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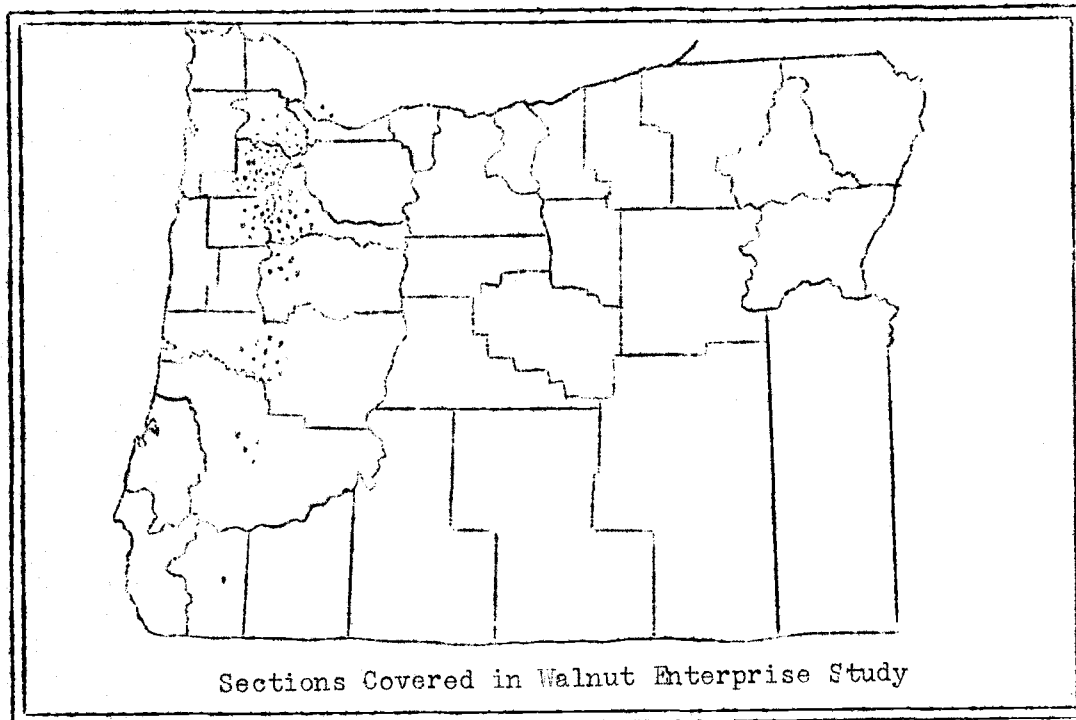
COST OF PRODUCING ENGLISH WALNUTS IN OREGON

(For the year 1931)

Progress Report No. 2

By

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Sections Covered in Walnut Enterprise Study

INTRODUCTION

The future of the English (Persian) walnut enterprise in Oregon, it is believed, depends largely on production costs. Steadily increasing production in both California and Oregon, due to young orchards reaching bearing age, indicates an approaching period of keen competition for markets. Should a permanent lower price level result from this competition, the only means of maintaining profits is to reduce production costs.

Information on walnut production costs under Oregon conditions has not heretofore been available. In the fall of 1929 the Oregon Experiment Station in cooperation with the U. S. Department of Agriculture commenced an economic study designed to supply such facts. The chief objectives of this study were four in number.

1. To determine the cost of producing walnuts.
2. To determine what factors have a major influence on the cost of producing walnuts.
3. To determine the cost of bringing a planting of walnuts to bearing age.
4. To determine the most economical methods of bringing a walnut planting to bearing age.

Field work on this project was commenced during the winter of 1929-1930. The field enumerators secured a total of 122 records covering the operation costs and management practices on bearing orchards for the 1929 crop year. Analysis of these records was commenced at once and in January, 1931, a progress report (Oregon Experiment Station Circular of Information No. 50) was issued. Included in this circular is a complete statement of the purpose and scope of this study which will not be repeated in this report.

The walnut crop the following year (1930) was almost a complete failure in many sections of Oregon. Since analysis of the 1929 records had shown yield to be of major importance in a cost reduction program, it was considered desirable to defer the second and final year's study of the bearing orchards until 1931, with the hope that yields would be more nearly normal and hence opportunity for analysis improved. Investigational work during the interim was shifted entirely to a study of the cost of growing a young orchard to bearing age. In November, 1931, Oregon Experiment Station Circular of Information No. 64 was issued which covered some of the chief preliminary findings of this phase of the study.

