Video of the Week: Growing Vegetables in Containers -
http://www.youtube.com/user/KSREVideos#p/c/38/jBGkqT769KM

TURFGRASS

Fertilize Irrigated Cool-Season Lawns in May

May is an excellent time to fertilize cool-season lawns such as tall fescue and Kentucky bluegrass if they will be irrigated throughout the summer. Non-irrigated lawns often go through a period of summer dormancy because of drought and do not need this fertilization.

May is a good time to fertilize because the springtime flush of growth characteristic of these grasses has tapered off, so the fertilizer you apply will be less likely to cause excessive shoot growth than if you had fertilized in April. Slow-release nitrogen sources are ideal. These nitrogen sources promote controlled growth, which is desirable as the stressful summer weather approaches. Relatively few fertilizers available to the homeowner supply ALL of the nitrogen in the slowly available form. But one such product that is widely available is Milorganite. Other such products available in the retail market include cottonseed meal, alfalfa-based fertilizers, and any other products derived from plants or animals. (Bloodmeal is an exception, and contrary to popular belief, the nitrogen it supplies is quickly available.) These products are all examples of natural organic fertilizers. They typically contain less than 10 percent nitrogen by weight, so compared to most synthetic fertilizers, more product must be applied to get the same amount of nitrogen. Translation: they are more expensive! Apply enough to give the lawn one pound of nitrogen per 1,000 square feet. For example, if the fertilizer is 6 percent nitrogen by weight, you will need to apply almost 17 pounds of fertilizer product per 1,000 square feet. Summer lawn fertilizers that contain at least a portion of the nitrogen as slow-release are fine to use as well. Be sure to follow label directions.
If cost is prohibitive, you can use the less expensive quick-release (i.e., soluble) sources, but split the application into two doses as follows: apply enough to give the lawn 0.5 lb nitrogen per 1,000 square feet in May and again in early June. (WU)

**Orchard Grass in Tall Fescue Lawns**

Orchard grass often infests tall fescue lawns. Unfortunately, orchard grass is lighter green and faster growing than tall fescue and so is very visible. Homeowners complain of the light green tufts of grass wherever this weed has become established. Even worse, there are no herbicides that will kill the orchard grass without also killing your turf. About the only good thing about orchard grass is that it is a bunch grass and does not spread.

Orchard grass often comes in as a contaminant on grass seed, especially K-31 tall fescue. Buying good grass seed is the first line of defense against this weed. Orchard grass is a pasture grass and therefore is not found in the “weed seed” portion of the seed label. Rather, orchard grass will be listed as “other crop seed.” Try to buy grass seed that has 0.0% “other crop seed.”

Control options are few and painful. Use glyphosate (Roundup, Killzall Weed and Grass Killer, Kleeraway Systemic Weed and Grass Killer and others) to spot spray orchard grass clumps. Any lawn grasses you hit will be killed, so keep the spots sprayed as small as possible. Wait until the spots have turned brown and then cut out the clumps and replace with a small piece of sod. Large numbers of orchard grass clumps may mean it is more practical to kill the entire lawn and start over.

For information on identification including images, go to: [http://kswildflower.org/grass_details.php?grassID=15](http://kswildflower.org/grass_details.php?grassID=15) (WU)

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**VEGETABLES**

**Sweet Corn Primer**

It used to be simple to decide which sweet corn to plant. You simply chose a cultivar and planted when the soil temperature reached 55 degrees. Now it has become more complicated due to genetic advances in sweet corn. Breeders have found certain genes that improve “standard” sweet corn. Below is an overview of the types commonly available to homeowners.
**Standard (su):** This is our “normal” sweet corn and contains a “sugary gene” (su). Standard sweet corn should be isolated from field corn, popcorn, supersweets and ornamental corn. To isolate one type of corn from another, do not plant one type within 200 to 250 feet or be sure to have a difference of 12 to 14 days in time to maturity. Plant when the soil temperature reaches at least 55 degrees. Recommended varieties include Honey and Cream, Silver Queen, Sterling Silver, Jubilee, or Merit.

Supersweet (sh2): Though supersweets have up to three times the sweetness of standard sweet corns and hold their sweetness longer after harvest due to the sh2 gene, they do have some drawbacks such as tougher kernels and a lack of some of that good “corn” flavor. They also need to be isolated from other sweet corn types and are very sensitive to cooler soils. Wait until the soil temperature reaches 65 degrees before planting. Try Candy Store, Florida Staysweet, Sugar Loaf, Sweet Time, or Sweetie.

**Sugar Enhanced (se):** These are probably the most popular type of sweet corn grown due to their tender kernels, good flavor and less sensitivity to cool soils (60 degree soil temperature for planting). They hold their post-harvest sweetness longer than standard types but will not hold sweetness as long as the supersweets. The sweetness from the sugar-enhanced types is due to the “se gene.” If both parents were se types, the variety is known as an se+ or se se. If only one parent was an se type and the other an su type, then the variety will be listed as se. They do not need to be isolated other than from the supersweets. Suggested varieties include Bodacious, Ambrosia, Sweet Temptation, Delectable and Miracle.

