

2009 California Walnut Objective Measurement Report



Cooperating with the California Department of Food and Agriculture

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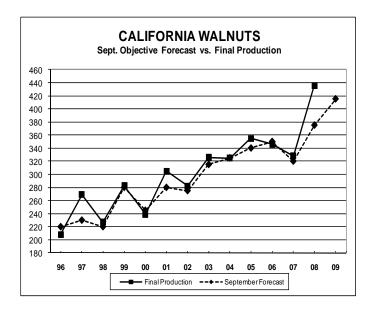
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WALNUT PRODUCTION FORECAST DOWN

The 2009 California walnut production is forecast at 415,000 tons, down 5 percent from 2008's production of 436,000 tons. This forecast is based on the 2009 Walnut Objective Measurement (O.M.) Survey, which was officially conducted August 1 through August 22, 2009. There were a few samples completed before August 1 for training and scheduling purposes.

Following a record crop, the 2009 walnut crop is generally in good condition. There were adequate chilling hours during the winter and mostly ideal weather conditions during the spring, with the exception of some rain which caused minimal blight damage in some areas. A mild summer, with the exception of some heat spells, has resulted in sunburn at modest levels. Irrigation water is a concern in some areas, but the crop was mostly unaffected by the drought.

The 2009 Walnut O.M. Survey utilized a total of 736 blocks with two sample trees per block. Survey data indicated an average nut set of 1,523 per tree, up 8 percent from 2008's average of 1,416. The Hartley nut set was up 34 percent; Chandler was down 6 percent; and Serr was down 22 percent from 2008. Percent of sound kernels in-shell was 97.9 percent Statewide. In-shell weight per nut was 22.0 grams, while the average in-shell suture measurement was 32.5 millimeters. The in-shell cross-width measurement was 33.0 and the average length in-shell was 39.3 millimeters.



Estimated nut sets, sizing measurements, average number of trees per acre, and estimated bearing acreage were used in the statistical models.

SURVEY HISTORY

The Walnut O.M. Survey began in 1958 to fulfill industry needs for an accurate walnut production forecast prior to harvest. The original sample was chosen proportionally to county and variety of bearing acreage. With each succeeding year, additions and deletions have been made in the sample to adjust for acreage removed, new bearing acreage, and operations that choose not to participate in the survey.

SAMPLING PROCEDURES

Once a block is randomly selected and permission is granted by the operation for enumerators to enter the block, two trees are randomly selected. An accessible branch is chosen, which is 5-15 percent of the total cross-sectional area of the primary limbs and reachable with a twelve-foot ladder. Measurements are made on the trunk, each primary, and each split leading to and including the accessible branch. The sample tree and accessible branch are marked by a single tag.

On the accessible branch, every first of five nuts is picked for use in size and grade determinations. If available, at least ten nuts are harvested from the accessible branch for this purpose.

The following measurements are made on nuts selected for sizing:

- 1. Weight of nut including hull
- 2. Width of shell at suture
- 3. Width of shell 90 degrees to suture line (cross-suture)
- 4. Length of shell
- 5. Kernel grade
- 6. Weight of nut in-shell

DATA RELIABILITY

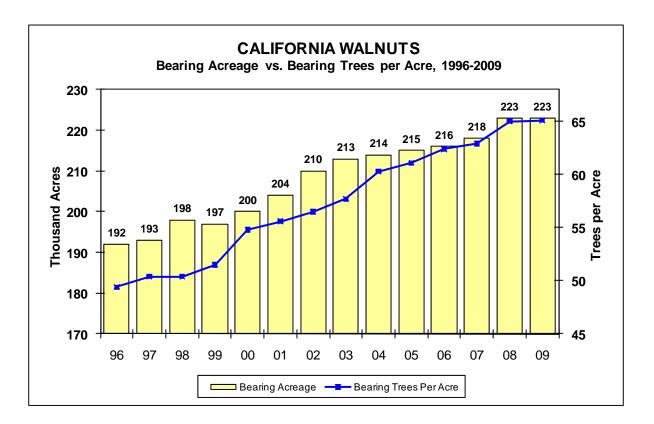
The 80 percent confidence interval is from 376,000 tons to 454,000 tons. This means there is an 80 percent chance the 2009 production will fall within this range.

| Year Bearing Acres | Trees Per Acre | Per Bearing Acre | Total Production | Price Per Ton | Total Value | | | | |
|--------------------|----------------|------------------|------------------|---------------|---------------|---------|--|--|--|
| | Tiees Fel Acle | То | ns | Dollars | 1,000 Dollars | | | | |
| 1988 | 177,000 | 43.8 | 1.18 | 209,000 | 922 | 192,698 | | | |
| 1989 | 179,000 | 45.3 | 1.28 | 229,000 | 1,070 | 245,030 | | | |
| 1990 | 181,000 | 45.7 | 1.25 | 227,000 | 1,040 | 236,080 | | | |
| 1991 | 181,000 | 46.8 | 1.43 | 259,000 | 1,060 | 274,540 | | | |
| 1992 | 178,000 | 47.5 | 1.14 | 203,000 | 1,410 | 286,230 | | | |
| 1993 | 185,000 | 47.9 | 1.41 | 260,000 | 1,390 | 361,400 | | | |
| 1994 | 189,000 | 48.7 | 1.23 | 232,000 | 1,030 | 238,960 | | | |
| 1995 | 193,000 | 49.0 | 1.21 | 234,000 | 1,400 | 327,600 | | | |
| 1996 | 192,000 | 49.4 | 1.08 | 208,000 | 1,580 | 328,640 | | | |
| 1997 | 193,000 | 50.4 | 1.39 | 269,000 | 1,430 | 384,670 | | | |
| 1998 | 198,000 | 50.4 | 1.15 | 227,000 | 1,050 | 238,350 | | | |
| 1999 | 197,000 | 51.5 | 1.44 | 283,000 | 886 | 250,738 | | | |
| 2000 | 200,000 | 54.8 | 1.20 | 239,000 | 1,240 | 296,360 | | | |
| 2001 | 204,000 | 55.6 | 1.50 | 305,000 | 1,120 | 341,600 | | | |
| 2002 | 210,000 | 56.5 | 1.34 | 282,000 | 1,170 | 329,940 | | | |
| 2003 | 213,000 | 57.7 | 1.53 | 326,000 | 1,160 | 378,160 | | | |
| 2004 | 214,000 | 60.3 | 1.52 | 325,000 | 1,390 | 451,750 | | | |
| 2005 | 215,000 | 61.1 | 1.65 | 355,000 | 1,570 | 539,600 | | | |
| 2006 | 216,000 | 62.4 | 1.60 | 346,000 | 1,630 | 563,980 | | | |
| 2007 | 218,000 | 62.9 | 1.50 | 328,000 | 2,290 | 751,120 | | | |
| 2008 a/ | 223,000 | 65.0 | 1.96 | 436,000 | 1,210 | 527,560 | | | |
| 2009 b/c/ | 223,000 | 65.1 | 1.86 | 415,000 | | | | | |

a/ Price Per Ton and Total Value are July 2009 preliminary data.

b/ Bearing years include plantings of the following: Chandler, Chico, Howard, Tulare (2005 & Earlier); 50-55, 59-124, 4946, Amigo, Ashley, Bardoni, Cisco, Earhorn, Grove, Gustine, Honeycutt, Houston, Jensen, Lompoc, Marchetti, Nuggett, Payne, Pedro, Serr, Sunland, Tehama, Trinta, UCD 67-13, Vina, Westside (2004 and Earlier); Franquette, Franquette Scharsch, Mayette, Placentia, Poe, Willsons/Willsons Wonder, Woodland (2002 & Earlier); all other varieties not specified (2003 & Earlier).

c/ Price Per Ton and Total Value preliminary data will be released July 2010.



