

Pike County Agriculture and Natural Resources



A message from your ANR Agent:

Folks,

Spring is the time everyone is motivated to do something on the farm and in the lawn/garden; identifying if you have a physiological problem in the plant, or a disease problem, or what? Information is designed for High Tunnels and professional growers. However, everything applies to your home garden too. Forage grown for beef and Spring Tips for working with your cattle are covered. There is an article on horse pastures. Keep in mind that most of us are using cool season grasses and should plan for fertilizing in the fall not spring/summer, with a few exceptions. When it comes to growing grass, if you listen to all the lawn and gardening ads, everyone encourages you to fertilize in spring. This is the wrong time of year to fertilize our cool season grasses-regardless if using for pasture or lawns. I have talked to more people wanting to start gardening this year than ever before. There is much printed material for gardening (both beginners and experienced). Part is to successfully transplant the baby plants you buy or grow. We have included an article on carrots, because several people tried them last year and are asking questions. Regardless of where or what you plant, you will have problems with pest control. We have added some pest control methods for everyone. It is the time of year to prune. Everyone has equipment to use and take care of. 99% of people take their equipment for granted and never (even remotely) think "prevention" or what to do until it tears up or shuts down. Take a good look at your equipment before the season starts, not just tractors and bigger equipment. Add checking your hand tools and everything else to the list. Sharpen blades, check handles, and follow equipment manufacturers recommendations. Included a few reminders and upcoming events.



Suzanne Stumbo

Pike County ANR Agent

606-432-2534 or sstum1@uky.edu

Inside this issue:

Physiological Disorders to Watch for in High Tunnels and Vegetable Gardens, Beef/Forage Tips, Spring Pasture Management Do's and Don'ts, Spring Lawn Care Success, Transplanting Vegetables, Guide to Carrots, Composting, Pest Control Options, Time to Prune, Using Small Quantities of Pesticides, Make Tractor Maintenance Routine, upcoming events, and more.

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Physiological Disorders to Watch for in High Tunnels and Garden Vegetables



Blossom end rot on ripening tomato fruit.

1. Blossom end rot appears as soft spots on the blossom end of many vegetable crops, particularly tomatoes, peppers, and squash. The soft spots turn dark brown over time and the fruit is unmarketable. The soft spots can make the fruit more vulnerable to bacteria or fungal pathogens. Blossom end rot is caused by a calcium deficiency in the fruit. This deficiency can be a result of low calcium in the soil, but is most often due to uneven irrigation, especially during high temperatures. Drought stress causes the plants to be unable to take-up and transport calcium. Excessive nitrogen fertilization can also lead to blossom end rot.

Management—Conduct annual soil testing to ensure that soil has the proper calcium levels. Avoid over-fertilization of plants as excessive nitrogen causes more vegetative growth which hinders calcium transport to the fruit. Keep soil moisture consistent, neither too dry or too wet. Ventilate and keep the tunnel as cool as possible during times of high air temperatures. Select cultivars less susceptible to blossom end rot.

2. Blotchy ripening results in irregularly ripened tomato fruit with green to gray areas on the skin. When fruit is cut, dark necrotic tissue is present internally. Affected fruit are generally not marketable. This condition is associated with short days, cool temperatures, and excessive nitrogen.

Management—Provide adequate potassium fertility to help reduce incidence. Obtain soil and/or tissue nutrient tests; adjust fertility accordingly. As much as possible, modify structure environments to provide optimum growing conditions for crops.

3. Chimera appears as variations in leaf color and is generally manifested as varying shades of yellow and green. These symptoms result from a naturally occurring genetic mutation, which only appears occasionally and randomly. For example, a chimera may be observed on one in 2,500



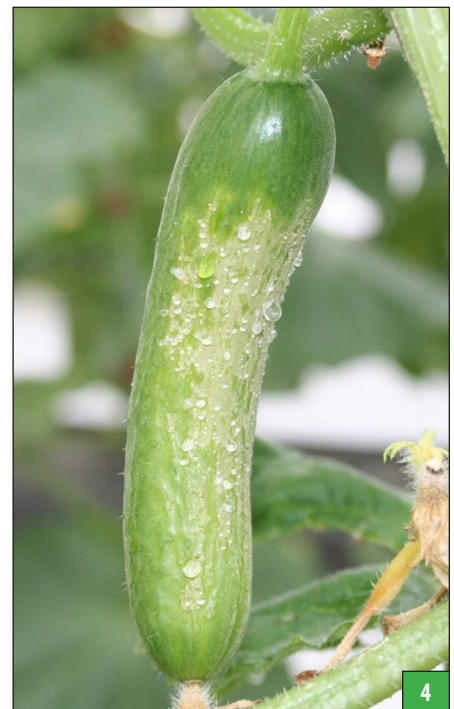
Chimera on English cucumber.

cucumber plants in a greenhouse. It is generally not considered a problem in vegetable crops.

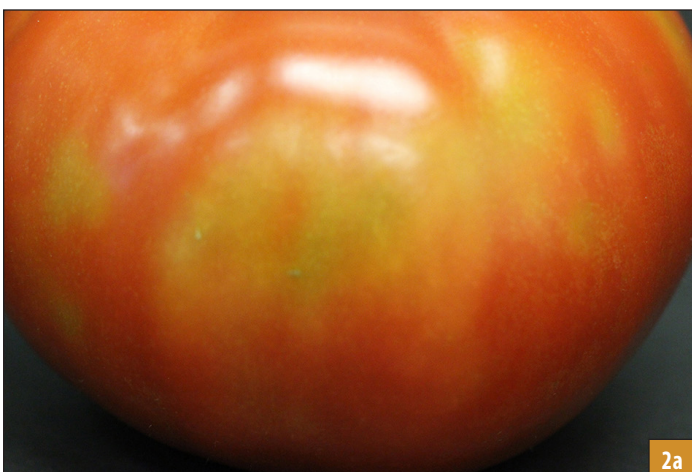
Management—No action is necessary.

