

Word from Australia

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Chairman, Australian Avocado Growers Federation. *(Mr. Lavers informally addressed the 1986 annual meeting of the California Avocado Society, and thereafter supplied this paper containing the substance of his talk.)*



While avocados have been present in Australia for almost a hundred years, the modern industry dates from the 1930s, when the first commercial varieties were imported from California and the first consignments of fruit were sold on the Brisbane market. Planting was restricted to a handful of keen pioneers until U.S. servicemen, stationed in the Pacific during World War II, taught Australians the joys of eating this exciting and exotic fruit, thus creating a surge of interest. The post-war rise continued until 1983, when prices fell in response to a fully supplied market and the previous optimism was replaced by concern of oversupply.

Plantings almost ceased, prices continued to fall, although they did not reach the depths more pessimistically expected; and the market continued to move the supply of fruit. In 1985, the last full year of production, the total crop was estimated at 1.5 million trays (6.5 kg), or about 10,000 tonnes, representing an increase of about 25% a year.

Queensland and New South Wales are the largest avocado producing states in Australia, with an estimated 55% and 40%, respectively. In Victoria, South Australia, and West Australia, where plantings are more recent, tree numbers are still small; but some areas show promise of future increase and the ability to fill production low spots in the market.

Most avocados pass through the larger eastern city markets—Sydney, Melbourne, and Brisbane—with smaller volumes through Adelaide, Perth, and Newcastle. The emergence of larger retail outlets, with their enhanced buying power, has seen a trend toward direct buying, thus bypassing the central market system. However, this has not

become a major move, and most industry people are happy to see the market retain its roles of setting price and quality.

VARIETIES

Our main varieties are Fuerte, Hass, and Sharwil. Differences in maturity time of the varieties, amplified by a marked climatic range between the growing areas, permit a twelve-month supply of fruit, although there is a low point in the late summer. Hass gives the highest production in most growing areas, and is the most popular with growers. Fuerte is a good producer on the Atherton Tableland and some other areas, but with a reputation for irregular bearing in some of the cooler areas. Sharwil is a top producer in favored areas, but these are not widespread. Fuerte has the big reputation with the consumer and is the undoubted market leader, with Sharwil a close second. However, the Hass star is rising in some markets, and opinion is that it equals Fuerte in Brisbane, is gaining in Sydney, but lags well behind in Melbourne.

Other varieties are planted in areas where climate does not favor the main three. Tony Whiley and his co-workers in Queensland believe that to improve production in the earlier part of the season in cooler climates, we need to find a cultivar with "A" type flowering pattern. He indicates that Gwen may have the necessary characteristics, but points to the need for field and market evaluation.

Two emerging varieties merit attention:

Pinkerton has shown consistently high yields in all areas grown, but there have been numerous reports of ripening problems: viz., hard areas and brown streaking in the pulp. Queensland DPI Horticulture Industry Group have examined fruit from young trees over three seasons and found the problem was reduced if the fruit were handled at temperatures higher than those used for other varieties. When stored above 10°C and ethylene ripened above 20°C, these problems diminish; but the risk of ripe fruit rots increases. The *Pinkerton* shows many favorable qualities, and studies are continuing.

Shepard did not show great promise when originally trialed in southern Queensland, but some years later, when taken to the Atherton Tableland, was found to be early, heavy cropping with tough skin and good consumer appeal. It is showing up well only in warm areas where a reliable early variety has proved most welcome.

In the 1983 Yearbook, I read the moving tribute to the late Stan Shepard, "Goodbye, Stan," which referred to his disappointment when the cultivar he developed failed to live up to its early promise. As a grower of Shepards in an environment where they shine, I would like to say, "*Thanks, Stan.*"

DISEASES AND PESTS

Phytophthora casts its shadow over all producing areas and is responsible for substantial loss of fruit quality and yield, as well as trees.

Ken Pegg and Tony Whiley, in Queensland, recommend an integrated control program involving clean nursery stock, resistant rootstocks, free draining sites, application of

organic litter through preplant cropping and mulching, sound nutrition programs, stabilizing pH at 5.5, and chemical control.

In 1985, a "Producer of the Year" competition was held in Queensland. The two orchards obtaining first and second places were both in an environment conducive to root rot and where the organism was prevalent. Using approved control methods, both averaged better than 24 tonnes of fruit per Ha (roughly, 21,000 pounds per acre).