Walnut Objective Measurement Survey Date, By District

| In-Shell Weight 1989 21.2 22.4 20.3 22 (gm) 14990 21.0 24.9 149.5 22 2000 11.9 22.9 143.1 22 2003 23.0 24.6 149.2 22 2004 22.0 24.1 147.7 22 2005 22.0 24.1 147.7 22 2005 20.0 23.5 20.7 22 2005 20.0 23.5 20.7 22 2005 20.0 23.5 20.7 22 2005 20.0 23.5 20.7 22 2006 20.0 23.5 31.6 33 2007 31.4 32.2 37.7 33 2007 31.4 32.2 37.7 33 2007 31.4 35.7 32.4 33 2007 31.4 35.7 32.4 33 2007 31.6 33.1 | Measurement | Year | Coast 1/ | Sacramento Valley 2/ | San Joaquin Valley 3/ | State 4/ |
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| (mm) 1999 38.3 39.7 38.9 3 2000 37.4 38.2 38.4 3 2001 38.6 38.5 37.9 3 2002 37.5 38.4 38.8 3 2003 38.8 39.7 38.3 3 2004 37.7 39.1 38.7 3 2005 42.0 38.4 38.7 3 2006 38.6 39.6 39.5 3 2007 37.4 37.3 38.1 3 2006 38.6 39.6 39.1 3 2007 37.4 37.3 38.1 3 2008 39.2 39.5 39.1 3 2009 36.9 39.6 39.1 3 2000 98.0 96.7 97.0 9 2001 98.3 97.5 98.1 9 2002 96.0 95.3 97.7 99.2 9 | In-Shell Length | 1998 | | 40.0 | 39.0 | 39.5 |
| 2000 37.4 38.2 38.4 33 2001 38.6 38.5 37.9 33 2002 37.5 38.4 38.8 33 2003 38.8 39.7 38.3 33 2004 37.7 39.1 38.7 38.3 2005 42.0 38.4 38.7 33 2006 38.6 39.6 39.5 39 2007 37.4 37.3 38.1 33 2008 39.2 39.5 39.1 33 2009 36.9 30.6 39.1 33 2001 98.3 97.5 98.3 9 2002 96.0 95.3 98.1 9 2001 98.3 97.5 98.1 9 2002 96.0 95.3 98.7 9 2004 97.6 97.7 99.2 9 2005 97.4 96.5 98.8 9 | | | | | | 39.4 |
| 2001 38.6 38.5 37.9 3 2002 37.5 38.4 38.8 3 2003 38.8 39.7 38.3 3 2004 37.7 39.1 38.7 3 2005 42.0 38.4 38.7 3 2006 38.6 39.6 39.5 3 2008 39.2 39.5 39.1 3 2008 39.2 39.5 39.1 3 2009 36.9 39.6 39.1 3 2009 36.9 39.6 39.1 3 2000 96.8 98.2 98.3 9 2001 98.3 97.5 98.1 9 2002 96.0 95.3 98.7 9 2004 97.6 97.7 99.2 9 2005 97.4 96.5 98.8 9 2006 98.1 97.9 99.2 9 2006 <td>()</td> <td></td> <td></td> <td></td> <td></td> <td>38.2</td> | () | | | | | 38.2 |
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| 2003 38.8 39.7 38.3 3 2004 37.7 39.1 38.7 3 2005 42.0 38.4 38.7 3 2006 38.6 39.6 39.5 3 2007 37.4 37.3 38.1 3 2008 39.2 39.5 39.1 3 2009 36.9 39.6 39.1 3 2000 36.9 39.6 39.1 3 2001 98.3 9 9 9 2002 96.0 96.7 97.0 9 2001 98.3 97.5 98.1 9 2002 96.0 95.3 98.7 9 2003 95.5 95.4 99.3 9 2004 97.6 97.7 99.2 9 2005 97.4 96.5 97.2 9 2006 98.1 98.5 97.2 9 2006 | | | | | | 38.5 |
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| 2007 37.4 37.3 38.1 3 2008 39.2 39.5 39.1 3 2009 36.9 39.6 39.1 3 Kernel Grade - 1998 79.9 93.2 98.3 9 Percent Sound 1999 96.8 98.2 97.4 9 2000 98.0 96.7 97.0 9 2001 98.3 97.5 98.1 9 2002 96.0 95.3 98.7 9 2003 95.5 95.4 99.3 9 2004 97.6 97.7 99.2 9 2005 97.4 96.5 98.8 9 2006 98.1 98.5 97.2 9 2007 97.8 97.9 99.2 9 2008 96.4 98.6 97.3 9 2009 94.9 97.0 99.6 9 2000 1,1355 2,180 1 | | | | | | 38.6 |
| 2008 39.2 39.5 39.1 3 2009 36.9 39.6 39.1 3 Kernel Grade - Percent Sound 1998 79.9 93.2 98.3 9 2000 98.0 96.7 97.0 9 2001 98.3 97.5 98.1 9 2002 96.0 95.3 98.7 9 2003 95.5 95.4 99.3 9 2004 97.6 97.7 99.2 9 2005 97.4 96.5 98.8 9 2006 98.1 98.5 97.2 9 2007 97.8 97.9 99.2 9 2008 96.4 98.6 97.3 9 2007 97.8 97.9 99.2 9 2009 94.9 97.0 99.6 9 20001 1,355 2,180 1,250 1,7 2001 937 2,020 1,478 | | | | | | 39.5 |
| 2009 36.9 39.6 39.1 3 Kernel Grade - 1998 79.9 93.2 98.3 9 Percent Sound 1999 96.8 98.2 97.4 99 2000 98.0 96.7 97.0 99 2001 98.3 97.5 98.1 99 2002 96.0 95.3 98.7 99 2003 95.5 95.4 99.3 99 2004 97.6 97.7 99.2 99 2005 97.4 96.5 98.8 99 2006 98.1 98.5 97.2 99 2007 97.8 97.9 99.2 99 2008 96.4 98.6 97.3 9 2009 94.9 97.0 99.6 9 2000 1,195 1,812 1,250 1,7 2001 937 2,020 1,478 1,7 2001 937 2,020 | | | | | | 37.6 |
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| 2000 98.0 96.7 97.0 99 2001 98.3 97.5 98.1 99 2002 96.0 95.3 98.7 99 2003 95.5 95.4 99.3 99 2004 97.6 97.7 99.2 99 2005 97.4 96.5 98.8 99 2006 98.1 98.5 97.2 99 2007 97.8 97.9 99.2 99 2008 96.4 98.6 97.3 99 2009 94.9 97.0 99.6 9 2000 1,195 1,812 1,204 1,4 2000 1,195 1,812 1,204 1,4 2001 937 2,020 1,478 1,7 2002 1,254 1,982 1,142 1,5 2003 640 1,846 1,429 1,5 2004 924 1,943 1,168 1,5 < | Kernel Grade - | | | | | 94.4 |
| 2001 98.3 97.5 98.1 9 2002 96.0 95.3 98.7 9 2003 95.5 95.4 99.3 9 2004 97.6 97.7 99.2 9 2005 97.4 96.5 98.8 9 2006 98.1 98.5 97.2 9 2007 97.8 97.9 99.2 9 2008 96.4 98.6 97.3 9 2009 94.9 97.0 99.6 9 2000 1,155 2,180 1,250 1,7 2000 1,195 1,812 1,204 1,4 2001 937 2,020 1,478 1,7 2002 1,254 1,982 1,142 1,5 2001 937 2,020 1,478 1,7 2002 1,254 1,982 1,142 1,5 2001 937 2,020 1,478 1,7 | Percent Sound | | 96.8 | 98.2 | 97.4 | 97.9 |
