Pruning recommendations and benefits

Pruning is an important grove practice that increases sunlight penetration within the tree canopy. Sunlight enhances flowering, fruit quality and color development. Sunlight also allows foliage to dry quickly after a rain shower, which reduces problems of fungal diseases.

Pruning trees can improve fruit quality and increase fruit size. However, tree response to pruning depends on scion variety, rootstock, tree age or size, growing conditions, time of pruning and other grove production practices. No one program is adequate for the many situations confronted in the grove.

Developing pruning guidelines should assist production managers in cutting the correct branches at the right time. Removal of a significant portion of the tree will result in excessive vegetative growth and a drastic reduction in fruit production. Pruning should allow greater light to reach the center of the tree canopy as well as the lower skirts of the tree.

Timing Considerations

Pruning should be done before trees become too large or crowded and should be an integral part of good grove management practices. Long intervals between pruning operations increase the cost due to heavy cutting of large branches and more brush disposal. Furthermore, excessively tall trees are more difficult and expensive to harvest and spray.

After severe pruning, high nitrogen application rates will produce vigorous vegetative regrowth at the expense of fruit production. Therefore, nitrogen rates should be adjusted to pruning severity. Reducing or omitting a nitrogen application before and after heavy pruning will reduce costs and excessive vegetative regrowth. Light pruning should not affect fertilizer needs.

Large crops tend to deplete carbohydrates and result in reduced fruit yield and increased vegetative growth. Pruning after a heavy crop additionally stimulates vegetative growth and reduces fruit yield. Therefore, it is recommended to prune after a light crop and before an expected heavy crop to improve fruit quality and help reduce alternate bearing, which is a major problem for many citrus cultivars.

Severe pruning may create problems of brush disposal and stimulates vigorous new vegetative growth, especially when done before a major growth flush. This happens because an undisturbed root system is providing food and water to a shrunk canopy. The thicker the wood that is cut, the larger is the subsequent shoot growth. Severe pruning reduces fruiting but increases fruit size.

The best time of year to prune depends on variety, location and severity of pruning. For early-maturing varieties, pruning is usually done after removal of the crop. Most growers prefer to prune before bloom, but trees may regrow vegetatively, which is not desirable. Pruning could begin as early as November in warm areas. During this period,
pruning should only cut minimal foliage and fruit from the trees.

Light maintenance pruning can be conducted throughout the summer and until early fall with little or no loss in fruit production. For late-maturing citrus varieties such as Valencia, trees may be pruned in late fall with minimal crop reduction. Moderate to severe pruning should not continue into the winter in freeze-prone areas, as trees may suffer from cold injury. In cases where severe pruning is to be performed, the trees should be harvested before pruning is conducted.

With citrus canker and HLB, selecting the best time for pruning has become more complicated. New growth flushes promoted by pruning in late spring, during the summer and in early fall can increase the population of citrus leafminers and psyllids and aggravate the spread of canker and HLB. HLB- declining trees with defoliated tops, dieback, reduced cropping and severe root loss should be pruned to help balance the shoot-to-root ratio, improve tree performance and increase tree lifespan.

ADVANTAGES TO TREES

Pruning trees properly and regularly will only require light pruning and has many benefits:

- Increases sunlight penetration in the center of the tree and provides better coverage of foliar sprays
- Improves air circulation within the tree and reduces insect pests and diseases
- Removes dead branches, which can harbor insect pests and diseases
- Promotes new growth and maintains good yield of high-quality fruit
- Keeps the tree at the preferred size and shape and alleviates alternate bearing.

However, when conducted at the wrong time, pruning may weaken the tree and reduce yield. Severe pruning is expensive, promotes excessive vegetative growth and reduces fruiting.

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