

May Hort Tips

Oklahoma Cooperative Extension Service - Division of Agricultural Sciences and Natural Resources -
Department of Horticulture & Landscape Architecture, Oklahoma State University

GARDEN TIPS FOR MAY!

David Hillock

Trees and Shrubs

- Prune and feed azaleas immediately after blooming.
- Insect Alert: ([EPP-7306](#))
- Bagworms on juniper and arborvitae. (Late May)
- Elm leaf beetles and larvae on elms. (Late May)
- Mimosa webworms on mimosa and honeylocust.
- Lace bugs on sycamore, pyracantha and azalea.
- Soak new transplants and newly planted trees unless rainfall is abundant.
- Pine needle disease treatments are needed in mid-May.

Turfgrass

- Cool-season lawns can be fertilized again. If you did not fertilize cool-season grasses in March and April, do so now.
- Warm-season lawns may be fertilized again in May. ([HLA-6420](#))
- Seeding of warm-season grasses such as bermudagrass, buffalograss, zoysiagrass and centipedegrass is best performed in mid-May through the end of June. The soil temperatures are warm enough for germination and adequate growing season is present to promote winter hardiness.
- Dollar spot disease of lawns can first become visible in mid-May. Make certain fertilizer applications have been adequate before ever applying a fungicide. ([EPP-7658](#))
- Nutsedge plants become visible during this month. Post-emergent treatments are best applied for the first time this month. Make certain warm-season grasses have completed green-up.
- The second application of pre-emergent annual grass herbicides can be applied in late-May or early June, depending upon timing of first application. Check label for details.
- Vegetative establishment of warm-season grasses can continue. ([HLA-6419](#))

Flowers

- Annual bedding plants can be set out for summer color.
- Plant summer bulbs such as cannas, dahlias, elephant ear, caladiums and gladiolus.
- Shake a leaf over white paper to look for spider mites. If the tiny specks begin to crawl, mites are present.

Water Gardens

- Clean out water garden and prepare for season. Divide and repot water garden plants.
- Begin feeding fish when water temperatures are over 50°F.

Fruits and Vegetables

- Plant watermelon, cantaloupe, cucumber, eggplant, okra, sweet potatoes, etc.
- Fruit spray programs should be faithfully continued during the next several weeks.
- Late May is the best time to control borers in the orchard. Check for label recommendations and controls.

Camp TURF Update

Shelley Mitchell, Associate Extension Specialist, 4-H and Youth

Camp TURF has been postponed until summer 2021 due to the COVID-19 pandemic. The new dates for Camp TURF will be June 6-18, 2021. If you have any questions regarding Camp TURF, please email shelley.mitchell@okstate.edu or call 405-744-5755.

Zinc in Pecan Trees

Becky Carroll, Associate Extension Specialist, Fruit and Pecans

Zinc is one of the essential nutrients needed for plant growth. In zinc deficient pecan trees, symptoms of wavy leaf margins, short internodes (rosetting), and smaller leaves may be noticeable. In larger slower growing trees, symptoms may not be visible but hidden deficiencies may be found when using leaf tissue analysis. Zinc deficiencies are commonly seen in most pecan growing areas across the state.

Most pecan growers in Oklahoma use foliar zinc applications. On young trees, begin spraying when new leaves are unfurling. One to two pounds of zinc sulfate (36%) in 100 gallons of water can be applied every two weeks until the trees stop growing in mid-July. Sprays should be applied until run-off. These can be combined with insecticide or fungicide applications. Young leaves are more efficient at taking up the zinc, so early season applications are most helpful.

In mature trees, apply zinc with other needed early season sprays or apply about 3 to 4 times early season about 2 weeks between applications. Zinc sulfate should be applied at rates of 4 to 6 pounds per acre.

