

PERMANENT
RECORD FILE

1986

ALMOND OBJECTIVE
MEASUREMENT SURVEY

CALIFORNIA CROP & LIVESTOCK
REPORTING SERVICE

P.O. BOX 1258
SACRAMENTO, CALIFORNIA 95806

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1986 ALMOND OBJECTIVE MEASUREMENT SURVEY

I. Results

Based on the findings of the 1986 Objective Measurement Survey, California almond production is estimated at 265 million meat pounds as of July 1, down 43 percent from the crop of 465 million meat pounds produced in 1985. At this level, the 1986 crop will be the smallest since 1983 and the second smallest since 1978. Of the last 21 years, only 1968 and 1978 had a lower yield per bearing acre. Nonpareil production is forecast at 150 million meat pounds comprising 57 percent of the total production forecast.

The 1986 forecasted bearing acreage is 418,000 acres, up 2 percent from the 1985 level and 62,000 more acres (17 percent) than were in production in 1983.

The average set of nuts per tree is estimated at 3,723, down 50 percent from the 7,373 average in 1985 and 6 percent less than the 1983 set of 3,949.

The average kernel weight was 1.84 grams which is 5 percent higher than the ten year average of 1.75 grams.

II. Survey History

The Almond Objective Measurement Survey began in 1962 to fulfill industry needs for an accurate almond production forecast prior to harvest.

To determine tree set, we use a method which counts nuts along a path that starts at the trunk and ends at the end of a terminal branch on the tree. This path is random in that, at each forking, only one of the branches is randomly selected to continue the path. In this way it is possible to end up at any of the tree's terminal branches. This method of selecting branches, wherein each branch at a forking is given probability of selection proportional to its cross-sectional area, is used because it has the highest statistical efficiency. Along intermediate stages, i.e., the bearing surface between forkings, every fifth nut is picked. All nuts on the terminal branch are picked. The path chosen has a certain probability of selection associated with it, and this is used to expand the counts along the path in order to arrive at an estimated set for the entire tree.

A Growth Survey was conducted from 1962 to 1968 to establish the growth pattern of nuts. The Survey determined that in-hull growth was generally complete by June 1st. A Post-Harvest Survey was conducted during November from 1962 through 1967 to provide information about varietal shelling ratios. A Nut Drop Survey indicated that the nut drop was substantially over by June 1st. Tree density, an important forecasting factor, results from information contained in the Fruit and Nut Acreage Survey. A table indicating trees per acre for the last 10 years is included in this report.

III. Field Sampling Activities

The Survey began May 30 in the San Joaquin Valley and sampling in all areas of the State was in full swing by June 6th. Sampling was completed on June 21st.

There were 1,605 trees sampled for the 1986 Survey in approximately 808 orchards. An additional 153 trees were not sampled for one of the following reasons:

- 1) orchard was wet
- 2) orchard had been pulled
- 3) owner refused to cooperate or could not be contacted

IV. The Objective Measurement Survey is funded by monies provided by the Almond Board of California in cooperation with the California Department of Food and Agriculture.

