

## THE AVOCADO VARIETY SITUATION TODAY

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*Talk presented at the Avocado Growers' Institute, Fallbrook, March 26, 1966,*

The avocado industry has been growing up rapidly the past few years. We know that with a well thought out, adequately financed promotion program, supported by modern, effective nation-wide marketing, tremendous quantities of avocados can be sold in this country, at a price that will return a profit to the grower. However, in order to sell large quantities of fruit in today's market, we must not only have fruit of a *quality* that gives consumer satisfaction, and a *volume* that allows marketing to keep an adequate flow of fruit moving, but we must produce fruit that the housewife will recognize as an avocado and have confidence that she will enjoy it.

With oranges we have essentially two varieties: navels and valencias. With avocados we have hundreds of varieties that have been packed and shipped in a single year. This might not be too great a problem if sales could be made on an individual basis; however, in today's Super Market, fruit *is not sold* to the individual housewife, instead, she buys what she likes the looks of, or what she is familiar with. This means that we must grow a good quality of fruit—both in eatability and in appearance.

Since every avocado seedling is a potential new variety, there have been hundreds of new varieties brought forth. Most of these have fallen by the wayside for one or more of many reasons. The California avocado industry was blessed with the establishment of the Fuerte early in the game. This came about when in 1911 F. O. Popenoe of Altadena sent Carl Schmidt to Mexico to search out a variety of avocado that might be grown here in California. As a result of this search, many bud sticks were sent back to Altadena. Bud stick number 15 grew exceptionally vigorously, withstood the 1913 freeze and otherwise showed strong characteristics. This one was given the name "Fuerte".

The Fuerte formed the backbone of the industry in California, but it does have the quality of being sensitive to climatic conditions. The irregular bearing habit of the Fuerte in many localities and its limited season, pressured growers into looking for other varieties, which would cover the rest of the year and bear more consistently. In recent years another drawback to the Fuerte has become apparent. It is prone to develop a skin blemish known as "corking" or "rusting", predominantly in areas that are subject to moderate to high levels of air pollution.

The variety that has emerged to compliment the Fuerte is the Hass, which was registered in 1932. It is interesting to note that it took this variety (currently number two in the industry) nearly 20 years to become established.

We are still looking for the ideal variety to fill the gap between the end of the Hass season (about the end of September) and the beginning of the Fuerte season which starts in late December. Many varieties have been tried and eliminated, One of fairly

general adaptability that is now recommended is the Bacon which was registered in 1948. But it too has qualities that limit its recommendation to areas where Hass or Fuerte cannot be grown.

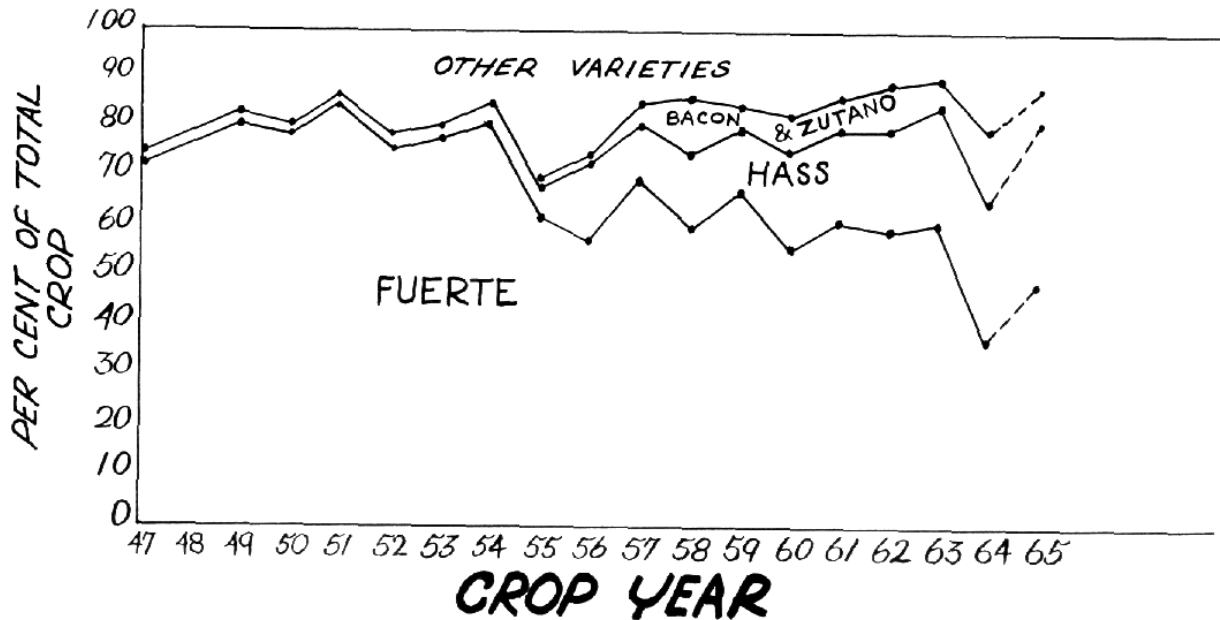


Figure above illustrates how the various, currently recommended varieties have taken a part in the California Avocado industry.