Many zinc products are available to use as a foliar application. Many of those products contain nitrogen or chelated zinc. Many of the liquid formulations of zinc and nitrogen are mixed at about 1½ quarts per 100 gallons of water. Follow label instructions for mixing and application rates. Some growers believe that the nitrogen helps with zinc absorption. These nitrogen applications will not be enough to provide all the nitrogen needed to the tree. Other forms of nitrogen will need to be incorporated in the management plan.

Be sure to measure and mix well prior to spraying. Zinc and nitrogen can burn foliage if not applied properly.

In soils with low pH readings, or less than 6.0, zinc can be available to the tree from the soil. In higher pH soils, the zinc will be unavailable. Chelated zincs are best applied to the soil rather than zinc sulfate. Chelated zinc products are released slowly and are more available to the tree. Zinc sulfate quickly becomes tied up with soil particles.

Water Saving Tips

David Hillock

Plants need water, but how you water and how much you water can make a big difference in plant health and how much your pocket book is affected. Below are some tips on how to water so you don't waste water or money and have healthy plants.

- Water deeply, but infrequently. Allowing the water to soak into the ground and letting the soil dry out between watering forces plants to produce strong, deep roots.
- Mulch. Mulch retains soil moisture, prevents erosion, controls weeds, and increases soil quality.
- Install a rain sensor. A rain sensor turns the irrigation system off during and immediately after a rain event.
- Don't water hardscapes. Make sure sprinklers are watering the lawn and not the street or sidewalks.
- Avoid heavy pruning. Pruning stimulates growth and your plants will require more water.
- Mature plants require less water. Mature plants and trees have deep root systems and can be watered less frequently.
- Use a rain gauge. Typically, lawns require 1 inch of water per week to stay healthy and up to 2 inches per week to stay green in the summer.
- Take advantage of your downspouts. Direct the downspout to your garden rather than draining towards the street.
- Fix or replace broken sprinkler heads. Take the broken irrigation head with you when buying a new one to ensure you get the right one.
- Adjust your irrigation system. Plants require less water in the fall and winter than in the spring and summer.
- Check for leaks. If you have a sudden increase in your water bill, dry or soggy areas in your yard, or overgrown turf areas you might have a leak.

For more information on efficient watering practices and low water use landscapes see the following OSU Extension publications:

- [E-1038](#) – A Guide to Saving Water in the Home Landscape
- [E-1037](#) – Drought-Tolerant Plant Selections for Oklahoma
- [HLA-6444](#) – Drought-Tolerant Plant Selections for Oklahoma
- [HLA-6445](#) – Smart Irrigation Technology: Controllers and Sensors
- [HLA-6610](#) – Simple Irrigation Audit for Home Lawns in Oklahoma
- [L-332](#) – Xeriscape Demonstration Garden
- [L-333](#) – Xeriscape Garden Plants
- [L-434](#) – Irrigation
- [L-438](#) – Water Saving Design Ideas for Oklahoma Landscapes
- [L-444](#) – Lawn Watering Tips
- [L-450](#) – The Water Conservation Garden.

Rose Alternatives

Casey Hentges, Oklahoma Gardening Host

Roses have been a staple in gardens for hundreds of years and with such elegant, colorful, fragrant flowers it is no wonder we all want them in our garden. Unfortunately, with their popularity and being planted in such large quantities, it is no wonder we have disease and insect issues. As Rose Rosette continues to claim more and more roses, you may want to consider some rose alternatives. While there is no absolute substitution for a rose, stop and consider the qualities of a rose you want the most – is it the color, the fragrance?

If you are looking for a shrub with fragrance, you might consider Abelia or Buddleia.

There are so many different cultivars of Abelia on the market now, but most of them range in size between 3-5 feet tall. Their tubular shaped flowers can range from pink to white and have a sweet fragrance you can smell as you walk by and this shrub will continue to produce these delicate flowers from summer until frost. The foliage is semi-evergreen and again depending on which cultivar you can range from glossy green to an array of variegation with the “twist of” series. There is twist of Lime with more yellow leaves, twist of Lemon with copper-tinged yellow leaves, twist of Vanilla that is green and white, and twist of orange that is green and shades of orange. If you can’t decide which variegation to get there is ‘Kaleidoscope’ which is a variegated Abelia that has shades of green, yellow, orange, and red.

