



GNO Gardening Magazine

September 2020



In This Issue:

Look at Me - Caesalpinia Pulcherrima

By: Dr. Joe Willis

Making the Most of Things - Successional Planting with Cool Weather Crops

By: Anna Timmerman

What's Bugging You Again? Tropical Sod Webworms

By: Chris Dunaway

Weed of the Month - Ragweed Parthenium

By: Dr. Joe Willis

Entomopathogenic Nematodes

By: Dr. Joe Willis

September Planting Guide
In the Kitchen with Austin
September Garden Checklist
Lawn Care Do's & Don't's

Cover photo:

A honey bee visiting a Caesalpinia pulcherrima.

Photo by Dr. Joe Willis.

Look At Me – *Caesalpinia pulcherrima*

A beautiful plant in bloom right now that is sure to catch your eye is *Caesalpinia pulcherrima* (also known as: The Red Bird of Paradise /Pride of Barbados / Dwarf Poinciana / Peacock Flower / Mexican Bird Of Paradise).

This full sun beauty is great for smaller yards or an indoor house plant, only growing to about 3-10 ft. Blooms reliably whether in a pot or planted right in the ground. It can grow to 3-6 ft. wide as a bush or you can train into a small tree. As a tree, it can reach as much as 20 ft. tall when planted inground. It has elegant reddish-orange 5-petaled flowers outlined in yellow with very long showy red stamens that appear spring through summer.

This fast-growing member of the Fabaceae family is native to tropical America (probably the West Indies) but is now widely grown in tropical areas around the world for its long bloom of colorful flowers (up to 2" diameter) that grow in upright 4-8" long terminal



Figure 2: *Caesalpinia pulcherrima* flower raceme. Note the long showy stamens.

racemes on prickly branches. It has feathery bi-pinnately compound green leaves (8-16" long) and is semi- evergreen; it may drop its leaves if temperatures dip below 40°F for too long.



Figure 1: *Caesalpinia pulcherrima* growing as a small shrub.

The plant is very drought tolerant and can survive temperatures as low as 18°F though it will die to the ground. It will tolerate some shade but flowers best when grown in full sun. It prefers well-drained soil and can tolerate a broad range of soil pH. It is easily propagated by seeds or cuttings. The flat fruits (seed pods 2.5 - 4" long), each contain 8-10 dark brown to black seeds which are ejected as the pod splits open at maturity. The plant has small sharp thorns along its stem. The green immature pods are cooked and eaten in Mexico though mature seeds are poisonous. In fact, all plant parts contain toxins.

It has very few disease and insect problems though it is susceptible to root rot in poorly drained locations. It tolerates pruning well and is a favorite of hummingbirds and butterflies. *Caesalpinia pulcherrima* is the national flower of the Caribbean island of Barbados.

~Dr. Joe Willis

September Vegetable Planting Guide

Crop	Recommended Variety
Beets	Detroit Dark Red, Kestrel, Red Ace F1, Ruby Queen
Broccoli	Arcadia, Diplomat, Gypsy, Packman, Premium Crop, Windsor, Greenbelt
Brussels Sprouts	Jade Cross E, Long Island Improved, Royal Marvel
Cabbage	Blue Vantage, Platinum Dynasty, Stonehead, Cheers, Blue Dynasty, Emblem, Rio Verde
Chinese Cabbage	None Given
Carrots	Danvers 128, Purple Haze, Thumbelina, Apache, Enterprise, Maverick, Sugar Snax 54
Cauliflower	Candid Charm, Cumberland, Freedom, Incline, Majestic, Show Crown, Wentworth
Collards	Champions, Flash, Georgia Southern, Top Bunch, Vates
Kale	None Given
English Peas	Mr. Big, Novella II, Oregon Sugar Pod II, Sugar Ann, Super Sugar Snap
Kohlrabi	Early Purple Vienna, Early White, Vienna, Winner
Lettuce	Esmeralda, New Red Fire F1, Nevada, Tall Guzmaine Elite
Mustard Greens	Florida Broadleaf, Greenwave, Red Giant, Southern Giant Curled, Savannah, Tender-green
Potatoes, Irish	Dark Red Norland, Red LaSoda, Red Pontiac, Kennebec, Yukon Gold
Pumpkins	Atlantic Giant, Baby Bear, Gooligan, Sorcerer, Sprint, Silver Moon
Radishes	Cherriette, Champion, White Icicle, April Cross
Shallots	None Given
Swiss Chard	None Given
Turnip Greens	Alamo, All Top, Purple, Top White Globe, Seven Top, Southern Green, Top Star, Tokyo Cross

Making the Most of Things- Successional Planting with Cool Season Crops

Many cool season crops have a fairly short turn around time. Flip those seed packets over and look at the “days to harvest” and you will be amazed at how quickly some cool season crops will be ready to enjoy on the table. With some planning, an endless salad bowl can be grown from roughly September-June of each year using some easy-to-find vegetables that are typically grown from seed.

Succession planting is one way that a beginning gardener can really transition into an advanced grower with a garden that is truly a powerhouse production system. Many beginning gardeners sow plenty of all of their favorite veggies at the beginning of each new season, only to harvest them later and find that the crop is finished and if they replant in the vacant space, it will be another 6-8 weeks before the next harvest! Savvy gardeners will hold back some of that seed and some space in the garden so that every 2-4 weeks another round of seed can get planted. This is succession planting.

