UF UNIVERSITY of FLORIDA
IFAS Extension

Pruning shade trees in the landscape

A plan for training shade trees

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Pruning objectives: **1)** Establish and maintain a dominant leader by subordinating all but one codominant stem; **2)** space main scaffold limbs apart by removing or shortening nearby branches; **3)** anticipate future form and function by training and pruning early to avoid cutting large branches later; don't remove large branches because this initiates decay in the trunk (i.e. instead of allowing a low branch from growing large then removing it when it is too low, anticipate this by shortening it earlier); **4)** position the lowest main scaffold limb high enough so it will not droop and have to be removed latter; **5)** prevent branches from growing larger than half the trunk diameter by pruning them regularly; **6)** maintain a live crown ratio of greater than 60%

Strategies: Begin pruning at planting and continue for 25 years. This strategy will provide a good branch and trunk structure.

- **At planting**
  - all branches will eventually be removed on trees less than 4" caliper
  - do not remove more than about 25% of live foliage
  - shorten or remove leaders and branches competing with the main leader (may have to do this in two stages, one year or more apart if there are more than three leaders)
  - if there is no dominant leader, create one by cutting back all leaders except one
  - remove broken, cracked or sevelely damaged branches

- **Two years**
  - all branches will eventually be removed on trees less than 4" caliper
  - do not remove more than 40% of live foliage
  - shorten or remove all competing leaders (may have to do in two stages if there are more than three leaders)
  - shorten or remove large, low vigorous branches to improve clearance
  - shorten or remove branches within 12" of largest diameter branches in top half of trees greater than about 4 inches caliper

- **Four years**
  - most branches are still temporary and will eventually be removed from the tree
  - do not remove more than 35% of live foliage
  - shorten or remove competing leaders
  - shorten or remove large, low vigorous branches to improve clearance
  - shorten or remove branches within 12" of largest diameter branches in top half of tree
  - there should be only one large branch per node (no clustered branches); shorten those nearby so only one is present

- **Eight years**
  - shorten or remove competing leaders
  - do not remove more than 25 to 35% of foliage
  - determine where you want the lowest permanent scaffold limb and shorten all large or vigorous branches lower than this limb
  - shorten branches within 12-18" of largest diameter branches (there should be only one large branch per node (no clustered branches)
  - shorten low branches that will have to be removed later so they do not become large

- **Fourteen years**
  - shorten or remove competing leaders
  - identify several permanent scaffold limbs
  - shorten vigorous branches within 18-36" of permanent scaffold limbs
  - shorten or remove large branches lower (on the trunk) than the lowest permanent scaffold limb
  - there should be only one large branch per node (no clustered branches)
  - shorten low branches that will have to be removed latter

- **Twenty years**
  - shorten or remove competing leaders
  - identify 5 to 10 permanent scaffold limbs
  - shorten aggressive branches within 18-36" of permanent scaffold limbs
  - shorten or remove large branches lower (on the trunk) than the first permanent branch
  - there should be only one large branch per node (no clustered branches)
  - shorten low branches that will have to be removed latter

- **Twenty-five years**
  - shorten or remove competing leaders
  - continue to develop and space permanent scaffold limbs
  - shorten branches within 36" of permanent scaffold limbs
  - shorten or remove large branches lower (on the trunk) than the first permanent branch
  - there should be only one large branch per node (no clustered branches)
  - shorten low branches that will have to be removed latter

With seven prunings in the first 25 years after planting, a good structure can be developed that can place the tree on the road to becoming a permanent fixture in the landscape. Less frequent pruning may be acceptable if good quality nursery trees were planted with a dominant leader, and trees were irrigated appropriately until established.

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