Report of the
Polk County Agricultural
Economic Outlook
Conference

Dallas, Oregon
February 21-22
1928

Containing a suggested Agricultural program for Polk County prepared by representative farmers and the Extension Service of the Oregon Agricultural College co-operating.
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This report is published as a result of a resolution unanimously passed by the general assembly of the Polk County Agricultural Economic Outlook Conference on the concluding day, February 22nd. Funds for the publication of the report were provided by the Polk County Court upon the request of the committee for this purpose, consisting of H. J. Elliott, S. L. Stewart and P. O. Powell. The Conference was planned and conducted by the General Committee, representing the Polk County Pomona Grange, the Polk County Farmers' Union and the Chambers of Commerce cooperating with the Oregon Agricultural Extension Service and the County Agent.

The purposes of the Conference were: (1), To gather accurate and detailed information on the local and national phases of agriculture; (2), To present this information in a concise and definite form, and (3), To draw conclusions and make recommendations from the assembled facts. The recommendations of the Conference constitute a compilation of the best opinions of the committees, supported by local experience and statistical data, together with results of extensive surveys of State and National Economic conditions affecting production and marketing conditions in Polk County.

The various committees put painstaking efforts in the preparation of this conference, notwithstanding this fact, the recommendations herein set forth should not be considered as final and it will become necessary to change them from time to time. It is not assumed that farmers will entirely change their systems of farming to meet conditions, on the contrary, there should be greater stability, more gradual adjustment and less violent fluctuation.

SIGNED:

Glenn De Haven, Polk County Farmers' Union
G. G. Hewitt, Polk County Pomona Grange
N. L. Guy, Dallas Chamber of Commerce
A. E. Horton, Independence Chamber of Commerce
J. R. Beck, County Agent.
Report of General Agricultural Economics Committee

Your committee has examined the State and Federal Agricultural Outlook reports for 1928, the report of the Polk County Economics Conference, and other pertinent data, including information gathered by several sub-committees of this committee, and reports as follows regarding the general situation and outlook, the demand outlook, the trend of cost of import goods and services and marketing costs and other points of interest to all Polk County producers.

The General Agricultural Situation

Although the general index of farm prices for the United States as a whole advanced ten points in 1927 and the purchasing power of all farm products in terms of non-agricultural products now stands at about 21 per cent of the pre-war average, this was not the result of any better demand situation, but rather because of reduced production of cotton, cattle, fruits and vegetables. Forces are not yet in evidence that would indicate any material improvement in the general situation during the next few years over the past three years, except as forward looking farmers may adopt more efficient methods and make further adjustments in the production to market demands.

The demand situation for farm products from the United States does not appear to be quite so favorable as a year ago. Information developed in the national agricultural outlook report indicates that this is also true with respect to the commodities exported from Oregon, a large part of which is ordinarily sold in one of the four countries—United Kingdom, Germany, Japan or China.

Agricultural commodities which go into foreign commerce from the port of Portland, of which Polk county is a producer, are principally canned fruits and vegetables, canned milk, hops, prunes, wheat and barley. Canned fruit and vegetables go principally to the United Kingdom, although France, Germany and Japan took...
small amounts last year. Canned milk goes mostly to Japan and China, although Peru took some last year. Hops are marketed largely in Belgium and United Kingdom; prunes to Germany and United Kingdom, although some go to Holland, Belgium, France, Norway, Denmark, Italy and Sweden. United Kingdom and Japan are leading markets for wheat although Germany, Italy, France, Holland, Belgium, Norway and China take some wheat from Portland. United Kingdom takes most of the barley going into export from Oregon.

The domestic demand for agricultural products in the United States as a whole is not expected to be any better than last year. Any increase in total production would more than offset any probable improvement in domestic demand. Commodities produced in Polk county which go into interstate commerce by rail or water are apples, canned fruits and vegetables, dairy products, dried prunes, hops, onions, seeds, poultry products and wool and mohair. On the other hand, for crops which there is a demand in Oregon or on the Pacific coast, the demand for the 1928-29 crop will probably be as strong and possibly stronger than the demand for the 1927-28 crop. The lumber industry seems to be in a more favorable position, with more men employed than a year ago, and prospects for some increase in production to supply future orders more out of productions, as stocks of lumber are now reported low. The population is also increasing more rapidly on the Pacific coast than in the country as a whole.

It does not appear, however, that the local markets in Polk county may be expected to absorb much more local produce than a year ago, as the population of the county is increasing quite slowly and industrial activities are not likely to increase materially in 1928. Although a local demand indicates that local merchants would prefer to buy local farm products if they are of good quality, properly graded and packed, Polk county producers are likely to continue for some time to depend principally upon out of county markets for most of their products. The importance of standardizing products offered for sale cannot be ignored, however, whether for local or distant market, if these markets are to be held and the demand increased.

**Agricultural Credit**

The general agricultural credit situation is improved, if anything, over a year ago, and no material change is anticipated in Oregon or in Polk county in 1928. The tendency is toward liquidation of short term obligations, without much net change in the farm mortgage situation.

The facilities of the intermediate credit bank of Spokane are gradually becoming recognized and used. The volume of business done by that institution in 1927 totaling $5,554,773.85 compared to $3,418,908.12 in 1926. The rate for direct loans to co-operative marketing associations remains unchanged at 4½ per cent.

**Farm Labor**

In general, the supply of farm labor is expected to exceed the demand in 1928. This situation is expected also to prevail in Oregon. In Polk county a shortage of labor will probably occur at harvest time unless men are induced to come in as has been done in former years.

