Video of the Week: Making Your Own Seed Tape

TURFGRASS

Seeding Cool-Season Lawns in the Spring

There are several reasons Kentucky bluegrass and tall fescue lawns are better seeded in the fall than in the spring.

- Some of the most serious lawn weeds such as crabgrass and foxtail emerge in the spring. Since they are warm-season weeds, they will outcompete and often crowd out young, tender cool-season grasses during the heat of summer.

- The most stressful time of year for cool-season grasses is summer, not winter. Poorly established lawns may die out during the summer because of heat and drought stress.

- A lawn often gets more use during the summer, leading to increased compaction and traffic stress. If an area needs to be established in the spring, sodding is much more likely to be successful than seeding. Sodding provides stronger, more mature plants that are better able to withstand stress and prevent weed invasion. (Ward Upham)

VEGETABLES

Fertilizing Cole Crops

If you transplanted cole crops such as cabbage, broccoli and cauliflower a couple of weeks ago, it is almost time for a fertilizer boost. These plants need to mature before summer heat arrives, so they must grow quickly while the weather is cool. A sidedressing of fertilizer about 3 weeks after transplanting helps plants continue to grow rapidly.

Use fertilizers high in nitrogen for sidedressing, such as nitrate of soda
or blood meal at the rate of 2 pounds per 100 feet of row. You can also use lawn fertilizers that have close to 30 percent nitrogen such as a 30-3-4 or 29-5-4, but cut the rate in half to 1 pound per 100 feet of row. Do not use lawn fertilizers that contain weed killers or preventers. Fertilizer must be watered in if timely rains don't do that job for you.


**Herbicides for Vegetables**

Though mulches and hoeing are usually all that is needed for small vegetable gardens, homeowners with large areas may need the help of herbicides to keep ahead of the weeds. One preemergence and one postemergence herbicide can be used on home vegetable gardens.

The preemergence herbicide is trifluralin. Preemergence herbicides kill weed seeds as they germinate. They usually have no effect on weeds that have emerged. Therefore, they must be put on either before weeds come up in the spring or after weeds have been physically removed. The preemergence herbicide trifluralin is sold under the trade names of Treflan, Preen, Miracle-Gro Garden Weed Preventer, Gordon's Garden Weed Preventer Granules and Monterey Vegetable and Ornamental Weeder.

The postemergence herbicide is sethoxydim. This product only kills grasses; broadleaves are not affected. It can be sprayed directly over the top of many vegetables. Sethoxydim is sold as Poast, Monterey Grass Getter, and Hi-Yield Grass Killer. A second postemergence herbicide called fluazifop-p-butyl is labeled for commercial growers as Fusilade, but I haven't found vegetables listed on the homeowner labels, “Over the Top Grass Killer” and “Grass-No-More.” Also, the other homeowner products mentioned above often do not have as many vegetables on the label as the commercial products. Even among the homeowner products with the same active ingredient, there may be slight differences among labels. Check product labels to be sure the crop is listed. Here is a list of herbicides and the crops for which they are labeled. Many of these crops have application restrictions. For example, trifluralin can be used on asparagus, but must be applied before spears emerge. (Ward Upham)

<table>
<thead>
<tr>
<th>Vegetable</th>
<th>Treflan</th>
<th>Poast</th>
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<tbody>
<tr>
<td>Asparagus</td>
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<td>Broccoli</td>
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<td>Carrot</td>
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<td>Cauliflower</td>
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<td>Corn, Sweet</td>
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<tr>
<td>Cucumber</td>
<td>X</td>
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</tr>
</tbody>
</table>
Eggplant -- X
Lettuce -- X
Greens X --
Muskmelon X X
Okra X --
Onion -- X
Peas X X
Pepper X X
Potato X X
Pumpkin -- X
Spinach -- X
Squash -- X
Sweetpotato -- --
Tomato X X
Turnip X --
Watermelon X X

FRUIT

Planting Peaches Correction

Last week we had an article that recommended planting peaches with the graft union below the ground. We should have said the union should be above the ground. There are two reasons for this. The first is that the dwarfing effect of dwarfing rootstock would be lost if roots formed from the scion (top part of the plant) and second, burying the graft may result in the tree being planted too deeply where the roots may be starved for oxygen. We apologize for any confusion. (Ward Upham)

