



Fall Fertilization of Warm-season Turf Species

Applying late-season fertilizer applications to warm-season turfgrasses in Mississippi (winterizing) is a controversial management practice that stems from the concerns for potential winterkill, disease promotion, and the effect on total nonstructural carbohydrates.

Some research has indicated that late-fall nitrogen fertilization increases vulnerability to winterkill and promotion of diseases. Other studies, including those conducted by Mississippi State University, have shown no direct correlation to winterkill, but instead prolongs fall color and earlier recovery in the spring.

Late fall applications of potassium are standard recommendations and practices as potassium promotes winter hardiness and disease resistance in turf. A strong healthy lawn probably can do just fine without fall fertilization, but a weak stressed lawn can still benefit from a boost in nutrients. The first official day of fall is September 23rd, so we still have several weeks of growing conditions left for most of the state.

Therefore, a fall application of a winterizing fertilizer formulated to contain lower ratios of nitrogen to potassium, and particularly with nitrogen sources that are released slowly, may be just what your lawn needs. Time the winterizing fertilizer application when temperatures begin to moderate and days begin to shorten, but before the turf goes dormant.

Regardless of time of year, lush turf growth stimulated by excessive nitrogen may be more susceptible to certain diseases and insects. Be prepared to treat accordingly with appropriate fungicides and/or insecticides. Your lawn

fertilization program should be based on soil test analysis, turf use requirements, and grower expectations.



INSIDE THIS ISSUE:

Fungus Gnats	2
Garden Calendar	3
Cool-Season Bedding Plants	4
Continued: Cool-Season Bedding Plants	5
Stink Bugs in Your Vegetable Garden	6
The Crosby Arboretum Events for October	7
49th Annual Ornamental Horticulture Field Day	8

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: ext-jackson@lists.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



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



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

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 houseplants, 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. Dryer 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: October

Plant

- Spring flowering bulbs should be planted this month, with the exception of tulips and hyacinths, which should be placed in the refrigerator for 6 weeks before being planted in late December or early January.
- Pot up Basil, Chives, Parsley, Rosemary, Sage, and Sweet Marjoram for that sunny kitchen window.
- Annuals to plant are Pansies, Violas, Pinks, Flowering Cabbage and Kale, English Daisy, Wildflower planting, Cornflowers, Larkspur, and Queen's Anne Lace.
- Perennials to plant include: Asters, Salvia, Hollyhock, Daylilies, Babies Breath, Iris, Shasta Daisy, Peonies, and Phlox.
- Many evergreens may be planted this month.

Fertilize

- Test soil in garden to monitor balance of minerals.

Prune

- Remove damaged and dead wood from trees.
- Pick blossom-like fruit of Golden Rain Trees and let dry for winter arrangements.
- Prune back annuals like Blue Salvia and Dianthus to the ground and mulch. They may go through the winter and bloom again.



Miscellaneous

- Dig up Caladiums now with foliage intact, allow to dry, remove dried foliage and store in peat moss in a cool dark place for replanting next year.
- Force bulbs for indoor show. Place bulb on gravel and water enough to cover the roots, keep in dark place until root system is established and sprout reaches 3 inches, bring gradually into the light and refill container with water to original level. Enjoy the blooms of Paper-white, Narcissus, Lily of the Valley, Jonquil, or Hyacinth in this way.
- Make sure the birds in your garden have food, shelter, and water.
- Place leaves in compost bin.



In Bloom

Mums, Marigolds, Periwinkle, Salvia, Sasanquas, Golden Rain Tree, Roses, Ageratum, Aster, Camellia, Celosia, Colchicum, Dahlia, Petunia, Salvia, Torenia, and Zinnia.



