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LYCHEE TREE RECOVERY POST SEVERE PRUNING AND NON-SEVERE/ SELECTIVE PRUNING

Currently, severe pruning of lychee trees is part of the Lychee Erinose Mite (LEM) eradication protocol implemented by the Florida Department of Agriculture and Consumer Services (FDACS). This pruning results in a pronounced regrowth of new shoots and leaves as the tree re-establishes a balance among the mass of the root system and the canopy of the tree. In contrast, selective removal of only LEM infested shoots or limbs results in only those pruned shoots or limbs to regrow (flush with new shoots and leaves). The post-pruning care recommendations for severely pruned and selectively pruned trees are described below.

Post **severe pruning** (hatracking) as part of the LEM eradication program

Watering – irrigation

1. Stop watering the tree immediately after the canopy is removed. Remember, trees only lose water through their leaves (no leaves, no water loss) and so, if trees are overwatered when they have little to no canopy, this results in too much soil moisture and the tree may decline from low soil oxygen content and/or fungi may attack the root system.
2. Once the tree begins to regrow i.e., new shoots start to emerge – begin watering, one good soaking a week should suffice.
3. Once these new shoots are more than a foot or so in length, water one to two times a week. If it rains a quarter inch or more skip the watering.

Fertilizer – nutrients

1. Do not apply fertilizer to the soil immediately after the canopy is removed. Trees cannot take up nutrients unless they have leaves.
2. Once the tree begins to regrow i.e., new shoots start to emerge – the amount of conventional and/or organic fertilizer to apply will depend upon the size of the tree. The general rule for conventional fertilizers is small amounts of granular fertilizer once a month is better than a large amount at one time infrequently. Be sure to spread it from the trunk out to the old dripline so most of the root system is fertilized. Alternatively, a slow-release material (follow label instructions for rates and frequency) may be used, which would supply small amounts of nutrients over time as it degrades. If liquid fertilizer is used, then small amounts once a month should be

enough – the idea is to apply a drench from the old-dripline to the trunk area to cover most of the root system.

3. As the tree continues to re-establish canopy and has branches 4, 5 or more ft long, and there is a lot of foliage, reduce or eliminate nitrogen fertilizer applications to enhance the chances the tree will bloom and set fruit in the spring. Trees over fertilized with nitrogen generally remain vegetative and do not flower and fruit. Apply potassium once during the fall and again in early spring. The secondary (magnesium) and micronutrients (manganese, zinc, iron, etc.) may be applied to the foliage in a spray solution or to the ground in granular or spray solution. This should be done two to three times from about March through October.

Post **non-severe/selective pruning**

These recommendations are for trees where just selected shoots or limbs that were infested with LEM are removed. Most of the tree's canopy will still be intact.

Watering – irrigation

1. If only a few selected shoots are removed maintain normal watering regime. If 20% or more of the canopy is removed, reduce irrigation accordingly (i.e., reduce the amount by 20%) until the new growth is about halfway developed.

Fertilizer – nutrients

1. If only a few selected shoots are removed maintain normal fertilizer rates. If 20% or more of the canopy is removed, reduce the fertilizer rate accordingly until the new growth is about halfway grown.

A word on nitrogen. Lychee trees are highly stimulated to grow in response to nitrogen fertilization. In fact, application of too much nitrogen may lead to repeated cycles of new flush (shoots and leaves) which is undesirable. Every new flush would need to be protected from LEM. Therefore, minor element (manganese, zinc, and iron) and secondary element (magnesium) and potassium fertilization should be emphasized.

(u://ext/handouts/2021/lychee TREE recovery post severe pruning FINAL.doc and in lychee fact sheet folder)