Succession planting is defined as the practice of planting the same crop more than once throughout the growing season to ensure a longer and more consistent harvest of that vegetable. This comes in handy often with leafy greens and other vegetables that we consume on a regular basis. Take a look at your grocery cart next time you visit the store. What vegetables do you purchase weekly? For me, the answer is arugula or spinach, salad mix, baby greens and broccoli. Broccoli is a little bit longer term crop and takes up a lot of space in the garden, however spinach, arugula, and lettuce are fast crops that can be sown at regular intervals, meaning that I will always have it on hand for the duration of the cool season if I plan accordingly.

Many crops are not good candidates for succession planting because their days to harvest interval takes all or most of each growing season. Succession planting depends on a quick turnaround. Some crops that are NOT good candidates for succession planting include cucumbers, fava beans, tomatoes, squash, peppers, onions, melons, and garlic. These veggies take a long time to mature.

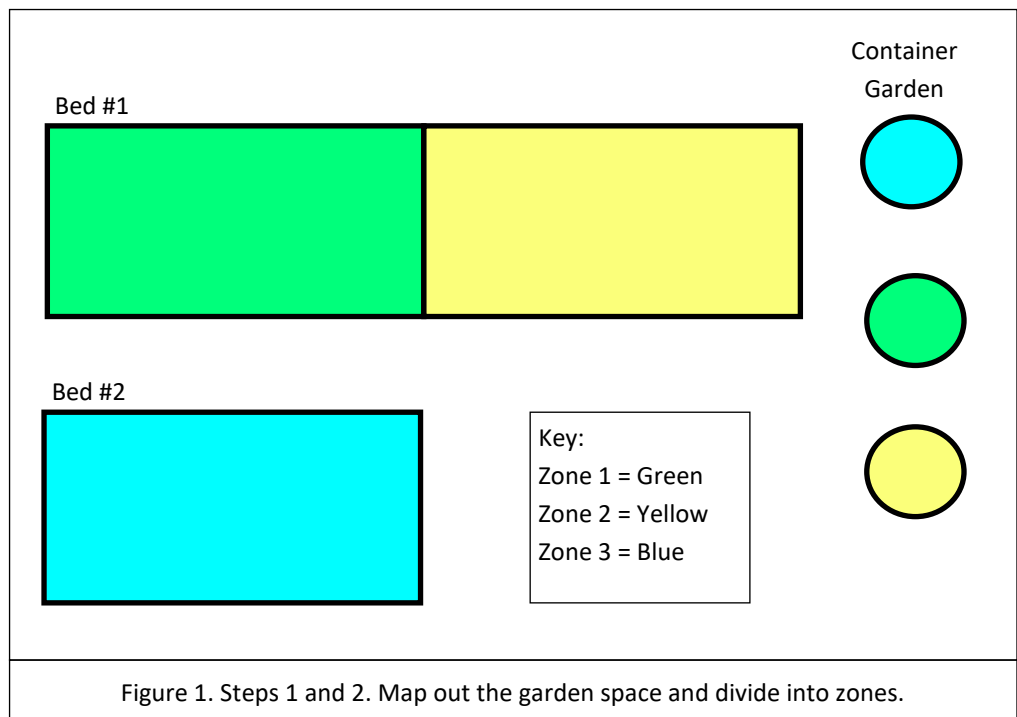


Figure 1. Steps 1 and 2. Map out the garden space and divide into zones.

Steps to Succession Planting for the Cool Season:

1. Map your garden space. Whether you grow in the ground, in beds, or in containers, take a moment to assess how much growing space you have for the cool season, which starts in September.
2. Divide that growing space into three “zones”. It may be helpful to map them out and color code it to keep track. (See figure 1 above.)
3. Make a list of the cool season vegetables with short harvest intervals that you and your family enjoy. Many of these crops have an extended harvest window, which means they can be picked over an extended period. Many can also be cut/harvested 2-3 times before replanting. Use either the seed packets or a seed catalog to find this

Making the Most of Things- Successional Planting with Cool Season Crops

information. These are just some of the possibilities: arugula, spinach, beets, radishes, baby bok choy, carrots, baby chard, cilantro, lettuce, Mizuna, mesclun, baby mustard, radish, spinach, cress and turnips.

4. Choose your crops based on what you like to eat! Unless you have a really large garden, it would be best to choose 3-5 of the succession crops listed above and start from there. For me, I like a regular supply of arugula (35 days), loose leaf baby lettuce for salads (45 days), spinach (37 days), and baby

bok choy (35 days). Note that each variety of vegetable have a slightly different days to harvest. Some varieties are quicker, some are slower. The seed packet and the seed catalog should be able to provide a rough idea of what to expect. For example, French Breakfast radish takes 22 roughly days, while some of the Asian types like Daikon take 60-70 days.

5. Create a successional planting plan! This is where your map comes in handy. I split my garden into three zones if you recall. I also chose four crops

Zone/ Planting Date	Crop/Days	Date of First Harvest	Date of Last Harvest
1	Arugula (35 days)	October 20	November 20
September 15th	Loose Leaf Lettuce (45 days)	October 30	November 30
	Spinach (37 days)	October 22	November 22
	Baby Bok Choy (35 days)	October 20	November 20
2	Arugula (35 days)	November 14	December 14
October 10th	Loose Leaf Lettuce (45 days)	November 24	December 24
	Spinach (37 days)	November 16	December 16
	Baby Bok Choy (35 days)	November 14	December 14
3	Arugula (35 days)	December 20	January 20
November 15th	Loose Leaf Lettuce (45 days)	December 30	January 30
	Spinach (37 days)	December 22	January 22
	Baby Bok Choy (35 days)		
1	Arugula (35 days)	January 19	February 19
December 15th	Loose Leaf Lettuce (45 days)	January 29	February 29
	Spinach (37 days)	January 21	February 21
	Baby Bok Choy (35 days)	January 19	February 19
2	Arugula (35 days)	February 14	March 14
January 15th	Loose Leaf Lettuce (45 days)	February 24	March 24
	Spinach (37 days)	February 16	March 16
	Baby Bok Choy (35 days)	February 14	March 14
3	Arugula (35 days)	March 22	April 22
February 15th	Loose Leaf Lettuce (45 days)	April 1	May 1
	Spinach (37 days)	March 24	April 24
	Baby Bok Choy (35 days)	March 22	April 22