| 2001 98.3 97.5 98.1 9 2002 96.0 95.3 98.7 9 2003 95.5 95.4 99.3 9 2004 97.6 97.7 99.2 9 2005 97.4 96.5 98.8 9 2006 98.1 98.5 97.2 9 2007 97.8 97.9 99.2 9 2008 96.4 98.6 97.3 9 2009 94.9 97.0 99.6 9 2000 1,195 1,812 1,204 1,4 1999 1,355 2,180 1,250 1,7 2000 1,195 1,812 1,204 1,4 2001 937 2,020 1,478 1,7 2002 1,254 1,982 1,142 1,5 2001 937 2,020 1,478 1,7 2002 1,254 1,982 1,142 1,5 <td></td> <td></td> <td>98.0</td> <td></td> <td>97.0</td> <td>96.9</td> | | | 98.0 | | 97.0 | 96.9 |
| 2002 96.0 95.3 98.7 99 2003 95.5 95.4 99.3 99 2004 97.6 97.7 99.2 99 2005 97.4 96.5 98.8 99 2006 98.1 98.5 97.2 99 2007 97.8 97.9 99.2 99 2008 96.4 98.6 97.3 99 2009 94.9 97.0 99.6 9 2009 94.9 97.0 99.6 9 2000 1,195 1,812 1,253 1,4 1999 1,355 2,180 1,250 1,7 2001 937 2,020 1,478 1,7 2002 1,254 1,982 1,142 1,5 2003 640 1,846 1,429 1,5 2004 924 1,943 1,168 1,5 2005 818 1,854 1,372 1,5 | | 2001 | | | | 97.8 |
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| 2004 97.6 97.7 99.2 99 2005 97.4 96.5 98.8 99 2006 98.1 98.5 97.2 99 2007 97.8 97.9 99.2 99 2008 96.4 98.6 97.3 99 2009 94.9 97.0 99.6 99 Nuts Set Per Tree 1998 1,070 1,654 1,253 1,4 2000 1,195 1,812 1,204 1,4 2001 937 2,020 1,478 1,7 2002 1,254 1,982 1,142 1,5 2003 640 1,846 1,429 1,5 2003 640 1,846 1,429 1,5 2004 924 1,943 1,168 1,5 2005 818 1,854 1,372 1,5 2006 1,316 1,660 1,267 1,4 2007 1,221 1,548 | | | | | | 97.0 |
| 2005 97.4 96.5 98.8 99 2006 98.1 98.5 97.2 99 2007 97.8 97.9 99.2 99 2008 96.4 98.6 97.3 99 2009 94.9 97.0 99.6 99 2000 1,988 1,070 1,654 1,253 1,4 1999 1,355 2,180 1,250 1,7 2000 1,195 1,812 1,204 1,4 2001 937 2,020 1,478 1,7 2002 1,254 1,982 1,142 1,5 2003 640 1,846 1,429 1,5 2004 924 1,943 1,168 1,5 2005 818 1,854 1,372 1,5 2006 1,316 1,660 1,267 1,4 2007 1,221 1,548 1,162 1,3 | | | | | | 98.2 |
| 2006 98.1 98.5 97.2 99 2007 97.8 97.9 99.2 99 2008 96.4 98.6 97.3 99 2009 94.9 97.0 99.6 9 Nuts Set Per Tree 1998 1,070 1,654 1,253 1,4 1999 1,355 2,180 1,250 1,7 2000 1,195 1,812 1,204 1,4 2001 937 2,020 1,478 1,7 2002 1,254 1,982 1,142 1,5 2003 640 1,846 1,429 1,5 2004 924 1,943 1,168 1,5 2005 818 1,854 1,372 1,5 2006 1,316 1,660 1,267 1,4 2007 1,221 1,548 1,162 1,3 | | | | | | 97.5 |
| 2007 97.8 97.9 99.2 99 2008 96.4 98.6 97.3 99 2009 94.9 97.0 99.6 9 Nuts Set Per Tree 1998 1,070 1,654 1,253 1,4 1999 1,355 2,180 1,250 1,7 2000 1,195 1,812 1,204 1,4 2001 937 2,020 1,478 1,7 2002 1,254 1,982 1,142 1,5 2003 640 1,846 1,429 1,5 2004 924 1,943 1,168 1,5 2005 818 1,854 1,372 1,5 2006 1,316 1,660 1,267 1,4 2007 1,221 1,548 1,162 1,3 | | | | | | 98.0 |
| 2008 96.4 98.6 97.3 9 2009 94.9 97.0 99.6 9 Nuts Set Per Tree 1998 1,070 1,654 1,253 1,4 1999 1,355 2,180 1,250 1,7 2000 1,195 1,812 1,204 1,4 2001 937 2,020 1,478 1,7 2002 1,254 1,982 1,142 1,5 2003 640 1,846 1,429 1,5 2004 924 1,943 1,168 1,5 2005 818 1,854 1,372 1,5 2006 1,316 1,660 1,267 1,4 2007 1,221 1,548 1,162 1,3 | | | | | | 98.4 |
| 2009 94.9 97.0 99.6 9 Nuts Set Per Tree 1998 1,070 1,654 1,253 1,4 1999 1,355 2,180 1,250 1,7 2000 1,195 1,812 1,204 1,4 2001 937 2,020 1,478 1,7 2002 1,254 1,982 1,142 1,5 2003 640 1,846 1,429 1,5 2004 924 1,943 1,168 1,5 2005 818 1,854 1,372 1,5 2006 1,316 1,660 1,267 1,4 2007 1,221 1,548 1,162 1,3 | | | | | | 98.0 |
| Nuts Set Per Tree 1998 1,070 1,654 1,253 1,4 1999 1,355 2,180 1,250 1,7 2000 1,195 1,812 1,204 1,4 2001 937 2,020 1,478 1,7 2002 1,254 1,982 1,142 1,5 2003 640 1,846 1,429 1,5 2004 924 1,943 1,168 1,5 2005 818 1,854 1,372 1,5 2006 1,316 1,660 1,267 1,4 2007 1,221 1,548 1,162 1,3 | | | | | | 97.9 |
| $\left[\begin{array}{cccccccccccccccccccccccccccccccccccc$ | Nute Set Per Tree | | | | | 1,407 |
| $\left[\begin{array}{cccccccccccccccccccccccccccccccccccc$ | INUIS SELFEL TIEE | | | | | , |
| 2001 937 2,020 1,478 1,7 2002 1,254 1,982 1,142 1,5 2003 640 1,846 1,429 1,5 2004 924 1,943 1,168 1,5 2005 818 1,854 1,372 1,5 2006 1,316 1,660 1,267 1,4 2007 1,221 1,548 1,162 1,3 | | | | | | 1,709 |
| 20021,2541,9821,1421,520036401,8461,4291,520049241,9431,1681,520058181,8541,3721,520061,3161,6601,2671,420071,2211,5481,1621,5 | | | | | | 1,483 |
| 20036401,8461,4291,520049241,9431,1681,520058181,8541,3721,520061,3161,6601,2671,420071,2211,5481,1621,5 | | | | | | 1,719 |
| 20049241,9431,1681,520058181,8541,3721,520061,3161,6601,2671,420071,2211,5481,1621,3 | | | | | | 1,572 |
| 20058181,8541,3721,520061,3161,6601,2671,420071,2211,5481,1621,3 | | | | | | 1,599 |
| 2006 1,316 1,660 1,267 1,4 2007 1,221 1,548 1,162 1,3 | | | | | | 1,526 |
| 2006 1,316 1,660 1,267 1,4 2007 1,221 1,548 1,162 1,3 | | 2005 | | 1,854 | | 1,575 |
| 2007 1,221 1,548 1,162 1,5 | | 2006 | 1,316 | 1,660 | | 1,458 |
| | | | | | | 1,357 |
| | | 2008 | 973 | 1,592 | 1,270 | 1,416 |
| | | | | | | 1,523 |