The report which follows herein deals chiefly with the more outstanding points of interest concerning bearing orchard costs for the 1931 crop year. The 1931 crop was the largest ever known in Oregon, and because of the high yields, costs were much lower than in 1929. However, the primary purpose of this study is to present the relationships between various factors and production costs, and there is no reason to assume that a high yield will fail to accurately portray such relationships.

All material presented in this report is preliminary and is subject to revision. Final analysis of this study is now being carried on and in the near future a complete and final report will be issued as an Experiment Station Bulletin.

THE WALNUT FARM ACREAGE

Although there are some exceptions to the average, a bearing walnut grove in Oregon is generally a unit in a diversified system of farming. The average farm with a bearing grove has about one-fourth of its total acreage and about 40% of its tilled acreage in bearing walnuts. (Table 1) In addition to the bearing orchard, another 7% of the total farm acreage, or 11% of the tilled land, is in young walnut orchard.

Table 1. UTILIZATION OF LAND ON WALNUT FARMS
(Average of 131 bearing orchard records taken in 1929-1931)*

Classification of Acreage	Average Acres Per Farm	Percentage of Total Acreage
Bearing walnut orchard	29.1	25.3
Non-bearing walnut orchard	8.0	7.0
Other fruit	13.0	11.3
Other crops	23.3	20.3
Pasture land and waste	41.6	36.1
TOTAL ACRES	115.0	100.0

*Records of ninety-seven orchards were taken for both 1929 and 1931, and 34 for only one of the two years.

INVESTMENT IN THE BEARING WALNUT ENTERPRISE

The total investment in the bearing walnut enterprise averaged $17,588 per farm, or $591 per acre for the two years of the study. Of this investment, 96.4% was for the bearing orchard which had an average value of $569 per acre. The per acre value of orchard on the same farms did not change during the period of the study. A slight difference in the average for 1929 as compared to 1931 is accounted for by the inclusion of new acreage to replace the acreage of cooperators dropping out of the study. This new acreage happened to have a lower per acre value than the acreage which it replaced.

Table 2. BEARING WALNUT INVESTMENT
Average of two years, 1929 and 1931

Investment Item	Investment Per Farm	Investment Per Acre	Percentage of Total Investment
Bearing orchard	$16,937	$569	96.4%
Tractor	138	5	.8
Other mach. & equip.	80	2	.4
Dryer (walnut use only)	392	13	2.2
Other buildings	41	2	.2
TOTAL	$17,588	$591	100.0%

3.

Due to the diversified nature of walnut farms, machinery and buildings are generally used jointly for several farm enterprises. The investment charge to bearing walnuts represents only that portion of the total use of these items that is actually concerned with the production of walnuts.

Except for the investment in the dryer, there was practically no difference in the building and machinery investment chargeable to bearing walnuts during the two years of the study. Most of the dryers on walnut farms are prune dryers and walnut drying is only a small part of their total use. Because of the heavy crop in 1931, the dryer investment charge against walnuts was slightly heavier than in 1929, for more tunnels were used for walnuts and the drying period was longer.

THE COST OF PRODUCING WALNUTS

The cost of producing the 1931 walnut crop on 3,609 acres of bearing orchard averaged $60.74 per acre, and 9.2¢ per pound. This large acreage which is composed of 116 groves, averaged 31.1 acres per grove, 20 trees to the acre, and 22 years of age. A total production of 2,369,591 pounds of nuts was harvested, the yield averaging 657 pounds of dried nuts per acre. The total production cost is distributed 38.1% to man and horse labor, 10% to general expense, 4.1% to depreciation of buildings and equipment, and 47.8% to interest on the bearing orchard. (Table 3).

LABOR

Man and horse labor is the second largest item of cost in walnut production. Man labor constitutes 97.5% of the total labor item, the remaining amount being for horse labor. About 12% of the man labor cost is for over-head management, while the remainder is direct labor used in actually performing various orchard operations. Of this direct labor, the hired labor cost 27.2¢ per hour, the operator valued his labor at 31.1¢ per hour, and the unpaid family labor was valued at 27.6¢ per hour. The bulk of the direct labor is hired or contracted as the operator or unpaid members of his family perform only 13% of the direct work. The high proportion of labor hired and contracted is due to the fact that three-fourths of the direct labor is for harvest operations. These operations must be performed as quickly as possible, first to avoid possible trouble from bad weather and secondly to allow the nuts to reach the eastern markets in time to be available for the Thanksgiving trade. Even a considerable share of the pre-harvest labor is hired, owing to a rather large proportion of non-operator owners.

