

Maple Leaf, Inc

Planting & Care Guide

"Owners Manual for Trees & Shrubs"

Plant and site Selection

Size

- Consider the size of the plant at maturity.
- The plant should complement - not complete - with its surroundings once it has reached its mature height and spread.
- The plant should not require constant pruning to maintain the shape or size that you wish it to have.

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Growth

Property caring for a plant will greatly influence its rate of growth. While it is often tempting to select plants that will provide a quick fix, remember that the fastest grower may not always be the best plant for the spot in the long run. In fact, many fast growing plants may have undesirable characteristics That must also be considered. "Slow" growers, given proper care, may be more satisfying in the end.

Tolerances

- Make sure your plant and your planting site are a good match.
- Choose plants that will tolerate the site's environmental factors.
- For example, plantings in areas affected by winter de-icing salts should be avoided or planted with species that are tolerant of salt.
- Similarly, moisture tolerate species are your best choices for sites with poor drainage and heavy soils.

Hardiness

Hardiness refers to the ability of a plant to survive the temperature extremes in a particular region. Plants are tested for hardiness and given a rating that indicates the zone in which they can be expected to survive and thrive. To help ensure the area in which you will be planting. The health of your plant and soil, the location of your planting site, and the care you provide, all have an important impact on determining the hardiness of your plant.

Soil

- Plants require both oxygen and moisture for proper growth. Carefully examine the soil and drainage of your site before planting.
- To test drainage, dig a hole 12 inches deep and fill it with water. The water should drain away at a rate of approximately 1/2" per hour so that the hole is empty after 24 hours has passed. If water still remains in the hole after this time, a drainage problem exists
- Don't conduct this test after periods of heavy rain.

Contact your local nursery professional for advise on soil texture and soil structure. Professional advice is best when considering soil amendments.

Soil pH

- Normal pH of 5.5 is best for most plants.
- Low pH indicates a soil that is acid. Some plants, such as blueberries and rhododendrons, require low pH (4.5 to 5.5) to do well.
- A pH greater than 7.0 indicates alkaline soils which normally exists next to the foundation of a home.

Soil pH can be altered through the use of many different materials. A soil test may be advisable. Contact your nursery professional or county extension office for information on soil testing labs.

Location and Purpose

- Consider the surroundings and obstructions plants may encounter as they grow to maturity.
- Nearby structures and plants will affect levels of light, temperature, moisture and hardiness.
- Plants can be used for shade or as screen between your yard and neighbors.
- Plants can bring flowers and fruit, or autumn colors, to our homes.
- Plants can provide structure and color to winter landscapes or food an shelter for wildlife.

Forms in which plants are offered for sale

Containerized/ container gown

- Containerized plants are the most widely sold plants material in nurseries and gardens centers today.
 - Before the plant is offered for sale, the roots should be firmly established in the container.
 - When planting containerized plants, always remove the container at the planting site and disturb the root ball as little as possible.
 - Container grown plants suffer very little transplant shock and can be successfully planted throughout the growing season.
 - However, when you remove the container at the planting site, you may find the root ball to be very tight or even root bound. The tighter the root ball, the more it should be disturbed before planting. Any roots circling the trunk or following the contour of the container should be cut to alleviate possible growth problems later.
- Never completely break up the root ball from either containerized or container grown plants.

Balled and burlapped (B&B)

- B&B plants are dug when dormant and are then held for planting throughout the season. It is usually the most expensive form in which plants are offered but it is very reliable when handled properly.

- B&B plants may be difficult to transport and plant without special equipment due to the weight of the plant and root ball. Container having B&B materials delivered and/or planted at your site by your nursery or landscape professional to avoid damage to the plant.
- Roots of B&B stock will be seriously damaged if the soil ball is broken or damaged in any way or is allowed to dry out, so proper care and handling is extremely important.
- The soil ball around the roots of a B&B plant is normally held in place by burlap and twine or a wire basket. When planting, a wire basket may be left in place. However, if twine and burlap was used, you must cut and remove all twine from the trunk of the plant and pull all the burlap away from the trunk and the top of the ball.
- When planting is complete, the burlap must be trunk dwell below the soil surface. If exposed, it will act as a wick and pull moisture away from the root ball and dry it out. Always make sure that the root ball on B&B stock has not been loosened or damaged in any way.

