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#### Lake County MGV Mission Statement

The mission of UF/IFAS Lake County Master Gardener Volunteers is to assist extension agents by providing horticultural education programs and current research-based information to the public through plant clinics, community outreach and Discovery Gardens.

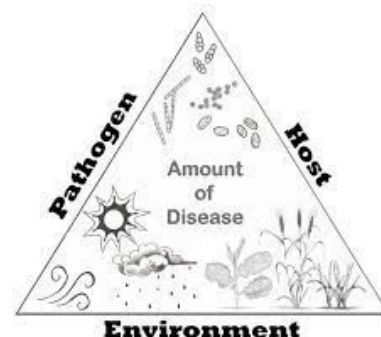
# Garden Scoop

## Plant Diseases

BY K. S. Kennen

One of the first things that can help with learning about plant diseases is understanding the disease triangle. For any disease to affect plants, there are three things that are needed to exist at the same time in order for a disease to take hold and damage a plant. This is called the disease triangle. The three elements of this triangle are host, pathogen, and environment. If a susceptible plant is in your landscape and the environmental conditions do not exist for the disease to establish, little or no change will occur to the plant. If the disease is present and the environmental conditions are just right for the pathogen, but the host plant is not planted in the garden, nothing happens. Lastly, if the host plant is in the garden and the environment is just right for the disease but there are no pathogens, the host plant will not be damaged.

The next thing to consider in the quest to learn about plant diseases is the five categories of pathogenic organisms. First are viruses as can be demonstrated by tomato spotted, wilt virus. Second are bacteria that cause such diseases as tomato wilt and are named *Ralstonia solanacearum*. Third are fungi such as black leaf spot which can be caused by a fungus and is often found on roses. The fourth category are the pathogenic



organisms which affect plant roots called nematodes. The last are the parasitic plants that cause damage by drawing necessary nutrition from the plant it grows on; a common parasitic plant is mistletoe. Of these five, the one that causes over 85% of the diseases in plants are fungi.

As you can probably deduce, Florida has the one criteria from the disease triangle for fungi to exist in the environment. Field studies on plant pathogens have demonstrated that the growth of fungi is favored by high moisture and moderate temperatures and as we know that is most of central and southern Florida. And since fungi can live on soil, plant material, surfaces, and in the air, it is easy to see why it comprises over 85 percent of plant diseases. An element of the triangle that gardeners can have control of is the type of plant that is in their garden. Be sure to select a variety that has been developed to be resistant to fungi or has a natural resistance to fungi. An example is black spot, a fungi that troubles rose growers. The one way to avoid this is to select antique roses or bushy shrubs that produce hybrid tea-like blooms including "Betty Prior" and "Iceberg," which all have a natural resistance to fungal diseases such as black spot mildew.

<https://irrecenvhort.ifas.ufl.edu/propagation/modules/module1/pathogens-in-plant-propagation.pdf>

For more information contact: UF/IFAS Extension, Lake County Office [lakemg.ifas@ufl.edu](mailto:lakemg.ifas@ufl.edu) •

