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CURRENT HEDGING AND TOPPING PRACTICES FOR AVOCADOS AND LIMES IN FLORIDA

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We would all prefer, I am sure, to permit our avocados and limes to develop to their natural and maximum growth potential dependent only upon varietal limitations. Under the economic pressure, however, for maximum land use and early returns, present day orchard planting densities preclude this ideal. Therefore, some form of growth control must he exercised if we are to perform the many operations required for good cultural practice, and for the maintenance of as much sunlight as possible in stimulating development of healthy fruiting wood in the close plantings under care here.

A list of reasons for tree-size control will usually include prevention of excessive height in avocados as a measure of insurance against major damage during high winds as well. In addition, better pest and fungus spray control may be achieved when there is less congestion between rows and when tree heights arc not excessive.

Fruit harvesting has always been a major expense item and one that yearly becomes more complex. Control of tree size is of prime concern here if we are to hold costs down. Tree heights must also be curtailed, particularly in the instance of avocados, to permit good coverage with overhead sprinkling, the usual means of irrigating and for frost protection.

In the absence of satisfactory chemical growth inhibitors, some form of mechanical pruning must be done, and in the instance of the maintenance of "width" control, we practice "hedging". Height control is generally referred to as "topping". Since the major portion of topping is performed with machines using booms and "gang saws," this practice generally follows hedging which serves to open the drives for better movement of the heavier cutting equipment.

Hedging equipment in use here quite often is suitable for operation in either avocado or lime orchards. Topping machines are generally of heavier construction, but both types usually employ a series of circular saws on single or double booms, hydraulically or electrically powered, adjustable for varying row widths and tree heights. When orchards are small, the simple practice of mounting sickle bars on flatbed trucks or on three-point tractor suspensions is effective for a simple toppíng program. Three-wheel or four-wheel powered ladders and harvesting "assist" equipment have been effective in putting operators in a position to wield various types of powered saws for cutting at selected heights. In this instance, individual judgments may be made for a particular situation.

Tree row spacing may vary in hedging, but most prefer widths of at least eight feet for passage of vehicular traffic. Angle cutting in hedging is practiced to benefit side growth or "skirt"' development, with some using more severe "slope" cutting on lime orchards

up to 15 to 17 percent off the perpendicular to encourage development of lower growth previously inhibited by lack of sunlight where plantings have grown too dense.

Topping heights may vary depending upon the frequency of cutting, but seven feet is sometimes seen on limes with an eight foot cut quite common. On avocados, much cutting is done at 17 and 18 feet, with limits established, in many instances, by irrigation risers of 21 foot "joint" length, in consideration of sprinkler patterns.

Timing is probably the most critical factor in any program of tree-size control to avoid disturbance to crop potential. On limes, particularly in hedge row plantings where 10' x 15' spacing is not uncommon, annual hedging and topping is a normal program, usually following the period of peak production. Cutting at this time of the year — usually during the late summer, permits recovery of top growth for tree protection during the colder months. Such a program usually coincides with generally lower prices as a rule.

Avocado pruning usually follows crop harvest and varies by variety, Harvest clean-ups can be as early as August for some types, including West Indians. Others may be held into February depending upon tree condition, weather and the market. These variables may delay cutting schedules, and unless pruning can be done sufficiently ahead of cold weather, most growers wait until the threat is over before doing this work.

Alternate rows are often hedged in successive years in order to spread the risk of severe crop reduction. Topping on vigorous varieties such as the Lula may be done annually, but every two years is a common program. A desired goal is to keep cutting at a minimum for economic purposes, as brush reduction can be very costly when the "wood" is too large.

Where groves must undergo severe corrective treatment in order to establish regular cutting programs, initial costs can be severe. In addition to the greater cost of the actual "pruning", expensive hand labor using chain saws or chipping machines is required, including physical removal of wood too large to mulch in the orchard. In this connection, it is believed that heavy brush cutting equipment such as is used in the citrus areas may be an answer to cost control in this instance.

Lime prunings are generally easier to dispose of and are usually chopped up by rotary type mowing equipment, sometimes in the course of regular weed control programs.

Hedging costs may run from $12.00 to $15.00 per acre depending upon the volume of work scheduled. Unless heavy corrective work is required, costs are similar for both avocados and limes. Topping on avocados will often be charged out on an hourly basis where extensive corrective work is being done, with $40.00 per hour a fairly common rate. Per acre costs usually run from $20.00 to $25.00 on average jobs. Lime work may run as little as $7.50 per acre on "single pass" cutting — more where cutting from both sides of the tree is required. Cost of the disposal of the brush or prunings is dependent upon frequency of cut, and varietal differences.

Generally, hedging and topping work is carried on in many groves as a regular cultural program in the performance of good orchard care. Where avocado groves, in particular, are allowed to grow uncontrolled, production gradually declines after reaching a plateau, because of serious tree congestion. As an example of this, production on one 60-acre full-bearing avocado grove under our care in the West Eureka Drive area, dropped from

a level of 14,000 to 3,000 bushels annually before a heavy cutting program was completed. In a little over 18 months, the harvest had returned to 10,000 bushels.

There are some problems that develop as a result of suddenly opening up avocado trees, in particular, to sunlight — as a result of topping. Vine growth, for example, may develop rapidly and cause added costs of control. "Bird nest" or cluster growth may also develop, and this must be considered in future cuts.

In conclusion, it is generally agreed that some type of a tree-size control program is necessary here in South Florida on avocados and limes. The proper timing and the scheduling of the costs involved should be considered as a part of any annual grove care budget.