Table 1. Example planting plan for a three zone garden.

with roughly similar days to harvest, and if you take into account the harvest window, I can plan for some overlap. I never want to run out of those items so a week or two of overlap between batches is a good thing! I am planning on sowing my first round September 15th, so with those two things in mind (days to harvest and harvest window), sowing a new round monthly should give me a continuous supply of these vegetables. See Table 1 for an example planting plan.

Making the Most of Things- Successional Planting with Cool Season Crops

6. By using just three areas or “zones” of my garden I can grow an awful lot of produce and always have those items on hand. Is this all I am growing for the cool season? Nope! Longer-term crops can be “intercropped” with these successional plantings. A patch of arugula for me (that lasts a week or more) measures roughly two square feet of garden bed space. Ditto for loose leaf lettuce and spinach. Baby bok choy is spaced out a little bit (this info is on the seed packet) while the other items are usually sown in a “block” and thinned out a bit once the seedlings emerge. My cabbages, kale, swiss chard, and brussels sprouts are grown in the same areas, taking up real estate in the zones I mapped out. My final map may look something like figure 2 below.

This is the process of successional planting planning step by step, in a simplified form. Planting plans can become complicated quickly as crops and additional growing spaces are added to the mix. Many software

planning tools exist online and several useful apps have been developed, including www.plangarden.com and www.smartgardener.com. Some additional free tools include this spreadsheet from Johnny’s Selected Seeds (<https://www.johnnyseeds.com/growers-library/online-tools-calculators.html>) and the garden planner from the Farmer’s Almanac (<https://www.almanac.com/content/succession-gardening-chart>). A piece of scrap paper, a pencil, and a calendar is what works best for me.

Succession planting is a great strategy and one that can really spice up your home gardening game. With some planning before planting, a continual harvest of your family’s favorite vegetables can be ensured. Try this strategy with a couple of items that always show up on the shopping list or in the grocery cart. You may be surprised just how efficient and reliable your harvest from the garden can become!

~Anna Timmerman

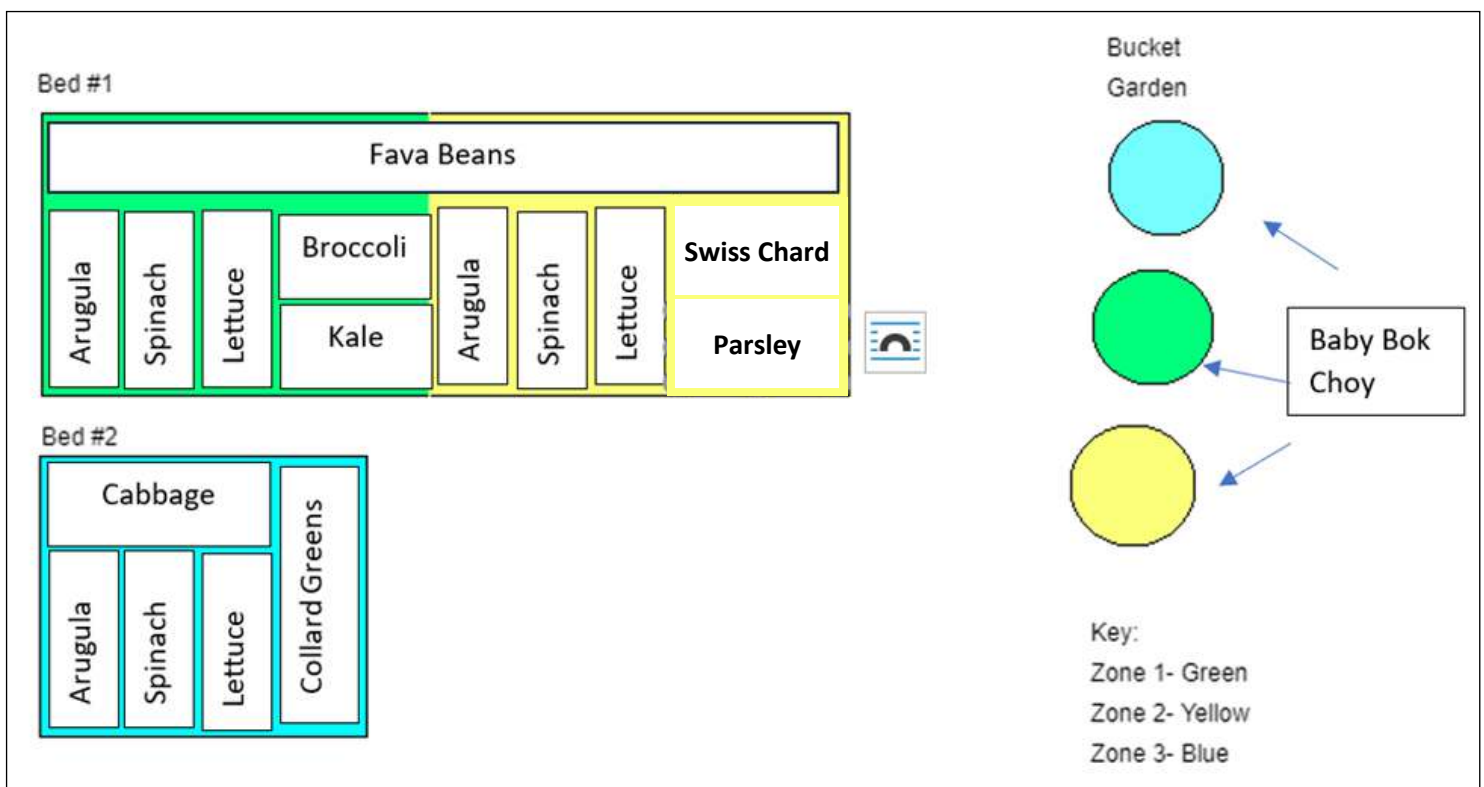


Figure 2. Example planting plan for a three zone garden.