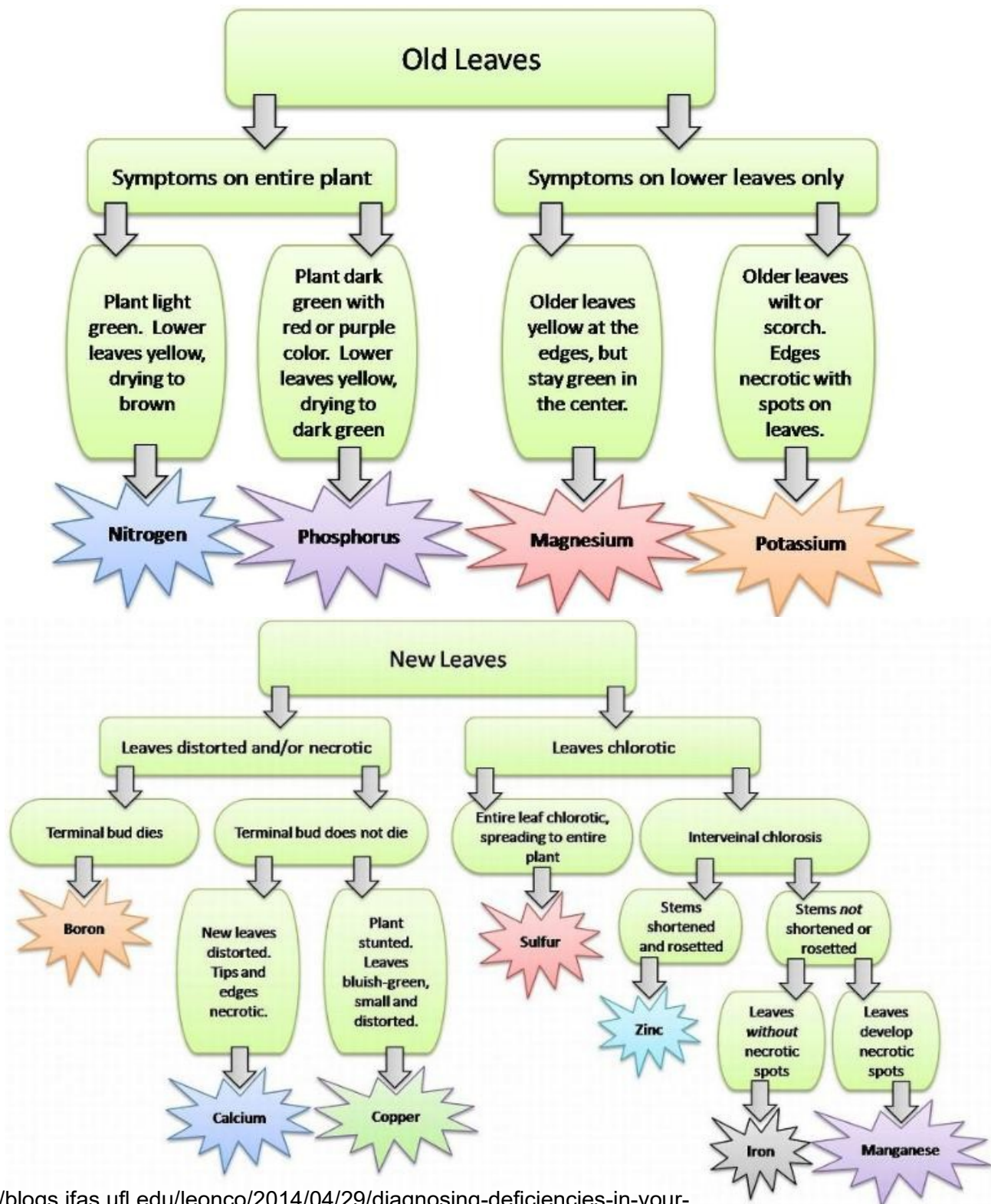
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# Visual Diagnosis of Plant Problems

Often after the summer humidity and heavy rains, plants may be displaying signs of nutrient deficiencies. Besides having your soil tested, you may also be able to tell by looking at the leaves of your plants what they are lacking. The following flow charts can help to narrow down which essential element may be lacking in your plant's diet.



## What's Cooking?



PUMPKINS aren't just for jack-o-lanterns but can be cooked and used in various recipes.

Cooking a pumpkin requires just a few steps:

- 1) Select a smaller one that does not sound hollow (more to cook)
- 2) Scoop out the seeds
- 3) Cut into quarters
- 4) Place in a pan with one inch of water in it
- 5) Bake at 350 degrees Fahrenheit for about 45 minutes or until fork inserts easily
- 6) Put cooked pumpkin through a strainer
- 7) Store for 3 - 5 days in refrigerator

Suggested uses are in a pie, as a side dish with select spices, and even as soup.

Be sure to roast the pumpkins seeds you remove from the pumpkin:

### Roasted Pumpkin Seed (in the microwave);

1 cup pumpkin seeds  
1 tablespoon butter  
1/4 teaspoon seasoned salt

Remove any fiber clinging to pumpkin seeds  
Wash and drain well.

Spread seeds in a single layer on a baking sheet to dry, stirring occasionally.  
Line a 9-inch microwavable dish with two layers of paper towels. Sprinkle seeds on the towels.  
Microwave at HIGH 10 – 14 minutes or until seeds are dry but still white, stirring every 5 minutes. Let stand 5 minutes.  
Place butter in a 2-cup measure, microwave until melted. Add seeds and salt, stir to coat.



