One of the most important aspects of installing a new tree or shrub is correct planting technique. Important aspects to consider include proper soil texture, fertility, depth, location and finish size. By taking a few steps to assure your planting is done correctly, you can reduce stress in the planting process, insuring better health overall and good root growth for stronger development later in the life of the plant.

Before you pick your tree be mindful of where you want to plant. Don’t put a tulip tree 5 foot away from your house. In addition to other problems associated with this location, the tree will grow to be greater than 100 foot tall posing a hazard to your living space. Don’t put tall trees under utility lines. Don’t plant anything that you cherish over in ground utilities. If the utility needs repair, your plant will suffer for it. Think about shade to your yard and to your house. Don’t plant tall evergreens or shrubs next to a front door or window. This provides a hiding place for people and animals.

Ideally soil texture would be loam. Components of clay for support and mineral availability, sand for good drainage and silt or organic matter for nutrient and water availability. Rarely are we fortunate enough to find perfect soil. Test your soils for texture and nutrition before planting. This can help you to decide on the correct tree to plant and the right amount of fertilizer to add. If your area is prone to excess water you will not want to plant boxwood but may find cypress or willow to work well. If your area has too much clay then a berm made up of organic matter may be in order.

After you have done your research it is time to do the physical labor of installing your new plant. When digging a hole, it should be 3 times wider than the size of the root mass but not deeper. You want to give the roots plenty of room to grow horizontally. You do not want to plant the tree deeper than where it was in the bucket or ground it came in. Often you will plant your tree or shrub 2-4 inches high and add organic matter or fine mulch around the root.
Plants with Winter Interest
Katie Kammler, MU Extension Horticulture Specialist

Planting Woody Plants
Sarah Denkler, MU Extension Horticulture Specialist

ball until it is as high as the ground level was on the trunk before you planted. This will help you prevent drowning in too much water. Once the tree is in the ground, you will need to make sure it is watered one inch per week for the first year.

Then, during the second year, maintain a good watering schedule to prevent the roots from becoming excessively dry. You want the roots to be healthy and continue to grow so that they can support the tree without your help, even during a drought. The best way to water is a long soaking on a regular schedule instead of a quick watering every day. Take rain into consideration when planning your water schedule. During the third year you will still need to be mindful that the plant has enough water. The roots may just be breaking out of the original root ball area. It generally takes a tree 7 years to overcome the stress of planting.

Other tips to planting include: 1) Select the healthiest plant you can find. 2) Remove the burlap if your plant is ball and burlap. 3) Water as soon as you have planted. 4) Protect the trunk or base of the plant from damage. 5) Mulch around the plant but do not allow mulch to touch the trunk. 6) Prune out dead or damaged stems and branches. 7) Plant during fall or spring to reduce stress from heat.

Tree Planting
To ensure healthy trees, start with Right Tree/Right Location.
Once you select a tree suited for your site and its microclimate, be sure to plant the tree correctly!

Incorrect
Correct

Leader has been pruned
Light pruning, rubbing, crossed or damaged branches are removed

Buds have been pruned
Tree staked for more than one year

Branch with narrow crotch angle not removed
Trunk protected by loose tree guard, taken off after one year

Short stake at angle, unprotected guy wires
Only existing soil used as backfill

Tree label not removed
Deep mulch retaining excess moisture against trunk

Unnecessary tree wrap
Highly amended soil has settled, sinking root ball, water collects

Tree planted too deep
Stake driven through root ball

Typing ropes left around trunk
Treated burlap not removed or slit for root extension

Black plastic mulch smothering roots
Hole not wide enough

Wire basket not removed
Stake driven through root ball

No soil pedestal, water accumulates in bottom of planting hole, not enough oxygen for roots
2”-3” organic mulch applied well away from trunk, no black plastic mulch layer

Sandy provided by the Udine and Community Forestry Academic Grants Program of the U.S. Forest Service in cooperation with the Virginia Department of Forestry © 1996