The total hired and contract labor amounted to $17.20 per acre, of which $10.31 or about 60% was contracted. On some groves, contract labor was used for every operation in the year's labor program. Absentee owners in particular seem to favor this method of hiring and on several large blocks of platted 5 and 10 acre tracts, one or more individuals made a business of performing a standard set of cultural operations for a set price per acre. Contract labor on pre-harvest operations amounts to about 12% of the total contracted labor as compared to 78% on harvest operations. Of the pre-harvest contract labor, 87% is for plowing and cultivating, 5% is for spraying, 3% is for pruning, and the remaining 5% is for fertilizing and cover cropping. About one-fourth of the growers used contract labor for one or more of the pre-harvest orchard operations and about 6% of the growers contracted all of their pre-harvest work.

Of the harvest labor contracted, about one-third is for picking, one-third is for drying, and another third is for such items as hauling walnuts, washing walnuts, cutting and hauling wood, and propping. Contract picking seems to be gaining in favor from year to year, as 50% of the 1931 crop was so picked as compared to 35% of the 1929 crop.

Table 3. THE COST OF PRODUCING WALNUTS
(1931 Crop)

116 orchards, 3609 acres, producing 2,369,591 pounds of nuts.

Average acres bearing walnuts per farm 31.1; average yield per acre 657 pounds; average number of trees per acre 20; average age of trees 22 years;

	Cost per Acre	Cost Per Pound of Walnuts	Percentage of Total Cost
Hired man labor (25.3 hrs. per acre)	$6.89	1.0¢	11.3
Operator's direct labor (6.8 hrs. per acre)	2.12	.3	3.5
Overhead management (4.0 hrs. per acre)	2.74	.4	4.5
Unpaid family labor (1.9 hrs. per acre)	.52	.1	.8
Contract labor	10.31	1.6	17.0
TOTAL MAN LABOR	$22.58	3.4¢	37.1
Horse labor (4.4 hrs. per acre)	.59	.1	1.0
TOTAL LABOR	$23.17	3.5¢	38.1
Fertilizer	.17	*	.3
Cover crop seed	.54	.1	.9
Taxes	2.79	.4	4.6
Power	.08	*	.1
Tractor operation	1.03	.2	1.7
Spraying and dusting materials	.36	.1	.6
Rent of machinery	.14	*	.2
Use of auto or truck	.29	*	.5
Purchased dryer fuel	.25	*	.4
Miscellaneous	.42	.1	.7
TOTAL GENERAL EXPENSE	$6.07	.9¢	10.0
Depreciation on tractor	.92	.1	1.5
Depreciation on other mach. & equip.	.40	.1	.7
Depreciation on dryer	1.06	.2	1.8
Depreciation on other buildings	.09	*	.1
TOTAL DEPRECIATION	$2.47	.4¢	4.1
TOTAL OPERATION COSTS	$31.71	4.8¢	52.2
Interest on land	27.78	4.1	45.8
Interest on tractor	.24	.1	.4
Interest on other mach. & equip.	.14	*	.2
Interest on dryer	.81	.1	1.3
Interest on other buildings	.06	.1	.1
TOTAL INTEREST (5%)	$29.03	4.4¢	47.8
TOTAL COST (1931)	$60.74	9.2¢	100.0
TOTAL COST (1929)	$58.11	17.4¢	-

*Less than one-tenth of a cent.

The average cost for contract picking in 1931 was 92¢ per hundredweight (dry basis) or 65¢ per hundredweight (green basis). On a dry weight basis, this was about 25¢ per hundredweight less than picking hired by the hour. Contract drying cost averaged $26.00 per dry ton, or $19.20 per green ton. The contract dryers handled 40% of the 1931 crop and the remainder was dried by growers in their own or rented dryers.