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TABLE 1: WEIGHT, SIZE, AND GRADE OF AVERAGE ALMOND SAMPLE

| Variety and District | Weight (Grams) | | Size (Millimeters) | | | | | Grade (Percent of Nuts)* | | | | | | | |
|---|----------------|--------|--------------------|--------|--------|-----------|---------|--------------------------|------|--------|--------|-----------|-------------|-------|-------|
| | In-Hull | Kernel | Suture | | Kernel | | | Edible Nuts | | Insect | Damage | Shriveled | Natural Gum | Blank | Other |
| | | | In-Hull | Length | Width | Thickness | Singles | Doubles | | | | | | | |
| VARIETY | | | | | | | | | | | | | | | |
| Nonpareil | | | | | | | | | | | | | | | |
| 1980*** | 15.09 | 2.05 | 30.73 | 24.20 | 25.94 | 15.16 | 10.35 | 95.2 | 0.9 | **** | 2.5 | 0.4 | 0.1 | 1.0 | |
| 1981*** | 13.48 | 1.94 | 29.43 | 23.06 | 25.18 | 14.88 | 10.27 | 95.0 | 1.6 | **** | 2.0 | 0.3 | 0.1 | 1.0 | |
| 1982 | 13.45 | 1.81 | 28.81 | 22.62 | 24.27 | 14.39 | 10.05 | 94.3 | 2.0 | **** | 3.1 | *** | 0.2 | 0.4 | |
| 1983 | 15.46 | 2.09 | 30.03 | 23.48 | 26.06 | 15.00 | 10.61 | 90.5 | 1.6 | **** | 5.7 | 0.6 | 0.3 | 1.2 | |
| 1984 | 12.15 | 1.73 | 27.51 | 21.54 | 24.40 | 13.92 | 10.32 | 95.4 | 2.1 | **** | 1.5 | 0.1 | 0.4 | 0.5 | |
| 1985 | 12.07 | 1.62 | 27.35 | 21.62 | 24.14 | 13.54 | 9.76 | 94.8 | 3.7 | **** | 0.8 | 0.1 | *** | 0.5 | |
| 1986 | 14.90 | 1.97 | 29.54 | 23.40 | 25.80 | 14.82 | 10.68 | 95.7 | 0.6 | **** | 2.5 | 0.2 | 0.1 | 0.7 | |
| Mission | | | | | | | | | | | | | | | |
| 1980*** | 9.89 | 1.55 | 26.39 | 20.32 | 20.94 | 13.73 | 11.08 | 94.2 | 3.2 | **** | 1.6 | 0.3 | *** | 0.8 | |
| 1981*** | 9.15 | 1.42 | 25.39 | 19.58 | 20.34 | 13.17 | 10.68 | 93.4 | 4.1 | 0.1 | 1.1 | 0.3 | 0.1 | 1.0 | |
| 1982 | 8.96 | 1.38 | 25.22 | 19.35 | 19.49 | 13.12 | 10.81 | 96.0 | 3.2 | **** | 0.4 | 0.2 | *** | 0.3 | |
| 1983 | 10.87 | 1.68 | 26.65 | 20.07 | 21.68 | 13.95 | 11.51 | 93.7 | 2.9 | **** | 2.0 | 0.2 | *** | 1.2 | |
| 1984 | 8.83 | 1.42 | 25.14 | 19.14 | 20.33 | 12.99 | 11.06 | 93.5 | 4.9 | **** | 0.7 | 0.2 | 0.1 | 0.5 | |
