



Fall Gardening

Just as Good Friday signals the time to get the spring garden in the ground, August's heat is the indication that it's time to plant the fall garden. Fall gardens are planted with the same varieties as are used in the spring. There are some heat tolerant varieties of tomatoes developed for fall planting. The key to having a successful fall garden is maintaining adequate water on the young plants.



I recommend gardeners use drip irrigation systems and soaker hoses to keep the plants watered. The root zone of young plants extends 2 to 3 inches deep, and likely will require daily watering to keep moist in August. As the plants mature, water 1 inch weekly.

Early August is the time to plant tomatoes, peppers, squash, sweet corn, peas and beans. Plant things in the cabbage family at close to the end of August to the middle of September. Cabbage, broccoli and cauliflower are actually easier to grow in the fall because temperatures have moderated by the time they are ready to produce fruit.

Before planting fall gardens, treat any weed problems that existed in the summer. Find a herbicide labeled for the crops that will be planted. For home gardens, I recommend the herbicide trifluralin, which is sold under such brand names as Treflan, Preen and Trilin.

Insects are more of a problem in the fall than in the spring, so be vigilant. When you see them, control them by whatever method you deem appropriate.

Wild animals become more of a problem with fall gardens as other plants tend to be drying up and going to seed. A well-watered garden of young plants offers a tempting meal.

Once established, fall gardens typically can grow and produce until the first frost, which in Mississippi ranges from October to December. Winter gardens, usually planted in different types of greens and English peas, can be planted when the fall garden is finished.

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Fungus Gnats

Fungus gnats (*Bradysia* sp.) are small dark-winged insects that are often found around houseplants in homes and offices. They can be a nuisance pest when they occur in large numbers. Adult fungus gnats are approximately 1/8" long with long legs and antennae. Though the adult insects are somewhat similar to mosquitoes in appearance, adult fungus gnats are harmless and do not bite. Larvae of the fungus gnat develop in the growing media of houseplants. Larvae are wormlike in appearance and are translucent with a black head.

Fungus gnat larvae live in the top 2 to 3 inches of growing media, dependent on moisture levels. These insects primarily feed on algae and fungi present in the medium. They will feed on leaves or roots resting on the surface of the growing medium and can cause damage to delicate houseplants. Larvae mature in 2 to 3 weeks and pupate in the growing medium. Adults emerge about 1 week later.



Fungus gnats are weak fliers and usually fly in short erratic patterns. Adults are usually seen around house-plants, but will occasionally also be found on nearby window frames. Adults can lay as many as 200 eggs in cracks or crevices of the growing medium. Moist media with high amounts of peat moss are highly attractive to these insects.

Though these insects are present year round, they tend to be more noticeable in the fall and winter. During this time of year, many plants are brought indoors. Small fungus gnat populations present outdoors may rapidly increase in response to warmer indoor temperatures. Also, with cooler temperatures and shorter daylengths, plant growth is slowed and less water is used leading to media staying wet longer.

The easiest way to manage fungus gnats is to allow the growing medium in the pot, especially the top few inches, to dry between watering. Drier media are less attractive to egg laying females, and eggs and larvae will often die in dry soil. Repotting plants will also decrease fungus gnat populations, as older growing media will retain more water once it has broken down. Another means of dealing with large populations of fungus gnats is to place yellow sticky cards under plant foliage. Adult gnats are attracted to the color of the card and will be eliminated before laying eggs.



Fungus gnat larva

Garden Calendar: August

Prepare

- Plan beds for bulbs. Order Tulips, Hyacinths, Dutch Iris, Daffodils, Narcissus, and Amaryllis.
- Prepare beds for October planting by adding compost or leaf mold.



Plant

- Plant Daylilies in a sunny location. They will be well established before winter.
- Divide and transplant Louisiana Iris, Easter Lily, Canna, Liriope, Ajuga, and Shasta Daisy.
- Plant cool season vegetables: Broccoli, Cauliflower, Brussels Sprouts, Cabbage, Spinach, Potatoes, Lettuce, Carrots, Beets, Radishes, and English Peas. Plant warm season grasses: Buffalo, Bermuda, and St. Augustine.
- Mums should be planted for September bloom and fall color.
- Marigolds, Asters, Zinnias, and Celosia can be planted to replace faded annuals.
- Plant seeds of Calendula, Columbine, English Daisy, Forget-me-not, Pansy, Sweet William, and Violet.

Fertilize

- If acid loving plants including Azaleas, Camelias, and Gardenia show signs of chlorosis (yellowing of leaves), a treatment of Iron Chelate should cause leaves to regain their green color.
- Feed mums with a complete fertilizer every two weeks and water thoroughly until buds show color.

Prune

- Cut back annuals, such as Impatiens and Vinca to encourage fall blooms.
- Disbud Camellias, Dahlias, and Chrysanthemums to produce specimen blooms.
- Continue to remove dead heads in the garden to stimulate blooming.
- Cut back rose canes to 24-30 inches from ground for autumn blooms.
- Remove dead and damaged wood from trees and shrubs.