From present indications, wholesale price of machinery will not differ greatly from the prices of 1927, but the demand for heavy lines of power machinery and harvesting machinery, particularly combines, appears to be strong. In the Willamette valley from 75 to 100 combines have been sold during the last two years, and some of these were used for harvesting clover seed and vetch seed. Farm machinery expense
appears to be justified for equipment that will lower cost of production.

Fertilizers

There may be some seasonal increase in fertilizer prices, but fertilizers are not expected to be much changed in 1928 as compared to last year. From the long time standpoint increasing competition in nitrates, as the result of improved manufacturing, may cause a gradual decline. Polk county does not use much commercial fertilizer and the soil fertility can generally be maintained or increased more economically for the crops grown by means of rotations, including legumes. Purchase of lime for legume production is justified more generally and some reduction in cost of lime is anticipated during 1928 through development of local lime deposits. Soil erosion and consequent depletion of fertility should be guarded against, especially in some orchard soils by plowing across slopes, by extensive water-furrowing to divide the streams of water and by the use of cover crops and the spreading of straw. These things, together with the use of all crop residues and manure, are more important than the use of commercial fertilizer.

Farm Building Materials

The present relationship between wholesale and retail prices of building materials in the United States would appear to give reason to expect some decline in the general level of retail prices, but on the other hand, lumber, which is a large item in farm construction, appears to be in a stronger position and there is no particular trend in evidence locally on other materials.

While the decline in land values in Oregon appears to have been checked, and there is a better demand for farms and farm leases than at any time since 1920.

The general trend of rail, truck and ocean transportation is downward, if anything. Competition between trucks and railroads on short to medium hauls is becoming keener in Polk county, as elsewhere. There is a trend toward an increase in trucking livestock, cream and other products to market.

Farm and Enterprise Accounting

The committee finds that some progress has been made in extension work in this division during 1927. One community has started a class in farm accounting and another arranged for a lecture in farm budgeting. The recommendations of the farm management committee in the Polk County Economic conference report of 1924 are hereby endorsed for continued attention by Polk county farmers. The project records kept by boys and girls in club work provides basic training which will increase farm and enterprise record keeping by future farm families and we especially commend farm account clubs wherever feasible as desirable in promoting this work.

Farm Relief

The value of our deliberations to the individual farmer will depend upon their application to and adjustment to his own farm. While national farm relief is an end to be desired, it is still true that the quickest farm relief to the individual farmer will generally come through his adjustments on his own farm, and it remains the type of relief over which he has the most ready and most complete control.

Each farm should be organized on a definite basis with definite enterprises chosen with regard to the size and type of farm; that adaptabilities of the individual; the demand and market outlet for the salable product, and the possibilities of economical production of the products.

The activities of any individual farm should generally be changed rather slowly both in
regards to type and volume of products, and should be made on the basis of probable financial returns as shown by adequate farm accounts. If expenditures are then made with the aid of a simple budgeting system, the individual will be able to keep his expenses within the safety limit and thus lay the basis for the future success of his farming enterprise.

**General Recommendations**

Realizing that much remains to be done before Polk county farmers can be fully advised regarding the best procedure to adjust production to probable demand, develop the most efficient marketing facilities and standardize production along most profitable lines, it is further recommended:

That the co-operative statistical and crop reporting work for securing basic data be continued and improved, particularly in other states and nations.

That more attention be given to demand studies for Polk county products.

Obtain more data on the trend of marketing costs for Polk county farm products.

Investigate the use of the facilities of the Federal intermediate credit banks in Polk county for marketing credit.

WHEREAS, A survey of the results of the Polk County Economic Conference held in November, 1924, reveals many benefits from the deliberations and findings of this conference, and

WHEREAS, The Outlook Conference just closing has revealed to us the need of revision from year to year of our conclusions as world conditions and markets may change, and

WHEREAS, The benefit of such conferences is cumulative and the benefit to be obtained will depend upon similar meetings being held from time to time,

THEREFORE, We, your committee on General Agricultural Economics, would recommend that the holding of such a conference each year or two as conditions may seem to require, be considered one of the projects to be undertaken by our County Agent; also,

We recommend that our farm organizations interest themselves in the work of gathering and disseminating statistical information along the lines of the information that has proven so valuable during this present conference, and

We further recommend that efforts be made through our farm organization to obtain an appropriation from the County Court to provide for the publication of the findings of this Outlook Conference.

The General Agricultural Economics Committee—

G. DeHaven, Chairman
J. H. Harland
Roy E. Barker
S. L. Stewart
W. M. Elliott
L. H. McBee
G. A. Peterson
L. R. Breithaupt
The Situation
The cow population of the county has decreased in the past two years some 1200 head and now stands at about 6,900. The manufacture of butter in the county has decreased some 50,000 lbs. in the past two years, some of which is due to the increased demand for fluid milk.

There are some 140 head of registered dairy sires in the county and about 30 to 40 grades. The average production per cow is about 191 pounds of butterfat with milk testing an average of 4.4 per cent. Prices of butterfat have averaged for the past year 45.6 cents in cream and 54.6 cents in whole milk to the condensary, a decline of 3 cents in the past three years.

The Outlook
The outlook for dairying in Polk county during the coming year or two is apt to remain about the same unless price depression abroad brings in more foreign product. There is a tendency for a wide spread between high and low score butter in adjacent markets to which our surplus is shipped and unless our dairymen bend every effort to keep ahead of adjoining states in quality they may lose this market. The high prices of beef and the demand from other districts for dairy stock of our county places the dairyman in a position to cull his herd without loss and also sell his surplus at prices better than the average of recent years.

