1995 ALMOND OBJECTIVE MEASUREMENT SURVEY RESULTS

RELEASED: JUNE 28, 1995
12:00 NOON PDT

CALIFORNIA AGRICULTURAL STATISTICS SERVICE

1995 CALIFORNIA ALMOND FORECAST

California's 1995 almond production is forecast at 310 million meat pounds, down 28 percent from May's subjective forecast and down 58 percent from last year's crop. This is based on 390,000 bearing acres. The Nonpareil variety is forecast at 160 million meat pounds, down 55 percent from last season. The Nonpareil variety represents 52 percent of total almond production.

The average nut set per tree is 3,792, down 54 percent from 1994. The Nonpareil average nut set of 3,851 represents a 51 percent decrease from last year's set. The average kernel weight for all varieties sampled was 1.91, up 17 percent from last year. A total of 95.4 percent of the nuts sized were sound.

Warm winter temperatures led to an early bloom. Heavy rain and winds during the bloom period resulted in bloom loss and pollination problems. Tree conditions and nut sets vary within the orchards, while nut sizes range from normal to large. The cool, wet weather in March slowed development of the crop and it is now behind normal.

SAMPLING PROCEDURES

To determine tree set, nuts are counted along a path within a randomly selected tree. Work begins at the trunk and progresses to the end of the terminal branch. Since at each forking only one branch is randomly selected to continue the path, the procedure is random. A branch's probability of selection is directly proportional to its cross-sectional area. This methodology is used because of its statistical efficiency. The method also makes it possible to end up at any one of the tree's numerous terminal branches. Since the selected path has a probability of selection associated with it, this probability is used to expand counts along the chosen path and then arrive at an estimated set for the entire tree.

Along intermediate stages (i.e., the bearing surface between forkings), every fifth nut is picked. All nuts on the terminal branch are picked. These nuts are used to determine size and weight measurements.

ACREAGE ADJUSTMENTS

The storms in the winter of 1995 destroyed a number of almond trees throughout the State. To determine how many acres were affected, we observed 20 trees in each sampled orchard to obtain the percent of trees that were destroyed by the storm. Based on the information obtained, we determined that about 6 percent of the acres or trees were missing or destroyed. However, some trees were missing prior to the storms and we estimated that about 4 percent were lost from the storms. This resulted in a reduction of 15,000 bearing acres to 390,000.

FIELD SAMPLING ACTIVITIES

The survey began June 1 and sampling was completed by June 20. There were 1,596 trees sampled for the 1995 survey in 798 orchards. An additional 108 orchards were not sampled for one of the following reasons:

1) Orchard had been sprayed.
2) Orchard was wet.
3) Orchard had been pulled.
4) Owner refused to cooperate or could not be contacted.

The Objective Measurement Survey is funded by monies provided by the Almond Board of California in cooperation with the California Department of Food and Agriculture.

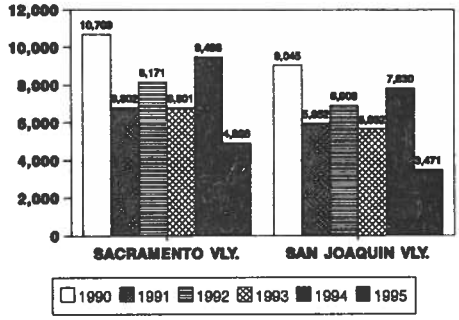
TABLE 1: COMPARISON OF NUT ESTIMATES AND ORCHARDS SAMPLED BY DISTRICT AND VARIETY, JUNE OBJECTIVE MEASUREMENT SURVEY COUNTS

District and Variety	1991		1992		1993		1994		1995	
	Nuts Per Tree	Orchards Sampled	Nuts Per Tree	Orchards Sampled	Nuts Per Tree	Orchards Sampled	Nuts Per Tree	Orchards Sampled	Nuts Per Tree	Orchards Sampled
ALL DISTRICTS										
(All Varieties)	6,134	775	7,217	678	5,871	767	8,183	766	3,792	798
BY DISTRICTS										
District I										
Sacramento Valley	6,802	166	8,171	139	6,801	173	9,498	176	4,926	176
District II										
San Joaquin Valley	5,952	609	6,908	535	5,652	587	7,830	586	3,471	622
BY VARIETIES										
California Types 1/	6,406	144	8,406	113	5,901	129	9,081	134	3,635	151
Carmel 2/	6,116	94	8,301	73	5,317	85	8,749	86	3,384	99
Merced	5,518	43	6,618	34	6,332	30	8,848	32	2,841	32
Mission	6,197	76	8,097	70	6,117	70	6,909	69	4,534	72
Ne Plus Ultra	6,681	32	6,479	25	4,808	29	9,785	26	2,557	29
Nonpareil	6,163	429	6,567	376	5,849	447	7,869	431	3,851	430

1/ For survey purposes, the California classification includes the following varieties: Ballico, Carmel, Davey, Fritz, Harvey, Le Grand, Mono, Monterey, Norman, Price Cluster, Ruby, Tokoyo and Yosemite.

