

1992 CALIFORNIA WALNUT OBJECTIVE MEASUREMENT SURVEY RESULTS

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CALIFORNIA AGRICULTURAL
STATISTICS SERVICE

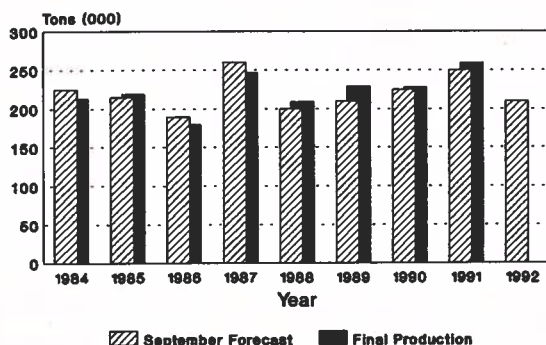
WALNUT PRODUCTION FORECAST

The 1992 California walnut production forecast is 210,000 tons, down 19 percent from 1991's record high production of 259,000 tons. This is down 5 percent from the July forecast. The July forecast was based on subjective information provided by growers, while the September forecast is based on the Walnut Objective Measurement Survey along with subjective grower information. The Objective Measurement Survey was conducted July 27 through August 14, 1992.

The 1992 Objective Measurement Survey utilized a total of 598 blocks with two sample trees per block. The survey data indicated an average number of nuts per tree of 1,604, down 31 percent from 1991's average of 2,340. The Hartley nut set was down 26 percent; the Chandler, down 47 percent; and the Eureka down more than 50 percent. The percent of sound kernels in-shell was 96.9 percent Statewide. The in-shell weight per nut was rather high at 22.7 grams, while the average in-shell suture measurement was 32.6 millimeters. The average length in-shell was 39.5 millimeters.

Estimated nut sets, sizing measurements, average number of trees per acre, and estimated bearing acreage were used in the regression formulas utilizing the years 1980-1991.

CALIFORNIA WALNUTS
September Forecast vs. Final Production



California Ag. Statistics Service

SURVEY HISTORY

The Walnut Objective Measurement 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 refusals.

SAMPLING PROCEDURES

Once a block is randomly selected and permission is granted, two trees are randomly selected. An accessible branch is chosen which is five to fifteen 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.

ACREAGE

Estimated bearing acreage for 1992 is 179,000 acres. The acreage table 2 is a county summary of the data published in the 1991 California Fruit and Nut Acreage Bulletin. These numbers are preliminary and are subject to revision in the 1992 Fruit and Nut Acreage publication to be released in June of 1993.

TABLE 1 -- California English Walnut Acreage, Production, Price And Value In-Shell

Year	Bearing Acres <u>a/</u>	Total Production	Per Bearing Acre	Price Per Ton	Total Value
		<u>Tons</u>	<u>Tons</u>	<u>Dollars</u>	<u>Dollars</u>
1983	176,000	199,000	1.13	631.00	125,569,000
1984	178,000	213,000	1.20	730.00	155,490,000
1985	179,000	219,000	1.22	798.00	174,762,000
1986	180,000	180,000	1.00	1,080.00	194,400,000
1987	176,000	247,000	1.40	984.00	243,048,000
1988	177,000	209,000	1.18	922.00	192,698,000
1989	179,000	229,000	1.28	1,070.00	245,030,000
1990	181,000	227,000	1.25	1,040.00	236,080,000
1991	181,000	259,000	1.43	1,080.00 <u>b/</u>	279,720,000 <u>b/</u>
1992	179,000	210,000	1.17		

a/ Eight years and older for the Blackmer, Carmelo, Concord, Franquette, Grove, Mayette, Placentia, Poe, and Pride of Ventura varieties, 6 years and older for the Amigo, Ashley, Chandler, Gustine, Howard, Lompoc, Midland, Payne, Pedro, Serr, Sunland, Tehama, Trinta, Vina, Westside, and 4946 varieties, 5 years and older for the Chico and Marchetti varieties, and 7 years and older for all other varieties.

b/ Preliminary figures as of July 1, 1992.

