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**Oregon Agricultural College**  
**Extension Service**

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Director

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*(Agriculture)*

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***A Program for Josephine  
County Agriculture***



**Report of the  
County Agricultural Conference**  
Grants Pass, Feb. 21-22, 1924

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## Foreword

This bulletin is published by reason of the following resolution adopted by the general assembly of the Josephine County Agricultural Conference on the last day of its two-day sessions, February 21st and 22nd, 1924:

"Whereas, this the first Josephine County Agricultural Conference, has adopted a program based upon a comprehensive study of production and marketing possibilities, which provides the best information for the further development of the agriculture of the county; and

"Whereas, the ultimate benefits growing out of the conference will depend upon the extent to which the program is understood and followed;

"Therefore, be it resolved, that the general committee in charge of the conference be continued as a standing committee for the purpose of preparing the information and recommendations of the various groups for publication in bulletin form and for the further purpose of devising ways and means of carrying the recommendations into effect."

In the aggregate these reports constitute an agricultural program for Josephine County. Taken singly the reports represent the most approved methods in the production and marketing of the county's major agricultural crops.

The conference was attended by about 150 persons, by far the larger percentage being Josephine County farmers. These people met in commodity groups and with the best available data before them formulated the recommendations and suggestions contained in the reports as adopted by the conference.

The conference was a beginning. Its ultimate value, however, depends upon the extent to which its recommendations are put into effect in the various communities of the County. The real success of the conference, then, rests in the hands of the individual producers upon whom depends the success of Josephine County agriculture.

# Growth of Josephine County Agriculture

A birdseye view of the development of Josephine County agriculture is indicated in the following table. It will be noted that between the years 1860 and 1920 population more than quadrupled; the number of farms increased from 120 to 727, and total acres in farms jumped from 28,531 to 97,299, (U. S. census).

Year	Total Population	No. of Farms	Acres in Farms		Total	Average Acres Per Farm
			Unimproved	Improved		
1860	1623	120	15,077	13,454	28,531	
1870	1204					
1880	2485	270		19,755		
1890	4878	398	49,813	21,330	71,143	172.4
1900	7517	557	73,880	22,139	96,019	170.0
1910	9567	855	90,876	30,969	121,845	142.5
1920	7655	727	67,762	29,537	97,299	133.8
1924		950	77,762	32,537	110,299	116.1

Figures for 1924 are taken from local estimates, and reflect a steady growth the county has experienced since 1920, the last census year.

Other evidence of the growth of the county's agriculture is shown in the following table on farm valuations (U. S. census).

Year	Value of all farm property	Average value per farm
1880	\$ 498,939.00	\$1,845.00
1899	1,312,920.00	3,300.00
1900	1,521,039.00	2,712.00
1910	6,301,459.00	7,358.00
1920	7,736,030.00	10,641.00

## PRESENT STATUS OF JOSEPHINE COUNTY AGRICULTURE

The 1920 census gives the total area of the county as 1,047,680 acres. This is divided as follows:

Forest Reserve.....	506,631 acres	48.3%
Non-taxable Lands.....	252,163 acres	24.1%
Taxable lands.....	288,886 acres	27.6%

1,047,680 acres

Figure 1 graphically shows the classification of these lands and their relative proportions. There are 97,297 acres in farms, or 9.3 per cent of the total area of the county. Of the 29,537 acres of improved farm lands 14,903 were irrigated and 14,634 not irrigated, according to the 1920 census. Almost one-half the area of the county is in forest reserves.

## SOURCES OF AGRICULTURAL INCOME

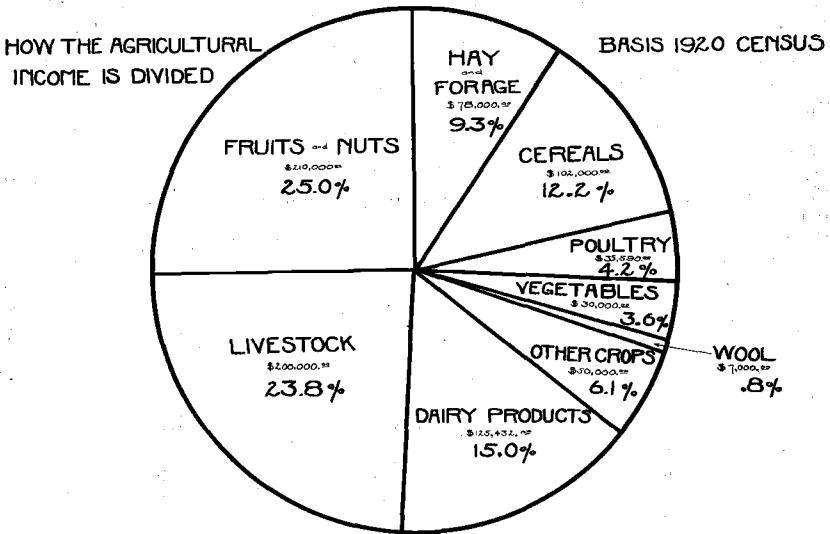
The 1920 U. S. census credited Josephine County with an agricultural income of \$838,022.00, derived from the following sources:

Product	Total sales	Pct. of Total income
Fruits .....	\$210,000.00	25.0
Livestock and meats .....	200,000.00	23.8
Dairy products .....	125,432.00	15.0
Cereals .....	102,000.00	12.2
Hay and forage.....	78,000.00	9.3
Poultry products.....	35,590.00	4.2
Vegetables (including potatoes).....	30,000.00	3.6
Wool and mohair .....	7,000.00	.8
All other sources.....	50,000.00	6.0

**TOTALS** .....\$838,022.00 99.9

Distribution of agricultural income in graphically shown in figure 2.

# JOSEPHINE COUNTY, OREGON



TOTAL INCOME FROM SALE OF AGRICULTURAL PRODUCTS \$838,000.

Figure 1

## VALUE OF CROPS AND LIVESTOCK

Inasmuch as actual sales do not fully represent the value of crops and livestock produced, the following summaries are given (U. S. census):

### Value of Farm Crops

Fruit .....	\$273,316.00
Hay and forage .....	405,574.00
Cereals .....	135,221.00
Vegetables (including potatoes).....	110,123.00
Miscellaneous grain and seeds.....	6,258.00
All other crops.....	50,211.00
<b>Total Crop Values.....</b>	<b>\$980,703.00</b>

### Value of Livestock

Dairy cattle .....	\$203,868.00
Beef cattle .....	177,480.00
Horses .....	135,171.00
Swine .....	63,562.00
Poultry .....	33,405.00
Sheep .....	24,229.00
Mules .....	10,957.00
Goats .....	6,163.00
<b>Total live stock values.....</b>	<b>\$621,430.00</b>

## CLIMATIC CONDITIONS

United States Weather Bureau records are available in Josephine County for the past 35 years. The records covering this length of time are available for the Grants Pass station. The records kept include six other places in Josephine County, and in order that certain sections of this report of the Agricultural Conference may be brought out, the following figures on climatical conditions are given.

## Precipitation

Precipitation records for the seven stations during different periods are given in the table below:

STATION	Years covered by record	Average annual precipitation (inches)	Heaviest annual on record (inches)	Least annual on record (inches)	Elevation of station (feet)
Grants Pass .....	1889-1923	30.37	43.83	16.92	956
Williams .....	1892-1923	33.00	57.57	19.34	1385
Waldo (Page Creek).....	1898-1923	59.87	96.74	43.23	1900
Merlin .....	1894-1902	32.78	43.11	15.51	910
Placer .....	1898-1903	43.27	57.52	37.57	1450
Mountain Ranch .....	1909-1914	43.68	58.23	34.04	2710
Galice .....	1909-1915	49.06	32.05	33.33	2000

The average precipitation for Grants Pass for the 35 year period is 30.37 inches, though the average annual precipitation in the last five years has been 24.92 inches.

From the monthly precipitation records given in the following table, it will be easily observed why the statement is made in another part of this report that for most crops irrigation is essential, the summer rainfall being extremely low. These are averages for the periods indicated above.