1/

Coast includes: Contra Cost, Lake, Monterey, Napa, San Benito, San Luis Obispo, Santa Clara, and Sonoma counties. Sacramento Valley includes: Butte, Colusa, El Dorado, Glenn, Sacramento, Solano, Sutter, Tehama, Yolo, and Yuba counties. San Joaquin Valley includes: Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, and Tulare counties. District and State averages are derived by weighting county averages by county bearing acreage figures. 2/ 3/

4/

| Walnut Objective Measurement Survey Date, By | Variety |
|--|---------|

| Measurenet Vale Astrog Chandler Fundes Frage Transm Link Vision Payse Start Terams Link Vision Dist - Dist - Dist - Dist - Dist Dist - Dist | | | | wa | 1 | tive Measure | | | | | | | | |
|---|------------------------|------|--------|-------|--------|--------------|---------|--------|-------|-------|--------|--------|--------|----------|
| (gm) 106 20.3 24.9 22.1 12.0 24.6 16.8 10.8 10.8 80.8 10 | | Year | Ashley | | Eureka | Franquette | Hartley | Howard | Payne | Serr | Tehama | Tulare | Vina | Other 1/ |
| 2000 17.5 22.9 21.7 11.3 22.8 11.8 11.3 12.9 11.9 | In-Shell Weight | 1998 | 19.2 | 21.9 | 20.8 | 20.2 | 24.0 | | 19.6 | 19.5 | 19.5 | | 19.2 | 19.9 |
| 2000 17.5 22.9 21.7 18.3 22.8 18.8 19.3 19.8 19.3 19.4 19.3 19.3 19.4 19.3 19. | (gm) | 1999 | 20.3 | 24.9 | 22.1 | 20.0 | 24.6 | | 19.0 | 20.3 | 19.1 | | 20.7 | 20.9 |
| 2000 17.8 22.7 20.0 21.2 23.2 19.8 17.8 17.1 19.8 19.3 2007 18.0 24.1 23.6 21.0 23.7 24.6 19.3 19.4 19.8 19.8 19.4 19.8 19.8 19.7 15.5 23.6 19.8 19.7 15.6 23.6 19.8 24.2 12.8 17.6 18.8 19.8 19.8 19.7 19.8 19.7 19.8 19.7 19.8 21.1 22.0 21.0 18.0 22.2 11.2 19.1 22.0 19.3 19.6 19.8 19.3 19.6 19.8 19.3 19.6 19.8 19.3 19.6 19.6 19.7 19.8 19.7 19.6 19.7 19.8 19.7 19.6 19.7 19.8 19.7 19.8 19.7 19.8 19.7 19.8 19.7 19.8 19.7 19.8 | | 2000 | 17.5 | 22.9 | 21.7 | 18.3 | 22.8 | | 18.8 | 19.3 | 19.8 | | 19.3 | 19.9 |
| 2002 11.60 92.41 20.8 11.3 21.6 11.3 12.6 10.6 17.7 18.5 -20.0 10.8 22.1 2004 11.4 23.2 24.2 24.2 17.7 18.5 20.3 11.3 22.6 2006 11.6 22.9 21.1 20.3 12.2 21.8 10.4 21.8 11.3 22.6 2006 11.9 22.9 21.1 20.3 25.0 22.8 13.1 2.7 23.8 13.1 30.4 2.1 13.6 2.1 7.7 33.9 33.1 31.1 33.1 33.1 33.1 33.1 33.1 33.1 33.1 33.1 33.1 33.1 33.1 33.1 33.1 33.1 33.1 33.1 33.1 33.1 33.1 33.1 33.1 33.1 33.1 33.1 33.1 | | 2001 | 17.8 | 22.7 | 20.0 | 21.2 | 23.2 | | 16.9 | 17.8 | | | 19.9 | 19.3 |
| 2003 17.1 20.6 21.0 20.7 25.2 16.6 17.2 20.8 19.8 22.1 2004 16.3 19.8 19.8 20.3 22.2 16.4 16.7 16.8 18.1 22.0 2007 16.5 22.2 22.1 20.3 15.0 22.8 18.4 16.6 22.2 22.8 18.4 16.6 22.5 22.8 19.3 18.2 23.6 18.4 16.6 22.6 22.8 19.3 13.3 32.0 33.7 23.0 23.1 23.1 23.1 23.1 23.1 23.1 23.1 33.1 30.6 33.1 33.1 33.2 33.1 33.2 33.1 33.2 33.1 33.1 33.2 33.1 33.2 33.1 33.1 33.2 33.1 33.2 33.1 33.2 33.1 33.2 33.1 33.2 33.1 33.2 33.1 33.2 33.1 33.2 | | | | | | | | | | | | | | |
| 2004 11.6 20.4 20.4 20.4 21.6 17.7 16.5 20.0 17.7 16.5 20.0 17.8 22.2 2005 16.1 22.0 22.0 22.0 22.0 10.0 22.0 2 | | | | | | | | | | | | | | |
| 2005 16.3 18.8 18.9 20.3 22.9 16.4 16.7 16.8 18.1 22.0 12.3 22.6 12.7 15.7 15.8 22.2 18.2 12.2 15.7 15.8 22.1 12.7 15.7 15.8 22.1 12.7 15.7 15.8 22.1 12.7 13.7 22.3 13.2 13.2 13.3 13.7 13.0 22.1 12.7 13.7 13.0 13.7 13.0 13.1 13.0 33.1 33.1 33.1 33.1 33.1 33.1 33.1 33.1 33.3 <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<> | | | | | | | | | | | | | | |
| 806 18.1 23.0 22.2 19.2 24.8 | | | | | | | | | | | | | | |
| bit | | | | | | | | | | | | | | |
| 1006 19.7 22.2 21.1 20.3 25.0 23.8 18.4 18.6 26.5 22.8 20.0 19.8 in-Shell Withi 1996 31.2 31.8 31.2 31.8 31.0 22.4 18.4 32.4 31.4 31.4 32.4 31.8 31.4 31.4 31.4 31.4 31.4 31.4 31.4 31.4 31.4 31.4 31.4 31.4 31.4 31.4 31.4 31.4 31.4 31.4 31.7 31.5 31.8 32.8 31.4 31.5 31.8 31.8 32.8 31.4 31.6 32.9 31.4 33.4 31.6 33.4 31.6 33.4 31.6 33.4 31.6 33.4 31.6 33.4 31.6 33.4 31.6 33.4 31.6 33.4 31.6 33.4 33.6 33.4 33.6 33.4 33.6 33.4 33.6 33.4 33.6 33.4 33.6 33.4 33.6 33.6 | | | | | | | | | | | | | | |
| in-Shell (Ving) 19.9 22.9 22.0 19.3 22.3 72.3 18.2 18.5 19.6 31.1 31.2 31.8 30.2 30.7 33.0 32.8 31.1 31.5 32.4 31.3 31.3 31.5 32.4 31.3 31.1 31.2 32.1 33.1 33.1 33.1 33.1 33.1 33.1 33.1 33.1 33.1 33.1 33.1 33.1 33.1 33.1 33.1 33.1 33.1 33.1 | | | | | | | | | | | | | | |
| In-Shell Worth (mm) 198 31.2 31.3 31.2 31.3 31.3 31.2 31.3 31.3 31.3 31.3 31.3 31.3 31.3 31.3 31.3 31.3 31.4 31.3 31.4 31.3 31.4 31.3 31.4 31.3 31.4 31.3 31.4 31.3 31.3 31.3 31.3 31.3 <td></td> | | | | | | | | | | | | | | |
| (mm) 199 30.7 32.8 31.0 31.6 | | | | | | | | | | | | | | |
| Participant | | | | | | | | | | | | | | |
| 901 30.3 32.0 32.0 30.5 32.3 31.0 31.3 30.3 32.9 31.7 30.8 32.9 31.7 | (mm) | | | | | | | | | | | | | |
| 2020 31.7 32.9 31.8 22.8 32.4 32.2 | | | | | | | | | | | | | | |
| 203 31.0 32.9 32.1 32.2 31.8 32.9 31.4 31.6 | | | | | | 30.5 | | | 31.2 | 31.8 | | | 30.3 | |
| Partial 32.1 33.1 33.1 33.1 33.4 33.4 33.4 33.4 33.4 33.4 33.4 2005 31.0 31.1 33.0 33.4 | | 2002 | 31.7 | 32.9 | 31.8 | 29.8 | 32.8 | | 33.0 | 32.9 | 31.7 | | 31.0 | 31.7 |
| Part Start | | 2003 | 31.0 | 32.9 | 32.1 | 32.4 | 33.2 | | 31.7 | 31.5 | 31.6 | | 30.8 | 32.3 |
| Part Str Str< Str Str< Str< Str | | 2004 | 32.1 | 32.5 | 31.5 | 31.8 | 32.8 | | 32.9 | 33.4 | 31.5 | | 30.8 | 33.4 |
| Part of the second se | | 2005 | 31.4 | 31.1 | 30.7 | 31.6 | 32.5 | | 31.7 | 32.2 | | | 31.4 | 32.4 |
| end 31.0 31.7 31.1 29.9 32.3 32.2 32.6 32.4 32.6 32.4 32.6 32.4 32.6 32.4 32.6 32.4 32.6 32.4 32.6 32.4 32.6 32.7 32.7 32.7 32.7 32.7 32.8 34.8 34.4 31.1 In-Shell Cross-Width 1999 30.8 31.2 31.0 31.2 33.2 31.4 31.6 30.8 31.8 32.7 32.6 33.1 32.6 33.1 32.6 33.1 32.6 33.1 32.6 33.1 32.6 33.1 32.6 33.8 31.0 31.1 33.6 33.1 32.2 32.8 34.1 31.0 31.0 33.1 32.2 32.8 34.1 31.4 31.4 31.4 31.4 31.4 31.4 31.4 31.4 31.4 31.4 31.4 31.4 31.4 31.4 31.4 31.4 31.4 31.4 31.4 | | | | | | | | | | | | | | |
