

## **AN AVOCADO FIELD DAY IN AUSTRALIA**

**Presented by Stanley Shepard**

*Avocado Growers, Carpinteria, California.*

*From notes taken by M. A. G. English, Secretary, July 7, 1961*

Approximately 120 avocado growers attended a Field Day in the Redlands district on Friday, 7th July.

The morning session was held at Mr. H. W. L. White's farm at Redland Bay, 20 miles southeast of Brisbane, and took the form of an address by a prominent California avocado grower, Mr. Stanley Shepard.

Following Mr. Shepard's address he answered a large number of questions on many different phases of the avocado industry.

Mr. Frank Sharpe, in introducing Mr. Shepard, stated that he had been a citrus and avocado grower in California for thirty-five years. He was a former Vice-President of the California Avocado Society and took a leading part in the avocado industry in California. He had approximately 5,000 trees mainly of the Rincon, Hass, MacArthur, Fuerte and Anaheim varieties.

Mr. Shepard divided his talk into a number of sections and the following notes are made on these various sections.

### **DISEASES AND PESTS**

When the industry was first started in California, avocados were thought to be pest-free, but growers soon found otherwise. Australia would find this same thing as production increased.

Although California had not had the Queensland fruit fly, growers had experienced infestations of three different other fruit flies. By adopting vigorous means they had all been eradicated. A virus disease called Sun Blotch was troublesome. It was not caused by the sun as would be imagined by the name. The effect of the disease was to open the tree up thereby allowing sunburn. It was transmitted by budwood and seed. Its main effects were dwarfing of the trees and marking the fruit.

Thrips were pests which varied according to climatic conditions. If they were severe, a Malathion treatment was usually effective. Applications had to cease two or three weeks before harvesting. However, growers found that Malathion would sometimes kill the parasites of Brown Mite and so insecticides were used as little as possible.

Spotted mite caused leaf drop and in severe cases almost defoliated the trees.

Cinnamon fungus was the most serious of all diseases. The industry had spent years and a good deal of money trying to control it. The Riverside Experiment Stations had done a great deal of work on trying to find resistant root stocks, but so far with only moderate success. The Duke variety, used as a root stock, showed some resistance to Cinnamon fungus, but not complete immunity. However, under a given set of conditions, the Duke rootstocks would hold up better than other varieties. This fungus could be transmitted on shoes and tools by animals, etc. It required moisture for its spread and it was found that bad drainage and heavy soils aggravated it. It had also been found that seed taken from fruit which had fallen to the ground on fungus infected soil, could transmit the disease.

## **VARIETIES**

It was not until 1900 that budded varieties were introduced in California and it was not until 1920 that the industry commenced to forge ahead. Most of the early varieties had since gone out of production.

The Fuerte variety was a revolutionary discovery. It was first selected because it stood up to frost. The name means strong in Spanish. It soon established itself as the leading variety with 70 to 80% of the total acreage. Owing to its irregular bearing habit the search for new varieties continued.

Hass was the best of the later varieties but its colour was a handicap.

The Dickinson variety, also purple, which had been introduced earlier, was a failure and unfortunately Hass suffered because of its similarity of colour.

He was most impressed with Sharwil variety which had been developed in Queensland. He expressed the opinion that this could become a leading variety in this State.

The Sharwil appeared to have everything in its favour—colour, shape size, small seed, vigorous growing habits, etc.

The Edranol was good fruit but it had bearing problems.

The MacArthur was also a good fruit in California. It was popular on the market and the fruit held well on the tree. From what he had seen, the MacArthur had a better shape in Australia than in California. The neck was not as pronounced and provided the tree cropped well, this variety could be popular in Australia.

The Rincon was a good bearer and in this respect was better than Fuerte. The trees were smaller than Fuerte trees and therefore easier to pick. It also had the habit of off-blooming, thereby bringing in off-season fruit which were usually very profitable.

The Hellen was a variety which was going out of favour.

The Corona was an attractive fruit and the tree cropped well, but its keeping qualities were suspect.

Mexican root stocks were used almost exclusively in California, the reason being that most irrigation water was fairly saline and it was found that Mexican varieties were more tolerant to salinity than Guatemalan varieties. Of the rootstocks used, Topa Topa was

the main one, with Mexicola and Jalna also being used.

