

## AVOCADO PRACTICES IN VENTURA COUNTY

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This afternoon I would like to give you a very brief bird's-eye view of the cultural practices our growers are performing in this county and their thinking as I have been able to pick it up along the line.

Now, if you were a bird and taking a little trip with me, you would have to fly quite a few miles. Those of you who know the industry of this county will realize that there is an orchard here, an orchard there, and another over there—pretty well scattered around over the county and not concentrated. Each one of these orchards represents a little experiment station in itself. We don't quite know what avocados are going to do in each of these areas. There are lots of variations. Each of the farmers has his own ideas on what he thinks is the right practice for his place. Far be it from me to tell him that he's wrong, because he is very likely right for his situation.

In order to look at the present and get an overall perspective, let us delve back into the past a bit. Recently an article written in 1926 was called to my attention. It was written by the late Vincent Blanchard, who, many of you remember, was formerly the Farm Advisor in this county. He suggested that there were possibilities for 20,000 acres of avocados in Ventura County. That was 25 years ago, and Mr. Blanchard was basing this prediction on his judgment and experience. Since then we have accumulated about 2,000 acres of avocados. There were less than 100 acres at the time he made that statement. Do you think he was way off? It sounds high, doesn't it? My personal opinion is that it's not too high. There is that same potential here in this county today—20,000 acres. Now you might ask, where will it come from? There certainly is plenty of opportunity. For instance, the lemon industry—20,000 acres; at least one half of it is suited in climate and soil for avocados. The orange industry of 18,000 acres—much of it is also suitable for avocados, perhaps four or five thousand acres. There is quite a bit of our coastal walnut acreage which is suitable for avocados—another four or five thousand acres. An acre here and an acre there adds up to quite a few acres. This means that, essentially, avocados will replace other crops in this county. I do not believe the water supply will allow us to expand to any new agricultural land. It will be a replacement proposition.

The question is, will the growers move out the crops they are growing now and start raising avocados? Let's look at some of the things that might alter their minds one way or the other.

First, the soil. Our soils in this county, for the most part, are deep, well drained soils. Those of you who are familiar with soils will recognize the fact that the Yolo series means deep, well drained soils, and a good share of the county comprises this type. We have practically no trouble in the operation of our soils. Of course, our avocado acreages are young and, for the most part, our orchards are cultivated. We have some of the older orchards in non-tillage, both the weed-spraying system and the permanent cover system. Soil types certainly wouldn't limit this possible switch-over to 20,000 acres.

Second, water supply. We have already recognized that if we planted these 20,000 acres to avocados it would replace some other crop. For the most part the acreage in our county that is presently being irrigated can continue to be irrigated with the water that we have in underground basins. There are several short areas, and those of you here in the county realize that we are just winding up a series of 18 field meetings trying to suggest to growers how they can save water by doing a better job of irrigation. Some growers are going to have to get by on very meager supplies. If we get good rains again, most of our underground reservoirs will be replenished rather quickly, so the situation will not be so critical. Because our source of water is from wells and, for the most part, on the farmers' own property, furrow irrigation is employed in the main. There are some orchards that are sprinkler irrigated, but they are certainly in the minority. The trend is, however, to go to sprinklers and rightly so, because anyone who has tried to furrow irrigate a mature avocado orchard knows the difficulty in controlling the water with a mat of leaves present. Also sprinklers are more adaptable. But it costs money to have a booster pump and steel pipe to provide the pressure for the operation of a sprinkler system. This investment deters people as long as they can satisfactorily irrigate their trees with furrows.

There is one other phase of the water problem that has some of us wondering. It is what we call salinity. You'll hear more about it this afternoon. Those of you who are familiar with the county realize that most of our well waters are on the saline side. They are not good waters. They contain various salts in solution and, in some cases, the content of these salts reduces growth and productivity. By and large, most of the waters are high in total salts and not in particular toxic ions, so we can live with these waters if we leach. In only a few orchards the trees have been defoliated and the production has been lost by the effects of saline irrigation waters. If we get heavy winter rains they would leach the salt from the soil and we could continue to use these poor waters for avocados. At present, almost all trees show some tip burn. But I have faith in the weatherman; rains will come again and water will not be a serious limiting factor in expanding this 20,000 acres.

Could it be disease? Essentially, we have no Root Rot problem. Our deep, well drained soils do not cause the Root Rot trouble so we're free of that. Among the other diseases, the only one that we recognize as a problem is Sunblotch, a virus disease carried in our trees. The older and older our orchards become, the more and more trees we see going down with Sun-blotch. And there is nothing you can do about it. If you have a tree with Sun-blotch you cut it down and plant another tree. This creates a replant problem. I want to remind those of you who are familiar with scaly bark disease in citrus orchards that we have learned to use registered trees. Perhaps we should pay more attention to

Sunblotch, but, at present, it is not a serious limiting factor.