| end 32.0 32.3 31.2 31.6 33.6 32.2 32.7 32.0 34.8 31.4 31.1 Im-Shell Cross-Width 1998 31.2 30.9 30.5 31.2 32.2 | | | | | | | | | | | | | | |
| in-Shell Coss 31.4 31.4 31.4 31.4 31.4 31.6 30.7 31.5 Im-Shell Coss 31.2 31.2 31.2 31.2 31.2 31.4 31.6 30.8 31.4 31.6 30.8 | | | | | | | | | | | | | | |
| In-Shell Lerges-Width 1998 31.2 30.9 30.5 31.2 32.2 31.4 31.6 30.8 31.4 31.6 30.8 31.7 32.0 (mm) 1998 30.8 32.0 33.0 33.2 32.4 31.6 31.6 31.6 31.6 31.6 31.8 32.0 31.1 32.2 33.1 32.2 33.1 32.2 33.1 32.2 33.1 32.2 33.1 32.2 33.1 32.2 33.1 32.2 33.1 32.2 33.1 33.4 31.0 31.6 31.6 32.2 33.1 32.2 33.1 32.2 33.1 32.2 33.1 32.2 33.1 32.2 33.1 32.2 33.1 32.2 33.1 32.2 33.1 32.2 33.1 32.2 33.1 32.2 33.1 32.2 33.1 32.2 33.1 32.2 33.1 32.2 33.1 32.2 33.1 32.2 33.1 32.2 33.1 | | | | | | | | | | | | | | |
| (mm) 1999 30.8 34.0 31.0 31.2 33.2 32.7 32.6 31.6 32.3 32.2 32.3 32.2 32.3 33.1 32.6 31.6 | In Shall Cross Width | | | | | | | | | | | | | |
| Number 31.0 31.0 32.0 31.1 32.0 31.1 32.0 31.1 32.0 31.1 32.0 31.1 32.0 31.1 32.0 31.1 32.0 31.1 32.0 31.1 32.2 20.0 31.8 33.1 32.2 33.1 32.2 33.1 32.2 33.1 32.2 33.1 33.4 31.0 31.0 31.8 32.2 2004 32.0 32.6 32.2 34.0 32.1 32.0 32.0 32.0 32.0 32.2 34.1 32.4 33.1 34.0 34.6 31.7 33.1 32.0 33.0 32.2 34.1 32.4 34.8 31.1 34.1 32.0 33.1 34.1 34.1 34.5 34.8 34.1 34.5 34.8 34.1 34.5 34.1 34.5 34.1 34.5 34.5 34.5 34.5 34.5 34.5 34.5 34.5 34.5 34.5 34.5 34.5 34.5 | | | | | | | | | | | | | | |
| Part 30.1 32.0 31.1 30.6 32.2 31.1 32.6 31.8 32.4 2003 30.6 33.1 32.2 32.3 33.1 31.4 32.6 31.8 31.3 32.4 31.0 31.4 31.6 31.6 33.4 31.0 31.4 33.4 31.0 31.6 33.4 33.6 32.7 32.4 33.3 32.0 32.5 37.7 38.4 33.6 33.7 38.4 33.6 33.1 35.4 35.6 36.7 37.7 37.7 38.4 33.6 33.6 36 | (mm) | | | | | | | | | | | | | |
| 2002 31.8 33.7 32.7 30.1 32.9 | | | | | | | | | | | | | | |
| 2003 30.6 33.1 32.2 32.3 33.1 31.2 30.6 31.6 31.3 32.2 33.3 32.8 | | | | | | | | | | | | | | |
| 2004 32.0 32.6 32.3 31.4 32.8 | | | | | | | | | | | | | | |
| 2005 30.9 31.1 31.7 31.4 32.1 31.4 32.5 32.1 32.0 32.2 34.0 32.6 33.1 34.0 2007 31.6 32.7 32.0 30.9 32.8 34.1 32.2 31.4 31.4 32.5 34.5 32.7 32.4 33.3 32.0 32.2 10.9 32.6 33.0 32.2 30.7 33.2 33.8 32.7 32.4 34.3 32.0 32.7 11.9 93.6.9 40.4 42.6 38.2 39.6 38.1 35.7 37.4 38.5 2000 35.6 39.4 43.0 37.4 38.2 36.2 37.6 37.4 38.5 30.0 | | | | | | | | | | | | | | |
| 2006 32.1 33.9 32.9 32.2 34.0 32.6 33.0 32.9 | | 2004 | 32.0 | 32.6 | | 31.3 | 32.8 | | 33.1 | 33.4 | 31.0 | | 30.9 | 33.1 |
| 2007 31.6 32.7 32.0 30.9 32.8 34.1 32.2 31.4 34.8 31.7 31.9 2009 32.6 33.0 32.3 30.7 33.2 33.8 32.7 32.7 32.4 34.3 32.0 32.5 In-Shell Length (mm) 1998 36.2 40.0 40.8 39.6 40.9 38.1 38.7 37.3 38.4 39.6 2000 35.8 39.4 43.0 37.4 38.2 37.6 36.8 37.3 38.7 | | 2005 | 30.9 | 31.1 | 31.7 | 31.4 | 32.1 | | 31.4 | 31.5 | 30.1 | | 31.6 | 32.6 |
| 2008 32.0 32.0 31.6 31.5 33.4 34.1 32.2 31.9 32.5 34.5 32.2 32.1 In-Shell Length (mm) 1998 37.2 40.0 40.8 39.6 40.9 38.1 38.5 37.3 38.4 38.5 37.3 38.1 38.5 37.3 38.7 39.5 2001 35.5 38.7 41.6 38.4 38.9 38.1 38.5 37.6 38.7 38.6 2002 36.1 39.7 41.4 37.0 38.7 36.6 36.0 37.6 38.0 39.1 2003 35.7 39.7 41.7 40.9 40.4 36.0 37.6 | | 2006 | | 33.9 | 32.9 | 32.2 | 34.0 | | 32.6 | 33.0 | 32.9 | | 33.1 | 34.0 |
| 2008 32.0 32.0 31.6 31.5 33.4 34.1 32.2 31.9 32.5 34.5 32.2 32.1 In-Shell Length (mm) 1998 37.2 40.0 40.8 39.6 40.9 38.1 38.5 37.3 38.4 38.5 37.3 38.1 38.5 37.3 38.7 39.5 2001 35.5 38.7 41.6 38.4 38.9 38.1 38.5 37.6 38.7 38.6 2002 36.1 39.7 41.4 37.0 38.7 36.6 36.0 37.6 38.0 39.1 2003 35.7 39.7 41.7 40.9 40.4 36.0 37.6 | | 2007 | 31.6 | 32.7 | 32.0 | 30.9 | 32.8 | 34.1 | 32.4 | 32.3 | 31.4 | 34.8 | 31.7 | 31.9 |
| 2009 32.6 33.0 32.3 30.7 33.2 33.8 32.7 32.7 32.4 43.4 32.0 32.5 In-Shell Length (mm) 1999 36.9 40.4 42.6 39.6 38.1 38.5 37.7 38.7 39.5 2000 35.8 39.4 43.0 37.4 38.2 37.6 38.6 37.7 38.4 37.7 38.4 37.7 38.4 37.7 38.4 37.7 38.2 37.5 38.8 | | 2008 | | 32.9 | 31.6 | | 33.4 | 34.1 | 32.2 | 31.9 | 32.5 | 34.5 | 32.2 | 32.1 |
| In-Shell Length (mm) 1998 37.2 40.0 40.8 39.6 40.9 | | | | | | | | | | | | | | |
| (mm) 1999 36.9 40.4 42.6 38.2 39.6 38.1 38.5 37.3 38.7 38.5 2001 35.2 38.7 41.6 38.4 38.9 37.0 36.4 37.2 37.4 38.3 2002 36.1 39.7 41.7 40.9 40.4 38.2 37.6 36.8 | In-Shell Length | | | | | | | | | | | | | |
| 2000 35.8 39.4 43.0 37.4 38.2 37.6 36.9 37.3 38.3 2001 35.2 38.7 41.6 38.4 38.9 37.0 36.4 37.2 37.4 38.3 2002 36.1 39.7 41.7 40.9 40.4 36.2 37.5 36.8 38.0 39.1 2004 36.4 39.6 41.3 39.3 39.7 37.0 37.1 36.4 38.0 39.1 37.0 37.0 36.0 38.0 38.1 39.3 38.7 37.1 36.4 38.0 38.6 37.7 38.0 38.6 37.7 39.3 38.6 38.7 38.1 40.2 38.0 37.4 37.3 36.4 36.7 38.9 38.4 38.7 38.0 38.7 38.0 | | | | | | | | | | | | | | |
| 2001 35.2 38.7 41.6 38.4 38.9 37.0 36.4 37.2 37.4 38.3 2002 36.1 39.7 41.7 40.9 38.7 | (1111) | | | | | | | | | | | | | |
| 2002 36.1 39.7 41.4 37.0 38.7 38.2 37.5 38.8 37.6 38.5 2003 35.7 39.7 41.7 40.9 40.4 36.5 36.0 37.6 | | | | | | | | | | | | | | |
| 2003 35.7 39.7 41.7 40.9 40.4 | | | | | | | | | | | | | | |
| 2004 36.4 39.6 41.3 39.3 39.7 37.0 37.1 36.4 37.4 38.8 2005 36.3 38.4 41.6 40.3 39.8 37.2 37.0 36.0 38.0 38.4 2006 37.4 39.5 44.2 38.6 40.4 37.3 36.4 36.7 38.9 38.7 2009 38.0 37.4 39.2 43.5 38.1 40.2 38.0 38.4 36.7 38.9 36.8 37.7 2009 38.0 39.9 43.5 38.1 40.2 38.0 38.6 38.2 37.7 38.9 36.4 49.7 Percent Sound 198 94.4 91.4 99.8 97.4 98.1 97.3 96.3 98.0 98.3 98.3 98.1 98.3 98.3 98.4 99.5 98.5 98.3 98.3 98.1 | | | | | | | | | | | | | | |
| 2006 36.3 38.4 41.6 40.3 38.8 37.2 37.0 36.0 38.0 38.4 2007 35.7 38.1 43.3 36.8 37.9 37.4 37.3 36.4 36.7 38.9 37.7 39.3 38.7 2008 37.4 39.2 43.4 39.3 40.9 38.0 37.4 37.7 39.3 38.4 39.7 2008 37.4 39.2 43.4 39.3 40.9 38.0 37.4 37.7 39.3 38.4 39.7 2009 38.0 39.4 91.4 99.8 89.5 94.4 96.3 97.9 94.3 98.2 97.3 2001 99.6 96.7 93.1 97.8 96.4 97.3 97.7 96.4 98.2 97.3 2001 94.3 98.8 98.9 98.8 97.0 97.3 97.7 96.4 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<> | | | | | | | | | | | | | | |