## **MARKETING IN CALIFORNIA**

The Calavo Organization was the principal marketing body, handling about 60% of the crop. It had been formed in 1925 to overcome the chaos which had developed in the industry. The producing area was divided into twelve districts each of which had a Director. The staff included a General Manager, a Production Manager, an Advertising Manager, etc. Field men were appointed to advise growers on harvesting with the object of co-ordinating deliveries and spreading the crop as much as possible. Most individual varieties are spread over a two month period and environmental variations from district to district spread further the time a variety can be harvested.

The Organization now had an even flow of fruit to the market over ten months of the year.

The industry still had tremendous fluctuations in production, varying from 6,000,000 to 11,000,000 flats per year, each flat containing 13 lbs. of fruit.

## **RESEARCH**

The California Avocado Society was essentially a research, organization and did not handle any marketing. It had done a tremendous amount of good and was continuing to do so.

All new varieties introduced are submitted to a Variety Improvement Committee which thoroughly tests them before they are accepted as named varieties.

The Riverside Experiment Station and the University of Los Angeles had obtained some promising new varieties as a result of a programme of plant breeding.

## **FERTILISING**

Most fertilising was done with nitrogen only. It was too expensive to use general fertilisers or animal manures, but besides this, it was found that the trees did not require the other elements. The main form of nitrogen used was urea, applied to the ground. When applied as a spray it was found that some leaf burning took place, particularly in warmer weather.

In California it was found that excessive amounts of nitrogen applied to the Fuerte variety affected the crop. This might not be so in Queensland which had a much heavier rainfall.

The only leaf sprays applied were trace elements. As the rainfall of the avocado districts was low, very little leaching took place. Leaf analysis was the method used to determine the nitrogen content of the trees.

## **IRRIGATION**

Various methods of irrigation were used. Some used the furrow and cultivation method.

Overhead sprinklers were the cheapest means of irrigation, but inefficient in windy conditions and did not distribute the water as well as the furrow method.

The underhead sprinklers, i.e. sprinklers under the trees, were now being used and showed promise. Some growers added their nitrogen to the irrigation water.

Hardly any steel piping was now used for irrigation as it had been found that plastic piping lasted much longer and did not corrode.

## **WEED CONTROL**

Some farmers used clean cultivation for destroying weeds, others herbicides and oils. The latter method was the one most used as it was found that it was beneficial not to disturb the roots by means of cultivation.

## **PRUNING**

Very little pruning was done. The object was to shape the trees properly when they were young and to head them off if they showed a tendency to grow too high. As they became older the lower limbs were removed.

## **PROCESSING**

Practically no processing took place and the growers were glad of it. The only processed product was a sandwich spread.

The industry relied entirely on the fresh fruit market and to quote Mr. Shepard, "This year's fresh fruit does not have to compete with last years culls in cans."

## **TREE SPACING**

These varied according to soil types and topography.

Trees were planted close together on hillsides to give protection from wind and to hold the soil. In fertile soil where the trees would grow larger, the spacing was much wider.

Following lunch at the Redlands Experiment Station, two very interesting addresses on marketing were delivered.

## **BRISBANE MARKET**

Mr. Reg Murray, a member of the Avocado Advisory Committee, in speaking on marketing in Brisbane, stated that the true picture was clouded by too many inferior

seedlings being sent to the Brisbane market. Amongst them were a lot which he did not even class as poor quality. No agent could sell them with confidence as he knew that in doing so he was 'knocking' the avocado industry. No retailer could be expected to develop an avocado trade with seedlings. Some seedlings were reasonably palatable but he was of the opinion that no one would develop a taste for avocados based on seedlings. Even with the Fuerte variety it was found that some of them took far too long to ripen and usually this was associated with poor eating quality.

Buyers who knew avocados, generally looked for the Fuerte variety. On the other hand most consumers did not know varieties.

The demand in Brisbane was changing from the half bushel dump case to the single layer carton, even for the country order trade. Printed wraps were a good advertising medium.

Mr. Morgan made the suggestion that the industry should consider having small stickers for placing on each piece of fruit, provided the quality was satisfactory. By having the name of the variety on the sticker, the consuming public could be educated to the qualities of the different varieties.

## **SYDNEY MARKET**

Mr. Len Kerr, the Acting Manager of the C.O.D.'s Sydney Branch, then spoke on marketing in Sydney.

In that market, the Fuerte variety was the gauge against which other varieties were measured.

There were more Zutanos received this year than previously and buyers had reacted well to them.

Prices throughout the season were fair as Fuerte supplies were not heavy. He urged growers to hold back later varieties while the Fuertes were still in plentiful supply.

