OREGON AGRICULTURE 6

FARM FORESTRY and CUTOVER LAND

An analysis by two committees of
the staff of
Oregon State College

SEPTEMBER 1946

Oregon Agricultural Experiment Station Collaborating with the Bureau of Plant Industry, Soils, and Agricultural Engineering, of the United States Department of Agriculture, and the Oregon Federal Cooperative Extension Service.

OREGON STATE COLLEGE
CORVALLIS

FOREWORD

In 1944 a committee of the faculty of the School of Agriculture was appointed to make a study of agriculture with a view to recommending policies for the guidance of the School of Agriculture in its three major divisions, resident teaching, research, and extension. The committee membership included personnel from these three major divisions. To assist in this work, the committee in turn appointed thirty subcommittees, each to consider a specific area within the field of agriculture. Memberships of these subcommittees likewise consisted of resident teaching, research, and extension staff members, and the membership also was developed to include specialists not only in the specific area of activity under consideration but also allied areas. For instance, committees having to do with the many phases of livestock consideration included farm crops specialists in addition to animal husbandry specialists.

These committees applied themselves intensively, and the results were thirty reports unanimously acceptable to committee members. These thirty subcommittee reports were briefed, summarized, and drawn together in a single background statement. This statement represents the opinion of the faculty of the School of Agriculture on a basic cross section of the State's agriculture and was published as number one in the current series on Oregon Agriculture. In addition to the conclusions presented, the committees made many suggestions valuable to the administrative staff in regard to reorganization, shifting of emphasis, and instructional procedure.

A representative number of subcommittee reports will be published in greater entirety than is possible in the background statement to serve as individual contributions to the commodity interest areas involved. This publication is the sixth of the series covering phases of Oregon Agriculture.

Wm. A. Schoenfeld

Dean and Director

Farm Forestry and Cutover Land*

FORESTRY is a major type of land use in Oregon. Approximately one-half of the land area within the State is covered with forest growth. Oregon has led all other states since 1938 in the production of forest products, and apparently will continue to do so for many years to come. More than 20 per cent of the total annual national production from forest industries comes from Oregon, chiefly from the Douglas fir and Ponderosa pine regions. This resource has been largely associated with the commercial timber areas where lumber has been the sole objective of land use.

FARM FORESTRY DEVELOPMENT IN OREGON

Farm woodlands, nevertheless, comprise one-ninth of the State's forest area, and more than 19 per cent of the farm acreage. In western Oregon approximately 40 per cent of the farm area is in some type of forest cover. Relatively little attention has been given to the possibility of cropping this farm timber as a resource of the farm lands. Timber is a crop of the soil. Many farm areas are growing forest products which, if fully utilized, could play a very important part in the economy of the farm and community enterprises. This fact will become increasingly important as time goes on.

Recent forest surveys show that the farm woodlands of Douglas fir in western Oregon average 35,000 board feet per acre. In 1943, more than one-half billion board feet of forest products were sold from Oregon farm woodlands. The average yearly value of products used and sold has been estimated at $2,700,000. These figures indicate large volumes of material sold but relatively low returns per unit. This is due to the farmers' incomplete information as to values and marketing procedure. At present more than one-half of the farm woodland products are sold for a lump sum (a stated price for the timber as it stands). As the farmer usually is not acquainted with

* This publication was prepared by two committees composed of members of the agricultural and forestry staffs of Oregon State College. COMMITTEE ON FARM FORESTRY: J. R. Beck, state supervisor, Farm Labor Service; J. J. Inskeep, Clackamas County agricultural agent; R. G. Johnson, range management extension specialist; A. S. King, soils extension specialist; D. Curtis Mumford, head, Department of Farm Management; Dan D. Robinson, extension forester; and Paul M. Dunn, dean of the School of Forestry. COMMITTEE ON CUTOVER LAND: P. M. Brandt, head, Department of Dairy Husbandry; J. R. Beck, state supervisor, Farm Labor Service; H. B. Howell, superintendent, Northrup-Creek cutover land grazing experimental area; E. R. Jackman, farm crops extension specialist; G. H. Jenkins, Coos County agricultural agent; D. Curtis Mumford, head, Department of Farm Management; and C. V. Ruzek, professor of soil fertility.

possible markets or methods of measuring his timber, he generally receives only a fraction of the true market value.