What's Bugging You Again?

Tropical Sod Webworms

They're Back! While taking a walk last week I noticed clouds of little whiteish moths erupting from the grass and surrounding shrubs. It has been 4 years since I have seen them in such great numbers but I knew that we were going to be getting a lot of calls about lawns suddenly turning brown because the little moths are the adult form of the Tropical Sod Webworm. Although they can be found just about all the time in the South, the right conditions can let the populations soar.

As adults, tropical sod webworms (*Herpetogramma phaeopteralis*) moths that are a mottled brown color and measure about 1/2 to 3/4 inches long. They have siphoning

mouthparts so do not damage grass or other plants. The adult females lay their eggs on the blades of grass. Once hatched it is the developing larvae that eat the grass causing damage to our lawns. According to Dr. Ron Strahan with the LSU AgCenter, the larvae go through several instars (growth stages) getting larger and more voracious with each. Sod webworms may be identified by chewing damage to the blades of grass, the presence of green fecal pellets in the thatch and the presence of the silky webbing for which the pest received its name. To help scout for the presence of the caterpillars, Dan Gill with the LSU AgCenter suggests pouring a mixture of soapy water on a section of the lawn where the damaged grass meets the healthy grass. If they are present, this should cause the caterpillars to start moving, making them easier to spot. Dan's recipe is one ounce of lemon scented dishwashing detergent to 1 gallon of water.

The good news, according to Dan, is that the caterpillars only eat the blades of grass and not the roots or crown. Therefore, healthy lawns are likely to recover. Lawns that

are already stressed by some other factor like drought, soil compaction or thatch buildup, may not recover from the predation. Dr. Strahan suggests applying a nitrogen-containing fertilizer to help lawns recover quickly. He warns that applications made after August 15 may lead to other problems including increased incidents of brown patch disease.



The final instar of a tropical sod webworm *Herpetogramma phaeopteralis*.

Control measures are the most effective if applied to the young caterpillars in the earlier instars. Trying to kill the moths is not very effective. David Smitley of Michigan State University wrote that the sighting of numerous webworm adults does not mean damage will occur. Harsh environmental conditions and

predators often destroy many eggs and young larvae before serious damage occurs. The eggs take about a week to hatch so begin checking your lawn 10 days after seeing moth activity.

A variety of insecticides will combat the webworms. Follow label directions carefully. The following insecticidal active ingredients can be effective in controlling tropical sod webworms: Spinosad, *Bacillus thuringiensis*, Chlorantraniprole, Lambda-cyhalothrin, Carbaryl, Dinotefuran, Thiamethoxam. There are also entomopathogenic nematodes (see Dr. Joe's article in this issue of GNO Gardening). Beneficial arthropods have also been observed attacking tropical sod webworm including several generalist predators, i.e. spiders, lady beetles, big-eyed bugs, syrphid flies, ground beetles, rove beetles and a variety of parasitoids, mostly Trichogramma and an ichneumonid wasp.

Maintaining a healthy lawn and creating a diverse environment for beneficial organisms is the best way to combat sod webworms.

~Chris Dunaway

Weed of the Month – Ragweed Parthenium

Ragweed parthenium (*Parthenium hysterophorus*) is a weed that has become prevalent in the Greater New Orleans area and is an increasing problem in a lot of the Southern

U.S. We usually hear about it when we get a call asking how to get rid of a weed that uses glyphosate like water. The description of deeply lobed gray-green leaves and heads of tiny white flowers points us in the direction of ragweed parthenium. Also known as parthenium weed, false ragweed, Santa Maria feverfew,

Congress grass, carrot weed and white top, *Parthenium hysterophorus* is native to Mexico and Central and South America but has spread to many other parts of the world and can be found coast-to-coast in the Southern United States.

Identification: Ragweed parthenium is a member of the Asteraceae family. It is an herbaceous annual that spreads by seed. Seedlings are basal rosettes up to 12" in diameter of deeply lobed gray-green leaves. A strong, branching, pubescent (hairy) stem with longitudinal grooves grows from the rosette center up to 6' tall. The leaves are alternate, pubescent, light green to gray-green and most are deeply lobed though some of the upper leaves may be entire. Small (1/8-1/5 inch wide) white flowers are borne on the stem tips. These are composite flowers with tiny ray florets at each of the five distinct pentagon points. Each ray floret

produces one seed, so each composite flower produces 5 seeds. Each plant can produce from 2400 to 30,000 seed and the seed are viable for several years (2-6 according to data).



Ragweed parthenium in full flower only 2" tall.

Characteristics:

Ragweed parthenium can grow over a wide range of soil types, soil pH and environmental conditions and is drought tolerant. The seeds require high soil moisture to germinate but can take place over a wide range of temperatures and soil pH. Ragweed parthenium is an excellent competitor

and can take over almost anywhere it gets a start and forms large dense monocultures.