Recommendations
1. Economical Production—
   Being a surplus producing county and state, economy of production is of major importance. There are some 700 to 800 farms in Polk county with from three to ten cows each. Practical dairying has shown it economical to have at least 10 cows per unit. Because of cost of production and feeding value greater use could be made of oats-vetch ensilage on farms having silos. Increased production per cow is important and rigid culling by the Babcock test is of first importance followed by the use of better sires.

2. Improved Herd Sires—
The use of the best possible sire is of prime importance and in this connection a long step would be taken if all breeders of registered stock would only offer for use such sires as they believe will produce offspring that will excel their dam in production. The use of a proven sire is one of the surest methods.

3. Cost of Raising Cow—
To the dairyman raising dairy heifers we suggest the following cost table as representative of costs incurred in bringing a heifer up to two years of age:

<table>
<thead>
<tr>
<th></th>
<th>Cost</th>
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<tbody>
<tr>
<td><strong>FIRST YEAR</strong></td>
<td></td>
</tr>
<tr>
<td>Whole Milk, 540 lbs. at 2c</td>
<td>$10.80</td>
</tr>
<tr>
<td>Calf Meal, 50 lbs.</td>
<td>2.00</td>
</tr>
<tr>
<td>Hay</td>
<td>2.00</td>
</tr>
<tr>
<td>Oats, 100 lbs.</td>
<td>2.00</td>
</tr>
<tr>
<td>Pasture, 6 mo.</td>
<td>6.00</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>$19.00</td>
</tr>
<tr>
<td><strong>SECOND YEAR</strong></td>
<td></td>
</tr>
<tr>
<td>Hay, 1 1/2 T</td>
<td>$15.00</td>
</tr>
<tr>
<td>Oats, 200 lbs.</td>
<td>4.00</td>
</tr>
<tr>
<td>Pasture, 6 mo.</td>
<td>9.00</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>$50.00</td>
</tr>
<tr>
<td>Labor and miscellaneous</td>
<td>$20.00</td>
</tr>
<tr>
<td><strong>REAL TOTAL</strong></td>
<td>$70.80</td>
</tr>
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With these figures in mind and the prevailing demand from outside districts it would seem that the time is more favorable for the production of female stuff than for some time past.

4. Butter Substitutes—

Campaign showing superior value and quality of butter over substitutes should be continued and all substitutes should be sold as such.

4-A. Assessment Registered Stock

In view of the decrease in spread of values between grade and purebreds the ratio of assessment should be decreased to where pure breds are only assessed the same as grades while it now is 100 per cent more.

5. Cost of Production—

The following table reasonably represents the cost of handling a dairy cow for a year and clearly shows the need for increased production per cow and economy of production. Using 191 pounds as the average production per cow it makes an average of 72c per pound.

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
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<tbody>
<tr>
<td>Mill feed, 1 T</td>
<td>$40.00</td>
</tr>
<tr>
<td>Hay, 2 T</td>
<td>20.00</td>
</tr>
<tr>
<td>Silage, 2 T</td>
<td>14.00</td>
</tr>
<tr>
<td>Pasture, 5 mos.</td>
<td>10.00</td>
</tr>
<tr>
<td>Labor, at 30c</td>
<td>54.00</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$138.00</strong></td>
</tr>
</tbody>
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6. Disease Situation—

Further improvement of the tubercular situation is largely dependent upon cleaning up of tuberculosis in the farm poultry flocks according to investigation by our county veterinarian.

Infectious abortion has assumed alarming importance and any plan that will give control to this disease without driving the dairyman out of business should be supported. The time is not ripe for compulsory testing as in tuberculosis.

Calf club work among the boys and girls is of fundamental importance in the dairy industry and those clubs of the county should be heartily supported by all interested in the dairy industry and new ones formed wherever possible.

8. Conclusion—

Dairying is of fundamental importance in the agriculture of Polk county and anything and everything should be done that will increase or maintain its present status both in production of milk and breeding or producing stock.

Committee—

G. G. Hewitt, Chairman
J. R. Beck, Secretary
Claud Hoisington
D. D. Rowland
A. J. Campbell
J. De Jong
E. W. Anderson
Geo. Dickenson
John Loy
C. P. Yungen
Sam McKee
W. O. Morrow
W. B. Allen
Geo. Stewart
In view of the tendency to increase the potato acreage in the United States we recommend no increase in the present commercial potato acreage in Polk county. The acreage for commercial potatoes should be largely confined to those required for local consumption. An increase in the acreage of certified seed to take care of local needs is recommended. Low top Burbanks are the most promising variety for certification and for main crop uses. Bliss Triumph, Irish Cobbler and Earliest of All are recommended as early potatoes for seed and commercial uses. We recommend the more general use of corrosive sublimate treatment for seed and that where seed storage conditions are not good that the seed potatoes be spread out and allowed to green as on a barn floor or mow floor.

Quantities of Yakima potatoes are being sold in Polk county, and many of these are low grade and being sold contrary to the labeling law. We recommend that local growers pay more attention to growing potatoes of good quality and grading them to meet market conditions and that dealers in Polk county specialize on the sale of Polk county grown potatoes. We recommend that the farm organizations of the county put on a campaign to educate consumers and dealers to the merits of well graded locally grown potatoes. Low grade potatoes should be kept off the market and fed to stock. They are being used very satisfactorily as hog and cow feed.

In growing certified seed the work should be carried out by folks using certified seed to start with. It should be planted only on new ground or ground free from potatoes for at least three years. Since thorough roguing or pulling out of the diseased plants is necessary certification is only suited to a small number of growers. Certified seed usually sells at from 50 per cent to 100 per cent premium over common and standard seed and is usually marketed at 25 to 50 per cent premium.