4. Cracking and fluid leaking can occur in high tunnels when cucumbers are exposed to cold temperatures in late fall during fruit development. Cool temperatures reduce the elasticity of fruit skin, making it more prone to cracking.

Management—Optimize conditions environmentally by proper management of ventilation and heating based on the structure type.



Cracked, leaking cucumber fruit.



Blotchy fruit external appearance (a) and internal necrosis (b).

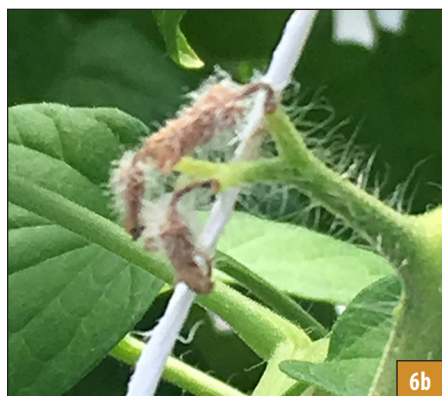


Curved cucumber fruit.

5. Curved fruits often occur in long English cucumbers when a leaf or a stem interferes with elongation of young, developing fruit. It can also be associated with improper irrigation and fertility management. Cucumbers developing close to the ground or top of container can also become curved.

Management—Prune cucumbers developing close to soil surface; do not allow longer English cucumbers to develop closer than 15 to 18 inches. Properly manage irrigation and fertility.

6. Flower drop/fruit abortion can be due to many conditions in protected structures, such as extreme heat, water stress, and fruit load. Flowers can also drop due to low light levels and relatively high nitrogen fertility.

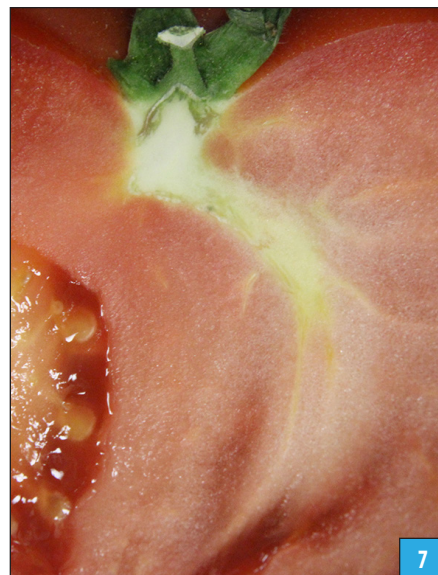


Aborted cucumber fruit (a) and aborted tomato flowers (b).

Management—Adjust planting dates to avoid seasonal low light levels during flowering. Insure proper fertility and water management for crops when temperatures are high. As much as possible, modify the structure environment to provide optimum growing conditions for the crop.

7. Green core occurs when tomato fruit centers become hard and vegetative; normal red flesh fails to develop in that portion of the fruit. It is often associated with cool temperatures, low light levels, and excessive nitrogen fertilization.

Management—Manage structure environment to provide ideal temperature levels as much as possible. Maximize light by preventing condensation formation and removing shade cloth when sunlight is limited during cooler seasons of the year.



Internal green core on tomato.

8. Interveinal chlorosis is often seen on tomatoes and sometimes peppers during heavy fruit set. It appears on the lower leaves (older growth) as yellowing between the leaf veins. This is attributed to a magnesium deficiency in the plant that may be caused by a magnesium deficiency in the soil, but also may be caused by low soil pH (below 6.0) which makes magnesium less available to the plant. It also may be caused by excess potassium in the soil which causes

reduced uptake of magnesium.

Management—Conduct annual soil testing several months prior to planting as soil pH alterations take time. A soil test will also indicate whether magnesium applications are necessary. Avoid excessive applications of phosphorus. During the growing season, a foliar/tissue test will indicate a deficiency in the plant. If a deficiency exists, magnesium oxide or magnesium sulfate may be applied.



Interveinal chlorosis (yellowing between the leaf veins) on tomato (a). When it occurs in the lower (older) leaves, it is often a symptom of magnesium deficiency in tomatoes (b).

9. Leaf roll symptoms include cupping of the lower leaves of tomato plants so that the margins are touching with no leaf discoloration. If plant stress is reduced, leaves with unroll. However, if stress factor persist, leaves further up the plant (and in rare cases the entire plant) with roll. Leaf roll can sometimes resemble symptoms caused by viruses, but it is physiological disorder that is not completely understood. The severity of leaf roll is often attributed to different cultivars. Indeterminate tomato plants bred to produce high yields are considered the most susceptible. Other causes include excessive pruning, excessive soil moisture combined with high air temperatures, and high nitrogen levels. Plant growth, fruit yield, and fruit quality are not generally affected.

Management—Avoid pruning when temperatures are high and avoid over-pruning. Maintain consistent, uniform soil moisture. Try maintaining temperatures below 95°F and consider using shade cloth.

10. Marginal leaf burning and **marginal yellowing** occur on cucumbers grown in protected structures. It is associated with excess salt in the soil or soilless media. Excess salt can also cause stunted growth and low yields in other vegetable crops, such as tomatoes.