Month	STATIONS						
	Grants Pass (inches)	Merlin (inches)	Placer (inches)	Mountain Ranch (inches)	Williams (inches)	Waldo (inches)	Galice (inches)
January .....	5.74	5.86	6.36	10.22	6.23	12.50	12.10
February .....	4.58	5.08	7.12	4.06	4.79	10.98	4.38
March .....	3.18	3.40	4.57	2.24	2.37	7.06	3.35
April .....	1.71	1.51	2.40	4.17	1.67	3.06	3.22
May .....	1.53	1.74	2.76	1.89	1.50	2.22	1.85
June .....	0.85	1.12	0.98	1.27	0.80	1.14	0.68
July .....	0.17	0.03	0.21	0.47	0.29	0.20	0.43
August .....	0.23	0.17	0.45	0.04	0.18	0.39	0.06
September .....	0.94	0.67	1.39	1.95	0.87	1.56	1.71
October .....	1.91	2.01	3.96	4.00	1.91	4.29	3.78
November .....	4.51	5.23	6.55	8.28	5.39	9.16	9.62
December .....	4.98	5.96	6.52	5.09	5.38	9.95	7.23
Annual .....	30.37	32.78	43.27	43.68	33.00	59.87	49.06

Records for the snowfall at Grants Pass shows an average of 8.4 inches for the 35-year period. The monthly snowfall for that period was distributed as follows:

Month	Snowfall (inches)
January .....	4.4 inches
February .....	1.4 inches
March .....	0.7 inches
April .....	Trace
November .....	0.7 inches
December .....	1.2 inches
Annual .....	8.4 inches

## Temperature

Temperature records have been kept at Grants Pass for the same 35-year period, and are available for that station only. Variations in temperature between the eastern part of the county, where Grants Pass is located, and the western and southern part of the county do not vary as widely as does the precipitation. The temperature in the Illinois Valley is generally a few degrees lower than that at Grants Pass, due to the difference in elevation. These government figures show that the temperature at Grants Pass does not vary extremely, that the extreme minimum ever recorded has been zero once in 35 years, and the average minimum temperature reached in the period indicated by the records is around 18 degrees.

The following data for the Grants Pass station covers a 35-year period:

# JOSEPHINE COUNTY, OREGON

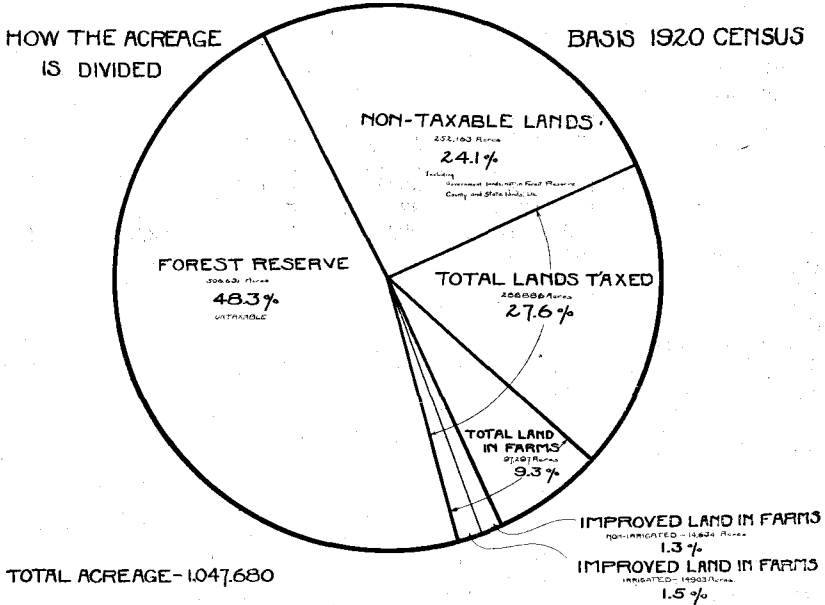


Figure 2

Month	Mean (degrees)	TEMPERATURE			
		Mean Maximum (degrees)	Mean Minimum (degrees)	Highest on record (degrees)	Lowest on record (degrees)
January	39.0	46.1	31.4	71	0
February	42.4	52.8	32.2	75	10
March	46.5	59.9	33.8	86	18
April	51.3	66.0	36.4	94	21
May	56.8	72.1	41.6	99	24
June	62.6	78.8	45.4	104	31
July	69.6	88.8	49.7	110	33
August	68.9	89.0	48.2	108	33
September	61.8	79.9	42.6	103	24
October	53.6	69.6	37.5	93	20
November	44.4	54.8	34.3	75	12
December	39.0	45.9	31.9	77	5
Annual	53.1	67.0	38.8	110	0

## FROST DATA

From the Weather Bureau summaries the following information on frost and length of growing season is obtained. Records are available for Grants Pass, Williams, and Waldo, showing average growing seasons as follows:

Grants Pass	147 days
Williams	147 days
Waldo	139 days

The following table gives more complete information. The year 1911 was abnormal, and disregarding that year, the shortest growing seasons would be 104 days at Grants Pass (in 1893), and 103 days at Williams (in 1903).

	Grants Pass 1893-1923	Waldo* 1898-1923	Williams 1892-1923
Years covered by records.....			
Average length of growing season (days).....	147	147	139
Shortest growing season on record (days).....	81 in 1911	69 in 1914	29 in 1911
Longest growing season on record (days).....	218 in 1922	209 in 1921	214 in 1923
Latest killing frost on record.....	June 29, 1911	June in 1916	July 10, 1911
Earliest killing frost on record....	Sept. 6, 1895	Aug. 12, 1914	
Elevation (feet).....	956	1900	1385

\*NOTE: No record for year 1911.

Records at Wolf Creek show growing seasons for 1919, 1920 and 1921 of 167, 151 and 148 days, respectively.

## Boy's and Girl's Club Committee Report

### 1.—Club Work Good Training for Farm Boys and Girls.

Any program for farm betterment should provide for the training of boys and girls along the line of crops, live stock and home making. The cheapest and most economical plan yet devised for this training is through the boys' and girls' club work as conducted by the Extension Service of the Oregon Agricultural College and State Department of Education.

### 2.—Active Support Is Urged.

The agricultural and home demonstration agents can devote only a limited amount of time to this work, therefore this committee recommends that the Farm Bureau, Grange, Parent-Teachers' Associations and all other organizations encourage club work and assist with the securing of local leaders and the organization of clubs and give to these leaders and club members their support throughout the year.

We urge particularly that the parents encourage the boys and girls in their club work and give such assistance as is necessary to make it possible for them to carry their work through the year successfully.

### 3. Club Organization Program Suggested.

We recommend that at least twenty-five dairy calf club members be secured under the plan as sponsored by the Grants Pass Chamber of Commerce and banks.

We also recommend that at least three pig clubs, two poultry clubs and two crop clubs be organized.

We further recommend that cooking, sewing, canning and home making clubs be organized under the direction of the Home Demonstration Agent.

### 4. Club Work Should Be Exhibited at County Fair.

It is recommended that the county fair board provide suitable classification and prizes for club exhibits from each of the various club projects undertaken in the county, and for judging contest and club demonstrations.

## Live Stock Committee Report

### A.—STATUS OF THE INDUSTRY

Josephine County carries at present about 3000 beef cattle, 2500 sheep, 1200 goats, and 3200 swine. The needs of the county for feeding the population at the present rate of consumption in the United States is 650 beef cattle, 957 sheep for mutton, and for wool 4750 sheep, and 3822 hogs for pork. In other words, the county produces less hogs and sheep than are needed for local use. Records show that there are about 10 cars of hogs shipped out of Josephine County each year. On the other hand, there is a considerable quantity of cured pork products shipped in annually.

Beef, mutton and wool, as well as pork, have a world market. The United States produces but half the wool needed for the population. Oregon, Washington and California in themselves produce but 87 per cent of the beef requirement.

The economical production of beef cattle and sheep in the west depends on cheap grass and forage. Range grass land has made the raising of cattle and sheep in the west an important agricultural enterprise. Pork production in Oregon can only be carried on at a profit on the waste products of the farm. According to the average per capita consumption we need one-half a hog per person. Our production of feed grains in the state is at present below the needs for fattening our present supply of hogs. We are compelled to ship in eastern grains for this purpose. On the other hand, if we attempt to produce more pork in the state than enough to supply our needs, it must be sent east where it comes in competition with the cheaper raised pork, which would result in a loss to the producer.

With these fundamental facts in mind, your live stock group has prepared the following recommendations.

## B.—RECOMMENDATIONS APPROVED BY THE CONFERENCE

### 1.—BEEF CATTLE

#### 1. Very Little Opportunity for Expansion.

Josephine County grazing lands as a whole do not offer an opportunity for an expansion in the production of beef, due to the fact that the lands do not afford enough grass to make it profitable. Much of the forest reserve and private lands are heavily timbered and covered with dense brush, allowing for very little grass. It is recognized, however, by the live stock group that there are exceptions to this rule on individual holdings where limited areas can be used for grazing. Such areas should continue to be used for the purpose of beef production.

#### 2. Good Type Beef Animals Preferred.

The live stock group stresses the importance of improving the quality of the stock handled. We condemn the practice of using suitable grazing lands for the production of dairy-bred steers, but urge that only good type beef animals be used. Experience of local stockmen has shown that well-bred beef animals make a far better profit for the feed consumed than off-grade stuff. Less and better beef cattle will bring a better return in Josephine County.