Small Grains

Winter grain is generally recognized as superior in production to spring grain. Grain costs are rather high in comparison with returns, making it necessary to reduce costs and secure high yields per acre to make production profitable. It is recommended (1) That the grain be grown in rotation with a legume as that tends to produce larger yields. (2) That the seed be treated for smut to avoid loss and dockage. (3) That standard varieties be used in all cases, and (4) That particular attention be paid to the matter of harvest costs.

During the past two years the small combine has been given serious consideration in the valley, and cost figures by the Farm Management of the college show that in 1927 grain was harvested at a lower cost per acre and per bushel by the small combine than by the binder-thresher method. This is in spite of the fact that in the small number of farms studied the yield per acre on the combine harvested farms was approximately 3½ bushels lower than that on the farms where the binder-thresher method was used.

Experiences by combine owners indicate that the combines are
well suited to the harvesting of grain and that where the combines are being used the barley acreage is increasing. Combines have been used in the harvesting of clover, seed flax and even kale and rape for seed, although experiences along this line are limited and complete practicability is not thoroughly worked out. Combines as a means for harvest are recommend, but very careful study with the trends indicating that harvesting is cheaper by that method than by the older method.

If combines become generally used non-shattering varieties allowing a longer harvest season will be necessary. This will eliminate Kinney, Huston and Minnesota Wonder wheats. Special problems associated with combine harvesting include (1) the collection and disposition of weed seed, which must not be allowed to go back on the land; (2) the scattering of straw, that it may be plowed under; (3) handling of straw that it will not kill out clover under straw rows or make too strawy hay.

**Winter Wheat**

For fall sowing Jenkin, Rink, Holland and Winter Wheat are recommended, with the Jenkin preferred on the more mellow and well-drained lands. Rink is also a good variety on mellow soils. Holland and White Winter are probably better suited to the heavier soils.

**Spring Wheat**

Among the spring wheats Huston, Marquis and Zimmerman have given best returns at the experiment station and under average conditions out-yield other varieties. It is recommended that the county agent establish some demonstration plantines of Zimmerman in the county to compare with the Rink and other varieties. While spring wheat is not usually a paying crop in Polk county conditions indicate that the market for it will justify 1928 plantings on lands making good yields.

**Barley**

The barley acreage in Polk county is increasing, and barley and oats are recommended for spring planting as superior to spring wheat under average market conditions. O. A. C. No. 7 Winter barley and Hanchen Spring barley are recommended as standard varieties. Barley usually out-yields all other spring grains in pounds of feed produced per acre. It is therefore the best grain for farm feed production and the market for it is usually good. Oregon ships in both barley and corn in large quantities. More home grown barley may take the place of this supply shipped in. Polk county Hanchen barley is shipped to the eastern market each year.

**Oats**

There is a substantial demand for more oats for milling and for feed purposes. In spite of a decreasing horse population the demand for milling oats and for oats for dairy and poultry feed purposes is greater than the supply. While oats are possibly the poorest paying cereal, they are better suited to some lands of low production than either wheat or barley. Gray winter oats are the best winter variety. The acreage for commercial and seed purposes may be profitably enlarged. Polk county annually ships out seed of the Shadeland Climax variety. The acreage of this may also be enlarged substantially for seed purposes. Victory and Three Grain are the highest yielding spring oat varieties at the experiment station, and it is recommended that they be introduced into the county.

**Corn**

Corn is successfully grown for silage and grain. The Northwest annually ships in from 2,000 to 2,500 carloads from eastern points. Polk county grows sufficiently good corn that it might take care of much of its local demand for
corn as grain. With the large numbers of prune and hop driers it is thought that corn for grain and seed may be grown and artificially dried in certain cases. If the corn is allowed to cure on the stalk or in the shock until the middle of November or later much of it may be successfully stored in cribs without artificial drying. For commercial shelling and sale artificial drying is necessary and is being practiced in two counties. With established driers the cost of drying is not excessively high and this may help to carry the overhead of both hop and prune driers.

For grain purposes yellow corn is recommended. Minnesota 13 is an early maturing variety recommended for grain. For silage purposes Bloody Butcher, McKay, Yellow Dent and in some cases Minnesota 13 are recommended.

**Flax**

Flax is grown in the county for fiber and seed purposes. Where the haul to the penitentiary is not too expensive and where good yields of two tons an acre of 30-inch or taller flax is secured, it is a paying crop at present contract prices. Where small yields, as one to one and one-half tons of flax of less than 30 inches are secured it is doubtful if it pays. There is little incentive to grow fiber flax except as it may be contracted to the state penitentiary. Fiber flax to be successful must be planted on a fine, firm and well-prepared seed bed, early as in late March or early April.

The outlook for fiber flax is limited to the needs of the plant at Salem. There is a large market for seed flax in the United States and in Oregon. There is no possibility of increasing the acreage to the point of flooding the market. There is active demand for at least 40 times our present production. On reasonably good land it is a profitable crop.

With average yields of wheat and flax the net returns per acre from flax selling at $1.90 per bushel would be equivalent to those from wheat selling at $1.30 per bushel. With the same yields flax at $1.60 per bushel would be as profitable as wheat at $1.10. On the other hand, if flax sold at $2.20 per bushel, wheat would have to sell for slightly over $1.50 per bushel to be profitable.

Flax is no harder on the soil than a grain crop. With the Duluth cash price guaranteed to Oregon growers in Portland the crop has great promise. Yields of 12 to 14 bushels per acre were secured under good flax conditions in 1927. It is especially recommended on some of the heavier low land type of soil where drainage is good. Like fiber flax, seed flax does best with early planting on a firm seed bed.

