



2009-10 California Valencia Orange Objective Measurement Report

Cooperating with the California Department of Food and Agriculture

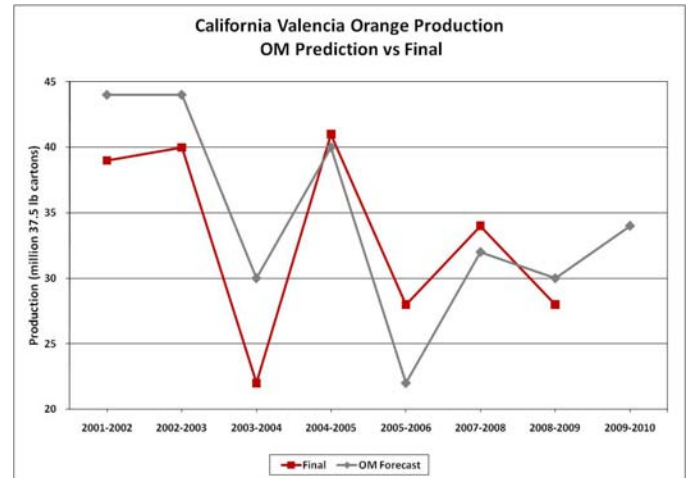
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Released: March 10, 2010

VALENCIA ORANGE PRODUCTION FORECAST UP

The initial 2009-10 Valencia orange forecast is 34 million cartons, 21 percent above last season's estimated total of 28 million cartons. This forecast is based on the results of the 2009-10 Valencia Orange Objective Measurement (O.M.) Survey, which was conducted from January 15 to February 24, 2010. Estimated fruit set per tree, fruit diameter, trees per acre, bearing acreage, and oranges per box were used in the statistical models estimating production.

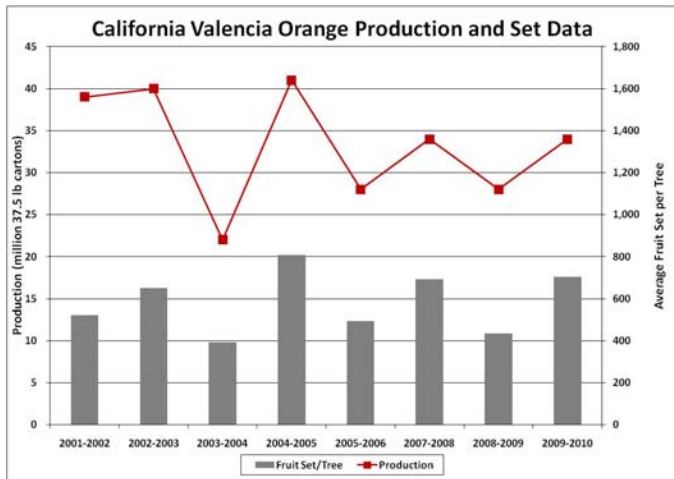
Measurements and weather conditions are indicating a return to a normal crop after last year's light season. In 2009, mild spring and summer weather aided healthy fruit development, while fall storms and winter temperatures did not significantly impact the crop. Survey data indicated a large fruit set per tree of 704, nearly 25 percent above the five-year average of 564. The average March 1 diameter was 2.630 inches, very similar to the five-year average of 2.620.



SURVEY SAMPLE

A sample of 600 Valencia orange groves was randomly selected proportional to acreage, county, and variety representation for the state, with 571 of these groves being utilized in this survey. Once a grove is randomly chosen and grower permission is granted, two trees are randomly selected for each grove. For each randomly selected tree, its trunk is measured along with all connected branches. A random number table is then used to select a branch, and then all connected branches from the randomly-selected branch are measured.

This process is repeated until a branch is reached with no significant limbs beyond it. This randomly-selected branch, called the terminal branch, is then closely inspected to count all fruit connected to it, as well as all of the fruit along the path from the trunk to the terminal branch. Since each selected path has a probability of selection associated with it, a probability-based method is then applied to estimate a fruit count for the entire tree.



SURVEY HISTORY

A Valencia Orange Objective Measurement Survey was conducted from the 1985-86 to 1993-94 seasons before being suspended due to a lack of funding. The survey has been conducted since it was reinstated for the 1999-00 season, with the exception of the 2006-07 season, due to a substantial freeze. The data from the first three years after the survey was reinstated were used for research purposes in developing crop-estimating models.

In the last week of the survey period, fruit diameter measurements are made on the right quadrant of four trees surrounding the two trees of every third sampled grove. These measurements were used to estimate an average fruit diameter per tree. Of the 571 utilized groves, 240 were in Tulare County, 99 were in Kern County, 58 were in San Diego County, 55 were in Ventura County, 40 were in Fresno County, 38 were in Riverside County, 18 were in San Bernardino County, 16 were in Madera County, 4 were in Imperial County, and 3 were in San Luis Obispo County.

CALIFORNIA VALENCIA ORANGE DATA

Crop Year	Number of Sampled Groves	Final Utilized Production (37.5 lb Cartons)	Forecast Utilized Production (37.5 lb Cartons) 1/	Bearing Acres	Average Trees per Acre	Average Set per Tree	Average March 1 Diameter 2/ (Inches)	Average July 1 Diameter 3/ (Inches)
1999-00	343	48,000,000	---	71,000	125	579	2.581	2.743
2000-01	782	38,000,000	---	68,000	125	477	2.614	2.867
2001-02	804	39,000,000	---	65,000	126	518	2.654	2.831
2002-03	780	40,000,000	44,000,000	64,000	126	653	2.584	2.750
2003-04	785	22,000,000	30,000,000	57,000	126	392	2.707	2.870
2004-05	589	41,000,000	40,000,000	53,000	123	807	2.644	2.807
2005-06	650	28,000,000	22,000,000	50,000	123	492	2.640	2.800
2006-07 4/	---	23,000,000	---	49,000	---	---	---	---
2007-08	656	34,000,000	32,000,000	47,000	123	692	2.523	2.695
2008-09 5/	655	28,000,000	30,000,000	45,000	124	435	2.587	2.764
2009-10	571	---	34,000,000	43,000	124	704	2.630	---

1/ No Objective Measurement forecasts were made in the first three years the survey resumed in order to develop suitable forecast models.

2/ Size data for 1999-00 through 2005-06 are from the orange industry, while size data from 2007-08 to the present are from the USDA-NASS, California Field Office Objective Measurement Survey.

3/ This estimate will no longer be published.

4/ An objective measurement survey was not conducted for the 2006-07 season due to the extensive freeze that year.

5/ Production and acreage estimates for the 2008-09 season are subject to revision on April 9, 2010 in the Crop Production Report.

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