Fill- potted

- Field potted refers to plants that are grown in the field, then dug and placed in a container with the field soil intact around the root ball. It is very important that the root ball be disturbed as little as possible throughout the handling of field-potted plants.
- Since field soil does not make a good growing medium in a container, plants should not be held in field pots for long periods of time.
- When planting field-potted plants, always remove the container at the planting site before planting. While some containers may be biodegradable, this usually occurs too slowly and will interfere with proper growth of the plant if not removed.

Bare root/ packaged

- Bare root plants are normally dug in fall or spring. The soil is removed from the roots of the plants and the plants are then held in controlled settings with cool temperatures and high humidity.
- While bare root is normally the least expensive, it will suffer most severely from transplant shock and has the highest mortality rate if handled improperly. It is extremely important that roots be kept moist and protected from sun and wind at all times during handling, transportation and planting.
- Bare root plants must be planted in early spring before the plant breaks from dormancy and growth begins.
- At the time of planting, prune away any roots or branches that appear to be diseased or damaged, but do not cut back healthy branched severely. As the buds on those branches begin in break, they will signal the roots of the plants to begin to grow.
- Packaged plants are simply bare root plants whose roots have been packed with a material such as peat moss. These should be handled in the same manner as bare root plants.
- It is very important that the packing material be kept moist and protected at all times.

Tree Spade

- A tree spade is usually used for transplanting larger trees and greatly increases their rate of survival.
- When having a tree-spaded, the matching planting hole must be pre-dug by the machine. The tree and its surrounding soil are then dug by the same machine which also transports it to the planting site and deposits it in the hole.

Site Preparation

IMPORTANT NOTICE: Before digging, always contact the state agency responsible for designating where utility lines are located. Not only is this the law, but it's a safety measure that could prevent injury or death.

Digging

- The planting hole should be dug approximately twice as wide as the soil ball.
- Measure the height of the root ball and dig the hole one-two inches less than the height of the root ball. Do not dig deeper or the plant will be too deep once the disturbed soil settles. A tape measure or a simple length of twine or string can be used to measure the root ball before digging.
- When digging is complete, roughen up the sides of the hole. This will help the plant to root in more easily.

Planting the plant

- If the plant is in a container of any kind, remove it at the planting site and place in the hole. Do not plant too deep! The top of the root ball should be one-two inches above ground level.
- Once it is in the hole, hold it erect and make sure it is centered and straight from all sides. Bare root plants should be placed with the largest branches facing the prevailing winds and with the roots straightened and spread evenly within the hole.
- Once your plant is properly placed, you can begin to backfill using the original soil dug from the hole. While poor soils may benefit from the addition of organic soil amendments such as peat moss or other composted products, you should never completely backfill with an amendment.
- If a soil amendment is called for, it should be mixed thoroughly with the original soil prior to backfilling the planting hole. In most cases, plants will grow best if the original soil is altered as little as possible. If roots suddenly encounter a completely different type of soil, they will have difficulty growing through this "wall" and into the surrounding soil. This has much the same effect as if you had not removed the container and will prevent proper root growth and drainage. Instead, create a transition zone so that the change from the amended soil to the original soil is minor.
- A qualified nursery professional can advise you on whether or not amendments are appropriate for your conditions. Remember that too much amendment or an inappropriate amendment will only make soil problems worse.
- Plants may benefit from being fertilized at the time of planting. A slow-release, complete fertilizer that is high in phosphorus (the middle number) will aid in the development of a

strong and healthy root system. Once again, the fertilizer should be mixed thoroughly with your original soil prior to back filling. Never put fertilizer directly on the roots of your plant and always use it in accordance with label directions.

- As you fill the hole, backfill evenly around the plant to keep air pockets to a minimum. If down slightly as you fill to help soil settle in around the roots
- Once your planting hole is approximately $\frac{3}{4}$ full of backfill, water the plant in thoroughly to further eliminate air pockets in the backfill. Then complete filling the hole and water thoroughly once again.