Management—Properly manage fertility, avoiding over-fertilization. Requesting a soluble salts or electroconductivity test on soil samples will provide information on soil salinity. Frequent tissue tests can help manage nutrient applications during the growing season. Periodically leach soil with fresh water to help remove some excess salt; however, effectiveness will vary based on soil type or soilless media. When it is time to replace the cover on the tunnel (approximately every 4-5 years), leave the tunnel uncovered through the winter to allow for weathering and rain to leach salts through the soil profile.



Tomato leaf roll, also known as leaf curl.



Marginal leaf yellowing on English cucumber foliage resulting from excess salt.

11. Pollutants, such as ethylene, sulfur dioxide, and nitrogen oxides, can cause plant injury that may be confused with herbicide injury. These pollutants can be generated by wood-fired boilers or natural gas/propane heaters. When heaters are used in protected structures, gases can build-up to damaging levels. Pollutants can also enter from exterior boilers as well. Symptoms of ethylene injury include distortion, yellowing, stunting, and flower/bud abortion. Other pollutants can cause flecking (typical of ozone injury) and/or burning of leaves and fruit.

Management—Regularly inspect heaters and maintain them in good working condition. Make sure heaters exhaust properly so pollutants are not trapped in structures.

12. Puffiness of tomatoes causes fruit to appear flattened on one or more sides and partially hollow inside. It can be attributed to an interaction of various factors during winter and early spring conditions, including low light levels, high fertility, and poor pollen viability.

Management—Choose varieties not prone to this disorder. Proper nutrient management and maximizing light penetration is critical. For structures with two layers of polyethylene, use outdoor air to inflate layers, rather than air from inside the structure; this prevents condensation formation between layers, which can reduce light.



Pollutants from heater causing damage to tomato plants.



Puffiness of tomato fruit external symptoms (a) and internal symptoms (b).

13. Yellow shoulder appears as yellow or pale orange around the stem of tomato fruit. Yellow shoulder may appear as delayed ripening, but is an actual disorder where part of the fruit will not turn red. Prevention is crucial as it occurs early in fruit development. The exact cause of yellow shoulder is unknown. However, it is thought to be related to potassium, magnesium, and calcium levels.

Management—Avoid excessive applications of magnesium. Manage foliar potassium levels by applying sufficient potassium prior to planting and maintaining consistent soil moisture. For mid to late summer tomatoes, consider using a 30% shade cloth.



Yellow shoulder.

14. Zippering is characterized by the presence of brown tissue (resembling a zipper) running down the sides of tomato fruit, often from the stem to blossom end. Zippering is the result of a flower anther remaining attached to newly forming fruit. It may be associated with incomplete shedding of lower petals when fruit is forming.

Management—Select varieties that do not seem prone to zipper.



Zipper scar on green tomato fruit.

 Cooperative Extension Service

21st Annual
Pike County Master Gardener
Spring Plant Swap

SATURDAY, APRIL 13, 2023

Rain or Shine!

Pike County Extension Office parking lot
(beside South end of Pikeville Pond)
148 Trivette Dr., Pikeville, KY

Prepare to Swap: Arrive by 9 am - Unload your labeled plants/items AND See the plants/items you will choose to take in the swap

FREE Swap: Begins promptly at 10 am -Fun drill that moves quickly and ends when all items are chosen

Bring vegetable seedlings, flowers, landscape plants, house plants, potting tools, seeds, or garden books.
Label all items.

606-616-1449

PIKEVILLE
Farmers Market

Planning to have pop-up markets starting in May!

For opening dates, find us on Facebook or call the Pike County Extension Office at 606-432-2534

Find us on Facebook, Instagram, and TikTok!

Interested in becoming a vendor?
Schedule a safety training:
(606) 432-2534



♥ 1,890

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INFORMATION FROM
KENTUCKY STATE UNIVERSITY
COOPERATIVE EXTENSION

Carrots

Dr. Leigh Whittinghill, Assistant Professor of Urban Agriculture

Planting

- Carrots should be planted between Mar 10 and Aug 1, March 20 and July 15, and April 1 to July 1, in Western, Central and Eastern Kentucky.
- Plant at 3 week intervals to have carrots throughout the growing season.
- Plant seeds at a depth of $\frac{1}{4}$ inch
- Final plant spacing should be 2 to 3 inches apart.
- If planting in a container, it should be 10 inches deep.

Care and Harvest

- Carrots can take a long time to germinate, so pulling weeds too early, may damage seedlings. The long period of germination can also mean that weeds become a problem, so ensure that the bed is free of weeds and weed seeds before planting.
- Water about 1 inch per week (including rain), taking care during establishment and root enlargement.
- Excess nitrogen may reduce yield or the quality of fruit, so use less than with other plants. If using compost as a nutrient source, be sure it is fully matured, or it may inhibit germination.
- As they grow, some carrots may poke up out of the ground. These should be covered with soil to prevent them from turning green, which makes them bitter.
- Carrots are ready to harvest 60-80 days after planting in the spring or summer and 80-90 days after planting in the fall, or as soon as they reach the desired size. Leaving them in the ground longer can make them fibrous.



Storage and Use

- After harvesting, wash the roots and dry them thoroughly.
- Trim tops to ½ before storing the carrots to maintain root quality during storage.
- Carrots will keep for 2 to 4 weeks and can be stored in the refrigerator or a cold, moist cellar.
- Do not store carrots with apples. The ethylene produced by ripe apples can cause carrots to taste bitter.
- Carrots should be water blanched for 3 minutes or steam blanched for 5 minutes before freezing.
- Slice carrots and use a hot pack methods and leave 1 inch of head space if canning. Process in a pressure canner for 25 minutes for pints and 30 minutes for quarts.