Apple Tree Sprays

Two common diseases on apple trees are cedar apple rust and apple scab. Though some apple varieties are resistant to these diseases — including Liberty, Jonafree, Redfree, Freedom, Williams Pride and Enterprise — most varieties are susceptible. For a description of disease-resistant varieties, go to [http://ohioline.osu.edu/hyg-fact/1000/1401.html](http://ohioline.osu.edu/hyg-fact/1000/1401.html)

Fungicide sprays during April and May are critical to preventing disease on susceptible varieties. A fungicide that is available to homeowners and very effective for control of apple scab and cedar apple rust is myclobutanil (Immunox). There are several formulations of Immunox but only one is labeled for fruit. Check the label.

Sprays should be done on a 7- to 10-day schedule to keep the protective chemical cover on the rapidly developing leaves and fruit. An insecticide will need to be added to this mixture after
petal drop to prevent damage from codling moths that cause wormy apples. Methoxychlor or malathion can be used as an insecticide. In order to protect bees, DO NOT use any insecticide during bloom.

Although gardeners may continue to use myclobutanil throughout the season (but not more than 10 times), certain other fungicides are more effective on summer diseases such as sooty blotch and fly speck. Consider switching to Captan or to a fruit spray mixture about June 1. A spreader-sticker can be added to the fungicide-insecticide chemical mixture to improve the distribution and retention of the pest control chemicals over the leaves and fruit. A hard, driving rain of about 1 inch or more will likely wash chemicals from the leaves and fruit. In such cases, another application should be made. You can find information on controlling insects and diseases on fruit trees in our publication titled "Fruit Pest Control for Home Gardens" at http://www.ksre.ksu.edu/bookstore/pubs/c592.pdf (Ward Upham)

Fertilizing the Home Orchard

Fruit trees benefit from fertilization around the bloom period, but the amount needed varies with the age of the tree. Normally, trees primarily need nitrogen, so the recommendations are for a high nitrogen fertilizer such as a 27-3-3, 29-5-4, 30-3-3 or something similar. Though recommended for lawns, these fertilizers will also work well as long as they do not contain weed killers or crabgrass preventers. Use the following rates:

Trees 1 to 2 years old, apply one-fourth cup of fertilizer per tree;  
Trees 3 to 4 years old, apply one-half cup per tree;  
Trees 5 to 10 years old, apply 1 to 2 cups per tree;  
Trees more than 10 years old, apply 2 to 3 cups.

You may also use nitrate of soda (16-0-0) but double the rate recommended above. If a soil test calls for phosphorus and potassium, use a 10-10-10 but triple the rate.

On apple trees, last year's growth should be 8 to 10 inches, cherries should have 10 to 12 inches, and peaches should equal 12 to 15 inches of terminal growth. If less than this, apply the higher rate of fertilizer, and if more, apply the lesser amount.

Spread all fertilizer evenly on the ground away from the trunk of the tree and to the outer spread of the branches. Water in the fertilizer. (Ward Upham)
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.

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. Several methods are 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 the tree can absorb the iron it needs from these areas. This will only work on non-calcareous soils.

If the tree has not been planted yet, have a soil test done. Add the recommended amount of sulfur (if any) and work into the soil before planting.

For existing trees, 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 can vary. 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. 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. (Ward Upham)

**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 lower pH. This works well for many soils, but not those that 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 long term. In many cases you would need well over a pound of sulfur per square foot just to neutralize the free lime.

Perform this simple test to see if your soil contains appreciable amounts of free lime. Apply one drop of vinegar to dry soil. A vigorous fizz usually means the soil contains at least 3 percent calcium carbonate. A mild fizz suggests a calcium carbonate of between 1 and 2 percent and a fizz that can only be heard suggests the soil has a calcium carbonate content less than 1 percent.

So what do you do? That depends on the situation. With vegetable gardens and annual flowerbeds, work products into the soil during the time of year 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 that result in enough iron availability 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 over 7.2, use a chelate that contains FeEDDHA (iron ethylenediamine-di-(hydroxyphenylacetate)). 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. (Ward Upham)
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