
TREES

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GRADING SHADE TREES

INTRODUCTION

Since most trees have a life expectancy of many years, it is important to plant good quality trees. The quality or grade of a tree at planting can have a large impact on longevity in the landscape. Tree quality is based on trunk, branch, crown, leaf and root characteristics.

Large-maturing trees which are allowed to develop a double or multiple trunk should not be planted. These are sturdy when they are young but could become increasingly hazardous as they grow larger. Except for small-maturing trees normally grown with multiple trunks, such as crape-myrtle, buttonwood, Japanese ligustrum and others, nursery trees should have one trunk up through the center to the top of the tree. Live oak and some other trees can grow with a modified dominant leader as shown in Fig. 1 on page 10 (**Florida Fancy**). Branch diameter should not be larger than 2/3 the diameter of the trunk measured directly above the branch. There should be no flush cuts anywhere on the tree and no open injuries on the trunk or major branches. The crown should be full of foliage and show little, if any, evidence of chlorosis, necrosis, disease or insect infestation. The root ball should be appropriately sized (see any matrix, e.g., page 14). Such a tree is given the top grade - **Florida Fancy**.

Trees graded **Florida #1** may require some corrective pruning so they develop good trunk and branch structure. They may have minor trunk injuries or could have other defects. Defects can be corrected by pruning the tree once or twice within a year or two after planting.

Florida #2 is a lesser grade. These trees require major corrective pruning to form a structurally strong tree, or are badly misshapen. Great skill and effort (two or more prunings) are required to develop a structure in these trees which will promote longevity. Defects may take several years to correct.

The lowest grade is a **Cull**. Defects are not correctable. These trees lack vigor and/ or have poor

trunk and branch structure or circling roots. They have other problems such as open wounds, flush cuts or loose root ball which may prevent them from becoming established in the landscape. If they become established, long life is unlikely.

The better grades of trees will require less pruning after planting, and they will establish more quickly. These have been properly trained and pruned in the nursery to develop a structure which will be resistant to damage from winds and other outside forces. Most tree maintenance budgets have not been developed to allow for pruning a tree after planting, so it makes sense to start with a tree which is healthy and well formed. If there is a large tree-pruning allocation in the landscape maintenance budget, trees with the poorer grades may be trained into sturdy trees in the landscape by skilled arborists.

Special Note: There is a specialty market for trees trained into forms which are not typical of their normal growth habit. Examples include standards, braided stems, poodles, espalier, topiary and bonsai, to name a few. When grading these trees, the height, spread and root-ball diameter-to-caliper relationships outlined in the matrices for these grades and standards do not apply. Therefore, when grading such trees, enter the grading process outlined below beginning at Step 6, skipping Steps 1 through 5. Large-maturing trees, such as oaks, are always graded beginning with Step 1 unless the planting specifications indicate that the trees will be maintained as topiaries or other small, clipped specimens throughout their lives in the landscape.

Grades established for trees {Florida Fancy, Florida #1, and Florida #2} do not apply to trees used in wetland mitigation. For trees used in wetland mitigation, refer to the wetland section of this manual.

STEPS FOR DETERMINING THE GRADE OF A TREE

Skip Steps 1, 2 and 4 (below) if you are grading crape-myrtle, cattley guava, wax privet, yaupon holly, lignum-vitae, wax-myrtle or other, similar small-maturing ornamental trees.

Skip Steps 1 through 5 below if you are grading specialty plants like standards, braided stems, poodles, espalier, topiary and bonsai; and ignore Steps 9a, 9f, 9h, 9i and 9j. In addition, ignore Step 8a if grading espaliers. Skip Step 2 if you are grading conifers (e.g., pines), magnolias, hollies, loblolly bay, bald-cypress and other narrow, upright trees.

Step 1. Look inside the crown of the tree at the trunk form. Grade the tree according to the drawings and captions in Fig. 1 (page 10). Trees with one dominant trunk are graded Florida Fancy. Those with double or multiple trunks are given a lesser grade depending on the extent of the defect. Circle the appropriate grade below based on trunk form only.

Florida Fancy **Florida #1** **Florida #2** **Cull**

Step 2. Check branch arrangement. Grade the tree according to the drawings and captions in Fig. 2 (page 11). Trees with optimum branch arrangement are graded as Florida Fancy. Those with branch arrangement defects are given a lesser grade according to the extent of the defects. Circle the appropriate grade below based on branch arrangement only.

Note: All conifers (e.g., pines), magnolias, hollies, loblolly bay, bald-cypress and other narrow, upright trees are exempt from Step 2.