Ragweed parthenium has been shown to produce parthenin and other chemicals that inhibit the growth, survival, and reproduction of other plants, a phenomenon known as allelopathy. All the plant parts, including trichomes and pollen, contain toxins called sesquiterpene lactones and can cause asthma, bronchitis, contact dermatitis, eye irritation, rhinitis (stuffy, runny nose), and sinusitis (hayfever). Ragweed parthenium has also been documented to exhibit pollen allelopathy and can inhibit fruit set (beans, eggplant, peppers,



Composite flowers of *ragweed parthenium* with five prominent ray florets evident.

tomatoes, and other plants) and grain filling (corn). Ragweed parthenium has also been shown to be a host for many phytophagous insects and phytopathogenic microorganisms.

Weed of the Month – Ragweed Parthenium

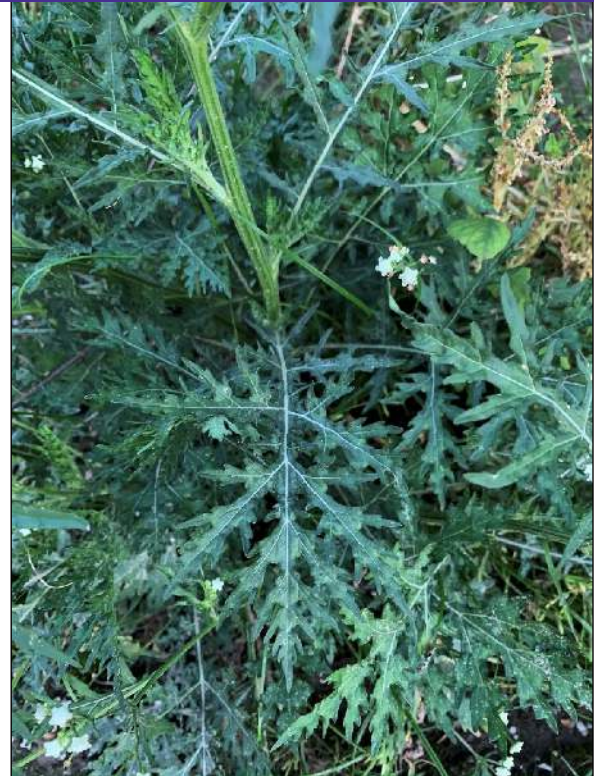
Control: Hand removal, though laborious, can give some control if it is done prior to seed set. The entire plant must be removed because it will regrow if cut to ground level. This can be difficult since it forms a strong massive root system. Though it can make a large plant, if you mow it down it will just produce flowers and seeds in its shortened state.

Pre-emergent herbicides that have been shown to be effective include those containing as an active ingredient atrazine, flumioxazin, imazaquin, norflurazon and isoxaben.

Post-emergent herbicides shown to be effective include those containing as an active ingredient 2,4-D, atrazine, quinclorac, metsulfuron methyl, dicamba, glufosinate or trifloxysulfuron.

Ragweed parthenium is a non-native, noxious, invasive weed that is highly adaptive, spreads easily, seeds prodigiously, highly competitive and difficult to control. Keep an eye out for this one and take action as soon as you see it or you may be overrun.

~Dr. Joe Willis



In the photo above we can see the stem of ragweed parthenium showing longitudinal grooves along with the typical lobed leaves.

In the Kitchen with Austin

Peach Butter

Sadly, the summer's bounty is coming to an end. But, here is a way to extend the flavors of the season! Fruit butters don't actually contain butter at all. They are merely called butter because they can easily be spread on breads, cookies, or cakes. This recipe makes 1 pint of peach butter and gallons of smiles.

Ingredients: 5 large peaches (washed & pitted, with peels)
½ cup water
1 cup sugar

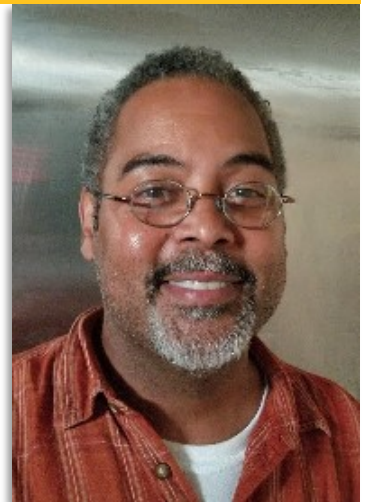
Directions:

In a large saucepan, place peaches and water. Bring to a boil. Simmer and cook until peaches are soft, about 20 minutes.

Run peaches through a sieve and discard the skins.

Add sugar to the pulp and mix well. Reduce the pulp by placing in a saucepan and cooking over medium-low heat for about 2 hours. Stir frequently until butter is thick enough to coat a spoon when turned upside down.

Butter can be kept refrigerated for up to three weeks or frozen for up to one year.



Bon Manger!

Entomopathogenic Nematodes

This is another installment in our ongoing series of articles on pest control measures that are alternatives to the more common chemical methods. This month we discuss entomopathogenic nematodes (EPNs) – microscopic worms that eat insects. Entomopathogenic nematodes are soft bodied, non-segmented roundworms that are obligate or sometimes facultative parasites of insects. Entomopathogenic nematodes occur naturally in soil environments and locate their host in response to carbon dioxide, vibration and other chemical cues. Entomopathogenic nematodes are an appropriate measure for integrated pest management (IPM) programs because they are considered non-toxic to humans, relatively specific to their target pests, and can be applied using normal pesticide application equipment. Entomopathogenic nematodes are exempted from the U.S. Environmental Protection Agency (EPA) pesticide registration, there is no personal protective equipment (PPE) requirements or re-entry restrictions and resistance development is unlikely.

