MISSISSIPPI STATE UNIVERSITY™ EXTENSION

County Gardeners Extension Express

MULTI COUNTY

JULY 2020 VOLUME 13, ISSUE 7

Watering Your Garden

Vegetable gardens usually need about 1 inch of water (630 gallons per 1,000 square feet) per week in the form of rain or irrigation during the growing season. Gardens in sandy soil may need as much as 2 inches of water per week in midsummer. Where a water source is located close to the garden, there are few excuses for letting the garden suffer in dry weather.

Where a water source is not close to the garden, it is possible to water some plants with a little work. Partially bury 1-gallon plastic milk jugs between tomato, pepper, eggplant, squash, and other widely spaced plants. Punch a few small holes near the bottoms of the jugs before placing them in the soil. Fill the jugs periodically with water hauled to the garden. The water will slowly seep into the soil, providing moisture to the root zone.

There are several choices of garden sprinklers, ranging from the simple garden hose with a spray nozzle to semi-automatic equipment. Many portable lawn sprinklers are adequate for the garden. Adjust the rate of water application so that it is not faster than it can enter the soil. Water applied too rapidly runs off, resulting in erosion or puddles, and causing soil compaction.

Since overhead sprinklers wet plant leaves, water early enough in the day to allow time for leaves to dry before night. This helps keep leaf diseases from developing and spreading. Each watering should wet the top 3 to 5 inches of soil. Frequent light watering results in shallow rooting, susceptibility to damage by drought, and plants that are easily blown over.

Soaker or perforated plastic hoses or drip and trickle irrigation systems are excellent for watering the garden. An irrigation system makes it possible to water a large garden all at the same time. The system, when properly operated, keeps soil at the base of the plant (root zone area) moist.

Eddie Smith, Ph.D., C.A., Co. Coordinator & Extension Agent
MSU-ES Pearl River County
Phone: (601) 403-2280 E-mail: eddie.smith@msstate.edu

INSIDE THIS ISSUE:

CONTACT INFORMATION

Forrest County
Phone: (601) 545-6083
Email: mtt52@msstate.edu

George County
Phone: (601) 947-4223
Email: h.steede@msstate.edu

Hancock County
Phone:(228) 467-5456
Email: C.Stephenson@msstate.edu

Harrison County
Phone: (228) 865-4227
Email: tim.ray@msstate.edu

Jackson County
Phone: (228) 769-3047
Email: evan.ware@msstate.edu

Lamar County
Phone : (601) 794-3910
Email: rosso@msstate.edu

Perry County
Phone: (601) 964-3668
Email: b.odum@msstate.edu

Pearl River County
Phone: (601) 403-2280
Email: eddie.smith@msstate.edu

Stone County
Phone: (601) 928-5286
Email: hbj4@msstate.edu

Christian Stephenson, Ph.D., C.A., Co. Coordinator & Extension Agent
MSU-ES Hancock County
Phone: 228-467-5456 E-mail: c.stephenson@msstate.edu

Planting a Fall Garden

Planting a garden in the fall is a great way to extend the gardening season and have fresh vegetables right into winter. Many vegetables are very well adapted to growing in the fall. In fact, cool season vegetables such as broccoli, carrots, and brussel sprouts develop better flavor when they mature in cooler weather. Some plants, such as Chinese cabbage and rutabagas, are very sensitive to heat and should only be grown in the fall.

It is possible to carry over your spring garden through the fall. Plants such as tomatoes, okra, and peppers can continue producing until winter frosts. In order to keep these plants producing, fertilization, insect pests, disease, and watering should be carefully managed to keep the plants healthy. A good fall garden also means planting new vegetables to produce in fall and early winter. In order to prepare for a fall planting, residue from spring plants should be removed and the soil should be tilled to a depth of at least six inches. It's a good idea to get a soil test from your local Extension Service office before planting, as fall plants need fertilization as much as spring and summer vegetables and may have very different fertilization needs.

Planting in the fall should be done keeping in mind the time required for plants to mature and the date of first frost in your area. In addition, warm season vegetables will need more time to mature as the weather cools. Check with your local Extension Service office for average first freeze dates and recommended planting dates for fall vegetables.

Hot weather in late summer can be very hard on germination seeds and young seedlings. A few simple steps will reduce stress on seeds and seedlings and make your planting more successful. Water a day or two prior to planting so that seeds are planted in moist soil. Watering after planting can cause the soil surface to crust, so it's a good idea to cover seeds with a material like peat moss and vermiculite as this will not form a crust.

Another good method is to plant seeds in individual containers and transplant them to your garden. Planting seedlings in separate containers allows you to transplant the seedling along with its soil in order to lessen the shock of being transplanted.