| 1985 | 7.88 | 1.22 | 24.40 | 18.64 | 19.30 | 12.27 | 10.12 | 96.9 | 1.8 | **** | 0.6 | 0.2 | *** | 0.5 | |
| 1986 | 10.09 | 1.56 | 25.91 | 19.81 | 21.38 | 13.46 | 11.13 | 93.7 | 2.8 | **** | 1.4 | 0.4 | *** | 1.8 | |
| Merced | | | | | | | | | | | | | | | |
| 1980*** | 12.07 | 1.80 | 28.23 | 21.96 | 23.31 | 14.25 | 10.95 | 88.4 | 2.7 | **** | 4.9 | 2.8 | 0.1 | 1.2 | |
| 1981*** | 10.92 | 1.76 | 27.14 | 21.16 | 22.90 | 13.94 | 10.95 | 91.1 | 4.2 | 0.1 | 2.5 | 1.1 | 0.1 | 0.9 | |
| 1982 | 11.36 | 1.63 | 26.79 | 20.61 | 21.55 | 13.61 | 10.81 | 93.5 | 3.0 | **** | 2.0 | 0.8 | 0.4 | 0.3 | |
| 1983 | 12.57 | 1.84 | 27.27 | 20.86 | 23.71 | 14.03 | 11.11 | 89.8 | 3.1 | **** | 3.8 | 1.4 | 0.4 | 1.5 | |
| 1984 | 11.04 | 1.64 | 26.61 | 20.51 | 22.44 | 13.73 | 11.06 | 88.9 | 7.4 | **** | 1.9 | 0.6 | 0.4 | 0.8 | |
| 1985 | 10.03 | 1.50 | 25.55 | 19.65 | 21.76 | 13.17 | 10.48 | 93.6 | 3.7 | 0.1 | 1.4 | 0.6 | 0.1 | 0.4 | |
| 1986 | 12.45 | 1.73 | 27.43 | 21.18 | 23.30 | 14.04 | 10.98 | 93.7 | 0.9 | **** | 2.5 | 1.7 | **** | 1.0 | |
| Ne Plus Ultra | | | | | | | | | | | | | | | |
| 1980*** | 14.18 | 2.00 | 29.40 | 22.30 | 27.13 | 14.54 | 10.14 | 87.0 | 7.0 | 0.2 | 4.1 | 0.9 | 0.1 | 0.8 | |
| 1981*** | 11.98 | 1.85 | 27.52 | 21.30 | 26.02 | 13.96 | 10.18 | 88.6 | 8.8 | **** | 1.9 | 0.2 | *** | 0.5 | |
| 1982 | 13.34 | 1.79 | 27.92 | 21.37 | 25.89 | 13.79 | 9.76 | 90.4 | 6.7 | **** | 2.3 | 0.1 | *** | 0.4 | |
| 1983 | 14.09 | 2.06 | 28.40 | 21.73 | 27.52 | 14.20 | 10.79 | 76.7 | 14.6 | **** | 5.7 | 2.2 | *** | 0.7 | |
| 1984 | 13.80 | 2.03 | 28.34 | 21.85 | 27.75 | 14.07 | 10.51 | 80.2 | 16.8 | 0.1 | 1.5 | 0.8 | 0.1 | 0.5 | |
| 1985 | 11.93 | 1.76 | 26.55 | 21.14 | 26.15 | 12.96 | 10.02 | 80.9 | 16.7 | 0.0 | 0.8 | 0.3 | 0.3 | 0.9 | |
| 1986 | 15.20 | 2.19 | 29.33 | 22.99 | 28.62 | 14.54 | 10.62 | 84.4 | 7.1 | 0.1 | 4.5 | 1.3 | *** | 2.6 | |
| California Types** | | | | | | | | | | | | | | | |
| 1980*** | 11.07 | 1.71 | 26.77 | 20.74 | 23.74 | 13.64 | 10.49 | 95.3 | 1.1 | **** | 2.5 | 0.7 | 0.1 | 0.5 | |