Water

- Water garden deeply, but infrequently throughout the month.
- Water early in the morning or in late afternoon. Water on leaves during the heat of the day can cause the sun to burn leaves.
- Potted plants and hanging baskets need to be watered daily.
- Make sure Azaleas and Camelias stay well watered, because they are forming flower buds for next year.

Miscellaneous

- Mow weekly and leave clippings on the lawn.
- Turn compost pile.
- Feed the birds.



In Bloom

- Ageratum, Angel's Trumpet, Balsam, Begonia, Browallia, Caladium, Canna, Celosia, Clematis, Dahlia, Four-o'clock, Funkia, Gladiolus, Lily, Hosta, Impatiens, Marigold, Periwinkle, Phlox, Portulaca, Rattle Box, Salvia, Snow-on-the-Mountain, Torenia, Vinca, Pink Zephyranthes Lily, Zinnia, Althea, Butterfly Bush, Crape Myrtle, Hydrangea, Oleander, Roses, and Tamarisk.



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Leaf-Footed Bug or Assassin Bug?

What is this odd-looking insect on my tomato plants? We often receive calls, texts, or emails needing insect identification. One we often identify is the leaf-footed bug. Leaf-footed bugs are plant feeders and are sometimes common pests in the vegetable garden, but they also kill back the tips of roses and ruin other ornamental type plants including crepemyrtle. Leaf-footed bugs also feed on and ruin pecan nuts, and they damage peaches and plums. They'll even feed on pinecones where they weaken or destroy developing seeds. Other plants infested include apple, bean, bell pepper, blueberry, blackberry, cucurbits, eggplant, and many others.

Bugs in the genus *Leptoglossus* are named leaf-footed bugs because part of the hind leg is wide and flat and resembles a small leaf. These leaf-like expansions somehow aid males in "fighting" for females. Leaf-footed bugs are $\frac{1}{2}$ to $\frac{3}{4}$ inch long and emit a distinctive odor from scent glands on the thorax. Eggs are fastened end to end in a small, golden-brown line of cylindrical eggs of about 20 on twigs or along a leaf vein. Eastern leaf-footed nymphs resemble adults except the nymphs are smaller and do not have wings. Very young nymphs have red bodies. Also, the hind legs of nymphs are completely slender. Eastern leaf-footed bugs often aggregate into large groups. One plant may be swarming with bugs while a neighboring plant has none.

Many assassin bug *species* attack quickly and paralyze their prey, hence their name. Assassin bugs kill many garden pests including flies, mosquitoes, Japanese beetles and large caterpillars. They lie in wait for these insects, stab the prey with their proboscis (beak), and inject a toxin that dissolves the insect. The assassin bug then sucks out the other insect's liquefied tissue. Some species have been known to bite humans if disturbed. Their bite is very painful and can cause a severe reaction.

Adult assassin bugs are usually $\frac{1}{2}$ to $\frac{3}{4}$ " long, but some species are longer. Many species are brownish or blackish, but some species are brightly colored. The elongated head is narrow with a distinct "neck" behind the often, reddish eyes. The long, curved mouth parts form a beak which is carried beneath the body, with the tip fitting in a groove on the underside of the body. The middle of the abdomen is often widened, so the wings don't completely cover the width of the body. The female lays eggs in tight, upright clusters on leaves or in the soil. Nymphs resemble miniature, wingless adults.

Don't confuse the harmful leaf-footed bug with the beneficial assassin bug. Often nymphs of leaf-footed bugs resemble assassin bugs. The beneficial assassin bugs may be feeding on harmful insects such as aphids, so proper identification is important. Even adults can be a bit confusing, but the "leaf-like" shape on the leaf-footed bug is a sure way to properly identify.



Assassin Bug Adult



Assassin Bug Nymph



Leaf-footed Bug Adult



Leaf-footed Bug Nymphs

Calendar:

August 18 - Tim Ray with Harrison County Extension will be hosting a free Maintaining Home Landscapes workshop via Zoom beginning at 2 PM. This program will help participants improve home landscapes and retain property value through regular maintenance and proper care.

Join Zoom Meeting August 18th

<https://msstateextension.zoom.us/j/96053749231>



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Solarization

Soil solarization allows gardens to control soilborne pests without the use of chemicals. Radiant energy from the sun is trapped under plastic laid over the soil and soil temperatures can raise to as high as 140° F which can help in the control of weeds, fungi, bacteria, insects and nematodes. Soil solarization can also increase the availability of nitrogen and other nutrients needed for growing healthy plants. Solarization leaves no residues and can be used on both small scale gardens and large farms. Plants may grow faster and produce both higher and better quality plants when grown in solarized soil.