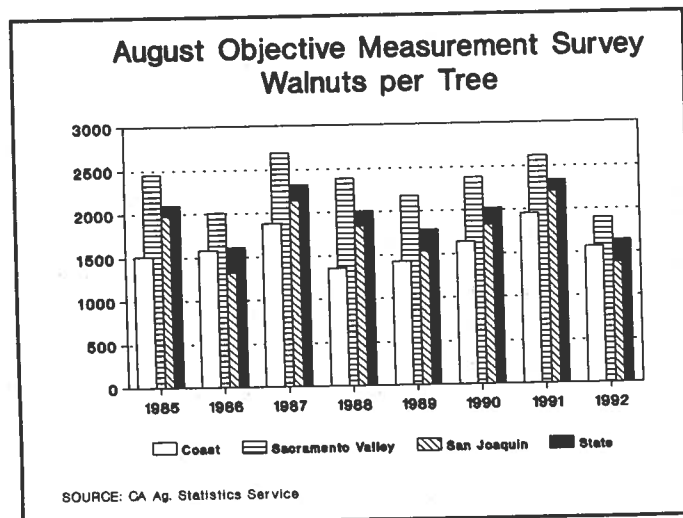
TABLE 2 -- Walnut Acreage By County As Of 1991

County	Bearing	Non-Bearing	Total
Alameda	297	0	297
Amador	568	2	570
Butte	15,451	874	16,325
Calaveras	671	45	716
Colusa	4,383	281	4,664
Contra Costa	1,593	169	1,762
El Dorado	277	1	278
Fresno	3,072	77	3,149
Glenn	5,817	509	6,326
Kern	1,609	32	1,641
Kings	5,392	506	5,898
Lake	7,250	158	7,408
Madera	1,171	55	1,226
Mendocino	148	0	148
Merced	7,337	582	7,919
Monterey	258	65	323
Napa	357	2	359
Placer	1,091	0	1,091
Sacramento	146	0	146
San Benito	3,877	104	3,981
San Joaquin	28,343	1,962	30,305
San Luis Obispo	2,588	197	2,785
Santa Barbara	746	21	767
Santa Clara	1,032	44	1,076
Shasta	1,479	5	1,484
Solano	3,399	1,049	4,448
Sonoma	357	1	358
Stanislaus	21,581	2,089	23,670
Sutter	12,947	1,571	14,518
Tehama	11,071	930	12,001
Tulare	23,184	1,224	24,408
Ventura	363	0	363
Yolo	7,127	782	7,909
Yuba	5,487	842	6,329
Other Counties	123	0	123
TOTAL	180,592	14,179	194,771

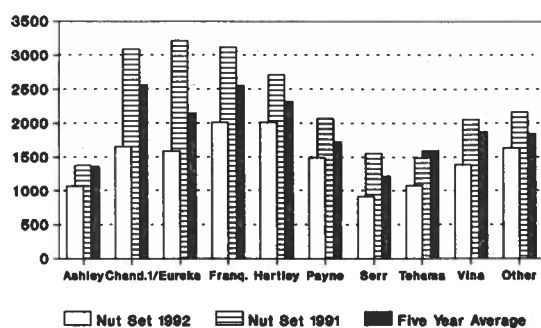
TABLE 3 -- Walnuts Per Tree, By District a/

Year	Coast <u>b/</u>	Sacramento Valley <u>c/</u>	San Joaquin Valley <u>d/</u>	State
1984	1,795	2,850	2,114	2,357
1985	1,512	2,457	1,982	2,099
1986	1,579	2,008	1,321	1,613
1987	1,883	2,696	2,143	2,320
1988	1,359	2,390	1,837	2,008
1989	1,427	2,182	1,537	1,785
1990	1,637	2,380	1,835	2,028
1991	1,955	2,620	2,210	2,340
1992	1,567	1,902	1,380	1,604

See Table 5 for footnotes.