We wish to go on record favoring a penalty clause in connection with the present bull law as applied to beef bulls.

### II. SHEEP

#### 1. Individual Farms Should Avoid Overstocking.

In view of the fact that sheep have shown an excellent return to Josephine County farm sheep owners, we recommend the expansion of this industry in the county. Practically every farmer has more or less feed that can be profitably utilized by a few sheep. Every farmer, however, should carefully analyze his own condition and carry only such number as there is ample feed for. Overstocking in this connection will destroy the profit and should be carefully guarded against.

#### 2. Early Lamb Marketing Looks Attractive.

It is recommended that good type mutton breeds be the standard for the county as the native grass offers a good opportunity for early lambs. The livestock group feels that this phase of the industry should be emphasized in that the climate and early feed are suitable to a limited number of milk-fed lambs for the early trade. All such lambs should be marketed by June first. After this period the native grass becomes dry and lambs are apt to lose weight. We wish to call attention to the importance of well finished lambs for this market. This further emphasizes the importance of keeping only enough sheep on the farm for which there is sufficient feed.

#### 3. Improved Pastures for Farm Flocks.

We recommend improved pastures on the farm in connection with farm flocks.



#### 4. Room For Improvement in Flock Culling.

We recommend careful culling of farm sheep, paying close attention to high shearing as well as good mutton form. It is felt that there is much room for improvement in this connection.

#### 5. Cooperative Marketing Will Aid in Selling on Grade.

Inasmuch as wool values are established on the basis of grade, we recommend the selling of wool and mohair cooperatively on such scale that will allow for proper grading of the product.

#### 6.—Government Hunter Wanted.

Whereas, there is considerable loss to sheep owners of the county from coyotes; and, whereas, the United States Biological Survey has been successful in destroying these animals where they have supplied government hunters, we recommend that local sheep men band themselves with those in other counties of Southern Oregon in a cooperative movement to secure the services of such hunters for this section.

### III. HOGS

#### 1.—Enough Hogs on Each Farm to Utilize Farm Wastes.

Inasmuch as feed grain production in Josephine County does not justify the production of hogs as a major industry, it is strongly recommended that each farm carry sufficient hogs to utilize the farm wastes. It is recommended that on the dairy farms that do not sell whole milk, one pig should be kept for each dairy cow of producing age to utilize the surplus milk; that grain farms try to raise about one pig for every five to ten acres of grain to glean the wastes from the stubble fields; that one hog be kept on each farm to properly consume the garbage from the household. It is felt that by properly utilizing all of the farm wastes practically enough hogs can be raised to take care of the local consumption.

#### 2. Grain as Basis for Fattening Ration.

We urge the use of orchard wastes for growing pigs rather than for fattening. Grain should be used as the basis of the fattening ration.

#### 3. Mineral Mixtures in All Hog Lots.

We recommend that mineral mixtures be used in all hog lots as it has been shown that such mixtures assist in better health and saving of grain.

#### 4. Growing Pigs Need Exercise.

We discourage close confinement for growing pigs, and call attention to the importance of exercise in connection with swine raising.

#### 5. Grain Should Be Fed for Best Results.

We wish to call attention to the importance of supplying grain with all waste products for the best results in swine feeding.

Inasmuch as some farms may be short of waste products with which to raise their hogs, we urge the use of pasture crops, roots or squash to assist under such conditions.

#### 6. Cooperative Shipping Encouraged.

We encourage the furtherance and patronage of cooperative livestock shipping in the county as the best system of marketing for the small owner.

#### 7. Endorsement of Livestock Club Work.

We endorse boys' and girls' livestock club work and urge its furtherance in the county as the best possible means of interesting youngsters in better farm practices.

#### 8. Study of Cost of Production Factors.

We urge on every stockman of the county the importance of studying production costs with the idea of putting the business on a more profitable basis.

### IV. IN GENERAL

#### 1. Increase in Grazing Fees Opposed.

The livestock group wishes to go on record as opposed to an increase in grazing fees on the National Forests on the grounds that the basis for arriving at these fees is the rental charges on private lands, which we feel is unfair, because of the fact that they were gathered during war time.

## Report of Land Settlement Committee

### 1.—The Man Now On the Land Is Our First Interest.

Our first interest in connection with land settlement is to know that the man now on the land, by diligent and intelligent effort can make a living for himself and his family, and lay up a competence, no matter how modest, for his old age. It would be illogical and wrong to advise the newcomer to settle unless he could do likewise.

### 2. Impartial Sources of Information Available.

Realizing the necessity of establishing settlers within Josephine County under conditions agreeable to success, we recommend that settlers be encouraged to consult with the Josephine County Land Settlement committee for reliable and unprejudiced information relative to land values and local conditions and as to adaptation to various kinds of farming in which the settler may desire to engage, that he be advised to consult the soil survey maps for information as to soils; and seek the advice of the county agent.

### 3. Not to Exceed 20 Acres Is Best One-Family Unit.

Believing that under present conditions success can best be made on areas not too large for a man and his family to operate without hired help, it is recommended that under the irrigation projects tracts of not to exceed twenty acres be recommended for settlement.

### 4. Conference Recommendations Should Be Followed.

Whereas, the group reports of the agricultural conference of Josephine County have formulated an agricultural program pertaining to the requirements of the various classes of agriculture in this county; we advise that present and prospective settlers study and follow these recommendations.

### 5. Irrigation on Part of the Farm, at Least, Considered Essential.

Except for the production of special crops, such as grapes, we caution settlers against attempting to engage in farming on non-irrigated uplands. It is considered essential under most conditions that a portion of the farm be under irrigation.

## Dairy Committee Report

### I. PRODUCTION

Recommendations Approved by the Conference.

#### 1. Size of Herds.

The 2920 dairy cows of Josephine County are on approximately 500 farms, making an average of about 5½ cows to the farm. Cost of production studies in other sections indicate that the small herd has a very high labor and overhead cost, which can be materially reduced by increasing the size of the herd to at least 10 cows. Small herds should not be discouraged, but their handicap should be recognized.

#### 2. Increase Average Production of Butterfat.

The average production of the cows of the county is 160 pounds butterfat per year. Cost investigations show that it is necessary to have a production of approximately 240 pounds per year to make a profit from the dairy business. To this end systematic keeping of records is encouraged and a cow testing association organized with at least 300 cows.

#### 3. Pure Bred Sires.

There are approximately 150 bulls in the county, of which one-half are grades or scrubs. To increase the number of purebred sires, the county campaign plan is endorsed, whereby not only purebred sires are sold, but also the value of them.

#### 4. Tuberculosis Eradication.

The percentage of tuberculosis in the cattle of the county is very low, in 1923 it being only two-tenths of one per cent, only seven reactors being

found in the county and these were in three herds. This is due to continued county-wide testing, and we urge that it be continued and that testing be made compulsory, and that a tuberculosis-free county be the goal.

#### 5. Dairy Cattle Feeds.

Proper feed for dairy cattle can be produced in the county. Alfalfa and clover hay, the main grain hay crops, are produced in sufficient quantity for the present supply of livestock and will probably increase as rapidly as the livestock. Succulent feeds, however, should be increased to provide 30 pounds daily per dairy cow, when not on pasture, and we urge the more general use of silage crops, particularly corn ensiling in the fall and oats and vetch or barley and vetch for ensiling in the spring for summer feed. The growing of kale and root crops for succulent feed should be encouraged.

#### 6. Dairy Association.

The formation of a County Dairyman's Association could result in many advantages to dairymen, and we recommend that a committee of five be appointed to complete the organization of the same.

## II. MANUFACTURING AND MARKETING

### Recommendations Approved by the Conference.

#### 1. Butter vs. Cheese vs. Condensed Milk.

In view of facts presented at the Economic Conference at Corvallis, butter manufacture should receive first consideration and quality of product should be emphasized. Further, that cheese factories or condenseries are not to be recommended.

#### 2. Quality Is Essential.

That, since quality product is highly essential to satisfactory marketing, cream grading and payment upon grade be demanded of the creameries of the county and that only creameries complying with this request be supported.

#### 3. Support Dairy Products Substitute Law.

That all dairymen, dairy organizations, dairy manufacturers and other interested agencies give their financial and moral support in preventing the success of the referendum against the dairy products substitute law and to finance such a campaign a contribution be made by each dairyman and dairy manufacturer proportionate to the amount of butter-fat produced or received.

#### 4. Butter Substitute Committee.

That a committee of 5 be appointed, 3 from the dairymen and 2 from the Chamber of Commerce, to call upon merchants of the county and request that the handling of butter substitutes be discontinued.

