

COOPERATIVE EXTENSION
UNIVERSITY OF CALIFORNIA

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1983

SAMPLE PRODUCTION COSTS
COSTS OF PRODUCING O'HENRY PEACHES (LATE SEASON)
Tulare, Fresno & Kings Counties

by

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Costs given in this sample study are for those of a typical well managed orchard and are not intended to reflect an average of all orchards in Tulare, Fresno and Kings Counties.

This study is based upon a 10 acre block out of a 40 acre total fruit orchard. The same machinery, pump and some other costs are shared on the whole orchard.

Practices listed are based on those considered typical production procedures. Sample costs given for labor, materials, equipment and contract services are based on 1983 figures. Interest and depreciation are based upon the cost of new equipment and recent land purchases. Some costs or practices listed in this study may not be applicable to your situation. The study is intended as a guide only.

For explanation of calculations used for the study refer to the attached cost estimate assumptions or call Agriculture Economics Extension, University of California, Davis, California (916) 752-3563.

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10 acres of a 40 acre orchard - 108 trees/acre
 Furrow Irrigation: 44 ac.in. total 50% district water, 50% well water
 Land owner basis Yield: 1500 lugs/acre (23 lbs/lug)

Cost Estimate Assumptions:

1. Prune in January:
 - Labor - 30 min/tree x 108 trees/acre (÷ 60 min/hr) = 54 hrs/acre
 - 54 hrs/acre @ \$5.25/hr = \$283.50/acre
 - Brush shredding - contract \$10.00/acre
2. Pest control:
 - Jan: Basic zinc
 - 3 lb/100 gal of water x 5 (for 500 gal/acre) @ .60/lb = \$ 9.00/acre
 - Spray oil
 - 1 gal/100 gal of water x 5 (for 500 gal/acre) @ \$3.50/lb = 17.50/acre
 - Parathion (25wp)
 - 2 lb/100 gal of water x 5 (for 500 gal/acre) @ \$1.25/lb = 12.50/acre
 - Basic copper
 - 4 lb/100 gal of water x 5 (for 500 gal/acre) @ \$1.10/lb = 22.00/acre
 - Total dormant materials (1 application) \$61.00/acre
 - Dormant spray to control San Jose scale, peach twig borer,
 peach leaf curl, zinc deficiency and over wintering mite eggs.
 - May: Parathion (25wp) for Oriental Fruit Moth control
 - 2 lb/100 gal x 3 (for 300 gal/acre) @ \$1.25/lb = \$ 7.50/acre
 - Jul: Miticide 1 lb/acre @ \$20.00/lb
 - Total materials for 3 applications = \$88.50
 - Application - speed sprayer, 500 gal pulled by 65hp diesel tractor
 - 1 pass in orchard each application
3. Tie limbs in February:
 - Labor & materials 108 trees/acre @ \$.70/tree = \$75.60/acre
 - \$.30/tree for material
 - \$.40/tree - labor
4. Furrow in March, May, July:
 - Furrower, 2 shovel pulled by 65hp diesel tractor - 1 pass in orchard each month
 - March prior to frost
 - May after thinning
 - July weed control
5. Thin fruit in May
 - Labor - 56.2 hrs/acre @ \$5.25/hr = \$295.05/acre
6. Prop limbs in July:
 - 9 hrs/acre @ \$5.25/hour = \$47.25/acre
 - In inventory - 432 props, & limb supporters @ \$1.30 each - 10' long with metal hooks
7. Fertilize in May and September:
 - Materials May: .5 lbs N/tree x 108 trees/acre @ \$.34/lb = \$18.36/acre
 - Sept: .75 lbs N/tree x 108 trees/acre @ \$.34/lb = \$27.54/acre
 - Total materials \$46.90/acre
 - Application - contract \$3.50/acre x 2 applications = \$7.00/acre

8. Disc in May, July, October:

Offset disc pulled by 65hp diesel tractor - 1 pass in orchard each month

May before furrowing
 July before furrowing
 October before pruning

9. Irrigation:

Furrow irrigation system includes:

| | | |
|-----------------------------|-----------------------|--------------|
| Pipeline | \$300/acre x 40 acres | \$12,000 |
| Well, 120 ft, 10-12" casing | | <u>2,300</u> |
| | | \$14,300 |

