

Practical Points in Avocado Pruning

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There are no illusions in my mind that this paper will be of any great practical value to you, in spite of the title, nor of the doubtful reception with which many of you will receive the ideas presented. With lack of conclusive and visual evidence to show you, it will be easy for you to shake your heads in doubt; and I won't much blame you.

If it had been possible to have brought some of our avocado trees and orchards into this room this afternoon, so that I might have demonstrated the need for pruning, and then how to go about it to improve the conditions by pruning, I might have been able to make my points forceful and conclusive. However in that case, instead of the few minutes that the reading of this paper will take, it would have required hours or days to fully cover the demonstration so that all points would be clearly understandable. Then a few years of watchful waiting on your part before many of you would be fully convinced.

Or granting that you are already convinced of the need of pruning in your orchard, and are anxious to know how to go about it, it will be difficult for you to get much practical information from one short lesson. Skill can only be acquired by practice and experience; and judgment, which is all important, may require years of experience. When to violate a rule is frequently of more importance than knowing the rule itself, but you need to know the rule.

Why then waste your time with this paper, even if it is short. My answer is that I hope it will give you a start on your thinking concerning pruning, and that it will stir the conscience of some of you concerning the neglect of pruning in so many orchards, and more especially that it will lead to the establishment of long time pruning plot demonstration orchards.

The presumption is that avocado growers desire to produce and harvest their crop as efficiently as possible in order to reduce effort, lower production costs, and increase profits. Sensible pruning can do more toward these ends than any other cultural practice, and yet pruning has been, and still is, the most neglected of all orchard practices in avocado culture. The pruning saw and pruning shears are strangers in many orchards and this lack of acquaintanceship is showing up in the jungles with circus tent tops, that are called avocado orchards. It takes "the man on the flying trapeze", or at least a "fancy ladder balancing act" to pick the fruit. This condition could well have been improved by a little judicious pruning over the years.

If a judicious pruning program is carried out during the early life of an orchard, no very severe pruning need **ever** be done, and after the trees have reached maturity and are properly spaced, the need for annual pruning is very small indeed. On the other hand, a mature orchard in which pruning and tree thinning have been neglected will require

severe and even "brutal" cutting to rehabilitate it. Unfortunately most of our older orchards fall in this class, and too many of the younger orchards are fast growing toward this condition.

There appears to be no scientific basis for the pruning of avocado trees other than the practical considerations; production is neither markedly increased nor decreased; fruit sizes do not appear to be affected by a practical and sensible pruning program during the formative years of the orchard development. On the other hand the lack of pruning and tree thinning (tree thinning is a part of a sensible pruning program) will eventually cut down the possible per acre yield materially, as crowding and shading out of interior and low branches takes place. The pruning necessary to rehabilitate such an orchard will further cut down the yield for an additional period.

The practical advantages of a well pruned orchard are sufficient to justify the effort and cost, and can be stated briefly.

The well pruned orchard provides the greatest possible degree of accessibility for all orchard operations, such as cultivation or other methods of weed control; irrigation, either by furrow or low sprinklers; the application of fertilizers, particularly organic materials and mulches; pest and disease control; and the picking and removal of fruit.

The time allotted for this paper does not allow of a detailed discussion of each of the foregoing orchard operations in relation to pruning; suffice it to say that the well pruned orchard does not have the low heavy horizontal branches that makes these orchard operations difficult and expensive.

The well pruned orchard makes it possible to maintain the greatest possible bearing wood area in the orchard and provides the cheapest and least destructive method of thinning excess and crowding trees.

The practical points of the actual pruning program include: The treatment of newly planted trees and the follow-up work for the first year; the control and disciplining of growth during the second and subsequent years of rapid growth; the early selection of permanent and filler trees and the control of filler trees by the removal of growth that interferes or threatens to interfere with the permanent trees. This control to continue over the years until the fillers are ready for removal; by this time they will be no great loss anyway; the removal of limbs and branches with the least loss of production by removal immediately after the crop is picked, or removal in light production or low price years.