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

Cool-Season Bedding Plants

Fall is here and a great time to plant those cool-season bedding plants. Local nurseries are bringing in fresh plant material that is healthy, fully established in the pot, and ready to be planted. Many gardeners have planted, or soon will be planting, their cool-season vegetables, such as lettuce, spinach, and broccoli. Likewise, there are cool-season bedding plants, such as alyssum, pansies, and Johnny jump-ups that are ready to be purchased and planted. Here are just a few to consider.



Pansy, Violet, Viola, Johnny Jump-up (*Viola tricolor*). These are some of the most popular purchases for fall gardening and are readily available at garden centers, hardware stores, and even grocery stores. These plants bloom throughout the winter; however, flower production increases substantially after hard freezes end in the spring. They come in a variety of colors and are relatively easy to grow.

Some have nicely fragrant, edible flowers that restaurants sometimes serve on gourmet salads. They benefit significantly from early-spring fertilizing. As temperatures rise, the plants stretch and turn yellow, and flowers shrink in size and production slows down.



Ornamental Kale (*Brassica oleracea*). Ornamental kale has become increasingly more popular over the years. Many varieties are available, even some that are sold as cut flowers in bouquets. They typically develop creamy white, pink, or purple leaves in the center of the plant's rosette, but small plants at the nursery lack colorful leaves, which develop as they mature. They will eventually flower the following spring, but often is removed from the landscape

before flowers develop. It is edible but may not be as palatable as other varieties of kale.



Snapdragon (*Antirrhinum*). These plants come in a variety of pink, white, yellow, red, and orange colors. They have a wide range in size. Some tall varieties can be grown as cut flowers, while others never become more than a foot tall. It is not surprising that so few snapdragons appear in Mississippi landscapes because they are so unassuming at the garden center. It is typical for them not to have a single open flower at the time of purchase. When

planted in the fall, a few flowers will develop, but the real show happens during April when they grow into plants with brightly colored flowers that are displayed on top of the green foliage. Spent flower stalks can be deadheaded or left to seed down more snapdragons. With warmer temperatures, flowering slows down. At this point, remove them from the flowerbeds and replace them with warm-weather annuals. Sometimes snapdragons survive the summer and provide another flush of flowers that fall or the following spring.



Tim Ray, C.A., Co. Coordinator & Extension Agent

MSU-ES Harrison County

Phone: (228) 865-4227

E-mail: tim.ray@msstate.edu

Continued: Cool-Season Bedding Plants



Petunia (Petunia). Petunias are often not thought of as being able to withstand freezing temperatures, but many cultivars can. Hard freezes do cause damage, but they grow back quickly from the stems and will flower during Mississippi's early spring. Many petunias will not survive through the intense heat of summer; for the earliest spring flowers, fresh petunias will need to be planted in the fall. Petunias are easy to grow and come in a rainbow of colors. Experiment with

different cultivars to find ones that will survive through winter, such as Easy Wave Silver.



Verbena (Verbena). There are many cultivars of verbena, but Homestead Purple is one of the most popular cultivars ever released. Other cultivars have showy colors, like bright red, white, purple, pink, and bicolor, and all of them do exceptionally well during the cool months. As the summer heat rises, flowering stops. During fall, they begin flowering again, and by the following spring, the plants will be in full bloom. These can last for several years in the landscape, but many of them will not survive reliably year after year. Plants

are typically less than a foot tall; some are even less than 6 inches tall. They spread out as a groundcover and fill in nicely around foundation plants.

Cool-season flowers planted in the fall will not reach their full potential without adequate care. Here are some tips for successful fall cool-season bedding plantings: water as needed until the roots are well-established; score or break apart tightly-bound roots surrounding the outside of the root ball to help them get established in the surrounding soil; plant where they will get afternoon shade to extend their longevity in the late spring and early summer; too much shade will reduce overall flowering; plant them in areas that have good drainage; do not apply fertilizer after the plants have gone dormant and are not actively growing; remove plant tissue that is dead, diseased, or damaged.



