

branches that are too large or shade out the lower parts of the tree are selectively removed. Greg has several demonstration blocks at Pine Tree Ranch and Cal Poly Pomona and several growers are testing the method in their own blocks.

The PRC has set up three long-term demonstration trials that are being used to teach these concepts and demonstrate long-term canopy management techniques to all interested. Please watch for field meeting notices in the California Avocado Commission *Greensheet* for opportunities to visit these trials. 🌱



Canopy management trials at ACW Ranch, Fallbrook

AN IMPRESSION OF NEW ZEALAND

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New Zealand consists of two large islands located southeast of Australia. About 70% of New Zealand's avocados (primarily Hass) are grown around the Bay of Plenty area on the North Island. This area has a southern latitude comparable to Ventura. The winters are warmer than Ventura and the summers are cooler. There is always high relative humidity and plenty of rain. In the Bay of Plenty there is approximately 48 inches of rain per year. There are even some areas where rainfall can be as high as 120 inches per year.

The total planted acreage is around 4,000 acres which last year (2000) produced 17 million pounds. Three quarters of the acreage is under 10 years of age and production in the year 2010 is projected to reach 88 million pounds. Avocados are the third most important export crop after kiwifruit and apples. The bulk of this fruit is exported to California and Australia, the majority going to California. Four companies export most of the fruit and have allied themselves with some California packers for distribution in the United States. Domestic fruit is sold at a fraction of the export price. Additionally, two domestic companies produce oil from lower quality fruit.

The majority of the acreage is planted on flat ground and harvested with cherry pickers. Partly because of the young age of the trees and also the wonderful climate, fruit sizes tend to be large.

Because of all the rainfall, postharvest fruit decay is a major problem. Prior to harvest the grower may apply as many as 12 copper sprays a year to control both stem end and body rots. This material is not very effective, unfortunately, against the anthracnose fungus, which is responsible for much of the decay. Great care is used in picking the fruit to avoid damage and thereby reducing the incidence of fruit rots. For example: in the packingshed, the bins are gently emptied onto the grading line to minimize damage. To further reduce fruit quality problems, the fruit is off the trees and onto the boats in

just a few days. Another technique they use is to set aside a "library" tray of fruit. This is a representative sample of fruit from each grower and picking date that the packinghouse keeps to determine if problematic fruit arriving at the export destination was a result of practices in the field and packinghouse or in transport. In order to reduce the amount of postharvest problems in the US market, fruit bound for California is picked early in the season and shipped often under controlled atmosphere. The trip to the US even on the fastest container vessels can take 12 to 14 days to reach Long Beach. In previous years, the voyage often took as long as six weeks and major problems of fruit quality were an issue. Fruit that is picked later in the season that is destined for Australia is frequently air transported in order to insure good fruit arrivals.

Root rot is present, but even with the high rainfall it is limited in scope. The lack of a serious root rot problem is probably due to the high levels of soil organic matter and its sandy texture. Regular trunk injections with phosphorous acid control the disease when it is present. This is also an environment that pests love. There are five native leaf roller species that require control. These leaf rollers are a challenge for the avocado grower. *Bacillus thuringensis* is not very effective in this environment and many other chemicals are used to combat these lepidopteran pests. Greenhouse thrips is also a problem and *Thripobius semiluteus* was recently introduced from California to control this pest. The whole agricultural community from dairy to apples is attempting to go "Clean Green," similar to what we call IPM (integrated pest management).

On the whole, New Zealand is a country that is extremely reliant on agricultural exports to survive. Avocado production is expected to continue to increase and they will need to hunt out new markets in the world for their avocados. In the future, expect to see more New Zealand avocados in the US market. 🌱