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Over the Garden Gate

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President's Corner *by Don Linke*

Why would you ever plant a tomato seed in an egg?

This is one of those questions Ron Brechter has posed and answered in his Vegetable Gardening class for the Hall County Master Gardener Program.

The answer has to do with preventing blossom end rot in soils with low calcium levels. Now that I have confirmed your first guess, why do I bring this up? Soon we will be accepting applications for the 2017 Hall County Master Gardener (HCMG) Class and you may use this question as a "teaser" to start a conversation about joining our group.

We have a truly wonderful group of gardeners with varied interests and yet we are all bound by a common love of gardening. We also know how calming it can be to walk into your garden and smile at the beauty of the flowers there or to pick something fresh and eat it right on the spot.

Because we all love nature and gardening so much, we (or at least I), find it very hard to say "No" to any project that involves gardening, whether it is to help children understand the need for plants or to help Vietnam veterans plan and spruce up a garden next to their monument. The only issue is having enough time or people to accomplish these things. Since there is a finite number of hours in a day, we need to bring more people into our group to help us with all the projects that are available to help the people of Hall County, our neighbors.

How do we get more Master Gardeners? We start conversations with friends, neighbors, people at garden related events, or strangers and we tell them about the wonderful things that we HCMGs are doing and see if they would like to learn more about becoming a HCMG. You can always ask the "Egg and a Tomato" question.

If you have one of our cards, you can suggest they call that number on the card to learn more or simply do a search on the Internet for Hall County Master Gardeners and select "Click for Details" as indicated by the arrow in the image of our Webpage.

Write for Us!

Like to write? Have something to say? Your fellow master gardeners want to hear from you! Email Rick at rsfreeland@charter.net for details.

Inside This Issue:

HCMG Officers
President: Don Linke
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Please submit your ideas, news, comments and questions to rsfreeland@charter.net

Newsletter contributors:

Don Linke

Rick Freeland

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Boxwood Blight

by Rick Freeland

There's an insidious menace threatening Georgia's boxwoods. In 2014, boxwood blight, or *Calonectria pseudonaviculatum* (syn. *Cylindrocladium pseudonaviculatum* and *Cylindrocladium buxicola*), established a foothold in our state. The fungus was first seen in North Carolina in 2011, and has infected landscapes and nursery stock in twenty states to-date. The disease is especially virulent in metro areas

like Atlanta, where many boxwoods are used in formal gardens.

All commercial boxwoods seem to be susceptible to the blight, though they may show a varying severity of symptoms. Some cultivars exhibit more tolerance, but still may be infected and act as vectors to spread the disease to healthy boxwoods. The blight can also impact Ground Spurge (*Pachysandra terminalis*) and Sweet Box (*Sarcococca* sp.), along with other plants in the Buxaceae family.

Symptoms

Keep an eye out for circular, tan leaf spots bordered by dark purple or brown. The spots could also be encircled by yellow to reddish halos. Stems may be black or sport black lesions, similar to Colletotrichum stem canker. Eventually, infected leaves go tan and drop, rapidly defoliating the plant.

Boxwood blight is a fast-moving disease and can quickly decimate massed boxwoods in landscape and garden environments, as well as nursery stock. There is no cure or effective treatment. If boxwood blight is found on a plant it should be removed at once, secured in a plastic bag, and taken to a landfill. All dropped leaves should be raked or vacuumed up, bagged, and disposed of.

Prevention

The pathogen's spores aren't wind-borne, but are tenaciously clingy, sticking to tools, clothes, shoes and pet fur, making it hard to keep out of the garden.

How can you lessen the chances of introducing boxwood blight?

- Use more tolerant cultivars, especially when establishing mass plantings or hedges.
- Inspect all plants for signs of blight, and buy only from nurseries having a **Boxwood Blight Compliance Agreement**.
- Avoid wetting leaves. Apply water directly to your boxwood's root zone using a drip irrigation system or soaker hoses.
- If you suspect you've been working with infected plants, be sure to sanitize your tools and boots with a solution of 1 part bleach to 9 parts water, and wash your clothes before working with uninfected plants. Make sure professional landscapers who maintain your property follow the same protocol.

