



Organic Control of Vegetable Insect Pests

Home gardeners often express an interest in growing vegetables without the use of conventional pesticides. Here in South Mississippi, with our warm and humid climate favorable to insect and fungal pests, this can be quite a challenge. However, with good preparation and planning it can be done.

The first step in gardening organically is in selecting what you will grow. Plants that are susceptible to many different pests, or on which those pests do a lot of damage will be more difficult to grow than those with only a few pests or which tolerate some damage. A good example of this would be tomatoes. Tomatoes are susceptible to many different insect and disease pests. Damage to tomatoes by pests, such as stink bugs, make growing them organically difficult but not impossible. By contrast, sweet corn can be grown so long as caterpillar pests can be avoided. Plant selection should also take into account the availability of varieties resistant to common diseases. Varieties can be chosen that will tolerate fungal disease and allow for production without needing to treat with conventional fungicides. Knowing what pest problems you have had in your garden in previous years is a great tool in helping you choose varieties to grow.

Planting date is another important tool in growing organic vegetables. Many insect pests will be much higher in population later in the growing season. Planting early, and harvesting earlier, allows you to avoid the pests. This is another area where variety selection can be important as different varieties may have shorter or longer lengths of time before produce can be harvested.

Another important factor in growing organically is to ensure that plants are as healthy as possible. Plants that are fertilized correctly and that are grown at the right pH will be more resistant to damage by insect pests and pathogens. Healthy plants will also be more able to recover from damage. Appropriate watering is one of the most important elements of producing healthy plants. Plants that are overwatered may be stunted and wet ground will promote the growth of soil borne fungi. Additionally, watering should be done so that plant leaves are wet as little as possible. Long periods of leaf wetness promote foliar fungal and bacterial disease. Ideally, plants should be watered in the morning so that they can dry quickly. Drip irrigation systems are also very effective at reducing problems with foliar disease.

Keeping the garden clean of plant residue is also a great way to reduce disease and insect pressure. Many diseases are spread from infected plant residue, and insects may use this material as cover. It is especially important to remove diseased plant tissue from the garden so that the disease does not spread to other plants. Diseased plant material should not be added to compost piles as the pathogen may survive to be reintroduced to the garden later.

There are several commercially available organic insecticides. When these are used properly they can be effective in reducing pest populations. Horticultural oils and insecticidal soaps are effective at controlling populations of pests, such as aphids, scale, and whiteflies. However, these products must come into contact with the insect to provide control, so it is important to get good spray coverage. Caterpillars can be controlled through the use of BT insecticides. BT is most effective against very young caterpillars. Also, BT is only effective when eaten by the insect, so good spray coverage is important, and control is not immediate. With this and with other pests it is important to identify the pest so that a good control method can be chosen.



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Upcoming Events for August 2018

