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Agricultural Extension Service  
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## WALNUT PRODUCTION AND COSTS IN BUTTE COUNTY

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The cost study that follows is designed to provide interested persons with the costs involved in producing a crop of walnuts. As with most studies of this nature, some growers will spend a little less for a certain practice while others will spend more. This study is not an average of the costs but rather a sample of costs a good commercial grower might encounter.

### VARIETIES

Butte County, like many other walnut areas, had a good percentage of the acreage planted to the Hartley and Franquette varieties. Recently the early bearing, higher yielding varieties have been planted in greatly increased numbers. Examples of such varieties are the Ashley and various University of California selections such as 58-11, 53-113, and 59-129. The culture on these newer varieties is of concern as it differs greatly from that encountered in the old "standards."

### PRUNING

In the development of the tree, the severity of the pruning is much greater in the new varieties. Due to their growth habits, and tendency toward early bearing, good pruners usually remove 1/3 to 1/2 of the current season's growth. If this procedure is not followed, limbs are often too long for their diameter, and soon bend to the ground with the weight of walnuts they soon set. Other of these varieties will be greatly stunted due to the heavy set. For this reason the pruning costs could be greater than noted in the study if the new varieties are planted.

### SPRAYING

The spraying practice is the greatest concern to the walnut grower and is made no easier by the new early bearing varieties noted above. Early blooming varieties generally require two Walnut Blight sprays (applied at 1% and 10 to 20% bloom) and two Codling Moth sprays. Later blooming varieties such as the Hartley generally bloom during a more favorable period and require only one blight spray or dust. These later varieties also may require only one Codling Moth spray.

To control aphids, growers generally include an aphicide with the last blight spray. A second spray is often needed later in the season for proper control.

Walnut Husk Fly, while not a problem yet, could be in the future. A well-timed aphid spray will also control Husk Fly so it may not be too great a problem.

### FERTILIZING

Generally only nitrogen applications are required and are applied in amounts from 100 to 200 pounds of actual nitrogen per acre. A few orchards have responded to potash applications but the problem is definitely localized. Phosphorus applications may aid the cover crop but it is not necessary to apply this element for the tree's benefit. Many vigorous young varieties may well do without nitrogen until the "settle down" in their growth habits.

## Harvest

The harvest operations generally revolve around shaking the tree, raking the walnuts, picking them up and hulling and drying them. The cost to have these operations done is roughly \$20 for shaking, \$25 - \$30 for picking up, and \$30 per ton for hulling and drying. The figures in this study note the labor and fuel and repairs costs as if the grower owned the equipment. When the depreciation is added, the costs then approach those listed in this paragraph. The depreciation figures have been "lumped" under the equipment heading in the cost study.

## SUMMARY

As you will note, it is an expensive business and requires a great deal of capital to bring the crop to market. The out-of-pocket expenses are often reduced as the grower supplies his own labor which accounts for a considerable portion of the costs. Depreciation is often ignored by marginal growers which allows them to show a false profit until the equipment has to be replaced.

	<u>1966 WALNUT ACREAGE</u>		
	<u>Bearing</u>	<u>Non-bearing</u>	<u>Total</u>
English	5257	2967	8224
Black	162	15	177

Additional information available to walnut growers:

- Current pest and disease control program
- New Walnut Varieties for Butte County
- Updating Pollination Requirements
- Training Young Walnut Trees
- Chemical Weed Control in Walnuts
- Nutritional Deficiencies in California Walnuts

**SAMPLE COSTS TO PRODUCE WALNUTS**

Butte County - 1967

Labor: Common, \$1.65; Skilled, \$2 including social security and workmen's compensation.

Hartley walnuts 35' x 35' (75 trees/A)  
Yield: 2500 lbs./A

Operation	Hours Per Acre	Cash & Labor Cost Per Acre			Total
		Labor	Fuel and repairs	Materials Kind and Quantity Cost	
<b>Cultural costs:</b>					
Prune	10.0	16.50	1.00		\$17.50
Brush removal	2.0	4.00	2.00		6.00
Fertilize 1x (2 men)	.5	1.00	1.00	150# N @ 11¢	18.50
Spray (Blight 2x)	.7	1.40	2.45	+ BHC (1x)	21.55
Spray (Moth, aphid)	.5	1.00	1.75		13.25
Disk 6x	3.0	6.00	6.00		12.00
Irrigate 3x	3.5	5.80		Water 18" =	16.30
Misc.	3.0	4.95			4.95
<b>TOTAL CULTURAL COSTS</b>		<b>40.65</b>	<b>14.20</b>		<b>110.05</b>
<b>Harvest costs:</b>					
Float and roll	1.0	2.00	1.00		3.00
Shake	2.0	4.00	3.70		7.70
Sweep	1.5	3.00	1.10		4.10
Pickup	1.2	2.40	3.30		5.70
Haul	1.0	1.65	.50		2.15
Hull and dry				2½ Ton @ 30.00	37.50
<b>TOTAL HARVEST COSTS</b>		<b>13.05</b>	<b>9.60</b>		<b>60.15</b>
<b>Cash overhead</b>					
Misc., office, etc.				8.00	
Taxes				40.00	
<b>TOTAL CASH OVERHEAD</b>		<b>53.70</b>	<b>23.80</b>	<b>48.00</b>	<b>48.00</b>
<b>TOTAL CASH COST</b>					<b>218.20</b>
Management 5% of 2500# @ 22¢/lb.					27.50

INVESTMENT	Per Acre	Annual Cost		
		Depreciation	Interest	
Land	1250		75.00	
Trees	2000	50.00	60.00	
Irrigation system	100	6.70	3.00	
Buildings	75	1.90	2.25	
Equipment	550	66.00	16.50	
<b>Total</b>	<b>3975</b>	<b>124.60</b>	<b>156.75</b>	<b>281.35</b>

**TOTAL COST PER ACRE** \$527.05  
 Cost per Pound @ 2500 lb. yield .21