF THE DEPARTMENT OF AGRICULTURE AND OTHER FEDERAL AGENCIES.

Vacated camps should be retained in those areas where there is an accessible supply of work for CCC occupancy after the present problem passes. In the meantime, when desirable, regulations should allow the split of personnel of each retained camp into two or more side camps.

Small mobile work camps should be provided for the use of labor available but not needed or not qualified for defense activities.

Adequate appropriations should be made annually to federal agencies administering grazing land, for needed range improvements.

The present emergency should not be used as an excuse for exploiting either locally or nationally our natural wildlife and range resources.

The increased fire hazards due to rapid liquidation of timber resources will call for additional fire protection from federal, state and local organizations. Therefore, Congress should immediately increase the Clarke-McNary authorization and appropriations as recommended in the Joint Congressional Forestry Committee's report.

The present method of paying or returning to counties a portion of the proceeds from timber sales and other products is inadequate to meet the annual needs of the county taxing bodies. Therefore, national legislation should be enacted to improve the system of reimbursing local governments for federally owned or managed lands.

Restricted movement of pulp and paper products from other countries has led to the development of increased production of these products in the United States and particularly in Oregon. To cushion the shock which will normally follow post-war adjustments, it is recommended that the proper governmental agencies immediately initiate the necessary studies to determine ways and means of extending a reasonable degree of protection to these industries.

The need for establishing sustained yield units of operation on private property is accentuated by the present emergency. Therefore, the technical government and state agencies should initiate studies looking toward the development of ways and means of compensating private owners for the cooperative establishment of sustained yield forest units. Such studies should be undertaken in close collaboration with county and state land use planning committees. It is urged that legal authority be given the U. S. Forest Service to enter into agreements with private operators for the establishment of sustained yield units and authorization for the purchase of second-growth and old-growth timber.

Incentive Payment Plan

As this state is in a position to produce certain commodities such as specialized vegetable seeds, fiber flax, and other crops heretofore imported, if the federal government finds that supplies of such crops are needed, it is suggested that their production can be brought about in the shortest possible time by means of an incentive payment program similar to that recently in effect for fiber flax. If this program should be undertaken, it is then recommended that whenever imports from foreign countries are made possible again, the size of these imports be graduated over a period of years so as to enable producers in this country to adjust their operations accordingly.

Imports for Hemispheric Solidarity

In the field of hemispheric solidarity, imports of certain commodities such as apples from Canada and pears from the Argentine have worked a hardship on Oregon producers as well as on those of other states. Where such a policy is felt to be advisable from the standpoint of national security and general welfare, it is recommended that the affected producers be compensated for such sacrifices.

Federal Food and Fiber Contracts

Government contracts for many supplies will inevitably develop, some of which will be in force at the close of the emergency. In the interest of the welfare of producers who enter into these contracts requiring months of time it is urged that the government fulfill these contracts and any surpluses thus accumulated be distributed to welfare agencies or to distressed European countries. At the same time, to avoid sharp deflation or harmful inflation, consideration should be given to a general scale of minimum and maximum price for agricultural commodities. In other words, the determination of a price floor and price ceiling.

Advance Purchases by Surplus Marketing Administration

The Surplus Marketing Administration might well make advance purchases of certain commodities not only for its routine activities, but to contribute the most for the money involved for the stabilization of markets. All such purchases should be made upon those grades and varieties that contribute to the long-time welfare of the industry involved.

Wheat Acreage and Loans

The Secretary of Agriculture is urged to set the minimum acreage allowed under the law for wheat in 1942 and establish the maximum loans. It is further pointed out the need for incorporating a requirement as to conservation practices in connection with any payments for wheat.

Department of State and Surplus Marketing Administration

The Department of State and the Surplus Marketing Administration should coordinate their efforts so that the adjustments of importations and surplus purchases will work together to cushion the effects of foreign trade relations as they may be changed from time to time.

Soils Data Needed

Land use planning committees find an increasing need for fundamental soils data such as those provided by the four-factor surveys of the Soil Conservation Service. These data are needed before making

fundamental land use adjustment recommendations, and to that end it is recommended that administrative rulings of the SCS be changed so as to make the services of that organization adequately available to the several counties without the need for establishment of soil conservation districts.

Erosion on Army Sites

To the officers of the U. S. Army the Oregon committee recommends immediate attention to ways and means for controlling wind erosion problems developing on the Morrow County bombing range, the Hermiston ammunition dump, and the Camp Clatsop sand dune area.

Farm Labor

Because of the probable extreme shortage of farm labor for harvesting many of the specialty crops of this state, immediate consideration should be given to ways and means for releasing CCC enrollees for emergency harvesting activities, should they develop.

Family-Type Farms

The economic and social welfare of rural life in this country demands that every effort should be directed toward establishing and maintaining the family-type farm unit. To this end it is recommended that all agencies, public and private, direct their efforts to furthering this ideal.

Rural Electrification Administration

The continuance and further expansion of the rural electrification program as a means of stabilizing the rural home and bringing greater economic security is strongly recommended.

Vocational Education

The need for vocational education in rural areas is recognized as one of the desirable fundamental adjustments in the secondary school system. By utilizing the present school system and facilities it is recommended that a program be established that will make available vocational training in all rural high schools, and that the facilities for instruction in home economics be expanded, looking toward the requirements of such courses for every girl.

Assisting Farmers to Maintain Reasonable Income

Under the present emergency state and federal agencies should assist farmers in maintaining income through marketing quotas, commodity loans, and surplus removal activities, such assistance to be contingent

upon farmer compliance with production adjustment programs. Quotas and loans should be tied directly with production control programs with payments to cooperating farmers to be made from funds raised by certificates or taxes on the commodities.

For a long-time program we recommend that federal aid be directed toward and contingent upon individual farm adjustments in keeping with an ideal farm plan designed to get maximum conservation of land and associated resources.

In other words we favor emphasis upon all three methods as outlined above.

Reduced Opportunities to Market Abroad

With reference to wheat, apples, winter pears and dried prunes consideration should be given to shifting permanently high-cost or high-hazard areas to other alternative systems of farming. Considerable progress has already been made in Oregon in this direction. Such shifts, if made intelligently, must be made upon the basis of fundamental data regarding soils, slope, degree of erosion, etc.

If existing restrictions in the making of four-factor surveys were removed this would be most helpful in accomplishing the desired shifts. With the basic data provided by four-factor surveys the State Land Use Planning Committee could readily formulate a general land use plan for the state which would delineate the major adjustment areas.

DETAILED RECOMMENDATIONS AND PLANS OF ACTION

GENERAL FARMING

In the preparation of this report the committee drew freely upon the counsel of individuals and organizations not directly represented on the committee. Among the organizations who have been consulted either in person or by letter are: Apple Growers' Association of Hood River, Fruit Growers' League, Rogue River Valley Traffic Association of Medford, Eastern Oregon Wheat League, Oregon State Grange, Oregon Farmer Union, and various individuals. Of particular significance was the tri-state wheat meeting held at Walla Walla, and which resulted in the wheat section of this report.

The agricultural enterprises considered by the committee represent 55 percent of the annual primary wealth-producing capacity of Oregon. In addition, the fundamental problems of soil and water conservation, development of deforested lands, farm credit, and farm labor all add to the multiplicity of problems in this field.

For the purpose of this presentation the report is divided into nine main sections, as follows:

1. Import type agricultural commodities
2. Domestic type agricultural commodities
3. Export type agricultural commodities
4. Utilization of deforested lands
5. Soil conservation
6. Water conservation
7. Farm credit
8. Farm labor
9. Government policy and agriculture

Import Type Agricultural Commodities

Farm products produced in Oregon which are also imported from foreign countries include flaxseed, flax fiber, sugar, and sugar beet-seed, some seeds of various kinds of forage crops, vegetable crops, and

flowers, some flower bulbs, filberts and walnuts, some beef, wool and furs. (Commodities both imported and exported include dairy products, and more recently some apples, pears, and small fruits.)

Statement of Situation. The most important import type crops produced in Oregon are flax grown for fiber, flaxseed, hops, nuts, and flower bulbs. Acreages of these crops, with the exception of bulbs, are shown in the following table:

Acreages of Import Type Crops

Years	Fiber Flax	Flaxseed	Hops	Filberts Walnuts	Misc. Crop & Veg. Seeds
1921-25	--	--	12,117	--	--
1926-30	2,760	--	15,393	11,174(1929)	--
1931-35	1,467	--	19,803	--	--
1936-38	3,057	3,112	21,000	25,807(1938)	5,775(1938)
1939	3,900	6,999	19,299	26,594	3,499
1940	7,490	3,998	19,593	29,951	5,769

The acreage of fiber flax has increased considerably during the past few years in the Willamette Valley as a result of the government incentive payment under the AAA. The production of miscellaneous crop and vegetable seeds has also increased since 1938. Hop acreage, which is restricted principally to the Willamette Valley and Southern Oregon, has remained at about the same level since 1935. For the past few years hop growers have imposed quotas on themselves under provisions of the AAA. Acreage of nut trees has gradually increased during the past 10 years. Some acreage increases in miscellaneous crop and vegetable seeds are occurring, particularly because of the restrictions of imports from European countries as a result of the war. Adequate statistics for bulb production in the state are not available.

The following table shows the annual average cash income for the import type crops:

Average Annual Cash Income for Period 1936-38

Crop	Amount
Fiber Flax	\$ 92,600
Flaxseed	53,900
Hops	2,851,000
Walnuts & Filberts	1,102,400
Misc. Crop & Veg. Seed	249,600

Recommendations. Increases in the acreage of crops which normally are imported will be necessary in some cases to supply domestic demand, particularly in the case of crops not commonly grown, such as certain vegetable seeds and similar crops.

(1) Contracts for such crops should be secured by the grower before the acreage of such crops is increased.

(2) The incentive payment plan of the AAA as now used for fiber flax production should be extended to the production of such crops as vegetable seeds that are needed for dietary reasons in the United States, and which have heretofore been principally imported.

(3) Specialty crops such as fiber flax, flower bulbs, and miscellaneous crop and vegetable seeds, production of which is increasing to meet domestic demand, will need protection if the national trade policy is such that foreign imports of these products are allowed to enter the United States in competition with crops domestically produced at the close of the present war.

(4) Particularly where the government recommends the increase of certain crops to meet domestic requirements, the return of imports should be brought about on a gradual scale through government control, rather than all at once, in order to give producers a chance to adjust their production.

(5) It is recommended that the imports of hops from German sources that have been coming into the United States through Russia be stopped.

Domestic Type Crops

The products of Oregon which are sold almost entirely in the United States include dairy and poultry products, truck crops and potatoes, most small fruits and peaches, meat (except some United States pork is exported), wool (of which some is imported), feed grains and hay, most of the seed crops, and nursery, greenhouse and bulb crops. This category, excepting wool, pork, and beef, represents \$46,697,000 of the Oregon farm income.

Dairy Products. The sale of milk products produced in this state brings in greater returns than any other agricultural commodity. For the period 1936-38, the annual average income from all milk products sold by farmers for cash was \$20,518,700, which was approximately 18 percent of the total cash income from agricultural products for that period.

Oregon's milk production and average price of butterfat by periods since 1921 and the number of dairy cows two years old or over are shown in the following table:

Years	Ave. number milk cows	Ave. yearly milk production pounds	Ave. price butterfat pound
1921-25	208,794	964,560,000	.431
1926-30	218,700	1,232,493,334	.442
1931-35	265,620	1,303,495,667	.234
1936-38	260,667	1,339,666,667	.323
1939	263,013	1,363,780,667	.257
1940	258,060		
1941	263,273		

Recommendations. Increased demands for dairy products as a result of increased consumer purchasing power will tend to cause an increase in the number of dairy cattle.

(1) Any increase in numbers during the next few years should be limited to instances where such expansion will bring about more efficient operation of the farm plant, through disposal of excess feeds, or in other ways.

(2) The construction of new buildings and equipment for the expansion of dairy cattle is felt to be undesirable under present conditions.

(3) Immediate increased needs for milk products can best be met by the increased feeding of dairy cattle.

(4) Dairy men should be encouraged to dispose of unprofitable animals in order to take advantage of the high beef prices and to encourage efficient production.

(5) Increases in consumption of fluid milk as a result of the establishment of army camps or temporary national defense industries can be met by the shifting of milk now used for dairy products to use as fluid milk. Such a shift will eliminate necessary expansion in buildings or equipment in existing grade B dairies.

(6) Continued activity of the Dairy Products Marketing Association in order to maintain prices of butterfat is recommended. In addition it is recommended that a "ceiling" in butterfat prices should be established in order to discourage overexpansion of the dairy industry because of temporary demands.

(7) Research on the part of the Bureau of Animal Industry in cooperation with the state agencies should be continued in order to determine the best method of controlling Bang's disease. Consideration should be given to both the test and slaughter method and the vaccination method of control.

Poultry. Poultry products are produced in all sections of Oregon, but the largest commercial production is located in the western part of the state. The average cash income for the period 1936-38 for all poultry products amounted to \$9,233,800 annually.

Poultry trends are shown in the following tables:

Average Yearly Production

Years	No. Chickens	No. Turkeys
1921-25	3,427,497	--
1926-30	3,455,064	612,060 (1929-30)
1931-35	3,369,300	729,624
1936-38	3,063,000	1,212,000
1939	2,833,275	1,517,424
1940	3,133,449	1,442,280
1941	3,001,740	

Average Yearly Prices

Years	Eggs cents per dozen	Turkeys cents per pound
1921-25	31.7	
1926-30	29.7	35.3
1931-35	19.0	20.1
1936-38	21.7	21.1
1939	19.6	19.7

Recommendations. In view of the request of the United States Department of Agriculture for increased egg production to meet increased domestic demand and possible shipments to Great Britain and because of the established price for eggs at 22 cents a dozen, it is recommended that:

(1) Where facilities and equipment are available, poultrymen should make full use of all facilities;

(2) Utilize feed resources for the greatest possible production;

(3) And maintain high standards of quality, particularly because of the necessity of shipping eggs long distances.

(4) No increase in the production of turkeys over present numbers is felt to be justified at the present time, with the exception that

(5) Where facilities are available, production of turkeys might be increased in the wheat-producing areas in order to utilize surplus wheat.

Fruits. Fruits that are principally produced for domestic consumption are peaches, cherries, and all small fruits.

The average annual cash income from peaches for the period 1936-38 was \$204,000. No statistics on the cash income from cherries are available. The total annual average cash income for small fruits during the same period was \$3,560,900.

The acreages by years for the principal domestic type fruits are listed as follows:

Average Yearly Acreages of
Certain Domestic Type Fruits

Years	Peaches	Cherries	All Small Fruits
1921-25	3,483		
1926-30	3,652	11,684	
1931-35	4,141	11,971	
1936-38	5,764	15,562	21,379
1939	5,951	15,562	21,978
1940	6,253	15,562	

The prices of cherries and peaches started a general decline in 1931 from the prices prevailing during the 1920's. In 1940, prices for strawberries, red raspberries, blackberries, and black raspberries were from 83 to 85 percent of the 1926-30 price levels. Loganberries were but 54 percent of the average price received during the 1926-30 period, but gooseberries were higher in price. Purchases of loganberries were made by the Surplus Marketing Administration in 1940 at very depressed prices, which were, according to some sources, less than the cost of harvesting.

Recommendation. The purchasing of small fruits by the Surplus Marketing Administration, as well as other domestically-consumed produce, when there is a surplus due to seasonal or market fluctuations that cannot be anticipated, should be made early in the season before the price has collapsed, and should be at a price that will enable the industry to stay in business.

Other Cash Crops. The most important cash crops which are grown principally for domestic consumption include all varieties of truck crops, forage crop seeds, potatoes, and ornamental and nursery stock. The principal areas producing truck crops are in the Willamette Valley, mostly in areas surrounding Portland or where canneries are located. Forage seed crops are produced principally in the Willamette Valley and in the irrigated sections of Eastern Oregon. Forage seed production has increased considerably during the past two years, particularly in the case of vetch and peas, which are purchased under the AAA crop grant-of-aid program. These two have increased from 85,000 acres in 1939 to 150,000 acres in 1941. The acreage of cash crops and the annual average cash farm income are shown in the following tables:

Acreage of Cash Crops Grown in Oregon by Years

Years	Truck Crops	Forage Crop Seeds	Ornamental and Nursery Stock	Potatoes
1921-25				36,000
1926-30	5,773			36,810
1931-35	13,063			46,800
1936-38	37,007	159,768	3,621	45,000
1939	36,970	199,390	3,959	45,000
1940	45,889			45,990

Annual Average Cash Farm Income for Period 1936-38

Truck Crops	\$ 5,402,300
Potatoes	4,112,700
Forage Crop Seeds	3,664,600
Ornamentals and Nursery Stock	2,860,300
Total	\$16,039,900

Prices of truck crops are generally from 50 to 70 percent of the prices that prevailed during the period 1926-30. Exceptions to these lower prices are found in the case of carrots, sweet corn, cucumbers, and a few other vegetables. The price of potatoes in 1939 was but 54.2 percent of the average price received for the period 1926-30. Potato prices raised some during the period 1936-38 but were lower during the 1931-35 period. With a few exceptions, the prices of forage crop seeds remained about the same during 1940 as in the period 1936-38, or were higher. Prices of alsike and red clover seed were considerably lower than during the base period, 1926-30.