Florida Fancy **Florida #1** **Florida #2** **Cull**

Step 3. Choose the appropriate tree matrix type based on the natural form of the tree as it should appear in the nursery (see Index of Trees on pages 37-44 for guidance).

Appropriate matrix type: _____

Refer to the appropriate matrix type for Step 5.
 Matrix 1 - page 14; Matrix 2 - page 20; Matrix 3 - page 26; Matrix 4 - page 30; Matrix 5 - page 34.

Step 4. Measure the caliper of the trunk.

Caliper: _____

Step 5. Locate the caliper of the tree in the left column of the appropriate matrix chart chosen in Step 3. (For multistemmed crapemyrtle, cattley guava, wax privet, wax myrtle or other similar trees, find the container size or root-ball diameter of the plant you are grading and ignore the caliper.) Grade the tree according to the minimum crown spread diameter (see Fig. 5 on page 45). A tree must have a spread equal to or larger than the minimum for the grade. Circle the appropriate grade below based on minimum crown spread only.

Florida Fancy **Florida #1** **Florida #2** **Cull**

Step 6. Grade the tree according to structural uniformity of the crown (see Fig. 3 on page 12). Circle the appropriate grade below based on structural uniformity only. Skip Step 6 when grading weeping yaupon holly and other trees with a naturally irregular canopy.

Florida Fancy **Florida #1** **Florida #2** **Cull**

Step 7. What is the lowest grade determined in Steps 1, 2, 5 and 6?

Grade: _____

Step 8. If any of the following statements (a, b, c, d, e, f, or g) are true, reduce the grade determined in Step 7 by one.

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- a) The tree with a trunk caliper larger than 1 " requires a stake to hold it erect.
- b) The root ball or container is undersized (consult any tree matrix).
- c) The root ball on a 8&8 tree is not secured tightly with pins, twine or wire.
- d) The tree is excessively root-bound.

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- e) There is evidence that one or more large roots (greater than 1/5 the diameter of the trunk) were growing out of the container or grow bag (see Fig. 9 on page 47).
- f) The crown is thin and sparsely foliated. Many evergreen oaks and other trees are thin and sparsely foliated in late winter / early spring just prior to the spring growth flush. Recently dug field-grown trees might also be thin. Do not downgrade for this.
- g) More than 5% of branches have tip die-back.

Grade: _____

Step 9. If two of the following statements (a-j) are true, reduce the grade determined in Step 8 by one. If more than two of the statements (a-j) are true, reduce the grade by two. **Note:** It takes only one true statement to reduce a Florida Fancy to a Florida #1. Three true statements are required to reduce a Florida Fancy to a Florida #2.

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- a) Tree height (see Fig. 11 on page 47) is shorter than the minimum height or taller than the maximum height specified in the appropriate matrix chart. Plants such as wax privet and other small multistemmed specialty plants should not be downgraded if they are shorter than the minimum height.
- b) Flush cuts were made when pruning branches from the trunk (see Fig. 4 on page 13).
- c) Branch stubs are left beyond the branch collar (see Fig. 4 on page 13). A branch stub can be removed and not reduce the grade.
- d) Open trunk wounds or other bark injury is evident. (Open trunk wounds must be less than 10% of the trunk circumference and less than 2 inches tall on Florida #1 trees. An open pruning scar on the trunk resulting from removing a branch is not considered an open trunk wound.)

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- e) Graft unions are not complete.
- f) More than the lower 40% of the trunk is free of branches. (The portion of the lower trunk with shortened, temporary branches is not considered part of the clear trunk; it is considered part of the canopy.) *
- g) More than 5% of the leaves are chlorotic; or more than 5% of the canopy exhibits damage from pests and diseases. Note: A Florida #1 cannot have more than 10% of the leaves chlorotic or more than 10% of the canopy damaged from pests or diseases.
- h) Most leaves are smaller than normal.
- i) There is bark included between the trunk and a major lateral branch or between main trunks (Fig. 7a on page 46).
- j) Trunks and/ or major branches are touching. Secondary branches on major branches may touch each other.

Final Grade: _____

Step 10. The tree is a Cull if it has a root greater than 1/10 the diameter of the trunk circling around more than 1/3 of the trunk in the top half of the root ball. Circling roots can be found on the periphery of the root ball or inside the root ball (Fig. 8 on page 46). Those inside the root ball result from being in a smaller container when the tree was younger. Circling roots less than 1/3 the trunk diameter can be cut at the point where they begin to circle. Following cutting, the tree is no longer a Cull.

*If planting specifications require that a larger portion of the trunk should be clear of branches, do not downgrade for Step 9f.