

## Horticulture 2008 Newsletter No. 9 March 5, 2008

### UPCOMING EVENTS

*Growing Growers*, a series of monthly workshops on basic market farming skills, begins March 15 and runs throughout the growing season. Most include classroom training and a farm tour. For details go to: <http://www.growinggrowers.org/workshop.htm>

### FRUIT

#### Strawberry Planting and Mulch Removal



New strawberry plantings should be set early in the growing season so that mother plants become established while the weather is still cool. The mother plants develop a strong root system during this cool period when soil temperatures are between 65 and 80 degrees F. The most appropriate planting time is mid- to late March in southern Kansas and late March to mid-April in the northern areas of the state.

Later in the season, runners and daughter plants develop. The earlier the mother plants are set, the sooner the first daughter plant will be formed and take root. These first daughter plants will be the largest plants at the end of the growing season and will bear more berries per plant the following spring.

When planting is done later, the higher temperatures stress the mother plants resulting in reduced growth, weaker mother plants and delays in daughter plant formation. Fewer and smaller daughter plants produce fewer berries, resulting in a smaller crop.

Remove all flowers during the first year. New plants have limited energy reserves that need to go toward establishing the mother plants and making runners rather than making fruit. If fruit is allowed to develop the first year, the amount of fruit produced the second year is drastically reduced.

Research in Illinois has shown that the straw mulch should be removed from strawberry plants

when the soil temperature is about 40 degrees F. Fruit production drops if the mulch remains as the soil temperature increases. There are likely to be freezing temperatures that will injure or kill blossoms, so keep the mulch between rows to conveniently recover the berries when freezing temperatures are predicted. (WU)

## ORNAMENTALS

### Cut Back Ornamental Grasses Soon



Now is the time to remove dead foliage from ornamental grasses. Grasses green up earlier if foliage is removed and are more attractive without a mixture of dead and live leaves. A number of tools can be used including hand clippers, weed whips (if the foliage is of a small enough diameter), weed whips with a circular blade, or even a chain saw. Use the top of the chainsaw bar to cut so the saw doesn't pull in debris and clog. Also, it is often helpful to tie foliage together before cutting so it doesn't interfere and is easier to dispose of. Burning

is another option — but only if it is safe and legal to do so. Note that these grasses may not burn long, but they burn extremely hot. Even so, the crown of the plant is not damaged and new growth appears relatively quickly.

If the center of the clump shows little growth, the plant would benefit from division. Dig up the entire clump and separate. Then replant the vigorous growth found on the outer edge of the clump. (WU)

### Correcting Iron Chlorosis in Trees



Iron chlorosis is a common problem in Kansas because of the high pH in some soils. Though these soils normally contain adequate amounts of iron, the high pH ties up iron so that it is unavailable to plants. Classic symptoms of iron chlorosis are yellow leaves with a network of dark green veins. In severe cases the entire leaf turns yellow and the edges of the leaf scorch and turn brown. Plants may eventually die in such cases.

One of the best methods of avoiding iron chlorosis is by planting tolerant trees. Trees that are susceptible to iron chlorosis include pin oak, sweetgum, and dawn redwood. Moderately tolerant trees are ash, cottonwood, linden, elm, hawthorn, most oaks and ginkgo. Even closely related trees can differ markedly in their resistance. For example, pin oak is notorious for sensitivity to iron chlorosis while most other oaks are moderately tolerant. Also, red, silver and Amur maples

are susceptible, but Norway maples are much less so. There are several methods used to correct iron chlorosis in trees. Not all methods work in all situations. The following are the most common.

**Soil Treatment:** The idea is to acidify a small quantity of soil so that the tree can absorb the iron it needs from these areas. This will only work on non-calcareous soils (see companion article). A mixture of equal parts of iron sulfate and elemental sulfur are mixed together, and the mixture is placed in holes made under the dripline of the tree. Holes should be 1 to 2 inches in diameter and 12 to 18 inches deep. Space them 18 to 24 inches apart. Each hole should be filled with the iron sulfate-elemental sulfur mixture to within 4 inches of the soil surface. This method is labor intensive and results are sometimes variable.

Iron chelates can also be used as a soil treatment. The only chelate that is effective above a soil pH of 7.2 is Iron EDDHA. It can be found in the products Sequestar 6% Iron Chelate WDG, Sequestrene 138 and Millers FerriPlus. Use these products in the spring before growth starts. Dry chelate can be sprinkled on the soil and watered in or dissolved in water and applied as a drench under the dripline of the tree. Normally, soil-applied chelates last only one year.

**Foliar Treatment:** Leaves are sprayed directly with iron chelates or iron sulfate early in the season. Response is quick, but leaf burning is possible. Response can be spotty and temporary. Repeat applications may be needed.

