Frost Proof Vegetable Plants

Certain vegetables can withstand cold spring temperatures as long as they have been toughened up by gradually exposing them to sunlight and outdoor temperatures. This “hardening off” process usually takes about a week. Reducing watering and temperature is the key to toughening up transplants. If possible, move transplants outside for a portion of each day. Start by placing them in a shady, protected location and gradually move them into a more exposed, sunny location as the week progresses. Hardened off cabbage, broccoli, cauliflower and onions can withstand temperatures near 20 F without being killed. Lettuce plants are not quite as tough but will be OK if exposed to temperatures in the mid 20s. Don’t hesitate to put these plants out now if extreme cold is not forecast. (WU)

Herbicides for Home Vegetable Gardens

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. There is one preemergence and one postemergence herbicide that 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 will only kill grasses; broadleaves are
not affected. However, 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 the various herbicides and the crops for which they are labeled. Note that many of these crops will have application restrictions. For example, trifluralin can be used on asparagus, but must be applied before spears emerge. (WU)

<table>
<thead>
<tr>
<th>Vegetable</th>
<th>Treflan</th>
<th>Poast</th>
<th>Vegetable</th>
<th>Treflan</th>
<th>Poast</th>
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<tr>
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<td>X</td>
<td>Watermelon</td>
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<td>X</td>
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</tbody>
</table>

**ORNAMENTALS**

**Ten Rules for Planting Trees**

Before you begin spring landscaping, here are some tips on planting trees.

1. Select the right tree for the site. To avoid serious problems, choose trees that are adapted to your location. Consider whether the tree produces nuisance fruit or if there are disease-resistant varieties available. For example, there are a number of crabapple varieties that are resistant to apple scab and rust diseases. Also consider the mature size of a tree to be sure you have enough room. Ask a local nurseryman for suggestions.
2. Keep the tree well watered and in a shady location until planting. When moving the tree, lift it by the root ball or pot and not by the trunk.

3. Before planting, remove all wires, labels, cords or anything else tied to the plant. If left on, they may eventually girdle the branch to which they are attached.

4. Dig a proper hole. Make the hole deep enough so that the tree sits slightly above nursery level. Plant the tree on solid ground, not fill dirt. In other words, don't dig the hole too deep and then add soil back to the hole before placing the tree. The root flare (point where trunk and roots meet) should be visible. If it isn't, remove enough soil or media so that it is. The width of the planting hole is very important. It should be three times the width of the root ball. Loosening the soil outside the hole so it is five times the diameter of the root ball will allow the tree to spread its roots faster.

5. Remove all containers from the root ball. Cut away plastic and peat pots; roll burlap and wire baskets back into the hole, cutting as much of the excess away as possible. If you can remove the wire basket without disturbing the root ball, do it. If roots have been circling around in the container, cut them and spread them out so they do not continue growing this way inside the hole and become girdling roots later in the life of the tree.

6. Backfill the hole with the same soil that was removed. Amendments such as peat moss likely do more harm than good. Make sure the soil that goes back is loosened - no clods or clumps. Add water as you fill to insure good root to soil contact and prevent air pockets. There is no need to fertilize at planting. Note: Adding organic matter to larger area than just the planting hole can be beneficial. However, adding amendments to the planting hole in heavy soil creates a “pot” effect that can fill with water and drown your new tree.

7. Don't cut back the branches of a tree after planting except those that are rubbing or damaged. The leaf buds release a hormone that encourages root growth. If the tree is cut back, the reduced number of leaf buds results in less hormone released and therefore fewer roots being formed.

8. Water the tree thoroughly and then once a week for the first season if there is insufficient rainfall.

9. Mulch around the tree. THIS IS IMPORTANT! Mulch should be 2 to 4 inches deep and cover an area two the three times the diameter of the root ball. Mulching reduces competition from other plants, conserves moisture and keeps soil temperature closer to what the plants' roots prefer.

10. Stake only when necessary. Trees will establish more quickly and grow faster if they are not staked. However, larger trees or those in windy locations may need to be staked the first year. Movement is necessary for the trunk to become strong. Staking should be designed to limit movement of the root ball rather than immobilize the trunk. (WU)
FLOWERS

Fertilizing Perennial Flowers

Most flowering perennials are not heavy feeders, and once established, may not need fertilizing every year. However, a soil test or visual symptoms will help determine plant needs. Weak plants with light green to yellowish foliage will probably benefit from a nitrogen-containing fertilizer. Fertilizer should be applied as growth begins in the spring. Perennials that tend to need more fertilizer than the average perennial include astilbe, chrysanthemum, delphinium, lupines and summer phlox. (WU)

TURFGRASS

Managing Turf in Shade

Turfgrasses differ in their capacity to grow in shade. Among Kansas turfgrasses, tall fescue is the best adapted to shade. Although the fine fescues (i.e., creeping red, chewings, hard and sheep) have better shade tolerance, they lack heat tolerance and typically decline during hot Kansas summers. The warm-season grasses have the poorest shade tolerance, although zoysia does better than bermuda and buffalo.

Where shade is still too heavy for fescue, there are other courses of action. The most obvious is to either remove trees, or to prune limbs and thin the tree canopies. Grass will do better under openly spaced trees than under closely spaced trees. Pruned limbs and thinned canopies will allow more sunlight to directly reach the turfgrass.

If possible, raise the mowing height in the shade to compensate for the more upright growth of the leaves, and to provide more leaf area for photosynthesis. The thin, weak turf in the shade may tempt you to fertilize more. Remember the problem is lack of light, not lack of fertility. Too much nitrogen in the spring causes the plant to grow faster and may result in starvation. The nitrogen rate for shaded grass should be cut back to at least half of that for grass in full sun. Late fall fertilization after tree leaves have fallen, on the other hand, is important for shaded cool-season turfgrasses and should be applied at full rate. Irrigate infrequently but deeply. Light, frequent irrigation may encourage tree feeder-roots to stay near the surface, which increases
competition between the trees and the turf. Restrict traffic in the shade.

Many times, the best choice for shaded areas is switch from a turfgrass to a more shade-tolerant plant. For example, English ivy and periwinkle (Vinca minor) are much more shade tolerant than any turfgrass adapted to our area. Another option is simply to mulch the area where turf doesn’t grow well. The trees will love the cool, moist soil and the absence of competition. (WU)

MISCELLANEOUS

Wet Garden Soils

With the wet winter, many of our soils are still too wet to work. If you have a small garden, consider spreading a tarp over the area when rain is forecast. You may also want to use a tarp to protect a small area of a large garden in which cool-season crops can be planted. Remove the tarp after the rain to allow the soil to continue to dry. Remember to never work garden soils that are wet. This will destroy the structure of soil and will form clods that are slow to break down. (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 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. Newer products are Weed Free Zone and Speed Zone. Both are combination products that contain a formulation of Trimec plus carfentrazone. These may be used at temperatures below 50 degrees, lower than traditional products. 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. But 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 per acre. 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. Remember to add a spreader-sticker. (WU)

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