SEPTEMBER/OCTOBER 2020

What COVID-19 Has Taught Us | Skinny Alligators in S. Fla.

PESTPRO

From Pest Management Education, Inc. to Landscape and Pest Managers

Insect Pest Host Range

High-Quality CEUs New From Urban Lab

OFFICIAL MAGAZINE OF FLORIDA PEST MANAGEMENT ASSOCIATION

Pest Management Education, Inc.
5814 Nob Hill Blvd.
Port Orange, FL 32127-5801

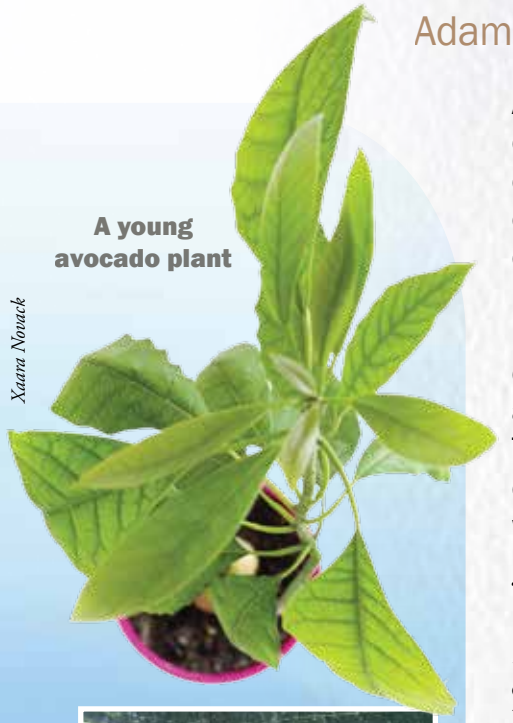
Martin LaBar

You Found *WHO* Feeding On *WHAT?*

A healthy azalea

Insect Pest Host Range

Adam Dale



A young avocado plant

Xaam Nowack

Avocado lace bug and damage

Lyle J. Buss / UFIFAS

As many of us have learned either through trainings or field experience, there are dozens of insect or mite pests that can damage plants in the landscape. However, there are generally more plant species or varieties that can be damaged than there are arthropod groups to damage them. That is because many, but not all, of these arthropod pests feed on a wide range of host plants.

HOST RANGE is a standard bit of information included in basically every insect pest fact sheet found on the web or in print. That is because knowing what a pest will feed on is essential for effective management. You have to know where to look to effectively monitor pest populations, track feeding damage, and target that pest with any control effort.

It is also helpful to know which plants are susceptible to pest attack so that you can choose alternative species when deciding what to plant on a property. Because of these multiple reasons, I always recommend lawn and ornamental pest management professionals be familiar with plant identification in addition to pest identification.

Jamba Gyelshen

Azalea lace bug and damage

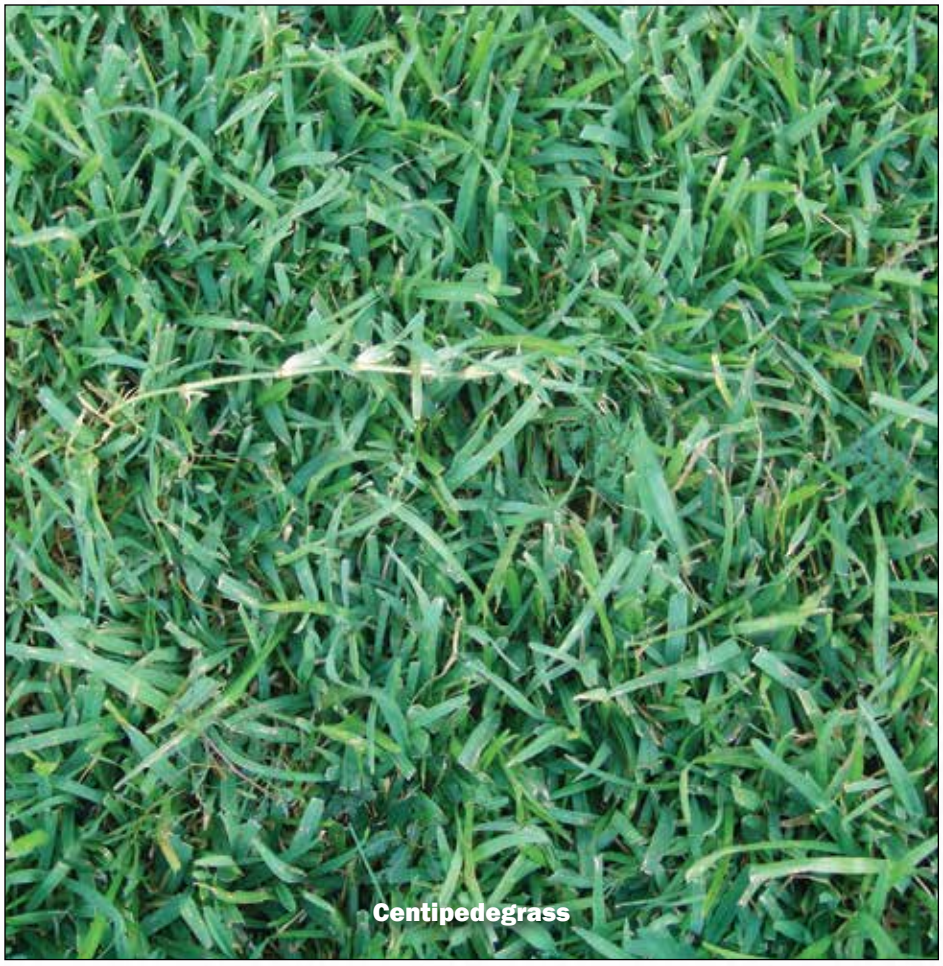
Being familiar with the host range of different pest groups can be particularly helpful as well. When I say pest groups, I mean classifications broader than the species level. For example, lace bugs, eriophyid mites, scale insects, and turfgrass caterpillar pests all have fairly predictable host ranges.