Recommendations. (1) The grant-of-aid program for vetch and seed peas for cover crops should be continued by the AAA until a market for these crops is established in the South.

(2) Potato allotments under the AAA program should be continued, but the production of potatoes should be discouraged on unadapted soils.

(3) As in the case of small fruits the Surplus Marketing Administration purchases of potatoes and other domestically consumed products, when there is a surplus due to seasonal or market fluctuations which cannot be anticipated, should be made early in the season before the price has collapsed and at prices that will enable the producers of these crops to stay in business.

Export Type Crops

Oregon's principal farm products which have been greatly dependent on foreign market outlets are wheat, prunes, apples, and pears. Other items include moderate amounts of canned fruits and milk, and some peppermint oil. Oregon pork competes with pork from other states. During the past decade wheat acreage has been reduced approximately 24 percent, prunes 26 percent, apples 55 percent, and pears 10 percent. Oregon's acreage of "export-type" products has been reduced from approximately 30 percent of the total acreage to approximately 20 percent. There remain approximately 800,000 acres of wheat, 41,400 acres of prunes, 14,100 acres of apples, and 19,000 acres of pears. Approximately one-third of the production of this land would normally be available for foreign markets, with two-thirds for United States markets.

Annual Average Cash Income
from Export Type Crops
1936-38

Commodity	Income
Wheat	\$12,259,700
Apples	2,221,333
Prunes	1,299,000*
Pears	2,940,666

*For 1937 from Horticultural Industry.
Henry Hartman. 1939

Wheat. From the standpoint of both income and acreage, wheat is the most important crop grown for export in Oregon. For the period 1936 to 1938 the annual average cash income from wheat harvested and marketed as grain was \$12,259,700, which was 10.7 percent of the cash income from all agricultural products produced in the state for that period. The 1939 acreage of wheat was approximately 26.6 percent of the total harvested crop acreage of the state for that year (1940 census). Commercial wheat production in the state is centered in the Columbia Basin area. Seventy-three percent of the wheat acreage in Oregon in 1940 was located in this section of the state.

The Columbia Basin wheat-producing section is located a great distance from the principal consuming centers of the nation. This disadvantage is made up to a considerable extent by the fact that cheap water transportation is now available. As a result of the construction of the Bonneville dam, wheat can be transported on the Columbia River from the center of the wheat-producing region to Portland and from there by water through the Panama Canal to eastern points.

Wheat production in the Columbia Basin is marked by stability of yields, which is not characteristic of many of the other wheat-producing sections of the United States. Records of wheat production in the Columbia Basin show that for the period 1889 to 1939 the average yield of 10 bushels per acre for 1889 is the lowest reported and that for 1928, 22.7 bushels, the highest.* The low percentage of abandonment of wheat acreage in the Columbia Basin is shown by the fact that the annual percentage of abandonment is only 1.7 percent for spring wheat and 10.6 percent for winter wheat seeded for the five-year period 1936-40. These figures do not entirely represent abandonment since some wheat is included that is later cut for hay.

* Oregon Agricultural Experiment Station Bulletin 373.

Because of the large size of farming units and the use of efficient machinery, the cost of producing wheat in the Columbia Basin is low. Studies of production costs on dry-land wheat farms of the Columbia Basin in Oregon made by the Oregon Agricultural Experiment Station* show that in 1936, which is considered an average year, wheat was produced at a net cost of 66 cents per bushel. The cost of production exclusive of all interest charges averaged 43 cents per bushel.

The alternatives to wheat production in the Columbia Basin in Oregon are extremely limited. No other known crop will make returns equal to wheat. Seeding to grass is practically the only alternate use that can be made of wheat lands and studies** which have been made show that under present conditions land which yields more than 8 to 10 bushels per acre will probably return more in actual cash to the farm business if left in wheat.

In 1940 wheat acreage had decreased in the state from the 1936-38 period by about 172,437 acres. Average wheat acreages for Oregon since 1921 and average farm prices for wheat are listed as follows:

Year	Acres	Price per bu.
		Cents
1921-1925	949,920	113.2
1926-1930	1,057,065	109.2
1931-1935	910,137	56.3
1936-1938	1,020,333	77.2
1939	752,406	61.8
1940	847,896	

From the above table it appears that wheat producers enjoyed favorable prices for wheat from 1921 to 1930, but that a sharp decline followed beginning with 1931.

Loss of export markets for wheat, with the resulting accumulation of large surpluses, has been the greatest factor in causing the decline in wheat prices in Oregon, as in other wheat-producing sections. Since 1938 the AAA wheat loan has established the price of wheat and the majority of commercial wheat producers have been able to maintain production only as a result of the benefits received from the AAA program.

* Oregon Agricultural Experiment Station Bulletin 373.

** "The effect of soil conservation practices in the dry-land wheat region of Oregon." H. L. Thomas, Soil Conservation Service.

Commercial wheat growers generally recognize the effect of the present world wheat situation on wheat production in Oregon. Representatives of the wheat leagues of Oregon and Washington; the State Land Use Committees; the AAA; the BAE; and the Extension Services of Washington, Idaho, and Oregon met at the suggestion of the Oregon State Land Use Committee to consider methods of solving the wheat surplus problems of the Columbia Basin area. The recommendations of this group form the basis for the following section of the report.

(1) It is felt that the production control features of government programs applying to wheat should be closely correlated with the land use and conservation features of such programs in order that conservation practices will be adopted by wheat growers along with acreage reduction.

(2) The present wheat situation demands drastic action by wheat producers. The Secretary of Agriculture is asked to set the 1941 wheat loan rate at the maximum percentage of parity provided in the law, and

(3) To set the wheat acreage allotment for 1942 at the minimum acreage provided by law. It appears to be necessary for wheat growers to reduce the production of wheat to the point that the supply corresponds to the market demand.

In making further reductions of the wheat acreage in the Columbia Basin area, it is suggested that the area be divided into two classes on the basis of rainfall; the first consisting of those areas having less than 16-18 inches of rainfall; and the second, those areas having more than 16-18 inches of rainfall. The commercial wheat-producing areas of Oregon which receive an amount of annual precipitation in excess of 16-18 inches are limited and for this reason rotations practicable in parts of Idaho and Washington apply to only a few farms in Oregon. In areas receiving less than 16-18 inches of rainfall the land is suitable only for the production of wheat or grass and consequently a larger portion of the area will need to remain in wheat.

(4) For these areas (having less than 16-18 inches of precipitation) it is recommended that 15 percent of the total area be retired permanently to grass. The remainder, or 85 percent, should be placed in a rotation of wheat and grass, the ratio to be dependent on the demands for and price of wheat, consistent with adequate land use practices.

(5) The following conservation practices should be established on all wheat lands of the Columbia Basin:

- (a) Fall crops or the last fall operation should be on the contour.
 - (b) On areas producing less than 20 bushels of wheat per acre all crop residue should be utilized for erosion control practices.
 - (c) Continuous slopes of about 1,500 feet or more should be broken with alternate strips of crop and fallow.
- (6) Similar conservation practices that are applicable to each wheat-producing area of the United States should be developed and put into effect in all wheat-producing areas simultaneously.
- (7) Abandoned croplands or lands formerly retired from crop production should not be returned to cultivated crop use under any circumstances. Any operator or landlord who returns to cultivation such land should not be eligible for federal benefits on such land unless equivalent crop acreage is retired.
- (8) During the period of crop adjustment, it is felt that mechanical methods of weed control should be actively carried out by each farmer.
- (9) Lands which are diverted from wheat production can be best utilized to produce supplemental feed for range livestock. Arrangements should be made for moving livestock from the range areas to utilize such crops for finishing beef animals which will result in producing a higher quality of beef and maximum utilization of feed resources.
- (10) In order to permit the maximum conservation on all leased wheat-producing lands, it is suggested that landlords and tenants draw leases in order to allow the full use of conservation practices.

Certain Tree Fruits

Apples. The principal commercial apple-producing section in Oregon is located in the Hood River Valley. Smaller commercial plantings are located in the Milton-Freewater area of Umatilla County and in the Rogue and Umpqua River valleys of Jackson and Douglas counties. There is also some commercial apple acreage in the Willamette Valley and in Union and Malheur counties. The average cash income from apple production for the period 1936-39 amounts to \$2,221,333, which is approximately 2 percent of the total cash income from all agricultural products of the state for that period.

Oregon's apple crop is marketed largely as fresh fruit in markets throughout the United States, and was previously sold in a number of foreign countries.

Because of the gradual loss of export markets and increased competition from other apple-producing sections and other fruits, the acreage of apples has decreased considerably since 1925. There has been an upward trend in the per capita consumption of citrus fruits, pears, and bananas. On the other hand, consumption has decreased for apples and peaches.

The following table shows the apple acreage by periods, starting with 1921. About two-thirds of the acreage is in commercial production.

<u>Year</u>	<u>Acres</u>
1921-25	50,510
1926-30	30,995
1931-35	26,090
1936-38	16,750
1939	15,080
1940	14,089

The price decline in apples since 1929 is brought out as follows:

Farm Price of Apples
(per bushel)

1921-25	\$ 1.32
1926-30	1.14
1931-35	.67
1936-38	.84
1939	.72

Production in excess of market demands which has caused declines in prices for apples has been brought about by loss of foreign markets, loss in buying power of consumers, and great increases in production and consumption of citrus fruits which have replaced per capita consumption of apples.

The Surplus Marketing Administration has made purchases of surplus apples during recent years and has distributed them for relief purposes. During the past season such purchases have been made at low market prices which have fixed that price, and as a result jobbers and dealers have offered the same price and have then profited as much as possible.

Recommendations. The removal of varieties of apple trees which do not meet the present market demands is felt to be desirable. Non-productive and neglected orchards should also be removed.

(1) Practices of the AAA program which provide payments for the removal of trees of this type should be continued and a more adequate allowance provided.

(2) Purchases of apples made by the Surplus Marketing Administration for the purpose of removing the surplus from the market should be made at the beginning instead of late in the season, as has been the case in the past. Early purchasing would be beneficial to the apple industry by reducing costs of packing, avoiding storage costs, and enabling the industry to know the amount of apples that they must move on their own initiative. It is felt that

(3) Purchases of the Surplus Marketing Administration should be large enough to offset, to a considerable degree, the lost foreign markets and any competition that imports from foreign countries will bring.

(4) The price offered by the Surplus Marketing Administration, it is felt, should be based on average prices heretofore prevailing, considering producing districts and grades, in order that a workable price may be maintained and so that the price will not be stabilized at a figure below the cost of production.

(5) In making purchases of apples it is recommended that the Surplus Marketing Administration gradually discontinue the purchasing of varieties that are commercially not acceptable. Such purchases tend to encourage the production of these odd varieties rather than to encourage their removal.

(6) If the imports of Canadian apples are necessary because of national policy, it is felt that quotas should be established a long period in advance so that the apple industry will know how much competition from this source can be expected.

Pears. The average income for pear production for the period 1936-38 amounts to \$2,940,666. This amount is approximately $2\frac{1}{2}$ percent of the total cash income from all agricultural products of the state.

Acreage of all pears increased until 1935, when the total acreage started to decline; a serious decline in prices of pears began in 1930. Acreage by years and price per bushel are shown in the following table:

<u>Years</u>	<u>Acres</u>	<u>Price per Bushel</u>
1921-25	18,763	\$ 1.65
1926-30	21,174	1.08
1931-35	22,743	.54
1936-38	19,468	.63
1939	18,968	.50
1940	19,104	

A considerable part of the pears in the state is produced primarily for canning. The remainder is marketed entirely as fresh fruit and is shipped to leading domestic markets, and formerly was marketed in a number of foreign countries.

The pear producer, as well as other producers of export type fruits, has been seriously affected by the loss in export markets. Competition from citrus fruits has also had an effect on the marketing of pears. Pear producers, through their organizations, have been building up domestic markets for pears during the past few years, to replace lost foreign markets.

The Surplus Marketing Administration has made purchases of winter pears in order to remove surplus production from the market and distribute it for relief purposes.

Recommendations. (1) The removal of diseased pear trees or trees of unmarketable varieties, or on unsuited locations is recommended.

(2) The practice payment in the AAA program for removal of apple trees should be made available for the removal of pear trees. It is felt, however, that orchards of marketable varieties that are in good production should not be eliminated at the present time.

(3) The continuance of practices in the AAA program to encourage the proper maintenance of orchards and conservation of soils is recommended.

(4) The purchase of winter pears by the Surplus Marketing Administration should be made at harvest time in order to avoid increased cost to growers and packers for storage and in transit rail charges.

(5) It is felt that purchases of pears by the Surplus Marketing Administration should be made at prices that have been established after consideration of past average prices, producing districts, and grades of fruit.

(6) Early establishment of a quota for Argentine pears is felt to be imperative by pear producers in order that the industry will be able to know in advance the amount of pears that will be shipped into the country to compete with domestically produced pears.

(7) It is recommended that the federal government purchase winter pears for use in training camps and in army and navy stations, and that winter pears be purchased under provisions of the Lease-Lend bill, for shipment to foreign countries.*

(8) That adequate financing be provided to enable this industry to weather the present storm of world-trade conditions.

Prunes. The cash income from prune production in Oregon for the year 1937 amounted to \$1,299,000,** which is approximately 1 percent of the total cash income from all agricultural products of the state for the period 1936-38.

The acreage of prunes has been declining considerably since 1930. This decrease in acreage can be attributed to loss of export markets and competition from other varieties of fruit. Acreage figures and price per pound are shown in the following table:

Year	Acres	Cents
		Per Pound
1921-25	56,765	
1926-30	56,233	5.9
1931-35	48,352	5.0
1936-38	45,548	3.7
1939	42,792	3.4
1940	41,583	

From the above it is apparent that, along with acreage decreases, prices have been lower for dried prunes in recent years.

A considerable amount of the prune acreage in the state is considered to be producing inefficiently. Many orchards are located on unsuited soils and have greatly deteriorated.

* Recommendations made by the Fruit Growers' League and Rogue River Valley Traffic Association, Medford, Oregon.

** Horticultural Industry. Henry Hartman. 1939.

About 19 percent of the prune production is marketed in the fresh state, about 25 percent is canned, and about 56 percent is dried. During the past few years the demand for canned prunes has increased, while the market for fresh prunes has held its own. The demand for dried prunes has shown a marked decline.

Recommendations. A period of very low prices has existed in the dried prune market for years. As a result, orchards and equipment have deteriorated to the extent that it would not be feasible to try and build a large percentage of the orchards up to a state of economical production. Drying facilities are in a run-down condition, and in most cases the prunes are handled in a very unsanitary way. Such a large percentage of the crop is handled in this manner that properly handled prunes bring no more than the junk.

We recommend:

- (1) That the AAA in conjunction with the SCS make a survey of the orchards as to condition of trees and soil erosion and where, in their judgment it is not economically practical to operate them as an orchard, that the AAA payment be increased for pulling trees.
- (2) That the practice by the Prune Exchange of changing grades from year to year be discontinued.
- (3) That rigid inspection based upon approved standards of driers and washing equipment and farm storage be at once set up.
- (4) That the Pure Food and Drug Administration give the same inspection service to the dried prunes that they do to the canning industry.

We feel that unless the quality* of Oregon dried prunes can immediately be improved, the dried prune industry is doomed.

Utilization of Deforested Lands

The Problem. There are approximately one and one-half million acres of cut-over timber lands in Oregon west of the summit of the Cascade Range. Most of these lands are in the Douglas-fir region. The heaviest harvesting of timber from these lands has occurred in the counties bordering the Columbia River and the Pacific Ocean. The following table* shows a breakdown of the cut-over lands in the Douglas-fir region.

