

STATE MASTER GARDENER CONFERENCE

September 24-26, 2004

Columbia, Missouri



SEPTEMBER 24th

12:00 noon to 10:00 pm Registration at North lobby Ramada Inn (Campus maps will be available.)

1:30 to 4:30 pm Optional Level II Advanced Training at Ramada Inn

4:30 to 5:30 pm Dinner on own

5:30 to 7:30 pm MU Campus Tours; Join us for a delightful fall evening of guided tours to explore the Missouri Botanic Garden and the Museum of Art and Archeology.

7:30 to 9:00 pm – Reception; Finish the evening with a delicious dessert reception at the Memorial Union.

SEPTEMBER 25th

6:00 to 9:30 am - Breakfast buffet at the Ramada Inn

7:30 am Tour buses depart. Step back in time to Camp Dubois, and the Expedition of 1804 as you come aboard the Conference Tours. Box Lunches will be provided.

6:00 pm Cash bar

7:00 pm Dinner and Keynote Speaker, Dr. Ray Rothenberger

SEPTEMBER 26th

6:00 to 9:30 am Breakfast buffet at Ramada Inn

7:45 to 8:15 am Ecumenical Services

9:00-11:50 Concurrent sessions at Ramada Inn

8:30-11:30 am Level II Advanced Training on MU Campus

12:00 noon Lunch and meeting

2:30 pm Adjourn

***See this website for more information on the tours, workshops, and registration.** <http://outreach.missouri.edu/boone/mg.html>. For those without internet access contact your county extension center for more information.

CONFERENCE ACCOMODATIONS

Reservations at Ramada Inn-Columbia , 1100 Vandiver Dr.; call 573-449-0051 by September 3 for special conference cost of \$63 plus tax. Mention you are with the "Master Gardeners of Missouri Conference" for this price. All registered guests will receive a coupon for a complimentary breakfast buffet. Check-in time is 4 pm. Check-out time is 12 pm.



Use Care When Side Dressing Vegetables with Nitrogen

Gaylord Moore, Horticulture Specialist, University of Missouri Extension

Vegetables and flowers vary in the amounts of nitrogen they need. Usually, vegetable crops require most of their nitrogen after they have made considerable growth or have begun to fruit. Too much nitrogen before this time will delay maturity and reduce flowering and yields. Plants get nitrogen from three major sources: the breakdown of organic matter, yearly maintenance application of fertilizer, or the nitrogen side dressings.

Often, the plant needs additional nitrogen by side dressing to complete fruiting and growth and to keep the plant vigorous and healthy. However, various plants or crops have different recommended nitrogen side dressings and the timing of the side dressing is very important. The nitrogen in most garden fertilizers is best utilized with frequent light application.

For example, tomatoes respond best to about three different side dressings. The first application should be one to two weeks before the first tomato ripens, then two weeks after picking the first ripe tomato, and again, one month later.

About one-third of a pound of actual nitrogen is required for each 100-foot row. For example, ammonium nitrate is 33 percent nitrogen. It would take about 1 pound of the ammonium nitrate to give the required amount for a 100-foot row of tomatoes. You may figure other high nitrogen type fertilizers to apply based upon the actual nitrogen percentage. Other forms of nitrogen such as urea, calcium nitrate and ammonium sulfate may be used on an equivalent nitrogen basis.

Other crops that require nitrogen side dressing include: cucumber and cantaloupe about one week after blossoming begins, and again three weeks later; sweet corn, when plants are eight to 10 inches tall and again one week after tassels appear; potatoes, but only after the tuber formation starts.

For a list of more crops and additional information on side dressing techniques, request guide sheet G6950, "Fertilizing Garden Soils," from the University of Missouri Extension Center in your county.

Who's Killing our Planted Trees? . . . We Are!