Recently a farmer in Columbia County sold 60 acres of second-growth Douglas fir timber to a logger for $1,800. A rough survey revealed that the stand contained approximately 50 cords of pulpwood per acre which at the current stumpage rate of $1 per cord would have returned the owner $3,000. The loss to the owner was even more apparent when it was discovered that he had labor and equipment available to produce the pulpwood and deliver it on the road ready for loading for $6 per cord. This added return would have gone to the owner in the form of wages and added stumpage value had he undertaken the job himself. Many similar instances of loss to the farm owner through lump sum sales have occurred elsewhere in the State.

Farm Woodlands Important

Western Oregon farm woodlands often range up to 100 acres or more in area. Despite favorable marketing conditions for wood products, the farmer usually considers his woodland merely a stock pasture or fuel reservoir and harvests or sells his timber without regard to management or sustained production. This situation is particularly current in Columbia County which has recently experienced the liquidation of the last large lumber and logging company operating in the area. Since the old-growth timber has been cut, numerous small loggers have been purchasing farmer-owned tracts of second-growth Douglas fir for railroad tie and pulpwood operations. More than 60 per cent of the total wood volume is left on the ground under present cutting practices on tie operations. The second-growth stands are harvested with no regard to sustained cropping at the period of their greatest annual increment. Under simple managed cutting practices over a wider area as much total volume of tie and pulpwood could be produced and a growing stock left for subsequent annual returns during the farm owner's entire lifetime.

Even on areas potentially suited to grazing and cultivated crops, closer utilization is essential in order that the tremendous volume of debris may be removed. On those areas primarily suited for a forest crop, sustained production should be the first concern of the farm owner.

This pattern has been followed in past decades in parts of the state of Washington and to a greater extent in the Great Lakes states, in New England, and in some of the southern states. Planned farm forestry management is now found very profitable in those areas. It likewise can be profitable on a large share of the 3,500,000 acres of farm woodland in Oregon.