Pump: 15hp, 70 ft lift, 450 gal/min = 1.0 ac.in./hr, \$7,900

Irrigation labor - 1 hr/application/acre

9 irrigations - 44 ac.in. total: 22 ac.in. district water
 22 ac.in. well water

District water cost: \$14.00/acre

First irrigation or two is well water, district water used until unavailable, then well water for balance of season.

| | | well | district |
|--------------|----|------------|-------------|
| April | 1x | 4.0 | |
| May | 1x | 4.0 | |
| June | 2x | | 11.0 |
| July | 2x | | 11.0 |
| August | 2x | 10.0 | |
| September | 1x | <u>4.0</u> | |
| Total ac.in. | | 22.0 | <u>22.0</u> |

An irrigation in March is possible for frost protection.

10. Weed control in May-September and December:

May-Sept: Labor (hoeing and touch up spraying) 1 hr/ac @ \$5.25/hr = \$5.25/acre
 Materials - additional spray = \$7.50/acre

December: Materials pre-emergence herbicide \$12.00/acre
 Application - contract \$7.00/acre

11. Misc. labor:

4 hrs/acre @ \$5.25/hr = \$21.00/acre
 1/3 hour charged each month for 12 months

12. Pickup: 25 miles/acre/month

13. Harvest in August:

Yield: 1500 packed lugs/acre (23 lbs/lug)

Price: \$5.50/lug (based on 1980 prices)

Contract harvest

Pick: \$.57/lug x 1500 lugs/acre = \$855/acre

\$20/bin and 35 carton packout

Haul: \$.10/lug x 1500 lugs/acre = \$150.00/acre

Misc. harvest labor: 4 hrs/ac @ \$5.25/hr = \$21.00/acre

Packing charges: \$2.35/lug

Selling charges: 10% of gross sales price = \$.55/lug

14. Labor rates include benefits:
 Machinery operators \$5.90/hr
 Irrigators \$5.90/hr
 Misc. Labor \$5.25/hr
15. Buildings and equipment :
 Farm shop 1500 sq. ft. @ \$12/sq.ft \$18,000
 Tools and shop equipment \$12,285
 Proportion allocation to Stone Fruit Orchard = 25% of above

16. Land owned:
 Land value \$5500/acre Land tax \$55.00/acre

17. Bookkeeping and misc. office: 2.5% of total variable costs

18. Machinery costs calculated by computer:

For self-propelled machinery and implements, the width, speed, field efficiency and number of passes in the orchard are all used in determining the number of hours necessary to complete an operation. Tractor hours are then calculated by taking into consideration all implements pulled.

Per hour cost of depreciation, interest, taxes, insurance, repairs, fuel, and lube are calculated by the computer using purchase price, annual hours of usage, years of life, etc. and this rate is multiplied by the total hours of usage for each machine and equipment.

19. Establishment costs per acre:
 20 year life of trees assumed.

Establishment costs were calculated in the four budgets for establishing a stone fruit orchard:

| | | |
|----------------------|--------------------|-----------------|
| Establishment year 1 | Budget Record #256 | \$2370.77 |
| year 2 | #257 | 1374.60 |
| year 3 | #258 | 1526.02 |
| year 4 | #259 | 3019.51 |
| - year 4 income | | <u>-1850.00</u> |
| | | \$6440.90 |

The establishment costs are divided by 20 years and the depreciation and interest costs are shown in each of the production years.