#### 5. Consumption of Dairy Products.

That all legitimate methods of education which will tend to bring about a greater consumption of dairy products within the state should be encouraged. The dairy farmer and manufacturer should each bear a part of this burden. To this end greater support should be given the Oregon Dairy Council.

## III. IN GENERAL

1. There are two creameries in the county and two cream stations. There is shipped out of the county 160,000 pounds of butterfat annually.

2. The two creameries in the county are adequate to take care of all the dairy products produced in the county.

3. The average butterfat price in Portland for 1923 was 46.6 cents per pound. The average prices received from local plants was about 4 cents less during the fore part of the year, but have averaged as high or higher during the last few months.

In view of prices received for products in the plants of the county and from Portland and California markets, it is apparently advantageous to continue shipments to California, at certain times of the year.

# Report of Farms Crop Committee

The recommendations and suggestions made for the various crops covered in the report of this committee were approved by the conference.

## I. CEREALS

### A.—WHEAT

#### 1. Wheat vs. Corn vs. Barley.

Wheat in this county is largely used for feed. The wheat acreage has remained about stationary for the last four years, from 2000 to 2200 acres per year. About 70 per cent of this is winter wheat, and 30 per cent spring wheat. The fall-sown wheat averages from 3 to 6 bushels more per acre than the spring wheat.

Since wheat is largely a feed grain here, it's comparative yields with other feed crops are important. The county averages for the past 3 years are as follows:

Grain	Acres	Yields per acre		Value per Acre
		Bushels	Pounds	
Winter wheat.....	1500	19	1140	\$19.00
Spring wheat .....	700	15	900	15.00
Corn .....	1026	30	1680	25.00
Barley .....	700	28	1444	22.00
Oats .....	800	27	864	15.00
Grain Hay .....	3000	1½ ton	2250	17.00

By the above figures it is seen that for feed crops, from the standpoint of value per acre, the crops rank corn, barley, winter wheat, hay, spring wheat, oats. It must be remembered that these figures are county averages and will not figure out in just this proportion on every individual farm. We believe, though, that the experience of farmers as well as statistics of this kind warrant the recommendation that where the crop is to be used for home feed, if a spring crop must be planted, that it be spring barley rather than spring wheat. This recommendation is of particular value for the dry lands.

#### 2. Federation Best Spring Variety.

The committee recommends the adoption of Federation wheat to the exclusion of all others for spring planting on both irrigated and dry land, and commends the work now being done in testing it out as a fall seeded crop in comparison with other varieties.

#### 3. Use Home-Milled Flour.

The local flour mill uses annually about 16,000 bushels of wheat, half of which is grown here and half shipped in. It is necessary to import some of this in order to secure wheat of higher gluten content. This local mill is helping to create a market for local wheat, is of benefit to dairymen in creating mill feed as a by-product and keeps some money at home. We urge the use by farmers and townspeople of the home-made flour.

## B.—BARLEY

#### 1. Barley Acreage Should Be Extended.

We urge the extension of the barley acreage and believe that when a spring grain crop must be seeded, spring barley will yield more pounds per acre than either wheat or oats.

#### 2. Fall Seeding Best.

Fall seeded crops will ordinarily yield more than spring seeded crops except on wet or very low, cold ground.

For fall planted barley we recommend Tennessee Winter, or O. A. C. No. 7. For spring seeding we recommend Hannchen. These recommendations apply to both dry and irrigated land.

### C.—OATS

#### 1. Oats Yield Less Per Acre Than Winter Wheat or Barley.

The larger share of the oats in the county are cut for hay. This crop is lower yielding in pounds per acre than either winter wheat or barley. Dairymen with alfalfa hay could advantageously grow a larger acreage of barley than oats.

#### 2. Confine Oat Growing Largely to Heavy or Wet Lands.

The oat acreage on dry land should be reduced as far as possible and oat growing confined to farms with wet land or heavy land where oats do better than winter wheat or barley. Three Grain is the variety best for dry land. There should be further experiments with varieties best adapted to irrigated land.

### D.—CORN

#### 1. Corn for Dairy Cows.

Corn silage is the cheapest succulent feed for dairy cows. For the most satisfactory returns from dairy cows a succulent feed is necessary. The county is short approximately 9000 tons of this feed. We recommend, therefore, that the silo be considered a goal for every dairyman to work toward.

#### 2. Minnesota 13 Probably Best Variety.

For silage or grain Minnesota 13 is probably the most satisfactory variety on most farms. Where there is difficulty in maturing or drying the Minnesota 13, Minnesota 23 will be found better for grain, although the variety is too small for use for silage. Reed's Yellow Dent is also a good variety for grain and silage.

#### 3. Vetch and Oats Often Better for Silage.

On dry land, fall sown vetch and oats or vetch and wheat will often prove better silage crops than corn. These crops also offer real possibilities as silage for summer feeding, making all-year use of the silo possible.

### II.—PASTURES

#### 1. Extend Permanent Grass Pastures.

On irrigated farms where cows or sheep are kept, we believe that there can be an extension of permanent grass pastures. It is possible here on good land to pasture as many as 2 cows per acre for 8 months. Where this can be done, we believe that it is cheaper to pasture than to cut the hay and feed to cows.

#### 2. Good Pasture Mixtures Needed.

In order to get the best results from pastures, a good pasture mixture must be used. We ask the agricultural college to formulate the best pasture mixtures for various types of soil and try to secure the cooperation of the seed dealers in carrying this mixture.

#### 3. Sweet Clover Merits Further Trial on Dry Land.

For dry land we recommend further trial of sweet clover to establish the places in the county where it will prove successful.

### III. SEED CROPS

#### 1. Production of Grimm Alfalfa Seed is Promising.

The state imports annually about \$100,000 of alfalfa seed, most of it Grimm. This is not being grown commercially in any part of the state. Climatic conditions are apparently right here for alfalfa seed growing. We urge that from 10 to 20 additional growers cooperate with the county agent in putting out small trial plots of Grimm alfalfa to test it out for seed growing. The seed should be sown very lightly. One pound per acre is enough when drilled in rows. It might be mixed with some substance as corn meal in order to get it on so lightly. If seed growing is tried under irrigation, the alfalfa should also be seeded lightly at the rate of not more than 4 pounds per acre.

#### 2. Soy Beans Deserve Variety Trials.

Trials of soy beans indicate that this crop may be a successful one, but further trials of varieties are necessary before making definite recom-

mendations. We urge additional trials of this kind. If successful, this crop will furnish a dairy feed very rich in protein, which can replace the oil meal now being imported.

#### IV. HAY

##### 1. Enough Hay Should Be Grown For Local Needs.

Josephine County is on a hay importing basis. The annual imports average 30 cars. This situation makes hay prices constantly higher than in other irrigated districts where hay is exported, such as Jackson County. Alfalfa hay averages a higher yield here than in any other county of the state, running up to 7 tons and averaging about 5 tons.

##### 2. Every Dairy Farm Should Grow Its Own Hay.

We believe that dairymen with not enough ground to raise all of the feed necessary can better afford to buy grain than hay. Both grain and hay are imported, so the prices of each are based on outside prices plus the freight. Freight is more of an item with hay, however, and takes a greater percentage of the total value. It is uphill business feeding cows with hay bought at the prices prevailing here. Under normal conditions dairymen cannot afford to buy hay at all, but may be able to buy some grain. The crop group therefore recommends that enough hay be grown on every dairy farm for home needs where possible.

##### 3. Vetch and Oats vs. Grain Hay.

About 35 per cent of the acreage of hay in the county is grain hay. This is mostly dry land grain hay. It yields only about 1 ton per acre. Where it is necessary to plow, harrow, seed, etc., we doubt if a grain hay crop often pays for the work necessary in growing it. Wherever possible, we recommend fall-planted vetch and oats or vetch and wheat drilled into stubble ground as a hay crop, rather than straight grain. This will be cheaper and make a greater tonnage of better hay than straight grain.

##### 4. Grimm Alfalfa Recommended on Dry or Irrigated Land.

On dry land we recommend the thorough trial of Grimm alfalfa seeded lightly for hay. This will usually yield at least a ton per acre and will thus furnish a better quality of hay and do away with all the work and expense of re-seeding. It should be seeded at a rate of not more than 8 pounds per acre and 4 pounds will be better on well prepared land.

On irrigated land we recommend the use of Grimm alfalfa in all cases except where the grower expects to plow up the field in a few years.

##### 5. Clover Will Outyield Alfalfa on Much of the Irrigated Land.

On much of the irrigated land, clover will outyield alfalfa. This is true where water stands on the surface, where the water table beneath is close to the surface, and where there is an impenetrable layer a short distance below the surface as is true on some of the granite solis.

#### V. POTATOES

##### 1. Good Seed Essential.

Good seed is essential to profitable potato growing. Good seed is only possible by careful seed selection and work in roguing out diseased plants.