Buddleia or Butterfly Bush is another alternative fragrant shrub. They are great nectar plants for pollinators. They come in various shades of white, pink, purple, and blue and many of them can easily get to 5-10 feet tall but there are several cultivars that stay much shorter now. ‘Miss Molly’, not only will grab your attention with its fragrance, but its rich sangria colored flowers will also make you stop and take notice. ‘Miss Molly’ will max out at about 4-5 feet tall. If that is still too tall for your space, another cultivar called ‘Blue Chip Jr.’ is very compact only reaching a height of 18-30 inches.

If you are less concerned with fragrance and more concerned with color, there are some alternatives as well.

You have probably heard of St. John’s Wort, but think more of the herbal supplement rather than the shrub. St. John’s Wort or Hypericum is also a great landscape plants for Oklahoma. It has bright yellow flower that cover the 3-5 foot shrub in late spring making it a great substitution for a yellow rose. Additionally, as roses get hips on them after they bloom, hypericums have orange to reddish berries in the fall.

Ruellia or Mexican Petunia, while it is not a shrub it will tend to spread into a mass that will look like a shrub that stand about 3 feet tall. It has dark green foliage and has blooms in shades of light pink and purple.

Salvia greggii or Autumn Sage is another plant that will not disappoint with its floral display. These come in a range of colors from white, to pale yellow, to hot pink and red. ‘Hot Lips’ is bicolored with both red and white. With bright colors they are also a great pollinator plant and hummingbirds love them. Another great thing about this plant is that once it is established they are can handle drier soils as well.

There are so many great hardy hibiscus and although the tropical ones tend to be a bit more colorful, the hardy hibiscus have quite a range in color also with reds, whites, pinks, and bicolors. They come in a range of heights from 2 feet to 8 feet, but what you have to love about this plant is the massive flowers!

Related to the hardy hibiscus are the old fashion rose of sharons. Again coming in a range of sizes and colors. ‘Lil’ Kim’ which only reaches a height of 3-4 feet tall is one of the shorter cultivars on the market now.

There are more options out there, and it is always hard to deal with losing plants, but when a plant dies or finally succumbs to a disease don't take it as discouragement, instead look at it as an opportunity to try something new. For a more extensive list of shrub alternatives look at Fact Sheet [HLA-6439 - Selecting Shrubs for the Landscape](#).

Oklahoma Gardening Video - <https://youtu.be/1IPN9zTMJro>

Bagworms

David Hillock

Bagworms can be a real nuisance on many plants. In Oklahoma the most common hosts are eastern redcedar, other junipers, and arborvitae. Other hosts sometimes damaged include pines, spruce, bald cypress, maple, boxelder, sycamore, willow, black locust, oaks, and roses. The bagworm has been recorded on 128 different plant species in various parts of the United States.

Symptoms: Bagworm larvae damage their hosts by feeding on the foliage. Heavy infestations can completely defoliate small plants. Defoliation usually kills hosts such as redcedar and other junipers. Broadleaf hosts are not killed, but are weakened and become more susceptible to borers and diseases.

Life Cycle: The overwintered eggs (in the year old female bags) begin to hatch in late April or early May and the young larvae begin to feed and construct bags immediately. The first evidence of an infestation is normally a small bag, about 1/4 inch long, standing almost on end. As larvae grow, silk and fragments of the host plant foliage are added to the bag until it reaches 1 1/2 or 2 inches long. When larvae are mature they fasten the bag to a plant stem with silk. Pupation occurs in the bag in August and males emerge in late August and September. They engage in a mating flight in search of the wingless females still inside their bags. After mating the female lays several hundred white eggs inside her old pupal case, drops from the bag, and dies. There is one generation per year.