Forest Design by: Dr. Dennis Jenkins
Visual Tech/University
www.woodland.com/ j.b. kane
Ornamentals
- Plant spring bulbs among hostas, ferns, daylilies or ground covers. As these plants grow in the spring they will hide the dying bulb foliage.
- Cannas and dahlias need to be dug after frost nips their foliage. Allow to dry before storage.
- Transplant deciduous trees once they have dropped their leaves.
- Be sure to clean up from around your perennial flowers, such as rose and peony. If left on the ground, leaves and stems can harbor diseases and provide convenient places for pests to spend the winter.
- As you clean out the flower beds, mark the spots where late starting perennials will come up next spring to avoid damaging them while working in the beds.
- While you can still identify them easily, prune dead and diseased branches from trees and shrubs.

Lawns
- Seeding of lawns should be finished by October 15.
- Keep leaves raked off lawns to prevent smothering grass.
- Now is a good time to apply lime if soil tests indicate the need.
- Leaves from lawns and heavily wooded areas can be beneficial to the garden and should not be burned or discarded. COMPOST THEM or till them into your garden for organic matter.
- Fall is the time to control certain broadleaf weeds in the lawn including chickweed, white clover, dandelion, wild onion and plantain.

Vegetables
- Clean up garden debris after frost especially tomato plants, squash vines, or pepper plants that might have had diseased foliage.
- Plant radishes, lettuce and spinach for late harvest. Harvest can be made to continue until spring if winter is mild enough or by using frost blankets.
- Harvest crops such as tomatoes, peppers, eggplant, melon, and sweet potatoes before frost or cover with blankets to protect them from light frost.
- Harvest mature, green tomatoes before frost and ripen indoors. Individually wrap fruits in newspaper to keep them for several weeks.

Miscellaneous
- Fall is a good time to get soil tested and add amendments to the soil.
- Look for ripened persimmons after the first frost has occurred.
- Place wire guards around trunks of young fruit trees for protection against mice and rabbits.
- Autumn is a good time to add manure, compost or leaf mold to garden soils for increasing organic matter content.
- Fall color season begins. By the third week of October, we should be in peak fall color.
Cannas are common in gardens around the area. They are native to tropical and subtropical areas so they are marginally hardy in southeast Missouri, depending on the winter. If you are worried about losing them, you can dig the rhizomes in the fall after frost and they can be stored in a cool, dry place for the winter before planting them again in the spring.

Cannas vary in size, foliage color, and flower color depending on variety. They can be 1.5 to 5 feet tall. The leaves are glossy, from dark green to red to yellow striped. Flower colors can be red, pink, yellow, and red with yellow. Smaller varieties work well in containers while larger ones serve as great background plants.

If you dig your cannas in the fall, you can start them earlier in pots indoors and then transplant them outside after frost so you have foliage color earlier. You can also plant the rhizomes directly in the garden, 3-4 inches deep and 1.5 to 3 feet apart. They grow best in full sun and hot weather, so long as they have enough water. They bloom mid-summer to frost.

I have a few red leaf cannas that I leave in the flower bed every year. They have just started to bloom in the last few weeks. The only pest problems that I have had with them are Japanese beetles. They seem to chew on the leaves that are still curled so when they open up, the leaves have a line of holes through them but otherwise they are pretty easy to care for.
Clematis are a genus of woody vines with 250 varied species. Each has its own unique flower either by color, by size or by form. In the past several years, Clematis has grown in popularity because of the beauty of the flowers and the vertical dimension in the landscape.

Although many see clematis as a hard vine to grow, they can in fact survive for up to 25 years in the correct growing environment.

In our area clematis often succumb to wilt or leaf spot. This disease, caused by *Ascochyta clematidina*, will cause the stem to collapse and rot. It occurs more on large flower types than small and can be found overwintering in debris and soil. The disease spreads activity during high humidity and rain. Symptoms are usually noticed as flowers begin to open.

