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OBSERVATIONS OF HASS TREES IN ORANGE COUNTY

J. E. Pehrson
University of California, Farm Advisor in Orange County.

The Hass avocado acreage increases every year in Orange County.

Its popularity stems from its producing capacity. For example one Hass grove shelled off 11,000 Ibs./acre/year from 1952 to 1955. Not all orchards do this but the Hass is becoming a favorite with more growers all the time. Orchards in warm areas are being topworked to this variety.

There have been observed some Hass plantings which exhibit undesirable behavior. Growers have called attention to certain tree symptoms which justify some concern by persons in the avocado industry.

Observations in Orange County indicate the variety is more subject to extremes of climate, has greater susceptibility to minor element deficiencies and exhibits unusual bark lesions of a cause still unexplained.

Most people know about its climatic responses, especially to frost and cold weather. The 1955 summer heat wave vividly demonstrated how it behaves under extreme warm temperature. Many trees were hard hit in this county. Fruit drop was heavy. Leaf scorch was common. In a variety planting it was often possible to pick out the Hass as the trees with the most severe symptoms. So with Hass you'll sacrifice tree hardiness for productivity.

The nutritional behavior of this variety has been fairly consistent. Minor element deficiency patterns are more general on the Hass. A case in point involves a combination Fuerte and Hass grove. Six per cent of the Fuerte trees had obvious zinc mottling, 15 per cent of the Hass. In the same two orchards less than 2 per cent of the Fuerte had chlorosis, over 3 per cent of the Hass were affected.

Chlorosis shows up more severe with Hass in some local orchards. One Placentia grove had 8 trees die and 11 become very chlorotic out of 110 spaces. This means 17 per cent of the trees became affected. Other varieties in the same planting — Fuerte, Elsies, Zutanos and Bacons — had 2 per cent or less trees chlorotic. All stock was from the same nursery. They received the same care. Anyone have a good answer to this?

A final item on the red side of the ledger is the recent outbreak of bark lesions and eruptions in some Hass orchards. Mr. Hugh Walker first brought them to the attention of this office and to other growers.

The eruptions resemble cankers. The reddish brown stain is present with white sugary exudate. Under the bark at these points there has been a hollow pocket of watery sap. This will often squirt out if the bark is pressed. The wood underneath is discolored and disfigured.

Members of the Citrus Experiment Station have made investigations, primarily of exploratory nature.

The extent of this disorder has not been established. It may be another reaction to 1955 summer's 116° temperature, moisture stress or neither. It may fade out and never become a serious problem. Obviously it would be unwise to use these trees as bud sources.

Now what do all these things mean to a grower? Or to a prospective grower?

First the importance of healthy trees in the right place is obvious. Some acreage expansion of this industry has been with less than top quality nursery stock. This isn't pointing the finger at nurserymen but rather at growers who buy or accept poor quality trees. A healthy tree should be one grown in disease-free soil on rootstock seed from a selected disease-free parent and with bud source from a healthy producer. There's so much we don't yet understand about avocados and their behavior. It's important that possible trouble be avoided.

Secondly these remarks emphasize the necessity of "good" location. When you're considering an avocado planting pay close attention to climatic and soil conditions. The wind and frost hazard will always work against the grower. So will poor soil conditions. Bear in mind that an orchard is an expensive investment. The best locations with the best soil is cheapest in the long run. Planting a variety like Hass in cold locations or in obviously calcareous soil just isn't sound business practice. It's a productive variety, true. But it's also a weak variety in many respects, when not planted in a good environment. If you're interested in this variety for your orchard get the best trees possible and put them in your best locations.

Typical bark lesion found on many Hass trees is pointed out by J. E. Pehrson, University of California farm advisor in Orange County. Lesion resembles a canker with reddish-brown stain, sugary exudate, watery sap pocket and discolored wood under bark.