Description: Adult males are small, clear winged moths with a black, hairy body and a wingspread of about 1 inch. Adult females are wingless, have no functional legs, eyes, or antennae, and are almost maggotlike in appearance. The female's body is soft, yellowish white, and practically naked except for a circle of woolly hairs at the posterior end of the abdomen. Mature larvae have a dark brown abdomen and the head and thorax are white, spotted with black. They are about 1 inch long. Both larvae and adult females are found in silken bags on the host plants.

Cultural control: Infestations can be reduced by handpicking bags (and overwintering eggs within bags) during fall, winter, or spring before eggs hatch. Eggs remain viable within bags so be sure to destroy bags upon removal by crushing or burning them. When larvae become active, bagworms can still be removed by hand if the numbers are small and the affected host plants are small enough to reach the canopy. Again, take care to destroy the bags once they are removed.

Biological control: There are several naturally occurring parasitic wasps and predatory insects that attack bagworms. The activity of these natural enemies apparently explains the fluctuation in bagworm populations observed from year to year.

Chemical control: Chemical controls are most effective if applied early when larva are small. In Oklahoma, it is normally a good practice to make applications of insecticide by early June. *Bacillus thuringiensis* var. *kurstaki*, a bacterial insecticide, is reported to provide good control of bagworms. Also effective are products that contain the active ingredient spinosad, another microbial agent. These insecticides must be ingested by the caterpillars in order to achieve kill, so be patient as it will take some time to see results. Repeat applications may be needed later in the summer in order to keep susceptible plants free of bagworms. This is not due to the occurrence of multiple generations. Rather, not all eggs will

hatch at the same time in some years and there may be migration of larvae between host plants. In most years, treatment in early June will catch most of the emerging larvae and provide fairly good, season-long control. The larger, older larvae can be controlled with products containing acephate (Orthene), carbaryl (Sevin), bifenthrin, cyfluthrin, and lambda-cyhalothrin.

Starting Your Garden

Lynn Brandenberger, Extension Specialist

Many of us get the gardening bug every spring and with all that is going on in the world today it may be a great way to spend time with your family and to provide both fresh vegetables and the nutrition you need to stay healthy. That said, there are some things we should consider particularly if this is our first time or it's been a long time since we have gardened.

Where to begin? Soil is the basis for all gardening. It provides plants with water, plant nutrients, physical anchorage, and oxygen for the root system. If your soil is in good condition you can make mistakes and likely still have something to eat. If the soil is in poor condition then it may not matter what else you do right, you may not be successful. The place to begin is to determine the soil composition (plant nutrients, organic matter) and pH level. The best way to do this is to take a good soil sample and then to send it in to be analyzed at a soil testing lab. Fact Sheet [L-249 - Soil Testing the Right First Step](#) covers the basics on soil testing and how to take a good soil sample.

The other consideration on garden soils is how well-drained is the soil you are planning to use? Here in Stillwater much of our soil is a heavy red clay, it's poorly drained and is difficult to grow in. We've remedied this problem through the use of raised beds and went the next step by filling those raised beds with a nice sandy loam soil. A raised bed can be as simple as using a garden rake to pull soil up into a hill, a free-standing raised bed or as fancy as using all sorts of materials to build a bed then fill it with better draining top-soil.

One of my favorite things to use for a small raised bed is a tire. Used tires can often be obtained for free from a tire shop, just make certain that you use auto or light duty truck tires since heavy duty truck tires have steel in the sidewalls. After getting your tires home take a sharp box-cutter or sheetrock knife and cut along the tread where the tread meets the side wall, do this on both sides and you end up with just the tread. This will make a great raised bed once you fill it with soil. A few suggestions are to pick out tires that are the same size so you'll have a nice uniform set of small raised beds; wear leather work gloves to protect your hands when cutting the sidewalls out (I always seem to slip); and control any bermudagrass prior to installing a raised bed.