For control, choose a site with six or more hours of sun that receives plenty of air movement. Select resistant plants and remove any disease tissue or debris as soon as you notice it. Select large specimen plants if possible with strong, undamaged stems. Avoid damaging the roots. A preventative spray using sulfur can be used to prevent a new infection from occurring if the disease has been seen in the past and the infection removed.

Resistant cultivars include: *Clematis* ‘Avant Garde’, ‘Bonanza’, ‘Confetti’ *C. alpina*, *C. montana*, *C. orientalis*, *C. viticella* (which is tolerant rather than resistant), *C. integrifolia*, *C. macropetala*, *C. tangutica*.

Other issues that can have an affect on the vine include powdery mildew (July or August) and aphids.

Plants should be planted in a loose, well-drained soil and covered with two inches of mulch to help retain soil moisture when it is dry. Pruning is based on the flowering type.

Early Flowering - bloom in spring on last seasons buds. These should be pruned as soon as they bloom to allow for new growth and bloom next year.

Large Flowering - these bloom mid summer and again in fall. They should be pruned in March to remove dead and week tissue. Cut back from the tip to the nearest group of living buds. They usually have few leaves at the base so you may want to surround them with other, small plants. Examples are Henryi, Niobe, Jackmanni Superba, Hagley Hybrid and General Sikorski.

Late Flowering - these bloom summer to fall and do not need any old wood to do so. These should be pruned in February to shape. A popular fall blooming variety is Sweet Autumn Clematis.
Autumn is a favorite time of year for many people with the beautiful colors abounding from tree tops to landscapes. Since fall is here, it is time to start thinking about cleaning up and closing the garden season. We can also start thinking about planting and getting ready for next year.

Fall is a great time for planting trees and shrubs. Many plant’s roots establish better in the fall than in the spring. Roots never go completely dormant like the above ground parts. The soil surrounding the roots usually have moderate temperatures and adequate moisture conducive to establishment and healthy root growth. So plants have a great opportunity for establishing before the heat of summer arrives.

Many perennials thrive being planted in the fall. Past peak perennials need to be tidied up and pruned back. Any perennial flowers with seed heads may be left for birds such at coneflower, coreopsis, and daisies. Many of the warm season annuals are ending their lifecycle and need to be discarded after the first frost arrives. However, there are a few annuals that thrive in the cooler temperature and will live well into the next gardening season. Fall is an ideal time to plant pansies, viola and flowering kale.

Since night temperatures are starting to decrease, it is time to bring houseplants indoors (when night temperatures drop below 55-60 degree F). For many of us, indoor space is limited and it is very important to decide which ones to keep and which ones to discard. If you overwinter tropicals, just remember that their requirement for bright light is important to keep them in good shape. Sometimes it is in everyone’s best interest to discard them and start with new ones next year.

Other important tasks to remember are to gather up fallen fruit, leaves, or other debris around gardens, orchards, and landscapes and compost them away from the planting areas. Discard any diseased or insect infested plant that may spread to other plants.

It is a great time to start a compost pile! With all the leaves falling and all the plants that will need disposed, there are plenty of browns and greens. Continue controlling weeds that might harbor pests. If planting areas are weedy, make sure to at least keep them from developing seed heads. Weeds without seed heads can be mowed, weedeated, or turned under with a tiller.

For more information on garden cleanup, see http://ipm.missouri.edu/MEG/2014/11/Fall-Garden-Cleanup/
Upcoming Events

The following Master Gardener meetings are held each month. All are welcome to attend. Please contact your local extension office to confirm location if you did not attend the previous meeting.