**Triplesweet (synergistic):** The newest types of sweet corns blend the su, se and supersweet types with the goal of combining the best characteristics of each. We don’t have firm recommendations yet but you may want to try Serendipity, Polka, Avalon or Frisky. (WU)

**ORNAMENTALS**

**Preventing Fruit on Crabapples**

Though many gardeners enjoy the brightly colored fruit produced by some crabapple trees, others find the fruit messy and would like to prevent them from forming. Fortunately, there is an easy way to accomplish this.

Sevin (carbaryl) is an insecticide that not only controls insects but can cause apples and crabapples to drop while still small. Check the label for this use. Not all Sevin labels mention thinning on the label.

Sevin should be applied soon after the blossoms have dried on the trees. DO NOT apply Sevin during bloom because it is extremely toxic to bees. Spray the trees thoroughly with 2 tablespoons
of liquid Sevin per gallon of water. Stems on the fruit should turn yellow and wrinkle, and the tiny apples should start to drop in 7 to 10 days. If drop hasn't started in two weeks, a second application may be needed. Sevin remains effective for about 35 days after full bloom though the fruit will become more difficult to remove as it increases in size. Note that Sevin is specific for apples and crabapples and will not prevent fruit formation on other trees. (WU)

PESTS

Eastern Tent Caterpillars

Eastern tent caterpillars have hatched in the Manhattan area and have started to feed on trees and shrubs such as flowering crab and sandhill plum. These insects produce a “silken tent” in the crotch of a branch where they stay when not feeding. Larvae and the tent they make will increase in size until about mid-May at which point they pupate. Though usually not detrimental to a tree’s health, control may be desired to prevent the ragged look these insects will produce by their feeding. An easy way to get rid of the colony is to wait until the insects have returned to their webbing and use a pole with a nail at its end or a toilet brush to twirl up the nest (and the larvae inside) and dispose of it. (WU)

Earthworms and Pesticides

Earthworms are organisms that have been present on earth for more than 500 million years, and there are more than 3,000 species distributed worldwide. There may be over 1 million earthworms in one acre of land. One earthworm can produce over 100 offspring per year, with an average lifespan of up to nine years. Earthworms may be found in a wide range of soil types, and are extremely beneficial to soils by enhancing aeration, improving water penetration/infiltration, reducing thatch, and breaking-down plant material (e.g., leaf litter), increasing the organic matter content of soils. This then provides nutrients to plants. They may also improve compacted soils because their burrowing and feeding reduces soil compaction and enhances thatch decomposition.

Earthworms consume and excrete organic and mineral components as they migrate through the soil profile to acquire food such as dead tissue, fungi, bacteria, and other microorganisms. As plant material and soil filter through the digestive system of an earthworm, the gut breaks down particles into smaller fragments. After excretion, other microorganisms may further decompose these fragments. Earthworms also convert mineralized forms of nitrogen, phosphorus, and
potassium into soluble forms that are readily available for plant uptake. Furthermore, they may increase the soil-to-air ratio by up to 30 percent.

Earthworms are most active during spring and fall. Summer and winter temperatures cause earthworms to burrow deep into the soil profile where they enter a resting stage similar to hibernation. Heavy rains will cause earthworms to appear on sidewalks and driveway. They do this to increase their chances of traveling aboveground without desiccating, which may occur when they are exposed to dry, sunny conditions.

Earthworms require moisture for survival because they do not have an exoskeleton to protect them from drying out. In addition, earthworms prefer a soil with a pH between 6.0 and 7.0. They are also the major food source of moles and cluster fly larvae.

Despite the benefits associated with earthworms, there are cases when there is a perceived need to control them with pesticides. This occurs when small mounds or worm castings are present on lawns. These worm castings are a mixture of soil and fecal matter deposits created when earthworms emerge from their burrows. These worm castings are an excellent soil amendment, an abundant source of beneficial microorganisms, and rich in nutrients. Also, worm castings have been suggested to increase resistance to insect pests, although further study is needed. But worm castings can be both unsightly and inhibit lawn mowing, especially in golf course settings. In addition, excessive earthworm activity may result in soft ground, root drying, and possibly thinning of the lawn.

Earthworms vary in susceptibility to pesticides depending on the type (e.g., insecticides, fungicides, and herbicides). Although there are no insecticides specifically registered for earthworm control, several insecticides are known to be directly toxic to earthworms including carbaryl (Sevin) and imidacloprid (Merit). Also, copper-based fungicides and fungicides with the active ingredient, thiophanatemethyl (e.g. Cleary’s 3336) have been shown to reduce earthworm populations. In addition to direct toxicity, these pesticides may indirectly affect earthworms by reducing feeding or inhibiting growth rates, but this varies depending on the application rate. Earthworm distribution and behavior may be negatively impacted as a result. For example, areas treated with certain pesticides may repel earthworms, thereby hindering the breakdown and incorporation of organic matter into the soil. Reducing earthworm populations may have a negative effect on the chemical and physical properties of soils. Also, these pesticides have broad-spectrum activity and may kill other beneficial organisms (e.g. insects and mites) in addition to earthworms, which may disrupt the soil ecosystem and lead to problems with other pests.