The next step to consider is the purpose for your garden. Is its primary purpose to provide both exercise and some food for your table or are you considering growing enough to share with others or to sell? This is a key consideration, particularly when one of the biggest challenges we can face is planting more garden than we have time or energy to maintain.

Growing up on the farm we always planted a huge garden, but we had lots of resources i.e. tractors, tillage equipment, etc. and since there were four children, plenty of labor. As I've matured (gotten older) I've figured out that maybe I don't really want to plant the entire "back forty" to vegetables. My gardens have gotten smaller over the years, but those smaller gardens have allowed me to manage the garden more intensely and to actually produce more food in less space. Currently we farm 100. . . Wait for it, "square feet" in our garden. Doesn't sound like much does it, but it provides enough fresh produce for salads and for canning. My advice is this, if you haven't gardened for several years or possibly you've never gardened, start small maybe just a container garden or just one small raised bed. Consider how much labor you have available for gardening. If you are just beginning, check with household members and find out if they are willing and able to help with the garden then plan accordingly, but be conservative in your estimate of available labor.

Next on your list of things to think about is what type of garden do you want to have? A salad garden or enough fresh produce for canning and or freezing? If you want to do both try to size your garden based upon how many people you plan on feeding from the garden and check out OSU's fact sheet on garden planning [HLA-6004 - Oklahoma Garden Planning Guide](#). This fact sheet provides guidelines on how much and when to plant most vegetables that you may want to consider.

One amazing thing about Oklahoma is we can garden nearly 12 months a year, you just need to consider each crop and when it will thrive and what conditions will be needed for that to happen. If you are new to gardening then select at least one crop that will be relatively easy to help boost your chances for success. Personally I prefer to begin my early season with some type of leafy greens crop.

Leafy greens are mostly cool season crops, are primarily started by direct seeding, but can be transplanted too. Several of these are nutritional "Super Stars" including most Brassica greens (kale, collard, turnip, and mustard) or the spinach family (spinach, Swiss chard, and beet greens). The nice thing about greens is that they are less complicated to grow since you are just growing leaf tissue, not trying to promote flowering-pollination-fruiting which can get pretty dicey at times.

Most fruiting vegetables are warm season crops. There are several families of this group which can include the nightshades (tomato, pepper, eggplant), the cucurbits (squash, pumpkin, cucumber, etc.), and legumes (beans, peas, etc.). One thing most fruiting vegetables have in common is they need to be pollinated to produce fruit which can be a bit tricky to say the least. Crops such as tomato, pepper, eggplant, and legumes are self-pollinated, but some are sensitive to high temperature and won't set fruit at temperatures above 85-90°F, examples would be tomato and snap bean. That said, there are alternatives that will pollinate during high summer temperatures. These include cowpea (pink-eye, black-eye, etc.) most cucurbits, and okra. Of these cowpea and okra actually are heat-loving species that really do well at high temperatures. That said, I hope you are beginning to catch-on that crop selection needs to take into consideration the specific temperatures and other conditions that each individual crop will thrive under.

Next month I hope to return to discuss more about vegetable gardening, possibly we may discuss things such as management of water, pests, or temperature. Until then enjoy your garden!

Transplanting Tomatoes

David Hillock

Tomatoes are one of the most popular vegetables for homeowners to grow and now is the time to get them planted if you haven't done so already.

Two main types of tomatoes are available, determinate and indeterminate types. Determinate types set all their fruit at one time, while indeterminate types produce fruit over a longer time period. We typically grow indeterminate types in the home garden; however, determinate tomatoes are ideal for small spaces and containers or if you plan to can your tomatoes for later use.

When selecting tomato cultivars for the vegetable garden one consideration is disease resistance. Consider selecting varieties resistant to Fusarium wilt and nematodes since these are problems in all areas of Oklahoma.