##### 2. Increase Early Potatoes.

An increase in the acreage of early potatoes for outside markets is justified, using Earliest Of All, and planting as soon as possible after February 10th, the earlier the better. This is one of the earliest districts in the Northwest.

##### 3. Increase Late Potato Acreage.

A very slight increase of late potatoes is recommended, planting from May 20th to June 10th and standardizing on Gold Coin. Growers with good seed of the Sport of Blue Victor will do better to keep that seed. Enough late potatoes for our own need should be grown.

The county imports an average of 10 carloads of potatoes a year. This is not a large amount as about 50 additional acres on irrigated land would make up the deficit. The only close market available for late potatoes is Jackson County, which annually imports about 70 car loads. When planted on clover or alfalfa land potatoes should yield at least 200 bushels per

acre here. There is opportunity for a moderate increase of acreage. We do not believe that late potatoes should be grown for shipping to outside markets except Jackson County.

#### 4. **Potato Grading Law.**

We endorse the state potato grading law.

### VI. GENERAL CROP RECOMMENDATIONS

#### 1. **Home-Grown Feeds Cheapest.**

Home-grown feeds are nearly always cheaper than bought feeds. The county imports from \$75,000 to \$100,000 of feeds annually.

#### 2. **Small Farms Need Other Income Than Farm Crops.**

Farms or less than 20 acres cannot be expected to succeed by growing farm crops of hay or grain. Smaller farms should grow truck crops or have some other source of income aside from general farm crops.

#### 3. **McNary-Haugen Bill Endorsed.**

We endorse the McNary-Haugen bill before Congress.

## Horticultural Committee Report

### I. IN GENERAL

#### 1. **Development Should Fit Supply and Demand.**

Horticulture in the State of Oregon has sustained many losses because, at the inception of the industry, plantings were made with but little thought or consideration of what was to be done with the product when it was grown. Plantings were guided more by fancy than by reason, with the results that sound economic axioms, as the law of supply and demand, were entirely overlooked. Among many, it was the consensus of opinion that the more pears, apples, prunes and loganberries that were planted, the greater would be our prosperity. It has been learned since, however, that after all the producer of any commodity is largely a servant of the consumer; that he must grow only what the consumer desires, and must produce only so much as the consumer can be induced to buy.

#### 2. **Increase in Commercial Production Heavy.**

Commercial fruit production in the United States has increased materially during recent years. For example, during 1917 the total carlot shipment of all fruits and competing vegetables was 275,231 cars, while in 1923 the total was 443,397 cars—an increase of over 61 per cent in seven years.

#### 3. **Fruit Growing is Josephine County's Biggest Industry.**

The value of the fruit crop in Josephine County has increased from about \$10,000 in 1880 to approximately \$270,000 in 1920 (U. S. census).

### II. PEAR PRODUCTION, MARKETING AND TRANSPORTATION

#### Production

#### 1. **United States and Pacific Coast Pear Production Has Greatly Increased In Recent Years.**

Figures show that during the past few years, the pear has been extensively planted in the Pacific Coast States and that commercial production has been materially increased. California alone now has 77,000 acres planted to pears, most of which are of the Bartlett variety. Oregon, at the present time, has approximately 12,000 acres of pears, a goodly portion of which is of winter varieties.

Nationally, there has been a reduction of approximately 26 per cent in the number of trees since 1919. In spite of this, however, the carlot shipment of pears has increased from 11,614 cars in 1917 to 17,600 cars in 1923, and indications are that the present acreage will yield considerable more than this when in full bearing. California, during recent years, has planted three times as many trees as are needed to keep her present acreage intact.

#### 2. **Early vs. Fall and Winter Varieties.**

Josephine County is adapted to the production of pears and in view of the facts mentioned above relative to the heavy plantings of Bartletts,

it would seem best to discontinue plantings of that variety and expand the fall and winter varieties.

#### Recommended Varieties and Facts Concerning Them.

**BARTLETTS**—Heavy and consistent bearer; very susceptible to blight, especially where growing rapidly. Harvest precedes other varieties and fits into harvesting schedule. Requires thinning. Requires two to three pickings. Market broadest. Price uncertain. Brings early returns which provides funds for harvest of following varieties. Advise against further planting, but the preserving of present acreage unless blight seriously effects yield. Where an orchard has a considerable acreage of young, non-bearing trees, recommend grafting part, if there is a gap in the harvesting program.

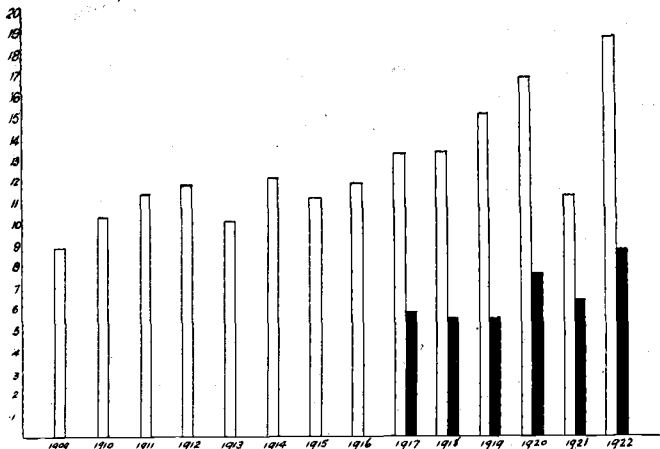
**HOWELL**—Follows closely after the Bartlett and precedes other varieties. Affords a continuity of harvesting. Yields well. Subject to sour-sap and susceptible to blight. Quality inferior to other late pears grown here. Market is narrow. Where producing well, do not advise grafting over, but do not recommend further planting.

**BOSC**—Reasonably consistent producer. Susceptible to blight and frost. Self fertile. Should be well russeted for best results. Proper ripening is a difficulty. Market returns the highest price of all pears. Market broad, but probably not possible to enlarge at present prices. Season intermediate. This district is considered especially adapted to this variety and has little competition to date. Most of the grafting over, and new plantings, in recent years, have been to this variety. Understand other sections are planting freely.

*Pear Production - U.S. - 1909 - 1922.*

*Total production - white, carlot shipments black*

*Figures refer to million bushels.*



*Based on U.S.D.A. Yearbook - 1922*

**D'ANJOU**—A well standardized variety. Tree grows to large size and produces heavily. Subject to non-setting and drop after setting which is said to be functional. Susceptible to blight in the crotches. Requires careful picking and handling to avoid bruising and stem punctures. Market broad and price satisfactory. Late keeper. Produced in Hood River, Colorado, Washington, and California, and to a limited extent, East. Should be in all commercial plantings.

**COMICE**—Produces poorly except in most favorable localities. Subject to non-setting and drop. Susceptible to blight. Fruit of highest quality. Requires special care in picking and handling to avoid bruising and stem punctures and may need a special package to reach market in satisfactory



condition. A large percentage of the acreage here has been grafted over. Market broad but price has receded from high level of ten years ago. Produced in California. Good keeper. Not recommended for planting.

**WINTER NELIS**—Reasonably consistent producer. Naturally small, but must be increased beyond the size usually produced here. Russett very desirable. Reputed to be reasonably free from blight, but where growing freely it blights badly. Subject to bloom wilt in localities. Market broad. Price satisfactory. Very late keeper. Grown in California and Washington. Should be in all commercial plantings where size can be attained.

### 3. Quality Is Important.

The matter of delivering a high class product to the consumer needs special attention. Cultural and handling practices must be shaped with this in view. It is especially important that to produce quality, these pears be properly grown, be harvested at the right time and be ripened under proper storage condition. More information is needed on correct handling practices for winter pears.

### 4. High Yields Per Acre Should Be Secured.

This conference has brought out the fact that our yield per acre is very low. In 1920 the yield per acre was 50 boxes. In 1921, 36.9 boxes; in 1922, 71.4 boxes. This shows a trend in the right direction. However, we are still far short of the ultimate production ideal. Every orchardist should strive to at least double our present average production. Your committee has taken cognizance of the large number of young bearing trees included in these averages.

Improved methods in handling our soils are greatly needed to make possible higher yields indicated.

### 5. Frost Protection Is Needed.

The marked increase in the production of pears in Josephine County the last two years, when contrasted with seasons in which we experienced heavy spring frosts, indicates very clearly the need of frost protection. Every grower should give this matter serious consideration.

### 6. Absentee Ownership Is Unsatisfactory.

Experience proves beyond a doubt that absentee ownership of pear orchards, and, for that matter, any fruit growing venture, has been unsatisfactory. Fruit growing, as practiced today, is a highly specialized business, which, at best, requires one's entire time and attention. Promotion schemes, wherein individuals are interested in exploitation rather than in the profits that may be derived from the fruit business itself, should be condemned. Experience proves that such ventures have been the cause of many failures in Josephine County.

