1957
Benton County
Farm and Home
Development Conference

Corvallis, Oregon
September 10, 1957

Prepared for Publication by
Farm and Home Planning Council Committees
Distributed by Benton County Extension Agents
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Benton County History</td>
<td>5</td>
</tr>
<tr>
<td>II. Land Use and Agricultural Economics</td>
<td>6</td>
</tr>
<tr>
<td>III. Crops</td>
<td>19</td>
</tr>
<tr>
<td>IV. Dairy</td>
<td>26</td>
</tr>
<tr>
<td>V. Livestock</td>
<td>29</td>
</tr>
<tr>
<td>VI. Horticulture</td>
<td>32</td>
</tr>
<tr>
<td>VII. Soils, Irrigation and Drainage</td>
<td>37</td>
</tr>
<tr>
<td>VIII. Poultry</td>
<td>40</td>
</tr>
<tr>
<td>IX. Youth Planning</td>
<td>43</td>
</tr>
<tr>
<td>X. Home Economics</td>
<td>45</td>
</tr>
<tr>
<td>XI. Community Life</td>
<td>47</td>
</tr>
</tbody>
</table>
FOREWORD

The purposes of the conference were to study and make recommendations concerning farm and home problems in Benton County for development and progress of agricultural industries, home life, youth and community activities, and natural resources.

The conference was organized and conducted by the Benton County Farm and Home Planning Council and committees with the cooperation of the Oregon State College Extension Service. Three similar conferences were held in 1925, 1936 and 1946. They have been responsible for much of Benton County's development and progress.

Committee reports were prepared by planning committee members who gave much time and thought on numerous subjects. Business firms, local, county, state and federal agencies supplied resource information and assistance.

The value of reports contained in this publication will come from intelligent use of committee recommendations.

Funds necessary for the publication of the reports were provided by the following local business concerns:

Parker Insurance Company
Moser Lumber Company
Bates & Bates Real Estate and Insurance
Pacific Power & Light
Medo-Land Creamery
Corvallis Feed and Seed
Monroe Feed Store
Oregon Seed Company
Schrock Seed Company
Corvallis Frozen Foods
Consumers Powers, Inc.
Western Oregon Packing Corporation
Oregon Dairy Breeders Association
Corvallis Market Milk Producers Assn.
J. A. Hanson and Son
Monroe Clay Products Company
I. P. Miller Lumber Company
Hull-Oakes Lumber Company
Wilson Motors
U. S. National Bank of Corvallis
First National Bank of Portland
First Federal Savings and Loan Assn.

Copies of reports are available at the Benton County Extension office, Post Office building, Corvallis, Oregon.

BENTON COUNTY FARM AND HOME PLANNING COUNCIL

Richard O. Powell, Chairman
G. M. Gragg, Vice Chairman
S. A. Jackson, Secretary
FARM AND HOME DEVELOPMENT
CONFERENCE COMMITTEE MEMBERS

Land Use and Economics
G. M. Gragg
Chairman
Loren J. Smith
Anderson Taylor
Bruce Starker

Forestry Subcommittee
Bruce Starker
Chairman
Marvin Brawley
Homer Hull

Livestock
Ed Reynolds
Chairman
Robert Stone
Robert Campbell
Robert Goracke
Clayton Mann

Poultry
Richard Hanson
Chairman
Francis Gerding
C. L. Anderson
Walter J. Biegel

Dairy
A. L. Guerber
Chairman
Vardyn Buchanan
Leland Hill
Richard Larkin

Horticulture
Richard Powell
Chairman
Harry Ashbahr
Lee Gilmour
Melvin Becker
Mrs. Leonard Lien
Henry Littlejohn

Crops
Dom Hector
Chairman
J. R. Buchanan
Rollie Robison
Dennis Strada

Weed Subcommittee
Sid W. Newton
Chairman
Lester Chilcote
C. O. Keester
B. A. Folks
Wm. Jefferies
Chris Lindseth
Joe Grey

Soil, Irrigation and Drainage
H. E. Thompson
Chairman
Punderson Avery
Fred Ray
Dave Schroek
Frank Kochis

Youth
Mrs. Ralph Rawie
Chairman
Mrs. Cal Monroe
Allen Guerber
William Burnip
Van Decker
Mrs. Leighton Davis
Barney Carlson
Mrs. Robert Everly

Home Economics
Mrs. Lloyd King
Chairman
Mrs. William Slater
Mrs. C. R. Bayless
Mrs. Allen Horn

Community Living
Mrs. M. C. Smith
Chairman
Mrs. Homer Davis
Mrs. Roy Law
Mrs. Howard Lill
LaRoy Edwards
George Kouns
Mrs. Louie Barnes
Benton County Farm and Home Development Conference

Benton County History

Benton County was created in 1847 and included all territory south of the Polk County line and west of the Willamette River and summit of the Cascade Mountains to the California line. In 1849, the Oregon legislature reduced the size to 735,000 acres which included much of present day Lincoln County. In 1893, Benton County was reduced to 414,720 acres, and in 1951, about 12,500 acres were taken from Lincoln County making 427,250 acres in Benton County.

Industry

The home of Oregon State College created in 1868 is in Corvallis. Two main industries, agriculture and lumbering, have developed to a strong position. Recent annual income amounts to about $9,000,000 for agriculture and $16,000,000 from forest products. Oregon State College and associated agencies spend about $7,000,000 annually in this vicinity.

Climate

Climate is considered mild. The average temperature at Corvallis is 52° F. Minimum temperatures seldom drop below zero. Maximum temperatures rarely exceed 100° F. The average first frosts occur in early November and the average last killing frosts are April 1. Rainfall in most of the county averages 40 inches; however, more rain falls in the northwest portion of the county. Most of the rainfall comes during late fall, winter and early spring months. A few inches of snow falls most winters.

Transportation, Communication, Public Utilities and Schools

Benton County and its cities are served by excellent county roads, state highways and city streets which are undergoing continuous improvement. Two railroads serve the county. Telephone and electric services are available to the entire county. Gas serves Corvallis and some rural areas between Albany and Corvallis.

Benton County can be proud of its school facilities. There are four modern high school systems in the county along with numerous lower grade schools. Oregon State College, an outstanding institution of higher learning, also is located here.

Private Land Ownership

Of the 427,520 acres, 310,615 are privately owned. There are 1,174 farms according to the 1954 census. 1,581 different private land ownerships over 10 acres in size are on county records. The average size farm is 185.9 acres and has increased in the last 20 years.
Land Use and Agricultural Economics Report

The Land Use and Economics Committee considered eight topics believed to be of importance to the welfare of Benton County. They are: land utilization, size of farm, Willamette Basin project, Alsea Basin water survey, county zoning, farm accounting, taxes and forestry.

**LAND UTILIZATION**

According to the census, Benton County contains 427,520 acres of land. Nearly one-fourth of this figure is improved land. Much of the remainder is best suited to forestry and grazing. Land suited for forestry and grazing lies mostly in western Benton County and much of this area should be left strictly for forest purposes.

**LAND USE IN BENTON COUNTY**

<table>
<thead>
<tr>
<th>Use</th>
<th>Acreage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farm land</td>
<td>214,342</td>
</tr>
<tr>
<td>Cropland</td>
<td>94,228</td>
</tr>
<tr>
<td>Non-tillable farmland</td>
<td>120,114</td>
</tr>
<tr>
<td>Timberland</td>
<td>263,179</td>
</tr>
<tr>
<td>Cities</td>
<td>4,394</td>
</tr>
<tr>
<td>OSC campus and Experiment Station exclusive of forestry</td>
<td>1,274</td>
</tr>
<tr>
<td>Suburban areas</td>
<td>1,135</td>
</tr>
<tr>
<td>Industrial areas outside of city</td>
<td></td>
</tr>
<tr>
<td>Game Commission and Camp Adair</td>
<td>2,300</td>
</tr>
<tr>
<td>National Guard and firing range</td>
<td>380</td>
</tr>
<tr>
<td>County road, 413 miles</td>
<td>2,250</td>
</tr>
<tr>
<td>State highway, 224 miles</td>
<td>1,904</td>
</tr>
</tbody>
</table>

There are duplications in certain of the figures. For example, part of the forest land is in non-tillable farmland.

The demand for non-agricultural and non-forest use becomes greater as population and industry increase. Therefore, it seems feasible that such development take place on the less productive land when possible. Taxes and assessments on land close to town tend to go up as development encroaches, because the market value of such properties is increased. They also become involved in the necessities of urban improvement. For agricultural purposes, drawbacks develop.

A projected Benton County population of 46,000 people by 1975 from an estimated 35,000 people in 1955 may result in a more rapid change from agriculture and forest land use than expected. Associated with this change, numerous community problems of concern to our entire county will arise.

As non-farm and non-forest land use expands, it becomes desirable to move towards improved efficiency in farm and forest operations which are expected to be of a wide multiple nature as influenced by changing economic conditions.

**SIZE OF THE FARM**

Benton County has 1,174 farms according to the census report. This number has declined from 1,678 in 1935. The size of farm has become larger and averages 185.9 acres today. While the trend has been for fewer and larger farms, the number of rural residence owners has been rapidly increasing. Lower farm prices, higher expenses and more costly family living have influenced the increase in farm size. They have also created the need for
maximum efficient production per unit to survive economically. Price indexes for Oregon bring this out. Using 1949 as a base period of 100, the farm price index is 92, expenses index 119, and consumer price index for Portland 115 in 1956. Suggested minimum economic units for major soil types are as follows: Chehalis and Newberg series, 120 to 150 acres; Willamette and good Amity, 200 acres; better Amity and Dayton, 400 to 500 acres; hill soils, 300 to 400 acres with 200 acres in cultivation unless there is a strong forestry program. Minimum farm units for a successful long-time enterprise are as follows:

1. Diversified Farming Units: Minimum requirements are 200 acres of the higher productive soils all under cultivation.

2. Grain, Hay and Field Seed Farming Units: Minimum requirements are 300 acres.

3. Dairy Farm: One hundred and twenty-five acres of cropland is considered a minimum for a 25 to 30-cow dairy.

4. Orchard Unit: A minimum of 50 acres of suitable soil for orchard and small fruit production divided into several enterprises is required.

5. Truck Farm: A truck farm requires at least 50 acres of suitable soil.

6. Poultry Unit for Egg Production: A minimum of 20 acres and 3,000 birds is considered advisable.

7. Stock Ranch: Five hundred acres is a minimum, of which 200 acres will be used for grain, hay, silage and annual summer pastures.

8. Part-Time Farmer: At present, 50 per cent of Benton County’s farmers are using outside employment for additional income. The reasons for this trend in employment have been high wages and lower net return from normal crop and livestock operations. Quite often, the farm income is reduced under such conditions; yet it has many aspects favorable to the county welfare. City people contemplating a small part-time operation will usually do better with a very small acreage or rural residence than with a small farm which requires power and machinery to operate. Rural residence type of place usually varies in size from one to three acres. Smaller farms are desirable for the semi-retired individual who wishes to pursue that way of life. There is the matter of self-satisfaction; most human beings have a yearning to be close to the soil. Previous to making a move to the country, it is suggested that the numerous advantages and disadvantages be carefully studied.

**WILLAMETTE BASIN PROJECT**

The committee favors the development of the Willamette Basin for flood control, power and storage of water for irrigation, industrial, sanitation and recreational purposes.

**Bank Protection on the Willamette River**

Benton County has 17 revetments built by U. S. Army Engineers to eliminate erosion at certain points. First construction started in 1938. The Long Tom River channel was improved downstream to Bundy Bridge in 1944. Several miles north of that point still remain unimproved. A cut-off channel operates between the Long Tom River and Willamette at the
I. P. Crist property. There are at least three more locations needing bank protection immediately; Federal bank protection appropriations amount to only $300,000 annually for the Willamette Basin, which will provide for only three to four jobs per year. The committee recommends that Oregon’s congressional delegation be urged to take steps to triple that amount. Bank protection, while costly, provides benefits far in excess of the costs. The committee also recommends that our congressmen introduce legislation to make maintenance the responsibility of the federal government rather than of local sponsoring groups. Local people might have much difficulty financially in living up to the present maintenance clause in the partnership agreement. The Oregon attorney general also rules that the state and portions of its government cannot assume responsibility for debts the federal government might incur. Court cases of a similar nature have been cited to prove the opinion.

Long Tom River

Improvement of the Long Tom River channel from Bundy Bridge to where it enters the Willamette on the Newman property is recommended to reduce flood damage occurring to 6,000 acres on the west side of the Long Tom channel and make discharging of flood waters from the Fern Ridge reservoir in flood control.

Discharge of Flood Waters From Reservoirs

Land on the main Willamette River has suffered damage by discharge waters from up-stream reservoirs during winter months which have frequently covered the extreme low lands for lengthy periods. In addition, the water level kept just below flood stage has increased bank erosion. Land owners are of the opinion that immediately after a flood, stored water should be discharged rapidly for two or three days and then allowed to drop down to the lowest possible level. The committee further recommends that discharge of stored water in the Willamette Basin reservoirs should start in July, rather than September, to replace underground water supplies for irrigation, meet the needs of industry, reduce pollution and provide water for downstream municipal use.

Mary’s River Basin

Mary’s River and its tributaries cover a watershed area of 300 square miles and empty into the Willamette River at Corvallis. There has been interest and study of development for flood control, drainage and irrigation on the following projects:

1. Tum Tum Reservoir: The proposed Tum Tum reservoir would be constructed at Blodgett, and preliminary estimates are as follows: drainage area, 35 square miles; height of dam, 63 feet; length 1,190 feet; cost, $3,487,000; water would be backed up to Burnt Woods; reservoir area of 1,050 acres, mostly tillable; flood control storage, 24,000 acre feet.