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- Rombauer, I.S. M.R. Becker, and E. Becker. 2006. “Roasted Carrots”. Joy of Cooking. Scribner. New York, New York. Pg 267.
- Shulman, M.R. 2018. Roasted Carrots with Parsley and Thyme. <https://cooking.nytimes.com/recipes/1014219-roasted-carrots-with-parsley-and-thyme> (accessed 15 June 2018)
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RECIPE: ROASTED CARROTS

- Preheat oven to 400°F. Toss together:
- 1 ½ pounds carrots, peeled and cut into large chunks
- Olive or vegetable oil to lightly coat
- 1/8 teaspoon dried thyme or several sprigs fresh thyme
- Oregano, parsley, and garlic are other herbs used in roasting carrots.
- Salt and black pepper to taste

Spread the carrots in a single layer on a rimmed baking sheet. Roast until golden and tender, about 1 hour.



Get Your Home Garden Off to a Good Start

Source: Rachel Rudolph, UK horticulture extension specialist

Springtime in Kentucky is the perfect time to get outside and start your home garden. A few tasks will help you have a successful season.

Planning your garden on paper before you begin allows you to visualize the plants you want to grow and when they will be ready to harvest.

Next, select a good gardening site. Plan a site in full sun, relatively level, well-drained, close to a water source and dries quickly from morning dew. You may need to get a soil test to best prepare the soil. Add fertilizer according to soil test results.

Remember to only plan a garden as large as you can easily maintain. Beginning gardeners often overplant and fail because they can't keep up with the required tasks. You must manage weeds and pests and apply water so your plants will be ready to harvest on time.

A few other important tips:

1. Grow vegetables that will produce the maximum amount of food in your available space.
2. Plant during the correct season for the crop.
3. Choose varieties recommended for Kentucky.
4. Harvest vegetables at their proper stage of maturity. Consider how you will store them if you don't use them right away.

Consult the University of Kentucky College of Agriculture, Food and Environment's Home Vegetable Gardening publication ID-128, available online at <http://www2.ca.uky.edu/agcomm/pubs/id/id128/id128.pdf>.

Successfully transplanting vegetables

Rick Durham, extension home horticulture specialist

With springtime finally here, we turn our attention to the vegetable garden. Getting your transplants up and growing will give you some delicious homegrown produce in the months to come.

Transplanting gives a plant more space to develop, but it will temporarily stop growth, not stimulate it. Therefore, for successful transplanting, try to interrupt plant growth as little as possible.

Whether you grow your own transplants or purchase them, these eight steps can ensure successful transplanting into the garden.

1. Transplant on a shady day in late afternoon or in early evening to prevent wilting.
2. Ensure transplants are well watered and their roots are thoroughly damp an hour or two before setting them in the garden.
3. Handle the plants carefully. Avoid disturbing the roots. Try removing plants from their containers by knocking them out in an inverted position rather than tugging on the plants. Plants growing in peat pots may be planted with the pot intact.
4. Dig a hole large enough to hold the roots. Set the plants to the lowest leaf at recommended spacings. Press soil firmly around the roots.
5. Pour 1 cup of a solution of soluble plant food and water mixed according to the label's directions.
6. Put more soil around each plant, but leave a slight depression for water to collect. Break off any exposed parts of peat pots so that they will not act as wicks and pull water out of the soil.
7. Shade the plants for a few days after transplanting on a very hot day by putting newspapers or cardboard on their south sides or cover them with a woven cotton fabric such as cheese cloth.
8. Water the plants every 2-3 days during the next week.

For more gardening tips, contact the Pike County Cooperative Extension Service or visit the Garden, Lawns and Landscapes section at www.extension.org.

Pest Control Options Abound During Growing Season

The return of gardening season also signals the return of insect pests that prey upon vegetables. University of Kentucky Entomologist Ric Bessin said home gardeners have many options to effectively manage these pests during the growing season.

Many insects become active when the average daily temperature reaches 45 degrees or so. They tend to emerge first in the southwest part of the state and move northeast, reaching the northern most counties seven to 14 days after first emergence.

“I think when many people think of insect control, they think of insecticides first, and I don’t think that should always be the case,” he said. “I think there are many situations where the home owner has additional options.”

The best pest management options for gardeners vary, depending on the types of vegetables a person grows. One of the simplest, low cost forms of pest control that small home gardeners can do involves people going out to their gardens in early morning with a bucket containing soapy water. Bessin said this is the time of the day when many of the insects are sluggish and have slow reaction times. Therefore, gardeners have the opportunity to easily knock the insects off the plants and drop them into the bucket. The soapy water kills the insects almost immediately.

The cold weather will not phase out all of the insect pests. Some of the most common pests home gardeners annually face include the Colorado potato beetle and tomato hornworm. Preventive control options for annual pests include looking for pest resistant varieties, selecting a planting date when pests are not as common, tilling the soil and crop rotation, he said.

“It pays to put money into preventive controls when we’re certain that pests are going to show up,” he said.

Gardeners can reduce their chances of becoming infested with the Colorado potato beetle by applying a 6-inch layer of straw on top of potatoes after they have been planted. The straw layer also makes it easier for gardeners to dig up the potatoes at the end of the season, Bessin said. While some insects are pests, some can be very beneficial to gardeners; including a type of wasp that kills the tomato hornworm. The wasp inserts its eggs into the insects like the tomato hornworm and eventually takes over the insect’s entire body. The wasps do not harm vegetables.

