Video of Week: Fertilizing the Garden

UPCOMING EVENTS

Mushroom Cultivation Workshop

March 21, 2019
John C. Pair Horticulture Research Cntr., Haysville
Discover easy, low-cost methods for growing delicious gourmet mushrooms such as shiitake, wine cap, and oyster. Learn how to inoculate logs and wood chip beds so that you can harvest and sell your own mushrooms year after year! For more information, go to https://hnr.k-state.edu/extension/info-center/newsletters/Mar5_2019_9.pdf

VEGETABLES

Time to Plant Potatoes Approaching

St. Patrick’s Day is just around the corner, so it is time to think about getting seed potatoes in the ground. Actually any time from mid- to late-March is fine for potato planting. We may have to plant later this year than normal due to cold, wet soils.

Be sure to buy seed potatoes rather than using those bought for cooking. Seed potatoes are certified disease free and have plenty of starch to sprout as quickly as soil temperatures allow. Most seed potatoes can be cut into four pieces, though large potatoes may yield more, and small less. Each seed piece should be between 1.5 and 2 ounces. Seed pieces this size will have more than one eye.

Each pound of potatoes should yield 8 to 10 seed pieces. Cut the seed 2 to 3 days before planting so freshly cut surfaces have a chance to suberize, or toughen, and form a protective coating. Storing seed in a warm location during suberization will speed the process. Plant each seed piece about 1 to 2 inches deep and 8 to 12 inches apart in rows. Though it is important to plant potatoes in March, emergence is slow. It is often mid- to late-April before new plants poke their way through the soil. As the potatoes grow, pull soil up to the base of the plants. New potatoes are borne above the planted seed piece, and it is important to keep sunlight from hitting the new potatoes. Exposed potatoes will turn green and produce a poisonous substance
Bolting and Buttoning in Cole Crop Plants

Broccoli, cabbage and cauliflower are cole crops that have a tendency to bolt (go to seed) or button (produce an extremely small head) if plants are not grown properly. These crops need to be kept actively growing through their production cycle, including growing transplants from seed. If they slow down due to under-fertilization or are stunted due to overgrowing their container, buttoning or bolting is more likely. Therefore, be sure to properly fertilize plants grown from seed and ensure they have enough light. The easiest way to fertilize transplants is to use a potting soil with fertilizer already added. Light may be more of a challenge. Often natural sunlight is not sufficient unless the plants are in a greenhouse. Therefore, additional light is often needed. Click here for a video on how to build a grow light.

If you are not growing your own transplants but rather selecting plants later in the month for transplanting, choose small, stocky, dark green plants. Even after transplanting, these plants need to be well-fertilized. Fertilize at transplanting with a starter solution and continue to fertilize every 2 to 3 weeks until harvest. Both buttoning and bolting are irreversible. Once a seed stalk starts for form, nothing can be done to force the plant to produce a normal crop. (Ward Upham)

Use Wide Rows for Certain Vegetables

Lettuce, radishes and spinach are planted early enough that weeds are usually not a problem. Though these plants can usually be planted starting in mid-March, planting may need to be delayed due to cold, wet soils this year. Usually, we can plant as late as mid-April for these plants. If space is at a premium, gardeners can plant a wide row and get more production out of a small space. How wide? Usually 12 to 18 inches is about right. Leaving aisles between wide rows allows for convenient harvesting.

Seed can be planted in several rows close together to make a wide row but it is easier to scatter seeds uniformly over the area. After seeding, tamp down the row lightly with the back of a hoe to eliminate air pockets. Then pull soil from the sides of the row with the back of a garden rake to cover the seed. One-quarter inch of soil over the seed should be good.

Be careful to not sow too densely as too much competition can stunt plants. Space seed according to the instructions on the seed packet. If you do happen to sow too thickly, plants can be thinned later.

It is best to go back to a single row for later planted crops to allow for easier weed control. (Ward Upham)
Rhubarb

Rhubarb is a perennial vegetable that can be a bit tricky to grow in Kansas. It is native to northern Asia (possibly Siberia) and so is adapted to cold winters and dry summers. However, it is susceptible to crown rot and should not be subjected to “wet feet” and therefore should be grown in a well-drained soil. The addition of organic matter can increase drainage as well as raise the soil level so that crown rot is less likely. Also, have a soil test done as rhubarb does best with a pH below 7.0.