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| | <u>Hancock County Events</u> |
| 8 | Hancock County Master Gardener Meeting — 1:30 p.m. at the Hancock County Extension Service Office. |
| 15 | Starting a Fall Garden — 2:00 p.m. at the Pass Christian Public Library. Due to our long growing season, gardeners in Mississippi have the opportunity to plant again after the rush of harvesting from spring planting. Topics for this presentation will include advantages of fall gardening, plant selection, planting dates, as well as information on insect and disease pests. Presenter is Christian Stephenson, Hancock County Extension Agent. |
| 21 | Keeping Trees Healthy in the Home Landscape — 6:30 p.m. at the Bay St. Louis Public Library. Trees give many benefits to homeowners. This program will include discussion of some of the problems found in trees in the home landscape and how best to manage them. Presenter is Christian Stephenson, Hancock County Extension Agent. |
| | <u>Harrison County Events</u> |
| 16 | Lawn Management Workshop — 6:00 until 8:00 p.m. at the Harrison County Extension Office, 2315 17th St., Gulfport, MS. In this workshop, you will learn the various turf types and how to manage each through proper mowing, watering, fertilizing and weed control techniques, along with identifying diseases that may affect turf. Presented by Tim Ray, Harrison County Extension Agent. This workshop is FREE to the public. |
| 30 | Private Applicator Training — 1:00 until 5:00 p.m. at the Harrison County Extension Office, 2315 17th St., Gulfport, MS. This training is for those who own or lease property for agricultural purposes. \$20 per individual payable by check or money order. No preregistration necessary. |
| | <u>Lamar County Events</u> |
| 2 | Pine Belt Beekeepers Association Meeting — 7:00 p.m. at the Lamar County Extension office. |
| 16 | Wildlife Food Plot Management Workshop — 6:00 p.m. at the Lamar County Extension office. |
| 18 | Purvis State Fall Dairy Show — Call the Lamar County Extension office for more information. |
| | <u>Pearl River County Events</u> |
| 3 | Pearl River County Master Gardeners Meeting — 12:30 p.m. PRC Extension Office. Speaker: Janet Connors will be presenting information about gourds and provide a fun interactive demonstration using gourds. |
| 7 | Pearl River-Stone County Forestry Association Meeting — 12:00 noon. The Sawmill Restaurant, 2205 Highway 49, Wiggins, MS. |
| 20 | Scam Alerts — 11:00 a.m. until 12:00 noon. The Senior Center of South Pearl River County. Presenter: Dawn Vosbein, Extension Agent. No RSVP required. |
| 30 | Muscadine Field Day — 9:00 a.m.-11:00 a.m. The annual Muscadine Field Day will be held in McNeill, MS at the MSU McNeill Research Station (7 Ben Gill Rd, Carriere, MS). |
| | <u>Stone County Events</u> |
| 7 | Pearl River-Stone County Forestry Association Meeting — 12:00 noon. The Sawmill Restaurant, 2205 Highway 49, Wiggins, MS. |
| | <u>Multi County Events</u> |
| 2 | Cool Flowers for Hot Days — 12:00 noon until 1:00 p.m. Your local County Extension Office. Presenter: Lynette McDougald, Instructor, Plant and Soil Sciences. Description: This month we will talk about getting the most from your garden's bounty: care and handling for the hot days of August and cool tricks for design success. Call your local Extension office to RSVP. |
| 9 | Miniature Mississippi Wildlife —12:00 noon until 1:00 p.m. Your local County Extension Office. Presenter: Dr. Blake Layton, Extension Professor, Biochemistry, Molecular Biology, Entomology and Plant Pathology. Description: Not all insects are pests! Join Dr. Layton as he discusses some of the many species of miniature wildlife, both insects and spiders, that share your garden and landscape. Bring the kids. Children love insects and enjoy learning about them, and they are usually quicker to see and notice them than us adults. Call your local Extension office to RSVP. |
| 23 | Tech Appy Hour —12:00 noon until 1:00 p.m. Your local County Extension Office. Presenter: Dr. Jamie Varner, Extension Instructor, Center for Technology Outreach. Description: Come learn about some useful apps and tech tips for your smartphone. We will look at apps to help with productivity, shopping, as well as saving at stores you visit often. Call your local Extension office to RSVP. |
| 30 | DIY 101: Creative Gift Boxes! —12:00 noon until 1:00 p.m. Your local County Extension Office. Presenter: Terri Thompson, Extension Agent III, Jackson County. Description: Who doesn't love an easy craft idea? Join Terri as she shows this great way to use greeting cards and decorative stock paper to make little boxes for small gifts or for storing small objects. Call your local Extension office to RSVP. |

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, Camellias, 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 Camellias 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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Preserving Trees in Construction Sites

Trees provide many benefits to our home or work. Construction activities such as trenching, soil compaction, soil clearing, and grading can slowly kill healthy shade trees during 1 to 10 years in what is termed a “mortality spiral”. This downward spiral begins when stress from construction weakens a tree so additional drought or insect/disease stresses may occur. These additional stresses may lead to defoliation and can be deadly when combined with construction.

The owner usually becomes aware that damage has occurred once a tree displays many dead branches and twigs. Once health is poor and decline is clearly visible, most restorative treatments are ineffective with few trees escaping the mortality spiral. Most construction related damage is inflicted belowground on the root system. Root damage usually goes unseen and without knowledge of its occurrence from either the contractors or owner. The root system is easily damaged because it is much larger and closer to the soil surface than many would suspect.

Ideally, a tree protection zone should be established using protective fencing. It is recommended that the fencing be erected 1.25 feet away in radial distance from a tree for every inch in stem diameter (Ex. 6 in. tree = 7.5 ft.). Diameter is measured 4.5 feet above ground. The resulting circle is termed “critical root area” and protecting this area is important to tree health.