White, egg-like cocoons may appear on the tomato hornworm’s body after it has been killed by the wasps. Bessin said gardeners should leave the tomato hornworm alone if they see this on one of their tomato plants because it is a signal the worm is dead and no longer a threat to the plant.

“We often don’t appreciate the levels of natural control that we have,” Bessin said. “If we didn’t have any beneficial insects, we would see pest problems of epic proportions.”

For more pest control options, visit the [UK Entomology Department’s ENTfacts Web site](#) or contact your county’s Cooperative Extension Service.

Accurately using small quantities of pesticides

Joe Masabni, UK extension fruit and vegetable specialist

Backpack and handheld sprayers are often used around the farm or home to treat small areas or a few infested trees. However, most pesticide labels focus on mixing and applying pesticide in quantities that far exceed the sizes of common backpack and handheld sprayers. As a result, accurate conversions must be made to avoid a spray mix or application rate that could result in a treatment that is either stronger than recommended or too weak to be effective.

A University of Kentucky Cooperative Extension Service publication has been developed to help homeowners make accurate treatments.

Two factors influence the accuracy of conversions: properly measuring pesticides (especially dry pesticides) to be added to the mix, and applying the correct amount of that pesticide for the desired outcome.

The rates for liquid pesticides tend to be easy to convert from large to small quantities because they can be measured in common units such as fluid ounces, tablespoons, teaspoons, or milliliters. However, dry chemicals, such as wettable powders or dry flowables, are difficult to measure without accurate scales, which most growers and homeowners do not have.

In addition, since dry materials have different densities, simple conversions are likely to be inaccurate. High-density pesticides occupy a smaller volume compared to low-density pesticides, and using anything other than actual weights for each product will result in mixtures that are either stronger or weaker than necessary.

Most labels list the application rate either on a “per acre” basis (derived from 400 gallons of diluted spray per acre), or on a “per 100 gal” basis. The 100-gallon rate is easier to use, since it doesn’t require determining the acreage to be sprayed.

When it comes to herbicides, label recommended spray volumes are much smaller, such as 5 to 40 gallons-per-acre. In this UK publication, a 20-gallon per acre rate has been selected in determining the amounts needed for 1-, 3-, or 5-gal spray volumes. This rate is a mid-range value applicable for most herbicides.

Growers and homeowners must make sure that their sprayers are calibrated to deliver a 20-gallon rate. If not calibrated, the error in herbicide delivery will be magnified when using small-volume sprays. For example, a grower spraying the equivalent of 10-gallons per acre will actually apply twice as much pesticide as needed compared to spraying with a 20-gallon rate. Calibration must be tested and practiced often to ensure proper application rate.

Here are some helpful hints.

- Make sure the pesticide concentration and formulation you are using exactly matches those found in this publication.
- Some of the pesticides may be out of circulation or may be found in various formulations. If a pesticide is available in more than one dry formulation, do not assume the values presented for one formulation are applicable to all.
- Values are presented in teaspoons for 1- and 3-gallon and in tablespoons for 5-gallon whenever possible. In some instances where the rate is high, resulting in large teaspoon values, the numbers have been converted to cups.
- Reminder: 1 cup is equal to 16 tablespoons or 48 teaspoons.

For a copy of UK publication HO-83, Dry Pesticide Rates for Hand-held Sprayers, contact the Pike County Cooperative Extension Service.

Off the Hoof Timely Tips

Dr. Les Anderson, Beef Extension Professor, University of Kentucky

Spring Calving Cow Herd

- Watch cows and calves closely. Work hard to save every calf (you can cull/sell them later). Calves can be identified while they are young and easy to handle. Commercial male calves should be castrated and implanted. Registered calves should be weighed at birth.
- Cows that have calved need to be on an adequate nutritional level to rebreed. Increase their feed after calving. Don't let them lose body condition. Keep feeding them until pastures are adequate.
- Don't "rush to grass" although it can be really tempting. Be sure that grass has accumulated enough growth to support the cow's nutritional needs before depending solely upon it. Cows may walk the pastures looking for green grass instead of eating dry feed. This lush, watery grass is not adequate to support them. Keep them consuming dry feed until sufficient grass is available to sustain body condition. We've spent too much money keeping them in good condition to lose it now!
- Prevent grass tetany! Provide magnesium in the mineral mix until daytime temperatures are consistently above 60o F. Mineral supplement should be available at all times and contain a minimum of about 14 percent magnesium. Make sure that your mineral mix also contains adequate selenium, copper, and zinc. You can ask your feed dealer about the UK Beef IRM High Magnesium Mineral.
- Make final selection of heifer replacements. Strongly consider vaccinating with a modified-live BVD vaccine. Vaccinate at least 60 days before the start of the breeding season.
- Purchase replacement bulls at least 30 days prior to the start of the breeding season. Have herd bulls evaluated for breeding soundness (10-20% of bulls are questionable or unsatisfactory breeders). Get all bulls in proper condition (BCS 6) for breeding.
- If you are going to use artificial insemination and/or estrous synchronization, make plans now and order needed supplies, semen, and schedule a technician.
- Prebreeding or "turn-out" working is usually scheduled for late April or May - between the end of calving season and before the start of the breeding season (while cows are open). Consult your veterinarian about vaccines and health products your herd needs. Plan now for products needed and have handling facilities in good working order. Dehorn commercial calves before going to pasture.

Fall Calving Cow Herd

- Pregnancy check cows now and cull open ones at weaning especially if the open cows are older than 5 years of age.
- Re-implant feeders.
- Consult with your veterinarian about preweaning working the herd.
- You may let calves creep-graze wheat or rye if it is available. Calves will benefit from extra feed until spring grass appears.
- Plan marketing strategy for feeder calves.

