Avocados

Department of Agriculture, Western Australia
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The avocado, (Persea americana), is a member of the laurel family, and a close relative of the common shade tree, camphor laurel. It is native to Mexico, Central America, West Indies and nearby areas where the fruit was often a major part of the diet of the local people.

The tree is medium to large, and classified as an evergreen, although some varieties lose their leaves for a short time before flowering.

**Commercial potential**

During the past ten years there has been a rapid rise in the number of trees established in Western Australia, and it is estimated that 15,000 trees have been planted. Before this period, trees were known to grow well in garden situations throughout the State, principally in the Perth metropolitan area. Observations made on these trees and on trial plantings established in fruit orchards suggested that avocados had the potential to grow and produce commercial crops. Plantations exceeding 1000 trees have been established with good quality fruit now flowing onto local markets.

Preliminary estimates, based on comparative consumption patterns in other Western countries, indicate that produce from about 40,000 trees could be consumed locally and not adversely affect the viability of plantations. However, fruit is marketed in Western Australia from eastern States and New Zealand sources.

The balance between imports and locally produced fruit may be the answer to the continuation of a successful industry in Western Australia. Those contemplating entering the industry are cautioned to examine carefully local demand and local production against possible imports from outside the State.
Success in establishing an avocado plantation in this State will depend on: close attention to planting certified grafted varieties; planting disease-free plants; the provision of good windbreaks; controlling pests; having the resources to apply large quantities of good quality water; establishing a balanced fertiliser programme; and having access to adequate funds to do all these operations professionally.

**Growth details**

Trees generally flower in the spring and fruit forms by November. Harvesting spreads from April through to December. Variation in flowering and fruiting depends on where trees are grown and the variety.

The flowers originate from the current year’s growth, each flower functioning as a female on one day, and re-opening as a male on the following day. Flies and other insects are the main pollinators. On the basis of when the female and male parts of the flowers are open, avocados are classed in two groups. In Class A, the female part of the flower opens in the morning, and the male part in the afternoon of the following day. In Class B, the female part opens in the afternoon, and the male part in the morning of the following day.

Varieties from each class, therefore, should be planted together, at least until more is understood about the factors affecting pollination.

The main varieties of avocado have come from three races: West Indian, Guatemalan and Mexican. However, many hybrids have developed, as these races appear to cross readily.

Varieties with a low spreading habit are easier to harvest and manage and are not so prone to wind damage. An example is Fuerte, which appears to do well locally. The characteristics of the race, from which the varieties have originated, should also be considered.

As the varieties cross-pollinate readily, named varieties should be produced by grafting to achieve uniformity which helps management and marketing. Seedling avocados may be low yielding, irregular in shape, large-seeded and of poor eating quality.

Results from trials in the Perth metropolitan area and the South-West of Western Australia and, more recently, orchard-type plantings indicate that the varieties Fuerte, Hass, Zutano, Bacon, Reed, Nabal and Locatori will grow and produce crops of commercially acceptable fruit. There has been some variation in these varieties between different properties, indicating a micro-climate, management or rootstock/variety out-turn. Frost has extensively damaged Hass in some locations, whereas Fuerte has survived and grown away the next season.