When planting a fall garden, you should be aware of high temperatures for you, as well as for your plants. When working outside, be certain to take precautions against heat-related illness including drinking plenty of water, replacing salts and minerals, and wearing appropriate clothing. It's also important to schedule outside activity for cooler parts of the day and to pace yourself to avoid getting overheated.

A fall garden can be very rewarding and can greatly increase the amount of vegetables you produce and enjoy. Contact your local Extension Service office for more resources on how to get the most out of your garden.

Garden Calendar: July

Planting

- Plant Pumpkin seeds for a Halloween harvest.
- Use Portulaca or Marigolds to fill in bare spots of flower bed.
- Root cuttings of Azalea, Boxwood, Camellia, Gardenia, Holly, and Poinsettia in coarse sand. Cuttings should be 4-6 inches from new growth with lower leaves removed.
- Plant now for color in the fall: Marigold, Zinnia, Celosia, and Joseph's Coat.
- Daylilies may still be planted.
- Start cuttings for house plants: Ivy, Wandering Jew, Philodendron, and Begonia.
- Plant fall vegetables: Cabbage, Parsley, and Collards.

Fertilizing

- Do not fertilize Camellias after July 1.
- Fertilize Chrysanthemums around July 15.
- Fertilize all of the garden as you did in March.
- Fertilize lawns with well balanced fertilizer.

Pruning

- Remove faded flowers from Crape Myrtle to encourage a second blooming.
- Pinch back Mums before July 15. Cut back broken or withered fern fronds.
- All Vegetables must be picked regularly to ensure continued bearing.
- When cutting Boxwood into a hedge, make sure the base is wider than the top to allow sunlight to reach base of plants.
- Remove dead limbs from trees and shrubs.
- Roses should be pruned to encourage fall blooms.
- Remove flowers from Basil and cut Mint to encourage new shoots.

Mulch

- Check mulch on Azaleas and Camellias. Mulch should be at least 2 inches thick.
- Zinnias and Mums must be kept mulched to reduce necessary cultivation and conserve moisture.

Miscellaneous

- Water Azaleas well because they are setting flower buds now for next year.
- Cut grass at 2.5 - 3 inches during hot weather.
- Water the whole garden deeply once a week.

Home Accent

- Never leave house plants in a closed home over a vacation. Either water and place under a shady tree or have a friendly neighbor come in and water them for you.

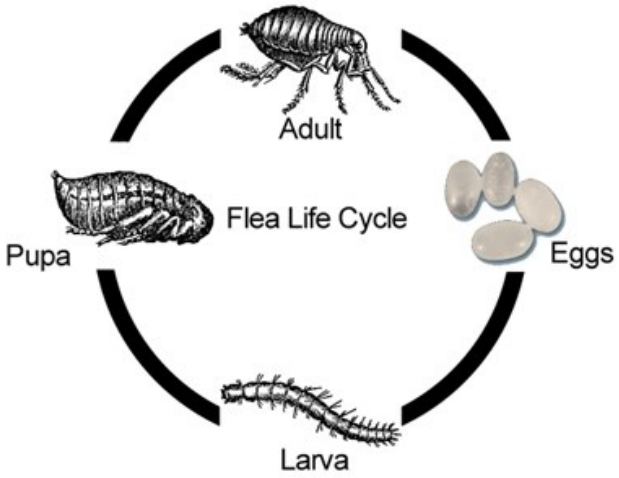
In Bloom

- Caladium, Cleome, Crape Myrtle, Four-o'clocks, Hibiscus, Impatiens, Liriope, Marigold, Mallow, Moonflower, Oleander, Periwinkle, Plumbago, Portulaca, Salvia, Ageratum, Zinnia, Balsam, Butterfly Weed, Canna, Cosmos, Dahlia, Daylily, Funkia, Gladiolus, Lily, Lycoris, Lythrum, Petunia, Phlox, Rudbeckia, Scabiosa, Shasta Daisy, Snapdragon, Snow-on-the-Mountain, Tuberose, Verbena, Veronica, Althea, Buddleaia, and Montbretia.

Tim Ray, Extension Agent
MSU-ES Harrison County
Phone: (228) 865-4227 E-mail: tim.ray@msstate.edu

Controlling Fleas in Your Home

If you own a dog or cat, you will have to control fleas. Even light flea infestations are annoying to pets, and some develop skin problems because they are allergic to flea bites. Fleas also bite people, and heavy infestations in the home can make life miserable for pet owners. To control fleas successfully, you need to control them in all areas where they occur: on the pet, in the house, and in the yard. Not allowing pets inside the house is the surest way to avoid having fleas inside the house, but not all pet owners favor this method. The first step in flea control is to treat the pet(s) with an effective and appropriate on-pet treatment. Fortunately, there are several highly effective treatments that can be applied to pets for preventive flea control. Good, on-pet flea preventive, combined with frequent cleaning of pet bedding areas, can keep fleas from becoming established in the home.