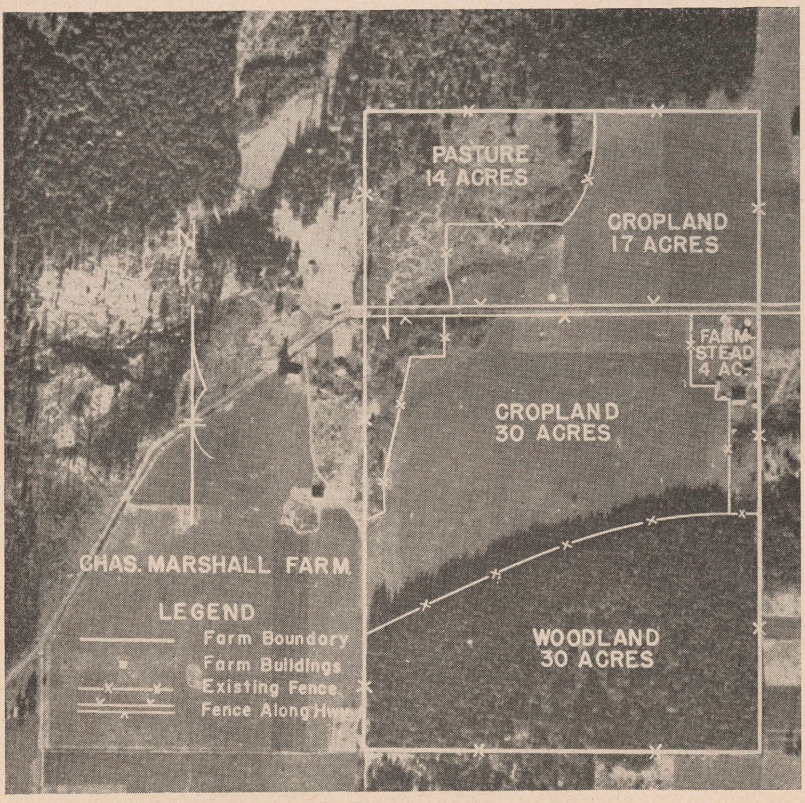

Figure 1. An aerial photograph showing land use on the Charles Marshall farm. This pattern is typical of many farms in western Oregon.

The situation in the eastern part of the State has been somewhat similar but with less direct economic importance because the timbered farm ownerships are more scattered and less productive. The need for trees to supply shade and shelter to livestock, crops, and buildings is more apparent in eastern Oregon and has resulted in the planting of windbreaks and plantations that also supply fence-post material, poles, and fuel in many instances.

Farm Forestry Study Made

Until the war period, relatively little attention had been given the farm forestry problem by the various forestry and agricultural agencies in the State. The Soil Conservation Service maintained a

farm forestry unit in Clackamas County for several years.* A report was published recently that outlines specific case histories of farm woodland operations in the county. (See Oregon State Extension Bulletin 662, *Farm Forestry in Clackamas County, Oregon.*)

Experience with the Clackamas County farm woodland units has indicated that it is profitable to manage the farm timber crop on a sustained basis; gross returns up to $20 per acre per year have been obtained under good management practices. Timber is a crop that produces an annual increment, and consequently an annual return, just as any other farm crop does if properly managed and utilized.

One goal of the demonstration in the Clackamas County study was to show that properly managed farm forests will provide a year-to-year income just as cropland and pasture land do. The five-year demonstration period was adequate to indicate probably continuous annual returns as a result of proper management and marketing, although the timber was not on a sustained yield basis at the start.

Records of the cooperators, however, indicated that the average 50-year-old stand grew the equivalent of 2½ cords or 1,000 board feet of wood per acre annually. Actual earnings from the individual woods depended, of course, on the type of products that were available for cutting and the degree to which the farmer processed the product. To illustrate: In some instances, the 1,000 board feet of timber growth was sold as stumpage for $5; in other instances, farmers cut and yarded their logs to the road for $14, or they sawed it into lumber which sold for $35. Stands ranged from seedling stage up to 80 years old with a few overmature groves.

Most of the operations the farmers carried on during the period were pointed to getting their woods to produce a year-by-year profitable return later. Depending on the relative maturity of the woods, the farmers were engaged mainly in thinning or clearcutting.

Whether it pays the farmer to harvest the timber himself or to market it as stumpage depends on the returns he can realize from the sale of stumpage and his labor off the farm, as compared with the returns for his own labor and management when used to harvest his woods crop.

Labor available for woodland cutting depends on what can be spared from other farm operations. Weather conditions do not permit work in cultivated fields during a portion of the winter months, and short slack periods occur during other seasons of the year, as between planting and haying time. Woods work will fit into these periods.

* This unit was turned over to the administration of the U. S. Forest Service, July 1, 1945. The Soil Conservation Service now limits its farm woodland activities to Soil Conservation Districts.

Figure 2. Ten sticks of piling per acre have been cut from this 60-year-old stand of Douglas fir on the E. S. Kruse farm near Sherwood. Sawlogs have been cut from the butt ends of the trees, and 60- to 90-foot piling from the tops. The operations returned a stumpage value of $40 an acre. The stand is still in need of additional thinning.