Unfortunately some growers marketed Anaheims and Nabals during the Fuerte season. The Anaheim was received well, but the fruit was a little large.

There had been fair supplies of Edranol and this also was a good variety. However this variety, together with Ryan and Rincon, were, to retailers, just another Fuerte. With proper publicity they would ultimately be accepted on their merits.

Unfortunately when the Fuerte season finished, some buyers ceased to operate.

It was a pity that some seedlings were sent to the market marked as Hass, Fuerte and other varieties.

The sooner that seedlings were kept off the market, the better it would be for the industry.

Buyers were at first uninterested in the Hass variety because of its purple colour and small size, but it was now commencing to sell on its merits. It was found that once the green varieties were off the market, there was a growing demand for Hass. Unfortunately its size was a disadvantage and some Hass had been marketed which

were far too small. Buyers preferred no more than thirty fruit to a carton or forty to a half bushel dump case.

The restriction on the early marketing of Fuertes was very desirable, but unfortunately some growers were bypassing it by using passenger train and road transport. A number of retailers had complained that the very early fruit was of poor quality, but they had been told it was their own fault for purchasing it.

It was found that, even after the transport restriction on Fuertes was lifted, a good deal of immature fruit was still sent to the market. This took too long to ripen in retailers' stores and held up sales. Monday was the best day for wholesale sales as retailers liked to sell the ripe fruit to consumers for the weekend.

There was an urgent need for spreading the crop. From mid-September onwards much greater quantities could be sold. Last year the deliveries in October and November were equal to only two weeks' supply in the peak period.

He urged growers to keep second grade fruit off the market when supplies were heavy, as inferior fruit caused an overall drop in prices.

For varieties other than Hass, the most desirable sizes were 16 to 28 to the carton. 18 to 20 was the ideal range. Whatever container growers used, it was essential that the pack should be a tight one.

The cardboard carton had proved to be by far the most popular. The single layer wooden tray was difficult to open for inspection. The only packing necessary was wraps. Woodwool or paper wool should not be used as this tended to cause sweating.

It was most important to see that the lids of the cartons were lightly taped down with cellulose tape.

In spite of lower values for most commodities on the Sydney market this year, avocado prices had been comparatively good. It was found that at the present time 500 packages per week was the maximum which could be sold comfortably.

There was great need for work on publicity. The C.O.D. Sydney Branch would be associating avocado publicity with a sales promotion campaign for tomatoes. This campaign would be embracing 2,000 retailers in Sydney. It was proposed also to extend the avocado publicity to hotels and large restaurants.

## **AVOCADO CONFERENCES**

Mr. J. H. Kidd explained the purpose of the annual conferences and urged growers to attend. Whilst Field Days were informative and interesting, it was at the annual conference that marketing policy was determined.

## **VOTE OF THANKS**

Dr. Trout proposed a vote of thanks to the speakers, to Mr. White and to Mr. Morgan, Senior Adviser in Horticulture, who acted as Chairman.

The Field Day concluded with an inspection of the avocado varieties and rootstocks

observational block at the Experiment Station.

### **COMMENTS BY MR. SHEPARD**

Our vacation in Australia was more for pleasure and to repair the ravages of trying to cope with present day living in these United States, what with Planning Commissions, Income Taxes, Relatives, Riotous Living, etc., but we did take time to see trees grown from graftwood from our own trees and varieties which we found very interesting.

Most of these varieties were doing very well, especially Rincon, Hellen, and Edranol. All of these were making good growth and the Hellen and Edranol were bearing much better than here. I picked a well matured fruit from a young Shepard tree that was just starting to bear and managed to keep it until it ripened with just as good quality as here. Hass bears heavily and almost all of our varieties seem to do very well, but so far there seems to be a worse gap in seasonal production than here and new varieties were needed to fill the gap.

The most promising Australian fruit that I saw was the Sharwil. This new avocado originated on the property of Mr. Frank Sharpe at Redlands Bay and is now in many locations and will soon be available in the U.S.A. It is a very strong growing tree and sets very heavy crops of properly sized green fruit with a very small seed. The flesh is excellent and it seems to me that this should become one of the leading Australian varieties, and it will be very interesting to see what it will do here.

Mrs. Shepard and I certainly recommend Australia for an interesting vacation, the people are friendly, the country is beautiful, food is excellent and the only thing wrong is that they drive on the wrong side of the road.