

Tree Selection and Placement

Exposure

The amount of sunlight available will affect tree and shrub species selection for a particular location. Most woody plants require full sunlight for proper growth and flowering. Some do well in, or even prefer, light shade; however, few species perform well in dense shade. Wind exposure is also a consideration. Wind can dry out soils, damage tree crowns, and uproot newly planted trees. Special maintenance, such as staking or more frequent watering, may be necessary to establish young trees on windy sites.

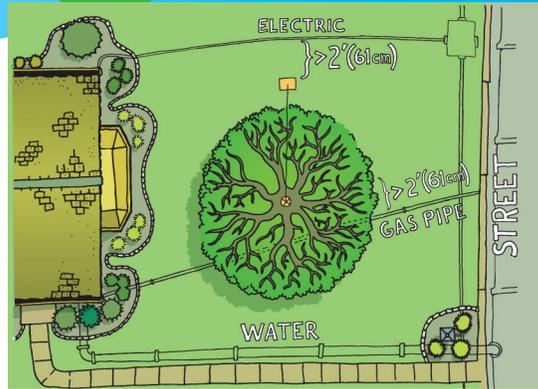
Drainage

Tree roots require oxygen to develop and thrive. Poor drainage limits oxygen availability to the roots and may ultimately kill the tree. If drainage is an issue on your property, ask a local arborist about what can be done to correct the problem or if there are trees that can tolerate the wet conditions.



Hardiness

Hardiness is the plant's ability to survive in the extreme temperatures of different geographic regions. Plants can be cold hardy, heat tolerant, or both. Most plant reference books provide a map of hardiness zone ranges. Check with your local garden center for your area's hardiness zone.



Space Constraints

Many factors can limit the current and future space available for the tree: overhead or underground utilities, pavement, buildings, other trees, visibility. The list goes on and on. Make sure there is adequate room for the tree you select to grow to maturity, both above and below ground.

Human Activity

Often an overlooked aspect of tree selection, the top five causes of tree death result from things people do. Soil compaction, underwatering, overwatering, vandalism, and the number one cause—planting the wrong tree—account for more urban tree deaths than all insect- and disease-related deaths combined.

Pest Problems

Every plant has its particular pest problems, and the severity varies geographically. These pests may or may not be life threatening to the plant, but selecting trees resistant to pest problems specific to your area is the best choice. Your local ISA Certified Arborist, tree consultant, or extension agent can direct you to information relevant to problem species for your location.

Species Selection

Personal preferences and site constraints play major roles in the selection process. Taking into consideration the factors listed here, you can help ensure the tree you plant grows and functions as desired. Remember, the beautiful, mature specimen trees you see in historic neighborhoods and in landscape photography would never have reached their full potential if planted in improperly matched sites.

This brochure is one in a series published by the International Society of Arboriculture as part of its Consumer Information Program. You may have additional interest in the following titles currently in the series:

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| Avoiding Tree and Utility Conflicts | Pruning Mature Trees |
| Avoiding Tree Damage During Construction | Pruning Young Trees |
| Benefits of Trees | Recognizing Tree Risk |
| Buying High-Quality Trees | Treatment of Trees Damaged by Construction |
| Insect and Disease Problems | Tree Selection and Placement |
| Mature Tree Care | Trees and Turf |
| New Tree Planting | Tree Values |
| Plant Health Care | Why Hire an Arborist |
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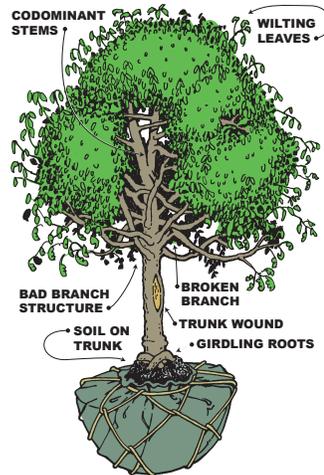
Understand the various factors to consider when selecting trees.

Tree selection and placement are two of the most important decisions a homeowner makes when landscaping their home or replacing a tree. Many trees have the potential to outlive those who plant them, so the impact of this decision can last a lifetime. Matching the tree to the site benefits both the tree and the homeowner.

One of the most common tree care questions is: “Which kind of tree should I plant?” Before this question can be answered, a number of factors need to be considered:

- Why is the tree being planted? What functions will it serve?
- Is a small, medium, or large tree best suited for the location and available space? Do overhead or belowground utilities preclude planting a tree that grows large at maturity – or any tree at all? What clearance is needed for sidewalks, patios, or driveways?
- What are the soil conditions? Is enough soil available of sufficient quality to support mature tree growth?
- How will necessary maintenance be provided? Will someone water, fertilize, and prune the tree as needed after planting?