Loss of roots located outside the circle is not expected to cause serious problems. More protection will be needed for trees that are old, in fair to poor health, or for species that are damage sensitive. For these trees, place a protective fence outside the dripline or 1.5 feet in radial distance per inch diameter, whichever is greater. There should be zero tolerance for any construction activity within this zone.

The combination of erecting a protective fence around trees and posting signs are initially effective. As construction progresses, workers will try to move and or remove these fences so it’s important to remind workers to respect them. An initial walk-through can identify valuable trees that the owner or builder has an interest in saving based on tree condition, size, and species.



Construction fencing placed at the edge of the critical root area. There should be NO construction activities within this barrier.



Using signs along with fencing will alert workers during construction. This will likely aid in protecting trees.





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Fall Gardening: Growing Onions

Vegetable gardening is great fun in early spring when the weather is cool and after we have spent most of the winter imagining what our next garden is going to look like. I get excited about growing stuff that time of year and can't wait to get the tiller out and dig in. However, gardeners who know about fall gardening can get just as enthused about planting this time of year.

A glorious thing takes place toward the end of summer. We get another opportunity to re-establish the vegetable garden with hopes of a grand harvest in the cool, fall climate. One of my favorite veggies to grow in the fall garden is multiplying onions. These babies are so easy to grow and so necessary in the kitchen. Every gardener can grow multiplying onions in their own back yard or patio container.

Onions are probably the most important culinary vegetable. One anonymous gourmet said, "Without onions there would be no gastronomic art. Its absence reduces the diner to despair". And, it was General U. S. Grant who said, "I will not move my armies without onions." We know onions are a very important part of our diet, but we may not know when to plant them or how to grow them.

The onions we grow at this time of year are commonly known as "multiplier" onions. If planted in August and early September, they can be harvested as soon as they get large enough. This usually begins in November (Thanksgiving onions) and continues through March. They will start forming flower buds in March. If all are not eaten, they can be dug, dried in the sun for a few days, cleaned and stored in the shed for replanting in late summer.



Muscadine Field Day

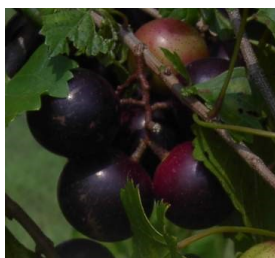
August 30, 2018

9:00 a.m. until 11:00 a.m.

Experts from the MSU Extension Service and the U.S. Department of Agriculture's Agricultural Research Service will discuss a variety of topics, including insects and diseases, best production practices, and cultivar selection.



This free program is from 9 to 11 a.m. The MSU Extension Service and Mississippi Agricultural and Forestry Experiment Station will host the event. The McNeill Experiment Station is located at 7 Ben Gill Road in Carriere. Come and discover which muscadine variety you like the best.



It's County Fair Time!!

The 74th Pearl River County Fair and Livestock Show and Rodeo will be held on August 27 thru September 1 at the fairgrounds in Poplarville, MS. A quick perusal of the fair's program shows that there should be something of interest for almost everyone: a wide range of youth livestock events from cattle and horses to many smaller animals, displays of arts and crafts, youth exhibits, school classroom displays, a pet show, and the traveling carnival with rides and games.

Visit the **Pearl River County Fair & Rodeo** Facebook page for more information or call the PRC Extension Service office at 601-403-2280.



2018 PEARL RIVER COUNTY FAIR AND LIVESTOCK SHOW PROGRAM

SATURDAY, AUGUST 25

8:00 a.m. - 9:30 a.m. Entry of Horses (Entries will be taken all day during the show for any events not yet held.)

10:00 a.m. Horse Show

MONDAY, AUGUST 27

9:00 a.m. - 7:00 p.m. Exhibit Building open for those who wish to work on displays and booths

9:00 a.m. - 7:00 p.m. Exhibit Building open to receive adult/youth exhibits

(Please note that ALL exhibits must be received during these hours.)

TUESDAY, AUGUST 28

8:00 a.m. - 12:00 noon Exhibit Building open to receive adult/youth exhibits

(Please note that ALL exhibits must be received during these hours.)