The only free-living stage of entomopathogenic nematodes is the infective juvenile stage. The nematode infects the host insect through natural openings or in some species through the soft membranes between body segments, and then enters into the body cavity containing the insect blood (hemocoel). Two common entomopathogenic nematode genera are *Heterorhabditis* and *Steinernema*. Both have a mutualistic association with bacteria of the genera *Photorhabdus* and *Xenorhabdus*, respectively. Upon entering the insect, the nematode releases some of their bacteria from their intestines into the insect's hemocoel. The bacteria feed and multiply within the insect host which usually dies within 24 to 48 hours. The bacteria are known to produce a toxic cocktail of

secondary metabolites created are lethal to the insect hosts, and also prevent other opportunistic bacteria and fungi from infesting the dead host, thus preserving the resources for themselves and their nematode partners. The nematodes continue to feed on the dead host tissue, mature and reproduce. The

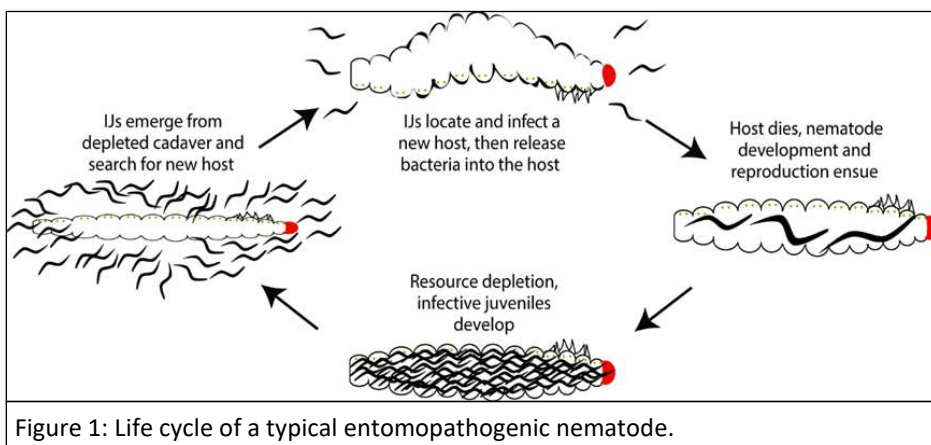


Figure 1: Life cycle of a typical entomopathogenic nematode.

insect cadaver becomes red if the insects are killed by heterorhabditids and brown or tan if killed by steinernematids due to pigments produced by the associated bacteria growing inside the host. Depending on the available resources, one or more generations may occur within the dead host and many infective juveniles are eventually released into the environment to infect other hosts and repeat the cycle.

Depending on the species, infective juveniles either lie-in-wait to attack mobile insects or move significant distances in search of prey. Some nematode species use both approaches to find their host.

Entomopathogenic nematodes are living organisms, and both biotic and abiotic factors can be detrimental during applications. Entomopathogenic nematodes work best in sandy soil with a pH between 4 and 8. Entomopathogenic nematodes are susceptible to freezing, hot temperatures, desiccation, and UV light. The nematode efficacy can be enhanced in many ways; 1) by matching the most appropriate species to the target pest, 2) using the correct rate of a viable nematode product, 3) keeping the treated area wet for at least 8 hours post application and 4) applying

Entomopathogenic Nematodes

during early morning or evening hours to minimize UV exposure and drying conditions. It is also important to inspect entomopathogenic nematodes after receiving them and prior to application to ensure that they are viable (wiggling movement of healthy juvenile stages can be observed with a 20× hand lens).

Entomopathogenic nematodes can be applied with most horticultural equipment including pressurized sprayers, mist blowers, and electrostatic sprayers. Filters, screens and swirl plates should be removed from spray equipment lines to prevent clogging by

infective juveniles. Regular agitation during application is essential because entomopathogenic nematodes quickly settle out of suspension. Studies have shown that entomopathogenic nematodes are compatible with many insecticides, fungicides and herbicides. Entomopathogenic nematodes come in a variety of formulations: water-dispersible granules, nematodes on gel, micronized vermiculite, nematode wool, and an aqueous suspension of nematodes. Follow label directions for best results. There are currently several products available – you can even buy them on Amazon.