| 1981*** | 11.27 | 1.61 | 25.65 | 20.51 | 23.50 | 13.22 | 10.28 | 94.8 | 3.0 | **** | 1.5 | 0.2 | 0.2 | 0.4 | |
| 1982 | 10.60 | 1.49 | 25.41 | 19.88 | 22.24 | 12.90 | 10.04 | 96.3 | 2.6 | **** | 0.9 | 0.2 | **** | 0.2 | |
| 1983 | 12.39 | 1.84 | 26.64 | 20.65 | 25.00 | 13.60 | 10.65 | 92.0 | 3.3 | **** | 2.5 | 0.5 | 0.2 | 1.5 | |
| 1984 | 10.38 | 1.56 | 25.04 | 19.28 | 23.39 | 12.83 | 10.46 | 92.3 | 5.5 | **** | 1.2 | 0.1 | 0.5 | 0.4 | |
| 1985 | 9.44 | 1.45 | 24.35 | 19.04 | 22.99 | 12.40 | 9.95 | 92.4 | 6.1 | 0.0 | 0.8 | 0.1 | 0.1 | 0.5 | |
| 1986 | 12.16 | 1.69 | 26.21 | 20.36 | 25.18 | 13.10 | 10.40 | 94.4 | 1.4 | **** | 2.9 | 0.1 | 0.1 | 1.0 | |
| DISTRICT (Weighted by bearing acreage) | | | | | | | | | | | | | | | |
| DISTRICT | | | | | | | | | | | | | | | |
| Sacramento Valley | | | | | | | | | | | | | | | |
| 1980*** | 15.09 | 2.01 | 30.38 | 23.44 | 25.33 | 15.29 | 10.35 | 93.6 | 3.3 | **** | 1.1 | 0.9 | *** | 1.0 | |
| 1981*** | 11.51 | 1.69 | 27.35 | 21.53 | 23.61 | 14.03 | 10.08 | 93.0 | 4.9 | **** | 1.4 | 0.1 | *** | 0.6 | |
| 1982 | 12.64 | 1.61 | 27.70 | 22.27 | 23.21 | 14.02 | 9.80 | 95.4 | 3.4 | **** | 0.9 | 0.2 | *** | 0.1 | |
| 1983 | 15.25 | 2.11 | 29.31 | 23.42 | 25.92 | 14.66 | 10.73 | 89.0 | 4.8 | **** | 2.3 | 1.9 | *** | 2.0 | |
| 1984 | 11.63 | 1.69 | 27.28 | 21.76 | 24.14 | 13.59 | 10.19 | 91.7 | 6.2 | **** | 0.7 | 0.3 | 0.2 | 0.9 | |
| 1985 | 10.12 | 1.39 | 25.50 | 21.47 | 22.58 | 12.38 | 9.29 | 92.5 | 4.9 | 0.1 | 0.8 | 0.2 | 0.3 | 1.2 | |
| 1986 | 13.39 | 1.81 | 28.08 | 23.40 | 25.14 | 13.67 | 10.77 | 93.7 | 3.5 | **** | 1.5 | 0.5 | *** | 0.7 | |
| San Joaquin Valley | | | | | | | | | | | | | | | |
| 1980*** | 13.04 | 1.89 | 29.11 | 22.70 | 24.55 | 14.51 | 10.58 | 93.7 | 1.8 | **** | 2.9 | 0.6 | 0.1 | 0.9 | |
| 1981*** | 12.38 | 1.85 | 28.46 | 22.19 | 24.33 | 14.45 | 10.52 | 93.7 | 2.6 | 0.1 | 2.0 | 0.4 | 0.1 | 1.0 | |
| 1982 | 11.91 | 1.67 | 27.37 | 21.33 | 22.17 | 13.79 | 10.28 | 93.7 | 2.5 | **** | 2.9 | 0.2 | 0.2 | 0.5 | |