These points do not necessarily all fit together in any one orchard or in any one year but are fundamental if you want an accessible orchard with reasonably well shaped trees.

Up to the present you are probably more or less in agreement with what I have said but from now on get your heads ready to shake.

The avocado tree itself is partly responsible for the lack of pruning it has received, especially in the first few years of its orchard life. It is even a cute looking little thing when the nurseryman delivers it to you, even if he, the mean man, has cut off some of its little tresses. But it soon recovers from that and soon is such a beautiful little bush that who could have the heart to mutilate it. Many avocado growers remind me of the fond mama who keeps her little boy in Lord Fauntleroy clothes and long curly hair too

long, yes much too long. For those little bushes become bigger bushes, and still bigger bushes, until one day, and many years too soon they suddenly seem to be turning to skeletons.

Avocado orchards would be in better shape today if the practice existed of cutting the nursery tree to whips and a growing tip as soon as received and planted, and then keeping the lower branches in control during the growing season by pinching, and then total removal at the end of the season until you have some framework branches that start out from the trunk at least four feet from the ground. Sure it's the lower branches that usually bear the first fruit! OK, just get the lower branches a bit higher off the ground; and why expect child labor from an avocado tree anyway, when you prohibit it by law for your boys and girls. It is the same idea; early production at the expense of better development.

The pinching back of these branches that insist on starting out low in life is what I call "disciplining" rather than "shaping" the young growing tree. So called shaping of most young trees of other fruits than the avocado is a positive procedure in which you select certain branches to be the framework at the time of the first one or two prunings and they usually stay that way. This is not usually true of the avocado, particularly the Fuerte variety, and by the way these remarks are directed mostly at the Fuerte variety. After all the Fuerte is the avocado industry pretty much, at least up to date. In shaping or disciplining the young avocado tree about all that you can insist on is to get rid of the branches you know you don't want and then let the tree select its own framework. When I am in doubt about removing a branch I ask myself this question—"Will the branch get worse or better if allowed to grow and develop?" The answer is usually obvious. This same rule and question applies to the pruning program throughout the years. Another question which I ask myself is—"Does this branch interfere with a better one or the development of a better one?" If the answer is yes, off it comes.

During the first few years of the growth of an orchard, pruning should be done frequently, three or four times a year at least. If so done, your thumb and finger and a light pair of pruning shears are all the tools that are needed and the amount of brush will be negligible. As the trees get older and become a bit more settled in their habits of growth an annual pruning will generally be sufficient, but be ever vigilant. It is surprising how much wrong growth a Fuerte tree can make while your back is turned if it suddenly decides to grow wild.

When you get to the annual pruning stage you will need to add a saw to your equipment and you will have some brush to remove. A branch that is good this year is not necessarily good next year. Also you are approaching the time when you will need to consider the relationship between the permanent and temporary trees. Now is the time to add another question to your list—"Is a branch on a temporary tree going to interfere soon with a branch on a permanent tree?" If the answer is yes then remove it entirely or head it back so that it will keep out of the path of progress. If this plan is followed the permanent trees will become broader and the temporary trees higher. In time height itself can become interference.

I do not like to cut off fruit by pruning any more than the next one. Years of high prices for fruit does interfere with my pruning program somewhat I admit, but I am not sure that

any neglect is a good policy. Keep the actual loss of fruit by pruning to a minimum by arranging your pruning program so that the branches are removed immediately after picking and before a new crop is set to distract you.

In your pruning program you will need a good pair of pruning shears and a good saw that will cut rapidly, willing hands, and some good sound thinking that will have the foresight to look to the future rather than the present, and not much else. I long ago abandoned the use of pruning paint as unnecessary even for large cuts.

That's about all there is to it.

The pruning treatment of diseased and neglected orchards, and the rehabilitation of those orchards and trees that have gotten out of hand is another story.