To control fleas effectively, you need to have a basic understanding of flea biology. Only adult fleas live on the animal and suck blood. Female adult fleas lay eggs on their hosts which roll off and fall to the floor, accumulating in those areas where the pet sleeps or rests. In 2 to 6 days the eggs will hatch. In an established flea infestation, adult fleas represent only a fraction of the total flea population. The eggs, larvae, and pupae far outnumber the adults, and you will not control fleas unless you control these immature stages.

Because flea larvae require high humidity and are repelled by sunlight, they usually move into cracks and crevices or burrow deep in carpet or rugs. The larvae mature in 1 to 3 weeks and then spin a small cocoon in which they develop into adults. This cocoon, or pupal stage can be just a week-long or several months long. Newly developed adult fleas that are still inside their cocoons can sense if host animals are present in the area based on vibrations and carbon dioxide concentrations. When no hosts are present, they will delay emergence from the cocoon for up to several months. This is why heavy flea infestations can emerge suddenly in homes that have been vacant for weeks or months. They emerged as soon as they sensed renewed activity, and, in the absence of pets, began biting people.

Given the biology and habits of immature fleas, it is easy to see why indoor flea infestations are usually concentrated in areas where pets rest and why infestations are often more severe in rooms that are not cleaned regularly and in rooms with carpet or rugs. It is also easy to see why vacuuming and other methods of cleaning pet bedding and floors play such an important role in indoor flea management.

Continued on page 5

Tim Ray, Extension Agent
MSU-ES Harrison County
Phone: (228) 865-4227 E-mail: tim.ray@msstate.edu

Continued: Controlling Fleas in Your Home

Key Steps to Control Heavy Indoor Flea Infestations:

- **Treat pet(s) with an on-pet flea treatment.**
- **Thoroughly vacuum pet bedding and the surrounding area.**
- **Wash pet bedding in hot, soapy water or discard and replace.**
- **Vacuum floors, carpets, and rugs. (Give special attention to cracks and crevices, under furniture, along walls, and around pet bedding areas.)**

- **Vacuum furniture where pets rest, being sure to move seat cushions and vacuum underneath.**
- **Move furniture and vacuum underneath.**
- **Apply directed spray of adulticide + Insect Growth Regulator (IGR). (Do not fan spray or broadcast spray carpets or floors unless the label says you can).**
- **Repeat cleaning and treatment in 14 days.**
- **Repeat again in 14 more days if fleas are still present.**
- **Maintain control by cleaning bedding areas weekly and regularly using on-pet treatments.**

There are many products labeled for indoor control of adult fleas that can be applied as directed sprays. These contain active ingredients such as permethrin, deltamethrin, or pyrethrins. While these products also have activity against immature fleas, flea larvae are difficult to control with traditional adulticide type insecticides because of their habit of burrowing deep into cracks and crevices where they are difficult to reach with insecticides. Of course, you can also hire a professional pest control company to apply indoor flea treatments. The pest control technician will have effective insecticides and IGRs and the knowledge and equipment to apply them safely and properly. However, you will still need to do the necessary cleaning before the technician arrives.

For more information, please refer to Extension publication 2597 at extension.msstate.edu or contact your local Extension office.

Christian Stephenson, Ph.D., C.A., Co. Coordinator & Extension Agent
MSU-ES Hancock County
Phone: 228-467-5456 E-mail: c.stephenson@msstate.edu

Deer in the Home Landscape

Though they are appreciated by hunters and wildlife enthusiasts, deer can be a major nuisance for homeowners. Increasing populations and the development of new residential areas have led to more contact between deer and humans. Deer have also shown themselves to be adept at living in suburban and even urban areas. Deer feed on a wide variety of plants, many of which are food or ornamental plants grown in gardens. An adult deer can eat up to ten pounds of food in a single day.

Deer looking majestic

There are a number of ways to discourage deer and prevent them from damaging the home landscape. The most effective long term solution is fencing. Though deer are able to jump fences as tall as ten feet, they generally prefer not to, and eight foot tall fences are usually sufficient. It is also recommended that fences designed to deter deer be electrified and that they be kept clear of vegetation for six feet on either side of the fence.

While fences are effective, an eight foot fence surrounding the property is not always practical. A number of repellants are available that are designed to repel deer either by scent or by having a bad taste. These repellants include mothballs, hair, bloodmeal and many others. Though most repellants sold are effective in the short term, they must be reapplied regularly. To remain effective, repellants will need to be applied to target plants every three or four weeks. In addition, deer will become accustomed to repellants, and so it is necessary to rotate through different products. Because of the cost of repellants, they are only suited to small areas or a few target plants.