**Hay**

It is recommended that there be still greater standardization on legume hay. The acreage in red clover is increasing for hay purposes with some surplus being marketed in the coast district by truck.

There are now approximately 600 acres of alfalfa in the county, and this acreage should be enlarged to care for local needs and to provide summer green feed and pasture for various stock and poultry growers. Grimm alfalfa is the standard variety and is suited to well drained bottom land and to much of the well drained upland when limed. Alfalfa should be inoculated previous to planting. It is best planted on a firm, well-prepared seed bed in April or May. Owing to the early harvest of the first crop each year it is recommended that growers do not attempt too large an acreage until they are accustomed to the crop.

Since hay making periods in late May and early June are few we request that the weather bureau broadcast long range forecasts the latter part of May and through June advising coming periods of hay making weather.
We urge the farm organizations to request the Oregon congressional delegation for this service. Vetch is recommended for hay purposes largely as a supplement to clover and on soils where clover is not a very certain crop. Both Hungarian and common vetch are recommended for hay and silage. In various parts of the county common is preferred on the better vetch land with Hungarian for the lower, heavier and more sour soils.

**Seeds**

Alfalfa is not recommended as a seed crop as it does not produce paying yields.

Red clover for seed is an important industry, and may be enlarged if we produce the right kinds. It is recommended that for local use for hay purposes that the Oregon type of clover seed be continued, but for the seed that must be marketed in the east we recommend that we standardize the Anthracnose Resistant variety and on the Hardy Hairy Stemmed American red clover types. A good market for the Anthracnose Resistant type prevails in the southern half of the Mississippi valley clover belt and the other type is suited to the north half. These clovers should be grown on land free from volunteer that they may be certified and sent back to the eastern markets.

Alsike clover is in substantial demand and the acreage should be enlarged.

Vetch seed — The planting of Hairy vetch may be enlarged to about three times its present acreage. The market is in the southeastern states. The crop should be produced where it may be harvested, cleaned and shipped in early August that it may reach the southeastern market in time for fall sowing. Hairy vetch for seed in Oregon is suited to rather heavy low lands without surface water and to some of the thin uplands where it may be grown for several years in succession. It should not be planted where either wheat, barley or other vetch seed growing is contemplated, as it volunteers badly and may be a pest in those three crops. It is not objectionable in seed flax, oats or hay fields.

With the large carry-over of common and Hungarian vetch seed it is doubtful if much of either should be saved for seed purposes in 1928 unless there is evidence of an unusual demand, as in case of a serious clover failure from this spring’s sowings.

Ladino clover seed offers promise as a profitable seed crop on irrigated or subirrigated soils free from Alsike or common white clover volunteer.

**Root Crops and Kale**

The growing of root crops and kale as supplemental feed is recommended for those soils where large yields may be secured. Both mangels and kale give good yields on well-manured, well-drained land. Important varieties of mangels are Giant Half Sugar, Sutton’s Prize Winner, Big Cropper, Danish Sludstrup, Mammoth Long Red and Giant Intermediate.

More attention should be given temporary and permanent pastures. For irrigation and sub-irrigated pastures, Ladino clover is possibly best. For dry upland summer pasture Grimm alfalfa is very productive. Precaution against bloat should be taken. Sweet clover makes a good yield of summer pasture on sweet soils but is susceptible to stem rot. Dwarf Essex rape used as a companion crop of clover makes an excellent summer sheep pasture. English or common rye grass planted alone or with clover makes good temporary fall and spring pasture. Mixed pastures for some of the permanent older pastures are recommended. A good upland or stump land mixture is rye grass 6 lbs., tall oat grass 3 lbs., orchard grass 3 lbs., Kentucky blue grass 3 lbs., red top grass 1 lb., Timothy 2 lbs.,
red clover 3 lbs. and Ladino 1 lb. This mixture sowed at 12-15 lbs. per acre is a good permanent mixture. For cattle pasture Burr clover is recommended in preference to red clover. Prepared Burn mixtures, because they are commonly made up from waste material, are not recommended.

Committee—

Geo. A. McCulloch, Chairman
George R. Hyslop, Secretary
P. O. Powell,
Laird Lindeman,
J. B. Lorence
Forrest Pence
C. D. Nairn
C. C. Gardner
Ernest Zielesch
S. H. Robison
Wm. Riddell, Jr.

Report of Horticultural Committee

A program for the balancing and development of the horticultural production of Polk county must be based upon not only what we can grow to advantage, but also what we can market to advantage. Only those varieties of tree and small fruits, nuts and vegetables which are particularly adapted to our soils and climatic conditions are to be included. Our fruit, nut and vegetable plantings must be planted in the location and upon the soils within the county suited for their production. They must be planted in large enough units for economic production. Existing plantings unfortunately located, such as prune orchards upon shallow or poorly drained soils, can be pulled at once to the financial advantage of the grower, as well as the good of the industry. Indications are that certain crops, such as prunes, apples, evergreen blackberries, are already over-planted in the county, while there are others, such as red raspberries, black cap raspberries, filberts, and some of the canning vegetables, which will stand reasonable expansion. We must produce those things our markets demand in the proportions demanded.