There are quite a few tracts in the Rogue River Valley that come under the heading of "absentee ownership."

### 7. Rogue River Valley Should Be Protected From Pear Blight.

Inasmuch as pear blight is well known to every grower in the Rogue River Valley it is not our intention to enter into a lengthy discussion of it.

We feel, however, in view of the serious conditions that prevailed in the Sacramento Valley, of California, and in some sections of the Rogue River Valley last year, that a committee (preferably composed of growers who have had to combat this menace every year) be appointed to look into the legislation surrounding this feature and report what steps to take in this connection.

## MARKETING AND TRANSPORTATION

### 1. Centralized Packing.

Except under special conditions centralized packing is recommended.

### 2. Quality of Pack Is Important.

Every box placed in car for shipment should be so attractive as to be regarded as an advertisement package from the famous Rogue River Valley, and in keeping with the quality of fruit produced here.

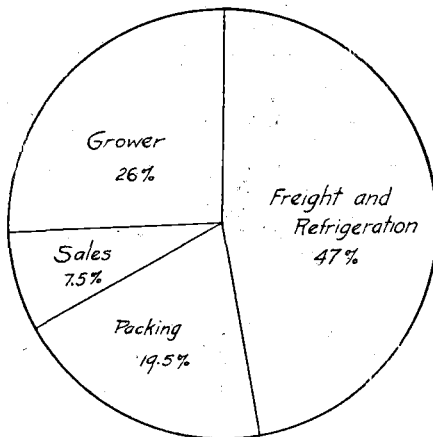
### 3. Large Problems Call for Coordinated Effort.

The three great states of California, Oregon and Washington should combine in an intense advertising campaign of fresh and processed pears. A local group should be authorized to take such steps as are necessary to

bring this about. Such action would lead to other coordinated effort on the part of every grower in these three states.

Following are a few of our problems:

- (a) Material reduction in the number of distributors.
- (b) Possibility of a Federal licensing system for distributing concerns.
- (c) Why west-bound refrigerator cars are not utilized to augment the revenue of the carriers, in order that the lowering of east-bound freight rates might be more easily obtained.
- (d) Collection and presentation of further data looking to a reduction in freight charges on Josephine County fruits.
- (e) A group of packing houses owned by the grower, looking toward the elimination of excessive packing costs.



*Where the Pear Consumer's Dollar Goes*

*Based on O.G.C.A. Rogue River Dist., Bartlett Pool for 1921.*

### III. APPLE PRODUCTION.

#### 1. Cost of Production Varies With Yield Per Acre.

Based on one acre out of a 20-acre unit of good, mature trees capable of producing annually 300 boxes or more with good yields and having first-class cultural methods, cost of production per acre of one season's crop without consideration of harvesting costs, is in the neighborhood of \$100.00. The approximate "tree-to-car" cost is \$225.00 per acre, and the refrigeration and transportation cost about \$275.00 per acre, on a 300-box crop.

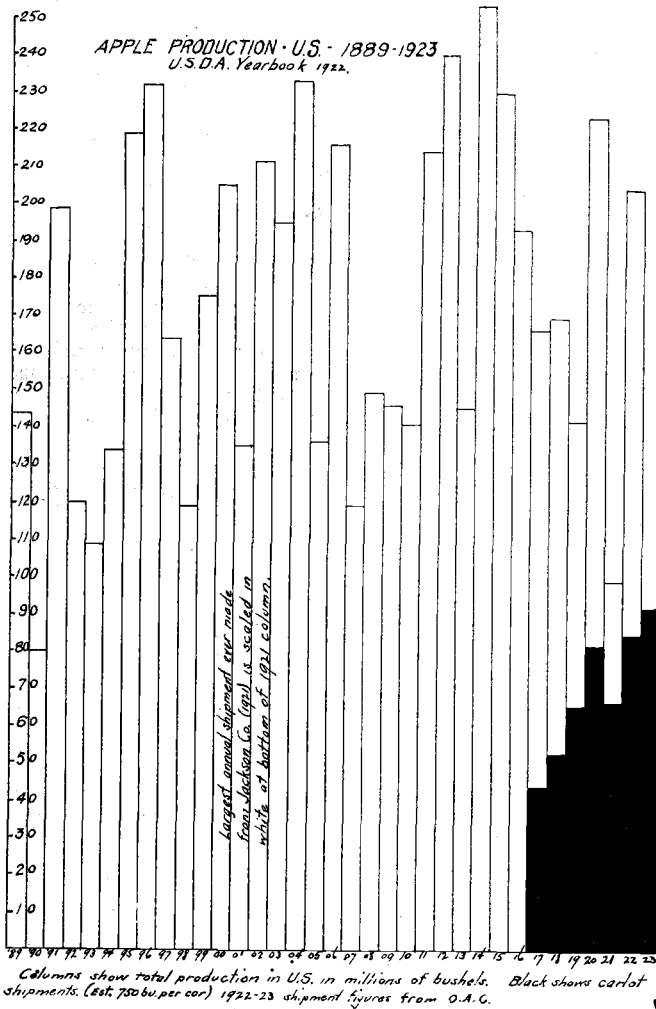
The average price received for Oregon apples from 1918 to 1922, inclusive, was about \$1.17. This average is figured for all apples sold throughout the state. According to the above figures, then, the orchard producing approximately 300 packed boxes, or more, during this period made some profit.

Due to the fact that Josephine County produces a large percentage of commercial apples it might be reasonable to assume that the average for this valley was somewhat over the figure \$1.17.

It is apparent that any orchard producing, say, below 250 packed boxes to the acre during this period did not pay total expenses.

#### 2. Price Outlook for Next Few Years is Encouraging.

In an endeavor to arrive at an estimate of a probable price that may be received over, say a period of the next seven years, a general study has been made of apple production throughout the United States in relation to price.



Total production for the United States from 1890 to the present time roughly shows three periods of over-production centering in the years 1895, 1904, and 1914. Two periods of under-production are shown, centering at approximately 1900 and 1910. A study of price in relation to production shows that practically without exception over this entire period prices have been high when production was low and correspondingly low when production was high.

These periods of over-production and under-production have lasted five years each, or a complete cycle every ten years. The figures also show that in the last several years there has been a decline in total production, exclusive of seasonal variations and other unusual conditions.

It would seem, therefore, that if we can estimate that the period of the next seven years is going to be one of under-production we may assume that it will be one of comparatively good prices. For the last two years both the east and the west have had good crops resulting in above average production. This has caused prices to be so low that many orchards are being neglected or are being pulled out and there is practically no

planting. This would seem to accentuate the period of under-production, which we estimate is soon to come.

Roughly, then, the conclusion of your committee is that apple crops of good tonnage and fair quality will probably show a good margin of profit over the period from 1924 to 1931.

**3. Favorable Price Differential May Be Diminished.**

We have made money in the past through great care in grading and the use of the box as a container. The more progressive sections of the east are adopting these two practices and this, it would seem, will diminish our price differential in the eastern markets. From the present point of view it seems problematical that this district is particularly suited for apple production. In order to reach sea ports we have a very heavy local freight charge, which is not borne by the districts to the north of us. Then, too, in order to compete with eastern apples we have also a heavy freight differential.

**4. Bulk Shipments Not Practical.**

The movement of apples in bulk to the east, thereby eliminating the major portion of our packing costs seems to be unworthy of consideration, in view of the facts set forth in the preceding paragraph. Should we be able to arrange to sell our bulk apples to the canneries or dryers at a net price to the growers of, say, \$25.00 a ton, there is little question that some growers would find the business profitable. With the tremendous tonnage in the northwest it seems unlikely that this avenue of disposal will ever prove adequate.

**5. Top Working Not a Good Practice.**

Varieties of apples which have been found of commercial importance and value here are: Newtons, Winter Banana, Jonathan, Delicious and Wine-sap.

The practice of top working old trees rarely gives satisfactory results. By the time new varieties come into full bearing we will probably be in the midst of or approaching another period of over-production.

**6. Cultural Practices Must Be Good.**

In such a highly competitive game as the apple industry a grower, to be at all successful, must practice most careful cultural methods, using every endeavor to get the maximum yield of clean fruit of first class quality.

**7. Pull Out Orchards That Can't Produce 300 Boxes Per Acre.**

Orchards not having the possible producing ability equal to 300 packed boxes per acre should be pulled out. This would include all orchards of inferior and undesirable varieties as well as orchards planted upon unsuitable soils.

## Report of Small Fruits and Vegetable Crops Committee

The recommendations of this committee, as given in succeeding paragraphs, were approved by the conference.