Although some pests will be controlled after just a few days of solarization, some pests will require 4 to 6 weeks of full sun to fully control. Solarization will control many important soilborne fungi and bacterial diseases such as Verticillium wilt, Fusarium wilt, damping off, and phytophthora root rot. Soil solarization is also effective in controlling nematodes, however, because they are mobile, control of nematodes is greatest in the top 12 inches of soil. Plants with deeper roots may still suffer damage. Many annual and perennial weeds can be controlled with solarization. Annual weeds are generally more effectively controlled than perennials. Where their rhizomes are shallow, solarization may be effective at controlling persistent weeds such as johnsongrass. Fortunately, beneficial soil microorganisms such as mycorrhizae either survive solarization or recolonize the soil quickly.

When solarizing the first step is to smooth the bed and remove any large clods or litter from the area so that the plastic can lay snugly against the soil. Soil should also be irrigated as wet soil conducts heat better and will provide better control of both weeds and pathogens. Soil should be wet to at least a depth of 12 inches. For raised beds this can be done with a drip irrigation system which will ensure the beds stay moist. Clear plastic is the best choice for solarization as it allows the sun's rays to pass through and be trapped to heat the soil. Thin plastic (1mm) will allow for greater heating but is also more likely to tear. Slightly thicker plastics (2mm) can be used in windy areas to prevent this. For home gardeners, rolls of 1mm or 4mm painter's plastic is available at most hardware stores and will be sufficient. However, this material may break down in direct sunlight and will not be reusable. When laying plastic ensure the plastic is as closely in contact with the soil as possible. For flat areas this can be done by digging a small trench around the area, laying the edge of the plastic in the trench and then covering with soil. For raised beds, plastic can be stapled or screwed to the frame of the bed using wooden slats to prevent tearing.

The goal of solarization is to maintain a daily maximum temperature in the top 6 inches of soil at or above 110 to 125 °F. A temperature probe can be used to ensure that these temperatures are being maintained. When removing solarization plastic, disturb the soil as little as possible as this may bring viable weed seeds to the surface.





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Fall Armyworms

Late summer and early fall are usually the peak season for fall armyworm invasions of well managed turf, especially bermudagrass lawns, athletic fields and golf courses that have been fertilized and watered. However, fall armyworms have arrived early this year.

The moths migrate in large numbers and lay as many as a thousand eggs each. During these hot days of summer, the eggs hatch in only a few days with the tiny caterpillars feeding almost continuously. When small, they may go unnoticed while consuming only a small amount of leaf tissue daily, but nearing their last few days as larvae, they can literally devour an entire lawn almost overnight. Therefore, it is important that a careful scouting regime be established to detect their presence and control them while they are small.



At least once a week during the remaining growing season, randomly check several locations in the lawn by brushing the grass back and forth with your hand, parting the blades down to the soil line, and looking for coiled light tan or green to nearly black caterpillars. If you care to pick one of them up and look at it straight on, you may notice a small inverted “Y” marking on its forehead. A tip that golf course superintendents use to alert them of their arrival is checking the flags on the greens each morning for small light brown egg masses that have been laid on them by the moths during the night. You might try placing a small flag or white flat stake in your lawn as well. Other indicators of their presence are flocks of birds on your lawn or an abundance of paper wasps hovering close to the turf canopy, as both feed on the caterpillars.

Control is not too difficult if the lawn is treated with an appropriate insecticide when the caterpillars are small. Liquid sprays or granules containing active ingredients of bifenthrin, carbaryl, cyfluthrin, lambda-cyhalothrin, permethrin or trichlorfon are recommended. Contact your local county Extension Service for more information.

Date: 08/25/2022



Muscadine Field Day

Registration Starts
at 08:30am

The 2022 Muscadine Field Day will be held at the MSU McNeill Research Station. Come see the fruit on the vine and hear speakers from Mississippi State University and the USDA-ARS on timely topics related to muscadine vines. We look forward to seeing you there! The program starts at 9am and runs to 11am.

Topics Include:

- *Propagation*
- *Insects and Disease*
- *Pruning*
- *And More!*

The address for the McNeill Station is 7 Ben Gill Rd., Carriere, MS 39426 . Directly across from Jack's Fish House.

For further info:

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Events

Beekeeping for Beginners

Friday, August 19, 10:00 to 11:00 a.m.

Bees and gardens go hand in hand! Pearl River County Extension Agent **Dr. Eddie Smith** will provide an introduction to how to get started with beekeeping, covering native plants for bees, basic biology, equipment, protective gear, mistakes and tips, how to grow your first colony of bees, and manage them throughout the year. Members free; \$5 for non-members. Registration is required. Call 601-799-2311 to register. **This program is for children and adults.**



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.

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EXTENSION

Private Applicator

TRAINING AND TESTING ONLINE

Watch the training modules, pass the exam, and receive your private applicator certification from MDAC Bureau of Plant Industry.

\$20 COST

Visit <http://msuext.ms/agmes>
or contact your local MSU Extension office for info on how to register.