| 1983 | 13.87 | 1.95 | 28.72 | 22.00 | 25.00 | 14.58 | 10.88 | 89.8 | 3.0 | **** | 4.9 | 0.7 | 0.4 | 1.1 | |
| 1984 | 11.28 | 1.67 | 27.15 | 20.84 | 23.81 | 13.78 | 10.52 | 93.4 | 4.0 | **** | 1.6 | 0.2 | 0.4 | 0.4 | |
| 1985 | 11.05 | 1.55 | 26.41 | 20.29 | 23.18 | 13.28 | 10.06 | 93.9 | 4.7 | **** | 0.8 | 0.2 | *** | 0.3 | |
| 1986 | 13.57 | 1.85 | 28.27 | 21.78 | 24.69 | 14.40 | 10.72 | 94.4 | 1.3 | **** | 2.7 | 0.4 | 0.1 | 1.2 | |
| Contra Costa & San Luis Obispo Counties | | | | | | | | | | | | | | | |
| 1980*** | 12.23 | 1.53 | 28.43 | 23.18 | 22.41 | 14.07 | 9.61 | 84.3 | 3.4 | **** | 10.8 | 0.3 | *** | 1.2 | |
| 1981*** | 9.02 | 1.26 | 25.53 | 18.84 | 21.11 | 12.94 | 9.13 | 94.5 | 2.0 | **** | 2.8 | 0.3 | 0.1 | 0.3 | |
| 1982 | 12.84 | 1.46 | 28.32 | 20.80 | 21.32 | 13.83 | 9.71 | 95.3 | 4.7 | **** | 0.7 | 0.3 | *** | 5.3 | |
| 1983 | 12.78 | 1.59 | 27.87 | 20.93 | 22.15 | 13.98 | 10.09 | 87.1 | 1.7 | **** | 5.9 | 0.2 | 0.2 | 0.3 | |
| 1984 | 10.70 | 1.22 | 25.83 | 19.35 | 21.79 | 12.35 | 8.69 | 93.3 | 3.3 | **** | 2.8 | 0.3 | 0.2 | 0.3 | |
| 1985 | 11.70 | 1.27 | 26.60 | 20.92 | 21.96 | 12.56 | 8.42 | 89.2 | 1.7 | 0.0 | 4.4 | 3.6 | 0.0 | 0.7 | |
| 1986 | 15.85 | 1.93 | 30.70 | 24.63 | 24.93 | 14.64 | 10.77 | 96.6 | 3.4 | **** | 3.4 | 0.2 | 0.2 | 0.2 | |
| State | | | | | | | | | | | | | | | |
| 1980*** | 13.62 | 1.91 | 29.40 | 22.89 | 24.68 | 14.69 | 10.49 | 93.6 | 2.1 | **** | 2.6 | 0.7 | 0.1 | 0.9 | |
| 1981*** | 12.08 | 1.79 | 28.11 | 21.94 | 24.07 | 14.31 | 10.38 | 93.6 | 3.1 | **** | 1.9 | 0.3 | 0.1 | 0.9 | |
| 1982 | 12.22 | 1.68 | 27.61 | 21.51 | 22.96 | 13.92 | 10.23 | 94.4 | 2.7 | **** | 2.2 | 0.2 | 0.2 | 0.3 | |
| 1983 | 14.11 | 1.97 | 28.79 | 22.25 | 25.04 | 14.55 | 10.83 | 90.1 | 3.2 | **** | 4.3 | 0.9 | 0.2 | 1.2 | |
| 1984 | 11.56 | 1.67 | 26.88 | 20.88 | 23.69 | 13.64 | 10.49 | 93.0 | 4.6 | **** | 1.4 | 0.2 | 0.3 | 0.5 | |
| 1985 | 10.83 | 1.51 | 26.19 | 20.58 | 23.03 | 13.07 | 9.88 | 93.6 | 4.7 | **** | 0.8 | 0.2 | 0.1 | 0.5 | |
| 1986 | 13.53 | 1.84 | 28.22 | 22.16 | 24.80 | 14.23 | 10.73 | 94.2 | 1.8 | **** | 2.4 | 0.4 | 0.1 | 1.1 | |