| 2006 37.4 39.5 44.2 38.5 40.4 38.1 39.2 37.8 39.3 38.7 2007 35.7 38.1 43.3 36.8 37.9 37.4 37.3 36.4 37.7 38.0 37.7 38.9 36.8 37.7 2008 37.4 37.4 37.6 37.7 38.9 38.4 39.7 2009 38.0 39.9 43.5 38.1 40.2 38.0 38.6 37.7 38.9 38.4 39.7 Percent Sound 1998 94.4 91.4 99.8 89.5 94.4 96.3 96.4 95.2 95.2 97.3 2000 96.6 96.7 93.1 97.8 96.4 97.3 96.3 98.0 98.2 97.3 2001 94.4 96.8 97.2 96.1 97.8 99.0 98.4 95.7 97.0 98.4 | | | | | | | | | | | | | | |
| 2007 35.7 38.1 43.3 36.8 37.9 37.4 37.3 36.4 36.7 38.9 36.8 37.7 2008 37.4 39.2 43.4 39.3 40.9 38.0 37.4 37.6 37.7 38.9 38.4 39.7 2009 38.0 39.9 43.5 38.1 40.2 38.0 37.4 37.6 37.7 38.9 37.9 37.9 40.1 Kernel Grade - 1998 94.4 91.4 99.8 89.5 94.4 96.3 97.9 94.3 95.2 95.2 Percent Sound 1999 96.1 98.1 97.1 98.3 96.4 97.3 97.5 97.4 98.8 97.0 97.3 98.1 91.4 98.9 98.3 98.7 97.0 99.2 98.1 91.8 98.0 99.7 98.0 99.7 98.0 9 | | | | | | | | | | | | | | |
| 2008 37.4 39.2 43.4 39.3 40.9 38.0 37.4 37.6 37.7 39.3 38.4 39.7 Kernel Grade - 1988 94.4 91.4 99.8 89.5 94.4 96.3 97.9 94.3 95.2 95.2 95.2 95.2 95.2 95.2 97.3 30.0 37.4 37.9 36.4 96.3 97.9 96.4 97.3 97.7 96.4 98.2 97.3 2000 95.6 96.7 93.1 97.8 96.4 97.3 97.7 96.4 98.2 97.3 2001 94.3 98.8 98.8 97.4 96.8 93.3 98.3 97.0 96.3 98.0 95.1 97.0 97.1 99.1 97.1 98.0 99.1 98.0 99.1 98.0 99.1 97.9 99.1 97.9 99.1 | | | | | | | | | | | | | | |
| 2009 38.0 39.9 43.5 38.1 40.2 38.0 38.6 38.2 37.7 38.9 37.9 40.1 Kernel Grade - 1998 94.4 91.4 99.8 89.5 94.4 96.3 97.9 94.3 95.2 95.2 95.2 Percent Sound 1999 96.1 98.1 97.1 96.3 97.7 96.4 98.2 97.3 2001 94.3 98.8 98.9 98.8 97.4 97.3 96.3 98.0 98.7 97.0 96.8 93.3 98.3 98.4 98.0 97.0 97.0 98.3 99.1 98.0 98.1 98.0 98.1 98.0 98.1 98.0 98.1 99.0 98.1 97.0 99.4 98.5 97.0 91.8 96.0 99.1 98.1 99.0 90.0 | | | | | | | | | | | | | | |
| Kernel Grade - Percent Sound 1998 94.4 91.4 99.8 89.5 94.4 96.3 97.9 94.3 95.2 95.2 Percent Sound 1999 96.1 98.1 97.1 98.3 98.1 95.0 98.3 96.4 98.2 97.3 2000 95.6 96.7 93.1 97.8 96.4 97.3 96.3 96.4 98.2 97.3 2001 94.3 98.8 97.4 97.3 96.4 98.7 97.5 2002 96.4 96.8 98.6 97.2 96.1 96.8 93.3 98.3 96.8 93.3 98.1 99.0 96.8 96.7 96.9 98.4 97.7 97.0 98.4 99.2 97.7 98.0 97.7 95.9 2007 96.5 98.1 99.1 97.7 95.9 2008 93.5 | | | 37.4 | 39.2 | 43.4 | 39.3 | 40.9 | 38.0 | 37.4 | 37.6 | 37.7 | 39.3 | 38.4 | 39.7 |
| Percent Sound 1999 96.1 98.1 97.1 98.3 98.1 95.0 98.3 96.4 98.2 97.3 2000 95.6 96.7 93.1 97.8 96.4 97.3 96.3 98.0 98.2 97.3 2001 94.3 98.8 98.9 98.7 96.1 97.3 96.3 98.0 98.7 98.7 96.1 97.3 96.3 98.3 98.7 96.1 97.3 96.1 91.8 97.0 98.6 97.0 99.4 98.3 99.1 98.0 99.1 98.0 99.1 98.0 99.1 98.0 99.1 98.0 99.1 98.0 99.1 98.0 99.7 96.5 98.1 99.1 99.1 99.1 99.1 99.1 99.1 99.1 99.1 99.1 | | 2009 | 38.0 | 39.9 | 43.5 | 38.1 | 40.2 | 38.0 | 38.6 | 38.2 | 37.7 | 38.9 | 37.9 | 40.1 |
| Percent Sound 1999 96.1 98.1 97.1 98.3 98.1 95.0 98.3 96.4 98.2 97.3 2000 95.6 96.7 93.1 97.8 96.4 97.3 96.3 98.0 98.2 97.3 2001 94.3 98.8 98.9 98.8 97.4 97.3 96.3 98.0 98.7 98.7 96.1 97.3 98.3 98.3 98.4 98.0 98.7 97.6 99.2 96.1 91.8 99.1 98.0 98.7 97.0 99.4 98.3 99.1 98.0 99.7 98.4 99.5 97.0 98.4 99.5 97.0 98.4 99.5 97.0 98.1 99.1 98.7 98.1 99.7 98.1 99.1 99.1 99.1 99.1 99.1 99.1 99.1 | Kernel Grade - | 1998 | 94.4 | 91.4 | 99.8 | 89.5 | 94.4 | | | 97.9 | 94.3 | | 95.2 | |
| 2000 95.6 96.7 93.1 97.8 96.4 97.3 97.7 96.4 98.2 97.3 2001 94.3 98.8 98.9 98.8 97.2 96.1 97.3 96.3 98.0 98.7 97.5 2002 96.4 96.8 98.6 97.2 96.1 99.4 98.3 98.3 96.4 98.6 97.5 96.4 98.5 98.6 97.2 99.4 98.3 98.1 99.1 97.0 96.8 96.7 96.9 99.4 99.5 97.0 98.4 99.5 97.0 98.4 99.5 97.0 98.1 99.1 97.7 98.9 97.0 98.2 97.7 97.9 2007 96.5 99.4 99.5 96.0 98.5 98.5 99.3 98.5 93.5 98.1 99.1 93.5 98.7 91.7 91.0 | Percent Sound | 1999 | 96.1 | 98.1 | 97.1 | 98.3 | 98.1 | | 95.0 | 98.3 | 96.4 | | 98.2 | 97.3 |
| 2001 94.3 98.8 98.9 98.8 97.4 97.3 96.3 98.0 98.7 97.5 2002 96.4 96.8 98.6 97.2 96.1 99.2 96.1 91.8 97.0 96.8 93.3 98.3 96.9 95.1 2004 97.7 99.0 98.4 95.6 98.2 99.4 98.3 99.1 98.0 96.7 2005 96.7 96.9 99.8 95.7 97.0 91.8 96.0 99.1 98.2 97.7 2006 98.4 99.2 95.1 99.6 97.7 91.8 96.0 99.1 98.2 97.7 91.9 94.5 96.5 98.5 93.5 93.5 99.0 94.5 96.5 98.1 99.1 93.5 90.0 97.7 91.0 1.010 1.01 1.01 99.0 <td< td=""><td></td><td>2000</td><td>95.6</td><td>96.7</td><td>93.1</td><td>97.8</td><td>96.4</td><td></td><td>97.3</td><td>97.7</td><td>96.4</td><td></td><td>98.2</td><td>97.3</td></td<> | | 2000 | 95.6 | 96.7 | 93.1 | 97.8 | 96.4 | | 97.3 | 97.7 | 96.4 | | 98.2 | 97.3 |
| 2002 96.4 96.8 98.6 97.2 96.1 96.8 93.3 98.3 97.0 96.8 2003 97.5 97.4 98.8 97.0 97.2 99.2 96.1 91.8 96.9 95.1 2004 97.9 99.0 98.4 95.6 98.2 99.4 98.3 99.1 98.0 97.7 2006 98.4 99.2 95.1 99.6 97.7 91.8 96.0 99.1 98.2 97.7 2007 96.5 99.4 99.5 96.0 98.5 98.5 93.5 98.7 99.1 99.2 99.0 99.0 94.5 98.1 99.1 93.5 93.5 98.7 91.7 91.0 94.5 96.5 98.1 99.1 93.5 93.0 97.7 91.0 94.5 96.5 98.1 99.1 93.5 93.0 97.7 91.0 | | | | | | | | | | | | | | |
| 2003 97.5 97.4 98.8 97.0 97.2 99.2 96.1 91.8 96.9 95.1 2004 97.9 99.0 98.4 95.6 98.2 99.4 98.3 99.1 98.0 96.7 2005 96.7 96.9 99.8 95.7 97.0 98.4 99.5 97.0 98.4 99.5 97.0 98.4 99.5 97.0 98.4 99.5 97.0 97.9 97.9 97.9 99.0 99.1 97.7 91.8 96.0 98.5 98.5 98.5 98.5 98.5 98.5 98.5 98.1 99.1 97.7 95.9 2008 93.5 98.7 91.7 97.6 99.2 99.0 94.5 96.5 98.1 99.1 97.7 91.0 Nuts Set Per Tree 1998 1,221 1,326 1,899 1,878 1,076 8 | | | | | | | | | | | | | | |
| 2004 97.9 99.0 98.4 95.6 98.2 99.4 98.3 99.1 98.0 96.7 2005 96.7 96.9 99.8 95.7 97.0 98.4 99.5 97.0 99.1 97.0 99.1 97.0 98.4 99.5 97.0 98.4 99.5 97.0 98.4 99.5 99.0 99.0 99.1 98.2 97.7 2007 96.5 99.4 99.5 96.0 98.5 99.3 98.5 99.0 99.0 94.5 96.5 98.1 99.1 99.1 99.1 99.1 93.5 98.7 91.0 93.5 98.6 99.2 98.1 99.2 98.8 99.7 96.3 97.7 91.0 Nuts Set Per Tree 1998 1,212 1,360 1,369 2,818 2,241 1,474 1,566 1,379 1,504 1,566 | | | | | | | | | | | | | | |