Rhubarb should be planted from mid-March to early April in Kansas. Mix 5 to 10 pounds of well-rotted barnyard manure into the soil for each 10 square feet of bed before planting.

Rhubarb is propagated from crowns (root sections) that contain one or two buds. Plants should be spaced 2 to 3 feet apart in the row with 4 to 5 feet between rows. The crowns are planted shallow so that the buds are just one-half to 1 inch below the soil surface. Firm soil around the crowns and make sure they are not in a depression that holds water. Recommended varieties include Canada Red, Crimson Red, McDonald and Valentine.

Rhubarb needs rejuvenated at least every 5 to 10 years and should be dug and divided from mid-March to early April. Use a cleaver or ax to cut crowns into sections that each contain one or two buds. Plant as described above.

Newly transplanted rhubarb should not be harvested the first year so the plant can recover from the transplant process. Only a few stalks should be harvested the second year to allow the plant to continue to build up its energy reserves. The harvest season for plants that are three years or older usually lasts about 8 weeks. Harvest only the largest and best stalks by pulling them slightly to the side so that they break away from the plant. Never harvest over one-third of the leaf stalks at one time. Only the leaf stalk (petiole) is eaten as the leaf blade contains oxalic acid and is poisonous.

Established rhubarb should be fertilized in late March. Fertilize according to soil test or use a 10-10-10, 12-12-12 or similar fertilizer and broadcast or band at the rate of 1.5 to 2 pounds per 100 square feet or about 1/2 cup per plant.

An additional 1/4 cup of fertilizer per plant of a high nitrogen fertilizer such as a 27-3-3, 28-4-4 or something similar in late June or July after the last harvest is often helpful to stimulate recovery from the harvest season. Though most of these high nitrogen fertilizers are lawn fertilizers, each will work well for our purposes as long as they do not contain weed killers or weed preventers.

Mulches can be used to reduce moisture loss, prevent weed growth and provide winter protection. However, it should be pulled away in the spring to allow the soil to warm so that early growth is encouraged. (Ward Upham)
FLOWERS

Iris Leaf Spot Control Starts Now

Now is a good time to begin control measures for iris leaf spot by removing old, dead leaves. Iris leaf spot is a fungus disease that attacks the leaves and occasionally the flower stalks and buds of iris. Infection is favored by wet periods during the spring, and emerging leaves eventually show small (1/8- to 1/4-inch diameter) spots. The borders of these spots are reddish, and surrounding tissue first appears water-soaked, and then yellows. Spots enlarge after flowering and may coalesce. The disease tends to be worse in wet weather and may kill individual leaves.

Though the disease will not kill the plant directly, repeated attacks can reduce plant vigor so that the iris may die from other stresses. Spores are passed to nearby plants by wind or splashing water.

Because this disease overwinters in old leaves, removal and destruction of dead leaves will help with control. For plants that had little infection the previous year, this may be all that is needed. Plants that were heavily infected last year should be sprayed with chlorothalonil (Bravado Fungicide, Fertilome Broad Spectrum Landscape & Garden Fungicide, Ortho Garden Disease Control, GardenTech Daconil, Bonide Fungonil, Bravo Flowable Fungicide) or myclobutanil (Immunox, Immunox Plus, F-Stop Lawn & Garden Fungicide) starting when leaves appear in the spring. Repeat sprays every seven to 10 days for four to six sprays. Iris leaves are waxy, so be sure to include a spreader-sticker in your spray to ensure good coverage. (Ward Upham)

Establishing a Wildflower Area

Native grasses and many native wildflowers do well within a wide pH range. Any pH between 5.5 and 8 should work. Just make sure the area receives at least 8 hours of sun a day.

It is better to choose a blend of grasses and wildflowers rather than a single species. Companies that provide regional blends include Sharp Brothers, Stock Seed and Wildseed Farms.

These plants do not take root and grow well in areas that already have established plants. Existing vegetation should be killed before seeding. Follow the following steps to increase the chances of success.

- Control perennial weeds by using a product containing glyphosate.
- Using glyphosate the fall before planting makes soil preparation easier the following spring
  - Adjust pH and fertilize according to soil test before planting.
  - The seedbed should be firm so that a boot heel sinks in no more than ½ inch.
  - The goal is good seed/soil contact.
  - Can mix seed with damp sand (4:1 sand/seed) for more uniform coverage with a drop seeder or whirlybird spreader.
- The seed should be raked in about 1/4” deep. It is best if the seedbed is firmed up by using roller or driving over the area with a riding lawn mower. Don’t mulch.
- Keep seed moist while the seed is germinating (3 to 4 times per week, if no rain). Slowly back off watering as plants develop.

