

Avocados in Polk County

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Lucerne Park

The Avocado is undoubtedly the most promising fruit among those bidding for popular favor at the present time; it has overcome much skepticism and now appears in varieties that can be grown throughout most of the citrus section.

It is difficult at present to define the exact climatic and soil conditions most favorable to the Avocado tree, as the different races vary in their adaptability under local conditions.

Taking Polk County for our illustration, it has been demonstrated that as a commercial proposition, the West Indian race which comes from the moist lowlands and sea coasts of tropical America is much more susceptible to frosts than either the Guatemalan, which comes from the highlands of southern Mexico and Guatemala, or the quite hardy Mexican from the table lands of central and northern Mexico.

It is true, however, that there are quite a number of old, large West Indian seedling trees in Polk County, some of which were injured only in 1895. There are two at Frostproof, and others near Winter Haven. One seedling in Polk County measures 12 feet in circumference at 12 inches from the ground and is well over 40 feet in height. All must admit that this is quite a sizeable tree. I estimate the tree to be 40 feet in height.

On March 26, 1921, the tree was nearly through blooming and the indications were for a very light crop; in fact it has always been a shy bearer. While this undoubtedly proves that the West Indian will grow in this section we are satisfied the race is too tender for a commercial planting. However, when one takes into consideration the rapidity with which they renew their fruiting wood, it shows that if one takes the precaution to bank above the bud, even the tender varieties are practical for home orchard planting as they can renew their top and fruit again in two or three years.

Pollock and Trapp trees in our planting at Lucerne Park are fully as large today as before the cold of 1917, and some of them matured fruit last year; proving that they recuperate very quickly from cold injury. As the fruit is excellent and budded trees bear at an early age, a few of this race should by all means be planted near the house for home use.

To illustrate the precocity of the Trapp variety, the following is a summary of tree performance records of some trees at Lucerne Park. This block of Trapps was planted in April, 1912, and this summary shows the average yield per tree per year. In the year 1914 the average number of fruits per tree was 1.30; in 1915, 6.70; in 1916, 34.33. These trees while injured in February, 1917, fruited again in 1920.

Concerning varieties, would say that after our experience with the West Indian race in 1917, as stated, we secured budwood of the best available varieties of the Guatemalan and Mexican races (including the Guatemalans introduced by Mr. Wilson Popenoe),

with which we worked over most of our older Trapp and Pollock trees. We later planted a new test plat budded on three different stocks, giving us a total of over forty different varieties in our groves. Of these some ten varieties fruited in 1920 and thirty-six are holding fruit at present. Some of the results noticed in this test planting which as stated includes trees budded on three different stocks—West Indian, Guatemalan and Mexican, are very interesting; and in the course of a few years should be of value in determining the variety and stock best suited for this section.

I wish to emphasize the fact that some of the Mexican races, including seedlings, while not of commercial value, are most excellent for home use, ripening in summer and early fall, and being quite hardy, they are of great economic value.

This reminds me, everyone thinks of the Avocado as a salad fruit, but really, have you ever eaten an Avocado pie? Take a good Mexican fruit or fruits, according to the size pie you like, and tell the cook to make it like pumpkin or sweet potato pie. The combination is guaranteed to make an Avocado enthusiast.

Speaking of some of the odd results noticed with these varieties, I would like to tell you the history of one of our trees. During March, 1917, a Pollock tree (injured in February) sent up two sprouts from the root stock. During April I budded one sprout with Taft and the other with Fuerte buds. They both lived and looked so promising that the Pollock wood was removed. Both buds made good growth and are now some sixteen feet in height. While both buds are on the same root system, each year the Fuerte has bloomed during January, while the Taft, on same root, has never started new growth until in March. Another point of interest is that the Fuerte bud matured fruit in 1919 and in 1920 and has a fair crop set this spring, while the Taft bud has not bloomed to date.

Regarding the hardiness of the different races and varieties, would say that we have both Mexican and Guatemalan varieties which withstood the cool spell of 1917, and are fruiting and growing very well today. Consequently exact data as to hardiness had best be left for a future report. At present there appears to be a marked difference in the first start of new growth and in blooming periods. This may be an important point to be taken into consideration later in connection with quality, quantity and favorable ripening season. The hardiness and vigor of the tree will be the important factors in choosing our most valuable varieties.

As previously stated, there are several stock experiments being conducted in this section which are showing some interesting phases. Personally, I believe the West Indian is one of the best and most vigorous growers on land which is suited to rough lemon stock. By banking above the bud it is undoubtedly sufficiently hardy. We have found a few instances where Guatemalan buds on this stock seem to make an imperfect union; proving a point long suspected, namely, that we have still many things to learn concerning stock behavior.