~Dr. Joe Willis

EPN species	Major pest target as recommended by commercial producer
<i>Steinernema glaseri</i>	White grubs, banana root borers
<i>Steinernema kraussei</i>	Black vine weevil, <i>Otiorhynchus sulcatus</i>
<i>Steinernema carpocapsae</i>	Armyworm (<i>Pseudaletia unipuncta</i>), Artichoke Plume Moth, Bagworm, Beet Armyworm (<i>Spodoptera exigua</i> (Hubner)), Black Cutworm (<i>Agrotis ipsilon</i> (Hufnagel)), Black Vine Weevil (<i>Otiorhynchus sulcatus</i>), Bluegrass Weevil, Caterpillars, Cockroaches (American, Asian, German), Codling Moth (<i>Cydia pomonella</i>), Corn Earworm, Cotton Bollworm, Cranberry Girdler, Cucumber Beetle, Cutworm (<i>Agrotis</i> , <i>Amathes</i> , <i>Peridroma</i> , <i>Prodenia</i> spp), Fall Armyworm (<i>Spodoptera frugiperda</i>), Flea Larvae, Fly Larvae, Fruit Flies (<i>Drasophylla</i>), Greater Peach Tree Borer (<i>Synanthedon exitiosa</i>), Lesser Peach Tree Borer (<i>Synanthedon pictipes</i>), Large Pine Weevil, Leafminers, Mint Flea Beetle, Mint Root Borer, Mole Crickets, Navel Orangeworm, Strawberry Root Weevil (<i>Otiorhynchus ovatus</i>), Tobacco Budworm, Webworms, Wireworm, Wood Borers
<i>Steinernema feltiae</i>	Beet Armyworm, Black Cutworm, Cabbage Maggot, Codling Moth, Corn Earworm, Cucumber Beetle, Fruit Flies (<i>Drasophylla</i>), Fungus Gnats (<i>Bradysia impatiens</i>), Onion Maggots, Pill Worm, Raspberry Crown Borer, Root Maggots, Sclarids, Shore Flies, Subterranean Termites, Sweet Potato Weevil, Thrips (<i>Franklinothrips</i> sp), Ticks, Tobacco Cutworm
<i>Steinernema scapterisci</i>	Mole crickets (<i>Scapteriscus</i> spp.)
<i>Steinernema riobrave</i>	Citrus root weevils (<i>Diaprepes</i> spp.), mole crickets
<i>Heterorhabditis bacteriophora</i>	Ants (Queen), Asparagus Beetle (<i>Crioceris asparagi</i> ; <i>Crioceris duodecimpunctata</i>), Bagworm, Banana Moth, Banana Weevil, Berry Root Weevil, Billbug, Black Vine Weevil, Borers (Iris, Tree, Vine), Carrot Weevil (<i>Listronotus oregonensis</i>), Chafers (European, Masked), Citrus Root Weevil, Colorado Potato Beetle (<i>Leptinotarsa decemlineata</i>), Corn Rootworm, Cranberry Root Weevil, Cucumber Beetle (Spotted) (<i>Diabrotica undecimpunctata howardi</i>), Flea Beetles, Fleas (Adults), Gall Midges, Grape Root Borer, Grubs, Humpbacked Flies, Japanese Beetle (<i>Popillia japonica</i> Newman), Leafminers, May/June Bugs (<i>Phyllophaga</i> sp.), Root Weevils, Scarabs, Sugarcane Stalk Borer, Sweet Potato Weevil, Ticks, Webworms
<i>Heterorhabditis megidis</i>	Weevils
<i>Heterorhabditis indica</i>	Fungus gnats, root mealybugs, grubs
<i>Heterorhabditis marelatus</i>	White grubs (scarabs), cutworms, black vine weevils
<i>Heterorhabditis zealandica</i>	Scarab grubs
There are several entomopathogenic nematodes commercially available for control of various insects as indicated by the table above.	

Local Independent Garden Centers

Orleans	Address	Contact
Urban Roots	2375 Tchoupitoulas St., New Orleans	(504) 522-4949
The Plant Gallery	9401 Airline Hwy., New Orleans	(504) 488-8887
Harold's Plants	1135 Press St., New Orleans	(504) 947-7554
We Bite Rare and Unusual Plants	1225 Mandeville St., New Orleans	(504) 380-4628
Hot Plants	1715 Feliciana St., New Orleans	www.hotplantsnursery.com
Delta Floral Native Plants	Pop Up Locations	(504) 224-8682
Pelican Greenhouse Sales	2 Celebration Dr., New Orleans	(504) 483-9437
Grow Wiser Garden Supply	2109 Decatur St., New Orleans	(504) 644-4713
Jefferson Feed Mid-City	309 N. Carrollton Ave., New Orleans	(504) 488-8118
Jefferson Feed Uptown	6047 Magazine St., New Orleans	(504) 218-4220
Jefferson		
Perino's Garden Center	3100 Veterans Memorial Blvd., Metairie	(504) 834-7888
Rose Garden Center	4005 Westbank Expressway, Marrero	(504) 341-5664
Rose Garden Center	5420 Lapalco Blvd., Marrero	(504) 347-8777
Banting's Nursery	3425 River Rd., Bridge City	(504) 436-4343
Jefferson Feed	4421 Jefferson Hwy., Jefferson	(504) 733-8572
Nine Mile Point Plant Nursery	2141 River Rd., Westwego	(504) 436-4915
Palm Garden Depot	351 Hickory Ave., Harahan	(504) 305-6170
Double M Feed Harahan	8400 Jefferson Hwy., Harahan	(504) 738-5007
Double M Feed Metairie	3212 W. Esplanade Ave., Metairie	(504) 835-9800
Double M Feed Terrytown	543 Holmes Blvd., Terrytown	(504) 361-4405
Sunrise Trading Co. Inc.	42 3rd St., Kenner	(504) 469-0077
Laughing Buddha Garden Center	4516 Clearview Pkwy., Metairie	(504) 887-4336
Creative Gardens & Landscape	2309 Manhattan Blvd., Harvey	(504) 367-9099
Plaquemines		
Southern Gateway Garden Center	107 Timber Ridge St., Belle Chasse	(504) 393-9300
St. Charles		
Plant & Palm Tropical Outlet	10018 River Rd., St. Rose	(504) 468-7256
Martin's Nursery & Landscape	320 3rd St., Luling	(985) 785-6165
St. Bernard		
Renaissance Gardens	9123 W. Judge Perez Dr., Chalmette	(504) 682-9911
Soil Vendors		
Schmelly's Dirt Farm (Compost Only)	https://www.schmellys.com/compost-sales/	
Laughing Buddha Garden Center	4516 Clearview Pkwy., Metairie	(504) 887-4336
Reliable Soil	725 Reverand Richard Wilson Dr., Kenner	(504) 467-1078
Renaissance Gardens	9123 W. Judge Perez Dr., Chalmette	(504) 682-9911
Rock n' Soil NOLA	9119 Airline Hwy., New Orleans	(504) 488-0908

We recommend that you call before visiting to enquire about operating hours or special instructions.