By Hank Stelzer, Extension Forester

They are out there, everywhere. Landscape trees planted years ago that just don't seem to be as tall as they should be. They leaf out later and drop their leaves sooner than their natural cousins. Even with frequent summer rains, their leaves look like someone took a blowtorch to their edges. Then it finally happens. One spring they don't leaf out at all. Or during a summer thunderstorm, they suddenly topple in a gust of wind.

These are not the notoriously fast-growing yet short-lived trees most people love to plant, like Bradford pear, Siberian elm and silver maple. We are talking about oak, maple and ash. What is the reason? A new exotic insect or disease? A new pollutant to our air or waterways? No! More often than not, we are the problem. We are simply planting our trees too deep.

The result? Stem girdling roots. Stem girdling roots, or SGRs, are the result of roots encircling the tree stem and eventually strangling the stem tissue. Water and nutrients cannot travel up the trunk, depriving the leaves of the building blocks required for photosynthesis. What little food the leaves do produce cannot travel down the stem to the roots, preventing vital water and nutrient absorption. You get the picture.

You may ask how a root can grow up around the stem of a tree. It's simple. By planting a tree too deep, or heaping mounds of mulch around a young tree, we create an environment for roots to grow abnormally and develop into SGRs.

While SGRs are not necessarily new, (the first cases were reported back in 1937) the phenomenon seems to have become more prevalent during the past 15 to 20 years. Some arborist point to the widespread use of the hydraulic tree spade and the push to get trees out of the nursery and into the landscape. Economic concerns have resulted in the lost art of hand-digging trees in production nurseries.

As a tree makes its way from the nursery pot, to the liner nursery, and finally to the landscape, there is an opportunity for planting a little deeper in the ground. The result is the trunk of an improperly planted tree resembles a telephone pole instead of the trunk's normal flaring observed in trees growing in the wild. Lest you think this is not a common problem, or one that does not happen in your community, consider this: At a recent urban forestry conference held in Missouri, we air-excavated (used air pressure to blow away the surrounding soil) and found SGRs on seven out of eight trees examined. All eight trees were within 100 feet of each other – right in front of the local park department's maintenance facility!

Preventing Stem Girdling Roots

How deep is too deep? If there is more than 1" of soil over the flair/branch root area, you are asking for trouble.

How can I check for proper depth? An easy way is to take a knitting needle and probe downward through the soil around the circumference of the stem. You are looking for the large roots that are running away from the stem. Once you hit such a root, mark the spot on the needle with your finger and remove it from the soil. If the depth is greater than 1", the tree is too deep.

What can I do? A large tree that has been in the ground for several years with a well-developed SGR is a lost cause and should be removed. For smaller and more recently planted trees, remove the excess soil from around the trunk to expose the root flare. If you find an SGR, cut the root with a hand pruner. If you just brought a tree home from the nursery and are waiting to plant it, remove the top of the root ball until you expose the root flare. You might be surprised how much excess soil you have bought!

UPCOMING EVENTS

- **June 1:** Salt River MG club meeting, 7 pm, Nutrition Center, Palmyra, MO
- **June 1:** Sullivan County MG club meeting, 6:30 pm, Milan, MO
- **June 4:** State MG Board Meeting, UM campus, Columbia
- **June:** Master Gardener training continues on Monday nights in Memphis
- **June 7:** Fabius MG club meeting, 6 pm, in conjunction w/ the MG training, firestation, Memphis, MO
- **June 15:** Kirksville Area MG club meeting, 7 pm, Adair Co. Extension Center, Kirksville
- **June 28:** Macon-Shelby MG club meeting, 7 pm, Macon, MO
- **June 19, 2004:** Kahoka Perennial Garden Club Garden Tour; Kahoka, MO; 11:00 AM to 4:00 PM; Cost is \$5. For more information call Carla at 660-727-2351.
- **July 13:** Turfgrass Field day, MU South Farms, Columbia
- **July 17-24:** NEMO Fair, Kirksville, MO
- **August 12-22:** Missouri State Fair Memphis, MO
- **September 24-25:** State Master Gardener Conference, Columbia; see information above.

