Dr. Reikels
Dr. Ommrod

Production Analysis

TREE FRUIT (PEACH)

NURSERY

- Don Ziraldo
### Overhead (trucks, fringe benefits, utilities, etc.)

<table>
<thead>
<tr>
<th></th>
<th>Amount</th>
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<tbody>
<tr>
<td>Building</td>
<td>$1,376.00</td>
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<tr>
<td>Land; Interests</td>
<td>$2,700.00</td>
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<tr>
<td>Taxes</td>
<td>$530.00</td>
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<tr>
<td></td>
<td>$3,230.00</td>
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<tr>
<td>Depreciation</td>
<td>$2,470.00</td>
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<tr>
<td></td>
<td>$5,700.00</td>
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### Management Costs

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Manager</td>
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<tr>
<td>Part-time Secretary</td>
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<tr>
<td></td>
<td>$11,000.00</td>
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</tbody>
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Resources - Acres - No. Boston  
Selling  
Correlate time w/ chart.
Bud Grafted Seedlings

- general maintenance for this period of growth in order that tree attains salable size and is free of disease and trained properly.

Cut Wild Seedling Top

- wild seedling just above the graft is cut off in order to induce bud to develop.

6 women - 3½ days - $1.45 per hour - $255.20

Herbicide

Treflan is sprayed directly over budded stock and then incorporated with cultivator.

Tractor - $2.06
Labour $2.50
Sprayer $1.72
I. H. Cultivator $1.44
Labour $1.50
$9.22 / hour

Material (Treflan) $20.80

- while cultivating with I.H. Cub can be applying fertilizer (10-52-17) $238.00

Requires four hours $395.60

Irrigate

- considered as cost in wild seedlings $346.50

3 times in system
Remove Wild Suckers

- wild suckers which sprout up around the inserted bud must be removed

5 days - 6 women - $1.45 \hspace{1cm} $303.00

Cultivate

I. H. Cub. \hspace{1cm} $1.44

Labour \hspace{1cm} $2.50

3.94 per hour \hspace{1cm} $63.04

Two times in system - $126.08

Spray

- insecticide for oriental fruit moth must be sprayed

Tractor \hspace{1cm} $2.06

Operator \hspace{1cm} 2.50

Sprayer \hspace{1cm} \frac{3.48}{8.04} / hour

Material

Guthion - 400 gal

2.63/100 gal \hspace{1cm} $10.52

Requires three hours ($24.12) plus material

($10.52) - $34.64

Five times in system - $173.20

Spray (Tree Borer)

- Thiodan (Endosilphan) must be sprayed with a gun because it must be directed at the tree trunks.

Tractor \hspace{1cm} $2.06

Labour (oper) \hspace{1cm} 2.50

(2 hand guns) \hspace{1cm} 3.00

Sprayes \hspace{1cm} \frac{3.48}{14.04} / hour

$14.04 / hour
Material - Thiodan - $18.93 $2.63 / 100 gallons
Requires three hours - $42.12 - $61.05
Three times in system $183.15

Rouge Out Wild Seedlings
- seedling on which grafts did not take must be removed
because wild suckers which grow into tree size will be
difficult to distinguish from the grafts.
Two days - 6 women - $1.45 per hour $159.20

Rototill
-Trees become too large to cultivate with tractor and
must therefore be rototilled.
1 man - 1 1/2 days - $2.50 per hour
Rototiller - $7.62 per hour
Two times in system $242.88

Spray
-fungicide spray after leaves have fallen, to coat
leaf scars from fungicide infection.
Tractor $2.06
Labour 2.50
Sprayer $3.48
$8.04 per hour
Materials - Phaltan - $2.18 per 100 gallons
500 gallons - $10.90 plus $24.12 $35.02
Installing fence - $72.00
Wild Seedlings

Fertilize - Tractor and Spreader $4.56 per hour - $18.24
Fertilizer $156.00 $174.24
Plough - Tractor and Plough $5.37 per hour $64.49

Transparent Seedling From Seed Bed

- (Six women - Two digging seeds out of the seed bed and four planting them in rows.)
Fourteen days - $1.45 per hour - $162.40

Irrigation

- 5,500 feet of irrigation plus 75 h.p. self-propelled centrifugal pump.
- operating cost of machine per hour is $56.00 plus $2.50 per hour for gas plus .25¢ per hour for lubrication - $58.75
- requires two men two hours to move portable system - $8.00
however, supervision is taken care of either man working in the immediate vacinity. $115.50

Hand Hoe

- herbicides cannot be used because of tenderness of seedlings therefore hand hoeing is best.
Six women - 3 days - $1.45 per hour $219.78

Weeding

- removal of weed seedling
Six women - 1 day - $1.45 per hour $79.60

Cultivate

- I. H. Cub. Tractor $1.44
Labour (operator) $2.50 / hr.
Requires 16 hours - therefore $63.04
Fertilizer 156.00