### I. GENERAL

**1. Berry and Vegetable Growers Association.**

Every grower should be fully aware of the necessity and value of standardizing the quality of fresh shipments of strawberries, and we therefore recommend that an association of berry and vegetable crop growers be formed to standardize the quality of small fruits and vegetables produced so that the high quality of Josephine County products now established may be maintained.

We believe that such an association will function to protect those growers who are endeavoring to maintain a uniform and high grade and pack of their berries and vegetables, to the extent that fair, uniform prices may prevail. We urge all growers of these products in Josephine County to become members of this association so that they may thus be mutually assisted

in receiving higher returns from the growing of berries and vegetables. All berries shipped by growers of the association should bear the name of such grower as a guarantee of quality of the goods and as a matter of protection for the buyer.

## II. SMALL FRUITS

### Strawberries

#### 1. Increase Acreage to Make Possible Car Lot Shipments.

Josephine County has the potential possibilities of growing strawberries of the finest quality and of extreme earliness. At the present time they are not produced in sufficient quantities to take care of the local and shipping demand.

It is our recommendation that the acreage of strawberries be so increased that there will be a sufficient supply for carlot shipments. We recommend as varieties for this purpose the Gold Dollar, and for local shipments Marshall, and third New Oregon. We suggest that no varieties be grown for fresh shipment other than the varieties named and we recommend the elimination of undesirable strawberry varieties which may jeopardize the standardization of future berry shipments made from this county.

#### 2. Grades Established for Shipping Berries.

We wish to recommend the following specifications for No. 1 grade shipping strawberries: Minimum size,  $\frac{3}{4}$  inch, berries must be sound, of good appearance, at least  $\frac{3}{4}$  ripe with short stems. A second grade shall consist of sound berries of good appearance that are  $\frac{3}{4}$  ripe of a size smaller than the requirement for the No. 1 grade.

Several growers have successfully produced and marketed their berries while others have not been so successful in their marketing. The reason for this unsuccessful marketing has been in the lack of proper grading of the berries. This is of extreme importance in offering these berries on the market.

We endorse the use of the 12-ounce cup for the 15-cup crate and suggest that this style of crate be uniformly used throughout the county in order to standardize the crate prices.

#### 3. Try Out Varieties for Canning.

In view of the possible location of a cannery in the county at some future time we recommend that canning varieties of strawberries, particularly the Ettersburg No. 121, be tried out on a small scale so that those varieties doing best may be more widely planted as markets demand.

### Raspberries

#### 1. Increase Cuthbert Acreage.

It is the sense of this group that there be a sufficient increase in plantings of Cuthbert raspberries to take care of existing local and shipping market demands, that the 8-ounce cup in a 15-cup crate be used for marketing this berry, and that sound berries in good order and appearance only be shipped.

### Miscellaneous Berries

#### 1. Limit Miscellaneous Berries to Available Markets.

It is our recommendation that other berries, such as blackberries, gooseberries, and currants, be limited in acreage to the extent of supplying the demand of the county markets available and such others as are open to take care of these berries. We do not recommend any widespread planting of any of the above-named berries.

## III. VEGETABLE CROPS

### Asparagus

1. The county should provide all the asparagus needed by its various markets and for nearby shipments.

2. Plant one-year-old roots of the Martha Washington variety.

3. Sales to be made on basis of one pound bunch, graded according to rules of the berry and vegetable growers' association, and bearing the association trade mark.

### String Beans

1. Since no cannery is yet established in the county, acreage should be governed by demand of local and local shipping market requirements.
2. Plant varieties selected from: Stringless Green Pod, Stringless Refugee, Kentucky Wonder and Oregon Giant.
3. All beans that are shipped should be packed in containers that are plainly stamped as to net contents of the package and should be sold on the pound basis.

### Broccoli

1. Plant on good soil up to 50 or 60 acres of broccoli in order to make possible loading of cars for distant shipment. This county can produce excellent broccoli.
2. No grower should plant more than five acres. Plantings should be made on soil which has received good farm practice in previous years. First class bench land previously well fertilized and grown to vetch and rye is preferred.
3. Dairymen might well consider trying a few acres for shipping. The waste from broccoli makes excellent food for cows.

### Bunch Crops.

All vegetable growers producing such crops as beets, carrots, radishes, etc., should be governed by the grades, standards and methods of preparation for marketing as contained in the complete marketing standard on file in the Josephine County Agent's office, to the end that there be a standardized marketing of these crops for the local markets and for shipping.

### Lettuce

This vegetable is growing in importance as a market crop, and its present rate of consumption by the general public is increasing. We recommend the growing of lettuce in the county to the extent that as far as possible throughout the year the nearby market demands be supplied by local growers. We recommend the variety New York for spring and fall and Salamander for summer use.

### Celery

But little celery is now produced in the county and we believe that under suitable conditions fine celery can be produced for local marketing from August to December. We recommend trial plantings on a small scale on good land of varieties which are being submitted for trial by the Oregon Experiment Station.

### Tomatoes

In view of the earliness of tomato ripening in this county plantings should be made of the earliest possible ripening varieties. Earliana, Red Head, Bonny Best varieties are recommended for general marketing.

### Greenhouse Crops

The production of greenhouse crops such as tomatoes, cucumbers and such other crops as may be in demand, should be produced for the markets now desiring this high quality produce and for which a good price is available. We wish to go on record favoring this enterprise as one which will increase the value of vegetable crops now grown in the county.

### Miscellaneous Vegetables

For other vegetables not herein mentioned, varieties and standards of grading and marketing should be adopted according to the report now filed in the county agent's office. That report is not herewith given in order to eliminate an undue amount of detail.

# Report of the Grape Committee

The following was approved by the conference

## 1. Increased Plantings.

We recommend that in spite of the increased plantings in California of the table grape, that plantings be increased slowly on the better locations, because of the superior quality of the locally grown grape, especially the Flame Tokay, with which we have successfully competed in many markets in the past.

## 2. Proper Locations.

The matter of securing the proper location for a vineyard is highly important, and we recommend south and west exposures for most cases with some slope to provide air drainage, although favorable elevation and protection from the early morning sun and northerly winds modify the desirability of the slope to a certain extent. As a guide the following information is given:

a. **Soil**—Most of the soils of the county, that fill the other needs are suitable for grape culture, although the red hill or bench lands are the main ones that the crop is now growing on. Hard-pan in the soil is very undesirable. Reference should be made to the U. S. Soil Survey of Josephine County for information as to the chemical content of the various soils.

b. **Soil Depth**—This is one of the most important points, as the grape crop is largely raised on non-irrigated land and the soil must have sufficient depth to hold water enough to mature the crop. To mature a successful crop requires about 16 acre inches of water and as for all practical purposes there is no rainfall during the growing season, this entire amount must be stored in the soil. In the average Josephine County soil this means from 10 to 12 feet of soil depth. This does not all need to be of the surface soil type, successful vineyards being grown on land with surface soil three to five feet deep, and the balance of it of a penetrable nature.

c. **Drainage, Soil and Air**—Good soil drainage is essential to proper growth of the vine and maturing of the crop. Air drainage to give freedom of frost is also essential.

d. **Elevation**—Minimum elevation for commercial vineyards. 1200 feet; maximum elevation, unknown, but not probably over 1700 to 1800 feet.

c. **Exposure**—Southerly or westerly slope.

## 3. Improper Locations.

Locations of land that do not fill the above specifications are not to be recommended.

## 4. Varieties.

Present plantings are about 80 per cent of the Flame Tokay variety and 15 per cent are of the Malaga variety. There are many other kinds grown in a small way which include: Black Price or Rose of Peru, Black Muscat, Thompson Seedless, Conichon, Dattier De Beyreuth, Emperor, and practically all of the American varieties, but these varieties are not recommended for commercial plantings. Expansion of plantings should be largely on the Flame Tokay and Malaga.

## 5. Distance to Plant.

Most of the present vineyards are set 9x9 feet, which makes approximately 540 vines per acre, but we recommend a fewer number of vines and increasing the distance of planting to 12x12 feet or 10x14 feet.

## 6. Life of Vineyard.

The oldest commercial vineyards in Josephine County is now 38 years old, and since no vineyards in the county have become depleted on account of age, the average life is not determined.

## 7. Age at Bearing.

The average time required to bring a vineyard into commercial bearing is five years.