Because earthworms are a major contributor to the physical, chemical, and biological processes associated with healthy soils, and they are an important part of the ecosystem, controlling earthworms seems counterintuitive. It may be best to live with the situation or attempt to implement practices such as lowering the soil pH, increasing soil drainage, and/or aerating lawns regularly. All these practices will likely alleviate problems with earthworms. (RC)
Controlling Grassy Weeds in Broadleaf Plants

Most gardeners are familiar with herbicides that can be used to eliminate broadleaves (i.e., dandelions) from grasses (i.e., lawn). They may not be as familiar with herbicides that can take grasses out of broadleaf plants like shrubs. There are two major weed killer types that are used to kill grassy weeds in broadleaf plants. On the commercial side, the trade names for these products are Fusilade and Poast. Homeowner labeling is more diverse. I have seen Fusilade sold under the names of "Grass-B-Gon," and "Grass-No-More Over the Top Spray" and "Over the Top Grass Killer." Poast is sometimes sold to homeowners under the Poast label but I've seen it more commonly sold as "Hi-Yield Grass Killer" and "Monterey Grass Getter." There may be other trade names, too. Fortunately, you can identify the product by the common chemical name listed on the label. Fusilade's common chemical name is fluazifop, and Poast's is sethoxydim.

If you decide to use one of these products, read the label carefully. Often, a crop oil must be added to the spray solution for the herbicide to work well. Some grassy weeds are harder to control such as bromegrass and sandbur.

Though both these products can be used over the top of numerous broadleaf plants (including iris), there are some differences in labeling. For example, if you need to control grasses in strawberries, choose Poast because it has a seven-day waiting period before harvest. Fusilade cannot be used within one year of harvest. (WU)

Field Bindweed Control

Field bindweed is difficult to control, especially for homeowners, but there are options.

Home Vegetable Gardens

Weed control requires taking the treated portion of the garden out of production for a time.

Solarization - Solarization uses the energy from the sun to produce heat that pasteurizes the soil. Follow these steps to solarize a garden area:

1. Select the hottest time of year to solarize, usually mid-June to mid-August in Kansas.

2. Work the soil deeply, and smooth the surface so the clear plastic will make uniform contact with the soil.
3. Water well. Moisture encourages seed to germinate and existing bindweed to grow so plants can be killed by the heat. The water also helps conduct the heat deeper into the soil.

4. Spread clear polyethylene film over the area. Seal the edges and seams with soil to prevent air from circulating under the plastic. One mil film is most effective at creating heat, but is likely to be torn apart by Kansas winds. Film that is 4 mil thick is more likely to last.

5. Leave the plastic in place for 4 to 6 weeks. The longer time is more effective.

6. Remove the plastic after 6 weeks. If you leave it in place longer, it may become brittle from exposure to ultraviolet radiation and be difficult to remove. You can plant the next day.

**Glyphosate** - Glyphosate is sold under a wide variety of names, the most common being Roundup. Take the garden out of production when treating.

1. Roundup is a nonselective herbicide that will kill whatever it hits. But it is inactivated when it contacts the soil.

2. Roundup is most effective when applied to bindweed that is at or beyond full bloom. You can treat earlier but don't skip the late summer to fall application.

3. Do not apply to bindweed that is under moisture stress or not growing well.

**Turf**

Selective herbicides are available. An herbicide with the trade name of Drive (quinclorac) has, until recently, only been available to commercial applicators. However, there is now Drive packaged for homeowners and is available from Monterey Lawn and Garden (www.montereylawngarden.com). There are also homeowner combination herbicides that contain Drive such as Ortho Weed-B-Gon Max + Crabgrass Control and Bayer All-in-One Lawn Weed and Crabgrass Killer.

Commercial applicators can also use Drive (quinclorac) as well as Q4 (contains quinclorac). Products with Drive work about as well as glyphosate but are selective.

Note that lawns treated with Drive should not use clippings in compost or as mulch as Drive is very stable on grass clippings. We recommend clippings be returned to the lawn anyway but if they are bagged, they should be discarded. Do not apply products with Drive over exposed roots of trees and ornamentals. It would be best to avoid spraying beneath the canopy of any trees to avoid possible damage. If there are plans to convert a section of lawn to a vegetable garden, do not use Drive on that area. Eggplants can be damaged if planted within 12 months of areas treated with Drive, and tomatoes can be damaged if planted within 24 months.

**Shrub Beds**

Use a spray of glyphosate between plants. Use a shield if spraying near plants to keep spray from
contacting green plant material. Remember, glyphosate will hurt your shrubs if it contacts green tissue.

It is possible to control field bindweed by pulling, but you must be extremely persistent. I remember reading a study from the 1940s that found that bindweed produces enough energy to start strengthening the roots when it reached the six-leaf stage. So, if pulling, never allow plants to produce more than six leaves. (WU)

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