Prunes

The dried prune production of the United States for 1927 was something more than 400 million pounds, California producing 380 million, and Oregon and Washington approximately 40 million pounds. The total production of these three coast states will easily reach the 500 million pound mark inside of five years, while that of the Northwest alone can be expected to reach the 100 million mark. The Pacific coast states have a monopoly upon the dried prune production of the United States. Oregon and Washington combined have a monopoly upon the tart-sweet dried prune production of the United
The total prune production is sufficient to feed the American population at the present consumption rate of one and one-half pounds per person, with 220 million pounds remaining for export trade. When the 500 million pound production is reached in the next five years, unless we increase the average consumption of the American consumer, we shall have over 325 million pounds for export.

The prune industry in Polk county has developed from 67 acres in 1889 to the present acreage of 11,000 acres. The ten to twelve cents received for the prunes in 1889 was responsible for the first heavy planting, the acreage reaching 1,145 in 1899. The dropping of prices to two and three cents a pound prevented any rapid increase during the next ten years, the 1909 acreage standing at 1,214. The six cents received in that year, and the other good prices during the following years, reaching as high as 20 cents in 1919, was responsible for the additional new plantings. The total plantings reached 5,181 in 1919, and 11,000 at the present time, 1928.

Conclusions and Recommendations

The probable value of a representative acre of bearing prunes, with the necessary buildings and equipment, is $625.00. The average production of dried prunes is not greater than 1,500 pounds per acre. The cost of production is at least seven cents per pound. The average price to the grower will be close to this same seven cents. For this reason, orchards averaging less than this 1,500 pound yield, which cannot be economically made to produce this amount, are better off removed.

No new acreage should be planted, excepting to fill out economic units, until consumption has at least caught up with production, and prices have reached a higher level. When new plantings are made they should be on deep, well-drained soils suitable for prune production.

Cultural methods should be improved to increase the average size of our prunes. Good cultural practices and proper selection will reduce the amount of small prunes, but will not eliminate them. Under the most favorable conditions we will have several million pounds of small prunes. These small prunes contain much food value and have cost as much to produce as the larger sizes, but sold on the market bring, in many cases, less than packing and selling costs, to say nothing of cost of production. Also, the very fact that these small prunes sell for a low price has a tendency to reduce the amount received for the larger sizes, as well as reducing the amount of the more profitable sizes sold.

It is suggested that these small prunes could be used as a by-product in such a way as to conserve the food value and at the same time remove them from competition with the larger sizes. To that end we recommend that the prune growers adopt some method to finance research work for finding some use for small prunes as a by-product, and that the chairman appoint a committee to work with a like committee of other prune growing districts to carry out the intent of this recommendation.

Dried prunes’ water content should be standardized.

Number of grades should be reduced.

Oregon prunes are now graded as to size, into 11 distinct commercial grades. Two distinct types of prunes are grown, doubling this number. Then at times old and new crop of prunes of each size and type are sold at the same time, and in addition each type and size is packed under a number of distinctive brand names. This untold multiplicity of sizes,
grades, brands and qualities is, to say the least, confusing to the consumer and the trade not justified by sound business methods and not conducive to the largest possible consumption of our prunes. In the opinion of your committee this large number of sizes is unnecessary. Perhaps no other commodity of as near uniform edible quality is marketed under so many distinct, though sometimes infinitesimally different sizes.

It is apparent that to merchandize the successively smaller sizes, a substantial difference in price is necessary between each different grade. By making ten successive substantial reductions, it is evident that an abnormally low price must be in effect on medium and smaller sized prunes to move them. To most consumers such an enormous reduction in price immediately suggests an even greater difference in quality, cleanliness or edibility of the smaller prune. This psychology of the consumer's mind still further depresses the price of the smaller sizes to a ruinous price to the grower. Then, the smaller sizes are being by these processes reduced to such a ridiculously low plane, the consumer as well as the trade naturally wonders why the larger sizes are so high while other prunes apparently just as large or at best only infinitesimally smaller, are so much cheaper. This feeling naturally depresses the price of the large prune also. In this way useless multiplicity of sizes creates a trade and consumer resistance to prices of both large and small prunes. In the same retail store may be seen a difference of 10 or 12 cents per pound or even more in the price of prunes grown on the same tree in this county. It is quite apparent that the grower is not getting 12 cents per pound more for the large prune that the small ones, and it is quite evident that most of the increase in price is taken somewhere down the line of the middlemen and is not to the interests of either grower or consumer.

It is the opinion of your committee that the number of commercial sizes of prunes be reduced from 11 to not exceed 4, or, by way of illustration, to be named as follows: Small, Medium, Large, Extra Large.

The recommendations of the (1) Production, (2) Grades and Sizes, (3) Advertising and Sales, and (4) Storage, Warehousing and Finance committees of the Northwest Dried Prune Convention are approved and highly recommended.

Cherries

The cherry acreage in Polk county is about 1,000. The average production probably is 1500 pounds. The approximate value of an acre of a bearing cherry orchard is around $650.00. The cost of production is not less than 9.3 cents.

No increased planting of cherries is recommended at present. Efforts to increase the yields of existing plantings by better cultural methods, adequate pollination and more thorough insect and disease control is urged.

No cherries should be permitted to be shipped out of the state in their fresh state unless sprayed for the cherry maggot and state inspected before shipping.

Pears

Polk county grows very few pears. Her 250 acres produced 20,000 bushel in 1923. This average yield of only 80 bushels is much below a profitable one. It should at least be increased fifty per cent.

Winter varieties, such as Anjou, Bosc and Winter Nelis can be satisfactorily grown and may be advantageously planted, if planted, in large enough blocks to insure car lot quantities for shipping. Bartlett acreage in Polk county should not be increased
because of heavy plantings in competing districts.