Fungicides can be used as preventive medicine, but won't cure plants already infected. Product labeling has not kept pace with the spread of boxwood blight. Be sure that the product you choose is labeled for control of *Cylindrocladium* or for use on boxwoods, and follow all label instructions.

For More Info:

- UGA Extension White Paper
- Boxwood Blight in Georgia
- Boxwood Blight Update

eXtension - A Helping Hand

by Rick Freeland

If you haven't heard of eXtension, you're in for a treat. eXtension is an online resource that supports the Cooperative Extension Service (and those professionals, educators, agents, faculty and specialists associated with it) nationwide. We as master gardeners are included in the mix, and can benefit from all eXtension provides. This article will introduce you to eXtension's offerings. If you want to reference eXtension as we go along, click the link below and you'll be taken to eXtension's Home page:

http://www.extension.org

You can use the site as-is, or sign up as an individual member. As we are associated with the University of Georgia Member Institution, if you sign up you will get Premium Membership benefits. There's no cost to sign up.

Master gardeners can benefit from eXtension in several ways. We can use the site to look into continuing education opportunities; watch and even produce educational webinars; publish content (subject to approval); connect and collaborate with our peers; answer questions in eXtension's "Ask an Expert" section; follow trending topics in the site's Blog; and more.

One of the coolest tools for master gardeners is eXtension's **Resource Area**, featuring info and articles on various subjects. To access the Resource Area, click on the "Find Resource Articles" tab on the right-hand menu on the eXtension.org Home page (or on the Resources tab at the top of the page). On the page that comes up, click on "Resource Areas" at the top. You'll be directed to a page called "Our Resource Areas".

Explore the page categories. Under "Lawn and Garden", for example, there's a link called "Extension Master Gardener". Click to go to this page. At the top, there's a scrolling features window showing articles available that deal with master gardeners. To the left is a list of resources. Other areas of the page list recent webinars and Ask an Expert questions. A lot of the resource pages are interlinked to other pages.

Take the time to explore eXtension. You'll find information and opportunities on a variety of issues important to Cooperative Extension and master gardeners. Think of it as another tool in your wheelbarrow of gardening and community service resources.

For More Info:

- eXtension Home Page

What the Heck?

Juglone

Juglone is a toxic substance produced by black walnut trees (and a few other species). Highest concentrations occur in buds and roots, where effects may extend past the drip line. Juglone sensitive plants will die if planted under juglone producers, but there are juglone tolerant species that will thrive. Research beforehand.

How Vines Climb

by Rick Freeland

Vine appeal. You plant them for their flowers, fruits, and fall color, to enhance and soften architectural forms and screen objectionable views, or just because they're pretty.

Vines can grow on buildings, walls, and fences, as well as arbors, pergolas, trellises, wire frames, gazebos, and even up and through other plants. They can even be used as groundcovers.

It's important to understand how a particular vine will attach itself to its support structure. Vines climb using several techniques.

Self Clinging Vines

Adventitious rootlets (also known as aerial roots) allow vines to cling to walls, buildings or tree trunks. Examined closely, these roots seem to be made up of countless fine hairs. Think English Ivy, or even Poison Ivy.

Aerial rootlet self-clingers are particularly effective as ground covers, but take care when planting around other plants and structures that might be overwhelmed by the climber. Also, if grown against a masonry wall, the rootlets may dislodge mortar over time.

Other self-clingers use adhesive tendril tips to grasp and cling. A good example of this type is Virginia Creeper.

Self-clingers need no additional support once established, but may need the help of a string or temporary stake when young (until their rootlets or tendrils establish a secure hold).

Twining Vines

Some vines climb via coiling stems that spiral around supports in either a clockwise or counter-clockwise direction, depending on the species. For example, Honeysuckles coil clockwise, while *Wisteria chinensis* spirals counter-clockwise.

Twining vines need some type of permanent support like a trellis, a woven wire attached to an overhead structure, or a sturdy host plant.