September Checklist/Garden Tips

Mulches may have decayed and thinned out over the summer. Replenish mulch layers with fresh material to maintain about a two to three inch thickness. Ideally, use what you can get for free – such as leaves, dry grass clippings or pine straw. If you prefer the appearance of a purchased mulch, put down an inch or two of leaves, dry grass clippings or pine straw, and then top it off with an about an inch of your favorite purchased mulch. This will save you money and still give you the look you like.

Only light pruning will be appropriate on shrubs from now on. Late, heavy pruning will stimulate growth in the fall and increase the chance of cold damage to your shrubs. Remember, spring flowering shrubs and gardenias, hydrangeas, sasanquas and camellias have already set their flower buds. Any pruning now will remove flower buds and reduce the display.

From now until next spring, do not apply fertilizers containing nitrogen to most landscape plants. Fertilizing trees, shrubs, lawns and ground covers with nitrogen in the fall can reduce the hardiness of some plants and promote winter injury.

Plant petunias into the garden now for blooms this fall and next spring. Petunias, snapdragons, nicotiana, calendula and dianthus are among the more heat tolerant cool season bedding plants, and can be planted earlier than more heat sensitive plants such as pansies.

Control caterpillar problems on ornamentals with a pesticide containing BT, spinosad or carbaryl (Sevin). BT is a bacterium that only attacks caterpillars and is harmless to other organisms. It is essentially non toxic and is appropriate for use by organic gardeners. Spinosad is also organic. Make applications before damage is too extensive, and make sure the damage is fresh and the caterpillars are still active before you treat. Keep these materials well away from butterfly garden areas. They are also toxic to butterfly caterpillars.

Evaluate caladium plantings. When the plants begin to look tired and less attractive and about two-thirds of the leaves have fallen over, it's time to dig the tubers. Caladiums may return the next year if left in the ground, but it is more reliable to dig them and store them indoors over the winter. Dig the tubers carefully leaving the foliage attached. Spread out in a well ventilated area to dry. When the foliage is dry and brown, remove it from the tubers and store them in paper or net bags indoors.

Many summer weeds are setting seeds now. Do not let this happen! Pull these weeds and dispose of them to reduce weed problems next year.

Remove the canes from blackberry bushes that produced fruit this summer. They will not produce again. Vegetative canes may be tipped back to control their growth

It is time to divide and transplant Louisiana irises, Easter lilies, and calla lilies. Louisiana irises generally do best when divided every three years.

Mail order spring bulbs in time for them to arrive in October or November. Bulbs are also readily available in local nurseries now. You can go ahead and purchase them, but there is no hurry to plant them.

Water your vegetable and flower gardens deeply and thoroughly once or twice a week during dry weather. When a good rain occurs (one-half to one inch), adjust your watering schedule accordingly. A daily watering is not recommended for established plants. It increases diseases and encourages a shallow root system. Newly seeded beds, however, should be watered daily until the seeds come up. New transplants also need to be watered more frequently. And plants in containers may need to be watered everyday.

The hurricane season is kicking into high gear now, and if you haven't already done so, its time to look over your landscape. In particular, shade trees in the landscape should be carefully evaluated to make sure they are in good shape. Dead branches must be pruned off and dead trees removed entirely.

Lawn Care Do's & Don't's

Do's:

1. Finish laying sod by the middle of the month to give it time to establish before winter.
2. Apply pre-emergent herbicide to prevent winter weed seeds from germinating in the lawn.
3. As the weather gets cooler, you may apply selective herbicides to eliminate broad leaf weeds in the lawn.
4. Aerate the soil if necessary to alleviate compaction.
5. Dethatch the lawn if necessary. This is the last month before winter to dethatch.
6. Continue to scout for fungal damage and control with fungicides if necessary. The most prevalent is called Large Patch of Warm-Season Turfgrass. [Click here to find information about large patch disease from the LSU AgCenter.](#)
7. Irrigate as necessary to moisten the soil to a depth of 4-6 inches. The best time to water is in the morning.
8. Keep an eye open for insect pests. Chinch bugs and tropical sod webworms have been reported lately.
9. Spread a mixture of fine compost and coarse builders sand over the lawn to add organic material and smooth out the lawn. Do not add more than 2 inches over actively growing grass.
10. Set your mower to the correct height for your turfgrass type.
11. Take a soil test. Test kits are available in our offices in the Botanical Gardens, the Yenni Building, and New Orleans City Hall as well as local garden centers. Follow this link to see Dr. Joe demonstrate how to take a soil sample: <https://www.facebook.com/1030624690304124/videos/1452161988150390/>



Dr. Joe Willis takes a soil sample from a garden bed in the Botanical Gardens.

Don't's

1. Do not apply fertilizer to the lawn again until April of next year.
2. Do not apply phosphorous winterizer to the lawn without taking a soil sample first. We have ample amounts of phosphorous in our soil already.
3. Do not attempt to install a new lawn with sprigs or seeds.
4. Do not cut more than 1/3 of the height of lawn grass at a single time.
5. Do not try to grow grass in deep shade.

Your Local Extension Office is Here to Help

E-mail us at: GNOGardening@agcenter.lsu.edu



Follow us on Facebook at [GNOGardening](#)

For more information visit LSUAgCenter.com

Dr. Joe Willis
Orleans Parish
Horticulture Agent
(504)483-9471

Anna Timmerman
Jefferson Parish
Horticulture Agent
(504)736-6519

Chris Dunaway
St. Charles Parish
Horticulture Agent
(985)785-4473

To subscribe to this newsletter please send a request to GNOGardening@agcenter.lsu.edu. The LSU AgCenter is a statewide campus of the LSU System and provides equal opportunities in programs and employment.