The ideal tomato transplant should be six to eight inches tall and dark green, with a stocky stem and well-developed root system. Normally, six to eight weeks are required to produce this type of plant from seed. When selecting plants at the garden center, don't be fooled into buying the biggest, tallest tomato plants, a short, stocky plant is a better choice.

The number of plants needed, will depend on your planned use. If your family is interested in having only fresh fruit, plant three to five plants per person. If you intend to can or freeze fruits, then five to ten plants per person should be grown.

Tomatoes should be set in the garden when the weather has warmed and the soil temperature is above 60°F. These conditions usually occur about April 5 in southern Oklahoma and about April 25 in northwestern Oklahoma. Temperatures below 50°F impair tomato growth. Tomatoes will produce roots along portions of the buried stem. So to help increase the root system, plant tomatoes fairly deep. Pull off the lowest set of leaves or even two sets if the stems are very compact, and then set the plants to the depth of the lowest set of remaining leaves. This is much different than the way we plant most other plants, but is very beneficial for establishing a strong root system.

Sometimes the only tomato transplants we can find are long and leggy. To plant these, we will dig short trenches about four inches deep and lay the plants down in the trench. Set the plant in the trench and turn the top upward, leaving the top six inches of the plant exposed above the soil line as you fill the soil back in. This will allow roots to develop along the buried portion of the stem and you will end up with a much stronger plant than if you left the long leggy stem above ground.

Tomatoes are set two feet apart. Planting them in a line will make it easier to stake the plants later. A stake and weave system works very well in holding up the plants.

It is best to set out tomato plants in the evening or on a cloudy day to keep the plants from wilting and getting too dry. Mulching tomatoes is very important to provide even moisture and prevent fruit from cracking. Place a two to three inch layer of organic material such as compost, leaves or hay around the growing plants. Compost, which is dark, will help keep the soil warm. Once the temperatures rise, cover the compost with straw, which has more of a cooling effect.

For more information on growing tomatoes refer to Extension Fact Sheet, [HLA-6012 Growing Tomatoes in the Home Garden](#).

Selecting Deciduous Trees for the Landscape

David Hillock

Deciduous trees (trees that lose all or most of their leaves at the end of a growing season) affect the well-being and appearance of Oklahoma communities. They contribute to an atmosphere of peace of mind and relaxation. One of the most effective ways to improve community appearance is to plant trees. Trees also increase recreational opportunities, bolster local property values and aid in reduced noise pollution.

Because there are so many deciduous trees for use in landscaping, carefully select appropriate trees for your needs. Selection should be based on several different factors. The intended purpose should influence selection of trees with appropriate shape, size and other physical characteristics.

Deciduous trees are used for shade, ornamentation, screening, windbreak, sound-reducing purposes and to attract wildlife. Deciduous trees also can be selected to provide edible fruit or nuts. When properly selected and maintained, trees can increase property values. Selecting native or adapted trees is important for long-term survival and reduced maintenance. Providing shade usually requires tall, sturdy, long-living species. Density of foliage, which determines the amount of shade, is important. A tree such as red maple will produce a very dense shade that may prevent other plants from growing under it, while a Kentucky coffeetree will produce a light partial shade, allowing some plants enough sunlight to grow. Deciduous trees should be used to shade the south and west windows of a home in the summer, allowing the sun to penetrate in the winter.

Ornamental attributes are quite varied. Deciduous trees can be selected for flowers, colorful fruit, interesting summer foliage, fall or winter color, interesting bark or interesting shapes of the plants themselves.

Consider the size of mature trees and where they are to be used. Trees that grow tall, such as the American elm, bur oak, sycamore and tulip tree, are suitable for larger buildings and spaces. They tend to dominate or hide one-story buildings. Smaller trees are perfect for urban landscapes. Careful consideration of mature size will reduce the need for pruning. Avoid placing trees too close to the home, as they can cause damage to the roof and fill gutters with plant debris. Roots of some species too close to the home may cause damage to the foundation. Plant trees at a minimum distance of half the mature canopy width away from the home.

