2012-13 California Valencia Orange Objective Measurement Report

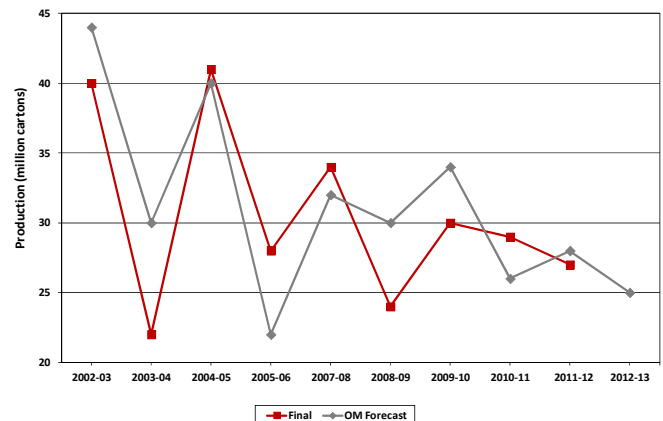cdfa

VALENCIA ORANGE PRODUCTION
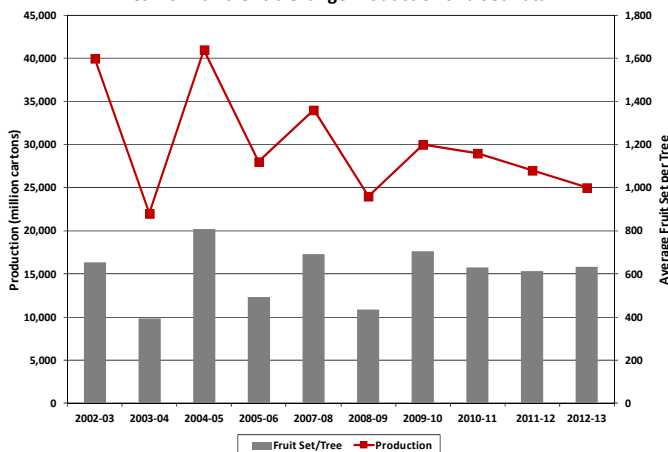### FORECAST 25 MILLION CARTONS

The initial 2012-13 Valencia orange forecast is 25 million cartons. This forecast was based on the results of the 2012-13 Valencia Orange Objective Measurement (O.M.) Survey, which was conducted from January 12 to February 23, 2013. Estimated fruit set per tree, fruit diameter, trees per acre, bearing acreage, and oranges per carton were used in the statistical models estimating production.

Measurements and weather conditions are indicating a normal crop year. Cold winter temperatures did not appear to negatively impact the crop. Survey data indicated an average fruit set per tree of 632, slightly above the five-year average of 615. The average March 1 diameter was 2.484 inches, very close to the five-year average of 2.574.

California Valencia Orange Production OM Prediction vs Final

SURVEY SAMPLE

A sample of 577 Valencia orange groves was randomly selected proportional to acreage, county, and variety representation for the state, with 526 of these groves being utilized in this survey. Once a grove was randomly chosen and grower permission was granted, two trees were randomly selected for each grove. For each randomly selected tree, its trunk was measured along with all connected branches. A random number table was then used to select a branch, and then all connected branches from the randomly-selected branch were measured.

This process was repeated until a branch was reached with no significant limbs beyond it. This randomly-selected branch, called the terminal branch, was 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 was then applied to estimate a fruit count for the entire tree.

In the last week of the survey period, fruit diameter measurements were 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. The sampled groves were primarily in the top Valencia orange producing counties of Tulare, Kern, Fresno, Ventura and San Diego.

California Valencia Orange Production and Set Data

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.

CALIFORNIA VALENCIA ORANGE STATEWIDE DATA

Crop Year	Number of Sampled Groves	Final Utilized Production (Cartons) 1/	Forecast Utilized Production (Cartons) 1/ 2/	Bearing Acres	Average Trees per Acre	Average Set per Tree	Average March 1 Diameter (Inches) 3/
1999-00	343	48,000,000	---	71,000	125	579	2.581
2000-01	782	38,000,000	---	68,000	125	477	2.614
2001-02	804	39,000,000	---	65,000	126	518	2.654
2002-03	780	40,000,000	44,000,000	64,000	126	653	2.584
2003-04	485	22,000,000	30,000,000	57,000	126	392	2.707
2004-05	589	41,000,000	40,000,000	53,000	123	807	2.644
2005-06	650	28,000,000	22,000,000	50,000	123	492	2.640
2006-07 4/	---	23,000,000	---	49,000	---	---	---
2007-08	656	34,000,000	32,000,000	47,000	123	692	2.523
2008-09	655	24,000,000	30,000,000	45,000	124	435	2.587
2009-10	571	30,000,000	34,000,000	43,000	124	704	2.630
2010-11	534	29,000,000	26,000,000	41,000	124	631	2.546
2011-12 5/	533	27,000,000	28,000,000	40,000	124	611	2.583
2012-13	526	---	25,000,000	39,000	125	632	2.484

1/ Prior to the 2010-11 season, cartons had a standard equivalent weight of 37.5 lbs. Beginning in the 2010-11 season, cartons have a standard equivalent weight of 40 lbs.

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

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

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

5/ Final production is subject to revision.

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