

STRAWBERRY NURSERY OPERATIONS

The strawberry nursery operations in Shasta County are a highly intensive crop enterprise concentrated on 360 acres (Agricultural Commissioner's Report - 1966). The average yield for that year was 330,000 plants per acre for the county. This compares to the year of 1961 with 314 acres and a yield of 275,000 plants per acre. The acreage planted to nurseries in Shasta County represents approximately two-thirds to three-quarters of the total plantings in California. This nursery activity, concentrated primarily in the upper portion of the Sacramento Valley, supports a \$40 to \$45 million dollar berry production industry in California. The risk in this industry is considered to be heavy. An examination of the cost data information on the attached sheet indicates the economic demands are high. Labor inputs are extensive (over 200 hours per acre) up to harvest.

This agricultural enterprise is a delicately balanced operation, occasioned by relatively small acreage, and the fact that well-managed nurseries are ordinarily producing high plant yields with a capability of meeting all berry producers' current needs in most years. In addition, some export orders are supplied from nurseries in the state. A certified plant foundation nursery is located in Shasta County. This operation involves the extra attention and costs necessary to provide the plant breeders with a continuing source of clean (pest and disease-free) plant materials.

Above it was noted that the risks are considered to be quite great in this crop, and a brief rundown of these items would be important. The changing pattern of fruit production necessitates the nursery producers being able to adapt their growing, harvesting, and storage practices to permit maximized berry fruit yields. Plants that are dug at high elevations in the early fall months, in the main, are utilized for late fall (winter) plantings in southern California and to supply other demands that may arise. The winter dug plants, concentrated in the Sacramento Valley with some in the San Joaquin Valley, are mostly utilized for July and August plantings in coastal or coastal-modified temperature regions. A look at the harvesting costs for strawberry nursery plants indicates that a sizable portion of the financing is involved in the digging and storing of these plants until such time as they may be needed and purchased by the strawberry fruit producers. When the strawberry nursery plants are stored for several months from December to March into the July or August planting period, extreme care and exact temperature levels must be maintained. Successful nursery operations must be in the hands of individuals highly skilled in plant physiology, economics, business relations, and cultural needs. In addition, water, fertilizer, and pest and weed control are important elements.

The economic data included with this report are intended to reflect a typical nursery operator's costs, an operation of 50 to 60 acres with a yield of 300,000 plants per acre. This information is of keen interest to lending agencies, nursery operators, and related agri-business elements. The cost data would enable a nursery operator to make a comparative cost study and to adjust where necessary. The total costs are cash costs, management charges, depreciation, and interest.

Cost Data by Russell H. Gripp, farm advisor, and  
P. S. Parsons, Extension economist,  
in cooperation with nursery operators.

