

## THE SAN JOAQUIN AVOCADO VARIETY DILEMMA

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The avocado industry in the San Joaquin Valley has more than doubled its acreage every two years all through the "60's". But stop to consider that there were only a few acres in 1960 and nearly 600 acres today, and above distinction doesn't seem as impressive.

Even so, avocado growing has come of age in the San Joaquin Valley. The foothill areas of Northern Kern, Tulare and Southern Fresno counties are dotted with plantings ranging in size from an acre or two to as large as 80 acres. And judging from plans now being made there will be some additional sizable plantings made in the next year or two.



Young avocado planting belonging to the Orlopp brothers located five miles east of Orosi in Tulare County.

Just what is the advantage in planting avocados in the San Joaquin Valley where the climate, both summer and winter, is anything but friendly to tender subtropicals? Fall maturing varieties from that region are picked in October and November, a time when summer and winter varieties grown south of the Tehachapi's are in short supply. This gives special advantage to those San Joaquin growers, who many years find little competition on the market at that time.

Even though avocados are successfully grown and marketed in California's Central Valley the variety situation is still unsolved.

Many Mexican seedling avocado trees are growing in the backyards throughout the San

Joaquin Valley. Some date back to the turn of the century or before. Mexican seedling avocados were shipped from Success Valley near Porterville to San Francisco in the early 1900's where they were served in some of the finest hotels.

Surprisingly, two acres of Fuertes were marketed for nearly 40 years on the Case and Case Ranch near Orange Cove. Although production was somewhat erratic, the spread of avocado root rot in the orchard was responsible for the trees being pushed out about 10 years ago.



Three-year-old Zutano and Bacon trees on the Ropes-Davis Ranch northeast of Ivanhoe.

Even though there were some feeble attempts to grow and market avocados from the San Joaquin Valley during the first half of the 20th century, no serious varietal evaluation was made until the late 1950's. At that time, Pat Foran, a citrus grower in Success Valley, became interested in the possibility of raising avocados on a commercial scale. He tried many varieties but only the Bacon and Zutano, although not ideal, were two showing the most promise.

Other variety plots established, along with observation trees scattered throughout Tulare County, confirmed Foran's results. A few "pioneer" growers willing to take the chance that Bacon and Zutano would prove commercially successful varieties, set out a few acres each throughout the citrus growing area in the early 1960's. After initial setbacks from major freezes, hot summer weather, and mistakes made in learning how to farm a new crop, most growers were agreed on the potential for commercial avocado production in the San Joaquin Valley. Rewards had surpassed the risks.

Consequently, additional plantings are made each year, with only a few failures. Most growers now know the type of nursery tree most likely to thrive and how to protect it against cold and heat for the first two years after planting. They also learned about planting distances, nutrient requirements and training young trees. And they also are now well aware that the name of the game is frequent application of water and lots of it during the growing season.

Bacon and Zutano have dominated plantings. Susan, a recent introduction into the San Joaquin Valley, has commercial possibilities and is now being planted by a few growers. However, because each of these varieties exhibits some faults, the search continues for the "ideal" avocado variety.

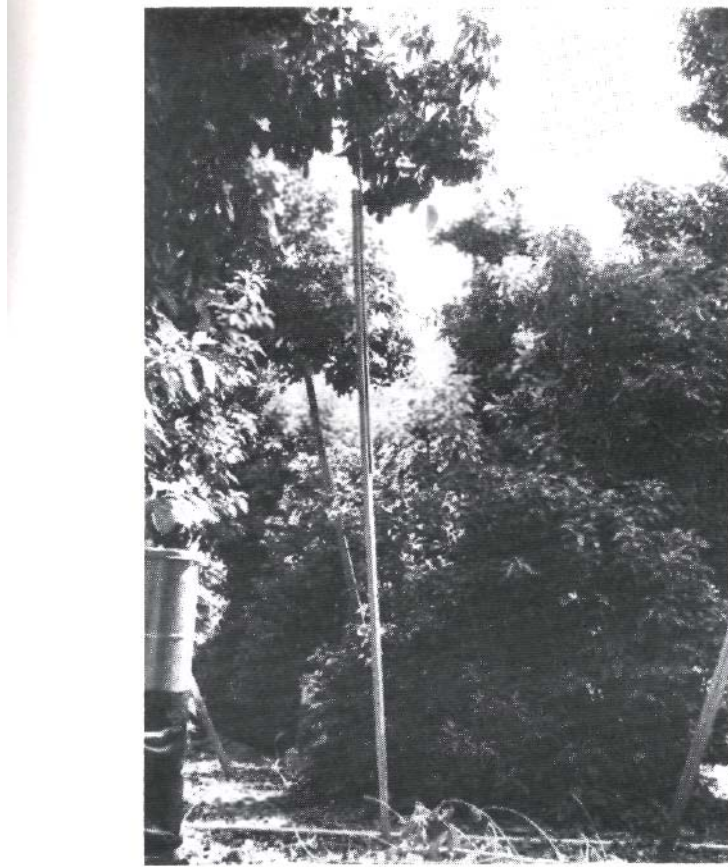
The Zutano reaches legal maturity by the middle of October and seems to produce well each year. However, its quality is not good, even though it is shinier and does not have blossom-end cracking and spotting as severely as some Zutanos grown in Southern California. The fruit is not mature at 8% oil content and may not fully soften until it reaches 10% oil. The Zutano tree is not as frost tolerant as Bacon.

Bacon was the ideal varietal choice when initial San Joaquin Valley plantings were made. The fruit matures in October with good quality and appearance. The tree is vigorous and quite frost tolerant. However, yields to date have been disappointing in many orchards with tree averages of only 20 to 30 pounds per year for 8 to 10-year old trees. There are as many reasons given for this low production as there are people who think they know the secret. The fact remains that production is low, although some years (1970 for example) seem better than others.

Susan is gaining favor because it is a good producer and one of the most frost tolerant varieties. The fruit has good external appearance and internal quality, despite the fact that it has a large seed which is loose in the seed cavity. Even so, the fruit has sold well on the market. The Susan tree is large and spreading compared to the tall upright growing Zutano and Bacon. Only time will tell whether Susan will justify the faith expressed by those now planting this new variety.

Meanwhile the search continues for a variety which will have all the attributes necessary to warrant planting in the San Joaquin Valley — frost resistant, highly productive, fall maturing and good quality. Somewhere a seedling, or controlled cross pollinated hybrid or old discarded or forgotten named variety exists that may fill the bill.

To this end the University of California Agricultural Extension Service and Agricultural Experiment Station Personnel are continuing to collect and introduce avocado varieties to the San Joaquin Valley. In addition to a cooperative variety trial now being conducted with Don Case in Orange Cove, another variety plot is under way at the University of California Lindcove Field Station. Nearly fifty varieties are now being evaluated.



Tall, heavy producing Zutano trees need props to prevent limb breakage in an orchard near Exeter.

Because many varieties take on a "new look" when grown in the San Joaquín Valley, there is no telling which one may show up as a potential winner. These avocados have less blotchiness and blossom-end spotting and cracking, tend to have longer necks and mature earlier than the same varieties grown in areas of Southern California. Consequently, many old and new varieties should be tested in this new area.

The San Joaquin Valley seems headed for increased avocado plantings and production in the future, if better varieties result in improved fruit quality and higher yields. Since all of the other ingredients are there—good soil, water, market and, for most years, the climate—the variety dilemma is bound to be straightened out to insure a bright and continuing future for a new area of avocado production in California.