

## INCREASING TRUNK CALIPER BY HEADING BACK LATERALS

California researchers have demonstrated that trunk diameter and strength of canned tree stock can be significantly increased in 5 months by leaving lateral branches on the trunk, lightly pruning them, eliminating stakes, and spacing the trees so the tops were free to move. Rigidly staked trees with lower limbs removed were taller, of less trunk caliper, and unable to stand upright when planted out without a stake.

A similar experiment was conducted on field-planted *Lagerstroemia speciosa* at the Waimanalo Farm during 1973. Seedling trees were staked to develop an upright leader. Five had all lower limbs pruned several times during the summer. Another group of 5 trees had the lower branches stubbed back to 4–8 inches. All trees were grown with stakes because strong leaders were still developing. Trunk diameters were measured at 2, 4½, and 6 feet from the ground at 3-month intervals.

As Table 1 shows, after 6 months there was a great increase (½ inch) in trunk caliper in the middle portion of trees with stubbed laterals than those with laterals removed. About the same amount of diameter increase (¾ inch) was measured 2 feet from ground level over the 6 month period for both treatments. The leaves on the stubbed laterals were contributing directly

to trunk growth in the vicinity of those laterals while there was insufficient food transported from the crown of the plant to the lower trunk on trees pruned cleanly.

Table 1. Comparison of trunk diameters (inches) of field grown *Lagerstroemia speciosa* as affected by lateral shoot pruning.

Trunk Caliper- Feet	All Laterals Removed			Laterals Headed Back		
	Above June	September	December	June	September	December
2	0.78	0.98	1.55	1.44	1.66	2.21
4½	0.41	0.70	0.99	0.57	1.02	1.46
6	0.29	0.51	0.67	0.41	0.84	1.25

Our study and those of California researchers would suggest that the landscape and nursery practice of removing all laterals contributes to a smaller caliper tree and one which is less capable of standing erect without support. Since nursery space is limiting a compromise between this operation and that of no staking or pruning would be to head back laterals on unstaked trees or to stake the trees for a limited time while a leader is developed but remove the stake and head back the laterals once the trunk axis is determined.

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