**Trunk Injection or Implantation:** In this method, holes are drilled in the lower trunk and ferric ammonium citrate (iron citrate) or ferrous sulfate is introduced through the holes. There are both liquid and dry formulations. Methods of application include capsules (Mauget), caps (Medicaps), and a system that feeds liquid material via tubes and tees (Nutri-Booster). Though results can be variable, this method usually has the greatest chance of success. Successful applications often last several years. The preferred time of application is during the spring just after the leaves have fully expanded. Use a brad-point drill bit to minimize tree wounding. Research has shown the uptake is enhanced if the holes are drilled in the root flares near the soil surface. (WU)

## MISCELLANEOUS

### Iron Chlorosis and Calcareous Soils

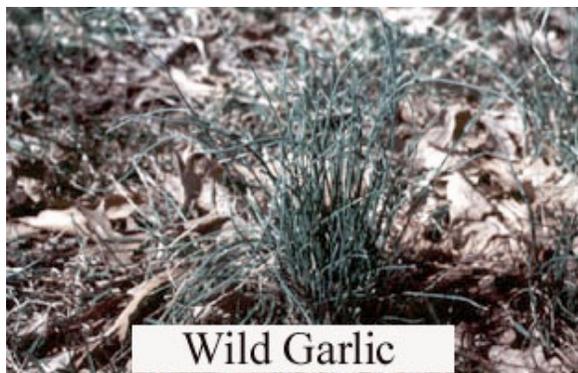


Iron chlorosis due to high pH soils is a significant problem in Kansas. Though Kansas soils normally contain adequate amounts of iron, a high pH makes that iron unavailable to the plant. Iron plays a major role in the production of chlorophyll. Thus, a lack of iron reduces the amount of chlorophyll and results in yellowing of leaves. Iron chlorosis weakens, and in severe cases, may kill a susceptible plant.

A popular recommendation for high pH soils is adding sulfur to reduce pH. This works well for many soils. But some soils are calcareous. Calcareous soils are those that contain actual particles of calcium carbonate (limestone). Calcareous soils can be difficult to practically impossible to acidify because the sulfur must neutralize all the free limestone before the pH is affected. In many cases you would need well over a pound of sulfur per square foot just to neutralize the free lime.

So what do you do? That depends on the situation. In vegetable gardens and annual flowerbeds, products can be worked into the soil when there are no plants present. Oregon State University suggests mixing 5 pounds of sulfur per 100 square feet into the soil before planting. The idea is to form little pockets of acidity so that enough iron is available for the plants during the year of application. Note that this must be done each year. Another possibility is to use iron chelates. Iron chelates hold the iron in such a way that the plant can get to it. However, not all iron chelates will work in high pH soils. For soils with a pH above 7.2, use a chelate that contains FeEDDHA (iron ethylenediamine-dihydroxyphenylacetate). This can be found in the products Sequestar 6% Iron Chelate WDG, Sequestrene 138 and Millers FerriPlus. Chelates can either be mixed into the soil at planting or sprayed on the foliage early in the season. Reapply as needed. (WU)

### **Wild Garlic, Wild Onion and Star-of-Bethlehem**



Wild garlic (*Allium vineale*) and wild onion (*Allium canadense*) are two closely related plants that can become weed problems in home lawns and landscapes. Though wild garlic and wild onion look much alike, each has an odor that is characterized by its name – wild garlic smells like garlic and wild onion smells like onion. These plants are perennials that can also reproduce by seeds and aerial bulbils. Bulbils form at the top of the stem and are oval and smooth. Wild garlic also reproduces by underground bulb offsets, but wild onion does not.

Both species produce a clump of plants that is unsightly in a lawn. Control recommendations are the same for each though we now have a couple of new additions to our arsenal. Traditionally we have used 2,4-D or 2,4-D + MCPP + Dicamba (i.e. Trimec, Weed-Out, Weed-B-Gon). These products should be sprayed during March on a day that is at least 50 degrees. The newer products we have are Weed Free Zone and Speed Zone. Both are combination products that contain a formulation of Trimec plus carfentrazone. These may be used at lower temperatures than the traditional products (below 50 degrees). A spreader-sticker added to the spray should help any of these products be more effective. At times, the spreader-sticker is already mixed into the weed killer; no additional amount is needed. These herbicides are also effective on dandelions.

Unfortunately, we have not had a good chemical control for Star-of-Bethlehem. The best products we had were Coolpower (31.3%) and Turflon Ester (23.8%). Coolpower is a commercial only product, but Turflon Ester is available to both commercial and homeowner users. However some recent research out of Virginia Tech has improved our outlook. Scientists there did a study in which they gained 96% control of Star-of-Bethlehem one month after treatment by using Quicksilver, a formulation of carfentrazone at the rate of 4 fl. oz/A. Quicksilver is a commercial

only product and therefore is not available to homeowners. However, both Speed Zone and Weed Free Zone contain carfentrazone and would certainly be worth a try if you have this troublesome plant. (WU)

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To view Upcoming Events: <http://tinyurl.com/fswqe>

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