Government Agencies Assist Farmers

The United States Forest Service and State Forestry Department initiated a timber marketing project in the agricultural areas of Yamhill, Polk, Washington, Marion, Linn, and Benton counties in 1943, to aid farmers in disposing of their forest products for war demands. This project is still active. In 1944 the Extension Service of the United States Department of Agriculture and Oregon State College provided funds for an extension forestry project on a statewide basis. This project provides written information and field assistance pertaining to farm forestry and wood utilization to county agricultural leaders and interested farmers. The other farm forestry programs mentioned above are coordinated with the extension project through the various agencies involved.

These projects have merely scratched the surface of the farm forestry problem in Oregon. With the exception of the Clackamas County Project, each of the areas serviced by the public agency foresters is far too large for one man to cover effectively.

Current Outlook in Regard to Farm Forestry

Present demand for lumber and wood products exceeds the supply by a substantial margin. A heavy demand for forest products is expected to continue. This demand is reflected by relatively high prices and maintains pressure on farmers to liquidate forest growing stock regardless of economic or silvicultural maturity. The farm owner who maintains a timber and wood supply on his own farm will have relatively low cost wood products immediately available for farm use, while the farm owner who is forced to buy rough lumber, fence posts, hop poles, etc., will be required to pay the full market price.

The fact that farm woodlands will continue to assume more importance in the farm economy necessitates a definite farm forestry policy by the leaders of Oregon's agricultural activity. Farm woodland owners require assistance in harvesting and marketing their timber from land suited and intended for use other than forest production. Similarly and more particularly, technical advice and assistance are needed in managing and utilizing timber stands on lands suited only for a sustained forest crop.

Trends in the wood-using industries indicate closer utilization of timber products. Truck transportation and caterpillar tractor logging are increasing the value of small tracts readily accessible to wood processing plants.

Farm management should consider farm forestry an important supplemental contributor to the entire farm economy. Correct land use is the basis of the relationship between farm woodland, pasture land, and cultivated cropland. Because of the general nature of the woodland resource, little if any conflict of land use, labor, or time need exist between farm forestry activities and other agricultural pursuits.

Low cost forest products should be available to each farm operator in the State through complete utilization of his own or neighboring woodlands. The farm woodland owner should be encouraged to keep each acre of his forest land fully stocked with desirable tree species. Farm labor should be used whenever possible during slack periods in other farm enterprises to tend, harvest, and market the forest crop. Surplus woodland products should be sold by units of measurement rather than for a lump sum offer for the standing trees. These and other management practices will provide maximum supplemental cash incomes to the farm woodland owner from surplus forest products.

A survey* of market outlets for farm forest products harvested

* Extension Bulletin 662, Walter M. Fergerson, *Farm Forestry in Clackamas County, Oregon.*

Figure 3. Cutover land on experimental tract now covered with an excellent stand of seeded grass.

in the Clackamas County Farm Forest Demonstration Project, made in June 1945, listed the following available outlets:

Twenty-two mills buying Douglas fir saw logs.

Four mills buying hardwood logs.

Two mills buying hemlock, spruce, cottonwood and true firs for pulpwood.

Six yards buying piling.

Two yards buying cedar poles.

CUTOVER LANDS A POTENTIAL RESOURCE

Oregon's commercial timber lands cover approximately 29,000,000 acres, 53 per cent west of the Cascade Mountains and 47 per cent east of the mountains. Present rates of cutting are in the same approximate ratio and in round numbers total 400,000 acres annually. In eastern Oregon cutting is practically all selective so that cutover land is still forest land, much of which is also used for grazing. Slash burns, skid roads, and other devastating operations leave 10

to 20 per cent of the land denuded. Work of public research agencies, supplemented by actual practice, indicates that, if these denuded areas are seeded, erosion is checked, fir and lodge pole thickets are retarded, fire danger is lessened, and an important feed source is provided. Most of this land is under federal ownership.

Cutover Land Presents Tax Problem

In western Oregon, there are now more than 2,000,000 acres of recent cutover and non-restocked cutover and deforested areas on which taxes are not paid. In one western Oregon county, 61,000 acres of cutover land have been foreclosed for unpaid taxes recently. A considerable acreage also had been deeded to the county by the owners of the land to obviate the expenses of foreclosure. The tendency not to pay taxes on cutover land prevails to a substantial degree throughout all western Oregon counties.