*Forest Resources of the Douglas-Fir Region, United States Department of Agriculture Miscellaneous Publication No. 389, P. 73.

Stocking Classification of Cut-Over Lands in the Douglas-Fir Region

	Well stocked	Medium stocked	Poorly stocked	Non- stocked	total
	Acres	Acres	Acres	Acres	Acres
Oregon lands cut over --					
Since beginning of 1920	86,285	122,237	208,522	301,998	719,042
Prior to 1920	238,584	309,550	127,740	139,698	815,572
Total	324,869	431,787	336,262	441,696	1,534,614

From the standpoint of possible adjustments in the use of these lands the significant figures are the three-quarters of a million acres classed as poorly stocked and nonstocked.

Many owners of cut-over lands fail to pay taxes on them after the timber crop is harvested. After a period of five years, the taxes become delinquent, and the land is then subject to foreclosure for non-payment of taxes. In one Western Oregon county, 61,000 acres of cut-over land had been foreclosed for unpaid taxes up to and including 1939 and, in addition, a considerable acreage had been deeded to the county by the owners of the land in order to obviate the expense of foreclosure on the part of the county. The tendency to fail to pay taxes on cut-over land exists throughout all Western Oregon counties to a greater or lesser degree.

In addition to the tax foreclosure problem, the constantly decreased valuation of timber lands resulting from the continued harvesting of the timber crop creates a perplexing problem involving the fiscal policies of the county and the state governments.

The main reason for the owners of cut-over lands being unwilling to pay taxes is because of the financial burden and hazard of retaining ownership of the lands until such time as another timber crop is ripe. As a partial solution to this problem, attention has been directed to the possibility of developing a more productive use for some of the cut-over lands which will permit them to be retained in private ownerships. One of the possible higher uses suggested is to convert such of the lands as may be so adapted to grazing by the proper seeding of them to approved varieties and types of grass. There seems to be some difference of opinion among technical men, among farmers and among timber owners as to the possibility of effectively using a part of these lands for grazing purposes.

For some years farmers, county courts, and county agents have cooperatively established, in several of the coast counties, trial

seedings on cut-over lands. The most promising varieties of perennial grasses alone and in various combinations have been used in these trials. The information gained from these trials has been and is continuing to be the basis for many seedings on ranges under development.

The State of Oregon has recognized the importance of attempting to utilize some of the cut-over lands for grazing purposes by establishing an experimental grazing area on typical cut-over land of Northwestern Oregon in cooperation with Clatsop County. This experimental grazing area includes 697 acres of land that have been fenced and properly seeded to various kinds of sod-forming grasses, including the bents, the fescues, the bromes, and some legumes. While this experimental area has only been in operation four years it seems fairly certain that these types of grasses will not only establish themselves but will maintain their stand on very steep slopes of cut-over land under livestock use. In fact, there is some evidence that proper grazing by livestock actually accelerates the tendency of these grasses to spread and thicken in stands.

This tract, known as the Northrup Creek Grazing Area, is being grazed with approximately 75 head of cattle, 350 head of ewes with lambs, and 50 head of goats. The carrying capacity is about 1 mature cow for each 4 acres, and 1 mature sheep for each acre.

Sheep grazed on similar land, adjacent to this experimental area and seeded to similar grasses, produced lambs which were marketed at a weight of approximately 90 pounds at the end of the proper feeding period. The lambs marketed from the Northrup Creek Grazing Area were also sold at satisfactory market condition.

An economic study* of ranch organization and range land use in Coos and Curry counties, Oregon, by the Bureau of Agricultural Economics in cooperation with the Oregon Agricultural Experiment Station, including data from 40 ranches, shows that the average carrying capacity grazed 1 sheep for every 1.7 acres of land, and 1 cow for every 11.6 acres of land. On these ranches only 61 percent of the total acreage was in improved pasture; 37 percent was in timber, brush, and waste land, and only 2 percent was in cropland. This study shows the following income from the operation of what might be termed "family-sized" sheep and cattle ranches.

*Ranch Organization and Range Land Use in Coos and Curry Counties, Oregon, Station Bulletin No. 381.

	<u>Cattle</u>	<u>Sheep</u>
Gross area operated	1,000 acres	850 acres
Animals operated	100 animal units	500 (100 a.u.)
Total investment	\$16,000	\$16,500
Ranch income	\$ 1,400	\$ 1,533
Interest on the investment at 5%	\$ 800	\$ 825
Family labor income	\$ 600	\$ 708

It is estimated from the land use studies in Coos and Curry counties that there is apparently sufficient adaptable land to graze a total of about 200,000 sheep while in 1939 there were only 45,000 grazed in these counties. From the above data it would appear that there is unquestioned possibility of profitably grazing appreciable portions of the cut-over lands in the Douglas-fir region.

The Possible Modification of Suggested Size of Operation as a Result of Changed Future Economy.

A redistribution of population may occur after the termination of the emergency phases of national defense activity. This may cause a readjustment of thinking as to the size of grazing operations in the cut-over land areas. Rather than attempt to operate with a 100 cow unit or a 500 sheep unit, which as a sole operation is considered necessary to produce an adequate family living on the basis of our present standards, it may be considered desirable to reduce the size of grazing operations and to supplement the grazing operations with some farming operations on land adequately cleared for that purpose. Recent developments in land clearing devices, with emphasis on tractors and supplemental attachments, indicate that some cut-over land can be made ready for the plow at a cost much below that which has prevailed. Such land when cleared should not cost more than 50 to 75 dollars an acre. Its use would permit supplementing the cut-over grazing land income with income from crops and perhaps dairy cattle. This type of operation would cause some readjustments of thinking with reference to public services, such as schools and roads, as compared with present land use objectives in this area. While such use of land is not a part of the land use program under present consideration, its possibilities for providing homes and a living for people in the post-war period should receive some consideration.

Suggested Program

Continued Research Needed. The foregoing suggests the importance of focusing upon the problem all of the research facilities that may conceivably make a contribution of sound factual material that may be applicable to it.

The Oregon Agricultural Experiment Station has a well-organized research program in operation on the Northrup Creek Grazing Area. It has enjoyed the cooperation of the State Board of Forestry and the Soil Conservation Service in getting this unit of work established. Its program on this area should be continued, with such modification as may seem desirable from time to time to meet new angles that may develop as the work progresses. Its main objective should be to measure the value of grasses on cut-over lands when used by livestock. The work of the Oregon Experiment Station at Northrup Creek should be supplemented by closely coordinating the research work applicable to pasture which it is conducting on the red hill soils in Clackamas County and that in prospect on the hill type scrub oak land recently acquired at Corvallis.

The recent legislation liberalizing the program of the State Board of Forestry and authorizing closer collaboration with work of this type should be made immediately effective by that Board. The program of the Pacific Northwest Forest Experiment Station should be enlarged to permit more intensive study of this problem by that organization. The possibilities of cooperation between this station and the Northrup Creek Grazing Area to take advantage of the livestock resources of the latter in measuring results should be considered. All other federal or state agencies whose resources permit a contribution to this problem should be encouraged to find their proper place in a coordinated attack upon the problem.

Legal Classification of Cut-Over Lands. Chapter 381, Oregon Laws 1937, provides for the segregation of forest lands into three classifications, one (Class 3) of which is for grazing purposes. This gives legal status to this use of these lands and makes it possible for such state agencies as the State Board of Forestry to cooperate in the development of such legally classified land which has been determined by the county land classification committees to be primarily adapted to grazing. The so-called Four-Factor Land Survey of the Soil Conservation Service, which includes "slope", "erosion", "cover", and "soil type", could very appropriately be the basis for the official action of the county land classification committees in their work of classifying these lands.

The need for the basic information provided by the four-factor survey has already been recognized by land use committees in both Coos and Tillamook counties, as they have heretofore formally requested such surveys in those counties. Such a report has been made by the Soil Conservation Service on the Northrup Creek Grazing Area. Obviously, the first step in the permanent development of any grazing lands or areas on the cut-over lands of Western Oregon should be based upon the formal classification of such lands under Chapter 381.

Fire Protection through Use of Grazing Areas or Strips. The ever-present danger of fire is recognized by all state, federal, and county agencies, and private individuals, having anything to do with the administration or utilization of cut-over lands. Recent changes in legislation make possible more adequate application of the fire control measures to these types of lands, and recognize the agricultural or grazing uses to a greater extent than formerly. In this connection, the possibility of establishing grazing strips surrounding or running through the areas set aside for reproduction of timber for the purpose of creating fire breaks should be carefully considered.

Large Scale Development Projects. While the per acre costs of converting cut-over lands into grazing lands are not high, the total investment in a ranch unit amounts to a considerable sum. The lands owned by the state and counties that will be found suitable for grazing will likely total hundreds of thousands of acres. It is obvious that from the standpoint of fire protection alone, it would be desirable to plant the classified grazing lands into grass as soon as possible and to immediately use the grass for the production of livestock, namely, cattle and sheep. It is difficult for the counties to find buyers with sufficient capital to first purchase, then improve and operate these lands in an orderly systematic manner. It would be much better for the entire program if the properly classified grazing lands could be offered for sale ready for use. By that is meant that they should be properly seeded and fenced in usable units.

The possible adjustment of the W. P. A. and the CCC program to permit the help of these agencies in making the improvements indicated on county and state-owned lands with the objective sale or lease to individuals should be considered. This type of work lends itself to the use of unskilled labor under competent supervision. Through these or similar agencies, much more rapid development of grazing on cut-over lands could be accomplished.

Soil Conservation

Eastern Oregon. The most serious soil erosion in Eastern Oregon is occurring on Columbia Basin wheatlands. In the past there have been serious losses from both wind and water erosion. The summer-fallow type of wheat farming that has been practiced in the Columbia Basin has been conducive to the development of erosion.

Studies made by the Soil Conservation Service on representative farms in the Columbia Basin show that on 42.5 percent of the cropland less than 25 percent of the surface soil has been removed; on 51.7 percent of the cropland 25-75 percent of the surface soil has been removed or relocated; and on 5 $\frac{1}{2}$ percent of the cropland over 75 percent of the surface soil has been removed by wind and/or water erosion. The results

of this study indicate that erosion is becoming a serious factor in the Columbia Basin and that better than half of the cropland is well on the way to becoming marginal or submarginal for wheat production unless some effective action is taken to check erosion.

The extent of erosion in sections of Eastern Oregon is shown in the table on the following page prepared by the Soil Conservation Service.

Much progress has been made in the past few years in lessening losses from erosion by the adoption of practices such as trashy summer fallow and cross seeding of slopes, which have proved effective. In Gilliam County trashy summer fallow is used on approximately one-half of the summer-fallow acreage. Payment under the agricultural conservation program has encouraged the adoption of conservation practices which will stop soil erosion.

There is some soil loss on irrigated lands where water is being misused. The extent of this loss has not been determined.

The area in Umatilla and Morrow counties taken over by the U. S. Army for bombing range and ordnance depot has been subject to wind erosion in the past. The Soil Conservation Service in cooperation with the Grazing Service has taken steps to stabilize this area during the past few years. Any disturbance to the cover of the bombing range or ordnance depot will tend to start erosion again, which will endanger adjoining farming areas, unless adequate protective measures are taken.

Erosion Conditions on Unit Areas
That Have Been Surveyed in Eastern Oregon

Area	Annual Rainfall	Acres Surveyed	Land Use	% in Each Erosion Classification Used
Athena (Umatilla County)	16" to 20"	23,368	Cultivated	40% lost less than 1/4 topsoil 53% lost between 1/4 and 3/4 7% lost over 3/4
Gibbon (Umatilla County)	14" to 18"	20,825	Cultivated	65% lost less than 1/4 topsoil 33% lost between 1/4 and 3/4 2% lost over 3/4
Condon (Gilliam County)	12"	39,495	Cultivated	40% lost less than 1/4 topsoil 60% lost between 1/4 and 3/4
			Range	28% lost less than 1/4 topsoil 64% lost between 1/4 and 3/4 8% lost over 3/4
Moro* (Sherman County)	11"	48,184	Cultivated	50% lost less than 1/4 topsoil 35% lost between 1/4 and 1/2 15% lost over 1/2
			Range	35% lost less than 1/4 topsoil 40% lost between 1/4 and 3/4 25% lost over 1/2

*Note that a division was made at 1/2 on Moro area and not on the others.

Western Oregon. The most serious erosion occurring in Western Oregon is the water erosion on hill lands in the Willamette Valley. On many of the hill soils where adequate protective measures such as the use of cover crops and the planting of row crops on the contour are not being practiced, serious soil loss is occurring. The extent of erosion has been shown by the surveys made by the Soil Conservation Service in the Chehalem Mountain area, which are applicable to the Willamette Valley. The following table, prepared by the Soil Conservation Service, gives a summary of soil loss.

Extent of Erosion on Chehalem Mountain Area
23,904 Acres

	Percentage of Topsoil Removed	Percentage of Area Affected
Hill Soils	0-25 %	31.4 %
	25-75	54.3
	Over 75	11.1
	All surface soil removed	1.3
Bottom and Terrace Soils	Deposition	.8
	0-25	98.1
	25-75	1.3

Total acreage of hill soils in the Willamette Valley as taken from the Willamette Valley soil survey is 1,466,000 acres. 992,700 acres of this amount are estimated to be under cultivation. The same survey classified 1,097,000 acres as bottom and terrace soils, with approximately 828,700 acres cultivated.

There has been an increase in Western Oregon during the past few years in the use of cover crops and other practices provided for in the agricultural conservation program which has lessened soil losses from erosion. There are, however, many farms on which adequate conservation practices have not yet been adopted.

In some localities in Western Oregon streambank erosion is a serious problem.

A similar situation exists in that section of the Clatsop Plains area which is being used by the Army as is occurring in the army ordnance depot and bombing range in Eastern Oregon. Some of the area being used consists in part of sand dune areas, which in the past have been spreading to adjoining cropland. The Soil Conservation Service has

been carrying out a program to stabilize this area for the last several years, and unless precautionary steps are taken by the Army to prevent erosion, any disturbance of the cover will cause the recurrence of spreading of sand dunes.

Recommendations. (1) In such areas where farmers are not using adequate protective measures to prevent the occurrence of erosion, special programs available through the agricultural conservation program should be adopted which will provide that on allotment farms before wheat payments will be made, approved conservation practices must be carried out, and on all non-wheat allotment farms agricultural conservation program practice payments will be dependent upon the completion of needed erosion control practices. In developing such special programs the material available on classification of land according to use capability from the Soil Conservation Service can be used. (See Appendix)

This material can also be used by AAA and land use committees in determining areas which need the application of such special programs mentioned above. In order for any practices to be made mandatory for AAA payment in special areas it is recognized that the cooperation of farmers in such areas must be secured, and for this reason

(2) Educational programs to acquaint farmers with the situation and stress the need for adoption of erosion control practices should be conducted in areas of this type.

(3) Support of county AAA committees in refusing payment where compliance is not in line with agricultural conservation program requirements should be given by land use committees and agricultural agencies.

(4) County land use committees, after determining areas in which serious erosion is occurring should determine the need for soil conservation districts and where this need is found, a request for action to be taken to form such a district should be sent to the State Land Use Committee, and from them to the State Soil Conservation Committee.

(5) The assistance of the Soil Conservation Service should be made available without regard to districts in order that they may cooperate with other agencies in accomplishing desirable land use adjustments where the organization of districts may be neither feasible nor justified.

(6) Action should be taken by the Army to prevent wind erosion from occurring on the ordnance depot west of Hermiston and also on the bombing range in Morrow County. The Army should take similar precautions to prevent erosion from recurring in the army cantonment in the Clatsop Plains area.

Water Conservation

Water conservation in the area east of the Cascades and in Southern Oregon is considered to be equally as important as soil conservation. One is usually dependent upon the other. With the exception of the Columbia Basin and parts of the Blue Mountain area, farming lands in Eastern Oregon require irrigation. The major portion of the livestock industry is dependent on irrigated areas for winter feed supplies and upon stock water for use of the range.

Average precipitation for Eastern Oregon and Southern Oregon is shown below:

	Average Annual inches	Summer (June-Sept.) inches
Eastern Oregon	13.56	2.5
Southern Oregon (Grants Pass)	29.26	2.05

Because of the decreased number of livestock that can be grazed on public lands, the conservation of all available water supplies for livestock use is becoming more important. The development of livestock watering places is needed to make possible better utilization of range lands and increased water supplies are needed for the irrigation of meadow pastures in order to provide additional grazing.

