

Planting and Maintaining Trees

A Selection of Facts and Resources Supported by Research

2024

Overview

Taking care to plant a tree and maintain it in the long-term after it is planted is important for the tree to be able to survive, especially in urban settings. Best practices will depend heavily on location, and not everyone agrees about the exact one “right” way to plant and take care of trees. However, there are some standard practices that many people have found to be successful.

Before Digging

- Before planting a tree, it is important **to dial the national [Call Before You Dig](#) number—811**—for them to mark the locations of all underground utilities. One rule is to stay a minimum of 5 feet away from any buried utility line and stay away 10 feet or more over sewer lines (Smith, 2022).
- It is also important to consider **overhead utilities and proximity to buildings**. Short, flowering trees don’t clash with overhead utility lines. Large deciduous trees in the southeast, southwest, and west provide cooling shade in the summer but don’t obstruct the warming winter sunlight. An evergreen windbreak to the north blocks cold winds in winter (Smith, 2022).
- When **choosing a tree**, take into account height, width (or canopy spread), whether it will lose its leaves in winter, form and shape, growth rate, soil, sun and moisture needs, fruit, and hardiness zones or which parts of the country it is likely to grow well (*Tree Care Tips & Techniques at Arborday.Org*, n.d.).

Digging a Hole

- In locations where trees go dormant over the winter, **the best times to plant** are after the fall leaves drop and before spring buds open, provided the ground is also not frozen.
- Most experts recommend **digging a hole at least two to three times the width of the container**. The height of the hole should be such that the root flare or root collar (the part of the trunk near the base where it gets slightly wider) will be 1-2 inches above surrounding soil.
- **When removing a tree from a bucket**, it can be good to massage the root ball to loosen the roots. Some people recommend staking a tree once planted, but this is not always necessary (Home, n.d.; *Tree Care Guide and Tips | Invest from the Ground Up*, n.d.).

Watering

- When a tree is first planted, it will need to be watered. Extra soil can be used to create a circular berm that directs water toward the roots. **The amount of water a tree needs will depend on species and location**. Some recommend giving it 15 gallons of water right away (Home, n.d.).
- Several sources recommend that younger trees will need roughly 10–15 gallons of water each week, while more mature trees, up to around four years, should receive 8–10 gallons per week. (Cooper, 2023; *Tree Care*, n.d.; *Tree Care Guide and Tips | Invest from the Ground Up*, n.d.).

Mulch, Soil, and Insects

- **Mulch is often used in tree beds to moderate soil temperature, retain moisture, suppress weeds, and protect roots.** Most experts recommend mulching no more than 2-4 inches deep and leaving 2-8 inches right next to the trunk free from mulch to prevent rotting the tree bark (Cooper, 2023).
- **“Leaving the leaves” can help many insects and other invertebrates who spend the winter in fallen leaves.** It is not necessary to leave them exactly where they land – they can be raked into garden beds, or placed around tree bases to help suppress weeds, retain moisture, and increase soil health. Leaving them whole rather than chopping them will be best for insects who have already laid eggs (*Leave the Leaves*, n.d.).
- It is important for the soil's structure to have some **air pockets for the trees to be healthiest.** Beneficial fungi and bacteria also contribute to a healthy soil structure for trees. Ways to reduce soil compaction include leaving the leaves when they fall, minimizing pesticides, reducing tillage or disturbance of the area around the tree, and limiting parked cars right on top of the areas where there are tree roots. (Smith, 2020)
- **Integrated pest management** is a way to control insects without relying solely on pesticides. It uses long-term prevention of pests or their damage through a combination of techniques such as biological control, habitat manipulation, change of cultural practices, and uses resistant plant varieties (*Practice Integrated Pest Management (IPM) | USDA*, n.d.).
- In addition to wood chips or fallen leaves, **low growing plants can be used as “green mulch” or “living mulch”** to suppress weeds, hold moisture, and protect tree roots all the while being more attractive to songbirds, butterflies, bees, pollinators, and other creatures (Schaefer 2020).

Pruning

- It is important to **prune trees for safety** and to help them have the desired shape. Once the tree has been established, it is recommended to choose the most promising central branch to be the leader and trim the other vertical branches to reduce their growth (*Tree Care Guide and Tips | Invest from the Ground Up*, n.d.).
- See this link for more information and diagrams about pruning:
<https://www.arborday.org/trees/bulletins/documents/001-summary.pdf>

Case Studies

Seminar on Indigenous Tree Knowledge: Davis, CA

- Davis Tree Care is an example of a company that partners with local Indigenous communities, including hosting a seminar on Indigenous tree knowledge and its relevance to modern tree care practices. They hope to create dialogue between Indigenous communities and contemporary tree care professionals (*Roots*, n.d.).

Indigenous Wisdom: Saving Trees and Beyond: Brooklyn Botanic Garden, New York City, NY

- Another example of a partnership event, this one between Brooklyn Botanic Garden and Shinnecock tribal citizen Cheneae Bullock, who shares her perspective on Indigenous ecological wisdom. “Going beyond preserving trees, Indigenous knowledge offers holistic understandings of regenerative living” (*Indigenous Wisdom*, n.d.).

Resources

Indigenous Knowledge

- [Medicinal Plants of Five Tribes](#)
- [Sukinani'oy Garden of Chumash Plants in Santa Barbara](#)
- [Pechanga Band of Indian's Native Plants List](#)
- [Kay-Nah-Chi-Wah-Nung Historical Centre Medicinal Plant Guide](#)

Websites

- [Arbor Day Tree Finder Tree Wizard](#)
- [Casey Trees List of Trees](#)
- [Leave the Leaves by Wild Seed Project:](#)
- [How to Plant Trees to Conserve Energy:](#)
- [Arbor Day Tree Finder Tree Wizard](#)
- [Morton Arboretum](#)
- [NGO Independent Sector](#)

How To (toolkits etc.)

- [How to Choose and Plant a Tree](#)
- [Urban Forest Management Plan Toolkit](#)
- [Proper Mulching Techniques:](#)
- [Green Infrastructure Center Tree Planning and Planting Guide:](#)

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