Could it be pests? No, I don't believe pests would prevent growers from planting new groves. Fortunately, we just don't have any pest problems to date. None of our growers have had to spray or dust in the last several years. Perhaps the next few years may see some change in this, but at present we don't have a pest problem.

Could the fertility of our orchards be limiting? Certainly, I don't believe it's going to be a major limiting factor. Most of our growers get by on small amounts of nitrogen fertilizer. Probably the average in the county is close to 200 pounds of nitrogen per acre. There has been one indication of the possible beneficial effect of phosphate fertilizer on avocados. That's really a story that Domingo Hardison should tell you, because it's on his ranch and it's his story.

Could it be climate? No, in fact climate is one of the main reasons for shifting to avocados. First of all, our trees grow well all the way from the coast to the interior. Throughout the county we can raise beautiful big avocado trees. The question is whether they'll bear or not—but that's another story. We can raise good trees. Our frost hazard is low in this county generally. Certainly no one would think of planting avocados in the bottoms of canyons and rivers where we know it's too cold, but our higher foothill areas, along edges of the valleys are excellent for avocados. Then, the wind blows down through here, too. I think -we get our share of the wind like everyone else and sometimes I think a little more. But, generally speaking, it hasn't done an awful lot of damage. Trees with heavy loads of fruit have had much of the fruit knocked off and limbs broken at times, but the biggest loss is fruit scarring. Windbreaks certainly help. The real solution lies in planting orchards in more or less sheltered areas which means our coastal areas. We're not thinking so much about the interior. The avocado industry in the coastal area has the climate, soils, water, and all requirements which seem to be all right for avocado production.

But, why is it that we haven't reached that 20,000 acres of avocados yet? It's my opinion that it is not cultural. There are no cultural problems in this county that would limit avocados to the present 2,000 acres. Certainly the problem is what I like to call "the economics of the variety situation." That may sound like a long handle but I don't think you can divorce the two parts. You talk about variety and you have some economic implications. You talk about economics and you have some variety implications. You have to think of them together. Let me explain what I mean. The problem is really two-fold. What can we expect in the economic situation in the avocado industry? For a coastal area, the Fuerte, for the most part, doesn't bear well. We have to think of other varieties. What other variety will we plant?

We don't know too much about them. So the grower says, "I know what I'll make out of lemons. I've been raising them for years and I make so many dollars an acre and I know what I can count on and this and that". Or, "I have a good producing walnut orchard" or "oranges aren't doing too well right now but maybe they'll get better". He knows what he's working with, so he'll stay in the orange business or lemon business and let somebody else play around with avocados. I think that one of the limiting factors in this county is competition from other crops. Since we can raise other crops with success our 20,000 acres will stay in other crops. Another point is, it takes a lot of money to get into

this avocado business and there is a certain amount of risk. When you invest anywhere from \$3,000 to \$5,000 an acre in an avocado enterprise you're risking a lot of your capital without knowing what your return will be. On the other hand, you might put just a little less into the lemon orchard and know what you'll get out of it. Certainly our expansion hinges around "the economics of this variety situation".

Our more productive varieties, speaking in terms of yields, are those that mature in the summer. The important ones are Dickinson, Nabal, Hass, Anaheim, Rincon, and, of course, our old stand-by up here, the MacArthur; all maturing somewhere from May into October. Those of you who have studied the industry know that this is when Florida and Cuba are in the market. In addition, all kinds of fresh vegetables and fruits are available for the housewife to select. So, how many of these summer-maturing fruits can be put on the market? That's where part of this economic picture comes in. Essentially the marketing of the avocado in this county is through one cooperative marketing organization. In this way the growers can sort of pull together and solve their marketing problems. No one knows what the future holds for the great development of summer-maturing varieties.

Another opportunity is the selection of varieties that might mature in competition with the Fuerte. That is something that very few of us have thought out in detail and it presents a real problem. If we had varieties that would produce heavy yields here in competition with the Fuerte we might plant them and then what would the picture be?

Let's go back to our trip around the county with our little bird looking down on each of these scattered orchards. You would see each grower trying out different varieties, spacings, methods of cultivation, irrigation, and fertilization. Each would be doing his little share of finding the answers. Looking ahead, what would you see in another 25 years? Would you see 20,000 acres or would you see 2,000 acres? I believe that you might see 20,000 acres because there's a spirit among the growers in this county to work together and solve their problems. They can find varieties; they can pull together on the marketing; they can stabilize their economic situation. Then they'll say, "Well, I can make more money on avocados than I would ever make in lemons". So certainly that's the future we have in Ventura County. : We hope that many of you can come back in another 25 years and see if I have misguessed along with Vincent Blanchard on the future of our avocado industry.