## 8. Time and Costs of Operations.

a. **Pruning**—Pruning may be done at any time during the dormant season, although the earlier it is done after December 1st the better for the general vigor of the vine, and the later the pruning is done the more effect it has on holding the vine back in the spring. The differential style of pruning to increase vigor is recommended, as is the double pruning system where there is danger of frost. Costs, \$5 to \$10 per acre.

b. **Cultivation**—It is necessary to cover the vineyard from six to ten times, depending on the season. The main object should be to keep a mulch to prevent evaporation and growth of weeds. Average costs of cultivation is about \$15.00 per acre.

c. **Thinning**—This is not a general practice, but it is increasing in favor very rapidly, small demonstration plots giving very favorable results. We recommend carefully carried out trials this year.

d. **Sulphuring**—The application of sulphur dust as a prevention of mildew should be made from two to four times per year. This will cost from \$1.25 to \$2.50 per acre.

e. **Harvesting**—The harvesting operation is the most expensive, as considerable trimming or "snipping" of bundles is required, although proper thinning early in the season is going to reduce this work. Cost from vine to car, including lugs, fifty cents per box. Average yield, 200 boxes per acre.

## 9. Cost of Vineyard to Producing Age.

a. **Planting Costs**—Cost of vines and planting (not including any land clearing) is on the average about \$51.75 per acre.

b. **Staking and Tying**—To properly train the young vines they must be staked and tied the first year at an average cost of \$27.75 per acre.

c. **Cultivating**—Cost of cultivation during the first four years is \$60.00.

d. **Pruning**—Cost of pruning for four years is \$20.00 per acre.

e. **Total Cost** of bringing vineyard into bearing on the average is \$107.75 per acre.

We recommend the cooperative methods in the production and marketing of grapes.

# Poultry Committee Report

## I. STATUS OF POULTRY INDUSTRY

The poultry industry of Josephine County is a valuable agricultural asset. According to the census report the value of chickens and eggs produced in the county in 1919 was \$73,830.00, as compared with \$49,285.00 in 1910. In value of chickens and eggs produced, this county ranks twenty-fifth in the State of Oregon. It produces a surplus of eggs that must be exported from the county. Facing this condition, the poultry interests of the county must consider now or later, the cooperative marketing of surplus products and any expansion of the industry must be along the lines of producing a product of exportable quality.

The poultry industry has suffered less, perhaps, in agricultural deflation than other lines. Its expansion should be encouraged in the county because conditions warrant it and a larger volume can be more economically marketed if done cooperatively.

The fact that poultry keeping has been a profitable crop during this period of deflation has resulted in many farmers rushing into the business without due knowledge of the many problems involved that are necessary to permanent financial success.

The poultry business is increasing rapidly, not only in Josephine County, but the state as a whole. It was therefore the work of this commodity group to make a study of the production and marketing conditions and to recommend a poultry program for Josephine County that will permit the permanent continuance and expansion of the industry along economic lines of production, marketing and management.



## II. RECOMMENDATIONS

The following was approved by the conference:

### 1. A Flock of 400 Laying Hens; Otherwise Just Enough to Supply the Home Table.

The poultry business is a technical one, and requires much regular detailed work and careful supervision. It is not presumable that every farmer or farm is adapted to successful poultry keeping. Small farm flocks, too small to be considered an important unit of farm work, usually suffer from poor management and neglect. Josephine County produces more eggs than can be consumed at home, which forces the issue of producing a high grade exportable quality. Eggs of this necessary quality will never be produced by the haphazardly managed, nondescript and ill-kept flocks. A drawback to the industry in the county is the fact that in the aggregate the greater volume is produced by the general farm flocks, rather than by the well-managed economical unit. The poultrymen assembled at this conference therefore specifically recommend to the general farmer, where adequate housing and management can be given, a side line unit flock of not less than 400 laying hens and pullets. A flock of this size commands respect, regular attention and returns a more profitable return per labor hour. A flock of this size further contributes to the ultimate solution of the marketing problem. For the farmers who are not interested to this extent, and for those who cannot pro-rate the necessary daily time, it is recommended that they keep only a sufficient number of hens to supply the needs of the home table.

### 2. Ten Acres Required for Each One Thousand Hens.

The greatest undermining factor of permanent poultry farming is the general lack of understanding upon the part of everyone relative to the amount of land necessary to commercial poultry keeping. Many established farms throughout the state and county, successful for a few years, have been compelled to close their doors and go out of business as a result of soil contamination. It is therefore strongly recommended by the poultrymen assembled that no one be influenced or even encouraged to engage in commercial poultry keeping on less than ten acres of systematically yarded, tillable soil for each one thousand hens. Commercial poultry keeping on one, two, and three acre tracts, where the 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 small acreage tracts as desirable units for permanent and successful intensified poultry farming.

Non-irrigated land is not recommended for poultry farming unless sufficient irrigated land is farmed in connection with it to supply an abundance of green feed the year around.

### 3. Chicks Must Be Produced on Disease-Free Soil.

The success of poultry keeping depends upon the ability of the producers to raise to maturity pullets that are healthy, vigorous, and free from intestinal parasites and inflammation. This can only be done through careful effort to produce chicks on disease-free soil and providing free range conditions for growing them to maturity. On farms desiring to build permanent brood houses, it is recommended that they be constructed in the center of a given area, so that the area may be divided into four yards; one yard to be used each year and then only until such time as they may be moved out on free range, as explained in Station Circular No. 54 of the Oregon Agricultural College. It is also recommended that the movable colony brooder house be used on farms wherever possible in accordance with the Oregon Agricultural College in Station Circular No. 52.

### 4. Kale and a Root Crop Should Be Grown for Green Feed.

Green, succulent feed is one of the four major classes of poultry feeds. Kale should be the main succulent feed. There are times in some winters, when it is frozen or made unfit for food. There are times in mid-winter when the supply of kale on some farms is very limited. It is therefore recommended that poultrymen protect the health, growth and production of their flocks against such disaster by growing a root crop to be used to supplement or to take the place of kale in emergencies. It is in connection

with the growing of this green feed that the recommendation as to necessity of irrigation was made in Section 2 of this report.

#### 5. Full Time State Veterinarian Urged for Poultry Disease Study.

One of the limiting factors of poultry production is the increase of poultry diseases. It is recommended that the conference endorse the action of the poultrymen assembled at the state economic conference at Corvallis, January 23 to 25, 1924, in asking the state to employ one veterinarian to devote full time to the investigation and study of poultry diseases and their prevention. Poultry raising in Oregon is a ten million dollar industry annually, and its magnitude and permanent security warrant at least a one-man study of its problems along this line.

#### 6. Fall and Winter Eggs Needed From Pullets.

It is recommended that chicks be hatched sufficiently early to be old enough to lay eggs during the fall and winter, when eggs are high in price. Poultry producers must have the benefit of the high price months in order to get more months of laying from the pullet before molting time as well as to secure the best average price per dozen for the year.

#### 7. A Uniform Lot of Chicks Simplifies Brooding and Management.

It is recommended that the poultry producers make the effort to secure all chicks for brooding purposes at one time because of the dangers underlying the attempt to brood together chicks of several different ages. In terms of results, financial, labor and permanency it is cheaper for the average producer to purchase, for example, 500 day-old chicks to secure 200 vigorous laying pullets, than to attempt to hatch this number at two or three hatchings from insufficient incubator capacity. A uniform lot simplifies the brooding, feeding, growing, housing and production problems and contributes largely towards a successful undertaking.

#### 8. Successful Operation Should Dictate Type of House.

Proper poultry houses are essential to successful poultry keeping. There is too great a tendency to construct houses along lines of individual hobbies rather than to construct poultry houses that through experimentation have proven successful. It is recommended, therefore, that producers desiring to construct new laying houses be guided by the plans recommended by the Oregon Agricultural College as fully explained in Station Circular No. 51.

#### 9. State Association Merits Support.

The poultrymen of Oregon in January organized an association to encourage attention along poultry lines; to secure the passage and enforcement of legislation which will protect and develop the poultry interest of the state, and to perform such other functions as will promote the welfare of the industry. The name of this organization is "Oregon Poultrymen's Association." It is therefore recommended that the Josephine County poultrymen and others interested support this organization.

#### 10. Marketing a Limiting Factor in Greater Production.

The poultry industry of Josephine County has reached the state of development where it is forced to recognize the critical situation of marketing its surplus product. It is useless at this time to encourage further production unless efforts are directed towards perfecting the present system of cooperative marketing.

The census figures relative to the poultry industry are not comparable to the present status inasmuch as a tremendous increase in poultry products has taken place since 1919. An example of this growth may well be shown by the cold storage situation in the city of Grants Pass for the past three years: 1921, 250 cases; 1922, 300 cases, and 1923, 950 cases. Actual express shipments out of Grants Pass for 1923 totalled 860 cases.

It is hereby recommended that the poultry producers of Southern Oregon expand the present cooperative marketing agencies, particularly the Southern Oregon Poultry Producers' Cooperative association now having its headquarters at Medford, into a territorial producers' cooperative organization with a volume necessary to properly distribute the overhead expenses.

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