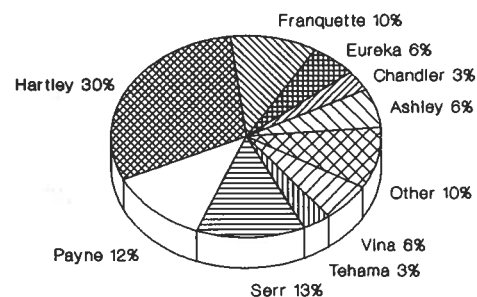


**August Objective Measurement Survey
Walnuts per Tree**



1/Chandler average 4 years
Source: CA Ag. Statistics Service

**1991 WALNUT BEARING ACRES
BY VARIETY**



Source: CA Ag. Statistics Service

TABLE 4 -- August Objective Measurement Survey Averages For In-Shell Measurements, By District

Measurement	Coast <u>b/</u>	Sacramento Valley <u>c/</u>	San Joaquin Valley <u>d/</u>	State <u>a/</u>
In-Shell Weight (gm)				
1985	20.2	21.1	20.6	20.7
1986	22.9	23.7	19.9	22.1
1987	20.7	22.5	20.9	21.5
1988	20.6	22.0	20.5	21.2
1989	19.7	22.0	21.4	21.5
1990	21.3	21.8	21.9	21.8
1991	20.7	22.1	19.6	20.8
1992	21.4	23.8	21.6	22.7
In-Shell Width (mm)				
1985	31.5	32.0	32.1	32.0
1986	32.8	33.3	32.3	32.9
1987	31.9	33.0	32.6	32.7
1988	31.7	32.6	32.6	32.5
1989	31.2	32.3	32.7	32.3
1990	31.5	31.9	33.0	32.3
1991	31.1	31.4	31.7	31.5
1992	32.1	32.7	32.6	32.6
In-Shell Cross-Width (mm)				
1985	31.9	32.5	32.3	32.4
1986	32.7	33.5	32.3	33.0
1987	32.2	33.8	32.9	33.2
1988	32.3	32.9	32.4	32.7
1989	32.0	33.0	32.2	32.6
1990	31.6	32.3	32.7	32.4
1991	30.5	31.2	31.2	31.1
1992	32.5	33.1	32.8	32.9
In-Shell Length (mm)				
1985	38.9	39.4	39.6	39.4
1986	40.4	40.6	39.2	40.0
1987	38.9	40.2	39.5	39.7
1988	39.0	39.4	38.9	39.1
1989	38.2	39.1	39.3	39.1
1990	38.5	38.3	39.5	38.8
1991	38.9	39.0	39.1	39.0
1992	39.0	39.7	39.5	39.5
Kernel Grade-Percent Sound				
1985	97.2	97.3	94.1	95.8
1986	97.2	98.0	91.3	95.3
1987	99.1	97.9	96.6	97.3
1988	88.7	97.8	95.9	96.2
1989	94.4	97.8	96.8	97.0
1990	96.1	97.1	95.4	96.3
1991	97.3	96.6	94.1	95.5
1992	93.6	96.9	97.6	96.9

See Table 5 for footnotes.