Some of the existing irrigation projects in the state have financial difficulties caused by excessive costs for construction, maintenance, drainage, or for other reasons. Also some projects were developed without adequate soil surveys or investigations of available water supplies, and as a result these projects have been unsuccessful.

The Umatilla project can be cited as an example of an irrigation project developed without adequate soil surveys. It was originally planned to irrigate 20,000 acres, but in 1940, only 7,430 acres were being irrigated. Some of the soils in this project are of such character that they require 20 acre-feet of water per season in order to produce a crop. As a result of this situation, the eastern and western districts of the Umatilla project had a debt in 1940 amounting to \$1,038,000.

The Ochoco project is one on which development was started with inadequate or inaccurate surveys of potential water supplies and with no control of land speculation. At one time over 20,000 acres were to be irrigated under this project, while at the present time water is being

delivered to around 9,000 acres. Estimates of water supplies were made during abnormally wet years and as a result, water shortages occur frequently. Poor construction and expensive pumping operations have also added to the difficulties of operation of this project.

Since 1934, as a result of provisions of the AAA act, approximately 18 irrigation districts in the state have been refinanced and have had their debts scaled down. Sixty thousand acres of land have been culled out from these districts.

There is need for soil surveys on many irrigation projects in the state. Surveys are being made on only a few projects at the present time.

The principal undeveloped water resources in the state at present include the John Day and Grand Ronde rivers in Eastern Oregon and the Umpqua and Willamette rivers and their tributaries in Western Oregon.

Recommendations. It is recommended (1) that governmental agencies whose programs have any connection with water conservation concentrate on the development of supplies of livestock water and of irrigation water in the state, both for new projects and to supply supplemental supplies of water for existing projects.

(2) To avoid the additional loss of funds and to discourage farming on unprofitable land in irrigation projects, it is recommended that the refinancing and reorganization of existing projects be based upon the findings of complete soil surveys as well as on the surveys of available water supplies, maintenance costs, etc.

(3) The use of water which will be available from new storage developments should be determined from the standpoint of the adaptability of the soils of the lands to be irrigated, as well as construction and maintenance costs, economic conditions, and other reasons.

Farm Credit

Statement of Situation. During past wars inflation has resulted in expansion of agricultural production with overuse and over-extension of credit, which has caused serious financial distress during periods that followed. At the present time there are large surpluses of wheat and supplies of apples, prunes, and pears in excess of normal demands because of loss of export markets, and future export markets for these commodities are uncertain. Numbers of cattle and sheep are increasing. In addition, production costs are increasing ahead of prices for farm commodities and a shortage of labor is expected, all of which affects the farm credit situation.

There are products such as fiber flax, vegetable seeds, and others which can be produced in Oregon which were in part imported. Since imports of these crops are now curtailed or suspended, expansion of their production will be necessary to supply domestic needs. There will be a need for credit for such expansion.

Census figures for 1940 show an increase in the number of small part-time farms in the state during the past 10 years. There has been a slight increase in the number of family-sized farms and a decrease in the number of larger farms. The following shows the changes in number of farms by size groups during the past 10 years:

Size	Number of Farms*		Percent Decrease Or Increase
	1930	1940	
Up to 19 acres	12,666	17,512	+ 38.4
20 to 499 "	36,462	38,776	+ 6.3
500 ac. & over	6,025	5,542	- 8.0

* 1930 and 1940 Census.

Recommendations. (1) In view of the present agricultural situation, the expansion of acreage of crops for which there is a surplus, or of livestock numbers at present high prices or in cases where adequate feed supplies are not available is considered unwise.

(2) Curtailment of credit by all credit agencies, private and public, for such expansion will assist in avoiding future distress.

(3) Land use planning committees and other agencies should support credit agencies in maintaining such a credit policy.

(4) Expansion on a sound basis of the production of those crops of which we are normally dependent on imports is felt to be justified. Expansion of this type of agricultural production is necessary to meet domestic needs.

(5) Data on supplies of export type, domestic type, and import type agricultural products should be furnished to credit agencies in the state from the Extension Agricultural Economist's office in cooperation with other agencies in order that credit agencies may assist in avoiding undue expansion.

(6) The primary aim of public and private credit agencies should be to encourage the increase in numbers and the maintenance of the family-size farm by providing adequate financing. The family-size unit may be considered as one that provides from 200 to 300 productive man days of labor, distributed throughout the year.

Farm Labor

Statement of the Situation. A large portion of Oregon's specialty crops, representing \$24,600,000 annually, is dependent upon large concentrations of labor for its harvesting, handling, and processing. The regions in which these specialty crops are located are widely scattered throughout the state, and the seasonal peak demands for labor cover the months from May to November, depending upon the commodity involved. Such commodities are small fruits, canning and shipping vegetables, sugar beets, tree fruits, hops, and potatoes.

In common with all other states, the preparedness program has drawn largely on the reserve supplies of labor within this and adjoining states. The outlook for adequate supplies of labor at the peak periods indicates the possibility of shortages in numerous instances.

Recommendations. It is recommended (1) that the federal and state employment offices, Farm Security Administration, Oregon State Extension Service, and any other agencies that might be of help, collaborate in appraising the labor demands, the periods when they will be needed, and means of locating them promptly and efficiently.

(2) Publicity concerning labor demands should be carefully supervised and efforts should be made by these cooperating agencies to make the most efficient use of the available supply throughout the periods of need.

(3) To release all possible labor supplies, it is further recommended that the WPA projects, except those directly connected with the preparedness program, be closed down during such emergency periods and that steps be taken to divert such labor to the harvesting, processing, or transporting of these crops.

(4) It is further suggested that ways and means might be devised for the utilization of CCC personnel, should the emergency become so acute as to justify this measure.

(5) In light of the important part that many young men who are subject to the selective service play in the harvesting of such crops, it is recommended that the selective service boards throughout the state give full consideration to temporary deferment of such selectees so as to enable them to make their contribution to the farm labor supply during this acute period before being called for active duty.

Government Policy and Agriculture

Foreign Trade Agreements. In some instances as a result of the foreign trade agreement program of the State Department, agricultural products are allowed to enter the United States in competition with domestically produced goods. Such a situation tends to cause lower prices for the domestic products, and in the case of apples and pears, which are allowed to enter from Canada and Argentina respectively, prices are now so low for the domestic production that it is impossible for the growers to make returns above the cost of production.

Therefore, it is recommended that a subsidy, in the form of an established domestic price or in some other manner, be provided for growers of products that are adversely affected as a result of any foreign trade agreement so that the cost of the United States foreign policy will be borne by the entire population.

Government Defense Purchases of Agricultural Products. The establishment of army camps and defense industries, such as ship-building yards, in the state will cause a demand for large quantities of agricultural products.

In order to supply this demand and to insure fair returns to producers, it is recommended that organized grower groups pool supplies so that they will be able to supply the grade and quantity of the products needed by the federal purchasing agencies. It is suggested that county land use committees assist in coordinating the activities of producers and cooperatives for the purpose of pooling agricultural products. Land use committees can provide information to the federal purchasing agencies on the supply of agricultural products that are available in their counties.

Because of the changes in demand for agricultural products by the Army as a result of shifting of men, producers supplying these products are apt to be adversely affected unless adequate notice is given of such changes so that they can make arrangements to dispose of their produce elsewhere.

It is recommended that insofar as possible the Army and other agencies involved in the defense program furnish information to producers on the numbers of men that will be stationed at army camps and

provide information on changes in numbers that are to be made as far in advance as possible, or information as to the quantity of products that will be needed.

Government contractual obligations for food and fiber supplies should not be canceled at the close of the present preparedness or war period, but should be fulfilled so as not to leave the producer holding the sack for commodities that require months or even years to produce. Any surplus thus accumulated should be used for relief work in this country or in Europe.*

Surplus Marketing Administration Purchases. Purchases of both export type and domestic type products have been made by the Surplus Marketing Administration during the last few years in order to remove surpluses from the market. With foreign markets for prunes, apples, and pears entirely gone, surplus production of these commodities is expected to continue. Surplus production of domestic type crops occurs when there are seasonal or market fluctuations, which often cannot be anticipated.

It is recommended that when purchases of export type products, with the exception of wheat, are made by the Surplus Marketing Administration, they be made early in the season at prices based on average prices received in the past, producing districts, and grades, that will enable the industry to stay in business.

The purchasing of surplus domestic type products as small fruits, potatoes, and other products is recommended to be early in the season before the price has collapsed, and at a price that will enable the industry to stay in business.

Cooperation between the State Department and the Surplus Marketing Administration in establishing policies and coordinating activities is suggested so that Surplus Marketing Administration purchases will serve to protect the domestic producer from commodities that are being imported.

The Surplus Marketing Administration should look ahead even to the extent of ordering materials accumulated, and if they are not needed for relief they could be used in school lunches or shipped to England.*

Government Contribution in Lieu of Taxes. In view of the fact that approximately 50 percent of the land ownership in this state is held by the federal government and because additional acquisitions of real property are being made and legislation is pending in Congress for still further acquisition, particularly of forest lands, the problem of

* Suggested by Ray Gill, Master, Oregon State Grange; and Harley Libby, President, Oregon State Farmer Union.

maintaining state and local government units becomes more difficult, especially were those units dependent upon the real estate tax for their operation.

Because of these facts, it is recommended that every agency cooperate with the Association of Oregon Counties in supporting suitable federal legislation that will provide for a contribution by the federal government to the several counties on such property in lieu of taxes.

General Recommendations on Government Activity. Some kind of a floor should be placed under farm prices to cushion post-war imports.*

The activities of all U. S. Department of Agriculture agencies should be directed toward the stabilization of the family-size farm unit.*

Note: All statistics given, unless otherwise noted, were taken from Extension Circular 357, "A Special Assembly of Agricultural Statistics, State of Oregon", Oregon State College, Corvallis, December 1940.

* Suggested by Ray Gill, Master, Oregon State Grange; and Harley Libby, President, Oregon State Farmer Union.

THE DEFENSE PROGRAM AND FOREST RESOURCES

American industrial production is greater now than it was in 1929 and will increase. It has been estimated that the peak will come in 1942. An expansion of the lumber industry is part and parcel of the general expansion. Wood products have bigger, more receptive markets, and command higher prices. Low quality products move more readily than heretofore, and there is some demand for special products.

Oregon cut about 5.3 billion board feet of lumber in 1940--the state's largest cut to date--and probably will cut about 6 billion board feet in 1941. The lumber industry is activated along traditional lines; in most localities long visible tendencies are accelerated; in some, where constructive changes have been made in the past, there is considerable temptation to revert to type. The general results of the defense stimulation apply largely to private forest properties. With a few notable exceptions, the forest industry is continuing to follow the policy of liquidating the forest resource tributary to each producing center in accordance with the historic pattern.

It may be that in the long run public forests will be exposed to pressures which will arise when private resources have been depleted by the defense effort. Since publicly owned forests, both federal and state, are with few exceptions operated under sustained yield forest management and these publicly owned resources will not be available for liquidation as needed to maintain current industrial capacities, such pressures would ultimately in any case be exerted. In all other respects federal and state forests--being better provided with finances, management, and objectives than private forests--are better able to avoid injurious effects of the defense program.

Changes in the ownership pattern by state and federal acquisition of timber required to facilitate sustained yield operations and to relieve the pressure which is forcing many private owners of timberland to liquidate their holdings are generally recognized as essential. With larger and better markets, temporary small mills are starting operations in what were formerly large blocks of non-operating properties. Rapid expansion of cutting operations is also developing such properties. It is in such blocks of timber that public acquisition has been contemplated. The present situation is resulting in the rapid disappearance of such non-operating properties, and if public acquisition is to follow at a later date the public will have to buy out operating facilities as well as the timber. If public acquisition of non-operating timber is started promptly and carried out on an extensive scale, present opportunities to secure a maximum degree of sustained yield operation can still be realized.

The following appear to be the ways in which the defense effort is affecting private forests in Oregon:

1. There is an over-all speeding up of the liquidation process. The total cut in Oregon is approximately 25 percent greater than a year ago. The increase by occurring largely near established communities or production centers adds to the difficulty of establishing sustained yield by units and shortens the lives of the communities by depletion of available supplies of timber.
2. More receptive markets and better prices for low-grade materials result on the positive side in better utilization; but on the negative side in increased cutting of second-growth west of the Cascades up to 500 million in some years, and in a tendency to clear cut ponderosa pine, leaving no reserve stands.
3. The general increase in cutting is accompanied by specific increases in partial cutting in the fir region. Much larger areas will be cut over by this method than would ordinarily be the case so that some of the unsolved or partially solved problems in connection with it may become serious. Among these problems those of slash disposal are most important.
4. Accelerated cutting means more operations, larger operations, more slash, more equipment, more people in the woods, that is, both greater fire hazards and more risk. There is an over-all increase in risk due to the defense program, particularly acute adjacent to the industrial areas. This situation creates special defense problems.
5. The defense efforts hasten depletion of special items which will be needed for future national defense. Airplane spruce is the most conspicuous example of these items.
6. Accelerated cutting along conventional lines hastens depletion of the forest tax base, results in either additional tax load for agriculture or reduced public services, or both. It adds to tax delinquency and to lands needing rehabilitation as demonstrated in Clatsop and Columbia counties. In 1940, 220,000 acres were cut over.
7. War time production levels cannot be maintained in peace time. When the defense effort subsides the excess mill and logging capacity will fall into disuse. Extensive unemployment will ensue. Probably it will be accompanied by its familiar evils--migration from cities to the land, economic competition with farmers, attempts to settle submarginal land, attempts to acquire subsistence, self sufficiency, decreased markets for farm products, more nomadic workers, relief and unrest.

8. Temporary mills are multiplying once more, this being a special phase of the general increase in mill output. It is an unhealthy trend not only in respect to its effects upon the general forestry problem, but also in the adverse social aspects of shack settlements.

9. The lumber industry in Oregon and adjacent states can expand production for the present defense effort because it is decentralized and backed up by adequate supplies of standing timber. But each great expansion of output reduces the facilities for expanding next time. Many production units will be cut out; the productive life of others is shortened; the industry tending to concentrate near remaining large timber bodies becomes more centralized. That these factors make it more difficult to meet future emergencies will become more evident if the condition of the State of Washington in 1917 is compared with its condition in 1940. During the World War the great expansion of the Pacific Northwest lumber industry occurred in Washington and the Columbia River area. During the present emergency, expansion in Oregon is much greater than in Washington--Washington no longer has the timber resources with which to expand. These effects of the present defense effort will be far reaching in both the pine and the fir regions.

10. The war in Europe has shut out all importations of pulp and paper products formerly imported from the Scandinavian countries both to this and other countries outside of Europe. The pulp and paper industry in this country and Canada has been producing at full capacity to meet current demands. Based on past experience production will be sharply curtailed if foreign competition again becomes effective. The shock of adjustment of this character could be softened and partially absorbed by extending to pulp and paper products a reasonable degree of tariff protection from European imports.

THE COMMITTEE RECOMMENDS THAT a study of ways and means to extend a reasonable degree of protection to pulp and paper products be made by the proper governmental agencies, in order to avoid a sharp decrease in production which will otherwise follow post-war adjustments.

For example, in the Bend territory the situation a year ago was about as follows: The annual depletion was about 350 million board feet per year, the national forest timber amounted to about 5,870 million feet, and the private timber to about 4,420 million feet. If operated on a sustained yield basis the privately owned timber would be cut at the rate of about 60 million feet annually, and the national forest timber at about 82 million feet per year. In other words, the total sustained yield capacity is about 142 million feet annually, whereas production was at the rate of 350 million feet.

If production at the rate of 350 million feet per year were confined to private lands, all privately owned timber would be cut out in about 12 years. As a matter of fact, two of the large operators in

Bend have a life of from 12 to 15 years and from 9 to 10 years respectively, while a third recently started has a 20 to 30 year life.

Production in the Bend territory for the calendar year 1940 was over 368 million, and if present trends continue during 1941 this figure will be surpassed. Obviously current market requirements merely speed the day of reckoning for this region.