Parkland MGs - 1st Monday at 6:30pm, Horticulture Classroom at MAC, Park Hills
Poplar Bluff MGs - 1st Tuesday at 6:00pm at First Episcopal Church in Poplar Bluff, MO (Do not meet in January)
Ste. Genevieve MGs - 2nd Thursday, at 6:30pm, Ste. Gen. County Extension Center
Cape Girardeau MGs - 3rd Thursday at 7:00pm, Cape County Extension Center in Fall and Winter and Shawnee Park Center in Spring and Summer. Call 573-238-2420 for questions
Perry MGs - 4th Monday at 6:30pm, Perry County Extension Center

OCTOBER
11 - “Pumpkins”, Ste. Genevieve Library, 6 pm

Master Gardener Training!

Master Gardener Classes are currently being conducted on Tuesdays and Thursdays from 9:00 a.m. to noon. at the Extension Center in Jackson, Mo. Master Gardeners are welcome to attend any of the sessions for free. Classes can be taken by non-Master Gardeners for $12 per session.

Oct 6 - Home Vegetable Gardening
  Using Season Extension
Oct 11 - Diseases in the Garden
  Turf/Lawn Care
Oct 13 - Home Fruit Production
Oct 18 - Garden Insects
  Pesticide Safety
Oct 20 - Preserving Your Harvest by
  Canning and Freezing
Oct 25 - Annual and Perennial Flowers
Oct 27 - Herb Gardening
Nov 1 - Organic Gardening

Trivia: Latin Names
Donna Aufdenberg, MU Extension Horticulture Specialist

The scientific names of plants are in Latin. To correctly identify plants, it is always wise to know the genus and species of a plant in addition to the common name. Most of the time, the scientific name describes something about the plant, where it was from or who discovered it. Can you correctly match the scientific names to the meaning?

A. acer 1. cold
B. vernalis 2. elegant
C. rubra 3. shrubby
D. frigidus 4. from Germany
E. edulis 5. smooth
F. azurea 6. mossy
G. pendula 7. edible
H. digitate 8. red
I. autumnalis 9. sharp
J. muscosus 10. spring
K. perennis 11. blue
L. dumetorum 12. hanging
M. germanicus 13. like a hand
N. callosus 14. velvety
O. laevigatus 15. small
P. velutinus 16. love + flower
Q. elegans 17. fall blooming
R. agapanthus 18. with a hard skin
S. fruiticosa 19. grows in thickets
T. compacta 20. many years

Answers on page 8
In the summertime, we get calls about roses that look funny. The rose leaves are usually red in color, there is odd growth known as a witches’ broom, and an abundance of thorns. This is caused by a disease called rose rosette virus. It is spread from wild multiflora roses to our cultivated roses by an eriophyid mite.

The first reported case of rose rosette in the US was in 1941. The spread of the disease throughout the US is linked to the history of the multiflora rose, an exotic plant introduced from Japan in 1866 as a rootstock for ornamental roses. Planting multiflora rose was recommended from the 1930s to 60s for erosion control, wildlife food, as a living fence for livestock, for strip mine reclamation, and as a crash barrier on highways. Unfortunately, we now know this was a mistake because it spreads quickly from seeds and vegetative. It is considered an invasive species. Multiflora rose is highly susceptible to rose rosette and since multiflora rose is found everywhere, it spreads rose rosette to ornamental roses.

The eriophyid mite that transmits the disease is carried by wind, tools, or clothing to new plants. Grafting can also spread the disease. Since this not a soil born disease, it is possible to replace a rose that was infected with another rose. However, the virus may persist in infected root pieces if they are not all removed from the soil and serve as an inoculum for the new plant.

There is no effective control measure available once a rose is infected, but the disease may be prevented from spreading by using a combination of the following approaches. Some types of roses are more resistant to rose rosette and the mite feeding. Early detection is key. Any suspect rose should be removed immediately and destroyed. Also removing multiflora roses in the vicinity can help prevent the spread. Control the mites is also an option with a miticide. Miticides that control spider mites do not control the eriophyid mite so read the label carefully before applying.