TABLE 5 -- August Objective Measurement Survey Data, By Variety

Measurement	Ashley	Chandler	Eureka	Franquette	Hartley	Payne	Serr	Tehama	Vina	Other
In-Shell Weight (gm)										
1985	19.8	N/A	21.0	17.6	23.5	20.1	20.9	20.5	18.3	20.3
1986	20.4	N/A	18.4	21.0	24.7	18.5	19.9	21.4	20.5	21.4
1987	20.3	N/A	23.1	19.7	23.7	19.3	20.5	22.1	18.8	22.1
1988	18.7	N/A	21.9	19.7	23.4	19.3	20.9	19.0	19.5	21.3
1989	19.1	24.8	21.0	20.4	24.7	20.4	19.6	21.5	20.1	20.2
1990	19.5	23.2	22.1	19.9	23.7	20.5	20.9	19.8	19.4	20.7
1991	18.7	22.8	20.1	19.2	23.4	18.2	18.7	20.3	18.8	19.9
1992	19.1	24.9	22.3	20.7	25.5	19.4	21.4	21.8	20.5	19.9
In-Shell Width (mm)										
1985	32.5	N/A	31.2	29.7	33.3	32.5	34.1	32.8	30.3	31.3
1986	32.7	N/A	30.4	31.7	34.0	31.9	33.4	33.7	31.6	32.5
1987	32.6	N/A	32.4	31.1	33.6	32.5	34.2	33.8	30.9	32.6
1988	32.0	N/A	31.4	30.9	33.5	32.4	34.1	31.8	31.2	32.2
1989	31.9	33.1	31.2	31.0	33.7	32.1	33.0	32.8	31.3	31.5
1990	32.3	32.8	31.1	30.7	33.1	33.0	34.2	31.4	30.0	31.4
1991	31.4	31.9	30.4	30.0	32.4	31.6	32.7	32.0	29.8	30.3
1992	32.0	33.3	31.6	30.9	33.6	32.3	34.1	33.1	31.3	31.0
In-Shell Cross-Width										
1985	32.5	N/A	31.7	30.5	33.5	32.4	33.4	32.6	31.1	32.3
1986	32.7	N/A	30.7	32.0	34.0	31.7	32.8	33.0	32.0	32.7
1987	33.2	N/A	32.7	32.0	34.0	32.7	33.4	34.1	32.7	33.5
1988	32.1	N/A	32.1	31.4	33.4	32.5	33.5	31.6	32.1	32.9
1989	31.8	33.9	31.0	31.8	34.1	31.8	32.4	32.6	32.2	32.4
1990	32.3	32.8	31.2	31.1	33.1	32.8	33.4	31.5	31.1	32.3
1991	30.7	32.3	30.5	30.1	32.1	30.7	30.7	31.0	30.2	30.5
1992	32.1	34.3	32.4	31.6	33.9	32.1	33.0	33.0	32.6	32.0
In-Shell Length (mm)										
1985	38.4	N/A	43.3	37.3	40.2	38.3	39.8	38.7	38.0	39.8
1986	39.1	N/A	40.7	39.8	40.8	38.4	39.3	38.7	40.2	39.8
1987	38.7	N/A	44.0	38.2	40.3	38.1	39.5	39.4	39.2	41.4
1988	37.3	N/A	43.0	38.6	39.6	37.6	39.1	37.5	39.1	40.5
1989	37.3	40.8	42.5	38.4	40.1	37.6	38.1	38.8	39.3	39.3
1990	36.9	39.7	42.6	37.5	39.7	38.1	38.9	37.1	37.3	38.4
1991	36.7	39.9	43.3	38.2	39.8	37.2	37.4	36.8	38.6	39.2
1992	37.2	40.5	42.8	37.9	40.6	38.0	38.8	38.3	39.3	37.2
Kernel Grade-Percent										
1985	96.7	N/A	89.0	97.4	96.3	95.2	96.7	96.2	98.3	97.2
1986	95.9	N/A	79.8	96.0	97.0	90.6	96.3	96.8	98.9	96.0
1987	95.1	N/A	98.1	98.1	97.4	96.2	96.7	98.5	97.8	97.6
1988	94.3	N/A	97.9	95.1	98.1	93.2	94.9	95.0	97.6	97.1
1989	97.3	98.3	93.9	97.8	97.5	95.2	97.0	97.2	98.7	96.8
1990	96.6	99.5	94.2	96.7	97.7	94.5	91.0	98.5	94.1	96.8
1991	91.0	99.9	87.1	97.2	96.1	94.7	94.2	96.7	98.1	98.5
1992	94.7	99.2	96.1	96.7	97.2	95.4	96.5	99.1	98.0	94.7
Nuts Set Per Tree										
1985	1,460	N/A	2,721	2,728	2,135	1,863	1,354	1,997	2,239	2,530
1986	808	N/A	1,076	2,474	2,220	1,062	846	1,290	1,430	1,478
1987	2,029	N/A	2,633	3,267	2,595	1,853	1,204	2,031	2,561	2,424
1988	1,599	N/A	1,789	2,482	2,414	1,885	1,084	2,224	2,006	1,799
1989	1,338	2,761	2,051	2,411	1,767	1,543	1,603	1,461	1,645	1,877
1990	1,399	2,716	2,058	2,706	2,662	1,648	884	1,683	2,216	1,708
1991	1,372	3,092	3,212	3,116	2,712	2,067	1,553	1,487	2,055	2,161
1992	1,072	1,645	1,585	2,012	2,008	1,987	915	1,082	1,385	1,626

a/ District and State averages are derived by weighting county averages by county bearing acreage figures.

