



SELECTING HIGH-QUALITY TREES

Planting high-quality trees increases their rate of survival. These have strong stems of desired diameter, healthy root systems, no trunk damage or disease, and well-spaced branches.

Before purchasing, research your tree(s) species, cultivars, site selection, and growing conditions. Then, follow these helpful tips to selecting high-quality trees from nurseries. Look for high-quality trees by their health, not by size.

KNOW YOUR NURSERY

Do your research.

Select a nursery that...

- Is reputable
- Has acceptable sanitation and pest prevention & management practices
 - Especially with Little Fire Ant and Coconut Rhinoceros Beetle!

If you can develop a relationship with a nursery, it may help.



PESTS & DISEASE

Visually inspect the nursery and plants.

- Note any pests in the nursery or on the plants
- Look for visible signs of pest damage or disease
 - Common signs include yellowing or browning of leaves, holes, and wilt
- Choose plants that are weed-free



Spiraling white fly on māmaki

A few helpful resources:
<https://www.ctahr.hawaii.edu/UHMG/pests-disease.asp>
<https://dlnr.hawaii.gov/hisc/info/invasive-species-profiles/>

TRUNK

Select trees with...

- Undamaged trunks, free of physical and pest-related damage

For shade or ornamental trees

- One central trunk

For a tree with multiple trunks:

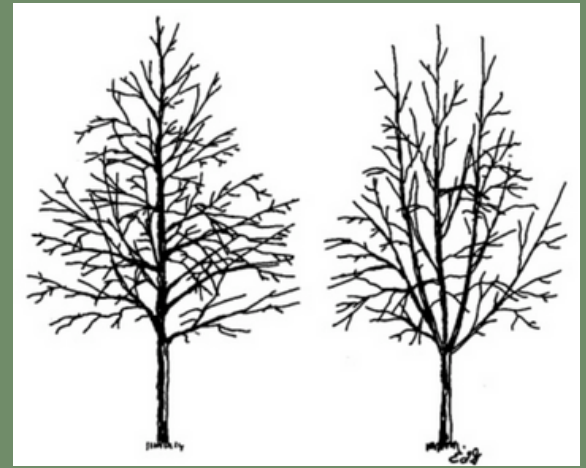
- Trunks well separated at the ground line

LIMBS

Trees with poor limb structure can require more maintenance in the future.

Select trees with...

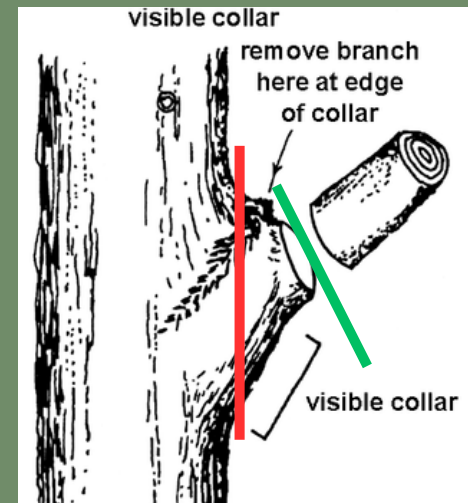
- Undamaged limbs
- Limbs free of **included bark**
 - **Included bark** is bark embedded where branches or branch and trunk join. It lacks structural integrity
- Well-distributed limbs around the tree for a balanced canopy
- Limbs at the desired clearance height
- Limbs free of **epicormic growth**
 - Also known as “water sprouts” and can be an indication of over-pruning or plant stress
- **Properly pruning** (see figure to right) without major branch stubs or flush cuts left behind



High-quality shade trees have one central trunk (left) vs. multiple trunks (right).



Preferred vs. included bark branching



A proper pruning cut (green) is made at the edge of the branch collar. An improper cut (red) is made through the visible collar, resulting in a flush cut which can cause disease and decay.



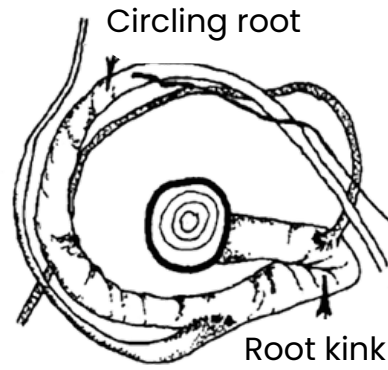
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ROOTS

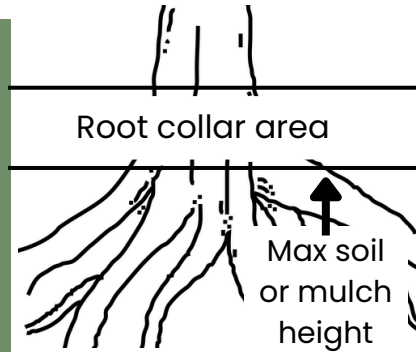
If possible, inspect roots by removing from pot.

Select trees with...

- Healthy, white or light-colored young roots
- Well-distributed, non-circling roots
 - Look for kink-free, non-stem girdling roots
- **Root collar** above the soil
 - **Root collar** is where the main roots meet the trunk



Example of circling, kinked root to avoid!



LEAVES/CANOPY

Select trees with...

- Healthy leaves typical of the species
 - Without signs of **necrosis** or **chlorosis**
- Clean, pest-free foliage
- Signs of new shoot growth



Necrosis

Death or browning of leaves caused by cell death

Chlorosis

Whitish/yellowish discoloration caused by lack of chlorophyll



A few helpful resources:

<https://cms.ctahr.hawaii.edu/uhtmprogram/Tropical-Topics>

After selecting your tree, plan to keep it watered and give it some time to harden before planting. **Trees can be long-lasting infrastructure when set up for success!**

Have questions about your tree selection? Reach out to nursery staff or certified arborists.