2. Wren: There is also a dam site at Wren on Mary’s River which has a drainage area of 78 square miles, 50,000 acre feet of storage and a dam height of 132 feet.
3. Upper Mary’s River at Summit: Channel clearing and cleaning plus reshaping in certain areas would improve drainage in this vicinity. Low check dams may be required with proper fish ladders to impound water for summer use.

4. Greasy Creek: There are no plans for improvements on this stream.

5. Muddy Creek: The draining of Muddy Creek has been considered for 30 years. Muddy Creek drainage area covers 100 square miles. Proposed plans of the Army Engineers in 1949 indicated 16,275 acres initially benefited and 33,100 acres totally benefited for a cost of $800,000. Channel distance would be reduced from 39 to 17 miles. There would be 487 ownerships involved. Six farm bridges and seven county bridges would need relocating or widening. Actual cash outlay for land owners would be $5 to $6 per acre of total area benefited. The Muddy Creek area to be benefited is comprised largely of Wapato and Dayton soils which, if better drained, would be suitable for certain other field crops. It is doubtful whether economic conditions will warrant much fruit and vegetable production in the drained area. The soils are not suited for fruit production except for the Willamette and better Amity. Muddy Creek in the Valley floor is not a problem from the erosion standpoint. There are some facts which land owners need to consider about Muddy Creek before draining it. Some of them are:

   a. What is the benefit ratio to the cost? To the committee’s knowledge, there are no figures on this.

   b. A water control district will need to be organized with powers to assess and tax.

   c. Present irrigation and fence systems will need reorganizing.

   d. The work must be well done to operate effectively as a large volume of water travels in Muddy Creek during winter months.

   e. Check dam arrangements in the channel will likely be needed to supply livestock, irrigation and fish and wildlife in the summer. There is a considerable amount of dead summer storage of water in the present Muddy channel.

   f. Deed descriptions of certain properties may need to be changed through appropriate legal channels to maintain clear title.

   g. If Muddy Creek is improved, lower Mary’s River channel improvement would become necessary to avoid extreme flooding in South Corvallis.

   h. Muddy Creek today is one of the better migratory waterfowl habitats in western Oregon. An estimated $25,000 was invested in hunting rights and other privileges in 1956. An increase in returns from this source is expected in the future. The stream also provides trout fishing. Based on observation of actual conditions of the Long Tom channel which was improved in 1943, fish and wildlife would suffer.

   i. Much of the land would be more suitable for irrigation if drainage occurred.

   j. As industry and population grow, storage dams may become necessary on head water streams. There are three sites for large reservoirs: one each at Alpine, lower
Beaver Creek and lower Bull Run Creek.

The development of the Mary's River Basin should be undertaken only after the local people have studied the various means and costs of doing the job and benefits to be obtained, and it should be at the majority's desire. The U. S. Army Engineers, the Small Watershed Act, the Small Reclamation Project Act, and the Agricultural Stabilization and Conservation program may be of value to the Mary's River Basin development.

**Luckiamute River Basin**

Benton County is touched by about 10 miles of the main Luckiamute channel in the Kings Valley and Hoskins communities. The area may become involved in the site of a reservoir, which if constructed, would benefit Polk County primarily, and not Benton County. Thorough study of the Luckiamute project seems desirable before action to develop the river by Polk County residents is taken.

**River Navigation**

With increased summer flow, the Willamette River will be navigable to Harrisburg. The committee believes local people should attempt to have river navigation improved to Corvallis in the near future so barges can reach Corvallis most of the year. River navigation offers possibilities for reduced freight rates and better opportunities to market pulpwood. Lime and fertilizer and petroleum costs could be lowered. Highway freight traffic can be reduced between Portland and Corvallis.

**Summer Stream Flow Of the Willamette**

The lowest flow recorded to date was 1,800 cubic feet per second. Army Engineers would like to maintain the flow at 3,000. It would be possible for the flow to drop as low as 1,000 c.s.f. as the demand for water increases. Maintaining a desired summer flow will permit wider water usage for all purposes. It will keep the river clean which contributes greatly to fish and wildlife, sanitation, city water supply, irrigation, industrial use, downstream boating and commercial navigation. The committee recommends the water of the Willamette be used for the purposes congress intended when the Willamette Basin project was authorized. A forecasted population of 300,000 people in the Eugene area by 1975 where there are now 120,000 may make great recreational demands during the summer months on water stored in reservoirs of that area. The committee realizes recreation is important, but believes that the program will need to be adjusted and coordinated with other water uses.

**ALSEA BASIN WATER SURVEY**

The committee recommends that the State Water Resources Board conduct a water use and need survey on the Alsea Basin and that all interests, resources and particular future development for the area be given very close study, and further, that all federal, state, county and city agencies plus farmers, recreation, game, commercial fishing and forestry interests participate in the survey. It is hoped the survey will help improve the various interests of the basin and provide sufficient water for their existence and expansion.
COUNTY ZONING UNDER OREGON LAWS 215.230.240

The zoning issue has been before the local public twice in the past and was disapproved. As the county develops, the subject will likely be introduced again. The committee proposes the following steps be taken when that time arrives:

1. First, everyone involved should study the question thoroughly.
2. The needs of zoning should be considered on a community basis rather than on a county-wide basis.
3. Various interests in Lane County can be contacted to learn about advantages and disadvantages. Zoning has been in operation in Lane County for several years.

FARM ACCOUNTING

Nearly every farmer keeps records of some kind. Accounting other than for tax purposes can be of great aid in selecting enterprises, financing, increasing returns and observing costs. Accounting on individual enterprises will be of great help to better farming.

TAXES

The committee believes many people are not well informed on various tax programs and proposed tax measures of the state and local government. A strong educational program on taxation reaching a large majority of the people appears to be a possible solution to part of our tax problem. The new state tax dealing with property taxes places considerable emphasis on the market value of land in determining true cash value for arriving at the assessed valuation. The market value of farm land in recent years has been influenced by outside interests who desired to invest money for various reasons. Prices paid for land and used to justify high tax appraisals have been considerably beyond what could be recovered through good farming over a twenty-five year period.

The tax contribution of the timber industry compared to the other industries needs to be made common knowledge among the state's population. Further interim tax studies on timber by the legislature are needed. The productivity of soil should be considered as basis of property tax on timber land. Timber is the only crop that pays taxes prior to harvesting.

FORESTRY

Forest industries of Benton County have long been of great economic importance. They formerly contributed one-third of our gross income, but now produce one-half of our income and are about a $16,000 industry at present. The future of forest industries appears to be good. Improved markets for various products and additional ways of converting logs into products in recent years have greatly improved utilization. Through various standard, modified, new and introduced manufacturing processes, wood will be able to keep step with other materials and, in some cases, take the lead in supplying the demands for construction, pulp, furniture, packaging and specialty materials in the world economy.
FOREST OWNERSHIP IN BENTON COUNTY

<table>
<thead>
<tr>
<th>Ownership</th>
<th>Acres</th>
<th>Board Feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Corvallis—Mary's Peak Watershed</td>
<td>1,938</td>
<td>40,000,000</td>
</tr>
<tr>
<td>U. S. Forest Service and O &amp; C controverted</td>
<td>15,180</td>
<td>614,000,000</td>
</tr>
<tr>
<td>Oregon State College</td>
<td></td>
<td></td>
</tr>
<tr>
<td>McDonald Forest</td>
<td>6,761</td>
<td>75,000,000</td>
</tr>
<tr>
<td>Adair Tract</td>
<td>6,240</td>
<td>27,791,000</td>
</tr>
<tr>
<td>Bureau of Land Management</td>
<td>50,778</td>
<td>1,100,990,500</td>
</tr>
<tr>
<td>Public domain</td>
<td>6,098</td>
<td>125,355,000</td>
</tr>
<tr>
<td>State forests</td>
<td>8,260</td>
<td>25,000,000</td>
</tr>
<tr>
<td>Private</td>
<td>151,000</td>
<td>700,000,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>151,190</strong></td>
<td><strong>2,708,186,000</strong></td>
</tr>
</tbody>
</table>

A more accurate figure will be available some time in 1957, as new estimates of volume are being made by various land ownership groups.

New forest stands are well established and most Benton County forest land is well covered with trees. Many logged areas are mostly stocked. Fern land that formerly had no forest stand due to annual burning is now mostly reseeded to trees. Reforestation still remains a problem on some acres as does the need to return lands to growing trees as hurriedly as possible after logging.

Forest industries in 1955 provided employment for an estimated 1,700 people. There were 33 sawmills operating in 1954 which produced 230 million board feet. The estimated log production amounted to 182 million board feet. All logs produced were not milled in Benton County. Some logs for processing in Benton County came from Lane, Polk, Lincoln and Linn counties. The employment of more men per thousand of production can be brought about by further processing.

A reduction in logging and sawmilling will likely come about in the next 5 or 10 years; then, in 20 to 30 years, they should increase as the new crop becomes ready for harvest. New uses for wood and greater marketing of logs for pulp fiber may alter the forecasted trend. Slabs, chips and alder from this area appear to be headed for use as pulp and other fiber.

Benton County must become aware that a certain pattern of ownership change could adversely affect the economy and tax base of the county. Everything possible should be done to avoid such occurrence. Private land, logging and lumbering are nearly all controlled and operated by local people. If this ownership was sold to large out-of-county companies, probably the woods crews would remain active, but mill operations discontinued. This movement would mean unemployment for many local residents. The ratio of men in the woods to men in the mills for several concerns runs 1:2½.

The productivity of forest lands is based on soil depth and composition, rainfall, slope, aspect, climate, drainage, competition from shrubs and other trees, wind and elevation. Land is classified into sites of which there are Site I, Site II, Site III, Site IV, and Site V. About 75 per cent of our land is classed in Site III and low Site II. A small amount of
Sites I and IV land are found in Benton County.

Average yield of fully-stocked stands—international 1/8-inch Kerf Scale—at 50 years age is as follows: Site I—70,000 board feet; Site II—55,000 board feet; Site III—37,000 board feet; Site IV—19,000 board feet; and Site V—7,700 board feet.

Annual yields of fully-stocked stands of Douglas fir in Benton County vary considerably and usually run from 600 to 1,200 board feet per acre after the age of 40 years.

At present prices, farm woodlot operators can expect annual returns above cash costs per acre of from $51 to $55 for established stands and $4 and up for Christmas tree production. Site, roads, stocking, intensity of management and markets are principal factors governing the returns.

**Government Timber**

Government timber is timber on the following owned lands: National Forest of the U. S. Department of Agriculture; Public Domain and Oregon and California Land Grant (O & C), both under the Department of Interior; and state, county and city-owned timber.

Part of the proceeds from the sale of government timber is turned over to state, county and city government by laws as payments in lieu of taxes. The public should be aware of the various procedures and should work to protect and improve their interests.

Improvements in management can be made which will increase productivity of such lands and make them more valuable to our economy and protective of other natural resources associated with forest land. Policies on management, we believe, should come from competent technical advisors with recommendations coming from field staff instead of politicians. The following practices should be completed on more acres with adjoining land owners; snag clearance, property-line marking, construction of fire breaks and roads, and planting.

**Government Access Roads**

Our committee believes that access roads to government timber are needed in some areas if the annual allowable cut is to be harvested. But we do not feel that public funds should be appropriated for access roads which would parallel existing private road systems in order to reach the same block of timber. In an intermingled land ownership pattern, such as the O & C lands, where a private road is already constructed, it would be sheer economic folly to duplicate that road if it could accommodate both government and private timber. There are many areas of government timber devoid of any roads where public funds should be used for road construction rather than for duplicating roads. The construction of such public access roads is being paid for by the public. In the case of O & C access roads, the cost will be borne by 25 per cent of the timber sale money from O and C timber that formerly went to the counties as payment in lieu of taxes. Counties have been receiving 75 per cent of the selling price of O and C timber, but will now receive 50 per cent. The use of these funds for access road purposes will tend to increase
everyone’s advalorem taxes, so use the money where it will do the most good. Many sales of O & C timber have been made in Benton County where access was provided by a private road. Private access to these sales did not limit competition and the selling prices of these sales were far above appraised prices.

Many private road owners in the county are willing to enter into right-of-way agreements with the government, either on an arbitration or on a fair rental basis, but there are few, if any, who wish to sell their road systems to the government, thereby relinquishing complete control.

The Bureau of Land Management has been hesitant about making reciprocal right-of-way agreements with private road owners in the county, even though existing O and C right-of-way regulations specifically provide for such agreements. The resulting controversies have resulted in withholding from the market portions of the annual allowable cut of the government timber, as well as private timber.

If the current O and C arbitration right-of-way regulations are unsatisfactory from the government’s standpoint, they either should be amended or replaced entirely by new and usable regulations.

Other features that need to be taken into consideration for access road construction include the amount of timber to be hauled per mile of road, and the use for public traffic other than logging. Are summer dirt roads sufficient?

Management of Federally-Owned Timber

The committee recommends that a speedier means of putting windthrow and salvage sales on the market should be devised in order to reduce existing waste by reducing sap rot and insect damage.

We firmly believe that no government agency should offer for sale good stands of young timber for clear cutting, but should use the other alternative of selective logging or thinning wherever possible, or allow the stand to reach full maturity. There are many areas in Benton County owned by the government which have acres well suited for selective logging. This practice put to use would provide additional employment in the woods for at least 100 men and make available forest production that has previously been wasted.