*Percentages may not add to 100 due to rounding.

**Ballico, Carmel, Davey, Fritz, Harvey, Le Grand, Mono, Norman, Price Cluster, Ruby, Tokyo, and Yosemite.

***Measurements are calculated using a straight average. After 1981 measurements were combined on a weighted average basis.

****Less than 0.05 percent.

NOTE: Sacramento Valley includes these counties: Butte, Colusa, Glenn; Solano, Sutter, Tehama, Yolo, and Yuba.

San Joaquin Valley includes these counties: Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, and Tulare.

TABLE 2: CALIFORNIA ALMOND ACREAGE AND PRODUCTION, 1966-86

| Year | Bearing Acres 1/ | Meat Production | | Per Bearing Acre |
|------|---------------------|--------------------|---------------------|---------------------|
| | | Total | Metric Tons | |
| | <u>Acres</u> | <u>Metric Tons</u> | <u>Million Lbs.</u> | <u>Lbs.</u> |
| 1966 | 118,260 | 43,000 | 95.4 | 807 |
| 1967 | 124,600 | 38,000 | 82.8 | 665 |
| 1968 | 135,120 | 37,000 | 80.8 | 598 |
| 1969 | 149,030 | 60,000 | 132.0 | 886 |
| 1970 | 169,920 | 68,000 | 149.0 | 877 |
| 1971 | 187,770 | 73,000 | 162.0 | 863 |
| 1972 | 198,910 | 68,000 | 151.0 | 759 |
| 1973 | 213,560 | 70,000 | 155.0 | 726 |
| 1974 | 231,200 | 104,000 | 230.0 | 995 |
| 1975 | 248,760 | 84,000 | 186.0 | 748 |
| 1976 | 256,850 | 129,000 | 284.0 | 1,106 |
| 1977 | 276,500 | 142,000 | 313.0 | 1,132 |
| 1978 | 303,600 | 82,000 | 181.0 | 596 |
| 1979 | 322,600 | 171,000 | 376.0 | 1,166 |
| 1980 | 326,800 | 146,000 | 322.0 | 985 |
| 1981 | 326,210 | 185,000 | 408.0 | 1,251 |
| 1982 | 339,320 | 157,000 | 347.0 | 1,023 |
| 1983 | 356,220 | 113,000 | 240.0 | 674 |
| 1984 | 379,565 | 266,000 | 587.0 | 1,486 |
| 1985 | 409,243 | 211,000 | 465.0 | 1,136 |
| 1986 | 418,000 2/ | 120,000 | 265.0 3/ | 634 3/ |

1/ Bearing acreage defined to be plantings 4 years and older.

2/ Preliminary figure.

3/ July forecast.

TABLE 3: COMPARISON OF NUT ESTIMATES AND ORCHARDS SAMPLED BY AREA AND VARIETY
JUNE OBJECTIVE MEASUREMENT SURVEY COUNTS

| Area or Variety | 1981 | | | 1982 | | | 1983 | | | 1984 | | | 1985 | | | 1986 | | |
|---|-----------------------------|---------------------|-----------------------------|-----------------------------|---------------------|-----------------------------|-----------------------------|---------------------|-----------------------------|-----------------------------|---------------------|-----------------------------|-----------------------------|---------------------|-----------------------------|-----------------------------|--|--|
| | Nuts Per Tree Sampled | Orchards Sampled | Nuts Per Tree Sampled | Nuts Per Tree Sampled | | |
| <u>All Districts</u> (All Varieties) | 7,598 | 794 | 5,982 | 768 | 3,949 | 776 | 9,216 | 804 | 7,373 | 843 | 3,723 | 808 | | | | | | |
| <u>By Districts</u> | | | | | | | | | | | | | | | | | | |
| District I 1/ Sacramento Vly. | 10,124 | 196 | 5,678 | 174 | 3,046 | 186 | 9,537 | 193 | 7,602 | 182 | 3,660 | 178 | | | | | | |
| District II 2/ San Joaquin Vly. | 7,006 | 575 | 6,338 | 573 | 4,353 | 572 | 9,297 | 595 | 7,463 | 647 | 3,775 | 624 | | | | | | |
| Contra Costa & S.L.O. Counties | 3,006 | 23 | 1,238 | 21 | 389 | 18 | 2,370 | 16 | 1,94 | 14 | 191 | 6 | | | | | | |
| <u>By Varieties</u> | | | | | | | | | | | | | | | | | | |
| Calif. Types 3/ Merced | 8,955 | 48 | 6,844 | 48 | 4,091 | 61 | 10,202 | 82 | 8,746 | 108 | 3,786 | 120 | | | | | | |
| Mission | 8,313 | 62 | 6,822 | 63 | 4,946 | 63 | 9,349 | 60 | 7,957 | 56 | 3,567 | 50 | | | | | | |
| Ne Plus Ultra | 8,410 | 112 | 6,453 | 112 | 4,544 | 101 | 8,556 | 104 | 7,890 | 101 | 4,784 | 92 | | | | | | |
| Nonpareil | 7,097 | 59 | 4,327 | 53 | 3,517 | 54 | 6,699 | 55 | 6,499 | 54 | 2,445 | 52 | | | | | | |
| | 7,124 | 430 | 5,924 | 421 | 3,753 | 428 | 9,592 | 443 | 7,017 | 449 | 3,606 | 417 | | | | | | |

1/ Sacramento Valley District includes Butte, Colusa, Glenn, Solano, Sutter, Tehama, Yolo, and Yuba counties.