8:00 a.m. - 7:00 p.m. Exhibit Building open for those who wish to work on displays and booths

3:00 p.m. - 6:00 p.m. Entry of poultry and rabbits

WEDNESDAY, AUGUST 29

9:00 a.m. - 12:00 noon Judging of entire Adult & Youth Division exhibits, displays and booths

(BUILDING CLOSED)

10:00 a.m. - 1:00 p.m. Judging of poultry and rabbits in pens

2:00 p.m. - 8:00 p.m. Exhibit Building open to public - Senior Citizen and Community Homes Day

6:00 p.m. - 10:00 p.m. Armband Night for Carnival Rides (\$17 per armband)

THURSDAY, AUGUST 30

10:00 a.m. - 8:00 p.m. Exhibit Building open to public - Preschool/Kindergarten Day

3:00 p.m. - 8:00 p.m. Entry of Beef, Dairy, Goats, Sheep, and Swine (Pre-registration on a 195 form is required by Friday, August 17, 2018)

5:00 p.m. Small Animal Show (Poultry and Rabbits) (Show Arena in Beef Cattle Barn)

FRIDAY, AUGUST 31

8:30 a.m. Dairy Show (Release of milking animals immediately following the show)

10:00 a.m. - 4:00 p.m. Armband Day for Carnival Rides (\$20 per armband)

10:00 a.m. - 9:00 p.m. Exhibit Building open to public - School Field Trips

5:30 p.m. Pet Show (Youth under 19 eligible to enter pets) (Show Arena in Beef Cattle Barn)

8:00 p.m. Rodeo

SATURDAY, SEPTEMBER 1

8:00 a.m. Goats, Sheep, and Swine Show (These animals will be released immediately following the show.)

Beef Cattle Show (Immediately following Goats, Sheep, and Swine Show) (Beef & Dairy cattle will be released at the conclusion of the Show)

10:00 a.m. - 9:00 p.m. Exhibit Building open to public

12:00 noon - 4:00 p.m. Half-price tickets for Carnival Rides

1:00 p.m. Field Day Events (Arena) (Registration starts at 12:30 p.m.)

4:00 p.m. Release of poultry and rabbits

8:00 p.m. Rodeo

Carnival will be Tuesday through Saturday night. Ticket prices are \$1.25 for a single ticket, and a family pack of 20 tickets is \$20. Each ride is 2-4 tickets.



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Fall Weed Control

Control of Winter annual weeds begins towards the end of Summer and beginning of Fall. Preemergence herbicides need to be applied in late-August to early September to prevent these weeds. To be effective, pre-emergence herbicides must be applied before weeds emerge. To be effective, they must also be applied before weed seed germination. These herbicides require 0.25 to 0.5 inches of rainfall or irrigation for activation.

All of the herbicides in this list can be used on established, southern turfgrasses. **READ THE LABEL** to make sure you can use it in your situation. A partial list of common (active ingredient) and trade names for Pre-emergent Weed Control in Home Lawns by Homeowners can be found below. Just as with an application of fertilizer, going in two different directions that total the labeled rate will provide a more consistent barrier to emerging weeds rather than an application in one single direction.

Depending on label directions and application restrictions of the particular product you purchase, reapplication may be beneficial in 6-8 weeks. It is not recommended you use a product that contains a fertilizer carrier at this time as the turf is getting prepared for winter dormancy and encouraging a flush of growth can be detrimental.

Common Name – Trade Name (partial list)

1. **dithiopyr** - Sta-Green Crab Ex; Green Light Crabgrass Preventer; Vigoro Preemergent Crabgrass and Weed Preventer
2. **pendimethalin** -Scotts Halts Crabgrass Preventer
3. **oryzalin** - Southern Ag. Surflan A.S.
4. **isoxaben** - Portrait Broadleaf Weed Preventer
5. **benefin + oryzalin** - Green Light Amaze Grass and Weed Preventer; XL 2G
6. **benefin + trifluralin** - Hi-Yield Crabgrass Preventer; Southern Ag. Team 2 G
7. **corn gluten meal** - Concern All Natural Weed Pre-venter Plus; Nature's Guide Corn Gluten Meal



Common chickweed



Henbit



Annual bluegrass