| $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$ | | | | | | | | | | | | | | |
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| 200996.998.699.298.397.398.199.298.899.796.397.791.0Nuts Set Per Tree19981,2211,3061,3801,5121,4571,1701,6221,3471,5041,29019991,0731,5401,3692,8182,2411,0769891,2101,3741,53620001,6331,2121,3251,8991,8781,6968861,1671,5661,37920011,5101,7411,7181,8192,0491,4431,3421,5601,6861,61720021,5341,3151,2462,0721,9611,2461,2591,4461,6111,64220031,4211,5941,8581,1951,7351,9951,6791,0211,5441,37720041,5041,3811,2232,1082,0461,1521,1721,4881,4711,16720051,3231,7831,6391,2671,7291,4431,4291,6671,2511,25620061,1291,3861,6872,0041,8831,4431,4291,6671,2661,31920061,1291,3861,6872,0041,8831,4431,4291,667 | | | | | | | | | | | | | | |
| Nuts Set Per Tree 1998 1,221 1,306 1,380 1,512 1,457 1,170 1,622 1,347 1,504 1,290 1999 1,073 1,540 1,369 2,818 2,241 1,076 989 1,210 1,374 1,536 2000 1,633 1,212 1,325 1,899 1,878 1,696 886 1,167 1,566 1,379 2001 1,510 1,741 1,718 1,819 2,049 1,443 1,342 1,560 1,611 1,642 2003 1,421 1,594 1,858 1,195 1,735 1,995 1,679 1,021 1,544 1,377 2004 1,504 1,381 1,223 2,108 2,046 1,152 1,172 1,488 1,471 1,167 2004 1,504 1,381 1,267 1,729 | | | | | | | | | | | | | | |
| $ \begin{array}{ c c c c c c c c c c c c c c c c c c c$ | Nute Cet Dr. Tr- | | | | | | | | | | | | | |
| 20001,6331,2121,3251,8991,8781,6968861,1671,5661,37920011,5101,7411,7181,8192,0491,4431,3421,5601,4881,53320021,5341,3151,2462,0721,9611,2461,2591,4461,6111,64220031,4211,5941,8581,1951,7351,9951,6791,0211,5441,37720041,5041,3811,2232,1082,0461,1521,1721,4881,4711,16720051,3231,7831,6391,2671,7291,4431,4291,0671,2511,25620061,1291,3681,6872,0041,8831,4351,1724621,2661,31920071,8751,0691,7311,5691,7381,1971,2021,7102,0589631,1831,64020081,6881,4252,2711,3431,4981,1561,3951,3711,1271,4381,2351,71220091,6911,3461,5122,2202,0011,4191,3061,0661,8931,2811,7551,074 | Nuts Set Per Tree | | | | | | | | | | | | | |
| 20011,5101,7411,7181,8192,0491,4431,3421,5601,4881,53320021,5341,3151,2462,0721,9611,2461,2591,4461,6111,64220031,4211,5941,8581,1951,7351,9951,6791,0211,5441,37720041,5041,3811,2232,1082,0461,1521,1721,4881,4711,16720051,3231,7831,6391,2671,7291,4431,4291,0671,2511,25620061,1291,3861,6872,0041,8831,3451,1724621,2661,31920071,8751,0691,7311,5691,7381,1971,2021,7102,0589631,1831,64020081,6881,4252,2711,3431,4981,1561,3951,3711,1271,4381,2351,71220091,6911,3461,5122,2202,0011,4191,3061,0661,8931,2811,7551,074 | | | | | | | | | | | | | | |
| 20021,5341,3151,2462,0721,9611,2461,2591,4461,6111,64220031,4211,5941,8581,1951,7351,9951,6791,0211,5441,37720041,5041,3811,2232,1082,0461,1521,1721,4881,4711,16720051,3231,7831,6391,2671,7291,4431,4291,0671,2511,25620061,1291,3861,6872,0041,8831,3451,1724621,2661,31920071,8751,0691,7311,5691,7381,1971,2021,7102,0589631,1831,64020081,6881,4252,2711,3431,4981,1561,3951,3711,1271,4381,2351,71220091,6911,3461,5122,2202,0011,4191,3061,0661,8931,2811,7551,074 | | | | | | | | | | | | | | |
| 20031,4211,5941,8581,1951,7351,9951,6791,0211,5441,37720041,5041,3811,2232,1082,0461,1521,1721,4881,4711,16720051,3231,7831,6391,2671,7291,4431,4291,0671,2511,25620061,1291,3861,6872,0041,8831,3451,1724621,2661,31920071,8751,0691,7311,5691,7381,1971,2021,7102,0589631,1831,64020081,6881,4252,2711,3431,4981,1561,3951,3711,1271,4381,2351,71220091,6911,3461,5122,2202,0011,4191,3061,0661,8931,2811,7551,074 | | | | | | | | | | | | | | |
| 20041,5041,3811,2232,1082,0461,1521,1721,4881,4711,16720051,3231,7831,6391,2671,7291,4431,4291,0671,2511,25620061,1291,3861,6872,0041,8831,3451,1724621,2661,31920071,8751,0691,7311,5691,7381,1971,2021,7102,0589631,1831,64020081,6881,4252,2711,3431,4981,1561,3951,3711,1271,4381,2351,71220091,6911,3461,5122,2202,0011,4191,3061,0661,8931,2811,7551,074 | | 2002 | | 1,315 | 1,246 | 2,072 | 1,961 | | 1,246 | 1,259 | 1,446 | | 1,611 | |
| 20041,5041,3811,2232,1082,0461,1521,1721,4881,4711,16720051,3231,7831,6391,2671,7291,4431,4291,0671,2511,25620061,1291,3861,6872,0041,8831,3451,1724621,2661,31920071,8751,0691,7311,5691,7381,1971,2021,7102,0589631,1831,64020081,6881,4252,2711,3431,4981,1561,3951,3711,1271,4381,2351,71220091,6911,3461,5122,2202,0011,4191,3061,0661,8931,2811,7551,074 | | 2003 | 1,421 | 1,594 | 1,858 | 1,195 | 1,735 | | 1,995 | 1,679 | 1,021 | | 1,544 | 1,377 |
| 20051,3231,7831,6391,2671,7291,4431,4291,0671,2511,25620061,1291,3861,6872,0041,8831,3451,1724621,2661,31920071,8751,0691,7311,5691,7381,1971,2021,7102,0589631,1831,64020081,6881,4252,2711,3431,4981,1561,3951,3711,1271,4381,2351,71220091,6911,3461,5122,2202,0011,4191,3061,0661,8931,2811,7551,074 | | 2004 | | 1,381 | 1,223 | 2,108 | 2,046 | | 1,152 | 1,172 | 1,488 | | 1,471 | |
| 20061,1291,3861,6872,0041,8831,3451,1724621,2661,31920071,8751,0691,7311,5691,7381,1971,2021,7102,0589631,1831,64020081,6881,4252,2711,3431,4981,1561,3951,3711,1271,4381,2351,71220091,6911,3461,5122,2202,0011,4191,3061,0661,8931,2811,7551,074 | | | | | | | | | | | | | | |
| 20071,8751,0691,7311,5691,7381,1971,2021,7102,0589631,1831,64020081,6881,4252,2711,3431,4981,1561,3951,3711,1271,4381,2351,71220091,6911,3461,5122,2202,0011,4191,3061,0661,8931,2811,7551,074 | | | | | | | | | | | | | | |
| 20081,6881,4252,2711,3431,4981,1561,3951,3711,1271,4381,2351,71220091,6911,3461,5122,2202,0011,4191,3061,0661,8931,2811,7551,074 | | | | | | | | | | | | | | |
| 2009 1,691 1,346 1,512 2,220 2,001 1,419 1,306 1,066 1,893 1,281 1,755 1,074 | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | 1/ Reginning in 2007 + | | | | | | | | | .,000 | 1,000 | .,_01 | .,, 00 | 1,014 |