Stockers

- Don't go to pastures too soon, give plants some growing time. Then stock at two to three times the July rate and rotate rapidly.
- "Condition" purchased calves prior to grazing. They should be processed and fed a conditioning diet prior to being placed on pasture. You can also use this time to introduce them to electric fences which are used in rotational grazing.
- Provide a good mineral supplement which contains a rumen modifier (Rumensin, Bovatec, etc.) along with adequate levels of copper and selenium.

General

- We've made a muddy mess this winter, so be prepared to reseed bare spots. Our forage group has some excellent information on restoring heavily traffic areas.
- Make plans to improve hay feeding areas to avoid muddy conditions like we have faced this winter. Consider geotextile fabric with gravel or concrete feeding pads.
- Prepare for the grazing season. Check fences and make necessary repairs. Check your corral, too.
- Get everything ready to make high quality hay in May! Have equipment serviced and spare parts on hand. Order baler twine now. Be prepared to harvest an adequate supply of hay when you have the opportunity. Re-supply the extra hay that you fed out of the barn. This past winter caused most producers to exhaust their hay supply, so it's time to re-stock.
- Plan now for fly control ... decide what fly control program that you will use but don't put insecticide eartags on cattle until fly population appears.

Spring Pasture Management Do's and Don'ts

After a long, cold winter in much of the United States, many farms and their fields will need some work come spring. The following guidelines will help ensure your pasture management efforts are both beneficial and economical for your farm.

Don't fertilize cool-season grass pastures heavily with nitrogen in the spring (more than 50-60 pounds actual nitrogen per acre would be considered heavy). These pastures experience a natural flush of growth in the spring; additional nitrogen will only end up costing you in both fertilizer and time spent mowing. Most horse farms do not have high enough stocking rates to utilize all the spring growth and, thus, will end up mowing down most of this production. Also remember that nitrogen benefits weeds and grasses alike.

Instead, take a soil sample. Most healthy pastures in the United States require additional lime, potassium, and phosphorus applications. A soil sample will show exactly what fertilizer you need to add. While you can sample soil anytime, spring is great time to do so because the weather is nice and you can observe how your pasture is recovering from fall grazing and winter conditions. Farm owners cannot truly know what is in their pastures until they actually walk them and see.

If stocking rates are high, consider top-dressing nitrogen. On farms where horse numbers are very high, such as small private farms or boarding facilities, top-dressing pastures with nitrogen can help them recover faster from the abuse of the previous fall and provide more grazing sooner. Top dress in late March, the first two weeks of May, and the first two weeks of August, if needed.

For more information on horse pasture fertility, see "[Soil Sampling and Nutrient Management in Horse Pastures.](#)"

Don't undertake spring seeding of cool-season grasses, such as Kentucky bluegrass, orchard grass, and endophyte-free tall fescue in the southern United States. Cool-season pastures are best seeded in the fall when there is less weed pressure, more favorable weather, and a longer rest period before spring grazing.

Timing of spring lawn care is critical to your success

By Ellen Brightwell

Forsythia and ornamental pears are in full bloom so it must be time to dust off the fertilizer spreader and fertilize your lawn to produce a lush, green yard. Right?

Wrong. Spring is not the best time to fertilize grass for a number of reasons.

"Fertilizing your lawn in the spring encourages weeds and reduces its drought tolerance. October through December is the best time to fertilize the lawn," said A. J. Powell, Extension turf specialist for the University of Kentucky College of Agriculture.

Spring fertilization encourages rapid growth of weeds such as crabgrass, chickweed and henbit. It makes grass more susceptible to leaf spot and some warm weather patch diseases.

Fertilizing your lawn in the spring reduces its tolerance to drought. Since all the grass growth is concentrated at the top, the root system stops growing. Grass with a poor root system cannot take up as much water and minerals. And this makes it less drought tolerant.

Although mid-April is not the right time to fertilize grass, it is a good time to apply broadleaf weed and pre-emergence crabgrass herbicides, according to Powell.

For effective control, apply the herbicide when broadleaf weeds are actively growing so the leaves will absorb the herbicide and move it into the plant. Use a liquid-applied material to cover weeds thoroughly. Apply the herbicide before temperatures become too hot, say above 85 degrees, to lower the chance of herbicide damage to grass and other plants. Spray when the wind is not blowing. Early morning is usually best time to spray.

"Use a pre-emergence herbicide to control crabgrass," Powell said. "We usually recommend a pre-emergence herbicide application before mid-April. An exception is when the crabgrass hasn't germinated and your lawn has a history of problems with this weed. In this situation, apply a pre-emergence herbicide as soon as possible. Most of your crabgrass might not germinate until early June, especially if you have a good grass cover. A granular product is usually more effective than a liquid for pre-emergence crabgrass control."

When applying fertilizer or pest control product, be sure to avoid hard surfaces like sidewalks and driveways because rainwater can move product materials into storm sewers and eventually to rivers or streams that are sources of drinking water.

"Spring isn't an appropriate time to control turf insects either," Powell said. "White grubs, which make up 99 percent of our lawn insect problems, harm grass during the fall.

"Be sure you have a grub problem before using an insecticide. Look for brown patches in the lawn during September and October. Since white grubs eat roots, you should be able to pull up grass like a piece of carpet. The grass will have white grubs or loose soil beneath it. If you discover a white grub problem this fall, treat the lawn with a product like Dylox and water it in immediately.