Tendril Climbers

These plants climb by using modified leaf stalks or tendrils.

Clematis is a good example of a vine climbing by modified leaf stalk. Others, like Cross Vine or Sweet Peas, may employ a contact-sensitive tendril that reacts on contact with a wire or structure. Grapes use terminal shoots to grasp; Passion Flower uses an auxiliary shoot.

Scrambling, Rambling or Trailing Type Climbers

Plants with long, arching stems make up this group. Winter Jasmine and *Bougainvillea* are good examples.

Stems of the trailing-type climbers might not actually attach themselves to their supports and may need to be tied. Use plastic ties, or specialized vine ties, for managing scramblers.

Ramblers can be trained to grow through shrubs or other support plants. They're perfect for sprawling over walls, make great groundcovers and can be used as erosion protection on banks.

Some trailing plants, like Climbing Roses, have developed a hooked thorn to help them establish a secure hold as they ramble through host plants. They can also be tied onto a support structure.

When you select your vines, consider fundamental design principles like line, color, texture and form, as well as attributes like flower type and bloom season, interesting bark or fall color. But whether you need to screen an unsightly view, soften a rock wall, establish shade for a patio, or just want a colorful vertical accent, there's always a vine perfect for the situation.

Mosquito Repellents That Work

by Rick Freeland

It's summer! Time for grilling out, lounging by the pool, and entertaining outdoors.

AND for swatting those pesky mosquitoes.

With all the news about the Zika virus and other mosquito-borne diseases, folks are smart to be concerned with controlling these blood suckers.

Break Out the Repellents

Personal mosquito repellents are among the most effective ways homeowners can protect themselves and their families from biting insect pests.

A residential mosquito control program can include source control (eliminating places breeding waters can accumulate), biological controls (inviting predator colonies of birds, bats, and dragonflies), mechanical and electrical trap devices, and chemical/bacteriological solutions.

Other than source control, however, these methods are of limited effectiveness at the back yard scale, and may need to be supplemented with a regimen of personal repellents for maximum control.

Personal Mosquito Repellents

Personal mosquito repellents come in three broad types: they're either applied directly to an individual's skin and/or clothing, incorporated into clothing, or designed to be used in close proximity to a person or persons, in human-use areas.

Homeowners can use these methods as stand-alone personal protection, or to defend against mosquitoes that have penetrated past outlying alternative mosquito controls and are zeroing in on a person for a blood meal.

DEET - the King of Insect Repellents

Effective mosquito repellents suitable for direct application to the body are available as sprays, creams or lotions. The top repellents currently are DEET based products, though there are new, promising alternatives on the market.

For over 50 years, DEET has set the bar for effective personal mosquito repellents. It stands for N,N-Diethyl-3-Methylbenzamide, the active ingredient in these broad-spectrum repellents. According to the United States Environmental Protection Agency, DEET products are used by 38% of the U.S. population, as well as 200,000,000 people world-wide.

DEET-based repellents are available as sprays, lotions, creams, gels, and even medicated towelettes, and generally contain a 5% to 10% concentration of DEET, although higher concentrations can be had for long-term outdoor use in especially "buggy" locations. Some are effective for up to 12 hours with 95% protection.

DEET products are marketed under the labels of Cutter, Repel, and Off (among others), and can be applied to skin, clothing, insect netting, window and door screens, even sleeping bags. Careful, though - DEET can damage plastics, leathers and synthetics.

Other Mosquito Repellents Suitable for Skin Use

Avon Skin-So-Soft, highly touted as an effective repellent at the grass-roots level, has been shown to provide a 30 to 40 minute window of protection, less than a 12.5% DEET concentration.

Citronella products can also be applied to skin, though they're generally used in candles or torches as proximity protection. Other products list plant oils such

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Upcoming Events

Monthly Meetings

- July 19, 6:30 pm, Brenau Center. Come join your fellow master gardeners to hear Jody Karlin of Just Add Water speak on Garden Creation and its Challenges in the Southeast.
- August - Hall County Master Gardener Panel of Experts will answer questions and make recommendations on landscape and gardening subjects of interest.
- September - Kelly Bowen of Full Bloom Nursery will speak on the good and the bad about GMOs, as well as organic pest control.