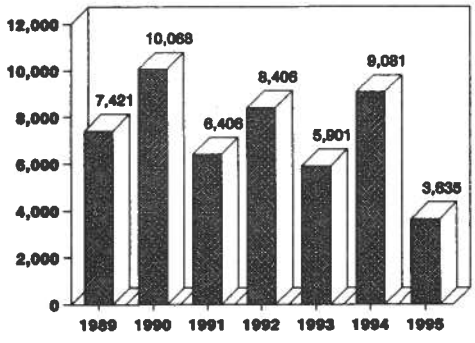
2/ Carmel breakdown was first provided in 1988. Carmel variety is also included in California Types.

DISTRICTS
NUTS PER TREE

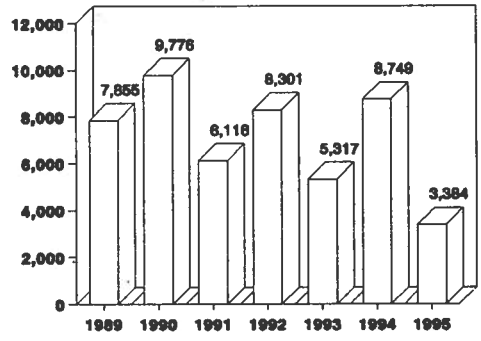


NUTS PER TREE

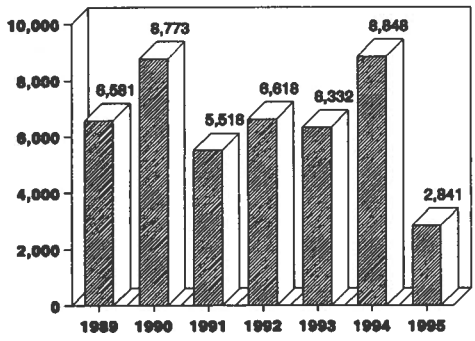
CALIFORNIA TYPES



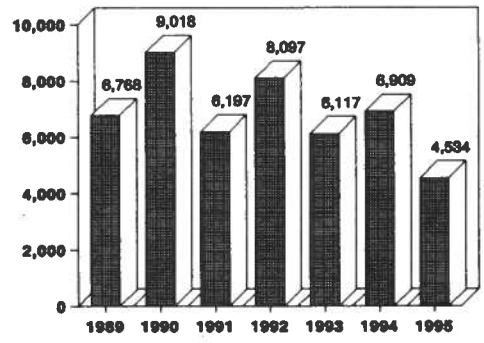
CARMEL



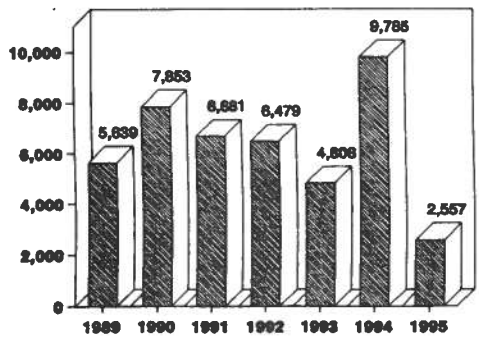
MERCED



MISSION



NE PLUS



NONPAREIL

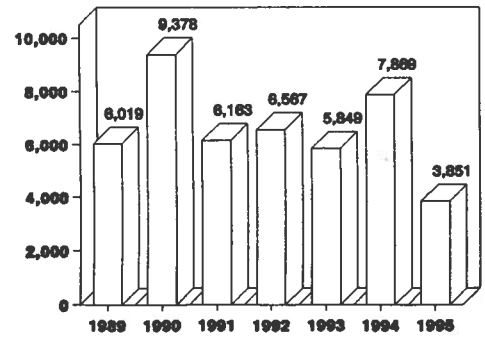


TABLE 2: WEIGHT, SIZE AND GRADE OF AVERAGE ALMOND SAMPLE

District and Variety	Weight (Grams)		Size (Millimeters)					Grade (Percent of Nuts) a/						
			Suture		Kernel			Edible Nuts		Insect Damage	Shrivel	Natural Gum	Blank	Other
	In-Hull	Kernel	In-Hull	In-Shell	Length	Width	Thickness	Singles	Doubles					
ALL DISTRICTS	(Weighted by Bearing Acreage)													
1990	10.51	1.53	25.73	20.71	23.36	12.98	9.94	92.6	5.3	b/	0.9	0.1	0.1	1.0
1991	e/	1.77	e/	e/	23.47	13.97	10.44	93.9	3.5	b/	1.2	0.2	0.1	1.0
1992	e/	1.65	e/	e/	23.80	13.24	9.90	95.3	2.8	b/	1.2	0.2	0.1	0.4
1993	e/	1.78	e/	e/	24.59	13.61	10.17	92.6	3.8	b/	2.6	0.4	b/	0.5
1994	e/	1.63	e/	e/	23.56	12.99	10.12	95.0	2.4	b/	1.7	0.3	b/	0.6
1995	e/	1.91	e/	e/	24.56	14.09	10.30	91.9	3.5	0.1	3.0	0.5	0.1	0.9
BY DISTRICT														
Sacramento Valley														
1990	9.31	1.39	24.85	19.58	21.85	12.63	9.70	91.4	7.4	b/	0.3	0.1	b/	0.8
1991	e/	1.68	e/	e/	22.23	13.68	10.19	93.7	4.2	b/	0.4	0.1	b/	1.5
1992	e/	1.59	e/	e/	23.56	13.25	9.81	95.1	3.3	b/	1.0	0.2	b/	0.3
1993	e/	1.71	e/	e/	24.84	13.44	9.71	93.1	4.4	0.1	2.0	b/	0.1	0.2
1994	e/	1.61	e/	e/	23.52	13.06	9.87	94.3	3.1	b/	1.0	0.2	0.1	1.3
1995	e/	1.82	e/	e/	23.72	13.70	9.88	91.4	5.4	b/	1.2	0.5	b/	1.5
San Joaquin Valley														
1990	10.88	1.57	26.01	21.07	23.84	13.09	10.02	92.9	4.6	b/	1.1	0.1	0.1	1.1
1991	e/	1.79	e/	e/	23.84	14.06	10.51	94.0	3.2	b/	1.5	0.2	0.2	0.8
1992	e/	1.67	e/	e/	23.88	13.24	9.94	95.4	2.6	b/	1.3	0.2	b/	0.5
1993	e/	1.81	e/	e/	24.50	13.67	10.34	92.4	3.6	b/	2.9	0.6	b/	0.6
1994	e/	1.64	e/	e/	23.57	12.96	10.21	95.2	2.1	b/	2.0	0.4	b/	0.3
1995	e/	1.95	e/	e/	24.95	14.27	10.51	92.2	2.6	0.2	3.8	0.5	0.2	0.6
BY VARIETY														
California Types c/														
1990	8.57	1.39	23.47	18.96	23.19	12.01	9.93	89.9	7.8	b/	1.0	b/	b/	1.2
1991	e/	1.55	e/	e/	23.25	12.62	10.12	93.6	3.7	b/	1.3	0.3	b/	1.1