So far the Mexican stock does not appear suited to this section, because as a rule the bud makes slow growth. Some may think there is contradiction in this statement as many Mexican seedlings here are very vigorous growers and bear heavily. It is, however, a well known horticultural fact that seedling trees, under favorable conditions, will usually make a strong growth. But this is by no means proof that buds from an apparently vigorous seedling will make satisfactory trees when propagated.

In connection with the question of stock there is one point which I deem of the utmost importance. Do not allow the tap root of the stock tree to become injured by being kept in a box or pot which will prevent the tap root from going where nature intended, namely, straight down towards a water supply. I consider this the greatest cause of failures with Avocados. Germinate the seed in a 5x5x12-inch box; and then transplant when the tree is some eight inches high. The tap root will be longer if you plant it where you want your future tree to grow and bud later. Handled in this manner your tree will prove more vigorous, withstand drought and winds and grow better than any root-bound tree can possibly do.

I realize this statement is treading very near some nurserymen's toes, but I wish to modify somewhat by saying that I refer to grove planting more particularly than to trees in small numbers for home grounds, unless one is able to bud them himself. Comparatively few have the tree knowledge to successfully bud Avocados, but for large plantings where best results are wanted the above method is entirely practical.

Would say in this connection that I have an Avocado planting where this method has been tried out and the trees show for themselves. When planted this way the tree will put down a deep tap root, the result being that it will withstand climatic changes much better than if shallow rooted. At first thought this method of developing groves seems more expensive than if handled in nursery rows, but it is more than offset by avoiding the shipping and handling of nursery trees later. Therefore I am confident groves could be developed by this method at less cost and ultimately have better and more uniform trees, for the *tree* is the thing we want. If you don't like its fruit, the tree, being vigorous can be top-worked to any desired variety and will be quite sure to fruit in two or three years.

In addition to the plantings referred to there are a number of commercial size in this section, perhaps the largest acreages being owned by Mr. M. E. Gillett at Eloise, Mr. Mackay at Lake Alfred, Mr. W. D. Carrier at Crooked Lake, and others, totaling perhaps 100 acres.

In cultivation, one of two methods should be followed. Either keep a dust mulch from the day the tree is planted which will force a deeper root system; or use a mulch of organic matter such as leaves, compost, etc. This will bring feeding roots to the surface, and the danger is that, in a dry spell, unless mulch is very heavy, trees will soon show bad effects from lack of moisture. However, in well drained land, for the first two years after planting, an Avocado tree should have water in anticipation of its wants.

In propagating it would perhaps show wisdom to engage some one who has demonstrated his ability along this line (but perhaps you desire to do this part yourself), very well. Make sure your stock is in thrifty, vigorous condition; do not allow the stock to become too large and the bark to harden before budding, as under such conditions failure is almost certain. With the stock in proper shape, select bud wood from the last growth (varieties differ, but usually best results are obtained from fairly mature wood), just before it is ready to start a new growth.

The actual manual performance of budding should be similar to shield budding of the citrus, either in form of a T or an inverted T. Personally I use the T, believing it will form a union nearer the ground. The bud being carefully placed in position, should be at once

tightly wrapped with a strip of waxed cloth, covering the entire bud except the eye. Be sure and fasten the end of the cloth, as it is necessary to keep the bud wrapped for a longer length of time than with citrus. After wrapping, judgment must be used to determine whether the stock plant needs the growth slightly checked by cutting away, say two or three leaves near the top of plant. This depends somewhat on whether propagation is in the open or under half shade.

Two weeks after the buds are inserted, depending somewhat on weather conditions, look them over carefully and if the bud is alive cut off three or four inches of the tip of stock. In another ten days if found alive, judgment must be used in removing axillary buds from the stock, or perhaps taking out a half inch section of bark from the stock about one inch directly above the bud. This will usually force the bud into growth, at which time the waxed cloth must be loosened above the eye of bud; but do not fully remove budding cloth until growth is well started. A point to remember is, if stock growth is checked too heavily, the eye is almost sure to fall from the bud and all your labor is lost. After the bud has made its first growth and the wood is maturing, the stock should be cut back further, tying bud to stem of seedling and removing sprouts, thus forcing all growth to the bud. While dormant during the following winter, stake the bud and remove the seedling stub, covering the cut surface with grafting wax.

In conclusion would suggest that everyone in the citrus section should plant Avocado trees of each of the three races for home use at least; someone sometime will thank you for doing so.