b/ Coast includes: Alameda, Contra Costa, Lake, Monterey, Napa, San Benito, San Luis Obispo, Santa Clara and Sonoma counties.

c/ Sacramento Valley includes: Butte, Colusa, El Dorado, Glenn, Placer, Sacramento, Shasta, Solano, Sutter, Tehama, Yolo and Yuba counties.

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

TABLE 6 -- Percentage Distribution Of Walnut Shell Suture Sizes, By District And Variety

TABLE 6 -- Percentage Distribution Of Walrus Shells Measured, By Standard Size Interval																																
District And Variety		U.S. Standards Size Intervals a/																														
		1988					1989					1990					1991					1992										
		Mth	Jmb	Lge	Med	Bby	Oth	Mth	Jmb	Lge	Med	Bby	Oth	Mth	Jmb	Lge	Med	Bby	Oth	Mth	Jmb	Lge	Med	Bby	Oth							
		----- Percent of Total b/ -----																														
DISTRICTS:																																
Coast		1	47	20	20	12	0	0	42	17	24	16	1	1	48	15	19	17	1	0	42	14	20	23	1	0	58	13	15	11	2	
Sacramento Valley		1	64	13	13	9	0	0	62	14	14	9	1	2	55	12	17	13	1	0	48	17	19	15	1	1	65	13	12	8	0	
San Joaquin Valley		0	66	15	12	7	0	0	64	19	12	5	0	2	71	12	8	5	1	0	51	21	16	11	0	1	64	15	12	8	0	
VARIETIES:																																
Ashley		0	57	17	17	9	0	0	54	21	17	8	0	1	65	10	14	10	1	0	47	20	18	14	0	0	58	14	15	13	0	
Chandler									0	81	11	5	3	0	3	66	11	19	1	0	0	56	24	14	5	0	1	75	13	6	4	0
Eureka		0	45	33	11	11	0	0	35	40	17	8	0	0	47	28	15	7	1	0	21	36	24	18	1	1	50	29	12	9	0	
Franquette		0	37	20	24	18	1	1	40	19	23	16	1	0	36	17	24	22	2	0	23	20	27	29	1	0	36	21	25	17	1	
Hartley		1	79	10	7	3	0	1	84	7	5	3	0	2	73	10	9	6	0	0	66	15	12	7	0	1	79	10	6	4	0	
Payne		0	64	14	13	9	0	0	58	17	15	10	0	1	72	12	9	5	1	0	49	21	17	11	1	1	59	15	15	10	0	
Serr		1	88	5	3	3	0	1	73	12	9	5	0	5	79	8	5	3	0	1	65	16	12	4	1	2	83	7	6	2	0	
Tehama		0	56	18	14	12	0	0	76	14	5	5	0	0	46	13	25	14	0	0	61	16	14	10	0	1	75	11	8	6	0	
Vina		0	43	22	19	14	2	0	40	22	25	13	0	0	37	13	24	17	4	0	20	17	30	31	1	0	46	20	18	15	1	
Other		0	61	16	16	7	0	0	41	22	23	14	0	1	45	17	21	15	1	0	30	17	26	26	1	1	36	18	26	19	1	
STATE		1	63	15	13	8	0	1	61	16	14	8	0	1	62	12	13	10	1	0	48	19	18	14	1	1	64	14	13	9	0	
Number of Shells Measured		13,705					12,936					11,986					11,611					11,563										

a/ 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".

b/ 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!*

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