1992	e/	1.52	e/	e/	23.69	12.32	9.84	94.0	4.5	b/	0.9	0.1	b/	0.5
1993	e/	1.67	e/	e/	24.47	12.69	10.12	89.8	5.8	b/	3.8	0.3	b/	0.3
1994	e/	1.49	e/	e/	23.00	12.14	10.05	94.9	2.5	b/	2.0	0.1	b/	0.5
1995	e/	1.81	e/	e/	25.23	13.18	10.25	88.7	5.3	0.1	4.4	0.5	0.1	0.9
Carmel d/														
1990	8.77	1.42	23.56	19.41	23.91	11.95	9.91	90.3	7.7	b/	1.1	b/	b/	0.7
1991	e/	1.61	e/	e/	24.22	12.74	10.11	94.7	2.8	b/	1.3	0.2	b/	1.0
1992	e/	1.54	e/	e/	24.27	12.27	9.81	94.2	4.5	b/	0.7	0.1	b/	0.5
1993	e/	1.69	e/	e/	25.03	12.68	10.06	91.7	5.2	b/	2.6	0.3	b/	0.2
1994	e/	1.51	e/	e/	23.42	12.13	10.06	95.7	1.9	b/	1.5	b/	b/	0.7
1995	e/	1.83	e/	e/	25.97	13.13	10.19	91.7	4.3	0.1	2.5	0.8	0.2	0.4
Merced														
1990	10.03	1.53	25.55	20.74	22.55	12.91	10.33	90.1	6.6	b/	2.1	0.4	b/	0.8
1991	e/	1.71	e/	e/	22.13	13.73	10.87	90.5	5.6	b/	2.1	0.8	b/	0.9
1992	e/	1.59	e/	e/	22.34	12.81	10.24	90.7	6.8	b/	1.2	0.8	0.1	0.3
1993	e/	1.70	e/	e/	23.13	13.32	10.53	88.1	8.5	b/	2.3	0.4	b/	0.6
1994	e/	1.60	e/	e/	22.20	12.69	10.65	92.5	4.4	b/	2.3	0.6	b/	0.2
1995	e/	1.86	e/	e/	23.91	13.90	10.67	87.8	4.3	b/	4.1	2.7	b/	1.2
Mission														
1990	7.45	1.31	23.46	18.17	19.43	12.17	10.62	85.9	11.1	b/	0.9	b/	0.1	1.9
1991	e/	1.43	e/	e/	19.68	13.11	10.74	95.2	2.2	b/	0.9	0.2	0.5	1.0
1992	e/	1.31	e/	e/	19.71	12.16	10.07	96.9	0.4	b/	1.6	0.3	0.2	0.5
1993	e/	1.45	e/	e/	20.61	12.34	10.62	90.1	7.5	0.1	1.6	0.1	b/	0.7
1994	e/	1.39	e/	e/	19.97	12.36	10.73	94.7	2.5	b/	1.0	1.3	b/	0.4
1995	e/	1.66	e/	e/	21.39	13.47	10.89	91.1	5.2	b/	1.8	0.7	b/	1.3
Ne Plus Ultra														
1990	11.44	1.79	26.35	20.97	26.84	13.39	10.20	85.1	12.2	b/	1.1	0.1	b/	1.3
1991	e/	1.98	e/	e/	26.58	13.99	10.37	85.2	12.0	b/	0.6	0.1	b/	1.8
1992	e/	1.87	e/	e/	26.61	13.37	10.05	87.8	10.1	b/	1.2	0.4	b/	0.4
1993	e/	2.11	e/	e/	28.50	14.22	10.12	87.9	8.5	b/	2.6	0.4	b/	0.6
1994	e/	1.88	e/	e/	26.78	13.14	10.36	81.8	11.4	b/	4.7	0.2	b/	1.6
1995	e/	2.17	e/	e/	26.59	14.32	10.32	76.5	13.2	b/	4.8	2.3	b/	3.2
Nonpareil														
1990	11.74	1.61	26.94	21.83	24.14	13.46	9.78	95.7	2.3	b/	0.8	b/	0.1	0.8
1991	e/	1.91	e/	e/	24.28	14.65	10.47	95.4	2.2	b/	1.3	0.1	0.1	0.8
1992	e/	1.80	e/	e/	25.01	13.95	9.87	96.6	1.7	b/	1.3	0.1	b/	0.3
1993	e/	1.89	e/	e/	25.37	14.12	10.10	95.0	1.4	b/	2.6	0.4	0.1	0.4
1994	e/	1.72	e/	e/	24.36	13.44	10.00	96.8	1.1	b/	1.4	0.2	b/	0.5
1995	e/	2.01	e/	e/	25.24	14.58	10.19	93.7	2.1	0.1	2.9	0.3	0.1	0.7

