

Tree Selection

Overview

Trees offer a lot more than shade and screening to a garden. You can add interest with flower color, fragrance, showy fruit, fall color, and bark with unusual color and texture.

A tree is a long term investment. Take the time to select the right tree for the location so that you can enjoy its good health for many years.

First, determine where the tree will be planted. Are the soils compacted and dry or is the location next to a creek or pond where the soils are moist to wet? Also, consider the tree's eventual size, and the effect it will have on its surroundings.

Another decision is whether you want an evergreen tree or a deciduous tree. Evergreen trees do lose needles or leaves, but they all don't fall at once.

Important factors to consider

Size

- 15 to 30 feet tall – e.g.: Japanese snowbell, *Stewartia*, redbud.
- 30 to 50 feet tall – e.g.: Larch, honey locust, bigleaf magnolia.
- 50+ feet tall – e.g.: Beech, katsura tree, *Ginkgo*.

Shape

- Weeping – Look for variety names such as 'Pendula' or 'Pendulum.'
- Columnar – Look for variety names such as 'Columnaris.'
- Fastigate (branches grow upright) – Look for variety names such as 'Fastigiatum' or 'Fastigiata.'

Environment

- Growth moderate to good in shade – e.g.: Dogwood, redbud, beech, *Stewartia*, Japanese snowbell.
- Trees that will survive and thrive in heavy soils – e.g.: Eastern red bud, maple, hawthorn, sour gum, black gum.
- Trees for dry sites – e.g.: Madrone, hackberry, ash, crape myrtle, flowering crabapple, mountain ash, coffee tree.
- Trees for tough urban sites – e.g.: Maple, hornbeam, hawthorn, *Ginkgo*, sweetgum, sour gum, linden.

- Tolerance to compacted soils, drought, heat – e.g.: *Ginkgo*, linden.
- Tolerance to moist and wet -- e.g.: Red maple, bald cypress, black tupelo gum.

Special features

- Evergreen or deciduous.
- Conifer or broadleaf.
- Not all conifers are evergreen. Deciduous conifers include larch, bald cypress, dawn redwood.
- Not all broadleaf or hardwood trees are deciduous. Evergreen broadleaf trees include Southern magnolia, holly, strawberry tree.
- Flower color -- e.g.: Dogwood, linden, cherry, redbud, Japanese snowbell.
- Fragrance -- e.g.: Sourwood, crabapple, Chinese fringe tree.
- Fruit -- e.g.: Hawthorn, crabapple, holly.
- Fall color -- e.g.: *Stewartia*, bald cypress, black tupelo gum, Persian parrotia.
- Interesting bark -- e.g.: Birch, coral bark cherry, paperbark maple, beech.
- Width of tree crown or canopy as compared to the height to accommodate the space.

How to begin

Begin your research at the local library or an OSU Extension Service office. *Dirr's Hardy Trees and Shrubs* and *The Pacific Northwest Gardener's Book of Lists* are useful references. Then, too, Master Gardeners at your county's Extension Service office can assist you.

And stroll through Hoyt Arboretum at the time of year that best shows the characteristics of the trees that interest you. While there, you'll also be able to see the mature size and shape of various trees.

Another useful resource is the Landscape Plants web site (see bibliography) developed by the Oregon State University Horticulture Department. It has photographs of trees and shrubs on the Oregon State University campus. The plants are listed by both the scientific and common name.

For further guidance about selecting a suitable tree for your garden and landscape, go to the web site for the International Society of Arboriculture (ISA; see bibliography) and click on *Tree Selection*.

Construction damage to trees

Trees are often damaged during construction. And damaged trees can cause problems which may not become apparent for a number of years. More often than not, such damage also leads to unanticipated expenses.

Further information can be obtained at the ISA web site (see bibliography); click on the brochure *How Trees are Damaged During Construction*.

Among the inciting factors are physical injury to the trunk and/or major branches; soil compaction from cars, trucks, and other heavy equipment; severed roots; raising or lowering the grade (soil level) within the root zone; and piling soil around or against the trunk, as for a flower bed.

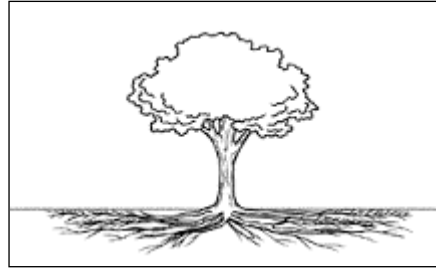
Another seldom realized threat is keeping one or several of the "lovely forest trees" when building a house in a wooded area.

As it turns out, forest trees grow as a community. Removing some of the trees, or opening the shared canopies of those trees, exposes the remaining trees to unexpected pressures from the environment. Bark may sunscald; branches are more likely to break from ice or wind; and the trees are more prone to windthrow (uprooted by wind), also known as blowdown.

It's easy to appreciate the potential for root damage when you understand where they grow.

The roots of a mature tree extend far from the trunk. In fact, roots typically will grow to a distance of 1-3 times the height of the tree and will be found mostly in the upper 6 to 10 inches of the soil.

The amount of root loss depends, in part, on how close to the tree the cut, or trench, is made.



(Illustration from

Hazard trees

Everyone who has trees on their property should be aware of the warning signs of potentially hazardous trees.

Among the conditions which may indicate that a tree is a hazard are an unfavorable history (perhaps construction damage; trenching within the root zone, a change in soil grade, and more); a recently developed lean; co-dominant trunks (multiple side-by-side trunks with the same diameter); weakly attached branches; sizeable cavities and/or hollows; cracks in the trunk and/or branches; broken branches which haven't yet fallen; and more.

Further details can be obtained from several brochures which discuss indicators of hazard trees. One is at the Collier Arbor Care web site the other is at the ISA web site (see bibliography).

If you wonder if your tree is a potential hazard, contact a certified arborist for an onsite evaluation. Arborists are listed in the Yellow Pages under a heading such as Trees, or Tree Care; those companies which have a certified arborist on staff will have a small logo in the ad noting that fact.

Additional information

Oregon State University publications are available at your county's OSU Extension Service office.

Some publications are available online at <http://extension.oregonstate.edu/gardening>.

Trees to Know in Oregon (EC 1450)

Selecting, Planting, and Caring for a New Tree (EC 1438)

Landscape Plant Identification web site has photographs of trees and shrubs on the Oregon State University campus. The plants are listed by both the scientific and common name.

<http://oregonstate.edu/dept/ldplants/> (Note that the "l" in "ldplants" is a lower case el.)

International Society of Arboriculture <http://www.treesaregood.com>

Click on *Tree Care Information*, then click on *Tree Selection*.

Other brochures which will be helpful in choosing and planting your new tree are *Buying High Quality Trees*, *Avoiding Tree and Utility Conflicts*, and *New Tree Planting*.

Durr's Hardy Trees and Shrubs by Michael A. Durr

The Pacific Northwest Gardener's Book of Lists by Ray and Jan McNeilan

Recognizing Tree Hazards at <http://www.collierarbor.com>

Master Gardener™ Advice

- Call Home Horticulture Helpline: 503-655-8631 (Clackamas County), 503-821-1150 (Washington County), or 503-445-4608 (Multnomah County).
- For more 10-Minute University™ handouts and class schedule, visit www.cmastergardeners.org or www.metromastergardeners.org.
- Look for Master Gardeners at area Farmers' Markets.