**Apples**

Polk county's 1,100 acres of apples produce about 90,000 bushels annually, an average production of only 90 bushels per acre. The cost of producing and equipping an acre of apples is at least $650. The cost of producing a box of apples is something over $1.00.

For these reasons orchards which cannot be economically made to produce an average production of 250 boxes per acre should be removed.

No new plantings should be made except to fill out an economic unit.

Yellow Newtons, red Gravensteins, Grimes goldens, red Delicious, red Romes, red June and yellow Transparent are suitable varieties for this county.

**Nuts**

Moderate plantings of walnuts and filberts may be advisable in this county.

Plantings should be made upon deep, well drained lands only. Frost free locations are necessary for walnuts.

Plantings should be made from most satisfactory varieties: Franquette walnuts and Barcelona filberts.

Walnuts should be grafted to root stalks of Northern California black walnuts.

Eleven to sixteen per cent of filbert plantings should be pollinizers.

Uniform grades should be established and enforced.

Marketing should be through a central agency, devoted exclusively to marketing nuts.

**Small Fruits**

Red raspberries, evergreen blackberries, black cap raspberries, loganberries, strawberries, gooseberries and currants can be economically grown in the county.

Red raspberries, loganberries, black cap raspberries and Ettersburg 121 may be safely planted as the demand exceeds the supply.

Gooseberries, currants, evergreen blackberries and soft strawberries should not be increased at the present time. Larger yields and plantings from stock free of all virus diseases is important.

Committee—

F. C. Ewing, Chairman
C. L. Long, Secretary
Max Gehlar
R. W. Hogg
B. I. Ferguson
Dr. J. M. Powell
G. A. Schroeder
L. W. Plummer
Frank Coad
T. J. Alsip
G. W. Curtiss
The poultry industry of Polk county is a valuable agricultural asset. We rank high in the state of Oregon in value of poultry products.

The poultry industry has just experienced one of its most trying years, although well managed plants have been able to show a profit.

The state of Oregon now produces more eggs than its population consumes and is, therefore, an exporter of eggs. Polk county likewise produces a surplus of eggs which must be shipped out of the county. The poultry industry of Polk county is considered not as a unit in itself, but as a unit in the poultry industry of Oregon.

There exists a strong outside buying demand for the surplus high quality Oregon eggs. With the present marketing facilities and their improvement to meet changing conditions, no difficulty is foreseen in marketing a material increase in eggs of exportable quality.

Conclusions and Recommendations

Careful study discloses the fact that farm flocks too small to be considered an important unit of farm work usually suffer from poor management, a fact which results in inferior products, complicating the general marketing problem of the state. There are two closely related phases of the poultry industry, namely: first, economical production of a quality product; second, efficient marketing of the product. The greater volume of the aggregate product is as yet produced by the general farm flock rather than by well managed economical units.

For farmers not interested in poultry or farmers not having surplus labor to invest it is recommended that only a sufficient number of hens be kept to supply the home table, preferably 24 hens or less.

At Least 15 Acres Needed for 1000 Hens

Many established poultry farms, successful for a time, have been compelled to quit business because all of the available ground space became badly contaminated. Limited acreage is one of the greatest undermining factors in the poultry business. One or two acre tracts purchased for commercial poultry keeping where young stock is to be reared each year must be considered only a temporary and dangerous undertaking. Real estate dealers should be discouraged from exploiting such small tracts as desirable units for successful and permanent, intensified poultry keeping.

It is recommended that commercial poultry keeping should not be attempted on less than 15 acres of tillable land for 1000 hens when young stock is to be reared each year on the farm to maintain this flock number.

Poultry keeping should not be advocated as a means of reclaiming logged off land except where the acreage is materially increased over that of the minimum tillable land recommended.

Must Raise Disease-Free Pullets

Success of poultry keeping in Polk county depends upon the ability of the producers to raise to maturity pullets that are vigorous and free from internal parasites and malformation. This can be done more safely through careful effort to brood chicks on clean soil each year.
On farms where permanent brooder houses must be used it is recommended that concrete yard the length of the brooder house and 20 feet wide be used.

It is recommended that producers endeavor to secure all chicks for brooding purposes at one time, where only one brooder and one range is available. In terms of financial results, labor and economics it is better to purchase 500 day old chicks at one time than to attempt to hatch this number at two or three hatchings from smaller incubator capacity. A uniform lot of chicks implies the brooding, feeding, growing, housing and production problems and contributes largely towards success.

Follow Successful Types

Proper poultry houses are essential to successful poultry keeping. There is a tendency to construct laying houses along lines of individual hobbies rather than to pattern after those which through experimentation, have proven successful. It is recommended, therefore, that producers desiring to construct new laying houses be guided by the plans set forth in Station Circular 51, Oregon Agricultural college.

One of the serious limiting factors of poultry production in Polk county and the state of Oregon is the increase of poultry diseases. That of coccidiosis, chicken pox, flu, croup and cold are among the worst, and we recommend the poultry veterinarian of the state college to use every means at his command to combat these diseases.

We recommend that the poultry department at the state college be allowed sufficient funds to carry on more experimental work along the lines of proper feeding and brooding.

This committee goes on record as being opposed to compulsory B. W. D. testing at this time.

Green Feed Is Essential

Green, succulent feed is one of the four major classes of poultry feeds necessary to growth and egg production. In Polk county kale and roots should be the main green feed. There are times in mid-winter when the supply of kale on some farms is limited, frozen or unfit to feed.

The summer green feed problem is even more important, as it is the season of short supply. It is perhaps the most important feed item in the ration of growing chicks. This committee especially recommends alfalfa for summer range.

This committee recommends that the tariff on eggs be doubled.