# Plant Clinic Clatter

By R. Doherty, MGV



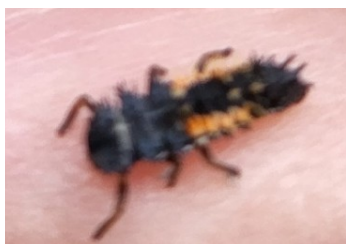
**MASTER GARDENER:** Please tell me what these bugs are. I found the orange and black one on my Podocarpus and the other was flying very fast all over the house.

**DEAR HOMEOWNER:** Thank you for your photos and description of where you found these insects.

The first one is the mature larva (4<sup>th</sup> instar stage) of the *Harmonia axyridis*, AKA the Harlequin, multi-colored Asian, or Asian lady beetle - a GOOD insect! It's considered a beneficial insect because it is a voracious predator of arthropod pests such as aphids, mites, thrips, and scale. The beetles can be used as a part of [IPM](#) cultural practices to help decrease the use of pesticides. Both the larvae and adult beetles feed on pests and quickly build up to large numbers. Since you found it on your Podocarpus, you most likely have Podocarpus aphids (picture below). Look for sooty mold, a dark gray or blackish powdery coating, on the shrub leaves to verify, then allow these beneficial insects to do their job. Adults occur in several color patterns or "morphs" varying from solid orange, orange with black spots, and red with black spots

The second is a *Tabanus spp.* or horse fly. Adult tabanids are encountered in Florida between the months of May and September. Most species overwinter in the larval stage and pupate during the spring and early summer. Their bite is fierce because they seek a blood meal. They are daytime feeders that inject an anticoagulant into the wound to increase blood flow. These wounds can often serve as sites for secondary infections and many people are allergic to the feeding activities of these pests. Horse flies tend to be much larger (from three-quarters of an inch to an inch or more in length) with a stout body and a very large head and eyes. Their wings are usually clear unlike deer flies that have dark bands across their wings. Both horse flies and deer flies are abundant in damp, wooded, and wetland environments which provide the necessary habitat for their eggs and larvae. Natural predators of horse flies and deer flies include such things as frogs, toads, spiders, wasps, hornets, dragonflies, and birds.

In addition, horse flies are important agents of disease transmission (like Anthrax) due to their intermittent feeding activity.



Harlequin beetle larva



Harlequin beetle adult



Horse fly

# Plant Clinic Clatter

By R. Doherty, MGV



**DEAR MASTER GARDENER:** Can you take a look at this list of native plants? I'd like your opinion on whether I should plant any of them along my five foot fence line. It's sun to partial shade and watered by irrigation.

**DEAR HOMEOWNER:** Thank you for the information about location and growing conditions of this area of your yard. This is a great list of Florida wildflowers! I've underlined the ones that I suggest will grow best along your fence line:

Meadow garlic (*Allium canadense*) – This accent perennial bulb grows 12" tall in full sun to partial shade and has whitish flowers. It dies back in the summer and fall.

Maryland golden-aster (*Chrysopsis mariana*) – This 18" tall, yellow blooming wildflower grows in dry, well-drained soil and full sun.

Golden canna (*Canna flaccida*) – This yellow, summer flowering, 3'-5' tall plant grows well in full sun and has rhizomes that spread underground, so it can easily be separated.

A FAVORITE OF MINE.

Marsh boltonia (*Asteraceae*) – This 3'-6' tall, 2'-3' wide plant with a short-lived bloom (white, pink, and lavender) grows in full sun to part shade. DON'T SUGGEST as these tend to spread easily and seeds stick to everything!

White-top aster (*Sericocarpus totifolius*) - This to 2' to 3' tall perennial wildflower blooms in the summer through the fall. It is HARD to find in stores.

Corn snakeroot (*Eryngium aquaticum*) – This plant grows 3'-5' tall with whitish, blue/lavender flowers and blooms from summer until the fall. May be challenging because it needs moist soil to grow well.

Southeastern sunflower (*Helianthus agrestis*) – This yellow-flowered, 3'-5' tall plant needs moist soil (I have these in my rain garden). It becomes dormant in the winter and can reseed. Better in large areas – not along a fence.

Soapwort gentian (*Gentiana saponaria*) - NOT GOOD FOR ZONE 9

Prairie iris (*Iris hexagona*) – This 3' tall, rhizome, perennial wildflower, with bluish/purple flowers, blooms in the spring and needs moist soil (like rain garden).

Obedient plant (*Physostegia virginiana*) – This plant grows 3'-4' tall, 18-24" wide with purplish blooms in the spring and summer. It needs moist soil. I DON'T recommend since it is from the mint family and will SPREAD!!

