

Fruit Growing in The South Pacific

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I have always had an interest in Australia and New Zealand, especially in their fruit farming methods. I have corresponded with progressive Australian and New Zealand growers and fruit officers about new varieties, methods of production, and other developments of mutual interest.

However, it wasn't until 1957 that I was finally able to work out plans for a trip to the South Pacific to see some of these things for myself. I boarded a plane for the first leg of my journey on December 9, 1957.

New Zealand

My first stop in the Pacific was Auckland, on the North Island of New Zealand. It is mainly tropical and I found very little deciduous fruit.

Further south, at Hamilton, in the rich Waikato District, I visited the Sunfruit Orchards and Nurseries, which specializes in the production of apple trees with three or more varieties on them. Most of their trees are on Northern Spy rootstocks, which are propagated by cutting up the Spy roots and sowing the pieces like potatoes. Here I saw an interesting ornamental fruit that we should try. It is a peach seedling budded with a weeping type peach at five feet on the stem. Later the weeping peach portion is budded at the top with an upright, double-flowered variety. The cascading blossoms of the weeping type with the globe of flowers at the top are quite spectacular.

Near Hamilton, I also saw the original tree of the Sage McVerna plum. This plum is a large, red-fleshed semi-freestone, which ripens earlier than Elephant Heart. It propagates readily

on peach, is vigorous, productive and highly resistant to *B. pruneri*.

Still further south, on the east coast of the North Island, is the fruit section at Hastings and Havelock North, which reminds me of the Watsonville, California area, with its apples, peaches, pears and sweet cherries. It is rather interesting that cherries are grown here at a profit in huge cages of poultry netting supported by large wooden poles or used train rails, as protection against birds.

At the Havelock North Station apple varieties are tested on Malling IX rootstocks. The New Fryberg apple, introduced by this station and the Fruit Growers' Federation, is an excellent eating apple similar to Newtown, but lacks color. Kidds Orange Red, a Delicious-Cox cross also looked good.

Golden Delicious grows to perfection in the Hastings area. They pick it on the green side and ship it to England.

It was in Hastings that I made my first contact with the New Zealand Fruit Growers' Federation. These folks greatly facilitated my further studies of New Zealand orchards. This organization, with headquarters in Wellington, unites the fruit men into one central group with a collective voice in dealing with the government and others on matters of interest to the growers. They maintain stores in all growing areas to supply growers with an economical source of chemicals, equipment and other orchard supplies, as well as with the latest information on fruit growing. The Federation maintains a nursery for the propagation of virus-free stock at Levin, southwest of Hastings. All their rootstock stoolbeds are indexed and ap-

parently free from viruses. Their budwood is selected from superior trees of known production, carefully checked for variety trueness-to-name, and indexed by the Commonwealth Scientific and Industrial Research for virus diseases. This program has worked out well. The biggest complaint by growers has been the difficulty of getting enough trees.

Northern Spy, which used to be the main apple rootstock, has shown certain weaknesses, namely, susceptibility to wet feet, and a tendency to develop a one-sided root system and to carry mosaic without showing symptoms. Interest now runs toward the more vigorous of the Malling and Malling-Merton stocks. Malling XII, M XVI, MM 779 and MM 793 are preferred. MM 793 gives a tree of Spy size, and MM 779 is like M XVI but more resistant to wooly aphid.

At Nelson, on the north tip of South Island of New Zealand, the manager of the local Federation showed me around the area. Here, lemons, peaches and apples thrive side by side. They apparently have enough cold to break the rest period of deciduous fruits, and yet it is never cold enough to injure citrus. Cox and Jonathan are the chief apple varieties here, and many trees are now being worked over to Golden Delicious.

Central Otago, an inland fruit area in the southern part of South Island, resembles our Yakima, Washington region, and is under irrigation. Apples, apricots, sweet cherries and peaches are grown here in quantity. The cherries are grown in cages, and one grower, Mr. Len Jackson, has over five acres of cherries under fire (See Fig. 1). Here apricot trees are much smaller and lower headed than in the United States. Apple trees on Spy stocks are Malling VII in size. Strawberries here were the best that I saw in the South Seas. Marsh Bros. markets over ten

tons per acre of the British Talisman strawberry, in spite of heavy rains. California varieties looked poor.

Australia

A flight out of Christchurch brought me to Sydney, Australia in four hours. I discovered that some early apples and early peaches are produced in the Sydney metropolitan district.

At Bathurst, northwest of Sydney, in the state of New South Wales, I visited the State Experiment Station. In looking over their rootstock trials, I noted that the popular Packham Triumph pear was doing exceptionally well on *Pyrus calleryana* D-6 clonal selection. The apples in this area of rolling hills are almost all on Spy stock and medium in size. Peach is the leading crop, pear second and apple third. The J. H. Hale peach grows to perfection here, and seems to appreciate the relatively dry climate.