GENERAL EXPENSE

A rather long list of miscellaneous expenditures such as taxes, spray and dust, fertilizer, cover crop seed, use of auto and truck, purchased fuel, and so forth, accounts for a total of 10% of the total 1931 production cost. The tax item, which every grower pays, averages larger than any of the other items in this group. Aside from taxes, no other item included in this group of costs was paid by every grower. For example, only 15% of the growers had expense for fertilizer, 52% used cover crop seed, 28% used spray or dusting materials, 41% had auto or truck expense, and 25% purchased dryer fuel. Since only part of the growers spent money for these items the average cost per acre, for all the acreage, is small. Although at present a very minor item, the cost of spray and dust materials promises to become of increasing importance because of the necessity for better control of walnut blight and aphis. However, if preliminary experimental findings continue to hold true, this item of expense will not become large enough to materially affect the cost per acre, and indications are that the degree of control may be such that the higher yields not only will offset the increased cost, but may actually lower present total cost per pound.

DEPRECIATION

The annual wear or depreciation charge on equipment accounts for 4.1% of the total cost of producing the 1931 walnut crop. Depreciation on machinery, buildings, and equipment used jointly by walnuts and other enterprises was charged to the bearing walnuts, according to the percentage of use by this enterprise.

OPERATING COSTS

In this study, the sum of the labor, general, and depreciation costs, which amounts to $31.71 per acre, and 4.3¢ per pound, has been designated as operating cost. This figure, when subtracted from the average field run price, received for the walnuts, gives the return on the capital invested in the enterprise.

INTEREST AND TOTAL COST

The largest item in the total cost of producing walnuts is the annual carrying cost of the investment itself. The high investment value of walnut groves makes this item large, and one which cannot be ignored if the normal earning power of money reasonably well invested is to be recognized. Particularly for those operators with a mortgage, the interest item is one of constant and serious importance, and it is believed that in any proper accounting of cost of production, the item of interest on investment must be considered. In the statement given in Table 3, interest at 5% on the bearing walnut investment has been added to the operating cost in order to arrive at the total cost of production. This interest amounts to $29.03 per acre, or 47.8% of the total production cost. Those who object to including interest as a production cost may omit this item, as it has been tabulated separately from the other items of cost (Table 3).

RETURNS FROM WALNUTS

The average price received by the grower for the 1931 walnut crop, orchard run, when dried and delivered at the packing plant, was 12.4¢ per pound. Deducting the operating cost of 4.8¢ per pound from this figure leaves a balance of 7.6¢ per pound as the return to the bearing walnut investment after meeting all cash and non-cash costs in full except interest. On a percentage basis, this amounted to a return of 8.6% on the total 1931 bearing walnut investment.

Returns may also be expressed in other ways. If the total cost of production, or 9.2¢ per pound, is deducted from the average price noted above, the difference, 3.2¢ per pound, is the profit above the total production cost. This profit of 3.2¢ per pound or $21.01 per acre is the amount the grower has left after meeting all costs, both cash and non-cash, and including 5% interest on his investment. Another and perhaps more expressive way of showing returns is to compute the labor and management return to the operator. If all costs per pound except the direct and overhead labor of the operator are deducted from the price, the balance left represents the pay the operator receives after meeting all cash and non-cash costs including 5% interest on the bearing walnut investment. In 1931, the operator's labor and management return amounted to $3.00 for each hour devoted to the bearing walnut enterprise. It should be remembered, however, that on the average the operator himself puts in only 7.86 hours per acre, so that under such conditions, a fairly large acreage is required to provide a living income. Again, if all costs per pound except interest and the direct and overhead labor of the operator are deducted from the price given above the balance left is the return to labor and investment. In 1931, the labor and investment return amounted to $52.65 per acre. In 1929 the labor and investment return was but $26.55 per acre, or approximately half of the 1931 return.

The walnut enterprise under present conditions when all other agricultural commodity prices are very low is showing attractive returns, due to relatively good prices for walnuts as compared with prices of other agricultural products. It should be remembered, however, that as competition increases from development into bearing of walnuts now planted, the price level is very likely to fall, and should this occur, only well-managed high-yielding groves will likely survive such prices.

THE 1931 AND THE 1929 PRODUCTION COST COMPARED

The total production cost for 1931 averaged $2.63 per acre more and 8.2¢ per pound less than the 1929 cost (Table 3). With the yield per acre almost twice the yield of 1929 and the consequent necessity for more labor in harvesting such a small difference in the per acre cost is somewhat surprising.