Care After Planting

Irrigation and watering

- It is very important for your new plantings to be watered regularly. However, the type of soil and the weather conditions should determine how frequently and how much you water.
- Never water automatically without first checking the soil determines if watering is needed. To do this, test the moisture of your soil about 4-8 inches deep. If you find it is dry or only slightly damp, the plant should be watered. Sandy soils generally will need to be watered more frequently than clay soils, but always check before automatically watering the plant.
- Since roots grow where oxygen and water are most available, short and frequent watering will result in the development of a shallow root system. Watering deeply, thoroughly and only as needed will encourage a deep and healthy root system that will be able to withstand environmental stresses.
- Heavy watering of lawns next to newly planted trees and shrubs can be detrimental to those trees and shrubs.

Mulching

- The use of mulch around your new plants will benefit it in many ways. A layer of several inches of a mulching material such as wood chips will help retain soil moisture and help to prevent wide fluctuations in soil temperatures throughout the year. It will also inhibit the growth of weeds in the area and by eliminating the grass close to the plant, it also reduces the risk of mechanical injury to the plant by weed whips and mowers.
- If you wish to use a weed barrier beneath the mulch, use a porous landscape fabric that allows for the passage of gases and liquids. Plastic does not allow for this movement and can result in the suffocation of the plant's root system.

Fertilization

- Once your plant becomes established, it may benefit from being fertilized every few years. Spring is generally the time of year when plants have their greatest flush of growth and therefore their greatest nutrients. To ensure that nutrients are available when this growth begins, fertilizer can be applied in fall after the plant has dropped its leaves or on spring before the plant begins to break from dormancy.
- Unless the plant is suffering from a diagnosed nutrient deficiency, never apply nitrogen in late summer. This will promote new growth that will be particularly susceptible to winter damage and will cause the plant to not harden for winter as it normally would.

The application of phosphorus and potassium, on the other hand, will help the plant to prepare for winter and can be applied in the fall to help the plant acclimate.

- Fertilizer comes in many forms and can be applied through root feedings or surface applications. Because fertilizer can draw moisture away from plants, it is a good idea to water thoroughly both before and after the application when conditions are dry. A qualified nursery professional can assist you in selecting the product best suited to your needs and instruct you how to use it properly.
- In problem situations, a soil test to determine your type of soil, pH and nutrient levels is tremendously helpful. This can enable you to identify and treat a specific problem affecting the health of your plant rather than guessing what it may be. Your county extension office can provide information and instruction regarding a reliable soil testing laboratory in your area.

Pruning

- Proper pruning at the time of planting and as maintenance throughout the years is very important. It should be done to enhance the health and natural form of the plant rather than to try and alter it. At planting time, work to help your plant develop strong branching and pruning away any limbs that appear to be damaged or are crossing or rubbing with others.
- Never make a cut that is flush with the surface or leaves a stub when pruning your plants. Cuts should be made so that the branch collar is left intact but no stub is left behind. If improperly pruned, the cut will invite disease and insects to the plant and prevent its natural defense system from functioning properly.
- Maintenance pruning is needed to help maintain the health of aging plants. Generally it should be done in late winter or very early spring when the plant is dormant. However, there are exceptions. Plants like lilacs that flower early in the year on old growth, for example, should be pruned immediately after flowering. Pruning later in the season will remove what would have produced flowers the following year.
- Other plants may benefit from specific types of pruning such as heading back or thinning out to aid renewal. While some types of evergreens may be pruned throughout the growth season, others should be pruned during their flush of growth in spring. Ask a qualified nursery or landscape professional for advice on which form of pruning is required for your plant.
- If it requires continuous pruning to maintain the size or form that you desire, it is probably not the right plant for your purpose. Some plants are very susceptible to insects and disease if pruning is done at certain times of the year. Oak trees should never be pruned from April through July because of the high risk of the spread of Oak Wilt disease at this time. If you absolutely must prune during this time, use a nontoxic pruning paint to seal the wound immediately.
- For general pruning of other plants (or for oaks at other times of the year) pruning sealers are not recommended. Wounds will heal most effectively if allowed to heal naturally.

Staking

- Under normal circumstances, newly planted trees will grow better if they are not staked. In fact, allowing the trunk to move freely is essential to the development of a strong tree.
- Staking of trees is normally required only for unusual instability such as cases where a tree has been pushed over by high winds.
- If staking is needed for some reason, it should be done so as to allow movement by the tree and the wire should be covered in some manner to prevent damage to the trunk. If the wire is unprotected or too tight, it will girdle the tree, effectively severing its circulatory system and resulting in death.
- In any case, the stakes and ties should always be removed as soon as the tree becomes established - normally one season of growth.

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