Cold Storage Law Should Be Repealed

Those engaged in the poultry industry believe that the consumption of eggs is reduced by the law which regulates the sale of cold storage eggs. Meats, fruits, potatoes, vegetables, butter, cheese, etc., are not required to be sold under a cold storage sign. Placing of eggs in cold storage is necessary to care for the surplus eggs during the flush season. The present storage law is not rigidly enforced. There is a nation-wide effort to eliminate the cold storage regulation and sell on size of egg and quality of egg. The poultrymen, therefore, recommend that the Oregon legislature repeal the present cold storage egg law and pass instead a law regulating the sale of eggs according to size and quality.

Committee—

George Cooper, Chairman
W. H. Small
F. E. Hennagin
Henry Dickenson
Wm. Garner

Morris Christensen
Forrest Martin
J. D. Smith
T. M. Lamond
Albert Schroeder
Report of Livestock Committee

Sheep

It is recognized that sheep have been increasing in numbers both in Oregon and in the United States. It is further recognized that present favorable prices may not continue indefinitely. It is believed, however, that sheep raising is one of Polk county's most permanent industries and that it has been, and will be, prosperous when taken over any long series of years including both good and bad. Continuation of the sheep business on this basis is recommended. Speculation in sheep is not to be advised.

The cost and income from grade ewes in Polk county was estimated as follows:

<table>
<thead>
<tr>
<th>EXPENSES</th>
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</thead>
<tbody>
<tr>
<td>Labor</td>
<td>$1.00</td>
</tr>
<tr>
<td>Pasture</td>
<td>3.00</td>
</tr>
<tr>
<td>Salt</td>
<td>.05</td>
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<tr>
<td>Shearing</td>
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<tr>
<td>Oats</td>
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</tr>
<tr>
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</tr>
<tr>
<td>Taxes</td>
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</tr>
<tr>
<td>Depreciation</td>
<td>1.00</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$8.05</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>INCOME</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Lamb</td>
<td>$8.00</td>
</tr>
<tr>
<td>Wool, 8 lbs. at 35c</td>
<td>2.80</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$10.80</strong></td>
</tr>
</tbody>
</table>

The above does not include ram costs, housing or incidentals. Beginners in the sheep and goat business together with experienced operators who are increasing their flocks will find it necessary to give special attention to the prevention of parasites.

Stomach worms are a constant menace to the sheep industry. Medical treatment is of doubtful value. Sanitation and rotation of pastures are workable means of prevention. Rotation is especially important on highly productive land that carries a large number of sheep per acre. Sheep pastures on such land should be regularly rotated with grain, hay or other crop that is not pastured.

Liver flukes may be combatted by draining swamp areas. Infested animals may be treated with reasonable success with carbon-tetrachloride.

Angora Goats

We do not feel that there is any immediate danger of over-production of mohair in view of the fact that its use for manufacturing purposes is expanding.

We strongly recommend goats as a means of economical land clearing but urge that the greatest success so far as profits are concerned is had when the goats are turned on stump land and allowed to remain until sprouts are eaten down close. After that they should be taken off and turned onto good pasture. As sprouts grow, turn in on them again until eaten down.

There are 315,000 acres of lands suitable for goat production in Polk county, capable of carrying 3 goats per acre. The average mohair clip is slightly over 4 lbs. per head and this can be materially increased by the use of good sires.

A return of $5.00 per head per year can be expected under intelligent care. We recommend some goats on every farm having some brush land as a means of utilizing waste areas suitable for that purpose. The use of goats will improve pasture conditions for all classes of farm livestock.
Swine

Under present Polk county conditions it is considered safe to keep hog production within the numbers necessary to utilize the available farm wastes. There is some profit in the business where the hogs are kept largely to consume surplus skim milk, cull fruit and vegetables and table wastes.

The present ratio between grain prices and pork prices is very unfavorable, but it is believed that this condition is but temporary. Market statistics show that as an average of the past 18 years 100 pounds of pork live weight has brought approximately the same figure as that received by the farmer for 616 pounds of barley. Cost figures presented by Mr. Pence of this committee show a feed cost of $20.94 for fall pigs at 200 lbs. and $16.95 for spring pigs at the same weight.

Intestinal worms are a frequent source of loss in Polk county hogs. These parasites may be largely prevented by keeping pigs off of old infested pastures until they are at least three months old. The pigs must be farrowed in perfectly clean, sanitary quarters and if not already on pasture soon moved to pastures that have not had hogs on them for at least a year.

Milk Goats

The United States imports 80,000,000 pounds of Roquefort cheese annually. There are not milk goats enough to supply the demand from hospitals. Therefore, we believe it will be years before there will be an over-production of milk goat products.

The same 315,000 acres in Polk county that is suited to Angora goats is suited to milk goats. The average return per milk goat is $25.00 net. There are 400 milk goats in the county. One doe requires two acres of land and in addition 300 lbs. of hay each year.

We recommend some milk goats on every farm having some brush land as a means of utilizing waste areas suitable for that purpose and as a means of replacing some crops which are now produced in surplus quantities.

Experienced raisers of milk goats here in Polk county state that the handling of this animal is easily learned and anyone interested in this phase of livestock can do so on the type of land referred to with a degree of assurance. The milk goat will function in the same manner as the Angora as regards land clearing and pasture improvement. We recommend that goat milk be disposed of in the form of Roquefort cheese.

Committee—

Ronald Hogg, Chairman
E. L. Potter, Secretary
W. F. Lee
D. R. Riddell
Robert Pence
Joe Staats
Frank Farmer
Harrison Brandt
W. D. Gilliam
Jess Walling