Heath Steede, Co. Coordinator & Extension Agent

MSU-ES George County

Phone: (601) 947-4223

E-mail: h.steede@msstate.edu

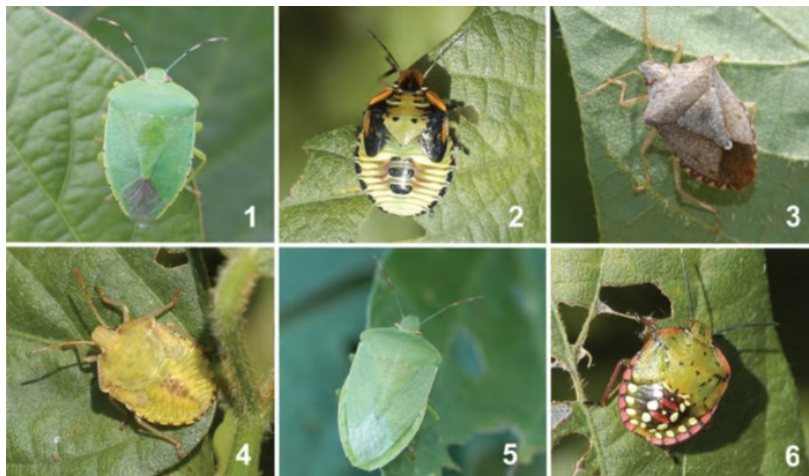
Stink Bugs in Your Vegetable Garden

One of the most damaging and common insect pests in late summer and fall gardens are stink bugs. A crop of vegetables can be damaged so severely by heavy infestations of stink bugs that the crop can be ruined. There are several key reasons that stink bugs are such a problem in late season vegetable gardens.

First, stink bugs have several generations each year, increasing their numbers with each generation. This is the reason that there are heavier numbers of stink bugs in the late summer than there were earlier in the year. Second, stink bugs reproduce on many different major row crops and weeds. After these crops mature the stink bug adults are trying to find another suitable host. Stink bugs are strong fliers and this makes it easy for them to move in where they feel comfortable. Third, stink bugs are fruit and seed feeders who focus their feeding on the part of the plant that we, as humans, like to harvest and eat as well.

The most common stink bug species that we have to deal with here in south Mississippi is Green Stink bugs, Southern Green Stink bugs, and Brown Stink bugs. The immature stink bugs known as nymphs can cause the same damage as the adults. The nymphs look similar to the adults as far as shape but the color can vary based on their stage of development. Another bug that can cause the same damage as the stink bug is the Leaf Footed Bug. They are larger and have an elongated body with leaf shaped segments on their hind legs.

Using an effective insecticide, such as products containing bifenthrin, cyfluthrin, gamma-cyhalothrin, permethrin, lambda-cyhalothrin or malathion, is the best way to get rid of this pest problem. **(Make sure and use the pesticide that is labeled for your particular crop.)** Most likely you will have to treat several times for stink bugs or leaf footed bugs because these unwelcomed bugs will continue to visit as long as there is a crop there that they like. **Be sure to always read the label carefully and follow the directions because the LABEL IS THE LAW!**



1. Green Stink Bug Adult
2. Green Stink Bug Nymph
3. Brown Stink Bug Adult
4. Brown Stink Bug Nymph
5. Southern Green Stink Bug Adult
6. Southern Green Stink Bug Nymph



The Crosby Arboretum

Program Schedule October 2022

BUGFEST! Oct. 7 & 8 (FRI/SAT)

FRIDAY, 9:30 to 11:00 a.m. (School/Homeschool Groups); **6:30 p.m. to 8:30 p.m.:** Blacklighting for Bugs (General Public); **SATURDAY, 10:00 a.m. to 2:00 p.m.** (General Public) Explore the world of entomology with insect collecting, identification, and more, with Extension Entomologist **Dr. John Guyton**, and professors and students from the Mississippi State University Biochemistry, Molecular Biology, Entomology and Plant Pathology Department and other Extension personnel. Please call to sign up. Groups for Friday's school field day must pre-register. Admission for both Fri and Saturday, \$2 for students/children; \$5 for adults/teachers/chaperons.

