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AVOCADO GROWING IN THE REDLAND DISTRICT

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Commercial success in growing avocados depends very largely on the varieties of trees selected. The sizes of the fruit must meet market demands, it must carry well and keep a sufficient time to allow for getting it into the hands of the consumers in good condition, especially not overripe. Varieties must also be prolific and if possible be made to bear a good crop every year.

Cross pollination has much to do with securing a uniform crop annually. This subject is fully treated in bulletins that may be had for the asking; hence I shall call your attention to only a few facts regarding pollination. Many varieties pollinate themselves if the season is favorable, but if the season is not favorable; the crops is short or even a complete failure. Cross pollination will do much to help make the crop uniform year after year.

To accomplish this we prefer to graft half of each tree with the variety of the opposite series which blooms at the same time as the other half of the tree. It is desirable, if such a selection can be made, to have the crop mature on one variety much earlier than the other. This allows your tree to begin to recuperate and store up food in its tissues for the next fruiting season, as it lightens the burden of carrying such a load of fruit. We have all observed that a tree overloaded with fruit and carrying it near to the blooming season does not bloom or even if it blooms, the fruit drops.

Fertilizing has much to do with having uniform crops annually. Plant food must be so applied that the tree will have a constant supply. To do this the source plant food, especially nitrogen, must come from slow-acting products—such sources are found in organic products, but with the present low prices for fruit they are impossible. Inorganic sources may be sought provided sufficient humus is available from the grass, cover crops and dropping foliage. Fertilizer should be applied in small amounts at frequent intervals rather than in larger amounts at long intervals.

In the Redland District irrigation plays a large part in securing a uniform crop annually. Twenty five years ago, before the canals were cut from Okeechobee, a wilted citrus tree was never seen during the dry season in this district. This process of draining the Everglades has lowered our water level at least eight feet in extremely dry seasons and has made it necessary to water our groves or let them go backward. This has taken much of our profits.

The effect of irrigation on avocados is that it causes the trees to put out a good bloom together with a strong healthy growth of foliage. If the trees suffer from lack of sufficient water, the bloom is sparse and foliage scant. When the summer rains come in May or June, the fertilizer lying dormant in the ground suddenly springs into action and such an

abundant flow of sap starts up that the trees drop most if not all of their fruit. With sufficient irrigation the trees are in good condition, much of the fertilizer has been used, and; so the transition from the dry to the wet season is less sudden, consequently the trees hold more of their fruit.

We advise topping of trees at twenty to twenty five feet high, as this facilitates both picking and spraying. Should the trees grow to such an extent that the limbs of one interlap with other trees, such pruning should be done as would keep them clear of each other, for there must be enough sunshine reaching all limbs to make them fruit.

We shall discuss this subject from the standpoint of a commercial success, and will use concrete facts taken from a grove in actual operation in the Redlands.

There are approximately 490 Pollock trees about eighteen years old. For ten or twelve years these trees were nursed and petted with the greatest care and remained almost totally barren. After such a complete failure half of each tree was cut off and grafted to Lula which blooms at the same season of the year and is the opposite series from the Pollock, A few Fuchs and Taylors, both opposite series from the Pollock, were also grafted in these stumps for an experiment, but the Lula was the one most counted on for cross pollinization. Ever since the Lula began to bloom this grove has produced an abundant crop, not only of Pollock but also of every variety grafted in the grove. The season just closing gave the following results from this plot:

	Lugs	Gross receiots
Pollock	2285	$1347.65
Lula	1614	1355.32
Fuchs	806	241.90
Taylor	517	460.00
Totals	5222	$3404.87
Deductions—1400 lugs sold by bushel		
Leaves 3822 lugs, packing charges @ 20c		764.47
Net on tree		$2,640.47

This does not account for the expense of spraying, irrigating, fertilizing and mowing. The remainder of the grove is in two other plots removed each from the other at least a ten-acre square and consists of trees as follows: Waldin, 80; Taylor, 329; Lula, 8S; Booth No. 8, 40; sundry, 40; Fuchs, *45;* also 96 Wagner which are practically worthless. We are cutting them down and grafting them to Booth No. 8 on one side and Taylor on the other. These two plots of 715 trees produced this season as follows:

	Lugs	Gross
Waldin	945	$ 659.85
Wagner	198	198.43
Booth No. 8	891	701.86
Taylor	3177	3048.32
Lula	400	300.00
Fuchs	122	44.00
	5733	4952.46
Packing charges on 4770 @ 20c		954.00
Net on the trees		$3998.46

There are about 202 lugs of Itzamna, producing $225.00.

These three plots of approximately 1200 trees produced $6863.93 net on the trees. As the grower did not keep an account of his cultivating expense, this is an approximate cost of production. This leaves about $5903.90 net from the 1200 trees.

Irrigation	$100.00
Mowing	5.00
Fertilizer	300.00
Labor—applying fertilizer	25.00
Spraying	430.00
Sundries	100.00
Total	$960.00

Fruit can not easily be sprayed on trees too high. To get the highest market price, fruit must be clean. In the groves we have taken for concrete examples, the fruit runs from 75 to 90% Fancy.