CASH FLOW & INVESTMENT SUMMARY FOR PEACHES

BUDGET RECORD NUMBER 239

COSTS OF PRODUCING O'HENRY PEACHES(LATE SEASON)
TULARE, FRESNO AND KINGS COUNTIES
J. LARUE, F. YOSHIKAWA, D. BIEDE AND K. KLOSKY

MONTHLY SUMMARY OF RECEIPTS AND EXPENSES

| CATEGORY | UNIT | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | TOTAL |
|------------------------|-------|--------|--------|-------|--------|--------|-------|--------|---------|-------|-------|-------|-------|---------|
| TOTAL RECEIPTS | \$/AC | | | | | | | | 250.00 | | | | | 250.00 |
| OPERATING EXPENSES | | | | | | | | | | | | | | |
| PEACHING | \$/AC | 283.50 | | | | | | | | | | | | 283.50 |
| BALSH BRSEEDING | \$/AC | 10.00 | | | | | | | | | | | | 10.00 |
| PEST - DORRANT | \$/AC | 61.00 | | | | | | | | | | | | 61.00 |
| TIE - MATLABOR | \$/AC | | 75.60 | | | | | | | | | | | 75.60 |
| THINNING | \$/AC | | | | 295.00 | | | | | | | | | 295.00 |
| PARATHION - GFA | \$/AC | | | | 7.50 | | | | | | | | | 7.50 |
| NITROGEN | \$/AC | | | | 10.36 | | | | | 27.54 | | | | 45.90 |
| CONTRACT H APPL. | \$/AC | | | | 3.50 | | | | | 3.50 | | | | 7.00 |
| DISTRICT WATER | \$/AC | | | | | | 7.00 | 7.00 | | | | | | 14.00 |
| WEED CONTROL | \$/AC | | | | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | | | | 12.75 |
| MITICIDE | \$/AC | | | | | | | 20.00 | | | | | | 20.00 |
| PROP | \$/AC | | | | | | | 47.25 | | | | | | 47.25 |
| PRE-EMERGE HERB | \$/AC | | | | | | | | | | | | 12.00 | 12.00 |
| CONTR. HERB APPL | \$/AC | | | | | | | | | | | | 7.00 | 7.00 |
| MISC. LABOR | \$/AC | 1.65 | 1.65 | 1.70 | 1.65 | 1.65 | 1.70 | 1.65 | 1.65 | 1.70 | 1.65 | 1.65 | 1.70 | 20.00 |
| CONTRACT PICK | \$/AC | | | | | | | | 355.00 | | | | | 355.00 |
| CONTRACT HAUL | \$/AC | | | | | | | | 150.00 | | | | | 150.00 |
| PACKING CHARGES | \$/AC | | | | | | | | 3525.00 | | | | | 3525.00 |
| SELLING CHARGES | \$/AC | | | | | | | | 825.00 | | | | | 825.00 |
| MISC HARV LABOR | \$/AC | | | | | | | | 20.00 | | | | | 20.00 |
| MACHINE LABOR COST | \$/AC | 10.49 | 8.85 | 12.94 | 8.85 | 19.04 | 8.85 | 19.04 | 8.85 | 8.85 | 13.31 | 8.85 | 8.85 | 136.74 |
| INTEREST ON OPER. CAP. | \$/AC | 29.99 | 6.41 | 1.49 | 1.35 | 12.58 | 0.91 | 1.42 | 0.62 | 8.06 | 3.18 | 1.91 | 3.42 | 70.75 |
| TRACTOR COST | \$/AC | 1.24 | | 3.10 | | 7.71 | | 7.71 | | | 3.38 | | | 23.14 |
| EQUIPMENT COST | \$/AC | 9.05 | 7.92 | 8.07 | 7.92 | 10.46 | 7.92 | 10.46 | 7.92 | 7.92 | 9.18 | 7.92 | 7.92 | 102.65 |
| BLDG OPER. COST | \$/AC | 0.43 | 0.43 | 0.43 | 0.43 | 0.43 | 0.43 | 0.43 | 0.43 | 0.43 | 0.43 | 0.43 | 0.43 | 5.10 |
| IRRIGATION COST | \$/AC | | | | 5.07 | 5.07 | | | 12.67 | 5.07 | | | | 27.88 |
| IRRIG LABOR COST | \$/AC | | | | 5.90 | 5.90 | 11.80 | 11.80 | 11.80 | 5.90 | | | | 53.10 |
| TOTAL EXPENSES | \$/AC | 407.35 | 100.86 | 27.72 | 31.16 | 389.80 | 41.15 | 129.31 | 5420.89 | 71.51 | 31.13 | 20.75 | 41.31 | 6712.95 |