In addition to the tax foreclosure problem, the constantly decreased valuation of timberlands resulting from continued harvesting of timber creates a perplexing problem involving fiscal policies of county and state government. Owners of cutover lands are unwilling to pay taxes because of the heavy financial burden and hazards of retaining ownership of the lands for the long time until another timber crop is ripe. Taxable property, therefore, is disappearing.

As a partial solution of this problem, attention has been devoted to the possibility of developing more productive use for some of the cutover lands in order that they may be retained in private ownerships and developed as sources of tax revenue to contribute to the public services of the municipalities. One of the possible higher uses is to convert lands adapted to grazing to approved grasses by proper seeding. There is, however, a difference of opinion among technical foresters, farmers, and timber owners on this question. Preliminary, but wholly inadequate study, now under way, coupled with a growing experience, is developing understanding rapidly and lessening divergence between points of view.

There is some exaggerated opinion as to the percentage of these cutover lands that ultimately can be brought into grazing use. Facts appear to indicate that only between 10 and 20 per cent will be found adapted to grazing, and the utilization of even this acreage will be dependent on development and acceptance of farm management plans that have economic place for this forage. The question of whether or not the forage actually can be produced and the questions surrounding its economic utilization are distinct in their separate implications.

Figure 4. Sheep grazing on mixed grass and brush lands presents a picture of the major land use of approximately one million acres of valley fringe lands in western Oregon.

For some years, farmers and county courts in the coast counties have cooperatively established trial grass seedings on cutover lands. Most promising varieties of perennial grasses, alone and in various combinations, have been seeded. Information gained is the basis for many seedings on ranges now under new development.

State Supports Grazing Experiment

The State has recognized the importance of attempting to utilize some cutover lands for grazing purposes by establishing an experimental grazing area on typical cutover land of northwestern Oregon in cooperation with Clatsop County. This experiment has been in operation less than ten years, yet it already seems fairly certain that some grasses not only will establish themselves but will maintain their stand on very steep slopes under livestock use. There is evidence, moreover, that proper grazing by livestock actually accelerates the tendency of these grasses to spread and thicken in stands.

Chapter 381, Oregon Laws 1937, provides for the segregation of forest lands into three classifications; one (Class 3) is for grazing purposes. This legislation provides legal status for this use and makes it possible for such state agencies as the State Board of Forestry to cooperate in the development of any legally classified

land primarily adapted to grazing. The four-factor survey, so-called, 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' work.

Recent changes in legislation make possible more adequate application of the fire control measures to these types of land, and recognition of the agricultural or grazing uses to a greater extent than formerly.

While per-acre costs for converting cutover lands into grazing are not high, the investment in a total ranch unit adds to a considerable sum. Thus, it requires substantial capital first to purchase, then improve, and later operate these lands in an efficient manner.

Lands suitable for grazing owned by the State and counties total hundreds of thousands of acres. From the standpoint of fire protection alone, it is obviously desirable to seed the classified grazing land to grass as soon as possible and to pasture it immediately.

Relationships between fire suppression, presuppression, and control need to be clarified in the structure of the Fire Patrol Associations to aid progress in further development of these lands for agricultural purposes. Such associations should grant agriculture the same protection as forestry. Until agricultural operators can exercise the privilege of participating membership and take an active part in the formation of policies, progress in the use of cutover lands for grazing purposes will be retarded.

At present, it has not been established whether cutover lands in the areas of greatest timber removal are most satisfactorily adapted to sheep or to cattle.

Cooperative Extension Work in Agriculture and Home Economics
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Oregon State College and United States Department of Agriculture Cooperating
Printed and distributed in furtherance of the Acts of Congress of May 8 and June 30, 1914