Extension Office

- Need hours? Want to learn while serving? Pull a stint answering community garden questions at the Hall County Extension Office. Call Robin for details on available times.

Bountiful Veggies

Take care of the following and harvest a bounty of vegetables through the remainder of summer and into fall.

Planting Dates for More Common Crops:

Pole beans, lima beans - Jul. 1 – August 1
Cucumbers - Jul. 15 - August 15
Bell Peppers - Jul. 15 – August 10
Summer squash - Jul. 25 – August 25
Tomatoes – June 15 – July 15

If you're going to raise seedling transplants of cool season cole crops such as cabbage and collards, start indoors now in the cool of the house and allow about 6-8 weeks before planting in the fall.

Planting Dates for Cole Crops:

Broccoli, brussels sprouts, kale, collards – plant in the garden between August 1-September 1 from transplants.

Cauliflower – August 1-August 15 from transplants.

Cabbage – August 1-October 1 from transplants.

Helpful Hint: Solarize the vegetable garden patch you plan to use for fall planting using solar heat. It takes four to six weeks to kill weeds, disease and nematodes, so start now.

(From Hall County Master Gardener website)

Mosquito Repellents that Work (*cont. from pg. 3*)

as verbena, penny royal, and geranium as active ingredients.

Bite Blocker (Consep, Inc.), is one such plant-based repellent which uses soybean, geranium and coconut oils. Bite Blocker has been available in Europe for several years and has proved itself admirably under field conditions. Studies performed by the University of Guelph in Ontario, Canada, show 97% protection against Aedes mosquitoes - up to 3.5 hours after application. Compare that to a 6.65% DEET solution, which had 86% protection, and citronella-based Skin-So-Soft (40%).

Another alternative to DEET is Permethrin, a synthetic pyrethroid that not only repels mosquitoes, but actively kills them. Permethrin should be applied to clothing or fabrics, not directly to skin. Unlike DEET, it's non-staining and nearly odorless. One study in Alaska showed that clothes treated with Permethrin were 99.9% effective against biting mosquitoes over an 8-hour period.

Picaridin is another agent showing close to DEET effectiveness as a repellent. Picaridin is marketed as Cutter Advanced, and is used widely outside the United States. It's odorless and has a pleasant feel. One good feature about picaridin - it can be used on infants as young as 2 months.

Oil of lemon-eucalyptus (sold as Repel) is a naturally derived product which is highly effective against ticks as well as mosquitoes.

Mosquito Repellent Clothing

While permethrin applied to clothing has a proven potency against mosquitoes for up to 2 weeks even after washing, a product called Buzz Off Insect Shield provides insect repellent apparel - clothing actually permeated with permethrin. This clothing line has been proven effective in the field against biting insects even after 25 washings.

Another product (Bug Bam) uses permethrin based wrist bands to keep mosquitoes away.

Proximity Repellents

Citronella candles and "tiki" torches are of limited effectiveness in keeping biting bugs at bay. Other smoke producing devices - even cigars - may work just as well. Citronella candles are most effective used in groups of 3 or more, arranged around the people to be protected, in a semi-enclosed area.

Mosquitoes are not strong fliers, so a large fan blowing across a deck or porch, coupled with personal repellents, may be all the supplemental protection needed.

Don't overlook your home's interior. The little boogers are expert house breakers, too. Use tight-fitting, 16 to 18 mesh screens to guard windows and doors and keep these insects in their place.

Whatever back yard mosquito protection program a homeowner uses, he needs to make sure that his last line of defense against biting insects is some form of personal repellent. Just remember - if mosquitoes don't like, they won't bite.

References:

- Fradin, Mark Dr. "Mosquitoes and Mosquito Repellents: A Clinician's Guide". Annals of Internal Medicine. June, 1998
- "Repellents". From website, American Mosquito Control Association
- UGA Extension "Tips for Controlling Mosquitoes"

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