In what might be called the Lower Columbia River area, which includes roughly Wahkiakum, Cowlitz, Clark, and Skamania counties in Washington, and Clatsop, Columbia, Tillamook, Washington, Yamhill, Multnomah, and Clackamas counties in Oregon, the gross annual depletion, log scale, is 2,285 million feet. In this area the Longview Production center has an installed capacity of 800 million feet and consumes about 600 million feet per year. The Portland area has an installed capacity of about 700 million feet and consumes about 500 million feet per year, while all the rest of the territory has an installed capacity of 1,600 million feet and consumes one billion feet per year. Within this broad area there are 46 billion feet of privately owned timber, which includes 36 billion of strictly old-growth and 10 billion of second-growth of merchantable size, of which approximately 24 billion feet are tied in with the mills at Longview, leaving only 22 billion feet for the rest of the mills in the Portland and Lower Columbia River area which have been producing 1,500 million per year. In terms of operating sawmills there are 174 operating companies in this territory. Two large companies with their operating facilities control about one-half of the old-growth timber--leaving about 172 companies to compete for the balance, which could supply all of them only a relatively few years.

Cheap water transportation due to the presence of the Columbia and Willamette Rivers and the Pacific Ocean allows the movement of logs into the Lower Columbia River area from other territory. Except for the unusually good marketing conditions resulting from the defense effort, it is probable that from five to ten mills, representing an annual capacity of 500 million feet would either be out of the picture at the present time or would withdraw from the picture in the next few years. However, these mills with practically no supply of timber of their own are buying on the open market and getting a part of their logs from either the Oregon Coast or the Willamette Valley territory south of Salem. This tends to threaten seriously the stability and long life of the industry in the upper Willamette Valley territory.

This process of forest depletion with the development of numerous community problems has about reached its logical conclusion in Clatsop, Columbia, and Tillamook counties. The problems in these areas are too well known to need any discussion.

From the foregoing statements of fact it is obvious that the impacts of war bear most heavily on privately owned land since sustained yield cutting on federal land in Oregon accounts for only about 13 percent of the total cutting depletion in 1939 and 1940. In Oregon there is so little timber on state-owned land that the contribution of state-owned timber to production is negligible.

For purposes of discussion both the facilities which private owners and county, state, and federal levels of government have for meeting these impacts, and the specific things which will best cushion such impacts, the problem will be divided into two parts:

1. What can be done immediately to control any particularly bad tendencies in the expanded defense program, and,
2. What can be done to remedy the after effects of excessive liquidation of forest resources during the war period.

Items Involved in Immediate Program (War Production)

Fire Protection. There is reason to believe that for "the duration" there will be need for a very considerable increase in protective effort over what has been in force for the past few years. Not only will there be added operations in the woods with the normal hazards that go with such operations, but if the season or seasons are in any way bad the probabilities for large losses from incendiarism are high. Without going into detail as to the number of extra wardens, equipment, etc., necessary to meet this enlarged emergency, there are four broad lines of action which should be carried out.

1. That the governor be prepared to declare an emergency and allocate extra funds for fire protection from the general funds of the state.
2. That the fire patrol associations be prepared to vote extra levies for protection.
3. That the Congress make immediate increases in Clarke-McNary authorization and appropriations as recommended in Joint Congressional Forest Committee report.
4. That all operators be urged to take extra precautions on their operations.

5. That a special protection plan be prepared and financed to meet hazards and risks caused by the defense effort in and adjacent to the more important industrial areas.

THIS COMMITTEE RECOMMENDS THAT action be taken by the various agencies indicated to carry out and strengthen fire protection as shown by the five preceding suggestions.

Making Raw Materials Available. So far as can be seen at this time privately owned timber is sufficient in conjunction with O & C and national forest timber now being put on the market to furnish all saw-mills, paper mills, and other wood-using industries with raw material required.

For most production units in Oregon, installed mill capacity and annual production usually exceed the sustained yield capacity of the forest land in the unit. The two major exceptions to this rule are Douglas county in western Oregon, and the pine territory in Wasco and Jefferson counties within the Warm Springs Indian Reservation. In both these areas installed mill capacity and annual depletion are less than sustained yield possibilities. Excess mill capacity on adjacent areas can utilize these available sources of supply.

It would be much better from both a local and state-wide standpoint if the timber resources available in Douglas county and on the Warm Springs Indian Reservation could contribute in a greater degree in meeting current defense needs. Expansion in these areas might tend to decrease overcutting elsewhere. Excessive depletion in some of the producing areas will be followed by very serious results. Where national forest or other federal or state timber is available to provide a supply on a sustained-yield basis, the economic disturbances following excessive depletion will be modified to the extent that these publicly owned resources can supplement the supply obtained from privately owned lands.

Forest Practices. High price levels for forest products combined with the possibility for operation at full capacity, create an unusually favorable economic opportunity for the forest industry to carry on the program started in recent years to leave their cut-over lands in a productive condition and take other measures desirable from the standpoint of securing better forest practice. It well may be that aggressive action now will create situations which will permit continuance of desirable changes or innovations permanently in the future as well as during the current emergency.

During the emergency period private owners should:

1. Take advantage of current market conditions and eliminate all wasteful woods practices.

2. Refrain from cutting in second-growth stands to the maximum degree possible; if economic necessity requires some realization, to cut on a light selective basis.

3. Heavy partial cutting creates a slash fire hazard which makes it extremely difficult if not impossible to control forest fires. The quantity of timber removed in such partial cutting should be sufficiently restricted to prevent the creation of unmanageable slash hazards. Either sufficient slash disposal work should be undertaken by the operator to reduce the hazard to a degree acceptable to the protective agencies, or where the volume of slash created is so great that the hazard cannot be reduced on account of the cost of this operation, the degree of cutting should be restricted. Cutting operations can be carried on again in later years.

4. In eastern Oregon extend the practice of light partial cutting to all areas in order that a maximum amount of mature pine which otherwise would be killed by insects be harvested. In eastern Oregon the timber loss from beetles in the last 10 years has averaged 728 million feet per annum. It has been clearly demonstrated that the removal of insect-susceptible trees by a light partial cutting is the one practical approach to control of the staggering annual loss. Some private companies are following this type of cutting. It is used on the national forest exclusively and economic conditions permit application on an extensive scale to private holdings.

5. In all cutting leave enough trees for an adequate source of seed supply.

6. In both eastern and western Oregon use extreme care in slash burning in the fall so that in the first place slash fires do not escape from the area being treated and in the second place that the maximum amount of reproduction and seed trees is preserved.

THE COMMITTEE RECOMMENDS THAT state and federal agencies emphasize to the public and to industry through their organized associations or otherwise the importance of applying to the current cutting, in a maximum degree, these suggested forest practices. Many, if not most, of these suggestions are included in the recognized program now being followed or favorably considered by industry.

Public Acquisition. If operation on a sustained yield basis is to be attained in many of the producing areas in the state, an immediate program of public acquisition, both state and federal, of non-operating timber should be initiated. The current expansion caused by the defense program is accompanied by the installation of many new mills drawing upon timber which has heretofore not been tied in with an operating unit. Rapidly expanding production of installed facilities draws upon many

non-operating holdings which heretofore have been inaccessible or for other reasons have not been tied in with a manufacturing enterprise. The need for providing a permanent source of raw material to insure the continuance of the timber industry in each one of the producing centers in the state is an urgent one. If postponed, increased costs will be involved in purchasing operating facilities as well as the timber. In the long run, production must be curtailed if the industry is to be permanently continued on a modified scale. Unquestionably the maximum degree of private ownership of timberlands should be maintained provided that, either alone or in cooperation with publicly owned resources, a permanent and dependable source of raw material can be maintained. It is generally recognized that an extensive program of public acquisition is necessary to enable private operators to go as far as they can in permanently retaining ownership of forest lands. Since public acquisition will be a long-time as well as a short-term project, the committee recommendation is made later in this report.

Items Involved in the Long-Time Program

Protection. At present forest fire protection on private, state, and county lands is a joint responsibility of the State Forester and the various private protective associations. The private associations are organized to give protection within their respective boundaries. The state also protects two areas in Oregon and in addition, of course, is the agency which enforces all the fire laws. The present setup excludes a considerable area of rural land where the dominant economy is agriculture but where at the same time there are very considerable areas of farm wood lots or other forest and wild land. These are known as non-patrol areas. The federal government, through Clarke-McNary contributions, aids in fire protection on state and private lands. On privately owned lands in the organized fire districts, money is raised by a special fire patrol tax. The owners have two ways of paying.

1. They can be members of the association and pay their assessments direct to the association.

2. Those owners not belonging to the association may pay the patrol tax to the state which in turn usually contracts protection of the area with the association.

The state also uses some of the State Forestry appropriations for protection.

The Clarke-McNary money coming from the federal government is distributed by the State Forester who retains part of it for over-all fire uses and distributes the balance to the associations and state units in proportion to their expenditures. For the calendar year 1940 the State Forester of Oregon reports the following expenditures for prevention:

State funds	\$ 75,970
Private funds	348,124
Federal funds (Clarke-McNary)	<u>157,354</u>
Total	\$581,448

These moneys were used by the state and associations to pay the salaries of fire wardens and lookouts, the purchase and maintenance of necessary tools, equipment, and other fire protection work. There were additional expenditures made by timber operators for snag falling, fire line construction, extra protection of hazardous operating areas, etc., amounting to about \$434,000. In addition to these items fire fighting cost \$124,000 which was paid by the timber operators and the associations depending on whether or not the fire originated on an operating area or on the association territory.

In addition to these expenditures the six O & C and the eight state and private CCC camps in Oregon contributed very materially to the protection of the state and private lands. It is conservatively estimated that the value of these camps to protection in the state of Oregon amounts to \$400,000 per year.

In the past the fire patrol associations have not fought fire on "operating areas" since the Oregon law states this is the responsibility of the owner. The associations do not fight fire on so-called "non-patrol" rural areas and such protection from fire as these areas get is given by the State Forester's office even though these lands pay no tax for this purpose. Generally speaking, private associations function most effectively when there is a certain minimum area of land which will contribute. As any association gets an increasing acreage of cut-over land in which the owner has lost interest, the association not only has an increasing hazard but also the problem of inadequate finances, since during the period of delinquency neither the owner nor the county pays any fire patrol assessment. After the counties or state take over the land they pay these assessments.

In extremely bad fire weather, private owners, although responsible for fires which start on their operating areas, may be unable to control these fires and the associations may then take over the burden, and if they in turn cannot handle the job, the ultimate responsibility of control of the fires falls on the state. This division of responsibility interferes with effective suppression action. The increase in number of operators, some of them irresponsible, and the increased area now being cut, intensify this problem.

The 1941 legislature strengthened materially the forest fire code and passed a law providing for fire protection on rural lands lying outside of incorporated cities and towns not otherwise protected. This

statute sets up two types of land; for one type money is raised in a manner similar to that used for ordinary forest land protection, and for the other type a tax is levied against each piece of property at not to exceed four mills on the dollar of the assessed value. This statute provides ways and means for rural communities to secure adequate fire protection for their buildings, farm wood lots and other facilities. It takes care of the territory outside of the areas protected by the state, the associations, or other protective agencies and may be considered as completing the protective structure although its use is of course dependent upon the initiative of the local community affected.

It will be noted from this very brief review of the protective organization that it is extremely complicated and perhaps in need of simplification in order to secure the lowest possible damage with a minimum of cost.

As time goes on the hazardous areas will increase; the area of land on which people will voluntarily pay their fire assessments will decrease; and with the possibility of a rather serious depression following the present era of war prosperity, it may be time to consider some different and more uniform method of raising money for the protection of all forest and other wild lands other than federal. It may be advisable to consider a millage tax on all rural property, the proceeds to be used for fire control. Such fire protection would include not only control of forest fires on all wild lands, but also on farm wood lots and farm buildings.

It has been estimated that if all such property in Oregon, exclusive of federal property, paid a two mill tax that at least one million dollars could be raised for fire protection in the state. The state would have the responsibility for raising the funds. Whether the state would then set up its own fire protection organization or would contract a certain amount of this to private protective agencies would be a matter to be worked out. This procedure would merely guarantee a minimum amount of fire protection and any large private owner or groups of private owners could supplement this minimum protection by any additional measures they might desire.

THE COMMITTEE RECOMMENDS THAT:

1. Clarke-McNary funds be increased.
2. The State Forester and the State Fire Marshall in cooperation with the State Tax Commission be authorized to investigate and report promptly on the feasibility of a levy on all real property, by hazard zones, in the state other than city and federal for fire protection purposes.

Extend Authority for Cooperative Sustained Yield Units to the
U. S. Forest Service

In order to work out adequate sustained yield plans which will tend to stabilize communities, the pattern of ownership in this state is such that sustained yield for many privately owned blocks can only be fully accomplished by cooperative setups involving publicly owned timber. Cooperative action is undoubtedly the most important if not the only way by which sustained yield can be attained on considerable areas of private forest land. At the present time the state and the O & C Administration have authority to set up cooperative sustained yield units. The Forest Service does not have such authority, although bills granting it have been introduced in several sessions and still are pending in Congress.

THE COMMITTEE URGES prompt passage of such legislation.

Sustained yield units are hard to establish due to the difficulty of obtaining concerted action from the various owners of timberland in the unit. Insofar as these owners tend to handle their lands upon a basis of immediate returns so as to minimize carrying charges and to maximize returns from their timber, it may be desirable to create a method of encouragement to owners of these lands to practice sustained yield management. One possible method of encouraging sustained yield units is through a system of payments to the individual owners so that the added costs of carrying timberland, such as fire protection costs, over the period of time demanded by a sustained yield unit will be partially offset.

IT IS RECOMMENDED THAT a study be made of the possibility of developing sustained yield units through governmental payments to private owners. Should any county land use committee be interested, they should be encouraged to sponsor such a study on selected areas within their county so as to determine the problems involved, the necessary safeguards to establish, the amount of funds desired, and the general administrative procedures which would be effective.

Once land is in stable ownership many of the forest problems which now confront the State of Oregon are partly solved since stable owners are more inclined to be interested in good forest practice. Very considerable acreages of land are now in county ownership. Except for a few southern Oregon counties most of this county-owned forest land is either new cut-over or older cut-over with varying amounts of second growth. Several Oregon counties have considerable volumes of merchantable timber on their county-owned lands, excepting such cases it is highly questionable if the counties are in a position to administer adequately county-owned forest lands; although adequate laws are available. The 1941 legislature gave the state the authority to embark on a rather comprehensive state forest acquisition program. In order to block up state forests the state can use both county-owned land and has the opportunity to acquire land direct from owners by the use of state utility bonds.

If the state takes aggressive action and lays out a comprehensive system of state forests based on using county-owned land and filling in the chinks with land purchased through utility bond money, the program of stabilizing ownership for cut-over lands would be partly solved. In the past and until recently, the program of the State Board of Forestry has been largely one of protection, with acquisition, land management, including planting and stand improvement work, subordinate. Recently the legislature has expanded the program to include the acquisition and rehabilitation of cut-over lands which have gone into county ownership via the channel of tax reversion.

The next step in a really comprehensive state program would include the acquisition and control of a certain amount of virgin and second-growth timberland rather than cut-over lands. The state would then be in a position to play a part in the stabilizing of communities. To carry out such a program the state might follow three procedures to secure the necessary funds to acquire land with merchantable timber. These procedures are:

1. Use Fulmer Act money when and as such money is made available by the Congress.
2. Use money available for acquisition under any special federal acquisition law which may be passed.
3. Appropriate state money for this purpose since state utility bonds will undoubtedly not be a satisfactory vehicle for securing any considerable amount of merchantable timber.

To get action under items one and two it will be necessary for the proper agencies to urge that Congress make money available for adequate acquisition.

The second item in stabilizing forest land ownership in Oregon will be an expanded federal program to acquire private lands within the present national forests and such adjacent lands as may be necessary to work out sustained yield units.

THE COMMITTEE URGES prompt initiation of a program of acquisition of second-growth and old-growth timber by both state and federal agencies provided the present system of federal compensation to the counties in lieu of taxes be modified to meet county needs equitably, as later suggested in this report. The system of state compensation to the counties on account of state-owned forest lands should be expanded so as to provide an equitable return for state forest lands secured by purchase.

The other element in stable ownership is the very considerable acreage of forest land held by the farmers. The 1940 census shows that in Oregon, farmers' wood lots consist of 2,081,907 acres; also that approximately 50 percent of the farmers within the state have wood lots.

The most recent information available indicates in addition to the material used on the farms, the farmers of Oregon sold to the general market in 1937 over 64 million feet of sawtimber, 3 million posts, and 360 thousand cords of wood besides a considerable amount of miscellaneous forest material such as poles, piling, and pulp wood.