Excess decadent seed trees in well-stocked areas should be removed at an early date to avoid fire hazards to the second crop. The allowable and actual cut on federal and state controlled lands should be high enough so that waste does not occur.

Management of Private Forest Land

Several means of improving privately-owned forest land would increase the total annual board-foot production per acre and provide a greater supply of timber to the forest industry.

1. Financing:

A long-term financing program has recently been developed for the small forest land owner. A greater understanding by lending agencies and land owners is needed to put the program into operation.

The establishment of such a credit program will greatly reduce premature harvesting of stands. Cut-
ting immature timber is one of the serious problems in the Northwest today. Everyone concerned will perform a great service if they can reduce this practice.

Agricultural Stabilization and Conservation federal cost-sharing practices can be of financial aid to the small forest tract owner. The soil bank program also should be considered.

2. Reforestation:

Our committee urges owners of forest land to establish a new crop of trees as soon as possible after logging. This can be accomplished by the following methods:

a. Leave blocks of seed trees in the proper location nearby.

b. Leave an adequate supply of good seed trees scattered over the logged area. Seed trees should more than comply with the minimum requirements of the law in both size and number.

c. Scatter seed on the area and poison for rodent control.

d. Plant trees. At present the Agricultural Stabilization and Conservation program pays 50 per cent of the cost of tree planting, and under the Soil Bank, 80 per cent of the cost is paid with maximum limitations. Perform special tasks such as mulching new plantings and cultivating when needed.

In addition to the logged-over area, there are about 15,000 acres of open grassland and cropland in the lower foothills that probably will return greater annual revenue per acre from timber over a long period than if used for pasture or crop production.

In the river bottom areas and some of the extremely wet lands in the main valley floor of Benton County, cottonwood and Oregon ash offer good possibilities for making desirable annual returns from forest products. A well-stocked stand of cottonwood will produce 1,200 board feet per acre annually. White fir, hemlock, cedar alder and maple in minor mixture have a proper but neglected place in reforestation.

In establishing new stands of timber, it is desirable to have even-aged stands because management problems are reduced when pruning and harvesting starts.

3. Livestock and Trees

The grazing of livestock on forest lands can be permitted providing the stockman is careful not to overgraze an area. Overgrazing is a common practice on forest land that has interim use possibilities. Young trees are often killed and others badly damaged. Tree damage is due mostly to early spring and late fall grazing. Deer damage on some tracts has been heavy in recent years. The damage seldom kills the tree, but badly deforms it so that it often does not make a good forest tree. One of the goals in tree growing is to keep the land fully covered with good trees.

Our committee recommends that the Oregon State College Experiment Station publish the results of livestock grazing on the Northrup Creek Experiment Station in Clatsop County where an experiment was conducted for several years with sheep and cattle grazing logged-off land.


Logging operators, fire protective associations, private landowners,
the U. S. Forest Service and the state are to be commended on the excellent fire protection program they are carrying out. Relaxation in the fire protection program should never occur, as fire prevention and control mean the difference between trees and no trees.

5. Pruning, Selective Thinning and Low Stumps

a. Tree pruning: Pruning of 15 to 30-year old stands of Douglas fir up to a height of 9 to 19 feet from the ground will improve the amount of clear material in butt logs. A 20-year old demonstration near Blodgett shows 5 inches of clear wood in diameter since pruning. Keep these points in mind when pruning.

1. Do not remove over one-third of the live crown.
2. Avoid overexposure of tree trunks to hot sun and wind.
3. Prune crop trees only about 100 to 150 per acre.
4. Prune flush with hole and smooth out.

b. Thinning: Under some conditions, this practice can be started on 25-year old Douglas fir stands and used up to ages of 100 years. Extremely rough, rocky ground is not suitable for selective logging. Healthy, well-formed, dominant and co-dominant trees should be the trees left, rather than removing all the large-sized trees and leaving small ones. The good trees are the money makers. This practice is known to have produced twice the accumulated board feet yield per acre compared to allowing nature to take its course and then clear cutting.

c. Low Stumps: There are several advantages in keeping stump heights at almost ground level. They include increased volume per tree and less breakage and waste.

6. Prelogging

Where old-growth stands are to be clear cut, prelogging snags, down trees and trees under 20 inches in diameter increase the harvested yield per acre by 6,000 to 10,000 board feet. Logging of the remaining stand is easier and faster. Some large timber companies are convinced that prelogging pays.

Christmas Trees

The long-time outlook for Christmas trees appears good for high quality trees. The bulk of Christmas trees will be Douglas fir. However, there is expected to be a good demand for noble fir, white fir, ponderosa pine, Austrian pine, redwood, some cedar and spruce. Plantings have been handled with success on nearly all types of land. Soils which produce one foot of annual growth do not leave much of a pruning problem, but they do have drawbacks for establishing a stand. Where annual growth is 18 to 30 inches, a well-timed pruning and scarring program must be used to produce trees of high quality.

Christmas trees have been successfully harvested while reforesting. The operator should know his business from the cultural standpoint if this method is used.

Christmas tree production and marketing is a specialized business. Growers need to learn local and export markets. The committee recommends:

1. A county voluntary membership Christmas Tree Association.
2. The county extension agents
secure annually a growers' list and the estimated number of trees for sale.

3. Better out-of-state markets must be developed as our supply of marketable trees becomes greater.


5. More research on marketing of Christmas trees and loss and damage in interstate shipment.

6. The county extension agents carry on a strong educational program covering Christmas tree production methods.

Public Utility Rights-of-Way

The present rights-of-way along power and telephone lines through forest land should not be widened. If they are, that means less tree-producing land. It is true that trees sometimes interrupt service, but those same trees are partially the basis for the utility companies' existence. The committee suggests that crews limbing trees away from lines cut the entire limb away flush with the trunk rather than leaving a stub.

Forestry in Secondary and Elementary Schools

Because forestry makes up a large segment of our state's economy, the committee recommends that all schools add to their curriculum a forestry class for both boys and girls. A one-day school forestry tour in cooperation with public agencies and private industry should be of much educational value and rights of private ownership even if the land is wild.

Fish and Wildlife and Recreation

Fish and game and other animal life occupy the forest land and are a part of the recreational assets of the area. The spawning grounds for the salmon important to commercial and sports fishing in the Alsea and Yaquina coastal streams are in our timber lands. Timber management must be such that it contributes to the fish and wildlife program.

The predatory animal control program of the county has kept bear damage to trees in check during recent years. Overcontrol of deer predators can result in deer damage to trees.

The committee feels that the Mary's Peak watershed is being well handled by the U. S. Forest Service. The complete removal of the present stand of timber should come about in a pattern that will keep tree cover on the watershed at all times. However, trees are like other living things. They reach maturity, decline and die. Good conservation is use without economic waste. A stand of young, healthy trees can absorb as much or more water in the soil as an old stand of trees; in variety mixture, it provides good wildlife habitat. Ground cover protects a watershed. During the winter when the saturation point is reached, run-off is inevitable. The collection of various data in connection with the Mary's River Peak watershed over a number of years will provide the people of the county with valuable information on watershed management.

For the best interest of everyone, the committee recommends that the Mary's Peak area not be handled as a wilderness area.
Soil Erosion Control

Soil erosion control measures suggested for landowners and logging operators are as follows:

1. Seed logging roads, cuts and road banks to grass, preferably common ryegrass or velvet grass, at heavy rates per acre or in mixtures with other seed. Both grasses make fast suitable cover. Soil will be stabilized fairly well after one winter, if cover exists the first year.

2. Make large cuts with back slope rather than straight up and down.

3. Use shallow diversion channels on the roadbed at necessary intervals.

4. Lay out a good road system with the lowest amount of grade possible.

5. Put logged areas back into trees or grass as soon as possible.


7. Log away from streams, if it can be done.

8. Remove debris from streams when through logging.

9. Avoid winter logging, if it can be done.

10. Remember, water causes the greatest amount of damage. Erosion cannot be eliminated 100 per cent. It has always existed, even before the white man came, but we should work to hold it to a minimum.

McDonald Forest and Adair Tract

A wonderful opportunity exists for this area to become a model tree farm of the Northwest; some excellent research data can be collected from this area and published. The committee urges that the Oregon State College School of Forestry take the necessary steps to reach that goal.

County Extension Program

The 30 established forestry demonstrations should be continued for many years. The data and experience from these demonstrations will greatly aid our farm forestry program for the new crop of trees.

Timely tours and meetings should be included in their annual program of work. A tour to show good cut logging is suggested.

Fertilizer demonstrations on Douglas fir for Christmas trees and forest trees.

Use of Technical Service and Educational Programs

The development of forest land owners and logging operators as good foresters is an accomplishment folks should strive for. Some of Benton County's best foresters have achieved that status without higher education, but have been good students of experience, observing and willing to learn and work things out.

Capable private consulting foresters are available. Technical foresters are available from the State Forester's office, Soil conservation Service and Extension Service through your County Agent office. Tours and meetings offer valuable information about forestry.

Montain Water for Municipal Use

A complete study of Benton County forest areas for city water supplies should be made to plan for expanding demand. Cedar Creek, Westwood Creek, Scheely Creek, Parker Creek, upper Mary's River, Wood Creek and Wells Creek offer possibilities.
Conclusion

The committee recommends that the forest industry, County Court, Chamber of Commerce, schools, business firms, various government agencies, legislators, farm groups, and land owners consider the recommendations and suggestions of our committee and some day make progress along the described lines.

Crops Report

The value of hay, silage and grain and seed marketings amounted to 43 per cent of agricultural marketing in 1956 for a total of $3,846,200. Similar proportions of the gross income for previous years have come from field crops. Field seeds provided the greatest returns with $2,074,800, and grain and hay combined for a total of $1,761,400.

ACREAGE TRENDS

Of Benton County’s acreage trends, approximately 94,000 acres of cropland production was as follows: 29,327 field seeds; 20,000 dry land pasture; 4,500 irrigated pasture; 11,000 hay and silage; 30,500 grains.

PRINCIPAL SEED CROPS

ACREAGE OF PRINCIPAL CROPS IN BENTON COUNTY 1929 - 1956

<table>
<thead>
<tr>
<th>Crop</th>
<th>1929</th>
<th>1939</th>
<th>1943</th>
<th>1956</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seed crops</td>
<td>3,580</td>
<td>16,920</td>
<td>32,600</td>
<td>23,327</td>
</tr>
<tr>
<td>Grains</td>
<td>24,437</td>
<td>32,752</td>
<td>23,650</td>
<td>30,500</td>
</tr>
<tr>
<td>Hay and silage</td>
<td>19,870</td>
<td>17,479</td>
<td>12,200</td>
<td>11,000</td>
</tr>
<tr>
<td>Dry land pasture</td>
<td>8,000</td>
<td>11,725</td>
<td>13,625</td>
<td>20,000</td>
</tr>
<tr>
<td>Irrigated pasture</td>
<td>70</td>
<td>600</td>
<td>950</td>
<td>4,500</td>
</tr>
<tr>
<td>Total</td>
<td>55,957</td>
<td>89,476</td>
<td>83,025</td>
<td>89,327</td>
</tr>
</tbody>
</table>

ACREAGE OF CEREAL GRAINS IN BENTON COUNTY 1929 - 1956

<table>
<thead>
<tr>
<th>Crop</th>
<th>1929</th>
<th>1939</th>
<th>1943</th>
<th>1956</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheat</td>
<td>8,810</td>
<td>6,079</td>
<td>4,000</td>
<td>4,500</td>
</tr>
<tr>
<td>Oats</td>
<td>10,379</td>
<td>12,048</td>
<td>8,600</td>
<td>12,500</td>
</tr>
<tr>
<td>Barley</td>
<td>1,877</td>
<td>5,195</td>
<td>5,700</td>
<td>13,000</td>
</tr>
<tr>
<td>Corn</td>
<td>1,559</td>
<td>1,875</td>
<td>850</td>
<td>200</td>
</tr>
<tr>
<td>Total</td>
<td>22,625</td>
<td>25,197</td>
<td>19,150</td>
<td>30,200</td>
</tr>
</tbody>
</table>

PRINCIPAL SEED CROPS HARVESTED IN BENTON COUNTY 1956

<table>
<thead>
<tr>
<th>Crop</th>
<th>Acreage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hairy vetch</td>
<td>5,500</td>
</tr>
<tr>
<td>Willamette vetch</td>
<td>120</td>
</tr>
<tr>
<td>Austrian peas</td>
<td>3,000</td>
</tr>
<tr>
<td>Crimson clover</td>
<td>800</td>
</tr>
<tr>
<td>Red clover</td>
<td>325</td>
</tr>
</tbody>
</table>

ACREAGES OF VARIOUS COMMODITIES

- Common ryegrass: 6,000
- Perennial ryegrass: 4,400
- Alta fescue: 550
- Bentgrass: 450
- Chewing fescue: 525
- Creeping red fescue: 160

Acreages of various commodities are discussed under individual commodities.
LOCAL PROCESSING PLANS

The number of local commercial seed cleaning, feed mixing and grain handling facilities is considered sufficient. There are seven commercial concerns in the county plus 12 individual farmer-owned cleaners who do most of their own work. There is room for further expansion of grain storage, and, to some extent, of seed-cleaning facilities on the farm.

GRAIN CROPS

The leading crop is Hannchen barley, largely because of the demand for malting purposes. Grain acreages have remained fairly constant for the past 10 years. Hannchen barley acreage has been increasing. Yields per acre have been nearly doubled on many farms. It is common for farmers today to harvest 1 1/2 tons of barley where 15 years ago, three-fourths of a ton per acre was good. Thirty-five to 60 bushels and even better wheat yields per acre are common where 20 to 25 bushels used to be normal. Oat yields are running well over a ton. Yields of all three grains in excess of two tons per acre have been harvested on good soil where certain production methods have been used. The results have been due to improved varieties, fertilizer, crop rotation, weed control and improved combines.