2/ San Joaquin Valley District includes Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, and Tulare counties.

3/ California types include the following varieties: Ballico, Carmel, Davey, Fritz, Harvey, Le Grand, Mono, Norman, Price Cluster, Ruby, Tokyo, and Yosemite.

Table 4: CALIFORNIA FRUIT AND NUT ACREAGE AS OF 1985--VARIETIES AND AGE GROUPS--STATE SUMMARY

| CROP AND VARIETY | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | ACRES STANDING IN 1985 | | |
|----------------------|---------|--------|--------|-------|-------|--------|--------|--------|--------|--------|-------|-------|-------|------------------------|--------|---------|
| | | | | | | | | | | | | | | NON-BEARING | TOTAL | |
| ALMONDS | | | | | | | | | | | | | | | | |
| BALLICO | 71 | 6 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 71 |
| BUTTE | 3,633 | 3,153 | 2,725 | 1,025 | 1,029 | 1,025 | 2,025 | 6,082 | 5,227 | 6,968 | 5,095 | 1,689 | 416 | 276 | 41 | 3,041 |
| CARMEL | 3,237 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3,237 |
| CARRIERS | 1,983 | 2 | 1 | 3 | 19 | 0 | 0 | 16 | 34 | 65 | 0 | 0 | 0 | 0 | 0 | 1,983 |
| DAVEY | 2,879 | 34 | 7 | 5 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 2,879 |
| DRAKE | 47 | 0 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 47 |
| EARLY MISSION | 63 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 63 |
| EMERALD | 137 | 28 | 103 | 35 | 70 | 136 | 75 | 192 | 307 | 157 | 46 | 17 | 77 | 1,063 | 291 | 1,374 |
| FRITZ | 956 | 400 | 362 | 90 | 12 | 33 | 207 | 118 | 51 | 3 | 0 | 0 | 0 | 0 | 0 | 956 |
| HARVEY | 0 | 0 | 0 | 50 | 50 | 159 | 145 | 0 | 0 | 78 | 62 | 0 | 0 | 0 | 0 | 0 |
| HASHAW | 1,0583 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 1,0583 |
| IXL | 2 | 29 | 2 | 0 | 0 | 0 | 30 | 238 | 66 | 304 | 0 | 0 | 0 | 0 | 0 | 2 |
| JEFFRIES | 863 | 5 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 863 |
| JORDANLO | 90 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 90 |
| JUBILEE | 416 | 8 | 6 | 4 | 23 | 0 | 2 | 25 | 3 | 8 | 68 | 0 | 0 | 0 | 0 | 96 |
| KAPRELL | 279 | 385 | 65 | 100 | 67 | 134 | 77 | 125 | 236 | 88 | 42 | 0 | 0 | 0 | 0 | 279 |
| LE GRAND | 120 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 120 |
| LEWELLING | 7 | 5 | 12 | 10 | 32 | 21 | 25 | 4 | 7 | 8 | 0 | 0 | 0 | 0 | 0 | 126 |
| LIVINGSTON | 136 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 135 |
| LONG IXL | 19,311 | 2,675 | 1,434 | 311 | 137 | 211 | 565 | 103 | 42 | 7 | 31 | 5 | 2 | 24,989 | 45 | 25,034 |