Starry rosinweed (*Silphium asteriscus*) – This 2'-5' tall, yellow wildflower blooms during the spring and fall. It does reseed – best to deadhead and save seeds for others/other areas. It is better in large areas – not along a fence.

Eastern beardtongue (*Penstemon laevigatus*) – NOT GOOD FOR ZONE 9

Chapman's rhododendron (*Rhododendron chapmanii*) – POISONOUS PLANT

**Resources:** <https://edis.ifas.ufl.edu> <https://www.flawildflowers.org> <https://www.fnps.org>  
<https://grownative.org>

**Native plant nurseries:** <https://www.plantrealflorida.org/>



# Garden of the Month

The orchid house is the garden of the month and is led by Donna and Glenn Brown who have not only supervised a new roof for the house but kept all orchids healthy. Within the orchid house, light, water, and temperature are controlled to ensure beautiful orchids. Cattleya, Oncidium, and Phaelaenopsis (moth orchid) are some of the orchids you will find here. Though orchids are viewed as exotic, they can easily be grown in your home.



Cattleya by Donna Corbelli Castro



Oncidium UF/IFAS

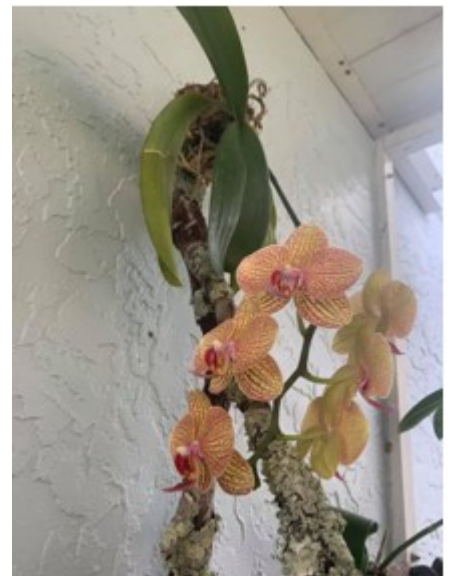
## Master Gardener Volunteer Plant Clinic

Bring your plant, insect, and soil problems to our Plant Clinic for advice Monday through Friday 10:00 a.m. to 2:00 p.m. The plant clinic is staffed by volunteers. Please call ahead at 352-343-4101 to be sure that someone is in the clinic to assist you with your question.

You may also send photos of your local problems to Jamielyn Daugherty at [jdaugherty@ufl.edu](mailto:jdaugherty@ufl.edu) or to the plant clinic at [lakemg@ifas.ufl.edu](mailto:lakemg@ifas.ufl.edu).



ORCHID HOUSE  
In Discovery Gardens



Phaelaenopsis UF/IFAS

# Classes

## October 15th Saturday in the Gardens: Carnivorous & Toxic Plants

Carnivorous plants are plants that derive some or most of their nutrients from trapping and consuming animals or protozoans, typically insects and other arthropods. A toxic plant is both beautiful and dangerous. Come out and learn more about these plants.

Registration is required at: <http://lakediscoverygardensprograms.eventbrite.com/>

TIME: 10 am

COST: \$5

LOCATION: 1951 Woodlea Road, Tavares

## October 20th Food Preservation: Pressure Canning

This program will provide an overview of the pressure canning process, foods that can be pressure canned and important food safety practices. During the class, you will make your own jar canned carrots, using a weighted gauge canner. All materials are provided.

Pre-registration is required, space is limited. INFORMATION for classes and registration, if required, can be found on the following website:

<https://www.eventbrite.com/d/fl--clermont/lake-county-extension/>

Participants must register by October 18, 2022

TIME: 1 – 3:30

COST: \$15

LOCATION: 1951 Woodlea Rd, Tavares, FL

## Discovery Gardens

Please plan a visit to over twenty different gardens located at 1951 Woodlea Road in Tavares. The hours are Monday through Friday and the third Saturday of the month from 9 a.m. until 4 p.m. Just like your yard, Discovery Garden changes with the seasons and will reveal something new with each visit. Come see the changes in the garden.

An Equal Opportunity Institution. UF/IFAS Extension, University of Florida, Institute of Food and Agricultural Sciences, Andra Johnson, Dean. Single copies of UF/IFAS Extension publications (excluding 4-H and youth publications) are available free to Florida residents from county UF/IFAS Extension offices.