The chief reason for this similarity in per acre costs is that wages were lower in 1931 than in 1929, and these low wages largely offset the increased amount of harvesting labor. The average value of all direct labor, exclusive of any contract work, was 28¢ per hour in 1931 as compared to 36.2¢ per hour in 1929 or a reduction of 8.2¢ per hour. As a result of these lower wages, pre-harvest work, per acre, which in quantity was about the same for both years, cost slightly less in 1931 than in 1929, and harvesting labor, while costing more per acre because of the greater yield, was reduced from 3.56¢ per pound to 2.26¢ per pound.

Except for variations in the amount and cost of labor due to the larger crop, there was very little difference in the 1931 and 1929 production costs. Depreciation charges per acre were slightly higher in 1931, due to larger proportionate use of the farm machinery and buildings by the walnut enterprise, but this

difference as well as slight differences in miscellaneous costs and interest are too small to be of significance.

CASH COSTS

Of the 1931 total production cost, only $25.60 per acre, or 42.1%, is cash or out-of-pocket cost. The remaining portion of the total cost is for such items as the labor of the operator and unpaid members of his family, farm horse labor, depreciation, and interest.

Table 4. CASH AND NON-CASH COSTS OF PRODUCING WALNUTS
(1931 Crop)

Cost Item	Cash Cost per Acre	Percentage of Total Cost	Non-Cash Cost Per Acre	Percentage of Total Cost
Hired and contract labor	$17.20	28.3%	-	-
Direct labor of operator & family	-	-	2.64	4.3
Overhead labor (hired manager or operator)	2.25	3.7	.49	.8
TOTAL MAN LABOR	$19.45	32.0	$3.13	5.1
Horse labor	.08	.1	.51	.9
TOTAL LABOR	$19.53	32.1	$3.64	6.0
Taxes	2.79	4.6	-	-
Tractor Operation	1.03	1.7	-	-
Fertilizer	.17	.3	-	-
Cover crop seed	.54	.9	-	-
Spray and dusting materials	.36	.6	-	-
Other miscellaneous costs	1.18	1.9	-	-
TOTAL GENERAL EXPENSE	$6.07	10.0	-	-
DEPRECIATION	-	-	$2.47	4.1
INTEREST (5%)	-	-	$29.03	47.8
TOTAL PER ACRE	$25.60	42.1%	$35.14	57.9%
TOTAL PER POUND (1931)	3.9¢	-	5.3¢	-
TOTAL PER POUND (1929)	6.4¢	-	11.0¢	-

Any segregation of costs into cash and non-cash groups is more or less arbitrary. Some costs such as taxes, materials, and hired or contract labor are definitely cash costs. They are the costs the producer must pay in cash each year. The so-called non-cash cost, on the other hand, could really be termed deferred costs for in any one year or perhaps for several years, part or all of these costs may be "put off" for future payment. Some of these costs such as replace machinery may be deferred for a long time, others such as capital earnings, or operator's wages with which to buy food, clothing, and repairs on the family car, must be met sooner. Eventually, if the farmer continues in business, all of these costs must be met in one way or another.

The average cash cost of producing walnuts in Oregon is very low. With

the good yields of 1931, the average cash cost was but 3.9¢ per pound, and even with the low yields of 1929, the cash cost amounted to only 6.4¢ per pound. Prices can reach an extremely low level before the average Oregon grower will be unable to meet his cash costs, at least.

VARIATION IN PRODUCTION COSTS

Individual orchards were found to differ widely in their production costs, but on the bulk of the orchards, the costs did not vary greatly from the average. Extremes in production cost were from 4.1¢ per pound for the lowest cost orchard to 54.1¢ per pound for the highest cost orchard. For more than half of the orchards, production costs were within a spread of 2¢ above or below the average cost.