There is a continuous need for improving varieties, maintaining quality and developing new varieties of grain. Farmers would like a heavy yielding thin hulled spring oat, something better than what is now available. Yield has always been a factor with winter barley even though there have been several improvements. There is a need of a heavier-yielding, stiff-strawed and greater forage producing winter barley.

Corn for grain has been produced in a very limited way. Satisfactory yields are obtained; however, wet weather makes harvesting difficult about every other year. A high yielding earlier variety would improve corn as a grain crop in Benton County.

Grain varieties suitable for production with irrigation in the Willamette Valley should be developed by the Experiment Station.

The use of clean-seed grain free from weeds and other grain is very important in maintaining quality.

The market outlook for cereal grains in the next few years is expected to be about the same as the past five years, not too strong, but fair.

SEED CROP

22.7 per cent of our farm marketings in 1956 came from field seeds. The major seed crops are hairy vetch, perennial ryegrass, Austrian peas, crimson clover, common ryegrass and fescues. The seed industry has been an important segment of our agriculture from an economic and soil conservation viewpoint.

Perennial grass seed crops, when properly established and cared for, also offer a means of utilizing the acreage of small part-time operators.

Winter Cover Crop Seeds

This group includes hairy vetch, common or Willamette vetch, crimson clover, Austrian peas and common ryegrass. The potential for increasing cover crop seeds in the 14
southern states appears to be very large, even though they produce much of their own seed and have been trying to urge the use of cover crops. A 1955 cover crops usage survey in those states reports 12,000,000 acres being cover-cropped out of a potential of 28,000,000 acres. The South has greatly reduced row crop acreage in the past 30 years. Much of the diversion went to perennial pastures, which could be made into better year-around pastures by top dressing each fall with common ryegrass and crimson clover of the reseeding type.

Perhaps Oregon can increase the usage of more cover crop seed in the South through various methods. Time and money will be required. Benton County seed growers can help themselves financially by working with the entire state in developing such programs. An improved market is required before cover crop legumes can be assured of a "healthy" position.

Production problems include weed control—especially wild garlic in seed crops and grass and hairy vetch in crimson clover. Lower cost and more effective chemicals are needed. Continued research is necessary on this phase.

Improved harvesting techniques can save more seed per acre of many seed crops.

Farmers are urged to avoid growing vetches and peas oftener than 3 or 4 years on the same land to avoid poor yields because of various diseases.

Slugs have been a menace for years. An improved insecticide would be welcomed. Hairy vetch weevil is being well controlled with DDT.

More accurate crop reporting of acreage, production, and usage would help producers to better plan marketing, fertilizer use and acres to grow.

Pasturing common ryegrass for seed production with sheep would help reduce the pounds of seed produced, hold up farm income and allow ryegrass to be produced on the heavy, wet soils of Benton and other counties that have few other cropping alternatives. It is recommended that the larger common ryegrass seed producers consider the conservation reserve part of the soil bank. The crops planning committee recommends that the seed industry urge Congress to raise conservation reserve payments from $13 per acre to $20 per acre to make participation in the soil bank program more attractive to ryegrass growers.

The committee urges all producers of both kinds of ryegrass to familiarize themselves with the proposed ryegrass commission prior to the coming referendum.

Perennial Grass Seeds

Perennial ryegrass, red fescue, chewings fescue, alta fescue, meadow foxtail, orchard grass, Tualatin oatgrass, bentgrass and Merion bluegrass are produced for seed.

The outlook on these crops brings the following remarks from the committee:

1. Perennial Ryegrass: Present production and marketing leads the committee to believe no further expansion is desirable, except to develop improved strains such as S-23 and others which are likely to
broaden the usage of perennial rye-grass.

2. Red Fescue and Chewing Fescue: What Canada produces will be one of the main factors in determining expansion. Producers who can harvest yields of 400 pounds or more of clean seed per acre can make good money at 20 cents per pound. The producer on hill soils who obtains only 200 pounds per acre or thereabouts will have difficulties. Improved strains of red fescue seem to bring a slight premium over other strains.

3. Alta Fescue: The acreage has been over-expanded nationally. In 1955, there were 118,000 acres harvested and 28,707,000 pounds of seed produced. The soil bank may bring temporary revival. The release of new strains seems to offer the best future. There are several which may be used. They are fine leaved strains that will be more suitable for turf purposes. One strain tests 25 per cent crude protein. Another most of its growth in the winter and early spring months. Alta fescue seed production works well with livestock.

4. Meadow Foxtail: A small amount of seed is produced as a by-product of pasture. Straight meadow foxtail seedings with lotus forage may be increased in the future on heavier soil types.

5. Orchard Grass: Benton County farmers could produce 500 acres of orchard grass seed of various strains annually. Seed production must be in rows on well-drained soils to obtain worthwhile yields. Potomac and S-143 perhaps offer the most promise at present.

6. Tualatin Oatgrass: A limited acreage may have a place. Oatgrass is short lived under severe winters and heavy grazing.

7. Bentgrass:
   a. Highland Bentgrass: The market is saturated today. The committee advises increase be confined to fields already heavily infested with bent and be sure the field will produce seed. Because of moisture, it is believed some fields do not produce seed very well.
   b. Astoria Bent: A few acres of Astoria can be produced under irrigation. The acreage and production has been declining in Oregon.
   c. Seaside Bent: Here is a grass with possibilities for a few individuals who can irrigate the crop several times. Prices are now $1.05 per pound.
   d. Rhode Island Bent: Development of this strain is recommended. There happens to be a stand of isolated Rhode Island bentgrass south of Alsea.

   The production of bentgrass seed is a specialty enterprise and producers should perform practices that produce maximum yields.

8. Merion Bluegrass: Benton County acreage amounted to 60 acres harvested in 1956; more could be produced, but supplies may soon exceed the demand. Good yields are 300 pounds of clean seed per acre. Production costs are high, and prices as low as 50 cents per pound are anticipated in the next 2 to 3 years.

Perennial and Biennial Legume Seed

Clovers have long been good money makers for many farmers. Red clover of the Kenland and
Pennscott strains offers a desirable crop for a sizeable number of farmers who have irrigation. More effective means of controlling nitidulids, a pollen-eating insect that affects red clover, are needed. Research should be continued.

Dutch white clover and other strains offer good possibilities. White Dutch clover will produce 150 to 200 pounds per acre on an average. Seed prices have ranged from 30 cents to 75 cents per pound for the past 30 years.

Alsike clover can be produced profitably under irrigation in western Oregon, the committee believes. A few acres of subterranean clover has possibilities for seed.

Someday lotus or trefoil may be of great importance after users learn how to grow it for forage. At present, seed supplies are more than plentiful.

Vegetable Seed

Growers who have the equipment, fertile river bottom soil, isolation, the knowledge, experience and willingness to apply all necessary steps to produce seed under contract with reliable outlets are justified in engaging in this enterprise. Seed crops of red beets, radishes, kale, cabbage, Swiss chard, spinach, carrots, onions, parsnips, squash, pumpkin, cucumbers, turnips, dill, mustard and rutabagas have been successfully grown. In 1956, vegetables seeds occupied 388 acres.

Production and Marketing Problems

The promotion of Oregon seeds must be a continuous program which includes the never-ending job of educating consumers. Oregon and Benton County are able to grow many more acres of seed if we can sell the commodities at prices above production costs. Marketing problems are of a long-range nature.

**FORAGE CROPS**

**Hay**

Benton County hay acreage in 1956 was estimated at 11,000 acres, composed of five different kinds which are: alfalfa, 2,700 acres; straight grain, 1,100 acres; vetch and supporting crops, 1,800 acres; clover alone, 2,400 acres; and grass hay, 3,000 acres. Most of this hay was fed in the county, but a small portion was shipped to coast counties. About 2,500 tons of alfalfa per year comes into Benton County from east of the Cascade Mountains.

Hay quality can be improved by producing hay with less weeds and cutting when the protein content is high. The committee believes hay acreage can be expanded. A greater market in nearby coastal areas is possible, and the use of more home grown forage can become a reality. Local alfalfa hay of top quality has a high nutritive value.

The expansion of hay acreage should occur with increased alfalfa, red clover, and grass and legume hay. Annual yields of 3½ tons per acre of alfalfa are being produced on deep hill soils that have been properly limed and fertilized. These fields would produce more if irrigated. With new alfalfa varieties and irrigation, yields of 7 tons per acre have been recorded. The production of grain alone for hay needs to be avoided when possible.

**Silage**
There are 116 silos capable of holding 10,600 tons. Most of the silage today is grass and legumes and cannery corn. Ten years ago, corn accounted for most of the silage. A good silage program will reduce winter feeding costs, enable farmers to harvest the first crop of alfalfa and other biennial and perennial legumes and grasses without rain damage which will occur to many operators 2 out of 3 years. A potential market may exist in coastal counties for silage sold from this county and warrants attempted development.

**Pastures**

The pasture area in the county consists of four different types:

(1) Seeded logged off land; (2) brush and native grass land; (3) seeded marginal crop and hill land; and (4) pasture produced on good crop land.

For expansion and improvement in the pasture program, the committee believes accomplishment can be obtained by these proposed steps:

1. Dairy and swine raisers should use irrigated clover and grass where production is possible. Beef cattle operators can use irrigated pasture if stomach worms are controlled in young stock. There are 4,500 acres of irrigated pasture now.

2. For those without irrigation, seeded perennial pastures, supplemented with annual grasses, sweet clover and rape for swine and sheep will improve the forage program.

3. The seeding of marginal crop land to perennials and renovation of old pastures will help produce more feed.

4. The reseeding of cut-over land immediately after logging and burning produces good forage and reduces fire hazards for our forest land. Some decisions between tree farming and livestock must be made. Manage brush and logged off pastures to avoid overgrazing, as an overgrazed pasture has much less carrying pasture and is shorter-lived; damage in the timber area occurs to young trees.

5. Plan the pasture program ahead.

6. Fertilizer will double yields per acre and on poorer soils it is essential for worthwhile pasture production. Lime where needed. Phosphate and nitrogen are helpful.

The practices mentioned have been proved on large tracts and are now being carried out by a large number of farms in the county. Much progress has been made in expanding pasture acreage in the last 20 years. Greater yields per acre and establishment of good stands seem to be the major problems. Costs per acre for establishing pasture run from $20 to $55 per acre. The Agricultural Stabilization and Conservation federal cost sharing program offers assistance to farmers for performing this practice. There are a number of high yielding perennial legumes and grasses suitable for pasture purposes in Benton County.

**Crop Residue**

With the exception of some perennial grass straw, crop residue in most cases should be returned to the soil by way of livestock or plowing under. Crop residue is a great soil builder. Alta fescue and perennial ryegrass straw makes livestock feed under certain conditions.
Burning of perennial grass stubble is recommended to control diseases and insects. The removal of perennial grass straw aids seed production and chemical weed control. Fine fescue straw should be burned rather than used for livestock feed as it causes poisoning in stock.

An estimated 20 per cent of the crop residue is burned.

**OIL CROPS**

Peppermint and dill constitute this group. The acreage is small and the committee recommends slow expansion because of insects, diseases, market outlets, and rapid expansion of production in other Columbia Basin areas. Cost of production runs high.

**WEED CONTROL**

The control of weeds is essential to good farming. Weeds reduce quality of many products and create increased costs.

A county-wide weed control district has operated in Benton County for several years. The district is financed by a special county levy outside of the six per cent limitation not to exceed one-half mill. The cost has been running around one-fourth mill for the supervisor, transportation and materials.

The following weeds are being controlled in the district: tansy ragwort, wild garlic, leafy spurge, poison hemlock, ragweed, star thistle, white top, Russian knapweed, brown knapweed and black knapweed. The land owner’s responsibility is to see that these weeds are not allowed to go to seed. Eradication has been exercised in many cases. The supervisor encourages folks to control these weeds and points them out to landowners when possible and sprays county roads when infested.

While 100 per cent control has not occurred and may be difficult to obtain, the infestation of wild tansy ragwort has been kept confined largely to areas it occupied prior to the district, and ragweed, knapweed and leafy spurge have been eliminated when an outbreak occurred.

The program has cost money, but many folks feel that it has saved much more.

The committee wishes to make recommendations:

1. Continued weed research should be kept going full pace at Oregon State College, including toxicity studies on tansy ragwort.
2. Government owned land, state and federal, should control tansy ragwort. Without their cooperation, control by private land owners becomes difficult. This is one weak spot in the entire tansy ragwort control program.
3. The county should inaugurate a greater brush and weed control program for roads with chemicals and mowing of the roadside. The county weed supervisor and county extension service should be their major source of information for the use of control chemicals under the county road program.
4. Every farmer should do his best to control weeds by numerous methods. Many weed control measures are non-cost practices, especially in the sanitation program.
5. The weed control district needs to be kept in operation.
6. Good weed control means higher yield per acre, better health, reduced loss of livestock from poi-
soiling, clean seed, grain and forage that sell for more money, less operating costs in the long run, and better tasting dairy products.

7. The Extension Service should continue an educational program and make individual recommendations to farm and home owners on weed control.

8. Organizations should attempt to encourage the adoption of Agricultural Stabilization and Conservation F-2 weed control practice workable at the county level which will require approval of certain weeds for control by the State Department of Agriculture.