The Orange fruit section is about 35 miles west of Bathurst and about 1000 feet higher. Here the sweet cherry is important, and I saw some of the new varieties developed by Dr. F. T. Bowman on trial. Some are showing crack resistance along with good color and quality. The standard variety seems to be **St. Margaret**—a medium-sized, fairly firm black fruit. **Rons** seedling is one of the best in its season, will cross-pollinate St. Margaret, bears large crops, and is fairly resistant to cracking.

Rival is an open-pollinated seedling of St. Margaret, has large size, and good quality, and is more resistant to cracking than Early Lyons (probably the same as Geneva's Lyons.) **Regina** is a St. Margaret-Black Eagle cross that ripens with Rival. The fruit is large, excellent in flavor and crack resistant. The tree is a prolific bearer.

Ransom is an open-pollinated seedling of St. Margaret which resembles

its parent but is several days earlier. The fruit is large, not quite as solid or as highly flavored as St. Margaret, but more resistant to splitting.

Apples are also important in the Orange area. The favored varieties are Delicious, Jonathan and Granny Smith—a late ripening green apple with excellent keeping quality and flavor.

In the Melbourne area of the state of Victoria, in the southeast corner of Australia, I found apple trees small, about the size of Malling VII. Pears are also small. At the Roberts Orchard, I saw some Jonathan trees 80 years old with 10 to 12 inch trunks and tops only eight to nine feet high. Mosaic seems quite prevalent here in Jonathan.

Northwest of Melbourne, the Goulburn Valley resembles the interior valleys of California. Granny Smith is the only variety of apple that does well in this area. Packham Triumph

and Bartlett are the leading pears. Many thousands of peach trees were killed in this valley the previous year due to wet feet. Apricot on Myrobalan stocks seem to have survived better under these conditions than did those on peach or apricot roots.

I saw one of the best apple orchards in Australia in the Baccus Marsh area, some distance west of Melbourne. The orchard owned by the Durham Brothers was getting 2000 boxes per acre on Spy rooted trees.

In the southeast corner of the state of Queensland in eastern Australia, is this state's leading apple section, near Stanthorpe, known as the Granite Belt. Most of the trees are on Spy stocks, very small and not heavy bearers. This deficiency is being overcome by the use of more vigorous stocks selected from the Malling and Malling Merton series by Len Thomas, at Applethorpe.

Henry Franklin, of Posieres, known



Figure 1. An aerial view of five acres of sweet cherries being grown commercially in wire-mesh cages on the farm of Len Jackson, Central Otago, New Zealand.

as the Burbank of South Queensland, has developed some promising new early peaches and apples.

Further north, in tropical Bundaberg, I visited the Langbecker Nurseries and saw the original Tropical Beauty apple, which was developed for areas with insufficient chilling for our regular varieties. Trees of this variety were doing well in test plantings and in the nursery. Several thousand have been propagated and were selling like hot cakes in New Guinea and North Queensland at \$7.11 per tree.

The state of South Australia has quite an acreage of apples and sweet cherries in its southeast corner, in the hills west of Adelaide. Ken Caldicott, of Lenswood has a new red sport of the apple variety Statesman, which carries good size, color and quality, and ripens with Rome Beauty. It looks like the best late apple I've yet seen, and we are importing scions of it for testing.

I spent Christmas in Hobart, Tasmania, Australia's Apple Isle, and found the Tasmanian climate about as perfect as one can find anywhere. The famous Huon Valley of Tasmania is heavily planted to apples, mostly on seedling rootstocks (Sturmer, Fameuse, etc.), and held to the size of Malling VII by heavy pruning. The leading varieties are Sturmer Pippin, Jonathan, Red John, Democrat, Cleopatra, Granny Smith and Delicious. I saw a beautiful block of Golden Delicious owned by a Mr. T. A. Francomb.

Tasmania grows raspberries to perfection in the uplands where no irrigation is necessary. No support is used. Instead, the canes are braided into four braids per hill, and the crop weighs them down carrying them in

an outward direction, allowing the new replacement canes to come up in the middle of the row to carry next season's crop.

The New Zealand Federation, the Apple and Pear Boards, and the government fruit officers in both New Zealand and Australia were most cooperative and helpful during my trip. I thoroughly enjoyed visiting with the fine folks who grow fruit in this part of the Southern Hemisphere. I hope the exchange of information was mutually valuable. Everyone I visited was most generous with their time and hospitality. My only regret was the rather hurried itinerary.



Tydeman's Red Apple

Tydeman's Red, the new English apple (Tydeman's Early Worcester), is due for large scale testing in the Northwest this year. Apparently the only thing that will hold back more planting is the lack of scion wood.

The few apples of this variety that have been produced in Washington State have given fruit growers a very favorable impression. Charles Worthen of Naches Heights has produced fruit for two years and is convinced it will do well as a late summer variety. The writer has also been impressed with the quality and color of the Tydeman's Red. It seems to produce good color even with high vigor. Size has been satisfactory.

Ray Redman of Parker is budding and grafting five acres of Malling VII's to Tydeman's Red. Ray, who is the Yakima Valley's largest Red Haven Peach grower, sees a bright future for this late summer apple.—*W. A. Luce, Yakima, Wash.*