Table 5. VARIATIONS IN COSTS OF PRODUCING WALNUTS
(1931 Crop)

Variation in Cost Per Pound	Average Cost Per Pound	Number of Farms	Percentage of Total Farms	Cumulative Percentage of Total Farms	Acres Bearing	Per Cent of Total Acreage	Cash Cost Per Pound
Below 5 cents	4.4¢	4	3.4	3.4	39.5	1.1	2.0¢
5 to 7 cents	6.3	19	16.4	19.8	366.5	10.2	2.6
7 to 9 cents	8.0	36	31.0	50.8	825.5	22.9	3.4
9 to 11 cents	10.1	30	25.9	76.7	1316.0	36.5	4.3
11 to 13 cents	12.2	13	11.2	87.9	310.5	8.5	4.6
13 to 15 cents	14.5	4	3.5	91.4	261.0	7.2	7.4
15 cents and up	18.7	10	8.6	100.0	490.0	13.5	7.3
TOTAL	9.2¢	116	100.0%	-	3609.0	-	3.9¢

Approximately half of the orchard operators produced walnuts at less than average cost. At the top of this low cost group were four orchard, or 3.4% of the total group, with average costs of only 4.4¢ per pound. While this group is small it is not too small to be indicative of the possibilities for very low walnut costs. By adding to this small group the next group shown in Table 5, a total of 23 orchards, or about 20% of all the surveyed orchards, are accounted for. The average cost of this large group, one-fifth of all the orchards in the study, was only 6.0¢ per pound. Here is proof that low costs not only may be attained, but are actually being attained by a large group of Oregon walnut growers.

As contrasted with the fine showing of the 20% low cost orchards, about 12% of the surveyed orchards had very high costs, ranging from 13¢ up to 54.1¢ per pound and averaging 16.3¢ per pound. Another 11% had costs between 11¢ and 13¢ per pound which, although not extremely high, are reaching a danger point, if profits above total cost are to be shown.

How can growers continue operation of these high cost orchards? Table 5 shows the cash cost for each of the cost groups. While the highest cost orchards are not making a profit over total costs, they have so far been able to meet their cash costs. The spread between these cash costs and the selling price plus some income from other enterprises has enabled these high cost orchards to continue business. Should poor crops and lower prices occur for a few seasons, continued operation might become very difficult if not impossible.

Why are some walnut groves operated at such low cost, while others are operated at such high cost? When one-fifth of the orchards are operated at a cost of 6.0¢ per pound, while another fifth at the other end of the picture are operated at an average cost of 16.3¢, there must be some very definite reasons for such wide differences. The major purpose of this study is to find as many of the major and minor reasons for these cost differences as possible. In the final report of this study, a complete analysis of these factors will be presented, but in this report, discussion will be limited to the one outstanding factor--yield per acre.

THE EFFECT OF YIELD PER ACRE ON PRODUCTION COSTS

The outstanding factor affecting production cost per pound is the yield per acre. From year to year on the same orchard, many costs such as taxes, interest, depreciation, and pre-harvest labor amount to about the same per acre regardless of the crop harvested. With large crops, the cost of these items per pound of walnuts produced is materially reduced. This is well illustrated in Table 6 by cost comparisons for the same farms in 1931 and in 1929. In this instance, nature, rather than man-controlled practices, is chiefly responsible for the greater yields and lower costs in 1931, but regardless of the cause of the better yields, the effect on cost is much the same.

Table 6. THE EFFECT OF YIELD PER ACRE ON WALNUT
PRODUCTION COST (1929 and 1931 crops)

Yield Per Acre 1931 (pounds)	No. of Orchards	Ave. Cost Per Acre	Ave. Yield Per Acre	Ave. Cost Per Pound	Same orchards, 1929	
					Average Yield Per Acre	Average Cost Per Pound
Below 400 lbs.	17	$33.94	254 lbs.	13.4¢	145 lbs.	22.9¢
400-799 lbs.	46	62.14	630	9.9	342	17.4
800-1199 lbs.	31	85.01	1002	8.5	538	15.6
1200-1599 lbs.	12	101.52	1391	7.3	758	14.8
1600 lbs. and over	10	106.35	1849	5.8	873	11.6
ALL ORCHARDS	116	$60.74	657	9.2¢	344	16.9¢

The 1931 yield on individual orchards varied widely. A total of 17 orchards had yields of less than 400 pounds per acre and a total production cost of 13.4¢ per pound (Table 6). At the other extreme were 10 orchards with average yields of 1849 pounds per acre and a total production cost of 5.8¢ per pound.