What about planting dates? Warm-season grasses and most prairie flowers should be seeded between April 1 and May 15. To control any remaining living vegetation, spray with a product containing glyphosate, wait a week and plant. Make sure the soil temperature is at least 60 degrees before planting. Soil thermometers are often available in garden centers, hardware stores and auto stores (they are used to test air temperatures from air conditioners as well as testing soil temperatures in gardens).

Hand weeding can help but must be done with care to avoid uprooting small prairie flowers. Mowing as high as possible can help control fast growing weeds while preserving most of the foliage on the prairie flower. (Ward Upham)

**Rose Rosette Disease**

Rose Rosette Disease (RRD) is a very destructive disease on roses. Once infected, roses cannot be cured but must be destroyed. A current USDA NIFA grant is seeking to determine the best way to diagnose the disease, determine the locations in the United States it is active and identify the best management practices with the ultimate purpose of breeding resistance into new cultivars.

The disease is caused by the Rose Rosette Virus (RRV) and is transmitted by the eriophyid mite, *Phyllocopetes fructiphylus*. This mite is so small it cannot be seen with the naked eye. Current management focuses on prevention by buying uninfected stock, keeping current plants healthy and roguing out infected plants including nearby wild roses (*Rosa multiflora*).

It has been felt that miticides would be ineffective in controlling the disease. However, grant researchers decided to test various miticides anyway to document how effective (or ineffective) each was. Two different trials evaluated effectiveness of miticides over two years. What they found surprised them.

Specific miticides were used on a weekly schedule throughout the growing season with no rotation. In other words, each treatment used only one miticide rather than alternating miticides to avoid resistance. All miticides were used at the highest label rate. Control plants were sprayed with water.

One hundred percent of the control plants were infected with RRD. However, several miticides gave 100% prevention of the disease over the two year period. Note these are preliminary results and we cannot give firm recommendations until this study is completed but this does open up a new avenue of control we did not expect.

So, what were the miticides? The products that were effective were Akari (fenpyroximate), Kontos (spirotetramal), Forbid (spiromesifen) and Talstar (bifenthrin). Two other treatments, horticultural oil and Avid + horticultural oil, gave good control the first year but not the second as disease pressure increased the second year. Sevin (carbaryl) was also in the test and was about as
effective as water. Research is continuing and is looking at rates, timing and alternating miticides.

Commercial people who decide to try to prevent this disease by using these miticides should not use one miticide exclusively but should alternate products from different IRAC groups to prevent the buildup of resistance. Akari is in group 21A, Kontos and Forbid in group 23 and Talstar in group 3. Therefore, since Kontos and Forbid are in the same group, alternating between them would do no good. Applications should be made every two weeks.

For homeowners, we would suggest alternating horticultural oil and bifenthrin (Hi-Yield Bug Blaster Bifenthrin) on two week intervals throughout the growing season. In other words, spray with horticultural oil, wait two weeks, spray with bifenthrin and repeat throughout the growing season. Be careful of temperature restrictions on horticultural oil so pay attention to the label.

A very good publication on the control of RRD has come out of this research and is available at: http://hnr.k-state.edu/doc/extension/Rose_Rosette_Disease.pdf

Again, these are preliminary results and we have much to learn before we can make more specific recommendations. (Ward Upham)

**ORNAMENTALS**

**Cut Back Ornamental Grasses**

March is a good 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. (Ward Upham)

**MISCELLANEOUS**

**Don’t Work Wet Soil**

Resist the temptation to work any soil if it is wet. Doing so destroys the structure of the soil resulting in clods that may not break down all summer. To determine if a soil is too wet to work, grab a handful and squeeze. If water comes out, it is much too wet. Even if no water drips out, it still
may not be dry enough to work. Push a finger into the soil you squeezed. If it crumbles, it is dry enough, but if your finger just leaves an indentation, more time is needed. Be sure to take your handfuls of soil from the depth you plan to work the soil because deeper soils may contain more moisture than the surface.

If there is a small area that you wish to plant in a few weeks and it much too wet to work, try tarping the area during wet weather and uncovering when it is dry. This will allow the soil to dry enough to work by the time you are ready to plant. (Ward Upham)

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