**AVOCADO VARIETY DISTRIBUTION\***

Crop and Variety	1944 or Earlier	1945 to 1949	1950 to 1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	Acreage Standing in 1965		
															Bearing	Non-bearing	Total
<b>AVOCADOS</b>																	
Anheim	83	49	73	9	11	5	5	2	--	--	--	--	--	--	237	--	237
Bacon	9	17	88	66	69	76	101	67	28	39	65	76	42	08	505	306	811
Fuerte	3,151	3,246	3,466	401	530	256	210	160	72	52	49	83	109	80	11,490	375	11,865
Hass	151	263	1,007	446	539	469	453	252	183	140	168	174	221	363	3,762	1,067	4,829
Jaine	--	7	25	39	43	54	36	32	5	18	8	4	1	--	240	32	272
MacArthur	35	94	386	29	36	44	22	6	21	16	34	6	10	2	673	68	741
Rincon	11	27	298	47	54	37	21	54	9	4	10	2	3	--	556	21	577
Zutano	12	22	208	65	68	49	47	33	23	6	10	7	12	14	507	69	576
Others	249	87	250	71	36	25	51	62	63	63	85	38	63	28	884	287	1,171
<b>All Avocados</b>	<b>3,701</b>	<b>3,812</b>	<b>5,801</b>	<b>1,173</b>	<b>1,386</b>	<b>1,015</b>	<b>946</b>	<b>668</b>	<b>404</b>	<b>338</b>	<b>429</b>	<b>390</b>	<b>461</b>	<b>555</b>	<b>18,854</b>	<b>2,225</b>	<b>21,079</b>

\* California fruit and nut crop acreages as of 1965 by variety and age growth — State summary.

The other fall variety which is recommended (including the San Joaquin Valley) is the Zutano, which was registered in 1932. The Zutano would be more widely touted if it

were not for its susceptibility to develop corkiness and end spot where air pollution is a factor.

As the plant breeding program under the direction of Dr. B. O. Bergh at Riverside progresses, the Zutano and the Bacon may succumb to an improved variety. Perhaps even the Fuerte will find a companion in a variety which will be less susceptible to air pollution, will possess a more uniform production pattern, and have better shipability. Even when a new variety does come forth, it will take many years for it to establish itself in the industry.

We can see that the Fuerte occupied between 70% and 85% of the total production with the Hass providing a very insignificant amount of fruit. Then in about 1955 the Hass began to assume a more important role in the market.

As marketing became more sophisticated in the post war era, it was realized that steps must be taken to standardize—that is—reduce the number of cat and dog varieties that were being grown. In 1965 the industry launched into an ambitious program of variety improvement. In four years some 1,000 acres of trees were top-worked to improved varieties. Interestingly enough about 47% of the trees changed were Fuertes being worked over to Hass. This change is reflected in the chart which shows that the Hass is becoming a very major factor, and this trend will no doubt continue.

The Bacon and Zutano have been taking an increasingly greater share of the fall market. Now we see that the four recommended varieties constitute about 90% of the industry production in a normal crop year.

The California Avocado Society Variety Committee, composed of growers, nurserymen, commercial grove care operators, marketing and University of California Extension people has spent over a year studying the current variety situation. The purpose was to arrive at a list of recommended varieties to be grown commercially in California. This recommendation is now complete and is being published and will be widely distributed.

Four varieties, Fuerte, Hass, Bacon and Zutano are presently the only ones recommended for commercial planting in California.

Six additional varieties, comprising the balance of 99% of California avocado production are also described in detail—but are *not* recommended for planting.

CALIFORNIA AVOCADO ACREAGE ESTIMATES BY COUNTIES  
AND STATE TOTALS AS OF 1965\*

County	Bearing	ACRES Non Bearing	Total
San Luis Obispo	1		1
Santa Clara	2		2
Santa Cruz		8	8
Butte	1		1
Fresno		39	39
Tulare	22	43	65
Los Angeles	2,004	6	2,010
Orange	1,389	35	1,424
Riverside	357	70	427
San Bernardino	116	4	120
San Diego	10,911	1,070	11,981

Santa Barbara	1,679	602	2,281
Ventura	2,372	348	2,720
STATE	18,854	2,225	21,079

\* *California Crop and Livestock Reporting Service,*