An example of successful companion cropping occurs in northern New South Wales, where avocados have been introduced to traditional banana slopes; soils are relative shallow, poorly drained, and *Phytophthora*-infected. Avocados perform satisfactorily while bananas are present, but succumb if the bananas are removed. The local belief is that bananas remove excess water and contribute litter, since no antagonist has been demonstrated.

Post-harvest Problems—which include the fungal diseases anthracnose stem-end rot, lesions from fruit-spotting bug and Queensland fruit fly—are initiated when the fruit are on the tree but appear after harvest, resulting in rejection of fruit. Fortunately, improved spray technology and more efficient orchard sprayers have greatly assisted control, but cost of application and the effect on the ecology cause concern. Victoria, South Australia, and West Australia are not troubled with these problems, and do not require the same spray program.

Other Pests include Latania scale, mites, and Monolepta—the latter a small brown beetle that can singe new growth like a flame thrower. The avocado flushworm, or leafroller, was once considered a low grade pest, but has suddenly sprung into prominence in some areas requiring additional insecticide treatments.

Two entomologists, Dan Smith and Dan Papacek, reported introducing Integrated Pest Management (IPM) into a number of large commercial citrus orchards in Queensland with spectacular savings in insecticides and cost. They maintained levels of one-seventh to one-fifteenth of the insecticide used previously for several years without reduction in crop or quality. In Queensland, IPM is being extended into avocados. Biological control of fruit fly using protein baits is showing great promise, and work is continuing into spotting bug and flushworm control.

THE FEDERATION

Clean Trees. The Federation liases closely with state departments in sponsoring two schemes to enable nurseries to supply disease-free planting material. The Australian Nursery Voluntary Accreditation Scheme (ANVAS) encourages nurseries to supply *Phytophthora*-free stock. The Virus Tree Programme maintains a register of true-to-type and sunblotch-free scion and rootstock selections. Most cultivars in the VT Programme were imported from California; but there are two Guatemalan rootstocks selected locally which, although lacking genetic resistance, have the capacity to produce new roots in a *Phytophthora*-infected environment.

Marketing and Promotion. Situated far distant from the main avocado consuming countries of the northern hemisphere, Australia has a freight disadvantage in developing a viable export market. A modest trade has developed with southeast Asia, and trial

shipments to Stockholm and Paris have been well received. At the Federation Conference in 1986, the theme "Beyond The Farm Gate" generated enthusiasm for export market development.

There appears ample opportunity to expand domestic markets since only one in three Australians has been shown to eat avocados, and annual consumption is a little over 500 g per person. Each state conducts its own promotion in the consumer area where its fruit is marketed. The Federation helps by assuming a coordinating role advised by Queensland's COD Promotion Department, which runs the "Fresh Is Best—Naturally" program for Queensland's range of horticultural products.

Programs have been targeted mainly on shoppers and school children and have proved to be stimulating, imaginative, and limited mainly by low budgets. The thrust has been that avocados:

- are good to eat,
- are easy to prepare,
- will go with anything.

We like the idea widely adopted by the California Avocado Commission that avocados should be an everyday food rather than a luxury item, and we try to convey this in our point-of-sale leaflets and recipes.

There are still plenty of misconceptions that avocados are bad for people on special diets, so we are publicizing the recommendations of the National Heart Foundation, as well as state health authorities, that people with heart conditions or weight problems can enjoy avocados providing they do not exceed acceptable fat or calorie intakes.

The Federation supports the conviction that the customer is always right, and the customer has convincingly shown that they want avocados that are ripe and can be recognized as ripe. A small number of merchants are ripening using banana ripening rooms, but attempts for a widespread Ripe Campaign have received a lukewarm response. Retailers see risks more clearly than benefits, and this is evident in the way they discount softening fruit. In most stores, shoppers can be seen applying a well practiced thumb to tired fruit in their search for the one to take home. We believe this is not good for shopper or retailer. It certainly is not good for our industry.

One large retailing chain recently announced a change of policy to buy ripe only. We are watching this move with great interest.

THE ECONOMIC CHALLENGE

The Australian industry shares with most primary producing countries of the western world the problem that costs are escalating faster than gross returns. Growers have a need to lift efficiency, and this means increasing the output of premium fruit per unit of cost. Much existing technology needs to be applied, and the Federation complements extension services by sponsoring a regular publication aimed at improving communication and grower education. However, the search must continue into new technology, particularly plant breeding, rootstock selection, cultural methods, IPM, and

post-harvest handling.

The Federation gratefully acknowledges the contribution that research and extension workers, marketers, and promoters in the USA, supported by forward thinking growers, have made to the world avocado industry.

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