The difference in the 1931 costs per pound for high yielding and low yielding orchards is chiefly due to two factors: first, as pointed out above, fixed and semi-fixed costs per acre are distributed over a larger number of pounds of walnuts; and secondly, the larger yields permitted greater harvesting efficiency, the harvesting cost being reduced from 3.4¢ per pound for the 17 lowest yielding orchards, to 2.0¢ per pound for the 10 highest yielding orchards.

The higher yielding orchards had higher costs per acre than the lower yielding orchards. This is due first to the increased labor cost for harvesting the larger yield and secondly to higher fixed and semi-fixed costs such as interest, depreciation, taxes and pre-harvest care. The higher cost per acre for fixed and semi-fixed costs on the higher yielding orchards is a natural condition for higher orchard values, higher taxes, more costly equipment, and more time spent in pre-harvest care of the orchard would be expected for the better orchards.

Even so, these items do increase the cost per acre, and therefore modify to a considerable extent the reduction in the cost per pound due to increased yields. In other words, on the same orchard where investment, depreciation and so forth are fairly constant, yield increases similar to those shown in Table 6 would be associated with even greater reductions in the cost per pound than Table 6 indicates.

What can be done to increase yields? This question as it affects agriculture in general has been the object of many years of study by agricultural investigators and yet there is a great deal to be done. Comparatively speaking, walnuts are one of the newer crops, and much less is known about their reactions to various conditions and practices than such crops as hay, grains, or potatoes. Observations made during this study indicate that proper planning of the orchard before planting so as to have the correct soil, location, variety, and planting distance are of primary importance in obtaining good yields. These factors as well as desirable production practices for bearing orchards are discussed at some length in Oregon Experiment Station Circular No. 91, "English Walnut Production in Oregon." In the final report on this study, such of these and other factors as our analysis can definitely clarify will be presented in detail.

INDIVIDUAL COST REPORT

The last page of this report is devoted to a table comparing costs for each individual orchard with costs for a group of orchards of similar yields. By comparing costs, shown in the column entitled YOUR FARM, with the average costs for a group of comparable yield, possibilities for cost reductions are shown. For example, if the harvest labor for YOUR FARM, with a yield of 1400 pounds per acre, is higher than for other farms with comparable yields, it is out of line and probably could be reduced. Likewise, pre-harvest cost, taxes, and so forth, may be compared. The red check indicates the proper column for comparison.

The column YOUR FARM is filled out in ink on the one copy of this report returned to the individual grower cooperating. This is the only instance in the entire study where the grower's name is ever used in connection with any of the facts or figures presented, and this confidential copy goes only to the grower concerned.

WALNUT PRODUCTION COST STUDY

Individual Cost Report for 1931 Crop
(Confidential)

Orchard of _____

Address _____

	COST PER ACRE FOR VARIOUS YIELDS					YOUR FARM
	Below 400# (17 Farms)	400# -800# (46 Farms)	800# -1200# (31 Farms)	1200# -1600# (12 Farms)	1600# and Over (10 Farms)	
Pre-Harvest Labor	$ 4.40	$ 4.55	$ 4.98	$ 6.65	$ 7.77	
Harvest Labor	8.00	14.47	21.56	28.93	32.78	
Overhead Management Labor	1.83	3.48	2.18	4.44	.32	
Horse Labor	.31	.66	.94	.43	.97	
TOTAL LABOR	$14.54	$23.16	$29.66	$40.45	$41.84	
Taxes	1.38	3.45	3.48	3.56	2.79	
Fertilizer and Cover Crop Seed	.20	.87	.82	1.18	2.11	
Other Miscellaneous Cost	1.33	2.63	3.53	5.03	3.90	
TOTAL GENERAL EXPENSE	$ 2.91	$ 6.96	$ 7.83	$ 9.77	$ 8.80	
TOTAL DEPRECIATION	$ .60	$ 2.94	$ 4.44	$ 2.70	$ 4.57	
TOTAL OPERATING COST	$18.05	$33.05	$41.93	$52.92	$55.21	
TOTAL INTEREST	$15.89	$29.09	$43.08	$48.60	$51.14	
TOTAL COST	$33.94	$62.14	$85.01	$101.52	$106.35	
Average Yield Per Acre	254 lbs.	630 lbs.	1002 lbs.	1391 lbs.	1849 lbs.	
Total Cost Per Pound	13.4¢	9.9¢	8.5¢	7.3¢	5.8¢	