There are several other things that should be considered when choosing the right tree for your landscape. Consideration of all characteristics and attributes along with proper planting techniques and care will result in beautiful and healthy trees that should last for many years.

For additional information on selecting deciduous trees, including a list of suggested plants, see OSU Extension Fact Sheet [HLA-6456 Selecting Deciduous Trees for Oklahoma](#).

Planting Trees

David Hillock

To insure successful tree establishment, the following planting techniques and methods should be used.

When to Plant

The best time to plant most trees is spring or fall; however, many trees can be planted any time if handled properly. Plants installed during the growing season are susceptible to high transpiration rates leading to desiccation of plant tissues.

- Early fall - best time for container-grown and balled & burlapped (B&B) trees.
- Mid-February through mid-April - bare-root.

Handling Trees before Planting

Avoiding unnecessary damage and stress to trees prior to planting will insure better success.

- Keep root-ball moist.
- Handle tree by the container, not by the trunk.

Preparing the Hole and Planting the Tree

Preparing the planting hole properly before planting is very critical. When working with heavy clay or sandy soils, organic matter such as composted manure, etc., can improve soil properties.

- Add soil amendments to entire planting area prior to digging the hole. Do not apply amendments to backfill only.
- Dig planting hole 2-3 times the dia. of tree's rootball and no deeper than the root ball itself.
- Plant trees at original grade OR plant trees 1-3" above grade if soil is poorly drained.
- Do not put crushed stone or gravel in bottom of hole!
- Remove all bags, containers, strings, and wires. Burlap of B&B trees may be left on to decay, but be sure to lay burlap back away from trunk and cover with soil. Synthetic burlap is used by some growers and should be removed.
- If roots are excessive and circling inner walls of pot, shave about ¼ to ½ inch off the all edges of root ball. Inspect for girdling roots and remove if possible.

Backfilling the Planting Hole

Fill in the planting hole (backfill) with native soil and tamp lightly. Soil amendments are not necessary and may result in further complications such as root rots.

Fertilizing

A new tree has a very limited capacity for utilizing fertilizer until it starts to establish itself. Do not overfertilize the new tree. If fertilizer is needed based on a soil test:

- Incorporate fertilizer into entire bed area.
- Do not dump fertilizer into bottom of planting hole.

Watering the New Tree

Apply at least one inch of water weekly during the growing season. Water should not stand longer than 20 minutes. In some soil types, surrounding soil may be moist while the root-ball itself is dry. Be sure to occasionally check the root-ball for adequate moisture.

Mulching the New Tree

New trees should be mulched using an organic mulch 1-2" deep; keep mulch at least 1-2" away from trunk of tree. Benefits of mulching to create a weed and turf-free area about 5-6' in diameter include:

- Reduced plant competition for water and nutrients.
- Even soil temperature and moisture.

Pruning the New Tree

Avoid overpruning new trees. Leave lower limbs intact if possible. Remove injured or diseased branches only. Overpruning may result in sunscald and overall depressed growth.

Trunk Protective Materials

Protective wraps can provide physical protection against equipment, animals, insects, people, herbicides, etc. Protective wraps also provide protection by modifying temperatures and bark moisture for thin-barked trees such as ash, birch, linden, and maple.

If misused however, damage may occur in the form of trunk girdling or constriction, insects, diseases and excessive moisture.

- Protective wraps may not be necessary at planting time. Use based on type of protection needed.
- Wrap loosely from base up to first branch by overlapping for shingle affect.
- Do not use plastic twine.
- Plastic guards should fit loosely and include holes or slits.
- Plastic lasts longer and is quite resistant to rodents.
- Inspect for damage and insects and spray for borers when necessary.

Staking Trees

Stake young trees sparingly and briefly when possible. Stake when top-heavy or planted in windswept areas. Always allow for sway. Too tight or prolonged staking results in an overall weaker tree. Remove stakes after one growing season or as soon as tree is sufficiently rooted.