ALL ABOUT COMPOSTING

Saturday, Oct. 15, 10:30 to 11:30 a.m.

Why should you learn to make and use compost, and recycle rather than throw away your yard waste? Urban Forester and Extension Horticulturalist **Donna Beilich** will discuss how to get started in composting, and other ways to recycle branches and perennial stems, so you can incorporate these simple sustainable practices into your gardening routine. Members free; \$5 for non-members. Registration required.

HOW YOU CAN GET FREE TREES

Saturday, Oct. 15, 1:00 to 2:00 p.m.

Who wouldn't like to know how and where to get free trees? Urban Forester and Extension Horticulturalist **Donna Beilich** will reveal a wealth of simple techniques and practices to help you increase your collection (and amaze your friends and family). Tip: Trees not only make shade, but great gifts! Members free; \$5 for non-members. Registration required.

MUSIC UNDER THE PINES!

OPEN MIC NIGHT on Pinecote Pavilion



Saturday, Oct. 15, 6:00 to 9:00 p.m.

Enjoy our popular open mic night in the lovely outdoor setting of the Pinecote Pavilion. Reserve your 15-minute time slot, ask your friends and family to take the stage, or join the audience and sit back for a fun evening of local talent. Coffee, tea, and light desserts will be available at this FREE community event. Don't miss out on this rare chance to see the Pinecote Pavilion illuminated at night! Call 601-799-2311 to let us know you are planning to attend, or to sign up for your 15-minute time slot.

Arboretum Fall Native Plant Sale!

October 21 & 22 (Fri/Sat), 10 a.m. to Noon

(Members enter each day at 9:00 a.m.)

Grab your cart and choose from an outstanding selection of native plants for your fall planting projects! Knowledgeable staff, volunteers, and Mississippi Master Gardeners will assist you with plant questions and provide advice on selections for your property's unique environmental conditions. **Free admission.** Sale will be held on the loop drive. Use Service Road entrance.

"Alexa, What's this Plant?" – Ins and Outs of Plant ID Apps

Saturday, Oct. 29, 10:00 a.m. to Noon

These days it seems like all knowledge is at our fingertips through technology – if we just know who to ask. But which virtual assistant knows the name of your mystery plant in the field? (Hint: It's not Alexa.) In this session, **Dr. Janet Wright**, retired ecologist, will compare some popular plant ID apps for smartphone. Afterwards, we'll take our virtual buddies onto the trail to see how they enrich our connection to the natural world.

HOLIDAY FAMILY CRAFT WORKSHOPS:

Saturday, Oct. 29, 2 to 3 PM, Halloween crafts

Saturday, Nov. 12, 10 to 11 AM, Thanksgiving crafts

Saturday, Dec. 10, 10 to 11 AM, Christmas crafts

Families will enjoy creating holiday-themed crafts together, in these fun workshops! As all children must be accompanied by an adult, there is no minimum age requirement. Cost is \$3 for members (adults and children), all non-members \$6. Registration required.



Events

49th Annual Ornamental Horticulture Field Day



The **49th Annual Ornamental Horticulture Field Day** will be held at the South Mississippi Branch Experiment Station in Poplarville on **Thursday, October 6, 2022**. Registration begins at 8:00 a.m. and the program begins at 8:30 a.m. Updates from scientists at Mississippi State University and the USDA-ARS Southern Horticultural Laboratory will be featured in the Trial and Display Gardens in the morning and conclude in the main field building in the early afternoon.

Please RSVP by calling 601-403-2280 (Monday – Friday 8a.m.-5p.m.)

Lunch and refreshments will be provided. This is a free event thanks to sponsors.

Location:

South Mississippi Branch Experiment Station
711 West North Street
Poplarville, MS

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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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.