Dairy Report

Dairy products sales amounted to 12 per cent of Benton County's agricultural income for 1956 as compared to 20 per cent in 1945. However, the gross dollar return has remained relatively constant during this period. Both 1945 and 1956 dairy marketing returns totaled about $1,100,000. 1953 returns resulted in a gross marketing of $1,540,000, the high for the period.

BENTON COUNTY DAIRY CATTLE NUMBERS
(2 years and older)

<table>
<thead>
<tr>
<th>Year</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1890</td>
<td>3,900</td>
</tr>
<tr>
<td>1935</td>
<td>6,200</td>
</tr>
<tr>
<td>1942</td>
<td>6,200</td>
</tr>
<tr>
<td>1945</td>
<td>5,800</td>
</tr>
<tr>
<td>1946</td>
<td>4,800</td>
</tr>
<tr>
<td>1950</td>
<td>4,600</td>
</tr>
<tr>
<td>1956</td>
<td>4,700</td>
</tr>
</tbody>
</table>

In Oregon, the number of dairy cows reached a war time high of 284,000 in 1945. There has been a decline to an estimated 219,000 for 1956. Nationally, dairy cattle numbers reached a peak of 27.7 million in 1945. Cattle numbers dropped rapidly through 1949. Since 1950, they have decreased about one-half million head to the present level of 23.2 million. This is the lowest number of dairy cows on U. S. farms since 1930.

Basic shifts have occurred in Benton County's dairy industry during the past decade. The number of dairymen has decreased while cow numbers remain constant. Marked reductions in factory milk production and sales outlets have taken place. Market milk producers are becoming fewer in numbers and averaging larger in size. The cost of items which the dairymen must purchase has increased more rapidly than the price which he received for his products. Family living expenses have advanced as rapidly as other costs. Dairymen have attempted to meet this situation by improving feeding practices, milking more cows, increasing production per cow, and improving labor management.

Benton dairymen must maintain and improve their situation in relation to problems that face them, or fall behind the pace of the industry. Some of the problems can be reduced by applying technical knowledge available. Some need additional research. Market outlets for factory milk may present a seri-
ous problem over which dairymen as individuals have little control. Lack of investment and operating capital is a serious problem to some.

**THE DAIRY BUSINESS**

Benton County is climatically suited to dairying. Dairymen compete economically with other Oregon production areas by properly utilizing the forage and grain crops that are produced. Markets are available within and adjacent to the county. Population forecasts justify continued gradual enlargement of the industry to supply our own needs.

The lack of a sound long-range plan is a problem with some dairymen. A long-range management and operating plan with definite objectives seems desirable.

Inadequate financing to develop or enlarge a dairy operation can result in a sub-economic unit. A 1947 study of Willamette Valley herds showed an average capital investment of $500 per cow. Few Benton County market milk herds have less than $1,000 per cow invested today. A prospective producer developing a good 30-cow or larger herd, including the forage program, could easily find the investment to be $1,500 per cow. Total investment required to dairy should be realized by dairymen, prospective dairymen, and consuming public.

The economic unit or "right size" of a dairy operation depends on the individual operation. For a factory milk producer employed off the farm, it may be five or less cows. Most dairies should have 20 or more cows.

**BREEDING AND PRODUCTION**

Benton County dairymen can and should produce more milk per cow. The feed program, handling, housing, health condition, and inherited production capacity all affect annual production. Herd improvement through breeding is a long-range program developed by using superior sires, artificially or by natural service, to produce improved replacement stock.

Production records supply the best basis for selecting replacement stock, as well as measuring the individual production of each cow and providing information needed to feed concentrates. Milk weight records can be kept by individual dairymen using the "weigh-a-day" record book or any other suitable record form. Dairy Herd Improvement Association milk fat and weight records under either the standard or owner-sampler plans are available to Benton County dairymen on a limited basis.

**FEEDING**

About 45 per cent of dairy costs are feed. The feed program of each dairymen should be developed after considering all factors on that farm. Benton County dairymen can reduce feed costs by purchasing off-farm feed supplies at harvest and producing home-grown feeds of higher quality and yield per acre.

Feed grains and protein supplements should be purchased by measuring food value against comparative costs of the types of feed available, and fed according to individual production.

Production of high quality
roughage is a major problem of Benton County dairymen.

Pasture, with few exceptions, supplies the bulk of the roughage fed during the growing season. High quality pasture can best be maintained by combining suitable grasses and legumes under high fertility and irrigation with rotation and clipping programs.

Forage utilized as silage can reduce feed costs and increase the quality of winter roughage. Many Benton dairymen could increase profits by storing homegrown forage as a high quality silage. Total digestible nutrients produced per acre are greater from silage than hay.

It is difficult to produce high quality hay in Benton County. Weather conditions usually delay first cuttings of most local hay crops. Consideration should be given to storage of the first cutting as silage. Alfalfa, red clover and other legumes or grass and legume mixtures, when cut at the proper stage, produce the best hay and silage. Purchased hay should be bought on the basis of feed value and palatability, not price per ton.

HOUSING AND EQUIPMENT

Dairy housing plans should provide expansion room not requiring expensive remodeling. Such plans should utilize present buildings to the best advantage. The long-range housing plan should reduce labor per cow, maintain herd health, and balance costs against durability.

Pit parlors, pipelines, automatic feeding equipment and other labor saving devices reduce labor and contribute to the ease of producing milk. Such items cannot always be economically justified. Dairymen must individually weigh economic and convenience benefits against cost.

Housing which provides a tight roof, protection from wind, and a dry bedding surface is adequate for Willamette Valley winter conditions.

Shavings, sawdust, or hog fuel have been used extensively for bedding and exercise yards. These timber by-products are rapidly becoming scarce. Dairymen should bed heavily in the summer, store winter requirements and use a 50 per cent straw mixture if necessary.

DISEASE AND PEST CONTROL

A healthy dairy herd results from careful handling and management practices. Pests can be controlled with available materials. The past program has brought TB under control and should be continued.

The test and slaughter program of Brucellosis is practiced on almost 100 per cent of Benton County dairy cattle. As a result, the incidence of this disease is very low. However, not a sufficient number of beef cattle are tested at present to qualify the county as a modified Brucellosis-free area. This problem should be remedied at the earliest possible time and accreditation maintained by the present or improved programs.

The factors which contribute to mastitis conditions should be familiar to all dairymen. Proper handling, sanitation and treatment are equally important in mastitis control.

MARKETING

The number and availability of outlets for marketing both factory
and market milk has decreased in the past 10 years. This trend will probably continue. Market milk producers should experience no difficulty in finding one or more outlets. Factory milk outlets may soon be unavailable in certain areas of the county. Consideration should be given to this problem and necessary steps taken to attempt to maintain countywide outlets.

SUMMARY

In summary, the dairy committee believes that the average Benton County dairymen can best improve his operation by:
1. Having a sound management plan containing definite objectives.
2. Operating an "economic unit."
3. Keeping production records and using them to cull, select replacements and feed concentrates.
4. Keeping cost records covering the complete operation as a basis of determining the best feed program possible.
5. Producing and storing high quality roughages. Silage should be considered in many operations.
6. Raising own replacements and growing them out carefully.
7. Giving particular care to the mastitis problem.
8. Using good sires.

Livestock Report

The Livestock Committee has reviewed the livestock enterprise in Benton County and made several recommendations which will be of value to our livestock producers.

In 1958, 8.0 per cent of farm marketings in the county came from sheep, beef, swine, and goats. The returns from livestock on a county basis have been declining because of reduced swine and beef numbers and declining prices.

Livestock production is essential to the economy of Benton County's agriculture. The industry may fluctuate, but ties in with land and crop utilization. Complacency in marketing and production of livestock leads to a downward trend of the industry and should never prevail.

CONSUMER EDUCATION

1. Two weekly television programs are available for viewing, one over a Portland station, and one over the Eugene station. These programs are designed to acquaint consumers with best buys of the week, also spotlighting meat. Housewives and others will benefit from seeing these programs.

2. The American Sheep Producers' Council has much information on uses of lamb and are promoting lamb consumption. Their efforts have helped stabilize lamb prices. Continued promotional efforts of the Council are recommended.

3. Oregon Cow-Belles' Association has made available a donation of $10 to home economics departments in many schools to assist students in learning new methods of preparing beef. The money is used for purchase of meat. The committee recommends the continuation of the program, if money is available, and commends the Cow-Belles' Association for their interest.

4. Consumer demand for lamb shows that the most desirable dress-
ed lamb carcass should weigh from 40 to 55 pounds. This means a live weight of 90 to 105 pounds.

5. Demands for pork indicate that the lean meat type hog is most desirable. The committee recommends increased hog production be lean meat type.

**MARKET REPORTS**

1. Within a short period of time, a better marketing report on sales of livestock from farmer direct to buyer will be available. This type of service is needed to give producers more market information.

2. The current market reporting system should be continued with some expansion.

**SELLING OF LIVESTOCK**

1. Contacting livestock commission firms on the Portland market will provide producers with more ideas on when and where to sell.

2. Livestock markets have shown high and low trends. Watch markets, sell on higher trends if possible.

3. Portland prices from July, 1954, through June, 1955, showed top grade steers and heifers tend to be highest in late summer and lowest in spring. Cows are lowest in fall and highest in late winter or early spring. Lambs are usually highest in spring (late March to mid June) and lowest in fall. Hogs tend to have two highs, one in early summer, and one in late winter. Lows are in spring and fall.

4. Prices received are somewhat higher when heifers are sold weighing not more than 850 pounds, steers 900 to 950 pounds grading good or choice, lambs choice and prime from 80 to 105 pounds, swine 180 to 215 pounds.

5. Where the operator has sufficient livestock to market, additional profit has been obtained by some when livestock was sold on dressed weight and grade. This applies where the stockman feels the grade of livestock is better than it would be if graded live.

6. The committee feels two demonstrations might be helpful to livestock producers. One would deal with beef where producers might grade animals on the hoof and later follow the same carcasses through the cooler and see the dressed grade. The other demonstration, which might be carried on through 4-H work, would be on docking and castrating of lambs by various methods.

7. Sorting of lambs at market time will benefit the producer. Sell all fat lambs in a group, feeder lambs as a group, and culls as a group rather than selling all in one lot.

**DRY LOT FEEDING OF BEEF AND LAMBS**

1. Obtain adequate feed supplies at the start.

2. Treat all animals for stomach worms at start of feeding period, and then do not turn back on pasture.

3. When buying feeders, a rule is not to pay more than 3½ to 4 cents under the fat stock market prices at the time of feeder purchase. A spread of this kind usually provides for a safe margin.

**SWINE PRODUCTION**

1. Ten per cent of the population lives on the west coast and only 1 per cent of the hogs are raised here. About 60 per cent of the pork consumed comes from the midwest.
2. Raise lean meat type hogs.
3. The swine industry has a future with some individual farmers.

**IRRIGATED PASTURE**
1. Sheep on irrigated pasture present some problems in stomach worm control. Adequate pasture is needed for proper rotation; not grazing too closely is necessary for this type of operation. Sheepmen have not fared well with use of permanent irrigated pasture.
2. Cattle on irrigated pasture do well. Up to 1,400 pounds of beef per acre have been produced on irrigated pasture. Normally 600 to 800 pounds can be expected. Production drops rapidly unless proper fertilization and management practices are carried out; also guard against stomach worms.
3. Higher production per acre could be realized from irrigated pastures if a more effective stomach worm control were available in cattle and sheep.

**CONTROL OF STOMACH WORMS**
1. Tetrachlorethylene capsule and Phenothiazine drench given at different times for treatment of stomach and intestinal worms has proven better than either method alone. Treat ewes twice a year, spring and fall. Lambs may need more frequent treatment, especially in the fall when pasture becomes short. Rotation of livestock on pastures helps hold stomach worms down.
2. The Oregon State College Veterinary Department should conduct further research to obtain more effective worm control methods.

**PASTURE MANAGEMENT**
1. Improved pastures that produce more feed per acre will result in better livestock operations.
2. Follow a good, well-planned rotation system.
3. Do not pasture too close.
4. Fertilize for greater production.
5. Have some pasture going to waste rather than not enough.

**LIVESTOCK BREEDING AND OTHER MANAGEMENT**
1. Follow a strict, efficient culling process. Sell off all low producers and ewes that shear light fleeces.
2. Use high quality sires and save replacement stock.
3. Keep livestock disease and parasite problems in each flock or herd suppressed. There are many new materials available for controlling many diseases that make the job less difficult than it was 15 years ago. Sanitation is still one of the best disease preventative measures. All beef cattle herds should submit to a brucellosis test each year.
4. Labor saving equipment and good buildings, fences and corrals take much work out of livestock handling. Substantial construction is desirable. Facilities do not need to be fancy.

**USE OF ANTIBIOTICS AND HORMONES FOR FEEDING**
1. It is recognized that these materials have given increased gains when properly used; however, caution should be used.
2. When antibiotics are used in livestock feeding, it is recommended that research recommendations for
amounts used be followed very closely.

**FEEDER CATTLE SALES**

1. This sale is recognized as a good event for selling and buying Willamette Valley cattle. Unless additional sources of supplies are available, the committee feels the sale should not be enlarged but remain about the same as the past year with approximately 700 to 800 head.

**Horticulture Report**

Horticultural crops are a relatively small but important part of Benton County’s agriculture. Vegetable and fruit crops are the only income on many farms. Fruit and vegetable processing is an integral part of local industry.

About 50,000 acres of soil in this county are suitable to horticultural crops. This indicates that the limiting factor to expansion is not soil. At present, 4,300 acres are devoted to commercial production of horticultural crops.