In order that these farm-owned woodlands may play their full part in the future economy of the state there should be aggressive action to see that all aspects of a comprehensive farm forestry program are canvassed and followed up. Raising timber and getting the most out of the land is probably more highly technical than raising most other farm crops and at the same time has received practically no attention. Compared with the substantial assistance given to general agriculture, farm forestry has been very badly neglected.

The time has come when for farm holdings the problem is sufficiently important to justify publicly supported county foresters working through federal and state extension systems under direct supervision of the county agents or in close collaboration with them. In Oregon there are many counties where the full time of a trained county forester is justified. There are also situations where one forester might meet the needs of two or more counties. In some counties such as Coos, Douglas, and Clatsop, a technically trained forester might function as county adviser in the management and handling of county-owned forest lands in addition to the farm forestry program. A forester engaged in farm forestry work is already available in Clackamas county, and there are numerous other counties such as Lane and Linn where there is a full time job if the potentialities of financial income and production from farm wood lots are to be fully utilized. Such a county forester organization should be financed jointly by the federal government and the state. To do so supplemental federal legislation will be necessary.

THE COMMITTEE RECOMMENDS THAT necessary supplemental federal legislation and appropriations be urged and that the State Forester and State Extension Service cooperate with the federal agencies concerned in working out a desirable program for the state.

Land Classification. In order that the above-mentioned programs of protection and ownership may be on a solid footing it is very obvious that a truly adequate job of land classification should be promptly initiated. In fact a thorough job of land classification should precede almost all the other items in this program. The complexity of soils, of use, of ownership, and other factors in the region, precludes most intelligent action until land classification is completed. Patterns of soil and topography can easily result in divergent points of view and confused conclusions. Thorough inventories of soil, topography, cover, and other factors, when properly made, will furnish maps and data which should make proper use of any area more or less self evident and facilitate classification under Chapter 381.

The job of gathering basic data followed by that of classification for all of Oregon is one requiring considerable money and time of trained personnel. Even though adequate funds were made available at once, the scarcity of competent personnel would delay completion of such work on a state-wide basis. Actually there is no need to classify all land; large acreages are admittedly agricultural, others are admittedly forest, and only the debatable or problem areas need attention. Of these there are a few units needing immediate attention. A relatively small party of competent people could rather quickly draw the boundaries of the more important problem areas, and when these have been delineated a crew of technicians with the requisite skills could make the more precise localized determinations of soil, slope, and other physical and economic factors necessary before the detailed schedule of preferable uses in such a major area can be determined.

The larger, more time-consuming job of inventory and classification of the balance of the state should undoubtedly be the function of some state department using all possible help from other state agencies and the various interested federal agencies.

THE COMMITTEE RECOMMENDS THAT, in order to get prompt action on these matters:

1. The various state and federal agencies such as the Oregon State College School of Agriculture, Oregon State College School of Forestry, Bureau of Agricultural Economics, Soil Conservation Service, U. S. Forest Service, State Board of Forestry, O & C Administration and other interested agencies should pool their resources to the extent of each furnishing one man for a period of approximately a month or more during the field season of 1941. This group should, by extensive field work, determine the outer boundaries of those areas needing immediate attention.

2. These same organizations each contribute one man with the requisite skill for the period required to do the necessary detailed work in these areas.

3. The Governor's Economic Council investigate ways and means of setting up a state land classification organization.

With classification available there are two ways of controlling unwise forest land use; one, through public acquisition of forest lands and the dedication of such publicly acquired land to appropriate uses, and two, by restrictive zoning of land use. Any plan for control will have to meet with the approval of the majority of local citizens. In a plan for land use the relative position of state, county, and federal land owning and managing agencies would have to be clearly defined. In some cases control will involve rural zoning, in others the establishment

of Soil Conservation districts, in others state or federal acquisition. In any case a good job of inventory and classification is the first step.

THE COMMITTEE RECOMMENDS THAT the State College and State Forester study the possibilities of restrictive land use regulation as a factor in securing adequate handling and development of the forest resource and prepare suggestions for desirable state legislation.

Forest Practices. The five items of forest practice cited as desirable on the part of private owners under an emergency program are, of course, equally desirable under a long-time program, and it may be expected that they will be followed by the more stable private owners who have a long-time interest in their properties. With prompt and large scale public acquisition, proper forest practices would be assured for a very large area of land. Without such acquisition control would probably be necessary on the ownerships of smaller financially unstable owners of forest land who obviously have no long-time interest in their property. The Oregon legislature recently passed "a forest regulation bill" which is an initial step in the "preservation of the forest and the conservation of forest resources for the equal and guaranteed use of future generations and the protection of forest and water resources and the continuous growth of timber on lands suitable therefor". This law is a beginning, and although the detailed provisions designed to keep forest lands productive represent no important change over present practices, it is a foundation on which improvements can be added as time goes on.

As a part of the "Forest Program" which the U. S. Forest Service has been recommending, this agency has suggested the regulation of the cutting and logging practice. Different bills, some representing the Forest Service point of view and some representing other points of view on this general subject, have been presented to Congress. The various agencies in Oregon interested in and responsible for progress in forestry and proper land use should closely follow progress made under the state regulation law and should work for changes in the form of amendments which will best serve the interest of the state.

THIS COMMITTEE RECOMMENDS THAT the State Land Use Planning Committee and other federal and state agencies should keep in close touch with the development of state regulation of the practices on private forest land and make such suggestions from time to time as may appear desirable to strengthen the state system or to secure cooperation with any federal regulatory law which may be enacted designed to cooperate with the states and counties in necessary regulation of this character.

If the present demands for specialized wood products for war use such as Sitka spruce, continues far enough, there might well result an acute shortage for any other emergency which might occur in another 20, 40, or 60 years. It will behoove public agencies to inventory their possibilities

for supplying such specialized needs in future emergencies and to initiate cultural practices insofar as possible to meet future requirements.

Forest Land as a Work Reservoir. As has been stated before, there is a good possibility that a depression of unknown magnitude may well follow the present period of war expansion. Undoubtedly public agencies, both state and federal, will be looking for projects preferably on publicly owned land where unemployed people may be employed at worth while work. An expanded public forest program with units well scattered throughout the state should provide a work reservoir for a large number of people who will need employment. Development of protective facilities and the use of unemployment agencies such as the CCC in fire protection and similar work on privately owned lands where the benefits will go to the private owners as a group rather than to individuals has been recognized. Such work, as well as other classes of work on privately owned lands with the same general objective, should be included.

If properly planned much of this work will not require tremendous investment in material and expensive equipment, since many types of stand improvement and planting work involve large amounts of hand labor with cheap tools. To be ready with such a work program requires an expanded program of forest land acquisition, and also a prompt cataloging of legitimate work projects on both private, state, and federal forests so that the State Forester and the federal forest agencies may have definite plans worked out in advance of any future depression.

THE COMMITTEE RECOMMENDS that the State Forester, the O & C Administration, the U. S. Forest Service and other agencies concerned promptly inventory all possible work projects on both public and private forest land and work out plans and schedules for employment on these projects.

Taxes. The liquidation of privately owned timber has and will continue to create tax problems in the State of Oregon. The faster the rate of liquidation the greater the speed with which the counties will be faced with tax problems. Naturally as county revenues from timber taxes decrease, the tax burden on other real property, both city and farm, increases. These tax problems are particularly acute in depression periods. As more land has been cut over, public ownership of one type or another has been the rule, and this trend will continue. There are several things that can be done to relieve this problem at least in part. First is to remedy the provisions for reimbursements to local government in lieu of taxes on account of federally owned or managed forest lands such as the national forests. There have been and still are different proposals on this subject before Congress. It is important that a solution to this problem be worked out as soon as possible.

The above proposal will only take care of problems in those timbered counties which have considerable national forest acreage and will

not take care of the financial problems of other counties where there are large acreages of state or county land. As has been the case in many eastern states where timbered counties were cut-over, the fiscal problems of cut over counties ultimately become state problems. The first step in getting at this problem is to secure a relatively exact picture of the fiscal relationships between the State of Oregon and its several counties. No such factual picture exists today. For example, the state collects within the county certain revenues via the gas tax, liquor tax, inheritance tax, and in many other ways. At the same time it returns to the county considerable amounts of money in the way of relief funds, road aids, school aids, etc. A complete and accurate tabulation county by county of all these items might well show that the state has certain responsibilities to certain types of counties. Such a factual presentation might lead to a better scheme for reimbursing the counties for state-owned lands in the interim period between state acquisition and the time when there will be a revenue from these lands.

THIS COMMITTEE RECOMMENDS THAT:

1. Interested agencies urge Congress to take prompt action to improve the system of reimbursing local government because of federally owned or managed forest land.
2. The Governor's Economic Council be urged to get prompt action on a study of state and county fiscal relationships.

Forest Research. In Oregon the proper use of wood as a raw material is and will continue to be of vital importance. The future welfare of the state is dependent upon the way in which the remaining wood resources are used and the progress that the forest industries can make in adapting their products and processes to remaining supplies and those yet to be grown. Research is an important key to progress in these fields. Only by scientific research can the particular qualities of wood demanded by a great variety of uses be determined. Use of wood for cellulose, plastics, distillation production such as alcohol, acetic acid, charcoal, etc., veneer, plywood, and even common lumber, can be improved and enlarged by research. Research is also needed to ascertain better methods of growing and harvesting wood. This type of work should be expanded both at the state and federal levels.

Public Information. THE COMMITTEE RECOMMENDS THAT this report be mimeographed and distributed to the members of the State and County Land Use Committees and other interested agencies and individuals.

A report of the forestry subcommittee of the State Land Use Committee contains numerous recommendations. Some method of keeping the committee informed of action taken by various agencies and progress made in carrying out these recommendations as well as securing acceptance of the recommendations by interested agencies appears desirable.

The committee suggests that a standing committee be appointed from the members of the State Land Use Committee, selected to secure an adequate cross-section of the various interested agencies. In order to secure adequate representation from timberland owners and operators it would appear desirable for John B. Woods of the Oregon Forest Fire Association and representatives of the lumbermen's associations or timberland owners be asked to serve on the committee in an advisory capacity.

RANGE LIVESTOCK AND WILDLIFE

The Oregon livestock industry, including dairy products, accounts for 43 percent of Oregon's farm income. Physical, ecological, and economical factors divide the industry naturally into two major regions or types of enterprises--Eastern Oregon with its range and feeding industry, and Western Oregon with its farm and pasture type.

Eastern Oregon Area

The Eastern Oregon region, which is principally a range livestock type-of-farming area, contains approximately 41,988,480 acres or approximately 63 percent of Oregon's land area, of which 35.6 percent is in private ownership; the balance, 64.4 percent, is controlled and administered by various public agencies. These lands produced partial feed and forage for 1,015,448 animal units of livestock. The Eastern Oregon region also supplies forage for 159,319 mule deer, 21,503 elk and 21,900 antelope. Since these wildlife forms range into several sub-regions for uncertain periods, it was not deemed advisable to attempt a further segregation. There were about 2,140 range livestock operators within this area in 1930. The number of animal units is the result of a 20-year period of downward adjustment following the heavy overstocking which occurred during 1914-20. This adjustment has been a cooperative effort of range operators and public agencies. The operators have reduced numbers or shifted kinds of A. U. on the one hand, and the public agencies have improved management practices for the range, assisting the private operator in improvements of range and other forage-producing lands. That these adjustments have been effective is indicated by the committee's survey which shows that present A. U. are in practical balance with range and forage resources. The survey also indicates that this balance can be maintained and the production of livestock products increased through a greater utilization of grain for finishing animals and through further improvements of range lands. The present upward trend in prices for animal products has already reflected a tendency on the part of some to expand the industry, which tends to disturb this practical balance.

The total animal units and the feed and forage which they depend upon are made up of many variables. In order to treat these variables in a comparable manner, animal units, feed, and forage resources were converted into animal unit months; for example one animal unit is equivalent to 12 animal unit months. The feed for one A. U. for one year is, therefore, 12 A. U. M.'s. The committee's survey indicates that the feed and forage resources of Eastern Oregon total 12,145,968 A. U. M.'s derived from the two major sources:* (1) Public lands--range and pasture--2,693,615; (2) private lands, of which range and pasture account for 3,142,278, and croplands including aftermath for 6,310,075 A. U. M.'s. This includes

*See appendix for methods used in making this survey, and limitation of the data.

only 16 percent of the harvested grain. Public lands supplied 23 percent, and private lands supplied 67 percent of the total A. U. M.'s.

The survey indicates that national forests have approximately 12 percent more A. U. M.'s usage than they have A. U. M.'s feed available if the feed resource is to be handled on a sustained long-time yield basis, due to insufficient fund allocations to construct needed range improvements --coupled with increased big game usage, brush and timber reproduction invasion of grasslands and drought during the past decade.

Grazing Service lands (national range) are now reasonably in balance as between A. U. M.'s of available feed and A. U. M.'s usage. It is estimated that the A. U. M.'s of available feed can be increased 12 percent in the next five years through use of water developments, adequate fencing, and other proposed range improvements which will open up present unavailable, unutilized feed areas.

The survey further indicates that if present improvement programs or range and other forage-producing lands are continued there will be available in 1945, 12,308,584 A. U. M.'s of forage. Shifting grain from a cash crop to a feed crop will add an additional 1,921,793 A. U. M.'s making a total potential feed and forage resource of 14,230,377 A. U. M.'s in 1945. This will allow for an increase of 170,416 A. U.'s.

From the above it is apparent that for the entire Eastern Oregon area A. U. M.'s of livestock and game are in practical balance with A. U. M.'s of feed and forage, with the exception of grain crops, which are now sold for cash and are moved out of the region for other than livestock consumption. The actual situation can be better appreciated, however, by dividing the Eastern Oregon area into three sub-regions and treating these regions separately:

Central Oregon Sub-Region

This sub-region is the principal range livestock area of the state and is commonly known as the public lands region. The area consists of approximately 26,568,320 acres, of which 73 percent is in public ownership and 27 percent in private ownership. In 1940 there were 6,612,132 A. U. M.'s of livestock (not including wildlife) and 5,725,914 A. U. M.'s of feed and forage actually used for livestock. The A. U. M.'s of feed are 87 percent of the A. U. M.'s of livestock.* Therefore, the number of animal units within this area is more than the feed requirements by 13 percent. This is not, however, serious, since most of the livestock moving from the area go out as feeders, and most livestock operators have their livestock on a bare maintenance nutritive basis.

* See appendix

Blue Mountain Sub-Region

In this sub-region is found the combination of range livestock and small seed and grain production. Livestock operators depend to a large extent on the national forest lands for summer range. The total area within this sub-region is approximately 9,271,040 acres, of which 53 percent is public and 48 percent private. The committee's survey indicates that the livestock derive their feed and forage from these lands in approximately the following ratios:

<u>A. U. M.'s produced by classes of ownership</u>		
	<u>A.U.M.'s</u>	<u>Percent</u>
National Forests	566,423	.015
Grazing Service	78,726	.02
Other Public	17,676	.01
Private Cropland	2,059,043	.52
Private Pasture & Range	1,207,679	.30
	<u>3,929,547</u>	<u>100%</u>

These amounts make a total of 3,929,547 A. U. M.'s of feed and forage which may be compared with the 3,449,616 A. U. M.'s of livestock (not including wildlife) in this region. The feed and forage A. U. M.'s are 114 percent of the A. U. M.'s of livestock. There is, it appears from these data, an excess of feed over that required by the livestock found in this region.

Columbia Basin Wheat Sub-Region

This sub-region contains approximately 2,971,000 acres, of which 53 percent is publicly owned and 47 percent privately owned. Private land consists chiefly of croplands devoted primarily to the production of wheat on a fallow system of farming. There are approximately 640,000 acres devoted to grain, with about the same in summer fallow and 2,989,000 acres in privately owned range and pasture lands. Public lands account for another 1,572,000 acres of range land. The committee's survey indicates that only 16 percent of the total wheat produced within this area is fed to livestock, leaving the balance going as a cash crop sold outside of the area. For other grains the amount fed was estimated at 69 percent for rye, 61 percent for oats and 79 percent for barley. The total number of A. U. M.'s of livestock is 2,123,628 (not including wildlife), and the total A. U. M.'s of feed and forage, including grain now fed, is 2,490,507. The feed and forage A. U. M.'s are 117 percent of the A. U. M.'s of livestock. This indicates that there is also a surplus of feed within this area.