| MERCEDE | 385 | 198 | 68 | 26 | 92 | 192 | 158 | 41 | 47 | 14 | 9 | 0 | 0 | 0 | 0 | 557 |
| MORO | 0 | 0 | 23 | 8 | 16 | 50 | 259 | 451 | 519 | 990 | 275 | 0 | 0 | 0 | 0 | 553 |
| MONTEREY | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| N-03 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NE PLUS ULTRA | 16,974 | 832 | 802 | 375 | 391 | 585 | 426 | 848 | 521 | 290 | 33 | 15 | 0 | 0 | 0 | 16,974 |
| NONPAREIL | 136,773 | 19,677 | 12,844 | 3,627 | 2,634 | 6,665 | 11,749 | 11,686 | 14,938 | 6,995 | 1,933 | 1,056 | 0 | 0 | 0 | 136,773 |
| NORMAN | 917 | 29 | 19 | 14 | 0 | 63 | 13 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 917 |
| PADRE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PEERLESS | 6,146 | 280 | 372 | 203 | 81 | 269 | 524 | 1,067 | 895 | 435 | 69 | 49 | 0 | 0 | 0 | 6,146 |
| PRICE CLUSTER | 1,506 | 671 | 792 | 368 | 337 | 947 | 1,672 | 2,053 | 3,623 | 1,319 | 477 | 170 | 106 | 12,387 | 2,072 | 2,633 |
| RIPON | 43 | 8 | 0 | 4 | 11 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14,459 |
| RUBY | 615 | 59 | 128 | 73 | 42 | 45 | 274 | 252 | 388 | 98 | 41 | 20 | 1,867 | 417 | 2,284 | 615 |
| SABRET #1 | 13 | 0 | 0 | 0 | 0 | 0 | 11 | 105 | 225 | 43 | 0 | 0 | 0 | 0 | 0 | 13 |
| SABRET #2 | 22 | 0 | 6 | 6 | 6 | 6 | 198 | 164 | 28 | 0 | 37 | 9 | 0 | 0 | 0 | 46 |
| TEXAS/MISSION | 36,388 | 4,063 | 2,430 | 692 | 455 | 729 | 985 | 1,060 | 1,516 | 632 | 348 | 79 | 35 | 18,426 | 1,094 | 49,520 |
| THOMPSON | 8,182 | 779 | 754 | 161 | 110 | 180 | 115 | 127 | 66 | 100 | 49 | 13 | 13 | 10,374 | 171 | 10,545 |
| TIGOA | 25 | 3 | 11 | 0 | 0 | 0 | 8 | 7 | 12 | 1 | 0 | 0 | 0 | 0 | 0 | 25 |
| TOKYO | 36 | 202 | 75 | 30 | 16 | 71 | 82 | 73 | 96 | 40 | 0 | 0 | 0 | 0 | 0 | 91 |
| TREMBATH/BAKERS SODA | 106 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 697 |
| YOSEMITE | 236 | 62 | 36 | 25 | 18 | 63 | 137 | 95 | 111 | 48 | 8 | 0 | 0 | 0 | 0 | 106 |
| OTHER | 1,245 | 285 | 29 | 66 | 50 | 54 | 155 | 69 | 60 | 99 | 32 | 26 | 9 | 2,013 | 160 | 2,175 |
| CROP TOTAL | 242,027 | 34,105 | 23,141 | 7,586 | 5,664 | 12,895 | 24,737 | 25,390 | 33,698 | 16,224 | 5,771 | 2,530 | 1,496 | 409,243 | 26,021 | 435,264 |

TABLE 5: BEARING TREES PER ACRE, 1976-1986

| Year | Average No. Trees/Acre | Year | Average No. Trees/Acre |
|------|------------------------|------|------------------------|
| 1976 | 80.5 | 1981 | 81.4 |
| 1977 | 80.3 | 1982 | 81.8 |
| 1978 | 80.1 | 1983 | 82.6 |
| 1979 | 80.4 | 1984 | 83.0 |
| 1980 | 81.1 | 1985 | 84.0 |
| 1981 | 81.5 | 1986 | 84.5 |