**BENTON COUNTY HORTICULTURAL CROP PRODUCTION**

<table>
<thead>
<tr>
<th>Crop</th>
<th>1956 Acreage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Irish potatoes</td>
<td>40</td>
</tr>
<tr>
<td>Asparagus</td>
<td>3</td>
</tr>
<tr>
<td>Beans</td>
<td>235</td>
</tr>
<tr>
<td>Sweet corn</td>
<td>1,000</td>
</tr>
<tr>
<td>Beets</td>
<td>500</td>
</tr>
<tr>
<td>Carrots</td>
<td>125</td>
</tr>
<tr>
<td>Squash and pumpkins</td>
<td>60</td>
</tr>
<tr>
<td>Strawberries</td>
<td>150</td>
</tr>
<tr>
<td>Blackberries</td>
<td>7</td>
</tr>
<tr>
<td>Blueberries</td>
<td>2</td>
</tr>
<tr>
<td>Boysenberries</td>
<td>20</td>
</tr>
<tr>
<td>Gooseberries</td>
<td>25</td>
</tr>
<tr>
<td>Loganberries</td>
<td>9</td>
</tr>
<tr>
<td>Raspberries</td>
<td>80</td>
</tr>
<tr>
<td>Youngberries</td>
<td>3</td>
</tr>
<tr>
<td>Apple</td>
<td>175</td>
</tr>
<tr>
<td>Sour cherries</td>
<td>75</td>
</tr>
<tr>
<td>Sweet cherries</td>
<td>80</td>
</tr>
<tr>
<td>Peaches</td>
<td>55</td>
</tr>
<tr>
<td>Plums and prunes</td>
<td>175</td>
</tr>
<tr>
<td>Filberts</td>
<td>750</td>
</tr>
<tr>
<td>Walnuts</td>
<td>215</td>
</tr>
<tr>
<td>Pears</td>
<td>40</td>
</tr>
<tr>
<td>Nurseries, etc.</td>
<td>17</td>
</tr>
<tr>
<td>Cut flowers, etc.</td>
<td>3</td>
</tr>
<tr>
<td>Vegetable and flower</td>
<td>388</td>
</tr>
<tr>
<td>seeds, etc.</td>
<td></td>
</tr>
<tr>
<td>Holly</td>
<td>12</td>
</tr>
</tbody>
</table>

**FARM LABOR**

Labor supply is an important factor in horticultural industries. In general, the labor situation has not been acute. With increases in certain crops, supply of labor will become a problem. The committee has the following recommendations to make concerning labor.
Improved housing facilities on farms would cause more transient labors to stop for harvest seasons.

Facilities and methods of training harvest help should be improved.

Educational agencies should strive to educate the general public to understand the grower's harvest need.

Relationship and understanding between the farm-labor office and the farmers should be improved.

**TREE FRUITS**

Tree fruits occupy one-third of the land devoted to horticulture crops. They do not have a proportionate share of the crop income. Marketing methods need to be revised drastically. Marketing and other problems of various tree fruits will be discussed separately in the following paragraphs.

Peaches are a deficit crop. Benton County does not produce sufficient peaches to supply local demand. This factor plus normal population growth will maintain the market. Peaches of many high quality varieties can be grown locally. Planting of new orchards is recommended. Those who plant will need to give close attention to varieties, disease control and marketing.

A small percentage of the apples and pears grown in the county are marketed suitably. The remainder either find no market or a low return. Main factors in this lack of success are: poor quality, unsuitable varieties, and lack of cold storage facilities on the farm. New plantings are not recommended unless the grower is willing to overcome those factors. There is a strong possibility that commercial orchards of dwarf apple trees would be advantageous. Some varieties, such as Golden Delicious, attain a superior quality in this area.

Sweet cherries throughout the state have been troubled with disease in recent years. Young trees have been affected, too. However, production has kept up to about normal. The canning and brining market remains steady. No increase in plantings is advisable except by established cherry growers. It is recommended that cherry growers replant to replace trees that go out of production. Lambert and Royal Ann varieties are most suited to the market and growing conditions.

Much of what has been said about sweet cherries applies to sour cherries. Returns are low at present and no new plantings are recommended. Established orchards should be maintained by replants. Outstanding variety is still the Montmorency.

The trend in the prune industry in Benton County has been away from drying. Most of Benton County's prunes now go to a cannery. Fair returns can be expected from prunes, with best returns going to growers who have young, vigorous orchards producing large, high-yielding prunes. Old orchards in poor shape are not producing well and should be replaced. Planting of new orchards with the Milton Early Italian prune is recommended. This variety of Italian prune has the same general quality of Italian prunes, but it ripens 10 to 14 days earlier, and is free from virus. Present orchards should be
given good care, fertilizer and pruning to achieve better quality and yield.

Filberts are an important tree crop in this area. Two factors in the industry are important. First, our average yield per tree is low (about 11 pounds) and could be increased by fertilizers, better pollinators and thinning out of crowded trees. The second factor is the replacing of old stands with young trees in order to maintain a stand. Picking costs are being reduced by machine harvesting. Investment in harvesting machines is costly and is only recommended on large acreages.

No increase in filbert or walnut acreage is recommended except for established growers. The committee feels that the industry could do a better job of promoting and selling Oregon's filbert crop. A result of that could be an increase in acreage.

SMALL FRUITS

The demand for strawberries in Benton County continues to be strong. Prices to the grower, however, are expected to drop in the next few years. Growers must revise their management, if necessary to adjust their cost of production. Size of planting must be large enough to increase efficiency. New plantings are recommended if cost of production will be low by having high yields, low weeding costs, etc. Varieties recommended for this area are the Marshall, Northwest and Siletz.

Red raspberries brought high prices this past season. Some new growers are going to plant berries because of that. New planting throughout the state might be overdone. However, red raspberries are a good crop in this area if planted with caution. Varieties are available which are acceptable to the processors and have high yield potentials. Those who plant are advised to use care to select light, well-drained soil. The varieties recommended for planting are Canby, Summer and Willamette. Prospective growers should check with a processor before planting.

Another berry which requires well-drained soil is the black raspberry (blackcap). Benton County's acreage is small and could be increased. The market for blackcaps is strong, especially the processor market. Some fresh market sales can be made. Prices have been high, but this is offset by the low yield per acre. The grower of this type of berry should work toward holding his costs of pruning and weeding to a minimum. Prospective growers are urged to buy planting stock from clean fields such as the registry of merit plantings.

Acreage of all blackberries, including boysenberries and loganberries, is below the demand from processors and fresh market. The climate and soils are well suited to this type of berry. With new varieties available, plantings are recommended. Except where special markets demand it, loganberries, boysenberries, and youngberries are not recommended for planting. The Chehalem blackberry is recommended for fresh market sales. Processors are most interested in the evergreen and Marion varieties. The Marion is recommended over
the evergreen for processor markets because of its high quality and yield.

Blueberries up until now have found a ready fresh market. Increased plantings will soon fill this demand. Processors have been freezing blueberries, but this returns a low price to the growers. As new plantings mature, the blueberry growers will have to look for new markets. Also, many may be stored for fresh sale after the season is over. The committee does not recommend plantings for any considerable size.

Gooseberries are mainly a canning crop. They grow well in this area, giving a good return to some growers. Prospective growers should plant according to the directions of a cannery. The committee recommends that research be continued on the gooseberry miner to determine the extent of its damage and possible controls.

VEGETABLES

Vegetables in general represent one of the best portions of our horticultural industry. Beets, beans, sweet corn and carrots are the main crops. The county has areas ideally suited to those crops. For some growers they are producing good returns. Marketing is almost entirely to canners and freezers. Marketing problems are therefore settled between grower and processor. Problems of production arise under each of the commodities.

Sweet corn at present prices is a good crop for those who raise high yields per acre. At least 5 to 6 tons per acre must be raised to meet costs. High yields are the result of many things: soil, water, etc. Research in irrigation and fertilizers by the Oregon State College Vegetable Crops Department should be continued to answer these questions on yields.

The outstanding problem in the production of beans is the labor situation. Proper labor management can make or break many bean growers. Grade of bean harvested is affected by labor efficiency. More on the labor situation has been discussed in the beginning of this report and applies to this commodity.

The bean industry is looking for the development of a bean picking machine and a blue lake type bush bean. Both of these developments would revolutionize bean production. In the meantime, beans are highly recommended as a crop in this area. Growers must contact a processor before planting. Production costs are high, but, with good management, high returns per acre are possible.

Two main problems of beet production are (1) obtaining uniform stands and (2) controlling weeds. Research should be continued to determine if placement of fertilizer affects the uniformity of the stand. Weed control by the salt treatment is not entirely satisfactory. New chemical weed control is needed to overcome high cost of weeding and hoeing. The committee also recommends that growers rotate their beet fields.

Carrots face much the same situation as beets. They should be grown on a sandier soil than beets. Canker and browning are beginning to show in the carrots. Until research gives exact answers to those problems, the committee recommends
that growers rotate their carrot fields.

A possible new crop for this area, green peas, was discussed by the committee. Before making further recommendations, more investigation is needed. However, the biggest need is for a processor in the area to handle the peas. One local processor does freeze a small volume of peas. The quality of the green pea grown here is sufficient for processor standards. Growers who may be interested could make some cooperative deal with a processor.

The future of fresh vegetables in this area depends largely upon marketing arrangements. Modern marketing demands large quantities of high quality produce properly packaged. The quality can be achieved by individual farmers. Efficient packaging and marketing would have to be done through a cooperative effort. Without high standards of packaging and marketing, fresh market sales are limited to a few local market producers.

Another new crop of interest would be asparagus for processing. Information on the economics of growing this crop is not readily available. Labor costs are high with gross returns per acre unknown. Until more is known about the crop, it is not recommended for planting. However, the committee understands that it is being planted in other areas in western Oregon.

SPECIALTY CROPS

The Pacific Northwest is acknowledged as the leader in commercial holly orchards. The Willamette Valley has become an important growing center. Benton County has climate and soil suited to this crop. Some expansion has taken place in the county and the state. The state acreage is 1,250. Benton County has 12 acres with some new acreage going in.

The committee recommends limited plantings of holly. The outlook for holly is good, with most of the markets in the east. English type holly is the most satisfactory. Several early bearing varieties survived the 1955 freeze.

Nurseries, cut flowers, vegetable seeds, flower seeds, etc., bring in about $110,000 annually in Benton County. As the population increases, there should be an increase in sales of nursery stock and other landscaping materials. The committee does not recommend that growers in general think of going into these types of enterprises. However, it does point out that there is opportunity for more locally grown nursery stock now and in the future. It is a highly specialized industry and only the experienced should attempt it.

SUMMARY

It is recommended in horticultural enterprises that growers specialize. A grower should pick a crop such as berries and then become a specialist in growing that. It is never advisable to jump in and out of production where horticultural crops are concerned. Successful growers throughout the state have shown that specialization in a crop pays off because of increased efficiency.

Improved marketing methods are part of improving efficiency. Our marketing methods are not up to date in this area. It is recommended
that meetings and other activities include information on new marketing methods. This would be of particular interest to growers who want to sell on a local fresh market.

Products should be graded, sorted and packaged. Highest quality must be obtained. Benton County can raise many high quality products.

Soils, Irrigation and Drainage Report

As farming becomes more intensive and competitive, soil fertility needs more attention. Natural levels of fertility decline rapidly in soils. This decline can usually be detected by a chemical soil test. Use of this method is highly recommended. One hundred and seventy-six soil tests were run by the Oregon State College Soils Testing Laboratory for Benton County farmers last year. These tests have indicated that most of our hill soils are low in phosphate and must be treated accordingly. Some areas in the river bottom soils are beginning to show potash deficiency.

Continued emphasis should be placed on the coordination of the soil tests with fertilizer trials and yield results. Fertilizer demonstrations in growing timber and Christmas trees are recommended. Further demonstrations in field crop fertilization are also recommended. The demonstrations should be aimed at a program of improved fertilizer use and results. The importance of this is shown by the one-half million dollars Benton County farmers spent for fertilizer in 1956.

Maintenance of soil fertility is influenced by the presence of organic matter as well as chemical content of the soil. Farmers should continue to use cover crops, crop residue, crop rotation and barnyard manure to maintain and build up soil organic matter. Better usage and preservation of manure could be made on many Benton County farms. Fertilizer and lime should always be used on cover crops when needed.

The use of lime is generally recommended wherever it is needed. Acreage of several legumes could be increased by the expanded use of lime. Also, some of the present legume acreage could be improved by lime application.

Farmers in Benton County are now using about 2,000 tons of lime per year. It should be about five times that amount. Continual education about lime payments under the Agricultural Stabilization and Conservation program is desirable. The program has been quite effective in the past, and it is recommended that the Agricultural Stabilization and Conservation lime payment program be continued.

DRAINAGE AND FLOOD CONTROL

Benton County has approximately 1,400 acres of cropland drained by tile. Small open ditches are aiding drainage on another 15,000 acres. An additional 40,000 acres of cropland would benefit from tiling and improved open ditches. Also,
drainage on about 5,000 acres of grazing land would be helped by improved ditches and tile. It is highly recommended that farmers continue to improve their land drainage.

The tiling is very effective. Assistance to farmers under the Agricultural Stabilization and Conservation program should be continued. Planning for the tiling job on a farm is available through the Agricultural Stabilization and Conservation program, the Soil Conservation Service, and the Extension Service. It is recommended that tiling be done only after an overall farm drainage plan has been formulated.