Summary Eastern Oregon

From the above sub-region analysis it is apparent that there is a deficiency of feed and forage in the Central Oregon area and a surplus

in the Blue Mountain and the Columbia Basin wheat area. The utilization or bringing into balance of these livestock numbers with the feed resources entails a number of problems, chief of which is the movement of the livestock to the area of surplus feed, or the movement of surplus feed to the livestock area. The committee is of the opinion that if this surplus feed is to be utilized for finishing livestock it will be necessary for the livestock to move from the Central Oregon area into the Columbia Basin wheat area on a feed lot basis, since there is insufficient forage produced within this area to maintain a combination livestock and cash wheat farming system.

The committee believes it inadvisable to stock any range lands heavier than the carrying capacity as figured for a long-time sustained yield basis--even for a short-time emergency period.

If national defense demands require increased production of livestock products such as meat and wool it is apparent that this increased demand will have to be met by feeding a larger quantity of grain in the Columbia Basin wheat area. The total production which can be brought about through better utilization of the grain in the area from estimates deduced in the survey indicates the possibility of increasing A. U. M.'s of feed in the entire Eastern Oregon area by 16.2 percent. Tables 1, 2, and 3, appendix, summarize the A. U. M.'s of livestock and feed; the acres of land by ownership; and the potential A. U. M.'s if all grain is fed.

The committee recommends the following:

That increased production to meet national defense needs be met through:

1. Increased unit production through improving the quality of the breeding stock.
2. Increased calf and lamb crop percentages.
3. Steers and barren cows now on the range could be moved into surplus crop-producing areas such as the Columbia Basin, where they can be handled on a combination of pasture and feed lot or feed lot alone until they reach the desired weight. This would permit increased numbers of breeding females on the ranges.
4. Greater utilization of improved pastures.

Range improvement. The probable necessity of reducing CCC camps due to national defense is recognized. In lieu of camps so vacated the following is urged:

1. That the vacated camps be retained in those areas where there is an accessible supply of work for CCC occupancy after the present

problem passes. In the meantime, when desirable, regulations should allow the split of personnel of each retained camp into two or more side camps.

2. Small mobile work camps should be provided for the use of labor available but not needed or not qualified for defense activities.

3. Adequate appropriations should be made annually to federal agencies administering grazing land, for needed range improvements.

Research and Demonstrations. That the range research programs of all agencies, including the Grazing Service, Forest Service, Soil Conservation Service, and Agricultural Adjustment Administration, dealing with range land adjustments or with new livestock production practices be coordinated closely. Stimulation of such research should materially assist the present national defense emergency by:

1. Encouraging the shifting of land now used for production of winter feed or other crops to pasture, to be used to supplement public ranges or to shorten the period of use on the latter.

2. Encouraging the production of better quality and heavier weight animals so that increased demand for meat products can be met without increasing numbers.

Coordination of Range Improvement Program. That range improvement programs of the U. S. Forest Service, Grazing Service, Soil Conservation Service, and the Agricultural Adjustment Administration on both public and private lands be coordinated through:

1. Greater participation in county land use planning committees.

2. Periodic meetings of representatives of the three agencies and the School of Agriculture.

Game Management. In order to maintain satisfactory balance between wildlife, domestic animals, and forage resources, based on reasonable demands, it is recommended that:

1. The U. S. Forest Service, Grazing Service, Fish and Wildlife Service, Game Commission, State Land Board, and the Oregon State College each designate one person who will either independently, or in collaboration with other representatives, make annual livestock and wildlife inventory and appraisals of forage conditions, including trends, and report to each respective organization recommendations for changes in range management including adjustments where necessary in numbers of domestic or game animals.

That these agency representatives with representatives of the livestock and wildlife associations, at the call of the Oregon State Game Commission, meet to develop such program as appears necessary to maintain the proper balance between forage and wildlife and domestic animals.

2. The game management organization should make every effort to increase numbers of small game forms such as the black-tailed deer, ring-necked pheasant, sage grouse, Hungarian partridges, etc.

3. The larger forms such as elk should be limited to wilderness areas or other areas presenting little or no present or potential conflict with other primary land uses. In Umatilla, Union, Wallowa, Baker, and Grant counties the cooperating agencies as named above should at an early date agree upon the number of elk that should be carried on this range and make the necessary arrangements to adjust the numbers to a desirable optimum.

4. Mule deer are in sufficient abundance but management practices should be instituted to obtain a better distribution.

5. The Oregon Game Commission should continue its research program looking toward the restoration of black-tailed deer in areas west of the Cascade range.

6. The Oregon Game Commission should effect an alliance with the Extension Service, the State Department of Public Instruction and other educational agencies for initiating a program of education in conservation and sportsmanship.

7. Publicity directing people where to harvest wildlife crops should be confined to problem areas of excessive concentration only.

Western Oregon Area

This area comprises that portion of the state lying west of the Cascade range. The Livestock enterprise within this area is typically a farm-flock type of farming and of necessity requires entirely different treatment from the range livestock industry of Eastern Oregon. This area has a total acreage of approximately 18,854,000, of which 49 percent is in public ownership. The total acreage is, as regards ownership, divided as follows: National forests, 27 percent; O & C Revested Lands Administration; 12 percent; county, 4 percent; state, 1 percent; other federal lands, 5 percent; and private, 51 percent. In 1940 there were 605,550 animal units of domestic livestock within this area, made up of 338,809 A. U. dairy; 64,028 A. U. beef cattle; 88,950 horses and mules; 91,600 A. U. sheep; and 22,160 A. U. goats. Approximately 85 percent of the total feed and forage for these animals is derived from privately owned

pasture and cropland. This area is divided into three sub-regions since the problems of each are quite different.

Willamette Valley

This is the largest of the sub-regions, comprising approximately 8,436,000 acres, and is a typical diversified-farming area, containing approximately 33,000 farms nearly all of which run a few head of livestock either beef, dairy, or sheep. The major problem in this area is one of improving hill pastures, of which there are approximately 500,000 acres. Under sound management these pastures should have a carrying capacity sufficient to increase the number of animal units of feed by approximately 25 percent.

In Western Oregon the hill pastures of the Willamette Valley and Southern Oregon have as yet received little consideration from a management and improvement standpoint. Improvement practices now known to be sound and economical should be stressed by all agencies concerned. Research agencies should greatly enlarge their present program on these lands. Means for improvements of Willamette Valley lands should include management, invader plant eradication, artificial rejuvenation of grasslands and better means for utilization of these grasslands.

Southern Oregon Sub-Region

This area comprises approximately 6,030,000 acres, containing approximately 7,900 farms.

This area may be differentiated from the Willamette Valley sub-region by the low percentage of rainfall and the intermingling of forest and agricultural lands, principally farm livestock, with the exception of some intensive tree fruit areas in portions of the Umpqua and Rogue River valleys. Most of the area needs pasture improvements in order to increase carrying capacity and produce better types of livestock.

Coast Sub-Region

This area comprises approximately 4,390,000 acres, containing approximately 6,800 farms.

This sub-region has for a number of years been classed as a dairy type-of-farming region. Recent developments, however, show a marked trend toward livestock production, especially sheep, through the utilization of cut-over forest lands for grazing. In Curry and Coos counties alone it is estimated that they have sufficient of this type of land to increase their sheep numbers by over 50 percent.

Present studies show that much potential carrying capacity suitable for use in national defense and in close proximity to population

centers is now being permitted to go to waste due to lack of utilization, improper seeding, or lack of facilities for development and control.

For the Western Oregon area it is recommended that:

1. All research agencies should stimulate their programs for this area. Other agencies concerned with good land management should lend every assistance toward development of a sound program of utilization of such resources, especially in view of possible future emergency demands.
2. Classification of lands for best use.
3. For the coast cut-over lands which have been classified as agricultural lands, we recommend further study be initiated and that actual development be encouraged.
4. Control of brush on lands classified as grazing.
5. Determination of most suitable grasses and mixtures through grass nurseries.
6. Determination of classes of livestock best suited to the area.
7. Production of winter feed.
8. Management practices that will insure maintenance of grass and constant A. U. of carrying capacity.

Summary of Recommendations

Long-time program

1. Numbers of livestock and feed resources be kept in balance.
2. Care be taken that ranges are utilized on a basis of long-time sustained yield.
3. In view of the multiple use demands upon the range, governmental agencies should render every possible assistance for maximum improvement and development of these lands.
4. All research and educational agencies should coordinate their programs closely. Plans for work should point toward answering questions arising from recommended land use adjustments.

5. When demand justifies and such practices are economically feasible that feeder livestock be fattened on grain and hay surpluses.
6. Numbers of game animals insofar as possible should be kept in balance with available forage resources and reasonable demands.

Increased production to meet national defense needs to be met through:

1. In surplus grain-producing areas efforts should be made to increase swine and poultry production.
2. That the present emergency not be used as an excuse for exploiting either locally or nationally our national wildlife and range resources.
3. Increased unit production through improving the quality of the breeding stock.
4. Increased calf and lamb crop percentages.
5. Steers and barren cows on the range could be moved into surplus crop-producing areas such as the Columbia Basin, where they can be handled on a combination of pasture and feed lot or feed lot alone until they reach the desired weight. This would permit increased numbers of breeding females on the ranges.
6. Greater utilization of improved pastures.

FARM HOME AND RURAL LIFE

Preserving our American home and way of life is one of our first lines of national defense, and since this involves a nation--well fed, well housed, mentally and morally strong, and a united nation--we, the Farm Home and Rural Life subcommittee of the State Land Use Planning Committee, after analyzing the Home and Rural Life reports of the thirty-six counties, have given careful consideration to the needs of the rural homes of the state and have endeavored to recommend constructive changes and adjustments in the light of changing economic and social conditions. The major phase of family and community life that should be stressed in a state-wide program include nutrition, home management and housing, education, home and community recreation, and family relationships.

Nutrition

A diet adequate in every respect for good nutrition should be our goal. Studies by the Bureau of Home Economics find that about one-fourth of the families in the United States have diets that could be rated adequate, more than a third, diets considered fair, and more than a third have diets classed as poor. Several reasons may account for this --lack of income, lack of knowledge or what is good nutrition; lack of land to raise garden, cows, and poultry; failure on the part of the parents to recognize signs of malnutrition in their children; and the "don't care" attitude.

Army recruiting officers have rejected more than 30 percent of all volunteers during a recent six-months' period because of physical defects, many of which are traceable to malnutrition.

Records of CCC enrollees show that upon admittance about 70 percent are below the standard army weight-height standard, 40 percent are below the army's minimum weight for height requirements. Among the factors believed to be responsible are insufficient amounts and inferior quality of food, lack of exercise and fresh air, and lack of regular habits.

A study made in Oregon of 1778 farm families on home food production and consumption showed that only 586 families raised all their vegetables, 124 families raised all their fruits and 311 families all their meat.

The U. S. Bureau of Home Economics in a study of 1788 non-relief farm families in Polk and Marion counties showed that non-cash income from farm furnished food had an average value of \$347 or 24 percent of the total average net family income. In the light of these statements we therefore recommend:

Nutritional Program

1. That an "All Out" state-wide educational nutrition program be given in order to reach all families--men, women, boys, and girls--with information on what constitutes an adequate diet. That this educational nutrition program be organized under the direction of the Oregon Nutritional Council for Defense, enlisting the cooperation of all agencies including the Extension Service, Farm Security Administration, Public Health Service, Smith-Hughes home economics instructors, State Nutrition Council, Surplus Marketing Administration, etc.
2. That the state program include demonstrations and educational information on the use of surplus commodities in planning adequate family diets and in the encouragement of wider participation in the program.
3. That the school lunch program be expanded to include schools that have not participated in this program, and that established lunch rooms be improved through better planning of menus, use of surplus commodities, and through the training of cooks on food preparation.
4. That the consumption of butter rather than butter substitutes be encouraged.

Live-At-Home Program. In order to aid families in providing better diets at a lower cost and in order to release money for other family living expenditures we recommend that a state-wide "live at home" program be adopted and emphasized by the Agricultural Extension Service of Oregon State College, the Farm Security Administration, Smith-Hughes Vocational Education teachers in agriculture and home economics and other agencies to carry on educational activity with the farm families.

Planning the Family Food Supply
 Home Food Production
 Home Vegetable Gardens
 Poultry, Dairy, and Small Fruits
 Food Preservation
 Canning
 Freezing
 Drying
 Storing
 Food Preparation--Meal Planning
 Adequate Meals at Low Cost
 Cooking Frozen Foods

4-H Clubs and Future Farmers of America. We recommend that 4-H Club members and Future Farmers of America participate in the "Live at Home" program by enrolling in related projects such as: Health, Cooking, Canning, Gardens, Dairy, and Poultry.

Home Management and Housing

In a study made of 8,081 farm homes in Oregon, management of the home and general home improvement need to be given state-wide consideration. Twenty-three counties expressed in their Home and Rural Life reports the need for help in financial planning. Therefore, we recommend:

1. That financial planning be a part of every farm and home program with a view to reducing indebtedness. We recommend that farm families budget their income including non-cash income provided by the farm, keep farm and home accounts, and encourage a cash basis for spending and that this program be organized under the direction of the Agricultural Extension Service of Oregon State College and the Farm Security Administration.
2. That the Rural Electrification program be continued and extended into those rural communities not now serviced; that an educational program be conducted in better farm, home, and school lighting, and in the selection, use, and care of electrical equipment. We recommend that this educational program precede the line extension and that it be emphasized by the Agricultural Extension Service of Oregon State College and the Farm Security Administration.
3. That housing conditions be improved, which would include careful planning, kitchen modernization, and simple home repairs and that this program be organized under the direction of the Agricultural Extension Service of Oregon State College and the Farm Security Administration.
4. That the educational program on home and community sanitation be continued and extended by the Agricultural Extension Service of Oregon State College, Farm Security Administration, and Public Health Service and WPA.
5. That there be a state-wide participation in the national program for the use of surplus commodities, including the cotton mattress and comforter program under the direction of the Extension Service of Oregon State College, Farm Security Administration, and Agricultural Adjustment Administration.

6. That the cotton mattress and comforter project which is a part of the national program in using surplus commodities, and which also adds to the health and comfort of the family be included in the program.
7. That group buying and ownership of farm and household production facilities be encouraged by the Agricultural Extension Service of Oregon State College and the Farm Security Administration.

Education

The war abroad and the defense program at home have materially increased the demand for skilled workers. We recognize that the Federal emergency appropriation of \$10,000,000 for vocational training of out-of-school rural youth this year will help provide the skilled workers needed, but considering education on a long-time basis, this committee believes that a complete secondary educational program should develop both the mind and the hand. Therefore, we recommend:

1. That more emphasis be placed upon vocational training in our school system in order to prepare for employment in both agricultural and non-agricultural industries. Present school facilities should be utilized, making additions in equipment and instructional staff as needed.
2. That home economics should be a required course for all high school girls.
3. That school time and facilities be made available for 4-H club work in elementary schools.
4. That rural schools be standardized, that rural youth receive high school training as a minimum of formal education; that school buildings be utilized as active community centers--encouraging such youth organizations as Future Farmers, Camp Fire, Scouts, and 4-H Clubs.

4-H Clubs

Twenty-three thousand, two hundred and three boys and girls are now enrolled in 4-H clubs in Oregon. Maintaining and raising the standards in our farm homes and on our farms will depend in the future on these young people. Twenty counties in their reports emphasized the value and need of 4-H club work.

Therefore we recommend:

1. That 4-H club enrollments be increased so that all rural youths may participate; that the local leaders be increased; that there be an increase in parent cooperation; and that emphasis be placed on such projects related to "Live at Home" program--health, cooking, canning, gardens, and poultry--and that emphasis be placed on training for citizenship in our democracy.

Home and Community Recreation

Recreation and entertainment in the home and community will do much to improve rural life for both young and old, and will help to maintain a true spirit of democracy.

Tension brought into lives because of the present world conditions can be lessened through wholesome home and community recreation. In the United States each year, many persons become mentally unbalanced as a result of mental tensions which they were not able to overcome. Therefore we recommend:

1. That communities develop community recreation centers under the supervision of representatives from various civic, educational and religious organizations. Present community facilities such as school buildings, churches, libraries, and halls of farm organizations should be made available and used. Recreation at these centers should be for all ages, but with special attention to older youths, (15 to 24 years). Community recreation may include social recreation, dramatics, singing and choruses, handicrafts, book reviews and patriotic programs.
2. That home recreation for the family be encouraged.
3. That the physical education program in the schools be so broadened that all school members participate, and that less emphasis be placed on competitive sports which are participated in by only a few students.