"If your lawn does have a history of white grub problems, you can apply Merit or Mach II during June or July. These environmentally friendly insecticides remain active in the soil for a long time. Use Merit or Mach II only if your lawn has perennial grub problems."

Note: No product endorsement is implied, nor discrimination against similar materials intended, by the mention of brand names in this article

Compost

Excerpt from ID-128: Home Vegetable Gardening in Kentucky

Compost is easy to make; all you need is raw organic matter and a little bit of time. This microbial process will take care of itself. Microbes are ubiquitous in the environment and will feed on the organic materials over time provided they are warm enough to grow and reproduce. Leaves, grass clippings, weeds, garden refuse, and manure are excellent organic materials to feed the microbes. Special additives don't help, though nitrogen fertilizer may speed up composting. The finer the material being composted, the faster the decomposition and maturation of the compost. It is best keep limbs and other large woody materials out of the compost bin unless you use a chipper/shredder.

Compost can be started anytime. Choose an area convenient to the garden so that garden residue and kitchen parings can be easily added. The best location is a shady spot; however, do not build directly under a tree, because the tree's roots may grow into the pile. Make two or three open ended bins or boxes to hold the compost. To maintain appropriately warm temperatures, compost piles need to be 3 square feet in size. You can build the boxes of wire fencing supported by posts, or they may be constructed of boards or masonry material. They can be made attractive enough to be part of the landscape or you can hide them among landscaping.

An appropriately-sized pile of organic material will mature to compost in time, but it is quicker to alternate layers of raw organic material, a small amount of N fertilizer or a high N-containing green waste (e.g. grass clippings) and a small amount of top soil (which contains an abundance of microbes, see Figure 20.15). Start with organic matter—6 inches deep if the material is fairly solid, or 12 inches deep if it is loose. If the material is dry, add a small amount of water. The material consistency should feel like a damp, wrung-out sponge. Next, add either an organic or small handful of synthetic fertilizer (e.g. 34-0-0).

After you fertilize, add a small handful of soil. The soil introduces microorganisms which decompose organic matter. Commercial microbial preparations which claim to enhance composting are unnecessary. Continue to alternate layers of organic matter, fertilizer and soil until the pile is 3 to 4 feet high, but slightly lower in the center for easy watering. Complete the pile with a layer of soil on the top.

Keep your compost moist but not soggy. With moisture and a layer of soil on the top, there should be no offensive odors. Turn or mix your compost pile several times during the year. A second bin and a shredder come in handy for this purpose. After mixing your pile into the second bin, you can start a new compost pile in the first one. If you start your compost in the fall and turn it several times, it should be ready for use about June 1.

Note—Fresh animal manures sometimes contain organisms that can make people sick (pathogens), such as the bacteria *Salmonella* sp. and *E. coli* O157:H7, or the parasite *Cryptosporidium parvum*. These pathogens can be present in soil that adheres to roots or low-growing leaves and fruits. The risk is minimized if no fresh manure is used in the garden. Careful peeling or washing fruits and vegetables with detergent removes most pathogens, but some risk remains. Thorough cooking effectively kills pathogens.

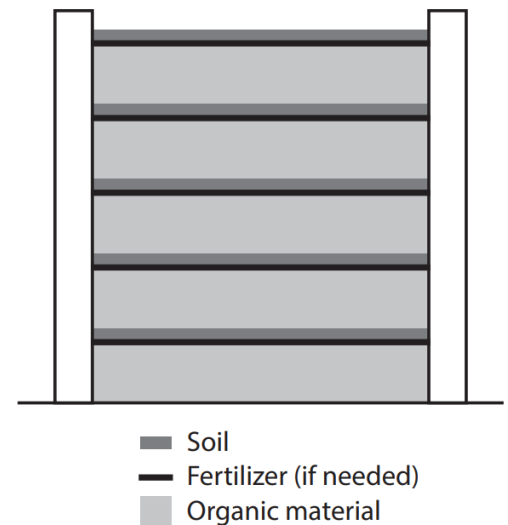


Figure 20.15. Layers for a compost pile.

Make Tractor Maintenance Routine

Source: Tim Stombaugh, extension agricultural engineer

Don't let the maintenance of your tractor slip when you get busy. There's a tendency to put maintenance on the back burner as spring and summer field activities get into full swing. Often when we do think about maintenance, it is the implement we think about, and we ignore the tractor.

A simple front to back routine executed every week can help you remember key maintenance points. Move from the front to the back of the tractor identifying key things to check. The manufacturer will have suggested intervals for most of the maintenance tasks, so you won't have to do everything every week. But the routine will prompt you to ask if it is time to do specific tasks.

Start with the front axles and steering. Is it time to grease those bearings and steering components? Make sure nothing is loose or ready to fall off. Then move to the coolant system. Make sure the coolant levels are OK, and the fluid is all right. Make sure the radiator is not plugged up with debris.

Next, take a look at the belts. Make sure they have the right tension, aren't cracked and ready to fail. This will prompt you to have a spare on hand. Then look at the air cleaner. Make sure its not plugged up and robbing power from your engine, because it can't get the air through it.

Take a look at the engine oil. This should be checked daily, but if you haven't, a good time to do it is during your weekly inspection. Also check the fluid itself. Make sure it doesn't have any contaminants or water in it.

If your battery is not a maintenance free battery, are the liquid levels all right? Check the cables for corrosion and make sure they aren't rubbing against the frame components.

Move on to the clutch and brake linkages. Here's a point where you can stop and take a specific look at these linkages. When you use a tractor everyday, you may not notice the linkage getting out of adjustment. Make a specific effort to check for free play and other adjustments on that linkage.