Total - $219.04

Weeding - (same as above) 79.60
Irrigate - 115.50

Trimming
lower branches on seedlings must be removed to facilitate bud grafting

Six women - 3 days - $1.45 per hr. 219.78

Bud Grafting
done on piece-work basis, budder receives

2½ c / tree while tier receives 1½ c per tree

50,00 no of trees X 4c = $2,000.00

plus materials (knives, tying bands) = $298.00

Total - $2,298.00

Weeding - $67.00

Seed

Preparing Seedbed

- Land preparation $79.00

Fumigation (Custom) $150.00

$229.00 $502.80

Planting Seed:

- Seed 200 bu. $1.00 @ $200.00

Seeding (6 women) 73.80

$273.80
Digging of Saleable Stock

Removal of fence:
- Fence must be erected in order to keep out rodents during the winter. A high density planting of thousands of trees per acre can be literally wiped out by hungry rabbits during the winter months.

Cost of fence: $1,500.00

Posts: $1.15 - $250.00

(cost of posts and fence can be amortized over a five year period) therefore, cost $350.00 per annum

Removal costs - $72.00

Actual cost of removal - $422.00

Lift Trees:

Tractor - $2.06

Labour (oper) 2.50

Digger $5.28 per hour

Therefore, six days costs - $31.68, plus five men at $1.50 per hour

$360.00 Total - $31.68 + 360.00 = $391.68

Grade and Sort Stock

- Trees are graded to size: 11/16" in each respective variety
  With any diseased, 9/16" malformed or undersized
  trees being exposed of. 7/16"
  5/16"
Tied in bundles of five and labelled.

Twine $41.75
Tags 39.60
Labour (5 women) 290.00 $371.35

Land Preparation:

Tractor $2.06
Labour 2.50
Plough \( \frac{81}{5.37 \text{ per hour}} \)

Requires 18 hrs. $96.66
Discing and harrowing 132.00
Cover crop of Sudan grass: Seed 39.00
Sow 78.00

Mowing Sudan grass

Tractor $2.06
Labour 2.50
Mower \( \frac{2.76}{7.32 \text{ per hour}} \)

Two times, 8 hours each $117.12
Plough, disc and harrow in the fall $228.66
Fumigate $700.00

(OPERTATIONAL) Total Costs $16,757.90

Management Costs $11,000.00
Overhead 2,200.00
Fixed Costs 5,700.00

Operational costs (excluding overhead and fixed costs) 8,857.00
10% miscellaneous costs which were overlooked in operational costs $1,675.90

Total - $29,432.90

RETURNS FROM TREE SALES TO GROWERS AND WHOLESALE SALES TO RETAILERS:

Growers:

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Size</th>
<th>Price</th>
<th>Total</th>
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<tbody>
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<td>15,000</td>
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<td>$1.50</td>
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<tr>
<td>8,000</td>
<td>9/16&quot;</td>
<td>$1.40</td>
<td>1,200.00</td>
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<td>2,000</td>
<td>7/16&quot;</td>
<td>$1.20</td>
<td>2,400.00</td>
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<tr>
<td>1,000</td>
<td>5/16&quot;</td>
<td>$1.00</td>
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</table>

Total Sales

Wholesale:

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Size</th>
<th>Price</th>
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<tbody>
<tr>
<td>1,000</td>
<td>11/16&quot;</td>
<td>$1.40</td>
<td>1,400.00</td>
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Total Sales $38,500.00

Costs $29,432.90

Returns $38,500.00

Revenue: $10,932.90
ALTERNATIVES

Seeding seed in seed bed vs. seeding directly in the row

Transplanting from seed bed allows only those plants which have germinated to be transplanted in the row giving an even stand, as compared to seeding directly in the row which in some years may result in patch (empty spots in the row) rows. This type of stand results in uneven growth of plants, where there are very few trees in that particular part of the row, and undersized trees where the plants are crowded.

Herbicide vs. hand hoeing

In the seedlings there is no choice because any herbicide used to kill germinating seed will also kill germinating peach seeds. However, after grafted plants have become established a herbicide such as Dymid and Treflan may be used. This will not only cut down the cost of weeding but it will also reduce the amount of mechanical injury which may be incurred due to hoeing, which in peach may result in a canker infection.
Cutting of tops in Spring vs. Fall

If the tops were cut in the fall when there is more time available the buds may break before winter gives, in which case, they would be destroyed. Also, if one waits until spring, the buds which have not taken can easily be identified and those that are dead may be removed.

Spring digging vs. Fall

If trees are dug during the spring they will have undergone a complete maturity and also having undergone a full winter are generally more hardy. However, digging in the fall gives the nurseryman an exact count of saleable stock as well as a guarantee against any winter injury in the field.
References:

Mr. Barovich - Vineland Station Propagator, Vineland Station
Farm Business Management, O.D.A.F.
Farm Business Analysis Report, 1965, Niagara Peninsula Specialized Fruit Farm, The Extension Branch, Vineland Station.


American Nurserymen, June 1, 1970
Canadian Nurserymen, January, 1971