GARDEN TIPS FOR JUNE

ORNAMENTALS

Week 1

- Watch for bagworms feeding on many garden plants, but especially juniper and aborvitae.
- Deadhead bulbs & spring flowering perennials as blossoms fade.
- Thin seedlings to proper spacings before plants crowd each other.

Weeks 2-3

- Apply organic mulches as the soil warms. These will conserve moisture, discourage weeds, and enrich the soil as they decay.
- Most houseplants brought outside prefer a bright spot shaded from afternoon sun. Check soil moisture daily during hot weather.
- Rhizomatous begonias are not just for shade. Many varieties, especially those with bronze foliage do well in full sun if given plenty of water and a well-drained site.
- Apply a balanced rose fertilizer after the first show of blooms is past.
- When night temperatures stay above 50 degrees, bring houseplants outdoors for the summer.
- Apply a second spray for borer control on hardwood trees.
- Plant tropical water lilies when water temperatures rise above 70 degrees.

Weeks 3-4

- Trees and shrubs may still be fertilized before July 4th.
- Softwood cuttings can be taken from trees and shrubs as the spring flush of growth is beginning to mature.
- Pruning of spring flowering trees and shrubs should be done after flowering.
- Continue spraying roses with a fungicide to prevent black spot disease.

VEGETABLES

Weeks 1-2

- Repeat plantings of corn and beans to extend the harvest season.
- As soon as cucumber and squash vines start to "run," begin spray

treatments to control cucumber beetles and squash vine borers.

- Plant pumpkins now to have Jack-O-Lanterns for Halloween.
- Early detection is essential for good control of vegetable pests. Learn to identify and distinguish between pests & beneficial predators.
- Stop harvesting asparagus when the spears become thin.

Weeks 2-4

- Start seedlings of broccoli, cabbage and cauliflower. These will provide transplants for the fall garden.
- Soaker hoses and drip irrigation systems make the most efficient use of water during dry times.
- To minimize diseases, water with overhead irrigation early enough in the day to allow the foliage to dry before the nightfall.
- Set out transplants of brussel sprouts started last month. These will mature for a fall harvest.
- To maximize top growth on asparagus, apply 2 pounds of 12-12-12 fertilizer per 100 sq. feet, water well and renew mulches to conserve moisture.
- Control corn earworms. Apply several drops of mineral oil every 3 to 7 days once silks appear. Sprays of B.T. are also effective.

FRUITS

Week 1

- Oriental fruit moths emerge. Most serious on peaches where first generation attacks growing tips. Shoots will wilt. These should be pruned out.
- Thinning overloaded fruit trees will result in larger and healthier fruits at harvest time. Thinned fruits should be

a hands width apart.

- Enjoy the strawberry harvest.

Weeks 2-3

- Renovate strawberries after harvest. Mow the rows; thin out excess plants; remove weeds; fertilize, and apply mulch for weed control.
- Summer fruiting raspberries are ripening now.
- Begin control for apple maggot flies.
- Spray trunks of peach trees and other stone fruits for peach tree borers.

Weeks 3-4

- Prune and train young fruit trees to eliminate poorly positioned branches and establish proper crotch angles.

TURFGRASS

All Month

- Water turf as needed to prevent drought stress.
- Mow lawns frequently enough to remove no more than one-third total height per mowing. There is no need to remove clippings unless excessive.
- Mow bluegrass at 2 to 3.5 inch height. Turfgrasses growing in shaded conditions should be mowed at the higher recommendations.

GENERAL GARDENING

- A mailbox mounted on a nearby post makes a handy place to store and keep dry any small tools, seeds, labels, etc. frequently used in the garden.
- When using any gas powered equipment, be sure to allow the engine a few minutes to cool before refilling empty fuel tanks.



Garden Talk!

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