Family Relationships

Training for good citizenship for youth and adults depends on a thorough understanding of American democracy. This education should begin in the home and continue in schools, churches, and community life. Therefore we recommend:

1. That the home, schools, churches, and all organizations place emphasis on good citizenship training for our democracy through panel discussions, group discussions and talks. That patriotic programs be encouraged.

Home Sanitation

A pure water supply piped into the house is one of the major problems of the farm home; therefore, we recommend that a program on home systems and home sanitation be developed by the Agricultural Extension Service, Agricultural Engineering Department of Oregon State College and the Farm Security Administration and that this program include:

1. An effective sewage disposal system (to eliminate surface drainage and the discharging of sewage into streams, ponds or deep pits).
2. The installation of screens for fly control.
3. Testing water for purity.
4. Improved outdoor toilets.
5. Installation of home water systems.

Health Service for Rural Communities

1. Health and sanitation problems of farm families must be recognized as a vital part of national defense, as well as of any program of rehabilitation. Further careful study should be made of these problems in the State of Oregon.
2. In any plan for adequate medical care there are two problems to be faced: First, the correction of chronic defects, and, second, the establishment of a comprehensive medical and dental "maintenance" program.

MAINTAINING FARM INCOME THROUGH PAYMENTS

The State Committee was asked by the Interbureau Committee of the United States Department of Agriculture to answer the following two questions relative to the national agricultural program:

Question No. 1. "In view of the war impacts, should the efforts of state and federal agencies in assisting farmers to maintain reasonable income from farm products consist largely of marketing quotas, storage, commodity loans, and surplus removal activities, with losses subsidized by appropriations from the Federal Treasury, such subsidy to be contingent upon farmer compliance with a production adjustment program; or should federal aid be directed toward and contingent upon individual farm adjustment in keeping with an ideal farm plan designed to get maximum conservation of land and associated resources; or should they be directed primarily toward maintaining prices by adjustment of production in line with prospective demand through payments to individual farmers from general appropriations from the Federal Treasury or from funds raised by special taxes on the commodity? Are there better alternatives to these? What are they?"

We recommend that, under the present emergency, state and federal agencies should assist farmers in maintaining income through marketing quotas, commodity loans, and surplus removal activities, such assistance to be contingent upon farmer compliance with production adjustment programs. Quotas and loans should be tied directly with production control programs with payments to cooperating farmers to be made from funds raised by certificates or taxes on the commodities.

For a long-time program we recommend that federal aid be directed toward and contingent upon individual farm adjustments in keeping with an ideal farm plan designed to get maximum conservation of land and associated resources.

In other words, we favor emphasis upon all three methods in the order outlined above.

Question No. 2. "In view of the reduced opportunities to market abroad such crops as wheat, tobacco, and cotton, should consideration be given to shifting permanently the high-cost or high-hazard areas in such crops to alternative systems of farming? How far is it practicable to move in this direction both as to areas and in making plans for individual farms? If this move is practicable, what changes in existing programs would be most helpful in accomplishing the desired shifts? Could your State Committee put together a general land use plan for the State which would delineate the major adjustment areas?"

With reference to wheat, apples, winter pears, and dried prunes, consideration should be given to shifting permanently high-cost or

high-hazard areas to other alternative systems of farming. Considerable progress has already been made in Oregon in this direction. Such shifts, if made intelligently, must be made upon the basis of fundamental data regarding soils, slope, degree of erosion, etc.

If existing restrictions in the making of four-factor surveys were removed this would be most helpful in accomplishing the desired shifts. With the basic data provided by four-factor surveys the State Land Use Planning Committee could readily formulate a general land use plan for the state which would delineate the major adjustment areas.

ORGANIZATION AND PROCEDURE

Background

The background for the preparation of the State Land Use Planning Committee report - an agricultural program to meet the impacts of war - was laid during the annual staff conference of members of the Extension Service, Experiment Station, and Resident Instruction, School of Agriculture, Oregon State College, in December 1940. During the five days of this conference, numerous panel discussions were held relative to the agricultural implications of the present war situation and its effect upon Oregon's agriculture.

During the months of January and February, outlook conferences were held in each of Oregon's thirty-six counties. These conferences included the four subcommittees, Land Use, Crops, Livestock, and Farm Home and Rural Life. A set of questions pertaining to the outlook for Oregon's agricultural products in view of the war situation was prepared in advance and presented to these various subcommittees for their consideration as applicable to their local conditions.

Two or more meetings in each county were held in this series. At the first, a staff member from the central office led the discussion on the outlook material which was of primary importance in the particular area. At the conference, subcommittees were appointed to give particular attention to the questions previously referred to and to the preparation of a set of recommendations as to how the local agricultural economy should be adjusted to meet war impacts.

Working with the subcommittees were representatives of the various federal and state agencies residing within the area, including the Smith-Hughes instructor and public health officials. The subcommittee reports, including recommendations, were then presented to the county committee where amendments were made. These recommendations were then discussed in various communities of the county. It is estimated that approximately two thousand farm men and women participated in the various conferences.

Appointment of Subcommittees

At a meeting of the State Land Use Planning Committee held in January 1941, the chairman appointed four subcommittees to prepare reports for presentation to the State Land Use Planning Committee to be used by them as a basis for formulating a state agricultural program.

The reports from the county committees, just referred to, were assembled in the central office of the Extension Service and summarized by recommendations, after which they were given to the appropriate subcommittees of the State Land Use Planning Committee. These Subcommittees were as follows:

Farming

John Ramage	Paul Spillman
Chester Wendt	Hubert Koons
Ralph Laird	J. Ralph Beck
S. T. White	Verne F. Livesay
D. Curtis Mumford	James C. Moore
N. C. Donaldson	

L. R. Breithaupt, Oregon State College
Technical Advisor

R. H. Sterling, Oregon State College
Secretary

The farming subcommittee was divided into two groups, one dealing with the farming problems west of the Cascade Range, with Mr. John Ramage as chairman, and one dealing with the problems east of the Cascade Range, with Mr. Paul Spillman as chairman. The agency representatives on the subcommittee worked with both groups.

Tri-State Wheat Meeting. At the first meeting of the farming subcommittee it was recommended that a tri-state meeting should be held among the states of Oregon, Washington, and Idaho with representatives of the State Land Use Planning Committee of each state, the State AAA Committee, and the Agricultural College in attendance, to consider and make recommendations regarding the Columbia Basin wheat area. This meeting was held in Walla Walla, Washington, and the conclusions reached at this meeting formed the basis for the State Committee's recommendations on wheat.

Forestry

Fred H. Brundage	George Peck
W. H. Horning	Ernest Clausen
N. S. Rogers	Earl G. Mason
James C. Moore	

R. W. Putnam, U. S. Forest Service
Secretary

Range Livestock

C. W. Craddock	James C. Moore
Nic Monte	Fred H. Brundage
N. C. Donaldson	S. T. White

R. G. Johnson, Oregon State College
and
L. H. Douglas, U. S. Forest Service
Technical Advisors

The membership on this committee was later enlarged to include A. S. Einarsen, Fish and Wildlife Service.

Farm Home and Rural Life

The Oregon Home Interest Conference set up a special committee of farm women to prepare this report, in cooperation with Mrs. Azalea Sager, of Oregon State College, School of Home Economics, and Mrs. Sara V. Thompson, State Home Supervisor of the Farm Security Administration, with Mr. V. F. Livesay and Mr. W. L. Teutsch to assist the committee.

Each of the above sub-committees held numerous meetings and consulted with various groups, organizations, and individuals regarding particular phases of their report. Particular acknowledgment is made of the assistance and cooperation rendered by the following organizations through their principal officers.

Oregon Wool Growers Association
Oregon Cattle and Horse Raisers Association
Oregon State Game Commission
Oregon Wildlife Federation
Oregon State Grange
Oregon State Farmer Union
Farm Bureau
Eastern Oregon Wheat League
Apple Growers Association of Hood River
Medford Fruit Growers League
Oregon Home Economics Extension Council
Oregon Forest Fire Protective Association, and others

The entire membership of the Oregon State Land Use Planning Committee, which includes farmers and representatives of all of the action agencies interested in various fields of land use, certain divisions of the Department of Interior and certain departments of Oregon State College, have had an active part in the preparation of this report.

Preparation of State Committee Report

On May 12, 13 and 14 the State Land Use Planning Committee met in Corvallis to give consideration to the sub-committee reports and the preparation of the state agricultural program. Each sub-committee report was gone over in detail with the committees as a whole and revisions were made as agreed upon. At this meeting the State Committee authorized the joint committee to summarize and harmonize any conflicting recommendations and to consolidate the individual sub-committee reports into a final report subject to the approval of a committee composed of the chairman of each of the sub-committees (with the exception of the chairman of the Farm Home and Rural Life Committee).

On May 22 the joint committee met with the foregoing group of sub-committee chairmen at Redmond, Oregon, to consider final changes in the report. This was done, and the final report was authorized as here presented.

APPENDIX

METHODS USED IN MAKING LIVESTOCK SURVEY

AND

LIMITATION OF DATA

The following methods were used in assembling the data which were used as a basis for feed, range, and livestock of the Eastern Oregon counties.

The subcommittee prepared a series of forms on which were shown the acreages of the various types of land use and the various ownerships. These forms were then taken into each county where meetings were held. The chairmen of the county AAA, land use, and livestock committees; the county agricultural agent; and representatives of the Forest Service, Grazing Service, and Indian Service (where these agencies had land) were invited to attend. At these meetings agreements were reached as to the number of livestock and the production of the various feeds including range, in terms of animal unit months.

The county data collected in this manner was then assembled by a representative of the Bureau of Agricultural Economics, Division of Farm Management and Costs, and analysis of the data showed a wide variation in the A. U. M.'s derived from the various types of hay and grain, some of which can be accounted for due to the different methods of feeding, the amount of winter range and whether or not the livestock were finished prior to removal from the county. A detailed reappraisal of the county data was made in one of the Southeastern Oregon counties to ascertain the degree of accuracy; this analysis indicated that the estimates for this particular county were from 10 to 15 percent in error. This would indicate that similar errors may occur in any of the other counties, and, therefore, the data should be used as an approximation of the present conditions relative to livestock and feed rather than the absolute fact.

The need for further detailed studies and assembly of basic data relative to these resources is apparent. Ways and means should be developed for carrying out such detailed investigations by those agencies particularly concerned in livestock and game management.

Table 1. Number of A. U. M.'s of Livestock and Number of A. U. M.'s of Feed Available

Eastern Oregon, 1940

Area	Number of Animal Units of Livestock*				Number of Animal Unit Months of Feed			Totals		Percent Feed & Forage is of Live- stock
	Beef Cattle	Dairy Cattle	Horses	Sheep	Private Cropland	Private Range & Pasture	Public Range & Pasture	AUM's of Live- stock**	AUM's of Feed	
Central Oregon	306,598	53,995	67,318	123,100	2,870,917	1,051,524	1,803,473	6,612,132	5,725,914	87
Blue Mountain	126,400	57,540	43,928	59,600	2,059,043	1,207,679	662,825	3,449,616	3,929,547	114
Columbia Basin	43,796	25,354	27,519	80,300	1,380,115	883,075	227,317	2,123,628	2,490,507	117
Total Eastern Oregon	476,794	136,889	138,765	263,000	6,310,075	3,142,278	2,693,615	12,185,376	12,145,968	99.7

*Livestock converted to Animal Unit (A. U.) basis as follows: Beef Cattle, 1 A. U.; Dairy Cattle, 1.4 A. U.; Sheep, 0.2 A. U.; Horses, 1.5 A. U.

**Animal Units converted to Animal Unit Months (A. U. M.'s) by multiplying A. U. by 12

Table 2. Acres of land producing feed or forage for livestock and game,
by type of land ownership, Eastern Oregon, 1940 ^{1/}

County	Total area of county ^{2/} Acres	Feed and forage producing land-acres			Percent of total area of county		
		Private ^{3/} Acres	Public Acres	Total ^{3/} Acres	Private Percent	Public Percent	Total Percent
Central Oregon							
Crook	1,877,760	869,510	979,430	1,848,940	46.3	52.2	98.5
Deschutes	1,961,600	509,510	1,423,300	1,932,810	26.0	72.6	98.6
Harney	6,357,120	1,371,578	5,056,744	^{4/} 6,428,322	21.6	79.5	101.1
Jefferson	1,138,560	540,603	582,262	1,122,865	47.5	51.1	98.6
Klamath	3,839,360	1,196,137	2,519,825	3,715,962	31.2	65.6	96.8
Lake	5,068,800	1,183,509	3,909,061	^{4/} 5,092,570	23.3	77.1	100.4
Malheur	6,325,120	1,311,641	4,947,887	6,259,528	20.7	78.2	98.9
Total subregion	26,568,320	6,982,488	19,418,509	26,400,997	26.3	73.1	99.4
Blue Mountain							
Baker	1,975,040	881,374	951,246	1,832,620	44.6	48.2	92.8
Grant	2,892,800	1,120,352	1,727,433	2,847,785	38.7	59.7	98.4
Union	1,284,480	684,631	560,955	1,245,586	53.3	43.7	97.0
Wallowa	2,028,160	764,000	1,163,892	1,927,892	37.7	57.4	95.1
Wheeler	1,090,560	713,420	367,097	1,080,517	65.4	33.7	99.1
Total subregion	9,271,040	4,163,777	4,770,623	8,934,400	44.9	51.5	96.4
Columbia Basin							
Gilliam	768,640	560,995	80,966	641,961	73.0	10.5	83.5
Morrow	1,296,000	885,382	336,833	1,222,215	68.3	26.0	94.3
Sherman	535,040	344,796	58,000	402,796	64.4	10.9	75.3
Umatilla	2,049,920	1,228,367	518,483	1,746,850	59.9	25.3	85.2
Wasco	1,499,520	781,465	577,286	1,358,751	52.1	38.5	90.6
Total subregion	6,149,120	3,801,005	1,571,568	5,372,573	61.8	25.6	87.4
Total Eastern Oregon	41,988,480	14,947,270	25,760,700	40,707,970	35.6	61.3	96.9

^{1/} Much of the wild lands furnish forage to game which is inaccessible to livestock. This land area is impossible to determine, therefore the acreages in this table are generally those used by livestock and game in common.

^{2/} As given in the Oregon Blue Book.

^{3/} The grain acreage is not used 100 percent for livestock. In some of the counties little grain is fed to livestock, but the grain aftermath contributes some forage. The total grain acreage amounts to about 930,000 acres, or 2.2 percent of the total area of Eastern Oregon.

^{4/} Totals more than the area of the county.

Table 3. Potential Animal Unit Months of Feed from Grains if 100% of grain is fed to Livestock
Eastern Oregon, 1940

County	Wheat	Rye	Oats	Barley	Corn	Total AUM's from Grain
<u>AUM's from Grain</u>						
Central Oregon						
Crook	13,500	2,254	9,360	12,420	—	37,534
Deschutes	6,399	833	8,584	8,280	—	24,096
Harney	4,973	3,640	4,508	10,029	—	23,150
Jefferson	33,750	280	320	630	—	34,980
Klamath	38,280	12,600	84,480	47,520	—	182,880
Lake	15,375	5,670	11,520	24,300	770	57,635
Malheur	<u>42,750</u>	<u>2,520</u>	<u>17,200</u>	<u>63,000</u>	<u>58,800</u>	<u>184,270</u>
Total subregion	155,027	27,797	135,972	166,179	59,570	544,545
Blue Mountain						
Baker	40,320	3,360	22,560	52,800	5,145	124,185
Grant	5,625	840	2,640	4,590	—	13,695
Union	159,900	9,856	27,200	46,800	224	243,980
Wallowa	82,300	3,171	16,408	40,536	350	142,765
Wheeler	<u>12,150</u>	<u>980</u>	<u>800</u>	<u>2,400</u>	<u>196</u>	<u>16,526</u>
Total subregion	300,295	18,207	69,608	147,126	5,915	541,151
Columbia Basin						
Gilliam	210,823	810	650	16,202	147	228,632
Morrow	184,801	3,122	760	11,035	840	200,558
Sherman	254,095	210	1,080	4,320	—	259,705
Umatilla	787,500	1,120	12,800	83,328	36,505	921,253
Wasco	<u>165,332</u>	<u>210</u>	<u>1,600</u>	<u>14,880</u>	<u>—</u>	<u>182,022</u>
Total subregion	1,602,551	5,472	16,890	129,765	37,492	1,792,170
Total						
Eastern Oregon	2,057,873	51,476	222,470	443,070	102,977	2,877,866