AGRICULTURAL EXTENSION SERVICE

UNIVERSITY OF CALIFORNIA

SHASTA COUNTY

**SAMPLE COSTS TO PRODUCE NURSERY GROWN STRAWBERRY PLANTS - SHASTA COUNTY**

Yield - 300,000 plants - 50 to 60 acre operation - assuming land is owned

| Operation                                                 | Hours per acre  | Cash and labor cost per acre |                  |                                                    | Total             |
|-----------------------------------------------------------|-----------------|------------------------------|------------------|----------------------------------------------------|-------------------|
|                                                           |                 | Labor                        | Fuel and repairs | Materials                                          |                   |
| <b>Cultural</b>                                           |                 |                              |                  |                                                    |                   |
| Subsoil, 2 times                                          |                 |                              |                  | Contract \$ 20.00                                  | \$ 20.00          |
| Disc, 2 times                                             | 1.0             | \$ 2.15                      | \$ 2.40          |                                                    | 4.55              |
| Irrigate, 3 times                                         | 3.0             | 4.95                         |                  |                                                    | 4.95              |
| Fumigate                                                  |                 |                              |                  | Contract 400.00                                    | 400.00            |
| Fertilize                                                 | .3              | .65                          | .60              | 125 lb. P @ \$.12 15.00                            | 16.25             |
| Disc & drag, 2 times                                      | 1.2             | 2.58                         | 2.90             |                                                    | 5.48              |
| Mark & plant                                              | 36.0            | 59.40                        | 1.00             | 9000 plants @ \$14.50 130.50                       | 190.90            |
| Replant                                                   | 2.0             | 3.30                         |                  | Plants 2.00                                        | 5.30              |
| Cultivate, 5 times                                        | 3.3             | 7.10                         | 4.95             |                                                    | 12.05             |
| Hoe, pick blossoms, set runners                           | 100.0           | 165.00                       |                  |                                                    | 165.00            |
| Fertilize with sprinklers                                 |                 |                              |                  | 120 lb. N @ \$.13 15.60                            | 15.60             |
| Insect control air, ground                                |                 |                              |                  | 2.50                                               | 2.50              |
| Irrigation as needed                                      | 45.0            | 74.25                        | 2.75             | Power to pump 5.5 ac. ft. @ \$8 and sprinkle 44.00 | 121.00            |
| Supervision @ \$3 hour                                    | 20.0            | 60.00                        |                  |                                                    | 60.00             |
| <b>TOTAL CULTURAL COST</b>                                |                 | <b>\$ 379.38</b>             | <b>\$14.60</b>   | <b>\$629.60</b>                                    | <b>\$1,023.58</b> |
| <b>Harvest</b>                                            |                 |                              |                  |                                                    |                   |
| Dig, gather, haul to shed                                 |                 | \$ 225.00                    |                  | 300,000 plants @ \$.75 per 1000                    | \$ 225.00         |
| Pack & shed labor @ \$4.20/M                              |                 | 1,260.00                     |                  | 150 boxes @ \$.40 \$ 60.00                         | 1,320.00          |
| Haul & handling to cold storage @ \$1 box                 |                 | 150.00                       |                  |                                                    | 150.00            |
| <b>TOTAL HARVEST COST</b>                                 |                 | <b>\$1,635.00</b>            |                  | <b>\$ 60.00</b>                                    | <b>\$1,695.00</b> |
| <b>CASH CULTURAL AND HARVEST COSTS</b>                    |                 |                              |                  |                                                    | <b>\$2,718.58</b> |
| Miscellaneous overhead - 5% of above costs                |                 |                              |                  |                                                    | \$ 135.90         |
| Taxes (2 years)                                           |                 |                              |                  |                                                    | 32.00             |
| <b>TOTAL MISCELLANEOUS OVERHEAD</b>                       |                 |                              |                  |                                                    | <b>\$ 167.90</b>  |
| <b>TOTAL CASH COSTS</b>                                   |                 |                              |                  |                                                    | <b>\$2,886.48</b> |
| Management 5% of 300,000 plants @ \$14.50 per 1000 plants |                 |                              |                  |                                                    | \$ 217.50         |
| <b>Investment</b>                                         |                 | <b>Annual Cost</b>           |                  |                                                    |                   |
|                                                           | <b>Per acre</b> | <b>Depreciation</b>          | <b>Interest</b>  |                                                    |                   |
| Land - 2 acres                                            | \$2,400         | \$                           | \$144.00         |                                                    |                   |
| Buildings                                                 | 400             | 20.00                        | 12.00            |                                                    |                   |
| Storage facility                                          | 1,200           | 60.00                        | 36.00            |                                                    |                   |
| Irrigation system                                         | 700             | 70.00                        | 21.00            |                                                    |                   |
| Equipment                                                 | 1,150           | 115.00                       | 34.50            |                                                    |                   |
| <b>TOTAL INVESTMENT</b>                                   | <b>\$5,850</b>  | <b>\$265.00</b>              | <b>\$247.50</b>  |                                                    | <b>\$ 512.50</b>  |
| <b>TOTAL COST PER ACRE</b>                                |                 |                              |                  |                                                    | <b>\$3,616.48</b> |

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