In the past, Benton County tiling was held up by the lack of tiling machines. At present, there are plenty of tiling machines available. There is some question as to the economy of draining heavier soils such as the Wapato, Cove and Dayton series. It is known that the tile spacing would have to be close and therefore expensive. This would indicate that high income crops would have to be grown to return the costs. The committee thinks that more research by Oregon State College along this line is needed.

Along with the program of farm drainage improvement, there is a need for improvement of outlet ditches and streams. At present, there are about 18 miles of improved trunk ditches in the county. An additional 60 miles is needed. This type of project is usually a community or pooling effort.

It is recommended that all ditches be properly designed and built. Particular attention should be paid to the depth and slope of the sides in order to carry sufficient water and hold back erosion to a minimum.

IRRIGATION

Approximately 9,400 acres are now under irrigation in Benton County. As the need develops, the irrigated acreage could be tripled economically. Beyond that, additional sources of water from reservoirs, etc., must be developed. The first development will be in the river and creek bed areas where underground and surface water are available at less cost.

Wherever possible, individuals should develop their own water storing facilities. In most cases, this is not economical. Technical assistance is available for the individual for the development of farm reservoirs. On many farms, reservoirs are and could serve a dual purpose. They could store water for irrigation and provide a fish pond for the raising of fish. It is recommended that Oregon State College research on the management of farm fish ponds be continued. In the meantime, farmers who now have a farm reservoir should investigate the possibility of raising fish.

Community storage and distribution facilities eventually can be developed through organizations such as (1) pooling agreements, (2) mutual improvement district, or (3) an irrigation district. These developments should come as a result of need and desire on the part of the people, and not from outside influence by a government agency. Once formed, the organized group
can receive federal cost sharing through: (1) Small Watershed Act, (2) Bureau of Reclamation, and (3) Agricultural Stabilization and Conservation pooling agreements. Reservoirs may be possible on Beaver Creek, Bull Run Creek, Upper Muddy Creek, Tum Tum River and Mary's River.

Many farms without irrigation might improve their situation markedly if they could add irrigation equipment economically. All of Benton County's 94,000 acres of cropland would benefit from irrigation, but only if certain crops were grown. Irrigation would enable a different choice of crops, where the soil is suitable, it would be possible to switch to higher income crops such as berries, vegetables, irrigated dairy pasture, and specialty crops. It would improve stands of legumes such as clovers and alfalfa.

Crops such as the above are most suited to irrigation and often justify the expense. New varieties of standard crops that would respond to irrigation are needed. Oregon State College should begin research immediately to develop varieties that will fit into the general farm program. These should be varieties of farm crops that make full use of water and fertilizer. They should be the type of crops that would fit into a rotation under irrigation and would make full use of a particular year's water. This would be of special interest where irrigation is developed on a community basis.

Irrigation systems should be chosen with care. Farmers should use the technical services of the county Agricultural Extension Service, the Soil Conservation Service and irrigation equipment and power companies.

Recent developments and refinements in soil moisture measuring devices make them easier to use and interpret. They can be a definite aid to farmers. Demonstrations in their use are being conducted on farms and should be continued. In high-income crops, purchase of these devices can be justified. This is especially true when there is some question concerning the timing of water application to an assortment of crops on a single farm. Outstanding among the moisture measuring devices is the irrigation stake. It is the only one recommended in this area.

Research in irrigation continues to make progress. Moisture measuring devices are part of that. Farmers should take advantage of these improvements. For instance, a new service of the Oregon State College Soils Department is testing soil for its moisture holding capacity. More information is needed, such as the water requirements of various crop plants.

SOIL EROSION

Throughout this report the emphasis has been upon the improved use of water and soil. Every effort must be made to prevent soil erosion. Even though farmers cannot stop erosion 100 per cent, they can follow a soil management program that will hold it to a minimum. Soil conservation practices should be performed in a manner to avoid economic waste.

Some of the recommended soil management practices are as follows:
1. Build up and maintain organic matter by turning under crops residue, and by using perennial grasses and legumes.

2. Seed extreme problems areas to permanent cover and leave it there. This recommendation includes newly logged areas and logging roads.

3. Seed fall crops in September and early October.

4. Construct and maintain proper drainage and sod waterways.

5. Use commercial fertilizers and barnyard manure for better growth.

6. Practice contour farming.

7. Produce legume and grass seed crops and perennial forage crops.

8. Prepare proper seed beds to insure good stands of grasses and legumes.

9. Plant forest trees.

10. Use cover crops on annual cropland.

Poultry Report

Benton County's poultry industry is directly related to the state, regional and national supply and production. The 1956 Benton County poultry marketings were valued at 7.8 per cent of the total value of all farm products. In the 1943-46 period, it was almost 20 per cent.

The present number of hens and pullets in the county is estimated at 70,000. This approximates the 1946-56 average, but is 30 per cent below the 1940 level. Statewide, there were 3.44 million hens and pullets on farms in 1956 as compared to the 1945-50 average of 3.35 million. Nationally, the 1956 inventory was estimated at 859.7 million.

Broiler production has grown rapidly. An estimated 350,000 were produced in Benton County in 1956. Statewide, 6.8 million were grown. Nationally, 1.29 billion broilers were raised in 1956. This is 828 per cent of the 1947-49 average and 30 times larger than the 1935 production.

The county raised 23,000 turkeys in 1956. The 1943-45 production average 130,000. During this high period, 15,000 breeders were carried. The 1956 breeder carryover is estimated at 1,200 birds. Oregon raised 1,428,000 turkeys in 1956 as compared to 2,553,000 in the 1943-45 period. Nationally, turkey production has increased from 36,612,000 in the 1943-45 period to an estimated 76,840,000 in 1956.

INDUSTRY CHANGES

The most challenging change within the national poultry industry is the degree to which vertical integration is assuming leadership. Complete vertical integration is the process of financing, hatching, feeding, processing and selling by the same organization. The committee wishes to point out that vertical integration has both advantages and disadvantages:

Advantages of Vertical Integration

1. Increases efficiency of industry.

2. Can provide poultry products to the consumer at a lower price.

3. Makes efficient use of labor, space, feed and finance.

4. Provides an adequate level of
income for the man furnishing the labor.
5. Further discourages marginal production.
6. Is an economically sound method of operation.

Disadvantages of Vertical Integration
1. Removes individual incentive.
2. Places control of the industry in the hands of a relatively few.
3. May remove profit from individual non-integrated poultry enterprises, even though of economic size and efficiently operated.
4. May eliminate many part-time poultry operations carried by family labor that produce additional income for the small diversified farm.
5. Divides the net poultry returns previously enjoyed by many poultry farmers among a relatively few.
6. Reduces the number of breeder and/or hatching operations.

Benton County poultrymen should keep in mind this trend toward integration in planning their poultry programs.

THE LAYING FLOCK

Marketing and County Production
1. Benton County is climatically suited for egg production. We feel that the county should maintain a hen population of not less than two birds per capita. This will supply our market.
2. Eggs can be marketed one of three ways: individually, through cooperatives, or through independent agencies. Each has its advantages. The individual poultryman must market according to his best advantage and make changes in marketing as conditions alter.

Feeding
1. Feed constitutes an average of 60 per cent of the total cost of producing an egg.
2. Feed must be purchased on the basis of quality, not lowest cost per pound.
3. The use of concentrates plus local grains is an economical practice where the size of the operation will justify costs of installation of grinding and mixing equipment.
4. An alternative is to have concentrates and home grains custom mixed.
5. Bulk feed handling reduces labor and feed cost.
6. Feed cost savings result from buying grains at harvest.
7. Alternate feed grains should be considered as part of the mix when available at lower price per pound of TDN (total digestible nutrients). Pelleted barley, at present prices, is an example.

Flock Size and Efficiency
1. There are a few operations in Oregon using automatic equipment and labor-saving housing where one man handles 8,000-10,000 layers.
2. A full-time poultry operation must keep at least 3,000 laying hens to approach an economic unit size. This number can easily be handled by one man.
3. Sideline operations size depends upon time and facilities available, but should not be less than 500 layers.
4. A family flock should consist of not more than 25 birds.
5. A labor return on $1.50 to $2.00 per bird per year under good management can be expected based on the past five years.
Housing

1. Successful poultrymen operate on the floor, in individual cages, or in community cages.
2. Housing must protect chickens from rain and wind, be well ventilated, and be constructed at a minimum cost.
3. Cost of constructing laying houses and equipment will vary from $1 to $3 per bird for labor, materials and equipment.

Chicks, Brooding and Rearing

1. Commercial egg-producing chicks should be purchased on the basis of production records, livability and disease records of the breeder selling the eggs, not on the basis of cost of chick.
2. Breed selection depends upon relative production ability, sale value of hens and egg use. White leghorns continue to be the predominate commercial egg hen.
3. Chicks are successfully brooded in colonies or common houses. Separate houses set 500 feet apart are more expensive and require more labor, but give more disease control.
4. It is desirable to have a separate person care for chicks up to 10 weeks of age to avoid possible disease contamination.
5. Provide at least one-half square foot of space per bird up to four weeks; one foot to 10 weeks; and two feet from two to five months.
6. Pullets from eight weeks on can be reared in houses or on range.
7. Range rearing is preferable from the economy and quality standpoint, if labor and space is available and safe from varmints. Use one acre per 250 birds alternate years.

Flock Management

1. Close attention to energy balance of ration is necessary to keep flock in laying conditions.
2. Flock rate should be maintained at 60 per cent level or higher.
3. Replace 75-100 per cent of laying flock yearly.
4. Brood two or three times per year to level production and work load.
5. Keep complete enterprise records.
6. Poultry producers should give additional consideration to the value of manure produced, particularly from cages. The sale of packaged poultry manure for gardening has possibilities.

Egg Management

1. Egg gathering and handling, not including delivering and selling, took an average of 37 per cent of the time spent on 91 poultry farms studied in the Willamette Valley.
2. Careful analysis and review of egg handling operations on many farms could result in reduction of labor.
3. Handle eggs to maintain maximum quality.

Poultry Breeder Opportunities

1. Potential breeders should be experienced poultryman and have a commercial goal in view before beginning operations.
2. The successful breeder must be willing to complete individual hen records, be an experienced poultryman, and do all operations in a superior manner.
3. This field appears to be well supplied in comparison to demand for eggs and young birds.
**BROILERS**

Production and Marketing

1. Vertical integration is predominant in broiler production.
2. Until present conditions change, contract production is safest. Most 1955 and 1956 contracts returned 5 to 10 cents per bird.
3. Feed efficiency of broiler production is very important, because 70 per cent of the cost of producing a broiler is feed cost.
4. Successful production is a volume business. One operator can care for 20,000-30,000 birds and raise four broods per year.
5. Commercial broiler production should never be undertaken unless the poultryman is experienced or has experienced advice available.
6. The committee feels that the Northwest should grow at least as many broilers as are consumed in the area. Likewise, Benton County should produce at this level or more.

**TURKEYS**

Turkey production in Benton County has shifted between 1946 and 1956 from an industry-marketing 130,000 birds to one that now produces 23,000 birds. The industry once supported as many as 15,000 breeder hens. This phase of the industry has almost disappeared.

The shift of turkey production to other areas of the United States is a direct result of lower feed and transportation costs. The basic reasons behind this shift are not likely to change in the foreseeable future. This eliminates Oregon as a large exporter of market birds. However, the committee firmly believes that export egg markets should be maintained at present level or increased, if markets can be found. The Northwest should produce at least all of the market birds it eats. Benton County should share in this production and maintain some breeder flocks.

We as a committee believe that a nucleus of experienced turkey producers is an asset to the county's agricultural picture, and they should be encouraged to continue operations if economically feasible.

Turkey Facts

1. Labor income in Oregon from Turkeys averaged $1.00 to $1.50 per bird for the 1950-55 period. The 1956 average labor return is estimated at 50 cents.
2. One man can care for 8,000-10,000 birds without difficulty.
3. Financing feed, when necessary, is a sound business method that enable turkey producers to operate larger numbers of birds than would otherwise be possible.
4. Contract production eliminates much of the risk, but limits returns. A contract should insure a fair return for management, labor, equipment and land.
5. Benton County turkey numbers should be maintained at least at present levels.

Youth Report

4-H Club enrollments in the county have shown a steady increase in the homemaking and agriculture projects are now the two leading home economics projects carried by
girls, and livestock projects have shown increased in sheep, beef and dairy. Club enrollments in the past five years have been between 600 and 700 members, with a slight increase in membership shown during last year. With increase in population, the general trend should result in increased enrollments with special emphasis placed on basic club projects. Health club enrollments have decreased during the past few years since health is carried as an activity in each of the various projects, and not so much as a regular 4-H project. Marketing has also been added to the club program in the county to help members become better acquainted with many phases of marketing of agriculture and forest products.

**YOUTH LEADERSHIP**

The success of youth programs and youth activities is very dependent upon adult leadership; many of the programs that could be carried out are only partially successful due to lack of adult leadership. In other cases, many young people are interested in taking part in youth programs; however, lack of encouragement by parents has prevented them being active participants. More parent cooperation is needed in the form of providing transportation to and from youth activities, encouraging project work and working with boys and girls to see that they can be active participants.

Some methods of providing youth leadership training were suggested by the committee. Leadership training techniques should be promoted through family recreation workshops, leadership training meetings sponsored by United Fund project, other small community leader training meetings, use of young people as junior or assistant leaders, and classes to acquaint parents and others with youth programs.

