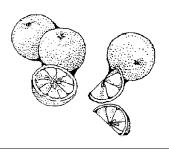
2003-04 California Navel Orange Objective Measurement Report



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CALIFORNIA AGRICULTURAL STATISTICS SERVICE

2003-04 CALIFORNIA NAVEL ORANGE FORECAST

The initial 2003-04 Navel orange forecast is 78.0 million (37.5-pound) cartons, 5 percent below last season's crop of 82.0 million cartons. Of the total forecast, 76.0 million cartons are estimated to be in the Central Valley. Survey data indicated an average fruit set of 358 oranges per tree, with a September 1 diameter of 2.410 inches.

SURVEY HISTORY

A Navel Orange Objective Measurement Survey has been conducted in the Central Valley since the 1984-85 crop year. The data from the first two years were used for research purposes in developing crop estimating models.

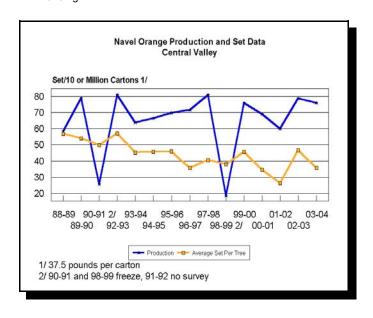
SURVEY SAMPLE

A sample of 498 Navel orange groves was randomly selected proportional to county and variety bearing acreage. Once a grove is randomly chosen and permission is granted, two trees are randomly selected. Trunk and branch measurements, along with fruit counts, are then made on each tree.

CALIFORNIA NAVEL ORANGE AVERAGE SET PER TREE BY COUNTY

| / / / / | | | IIVEE DI | 000111 | |
|-----------------|--------|--------|----------|--------|-------------------|
| Year <u>1</u> / | Madera | Fresno | Tulare | Kern | Central Valley |
| 1986-87 | 347 | 637 | 541 | 504 | 544 |
| 1987-88 | 272 | 236 | 402 | 354 | 361 |
| 1988-89 | 403 | 518 | 585 | 594 | 570 |
| 1989-90 | 491 | 606 | 501 | 614 | 541 |
| 1990-91 | 655 | 476 | 505 | 479 | 498 |
| 1991-92 | | | | | |
| 1992-93 | 402 | 501 | 569 | 654 | 572 |
| 1993-94 | 498 | 433 | 427 | 513 | 452 |
| 1994-95 | 300 | 356 | 450 | 529 | 457 |
| 1995-96 | 372 | 428 | 467 | 479 | 460 |
| 1996-97 | 285 | 280 | 376 | 388 | 359 |
| 1997-98 | 191 | 292 | 424 | 477 | 407 |
| 1998-99 | 378 | 343 | 391 | 377 | 380 |
| 1999-00 | 290 | 390 | 450 | 545 | 458 |
| 2000-01 | 314 | 485 | 293 | 392 | 347 |
| 2001-02 | 462 | 201 | 260 | 299 | 264 |
| 2002-03 | 413 | 289 | 465 | 592 | 466 |
| 2003-04 | 301 | 524 | 305 | 388 | 358 |

Data for 1990-91 and 1998-99 (freeze years) were not used in forecasting the 2003-04 crop. No Objective Measurement Survey was conducted for the 1991-92 season due to lack of funding.



CALIFORNIA CENTRAL VALLEY NAVEL ORANGES 1/

| Crop Year <u>2</u> / | Final Utilized Production <u>3</u> / (37.5-Lb. Cartons) | Bearing Acres | Average Trees Per Acre | Average Set Per Tree | Average September 1 Diameter <u>4</u> / (Inches) | Average March 1 Diameter <u>4</u> / <u>5</u> / (Inches) |
|----------------------|---|------------------|---------------------------|-------------------------|---|---|
| 1986-87 | 58,566,000 | 94,997 | 128 | 544 | 2.169 | 2.847 |
| 1987-88 | 53,588,000 | 96,110 | 126 | 361 | 2.343 | 3.195 |
| 1988-89 | 58,326,000 | 98,766 | 126 | 570 | 2.195 | 2.761 |
| 1989-90 | 79,242,000 | 101,525 | 125 | 541 | 2.250 | 2.820 |
| 1990-91 | 25,514,000 | 104,560 | 124 | 498 | 2.213 | |
| 1991-92 | 60,406,000 | 102,000 | 124 | | | |
| 1992-93 | 81,034,000 | 102,612 | 121 | 572 | 2.296 | 3.021 |
| 1993-94 | 63,800,000 | 106,381 | 121 | 452 | 2.365 | 3.090 |
| 1994-95 | 66,358,000 | 107,049 | 121 | 457 | 2.232 | 3.063 |
| 1995-96 | 69,750,000 | 113,000 | 121 | 460 | 2.258 | 2.994 |
| 1996-97 | 71,700,000 | 115,000 | 121 | 359 | 2.470 | 3.208 |
| 1997-98 | 81,000,000 | 116,500 | 121 | 407 | 2.481 | 3.195 |
| 1998-99 | 37,000,000 | 118,000 | 121 | 380 | 2.184 | |
| 1999-00 | 76,000,000 | 119,000 | 122 | 458 | 2.224 | 3.049 |
| 2000-01 | 68,000,000 | 122,000 | 122 | 347 | 2.311 | 3.120 |
| 2001-02 | 65,000,000 | 122,000 | 122 | 264 | 2.483 | 3.172 |
| 2002-03 | 79,000,000 | 122,500 | 122 | 466 | 2.200 | 3.000 |
| 2003-04 | 76,000,000 | 123,000 | 124 | 358 | 2.410 | 3.210 |

- Data for final utilized production and bearing acres are from the orange industry. Acreage data are the number of acres with trees of bearing age (more than four years old). Some fruit could have been picked from trees younger than four years old, but not enough to consider the tree full-bearing.
- 2/ Data for 1990-91 and 1998-99 (freeze years) were not used in forecasting the 2002-03 crop. An Objective Measurement Survey was not conducted for the 1991-92 season due to lack of funding.
- 3/ California Agricultural Statistics Service preliminary forecast for 2002-03.
- 4/ Size data for 1984-85 through 1993-94 are from the Navel Orange Administrative Committee, while the data since 1993-94 are from the orange industry.
- 5/ Data for 2002-03 and 2003-04 were derived using the five-year average growth size from the orange industry.

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