Look at your hydraulic fluid. Make sure it's at the right level and be sure to change the fluid when needed. Not only does it provide fluids for remote cylinders, but it is the lubricating force in your tractor's transmission and it is very critical.

Look at tires to make sure they have the proper inflation. Make sure the back of your tractor is clean especially where the hydraulic hoses are connected, so you don't get dirt in the system. These simple procedures can extend the life of your tractors thereby protecting your critical investment.

Time to Prune

Rick Durham, UK Horticulture Specialist

Believe it or not, spring really is here. After our 8th warmest winter on record, many homeowners begin to turn their attention to their landscape. The winter months can be damaging to trees and shrubs. To ensure healthy spring plants, homeowners may want to prune the trees and shrubs around their home. But you shouldn't just prune for the sake of pruning; make sure you have a valid reason.

Pruning during the late winter months allows you to remove damage caused by winter winds and precipitation. Pruning also is a way to remove diseased, crowded or hazardous branches. When pruning trees, the size of the tree should not be reduced too much in one season. Limit the pruning amount to one-fourth of the tree's volume. Start by thinning out branches by cutting them off close to the tree's trunk or a large limb.

Leave the base of the branch, known as the collar, intact. Cutting the collar will prevent the plant from growing over the wound caused from pruning. Pruning in this manner allows for a healthy tree that is more open to sunlight and air movement. If the branch is cut back only part way, there will likely be a crowded regrowth of new branches where the cut was made. Do not seal or paint the wounds resulting from pruning, because this will only delay the tree's healing process.

Spring-flowering shrubs may need rejuvenation pruning, and the best time for that is right after they flower. If you prune a shrub before it blooms, you remove buds too soon and don't get an opportunity to enjoy those blooms. When you prune after blooming, you can still enjoy the flowers and the plant can recover, grow, and produce more buds for flowers next spring.

For rejuvenation pruning you remove one-third of the shrub's oldest growth. You need to select the thickest, darkest and unhealthiest stems or branches and cut them back. You should cut back stems to soil level and branches to the point of intersection with the shrub's main trunk. This ensures that only the youngest, most productive wood (that which produces the most and best flowers) remains a part of the shrub. During early spring you can also prune shrubs that will bloom during the summer months.

Pruning is not limited to a certain time of year. You can prune at any time if you notice damaged branches and limbs. The process is invigorating for the plants in a home landscape so you shouldn't necessarily think of pruning just as a means of size control.

If you have a plant that has grown out-of-bounds, pruning may not be the answer – you may need to consider replacing the plant with one that will reach a smaller size at maturity.

Trees and shrubs to prune in late winter/early spring while still dormant: Bradford pear (*Pyrus calleryana*); Butterfly bush (*Buddleia Davidii*); Crape myrtle (*Lagerstroemia indica*); Flowering dogwood (*Cornus florida*); Flowering plum (*Prunus blireana*); Glossy abelia (*Abelia x grandiflora*); Golden rain tree (*Koelreuteria paniculata*); Honeysuckle (*Lonicera fragrantissima*); Hydrangea, Peegee (*Hydrangea paniculata 'Grandiflora'*); Potentilla (*Potentilla fruticosa*); Redbud (*Cercis canadensis*); Spirea (except bridal wreath) (*Spirea japonica*); Wisteria (*Wisteria* species).

Trees and Shrubs to prune in late spring/summer, after bloom: Azalea (*Rhododendron* species); Beauty bush (*Kolkwitzia amabilis*); Bridal wreath spirea (*Spirea x vanhouttei*); Flowering crabapple (*Malus* species and cultivars); Forsythia (*forsythia x intermedia*); Hawthorn (*Crataegus* species and cultivars); Hydrangea, Bigleaf (*Hydrangea macrophylla*); Lilac (*Syringa vulgaris*); Magnolia (*Magnolia* species and cultivars); Mock orange (*Philadelphus coronarius*); Mountain laurel (*Kalmia latifolia*); Rhododendron (*Rhododendron* species); Serviceberry (*Amelanchier x grandiflora*); Slender deutzia (*deutzia gracilis*); Weigela (*Weigela florida*).

The Kentucky Cooperative Extension Service offers publications that can answer many of your pruning and other gardening and landscape questions. Online, https://forestry.ca.uky.edu/files/pruning_landscape_trees.pdf offers information about pruning trees.

Upcoming Events

April		May		June	
11 th - Master Gardener Meeting Canceled		4 th Famers Market Pop-up Market		3 rd – Beekeepers Meeting	
13 th - Master Gardener Plant Swap		6 th -Beekeepers Meeting		1 st , 8 th , 15 th , 22 nd , 29 th – Farmers Market 9:00 a.m. – 1:00 p.m. 130 Adams Lane	
		9 th -Master Gardener meeting “Is it a Weed or Wildflower”			
17 th - Hosting D1 ANR		4 th , 11 th , 18 th , 25 th Pikeville Farmers Market planning for Pop-up Markets Follow Pikeville Farmers Market on Facebook or call the extension office for opening updates		4 th , 11 th , 18 th , 25 th - Farmers Market 4:30 – 7:00 p.m. 130 Adams Lane	
30 th -Hosting CAIP Training for Eastern Kentucky					
To be scheduled soon:					
Wine Cap Workshop	Home Based Processing	Queen Breeding Workshop	Farmers Market Meeting	CAIP/Ag Advisory	

Pike County Extension Service

148 Trivette Drive
 Pikeville, KY 41501
 (606) 432-2534
 Fax: (606) 432-2536
www.uky.edu



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