**YOUTH RECREATION**

It is the opinion of this committee there is a need for youth recreation facilities, whether it be in form of YMCA recreation activity, schools, or special recreation that can be provided in existing facilities or ones to be built in the near future. It was the suggestion of the committee that the new fair building, when completed, can be made available. Under direct supervision, the fair building could be a recreation facility that might be used for square dancing, games, basketball, and many other type of recreation besides 4-H, F.F.A. and grange fairs and other activities for which the building is being built. It is thought that some of the necessary supervision could be provided by the Corvallis city recreation commission. One school district has arranged for square dancing for the youth of their community; this program might be further expanded for outlying communities.

Skating and dancing are enjoyed by young people, and this form of recreation could be further expanded and promoted within the county. It was suggested by the committee that possibly some help on recreation training and supervision might be provided by college students who are studying this subject.

**YOUTH GROUP PARTICIPATION**

A study of youth activities within
the county shows there are many opportunities for youth participation through 4-H Club work, Girl and Boy Scouts, Campfire Girls, church groups, F.F.A. and many other youth groups that are conducted through schools. One of the committee members reported there are approximately fifty youth groups at the Corvallis High School during school hours that might offer sources of greater youth participation.

Lack of leadership, school consolidation with its accompanying use of school busses, and lack of encouragement by parents have proven to be some of the reasons why there has not been greater youth participation. Study of these problems might provide greater participation by boys and girls.

Additional equipped parks and playground facilities where young people can conduct their own recreation programs without direct supervision would offer excellent daytime recreation.

Home Economics Program Projection Report

The Home Economics Program Projection Committee discussed, in general, methods by which home economics extension work can be effective, what groups of people might be served who are not being served at the present time, and what subject matter areas need emphasis to meet the needs as seen by the committee.

USE OF MEETING

The 17 Benton County extension units are the core of the present home economics extension program, and through the units about 300 women each month gain new information through the unit lessons and workshops. The enrollment in the unit at the present time is 459. These units have come into existence within the last 10 years and have added much to the lives of the homemakers participating. A constant effort to increase membership is made, but there will always be many women who are not reached through the units. The suggestion was made that notices of extension meetings might be sent home with children from school where such a practice is agreeable to the teachers.

There is at the present time no extension unit within the city limits of Corvallis. The committee felt that one or more units might be organized if the town women realized that extension work is possible within a town. It is also possible that the many organizations already in existence in Corvallis and in the county would welcome help with programs for their meetings if they were informed of the possibilities. These possibilities, as seen by the committee, are:

1. Ask the county agent to give a demonstration.
2. Asking for help in securing a specialist from the college.
3. Sending a project leader to a training meeting being given for the extension units. The list of projects and the dates of training meetings could be given to these organizations, and they could sign up for any lessons in which they were interested.
The organizations could be informed of these possibilities by newspaper, personal contacts, and through the yearly training meeting which the Gazette-Times has held for the reporters and secretaries of organizations. Whenever the county agent is the speaker at one of these meetings, she could take the opportunity to explain the service Extension offers to homemakers.

The feasibility of night extension units for the benefit of working women and mothers of young children was discussed, and it was the opinion of the committee that there was a place for such a program in the community. The night classes at the high school and college do not make such a program unnecessary, since many women cannot take the time to attend weekly classes, but would enjoy and benefit from monthly meetings. Evening television programs are also a possibility for reaching these and other homemakers, and might become a reality when the educational television station in Corvallis goes into operation.

Special open meetings for persons interested in some particular subject were discussed. Few of these meetings have been well attended in the past, but the idea was presented that such meetings be spearheaded by the extension units in order to insure better attendance. Several meetings out in the county might be better attended than one meeting in Corvallis. Landscape gardening is an example of subject matter for such a meeting.

**NEWSLETTER**

The county extension agent for home economics is at present sending a monthly newsletter to members of the 17 extension units in Benton County. Approximately 450 newsletters are mailed each month. A wider circulation of this newsletter was suggested as a means of spreading the latest home economics information, and also of stimulating interest in the extension unit program. Latest research in home economics, helps for the consumer in all fields, and articles on human relationships are suggested subject matter.

**OFFICE CALLS, TELEPHONE CALLS AND HOME VISITS**

A large number of bulletins are given out to office callers and quite a few questions are answered over the telephone. However, many women in the county do not know that information can be secured this way, or that the home economics agent makes home visits, when needed, to give help. More publicity should be given to let residents know of these services.

**NEWSPAPER STORIES**

The committee suggested that news releases be sent to the Democrat Herald in Albany in order that the residents of the northern part of Benton County might read the articles. It was the opinion of the committee that the news articles are read by many people, and that more articles giving homemaking information should be written with emphasis on consumer education to help housewives spend their money to best advantage. Information on budgeting might be helpful to many people. The suggestion was made that the newspaper be asked if articles on home economics might appear on pages other than...
the farm page in order that a wider reader audience be reached.

A regular weekly feature giving the foods in good supply, and therefore good buys, might be helpful to many women in their grocery buying. Knowing when to stock up for months ahead would result in considerable savings in the food budget.

Since many women cannot take advantage of unit meetings and workshops, news articles could be prepared giving as much information as possible on the subjects involved. Excerpts from bulletins could also be given in news stories for the benefit of those who do not ask for the bulletins, and to stimulate interest in securing the bulletins.

SPECIAL NEEDS

Leadership

As more and more people populate Benton County, the need for trained leaders for all phases of community endeavor increases. Workshops, in leadership training for men and women in many capacities and many types of organizations might be offered by the extension service.

Working Mothers

Working mothers have special problems in child care. Corvallis has no child care center, and no nursery schools outside of the two sponsored by the college, which serve relatively few children. A good city child care center might be a great boon to both the working mothers and the children. The extension service could be the formation of a committee to work with business men on the possibilities of employing mothers of school-age children for a working day that coincides with the school day. This is now being done in some places on the east coast.

Help for Store Personnel

Help for store personnel might be a method of helping consumers and the stores at the same time. In the field of fabrics, for example, the changes have been rapid and labeling has not been adequate in many cases, so neither sales ladies nor customers have enough knowledge about performance of the fabrics and the care they need. A sharing of experiences in this field would aid both the stores and the consumers.

GROWTH OF POPULATION

The projected population for Benton County is 46,000 in 1975. It is the opinion of this committee that, in order to meet the needs of this increased number of homemakers, careful planning on the part of all interested groups, government agencies and individuals can be of great value.

Community Living Report

County Health Officer and Sanitarian

At present, Benton County employs a half-time county health officer, a full-time sanitarian, and two full-time nurses. In all probability, some time within the next 10 years, we will have to consider hiring a full-time health officer, additional nurses and sanitarians, assuming the population of the area increases as anticipated.
Tuberculosis and Polio

It seems advisable for all people to obtain polio vaccinations. Everyone should be encouraged to participate in the tuberculosis X-ray program. The committee feels a standard fee should be charged for Salk polio vaccinations. Contributions to the tuberculosis and polio programs are very worthwhile. It is suggested that people do not neglect these fund drives as the funds obtained in this manner go for worthy causes.

Ambulance

We advise those who are operating the ambulances be familiar with the correct procedures in handling the patients. An up-to-date county map should be available to the driver. People calling in for ambulance service should give complete directions as to location.

The ambulance service that is available to much of Benton County is handled by the Corvallis Fire Department, and they should be commended for the excellent job they have done over the years. If ambulance service facilities are to be expanded in any areas, it is suggested that the civil defense program for offering ambulance assistance be investigated.

Drinking Water

The committee recommends that a county-wide publicity program be carried on to urge people who are using wells as a source of domestic water to have it tested for purity periodically. There is a tendency for people to become lax about household water, and oftentimes it can be a source of illness. The first step in having water tested is to contact the county health office and obtain a sterilized bottle. If the source of water should be found undesirable for human consumption, contact should be made with the county sanitarian at the earliest opportunity. Usually purification can be accomplished without great difficulty. Construction of septic tanks according to specifications will help keep wells clean.

Garbage and Trash

An organized county-wide plan is suggested for improving garbage disposal, which should discourage roadside dumping of garbage and provide for more conveniently located and operated areas than the present dumping facilities for individuals who wish to haul garbage to the dump.

ROADS, DIRECTION SIGNS AND MAILBOXES

The committee suggests that all mailboxes be properly lettered and numbered so individual residences will be identified. Good identification where people live may have some drawbacks, but it has many other valuable aspects.

Road signs showing where people live have been established in some rural communities of the county. This program seems to meet with approval in these areas. Two methods have been used: one is to place a sign where an individual lives; the other is to place signs at crossroads with each resident's name and the distances from the crossroads. Other communities might consider a program of this kind. Uniform construction and lettering would seem desirable in such a program. The county court might consider the possibility of providing
maintenance service assistance on the signs once they are established by the home owners. County roads that are named should also be properly identified with signs at junctions and cross-roads. This is an excellent activity for organizations to handle.

**RURAL FIRE PREVENTION**

All home owners can well afford to make a fire prevention checkup around their dwelling and farm buildings at least once a year. Check sheets are available at the county extension service office and may be quite helpful in reducing fire hazards.

Rural fire districts serve much of the area in the vicinity of Corvallis, North Albany, Monroe, and Philomath. Other communities might consider organizing rural fire districts. If such an organization does not seem desirable, thought and action on improving the standby equipment that is used for fire fighting on individual farms and sawmills may be helpful. During the summer months, a good neighbor policy of the Polk-Benton Forest Protective Association in recent years has been to help fight crop and farm building fires. Forest protective associations are not responsible for this type of fire control, and rural people should bear in mind their main obligation is to protect forest land.

The committee urges everyone to know how to place a fire alarm and to give accurate directions on the fire location.

**POLICE PROTECTION**

The committee recommends that the county-wide police protection situation be reviewed very thoroughly, and, if necessary, the budget be increased to add enough members to the county sheriff's staff to have deputies on call at any time they are needed for all parts of the county.

There would also be a need for familiarizing people with the areas of jurisdiction of the Corvallis and Philomath city police and their relationship and possible overlapping of duties with the county's sheriff's staff, in order that residents know whom to call in an emergency, and how to obtain necessary aid with the least delay.

**PARKS AND RECREATION**

**Parks**

The committee recommends that the county court appoint a park commission to serve on a voluntary basis for the purpose of studying the development of additional park facilities in this county. It is suggested that the county court investigate the possibility of having the state highway department take over a small park near the Albany bridge that has been maintained in recent years by the Albany Garden Club. It is the committee's understanding that the Albany Garden Club wishes to discontinue this function in the near future.

Park facilities in Corvallis and Helmick Park (over the boundary line in Polk County) are heavily used and overcrowded in the summer. There is a definite need for more park facilities. Planning now for future development would aid in acquiring better locations and reducing development costs, whether the development is done by a taxpayer group, individual, or organization.
Park facilities for Kings Valley, Hoskins, Blodgett, Philomath and Alsea areas need to be planned for future development. Improvement of the Bellfountain and Sulphur Springs parks would provide greater usage of those facilities. Throughout the county are numerous roadside areas that can be developed to accommodate a few cars for a rest stop and luncheon place. Such areas should have adequate drinking water whenever possible, garbage cans, rest rooms and benches.

Various organizations should consider the development and maintenance of one or two summer camps in Benton County. These camps would be used mainly by youth groups.

Additional public access ways to the Willamette River for sportsmen and boating enthusiasts should be provided for in Benton County. One should be located in the Ingram Island vicinity, another one south of Kiger Island, one between Albany and Corvallis, and one near the Polk County line.

Fishing

The improvement of sports fishing in the Willamette River and other Benton County streams would improve recreation and reduce delinquency problems.

Development of farm fish ponds may not have a great deal of economic value, but do provide recreational value. At the present time, there are approximately 30 in Benton County. There is room for more. These will provide good habitat for trout, bass, crappies and sunfish.

PARKING PROBLEMS AND REST ROOMS (CORVALLIS)

The committee recommends that the area between sixth and seventh streets and Madison and Monroe streets be converted to a public parking lot for all-day parking without meters. This can be done without necessarily cutting through and opening seventh street.

Public rest rooms should be erected on a corner lot. The Corvallis police station may offer an additional possibility for public rest rooms.

EDUCATION AND INFORMATION

School Lunches

It is difficult to operate a school lunch program for less than 80 people. Without space expenditures, equipment and other items, it costs about $100 per pupil. The committee believes school lunch programs should be left up to the local school board. Operational and equipment problems should be investigated thoroughly before undertaking a school lunch program. The school lunch program serves many purposes and should be encouraged where possible.

Parent Education

The committee recommends that parents be made aware of available resources for guidance and direction of the conduct of their children because of the responsibility to the community and society. Possible sources for transmitting this are: adult education programs in the schools, television programs (KOAC Channel 7), better newspaper articles, extension unit programs, parent-teacher associations,
community organizations, fraternal organizations and churches.

Great Decisions

This voluntary program to study world affairs is very worthwhile. The committee believes individuals could gain much by reading the available material or viewing television programs, or joining a discussion group on the subject. There are numerous Great Decisions groups in the county.

Know Your County

The committee endorses the program of the Corvallis League of Woman Voters and the Benton County Centennial Committee, as both groups have been and will be carrying on functions that will be helpful in informing local people about Benton County. We suggest that folks learn more about the local industries, geography, history, education and local government in Benton County.

Community Bulletin Boards

A cooperative program among the state highway department, county court, and rural organizations and communities might be undertaken to develop community bulletin boards in the more thickly populated out-of-town areas for the purpose of placing public notices of hearings, various elections and other meetings, rather than placing the notices on the doorstep of some infrequently visited organizational hall or school building that may be located on a side road.

Church Attendance

The committee feels that the residents need to be better informed as to the church facilities already established within the county, and that people be encouraged to avail themselves of the opportunities.