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| | U.S. Standards Size Intervals 1/ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------|----------------------------------|----|----|----|-----|-----|------|-----|------|-----|----|----|---|---------|-------|-------|--------|-----|-----|------|-----|-----|-----|-----|-----|-----|------|-----|----|---|--|
| District and Variety | | | | | | | 2006 | | | | | | | 2007 2/ | | | | | | 2008 | | | | | | | 2009 | | | | |
| | Mth Jmb Lge Med Bby Oth | | | | Mth | Jmb | Lge | Med | Bby | Oth | | | | | | | Mth | Jmb | Lge | Med | Bby | Oth | Mth | Jmb | Lge | Med | Bby | Oth | | | |
| | | | | | | | | | | | | | | Perc | ent o | of to | tal 3/ | / | · | | | | | | i | | | | | | |
| DISTRICTS: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Coast | 1 | 71 | 15 | 9 | 4 | 0 | 0 | 30 | 15 | 18 | 26 | 11 | 9 | 30 | 17 | 24 | 20 | 0 | 0 | 49 | 18 | 17 | 15 | 0 | 0 | 25 | 13 | 25 | 37 | 0 | |
| Sacramento Vly. | 1 | 47 | 19 | 15 | 12 | 3 | 0 | 38 | 11 | 16 | 28 | 5 | 1 | 50 | 16 | 17 | 15 | 1 | 0 | 68 | 15 | 11 | 5 | 0 | 0 | 66 | 14 | 11 | 8 | 0 | |
| San Joaquin Vly. | 1 | 56 | 20 | 17 | 6 | 0 | 2 | 68 | 16 | 9 | 5 | 0 | 1 | 63 | 16 | 11 | 8 | 0 | 1 | 66 | 16 | 10 | 6 | 1 | 1 | 70 | 14 | 9 | 5 | 0 | |
| VARIETIES: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ashley | 1 | 47 | 17 | 17 | 16 | 1 | 0 | 46 | 19 | 15 | 18 | 2 | 5 | 31 | 16 | 23 | 21 | 3 | 0 | 60 | 18 | 15 | 7 | 1 | 0 | 66 | 13 | 11 | 10 | 0 | |
| Chandler | 0 | 42 | 23 | 21 | 10 | 3 | 1 | 48 | 15 | 14 | 19 | 3 | 1 | 54 | 17 | 15 | 13 | 1 | 0 | 63 | 19 | 11 | 6 | 0 | 0 | 67 | 16 | 10 | 6 | 0 | |
| Eureka | 0 | 29 | 37 | 21 | 11 | 1 | 1 | 56 | 34 | 4 | 5 | 0 | 0 | 48 | 28 | 9 | 16 | 0 | 0 | 34 | 40 | 19 | 7 | 0 | 0 | 46 | 40 | 9 | 5 | 0 | |
| Franquette | 0 | 53 | 19 | 17 | 11 | 0 | 0 | 21 | 15 | 19 | 34 | 12 | 0 | 23 | 17 | 30 | 28 | 1 | 0 | 43 | 18 | 23 | 15 | 0 | 0 | 27 | 18 | 25 | 31 | 0 | |
| Hartley | 1 | 64 | 14 | 9 | 7 | 2 | 0 | 52 | 10 | 14 | 20 | 4 | 1 | 63 | 14 | 13 | 9 | 0 | 0 | 83 | 9 | 4 | 3 | 1 | 0 | 79 | 11 | 6 | 4 | 0 | |
| Howard | | | | | | | | | | | | | 1 | 55 | 19 | 15 | 10 | 0 | 0 | 58 | 21 | 15 | 6 | 0 | 0 | 61 | 18 | 12 | 9 | 0 | |
| Payne | 1 | 51 | 19 | 19 | 8 | 1 | 0 | 72 | 16 | 5 | 7 | 1 | 0 | 60 | 19 | 12 | 8 | 1 | 1 | 73 | 14 | 8 | 4 | 0 | 2 | 70 | 13 | 9 | 6 | 0 | |
| Serr | 2 | 60 | 16 | 11 | 11 | 0 | 2 | 69 | 11 | 8 | 10 | 1 | 1 | 69 | 11 | 10 | 8 | 1 | 0 | 73 | 11 | 9 | 5 | 1 | 0 | 74 | 13 | 7 | 6 | 0 | |
| Tehama | 0 | 45 | 19 | 18 | 15 | 1 | 1 | 52 | 14 | 12 | 17 | 5 | 0 | 38 | 26 | 21 | 14 | 1 | 0 | 74 | 10 | 10 | 6 | 0 | 0 | 62 | 19 | 10 | 9 | 0 | |
| Tulare | | | | | | | | | | | | | 8 | 76 | 7 | 6 | 3 | 0 | 7 | 82 | 5 | 4 | 2 | 0 | 5 | 80 | 6 | 4 | 3 | 0 | |
| Vina | 4 | 32 | 27 | 21 | 12 | 1 | 0 | 39 | 18 | 18 | 20 | 4 | 0 | 32 | 21 | 21 | 23 | 2 | 1 | 44 | 24 | 19 | 12 | 0 | 0 | 31 | 21 | 27 | 20 | 1 | |
| Other | 2 | 57 | 15 | 12 | 11 | 1 | 4 | 54 | 10 | 12 | 16 | 3 | 0 | 29 | 18 | 22 | 30 | 0 | 2 | 37 | 15 | 29 | 16 | 1 | 3 | 42 | 13 | 18 | 23 | 1 | |
| STATE | 1 | 51 | 19 | 16 | 10 | 2 | 1 | 51 | 13 | 13 | 18 | 3 | 1 | 55 | 16 | 15 | 12 | 1 | 1 | 67 | 16 | 11 | 6 | 0 | 1 | 66 | 14 | 11 | 8 | 0 | |
| Number of | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Shells Measured | d 12,736 | | | | | | | | 13,4 | 491 | | | | | 13, | 219 | | | | | 13, | 485 | | | | | 14, | 625 | | | |

1/ Sizes used are as follows: Mammoth -- Larger than 96/64" in diameter; Jumbo -- 80/64" to 96/64"; Large -- 76/64" to 80/64" for Eureka variety, 77/64" to 80/64" for all other varieties; Medium -- 73/64" to 76/64" for Eureka, 73/64" to 77/64" for all others; Baby -- 60/64" to 73/64"; and Others -- below 60/64".

Beginning in 2007, the Howard and Tulare varieties were taken out of "Other" and published separately.
Percentage distributions, based upon nut samples taken in the field, may not equal 100 percent due to rounding.

The California Walnut Industry has been very supportive. We appreciate your continued cooperation!

> VIC TOLOMEO, Director SARAH HOFFMAN – KELLY KRUG, Deputy Directors

> > DOUG FLOHR – JENNIFER VAN COURT Statisticians – Estimates Group

USDA, NASS, California Field Office publications are available free-of-charge on the Internet at: www.nass.usda.gov/ca