MONTHLY IRRIGATION AND LABOR REQUIREMENTS

| | HR/AC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | TOTAL |
|----------------------|-------|------|------|------|------|------|------|------|-------|------|------|------|------|-------|
| MACHINE LABOR | HR/AC | 1.78 | 1.50 | 2.17 | 1.50 | 3.23 | 1.36 | 3.23 | 1.50 | 1.50 | 2.26 | 1.50 | 1.50 | 23.18 |
| IRRIGATION LABOR | HR/AC | | | | 1.00 | 1.00 | 2.00 | 2.00 | 2.00 | 1.00 | | | | 9.00 |
| IRRIG. WATER APPLIED | ACIN | | | | 4.00 | 4.00 | | | 10.00 | 4.00 | | | | 22.00 |

MACHINERY FIXED AND VARIABLE COSTS PER ACRE

| MACHINE | CODE | SIZE | PURCHASE PRICE | YEARS OWNED | HOURS USED | ANN. FIXED COST PER ACRE | | | VARIABLE COST PER ACRE | | | | | HRS PER ACRE |
|------------------|------|------|----------------|-------------|------------|--------------------------|--------|------|------------------------|-------|---------|-------|-------|--------------|
| | | | | | | DEPR. | INTER. | TAX | FUEL | LUBE | REPAIRS | TOTAL | | |
| TRACTOR 55HP | 4 | 65.0 | 20000. | 15. | 300. | 16.86 | 26.26 | 7.06 | 50.18 | 14.11 | 2.12 | 6.92 | 23.14 | 4.709 |
| PICKUP 1/2 TON | 14 | 0.5 | 10000. | 7. | 435. | 36.69 | 50.30 | 7.76 | 74.75 | 72.00 | 10.00 | 12.22 | 95.02 | 15.000 |
| IRRIG PUMP 15HP | 21 | 1.0 | 7900. | 25. | 6400. | 0.99 | 2.06 | 0.61 | 3.67 | 22.13 | 0.33 | 2.20 | 24.67 | 22.000 |
| FURROW IRRIG SYS | 53 | 1.0 | 14300. | 10. | 5000. | 4.43 | 5.71 | 1.42 | 11.55 | 0.00 | 0.06 | 3.15 | 3.22 | 22.000 |
| DISC-OFFSET | 78 | 0.3 | 4000. | 15. | 109. | 4.52 | 5.75 | 1.59 | 11.94 | 0.00 | 0.07 | 3.70 | 3.77 | 1.875 |
| SPD SPRTR 500 GA | 91 | 20.0 | 12500. | 15. | 80. | 6.47 | 8.24 | 2.42 | 17.13 | 0.00 | 0.07 | 3.34 | 3.41 | 0.688 |
| FURROWER 25NOVEL | 102 | 8.0 | 450. | 15. | 140. | 0.33 | 0.42 | 0.12 | 0.80 | 0.00 | 0.01 | 0.44 | 0.45 | 1.719 |
| FARA SHOP | 1 | | 4500. | 35. | | 11.57 | 26.41 | 4.50 | 42.48 | 4.50 | | 0.19 | 4.69 | |
| TOOLS-SHOP EQUIP | 4 | | 3071. | 15. | | 14.33 | 21.30 | 3.07 | 38.70 | 0.00 | | 0.41 | 0.41 | |
| PROPS 4LINE SUP | 72 | | 562. | 10. | | 5.62 | 3.00 | 0.56 | 9.17 | 0.00 | | 0.00 | 0.00 | |

MACHINERY & EQUIPMENT 7728.
INVESTMENT & COSTS PER ACRE
TOTAL INVESTMENT 77283.

BASED ON 10 ACRES OF A 40 ACRE ORCHARD - 108 TREES/ACRE
FURROW IRRIGATION: 44 AC. IN. TOTAL 30X DISTRICT WATER, 30X WELL WATER
LAND OWNER BASIS YIELD (500 LBS/ACRE) FOR 100 ACRES
DATE PRINTED: 02/28/83