Lace bug and eriophyid mite species are highly specialized on their hosts. Azalea lace bugs or avocado lace bugs will only feed on azalea and avocado plants, respectively. Similarly, an eriophyid mite found on *Ligustrum* will only feed on *Ligustrum*.

Continued on Page 15

Adam Dale

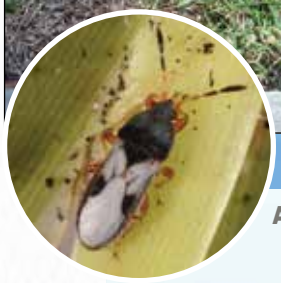
An eriophyid mite and damage on *Ligustrum*



James Becwar

Centipedegrass, shown above, plus bahiagrass and seashore paspalum, lower right, proved least susceptible to southern chinch bug infestation in a 2011 study by Dr. Adam Dale and colleagues.

Lyle J. Buss / Eileen A. Buss



Adult southern chinch bug

TURF SUSCEPTIBILITY TO SOUTHERN CHINCH BUG

St. Augustinegrass MORE
Zoysiagrass
Buffalograss
Tall fescue
Bermudagrass
Bahiagrass
Seashore paspalum
Centipedegrass LESS

Results from Reinert et al. 2011. Susceptibility of genera and cultivars of turfgrass to the southern chinch bug *Blissus insularis* (Hemiptera: Blissidae). Florida Entomologist 94(2) 158–163.

Forest Starr / Kim Starr

Host Range, continued from Page 13

In contrast, most scale insect species and turfgrass caterpillar pests are not picky and will feed on a wide range of plant species.

Although this general familiarity is useful, it is also very helpful to know the specific plants at risk from the key pests that you deal with on a daily basis. In fact, I bet many of you can list which insect or mite pests you anticipate finding on some of the most common landscape plants.

Which pests come to mind when you get to a property with a St. Augustinegrass lawn? What about a property with camellia shrubs? What about roses? Or hibiscus? I am sure a few specifics come to mind. However, you will occasionally get thrown a curve ball.

Southern Chinch Bug Infests Many Turf Species

Over the past couple of years and particularly in 2020, I have received multiple calls and emails about chinch bugs damaging zoysiagrass and bermudagrass plantings in residential lawns and on golf courses. Most people who have reached out to me do so with concern, surprise and fear that this major turfgrass pest has broken loose and is about to wreak havoc on all turf species. Or, that a new chinch bug species is attacking turf in Florida. This reaction is because most people, myself included, tend to associate chinch bugs in the southeastern and southern United States with St. Augustinegrass.

The most common and problematic chinch bug species in the southern and southeastern United States is the southern chinch bug, *Blissus insularis*. In fact, the southern chinch bug is the most economically important insect pest of lawns in this region.

The principle host associated with this insect is St. Augustinegrass, which can be severely damaged in many cases. However, the southern chinch bug can also feed and reproduce on several other turf species, including bermudagrass, centipedegrass, zoysiagrass, bahiagrass and others.

A study in 2011 compared the susceptibility of these turf types and found that St. Augustinegrass, including five cultivars, is by far the most susceptible species, but that zoysiagrass, including five cultivars, and others are also suitable hosts. See table above.

Continued next page

Forest Starr / Kim Starr

TO DETERMINE if these recent accounts of damage to bermudagrass and zoysiagrass were caused by the southern chinch bug, we inspected individuals from multiple instances and confirmed that they were the southern chinch bug, not a different species.

There are two factors that make the southern chinch bug the most economically important insect pest of lawns in the Southeast and make it surprising to find them damaging other turf species. First, southern chinch bug populations become over 11 times more abundant when feeding on St. Augustinegrass compared to the next most susceptible turf type, zoysiagrass. Second, St. Augustinegrass makes up over half of the turfgrass produced in Florida and a large percentage in other southern states. Therefore, it is a host susceptibility and numbers game.

Final Thoughts

If you are dealing with southern chinch infestations in turfgrasses other than St. Augustinegrass, there is some good news. They can be managed just as they would be in St. Augustinegrass — scouting, proper turf maintenance, and proper product selection and use.

In addition, zoysiagrass and bermudagrass should be more resilient to chinch bug damage. This is because zoysia and bermudagrass spread by stolons, which are aboveground stems, and rhizomes, which are belowground stems. Stolons are directly damaged by chinch bugs, but rhizomes are not. Therefore, these plantings can push up new vegetation from the rhizomes and recover more quickly unlike St. Augustinegrass, which only has stolons.

When managing lawns and ornamentals of any species, always be on the lookout for expected and unexpected, familiar and unfamiliar pests. Scouting properties and monitoring for pests is critical for effective pest management. You only know what to control, if you need to control, and how to control a pest if you are actively looking for it. PP

Dr. Adam Dale can be reached by email at agdale@ufl.edu. Mor information about his research and Extension programs at the University of Florida can be found at dalelab.org.