Answering these and other questions can help you choose the **right tree for the right place.**



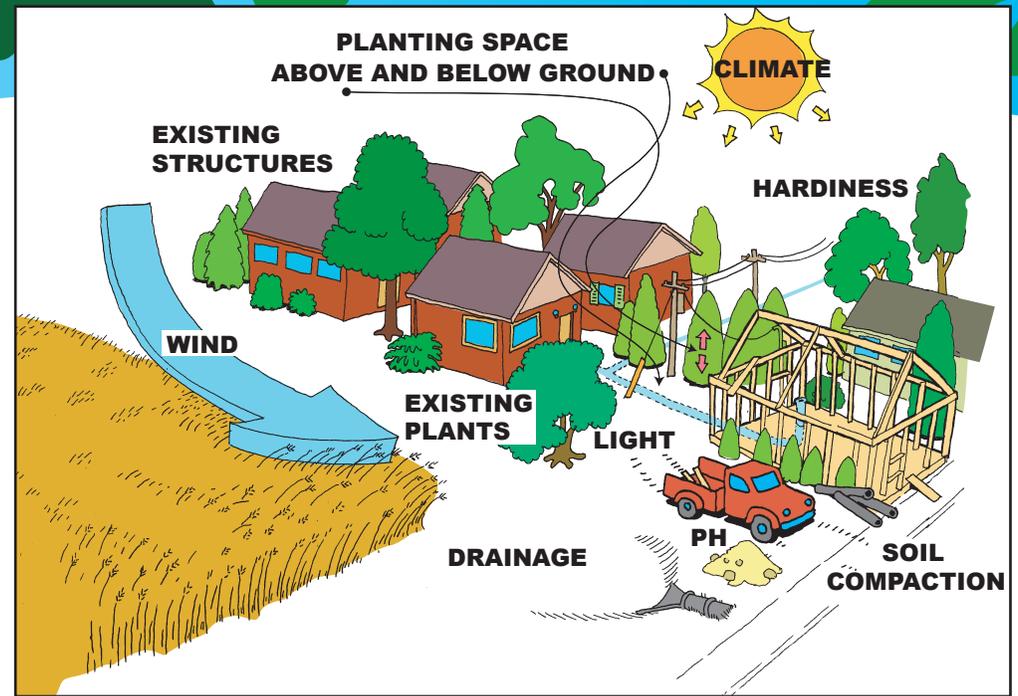
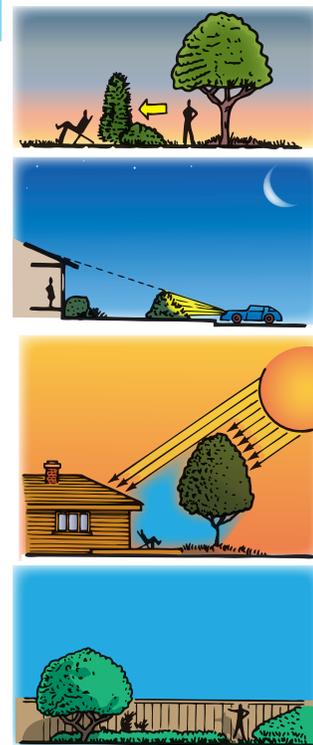
When selecting a tree, check for signs of structural problems, damage, and poor tree health.

Tree Function

Large, healthy trees increase property values and make outdoor surroundings more pleasant. A deciduous shade tree that loses leaves in fall provides cooling relief from summer’s heat while allowing the winter sun to warm a home. An ornamental tree displays beautiful flowers, leaves, bark, or fruit. Evergreens with dense, persistent foliage can provide a windbreak or a screen for privacy. A tree or shrub that produces fruit can provide food for the owner or wildlife. Street trees decrease the glare from pavement, reduce runoff, filter out pollutants, and add oxygen to the air we breathe. Street trees also improve the overall appearance and quality of life in a city or neighborhood.

Form and Size

A basic principle of modern architecture is “form follows function.” Selecting the right form (shape) to complement the desired function (what you want the tree to do) can significantly reduce maintenance costs and increase the tree’s value in the landscape. In addition, mature tree size determines the level of benefits received. Larger trees typically provide the greatest economic and environmental returns.



Depending on site restrictions, you can choose from hundreds of form and size combinations. A low, spreading tree may be planted under overhead utility lines. A narrow, columnar evergreen may provide a screen between two buildings. Large, vase-shaped trees can create an arbor over a driveway or city street.

Site Conditions

Selecting a tree that will thrive in a given set of site conditions is the key to long-term tree survival and reduced maintenance. Consider the following when selecting a tree and its planting location:

- soil conditions
- exposure (sun and wind)
- drainage
- space constraints
- hardiness zone
- human activity
- insect and disease susceptibility

Soil Conditions

In dense urban areas and new subdivisions, soil is often disturbed, shallow, compacted, and subject to drought. Most trees will suffer in these conditions without additional care. An arborist can take soil samples from your yard to test for texture, fertility, salinity, and pH (alkalinity or acidity). These tests can be used to determine which trees are suited for your property and may include recommendations for improving poor soil conditions.