

UNIVERSITY OF CALIFORNIA  
AGRICULTURAL EXTENSION SERVICE  
LAKE COUNTY

Farm Advisors Office, Kelseyville, Calif.  
July, 1955

WALNUT COST AVERAGES - LAKE COUNTY, 1954 - NON-IRRIGATED

Sample costs averaged from five mature orchards; yield records 1950 through 1954.

COST COMPARISONS: Cash costs of \$127.03 per acre are lower than irrigated orchards (\$195.15), but cost-per-100 lbs. of walnuts are nearly the same: \$12.70 non-irrigated; \$12.19 irrigated.

	Cash Costs/100 lbs.	Total All Costs, Int., Deprec.
Lake Co. non-irrig. 1000#/acre 1954	\$12.70	\$17.13
Lake Co. irrig. 1600#/acre 1954	12.19	17.65
Santa Clara Co. 2127#/acre 1954	12.80	19.20
San Benito Co. 2500#/acre 1954	9.68	12.58
Stanislaus Co. 1467#/acre 1953	8.04	14.14
Santa Barbara Co. 2000#/acre 1953	9.35	13.10

All the above apply to irrigated orchards except the first line. Yields and costs vary from year to year, and none of the above data should be taken as the rule in any one county.

VARIETIES: 1,100 acres Poe; 3,200 acres Franquette; 400 acres Mayette. "Frost-Free" period is about May 1 to October 15, requiring late blooming and early harvest variety. Hartley at present is the nearest to meeting this order for new acreage, and about equal acreage is also being top-worked to Franquette. Yield records of 20 selected strains of Mayette and Franquette and new hybrid varieties are continuing in the U. C. plot near Kelseyville. Several are very promising. Check with Farm Advisor.

SOIL: Necessary for a non-irrigated walnut orchard to be profitable is deep loamy soil with a capacity to hold our rainfall (25 inches or more) and give deep rooting and good drainage to reduce crown rot.

SLOPE: Non-irrigated orchards on south slopes are doing poorly. Select level or north-sloping land, as trees and soil do not get the heat and drying conditions.

FERTILIZERS: Commercial fertilizer containing 100 pounds of nitrogen per acre is recommended annually (November - February) for good yields. Ammonium sulphate at 500 pounds per acre will furnish this and also contains some sulfur which may be beneficial. It is less subject to leaching than ammonium nitrate which would be needed at 300 pounds per acre to furnish the nitrogen.

NUT QUALITY: Light colored meats, lack of mildew, and clean shells are the rule from Lake County because nuts must be shaken, picked, hulled and dehydrated as quickly as mature to avoid mid-October frosts.

PESTS AND DISEASES: Two aphid dustings (see cost data) are the only usual pest control practices needed. Blight is increasing in several areas, requiring coppers. "Crown rot", if present, requires digging holes around tree trunks to dry bark.

ROOTSTOCKS: Northern California black walnut is the most common. Several blocks and many scattered trees have "hybrid" rootstocks which are notable for their resistance to crown rot. They exceed the black stocks in vigor and mature tree size where seepage causes drainage problems and in gravelly or poor soils. Both types of rootstocks should be trained high for four years before grafting in deer areas.

Arthur Shultis, Extension Economist

John J. Smith, Farm Advisor

(OVER)

SAMPLE COSTS FOR WALNUTS - LAKE COUNTYNon-Irrigated Orchard with a Yield of 1000 Pounds per Acre.

	Man	20-30 hp	Pickup	Cost	Cost	
	labor	Tractor	or trk.	per	per	
	Hours per Acre			acre	Cwt.	
Pruning & brush disposal, 27 trees/acre	5.0	0.5		7.50		
Cultivation	4.0	3.0		12.00		
Application of fertilizer	0.5	0.3	0.1	1.60		
Dusting, twice for aphid	0.3	0.3		1.05		
Miscellaneous other work	3.0	0.5	0.5	6.25		
Subtotal cultural labor	12.8	4.6	0.6	28.40	2.84	
Shaking and some knocking	5.0	2.0		10.75	1.07	
Picking - by sack, etc. @ \$40 a dry ton				20.00	2.00	
Hauling, orchard to dehydrator	1.0		0.8	3.50	.35	
Custom hulling and dehydration @ \$35 a T				17.50	1.75	
Hauling to market, contract @ \$5 a ton				2.50	.25	
Total harvesting	6.0	2.0	0.8	54.25	5.42	
Total cultural & harvesting labor	18.8	6.6	1.4	82.65	8.26	
Fertilizer to give 100 lbs. nitrogen				15.00		
Dust - 70 pounds				9.00		
Miscellaneous other materials				1.00		
Total material cost				25.00	2.50	
General expense, estimated @ 5% of total labor & materials				5.38		
County taxes, \$205 value @ \$5.37				11.00		
Repairs other than truck and tractor				1.50		
Compensation and other insurance				1.50		
Total cash overhead cost				19.38	1.94	
Total cash and labor costs				127.03	12.70	
	Total cost	Orig. cost	Aver. invest	5% int.	Depreciation	
	40 A		Dollars per Acre			
Trees, 10-12 yrs. to bearing	\$20,000	\$500	\$250.00	\$12.50	\$12.50	
Building for equipment	1,600	40	20.00	1.00	1.00	
Disk, roller, and drag	640	16	8.00	.40	.80	
Duster	1,000	25	12.50	.63	2.00	
Miscel. other equipment	320	8	4.00	.20	.80	
Land	10,000	250	250.00	12.50		
Total investment	\$33,560	839	544.50			
Total depreciation					17.10	17.10 1.71
Total cash costs and depreciation						144.13 14.41
Total interest on investment				27.23		27.23 2.72
Total all costs of production						171.36 17.13

Costs above are figured at the following hourly rates: man labor \$1.25 and \$1.50; 20-30 hp track tractor \$2.00; pickup or truck \$2.50. The tractor and truck rates include depreciation, insurance, other overhead, repairs, and operating costs, based on use for only 40 acres.

Trees are estimated to have cost around \$500 an acre by the time they begin to pay at around 10 to 12 years of age. (This cost includes 5% interest on the investment in land, facilities and the net cost of the trees compounded annually during the waiting period.) Interest is charged above as 5% on half the original cost for depreciable items to arrive at an average for lifetime use. Trees are presumed to have a productive life of 40 years after coming in bearing, so depreciation is \$12.50 per acre per year.

If walnuts averaged 21 cents a pound, gross income of \$210 per acre would leave a management income of \$38.64 an acre. An owner out of debt would get also the \$27.23 interest for a capital and management income of \$65.87. A working operator could do about \$20 worth of the labor for a total net farm income of \$85.87 per acre or \$3,435 for the 40 acres.