

Planting Practices



What's the Problem?

Trees, shrubs, and other plants provide numerous benefits to a community. However, if these plants are not properly planted, it can negatively impact the health of the plant and the aesthetics of the site.

Low-cost solutions

Proper planting practices are a low cost way to ensure the health of your trees and shrubs. Take the time to consider site selection, site preparation, plant preparation, and post planting care. It will save the community money in the long run by having healthy, vibrant plants that do not require replacement or costly maintenance.

Planting Guidelines

Planting technique follows a generally accepted path, however, variations are needed to address specific requirements of stock type, such as balled and burlapped (B & B), container, or bare root; species type such as trees, shrubs, groundcovers, perennials, and annuals; and transplant method, such as with mechanical tree spades.

Site Selection

Consider the following tips when selecting plants for your site:

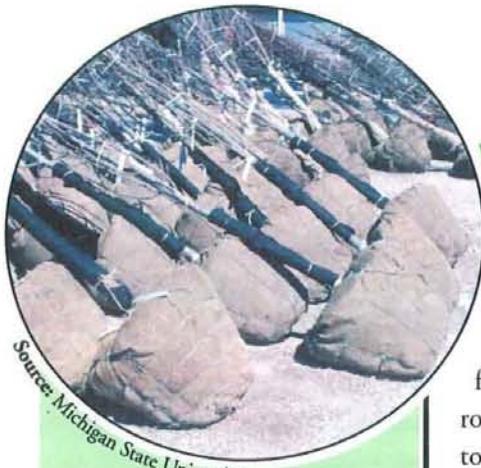
- **Size.** Keep in mind the potential size of the mature tree or shrub when deciding site location.
- **Light.** A shade intolerant tree will not thrive in a highly shaded area and vice versa.
- **Pest Tolerance.** Use native plants when possible. Native species are adapted to the environmental conditions of the area and are therefore less prone to stress caused by the environment, insects or diseases.
- **Soil.** Examine the soil type to determine the potential for compaction and/or drainage problems.

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Source: Michigan State University

Planting Guidelines – Balled and Burlapped

Planting level. Planting level should be in reference to the top of the root system, not the top of the soil ball because the two may not be the same. Examine the top of the soil ball to determine the true level of the root system. Pull away the soil from the trunk and locate the uppermost structure roots of the plant (A few fibrous roots may be up into the soil, but usually are not in substantial numbers). Once the top of the roots are located, skim off the top of the ball to reveal the true level that the root system should be set.

Plant preparation. In preparing the plant, remove all material from the trunk. Materials used to tie off the trunk are either natural or synthetic. Even though natural materials do degrade, the multiple wraps used to secure the basket and trunk may take several seasons to loosen. Pull back or remove burlap from the top of the ball. (For small plants, remove the burlap entirely). Bend the tie loops back on the basket or remove the top wire of the basket.

Plant hole size. Twelve inches outside the edge of the ball is enough room to facilitate root development and allow for backfilling and stabilization of the ball within the hole. The bottom of the hole should be firm to prevent future settling.

Backfilling. Backfilling is an important step in stabilizing the ball and maintaining a straight tree. First, place soil around and under the ball to help compensate for irregularities in ball shape and to aid in straightening the tree. Remaining backfill should be done in 3 layers, compacting each soil layer around the ball after it's added. The final layer should be graded to develop the smooth transition to the surrounding grade.

Watering. Initially after planting, the plant relies on the ball moisture to supply the necessary moisture for bud break, shoot growth and leaf expansion. Watering at planting aids in supplying ball moisture, however care must be taken to ensure that water infiltrates into the ball and does not predominately run off to the planting backfill. Check ball moisture prior to planting and provide the necessary recharge before the whole is covered up.

Planting Guidelines – Container Grown

Planting level. Planting level should be at the top of the root system. (The false top of the soil ball found in balled and burlapped plants isn't as prevalent in most shrubs).

Plant preparation. The first step when handling container plants is to remove all containers, including pressed paper pots that may say they are degradable. (The paper pots can cause a barrier for water movement and root problems).

It is also important that the planting soil be in contact with the core of the container media, not just the edges. Therefore, it's important to disrupt the root systems of pot bound container plants. If the plants are not severely bound, loosen the root system with your hands. On dense, tighter masses, cut through the root zone about one third of the way up, turning the mass 90 degrees and cutting again. This will produce four lobes and open up the core of the container mass to the soil. (This is called butterflying).

Plant hole size. Six inches outside the edge of the root mass. The bottom of the hole should be firm to prevent future settling or shifting of the plant.

Backfilling. Backfilling stabilizes the plants and maintains a straight crown or overall appearance. First, work soil around the base of the plant to compensate for irregularities due to disruption of the container media. Two layers of backfill should be adequate. Remember to compact the soil after each layer and have the last layer graded to a smooth transition to the surrounding grade.

Watering. It's important to insure that adequate water is given to the plants during the transitional period between shipping and planting to minimize stress that may impact plant quality or delay establishment. Target watering to the base of the plant.



Source: Michigan State University

Post Planting Care

After the planting is complete, consider the following tips:

- **Water.** Watering is an important step and needs to be considered during planting. For example for balled and burlapped plants, watering at the time of planting is an opportune time to recharge the soil ball.
- **Mulch.** Mulch around new plants, but be careful to do it properly. Use about 2-3 inches of mulch out to the drip line of a tree. Keep the mulch at least 6 inches from the trunk.
- **Avoid pruning.** Avoid pruning new trees or shrubs. (Severe pruning of new trees will affect the plant's ability to manufacture food and will decrease plant growth).

Cover photo: Courtesy of Michigan State University.

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Resources

Schutzki, Robert. *Planting B & B Trees*. The Michigan Landscape. Michigan State University Department of Horticulture. 2003.

Schutzki, Robert. *Planting Techniques: Mechanical Tree Spades*. The Michigan Landscape. Michigan State University Department of Horticulture. 2003.

Schutzki, Robert. *Planting Techniques: Shrubs*. The Michigan Landscape. Michigan State University Department of Horticulture. 2003.

Smith, Jackie. *Tree and Shrub Planting Guidelines and Post-Planting Care*. Michigan State University. 2003.



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