Deer looking much less majestic

Though deer will eat almost anything when they are hungry, they do show a preference for some plants and a distaste for others. Plants such as pears, cedar and hydrangeas are particularly susceptible to deer feeding. The selection of plants that are less favored by deer can significantly reduce problems with damage to the landscape. Trees such as American holly, and honey locust, as well as shrubs such as boxwood, forsythia, and butterfly bush are rarely damaged by deer feeding. Perennials such as coreopsis, daffodils, mint and bee balm, as well as annual flowers such as snapdragons, begonias, and marigolds are also resistant to damage by deer.

Evan Ware, Extension Agent
MSU-ES Jackson County
Phone: 228-769-3047 E-mail: evan.ware@msstate.edu

Rain Gardens

Your garden can be an important tool in helping to manage storm water runoff. Heavy rains can cause stormwater runoff which is water that runs off areas that are impervious (such as rooftops, driveways, or walkways) or water-saturated areas. When excess stormwater is carried out of your neighborhood through a stormwater system, sometimes it is not treated before it flows directly into local waterways. Dissolved pollutants such as nutrient and bacterial pollution from pet waste, oil leaks on driveways, and unused nutrients from over-fertilized lawns and landscapes can be carried in stormwater runoff and pollute nearby waters.

Many native plants, such as *Rudbeckia*, are good choices for rain gardens.

Soil is a natural pollutant remover and if stormwater slows down and has time to percolate through the ground, most pollutants can be removed before the water reaches bodies of water. A healthy, properly managed lawn or planted landscape can often do a good job of filtering stormwater on its own. However, if the main drainage ways or low areas in your yard pool during rains, a rain garden installed in these areas could be a solution to hold and filter stormwater. A rain garden should be planted in an open area downslope from any structures and should only hold water for 48 hours or less. They are often planted with native plants that are drought tolerant but can also withstand wet soils for 24-48 hours.

Even small rain gardens can make a difference in reducing stormwater runoff from your landscape (Photo credit: Rhonda Britton, Alabama Cooperative Extension System)

Landscapes with clay soils and slow percolation rates will need to be amended or have drains installed before the installation of a rain garden. Most small rain gardens can be built by homeowners, but you may want to have one professionally designed. Depending on your site and the scale of your flooding issues, you may need the help of a professional such as a landscape architect.

For more information on rain gardens, including site size calculations and recommended plants, visit extension.msstate.edu/rain-gardens.

Christian Stephenson, Ph.D., C.A., Co. Coordinator & Extension Agent
MSU-ES Hancock County
Phone: 228-467-5456 E-mail: c.stephenson@msstate.edu

Twospotted Spider Mites

The twospotted spider mite (*Tetranychus urticae*) is a common pest of indoor plants. Infestations most often enter the house when plants are moved from outdoors or when new plants are purchased. Spider mites may crawl from plant to plant or be moved by air currents.

Spider mites feed on plants by inserting a stylet-like mouthpart and sucking plant sap. Their feeding produces small wounds which appear as white flecks. At the outset of infestation, these injuries are localized in small patches on the underside of the leaf near the base of leaf veins. As damage progresses, leaves may have a generalized "off" color that appears as a graying or bronzing. In severe infestations, spider mites make webbing which is very visible. Heavily infested leaves may also drop prematurely.

Under ideal conditions, spider mites may complete their life cycle in as little as two weeks. This allows for very rapid population increases. Spider mite females may lay as many as five eggs a day. Eggs hatch within two days and immature mites feed in the same fashion as adults.

Control of spider mites can be very difficult. When possible, heavily infested plants should be disposed of as they serve as a source of new infestations. Spider mite problems often develop when plants are under stress, so good plant care is important in controlling this pest. Small plants can be washed repeatedly with a jet of water to reduce population levels. Neem oil is the most effective spray product for control of spider mites. Biological control with predatory mites is also a possibility for large indoor plantings or greenhouses.

Online Private Applicator Certification Program

A *private applicator* is a certified applicator who uses or supervises the use of restricted-use pesticides to produce an agricultural commodity on his or her own land, leased land, or rented land or on the lands of his or her employer. Private applicators must be at least 18 years old.

In response to limited face-to-face training during the COVID-19 situation, the Mississippi Department of Agriculture–Bureau of Plant Industry has approved an online private applicator certification program developed by the MSU Extension Service. Persons needing to obtain or renew their private applicator certification can complete the online training (two video training modules and a competency exam) by using the following link: http://extension.msstate.edu/content/online-private-applicator-certification-program. The fee for training and testing is $20, payable online by credit card, debit card, or eCheck.