a/ Percentages may not add to 100 due to rounding.

b/ Not shown if less than 0.07 percent.

c/ For survey purposes, the California classification includes the following varieties: Ballico, Carmel, Davey, Fritz, Harvey, Le Grand, Mono, Monterey, Norman, Price Cluster, Ruby, Tokoyo and Yosemite.

d/ Carmel breakdown was available for the first time in 1988. Carmel variety is also included in California Types.

e/ In-Hull and In-Shell measurements and In-Hull weights were discontinued in 1991.

NOTE: Sacramento Valley includes these counties: Butte, Colusa, Glenn, Solano, Sutter, Tehama, Yolo and Yuba.
San Joaquin Valley includes these counties: Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus and Tulare.

TABLE 3: CALIFORNIA ALMOND ACREAGE, PRODUCTION AND TREES/ACRE, 1987-95

Year	Bearing Acres 1/	Total Meat Production			Average Trees Per Acre
		Metric Ton 2/	Million Lbs.	Lbs. Per Acre	
1980	327,000	146,000	322	985	N/A
1981	326,000	185,000	408	1,250	N/A
1982	339,000	157,000	347	1,020	N/A
1983	360,000	110,000	242	673	N/A
1984	381,000	268,000	590	1,550	N/A
1985	409,000	211,000	465	1,140	N/A
1986	416,000	113,000	250	601	84.5
1987	417,000	299,000	660	1,580	84.0
1988	419,000	268,000	590	1,410	86.3
1989	411,000	222,000	490	1,190	87.3
1990	411,000	299,000	660	1,610	88.4
1991	405,000	222,000	490	1,210	89.6
1992	401,000	249,000	548	1,370	90.5
1993	402,000	222,000	490	1,220	92.0
1994	403,000	330,000	730	1,810	92.7
1995	390,000	141,000	310	795	92.7

1/ Bearing acreage is defined as plantings four years and older.
2/ Rounded to nearest thousand.

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