

Environmental Horticulture Issues Newsletter

Orange County/University of Florida
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Yellow Blotches in St. Augustine Grass Lawns



Hundreds of calls, emails, and inquiries came to the turf grass faculty at UF this spring about St. Augustine grass lawns that developed chlorosis (yellowing) symptoms with various levels of severity and patterns. After some research, they have provided some insight as to possible causes. The yellowing itself is a response of the turf plant indicating the lack (or over-abundance) of a vital nutrient. The underlying cause can be a compromised root system, unfavorable soil chemistry (such as improper pH, or soil nutrient levels), or presence of particular

classes of herbicides in some cases.

Primary causes:

Winter injury: St. Augustine grass can be injured or killed by below-freezing temperatures (-7 C or colder). The degree of injury is dependent on many factors including the cultivar of grass. Symptoms can range from yellowing and thinning to death of the turf. The symptoms of winter injury will sometimes occur in patterns that suggest a secondary stress is involved. Soil compaction, disease, and fertilizer or pesticide application patterns all can show up as variation in the winter injury severity or occurrence in a lawn. Cultural management of the lawn prior to and during winter can affect the likelihood and severity of winter injury as well. Follow the fertilizer application rates and timings in UF resources and avoid late-season fertilizer applications in particular as these may contribute to winter injury later.

Take all root rot: The disease is typically thought-of as a summer disease that kills large areas of turf grass. However, the first symptom that often is observed is yellowing of the lawns in areas where the disease will later develop to be most severe. The pattern of the yellowing will be random, non-uniform, and will tend to occur in low areas with high soil pH in many cases where take all root rot is the cause. To test if the symptoms are being caused by disease, take samples from the yellowing turf grass and from nearby healthy grass and send them to the Florida Extension Plant Disease Clinic. If the pathogen is present, the disease could be contributing to the problem. A fungicide application now, before the turf dies, (preventative) may help reduce the chance of turf death this summer.

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Yellow Blotches in St. Augustine Grass Lawns

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What to do:

If no disease is found, then fungicide isn't necessary. Maintain the turf according to University of Florida management recommendations and the symptoms should fade with time. Dead areas will not recover, so they will need to be sprigged or sodded or will have to grow-in from unaffected areas of the lawn. Ensure that the proper fertilizer, irrigation, mowing height, herbicide, insecticide, and other recommendations are observed to give the turf the best chance possible for a speedy recovery.

New! Mapping Function for Rapid Turf Service

IFAS DDIS folks have developed a mapping website for their turf sample data. It shows what diseases occur on what grasses in what Florida counties, during time periods the user specifies. Download the plug-in and try it. <http://ddis.ifas.ufl.edu/ddisx/jsp/mapreport/FloridaReports/rpt3/index.jsp>

Pesticide Updates

From Chemically Speaking

- ◇ Bayer CropScience announced in late April that effective immediately, it will exit the **Monitor®** (Methamidophos) and **Di-Syston®** (Disulfoton) insecticide business in the U.S. This includes the products Monitor®, Di-Syston® 8, and Di-Syston® 15G. The company manufactures other products that provide control to pests in crops that were labeled for the affected products.
- ◇ The EPA has reached an agreement in principle with the major manufacturers of the organic arsenicals **MSMA**, **DSMA**, **CAMA**, and Cacodylic acid and its sodium salt. This voluntary agreement steadily removes all organic arsenical pesticide uses, except the use of MSMA on cotton, from the market and implements new restrictions to better protect drinking water resources. Phasing out these uses is expected to accelerate the transition to new, lower risk herbicides. By the end of 2009, many existing uses will be phased out and canceled including use on residential lawns, forestry, non-bearing fruit and nut trees, and citrus orchards. Over the next four years, uses on golf courses, sod farms, and highway rights-of-way will be phased out.
- ◇ FDACS approved the registration of Biopreparaty Co. Ltd.'s biofungicide *Pythium oligandrum* DV74 (**Polyversum®**) for use on greenhouse ornamental plants and turf grass on sod farms.
- ◇ FDACS conditionally approved the registration of Wellmark International's insecticide Etofenprox (**Zenivex E20®**) for ground or aerial application (dilute or undiluted) to residential, industrial, commercial, urban, recreational and woodland areas for control of mosquitoes, midges, and black flies.
- ◇ The strategic plan for IPM in schools in the U.S. was released in late February. It is a collaboration between the IPM Institute of North America and university collaborators. It can be found at: <http://www.ipmcenters.org/pmsp/pdf/USschoolsPMSP.pdf>

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Is There Hope For A Chilli Thrips' Control?

Chilli Thrips are a tiny insect that threaten many of the Florida's most important crops. Fortunately, University of Florida research shows a predatory mite gobbles them up like popcorn.

On bell pepper plants in greenhouses, the mite consumed enough Chilli Thrips to keep the population to less than one per leaf, compared with 70 per leaf on control plants. Similar results were obtained with peppers grown outdoors. The study was published this month in the journal *Biological Control*.

Native to Asia, the invasive pest attacks more than 100 host plants, including corn, citrus, peanuts, tomatoes and ornamentals. For greenhouse crops — including bell peppers, strawberries, basil and flowers such as Gerber daisies — the mite could provide a much needed alternative to pesticides, said Dr. Lance Osborne, a professor with UF's Institute of Food and Agricultural Sciences and an author of the study. The current study was part of an ongoing collaboration between scientists with UF and the USDA, aimed at minimizing Chilli Thrips damage.

"This mite has a lot of potential for greenhouses, which is where it's used now," Osborne said. The mite, which has no common name but is known scientifically as *Amblyseius Swirskii*, is available commercially to manage whiteflies and broad mites. Because the mite is

already approved for use in Florida, growers can try it against Chilli Thrips, he said. Osborne cautioned that the mite is not likely to be successful on every crop the pest attacks. Researchers were happy to find the mite held up well outdoors on bell peppers. Previous

attempts to establish the mite outside on rose bushes have been unsuccessful, he said. "Maybe there is a plant issue — they prefer peppers, but not roses," Osborne said.

An upcoming project will investigate the use of peppers as "banker plants" — the mite equivalent of birdhouses, said Cindy McKenzie, a research entomologist with the USDA's Horticultural Research Laboratory in Fort Pierce. In the project, ornamental peppers will be planted outdoors among rose bushes, to see if they can harbor mite populations that protect both plant species, said McKenzie, another author of the study. If successful, this approach could be helpful to rose gardeners and landscapers, especially in the Orlando area, hard-hit by Chilli Thrips.



Researchers also hope to develop a pesticide-resistant strain of the mite, Osborne said. "That way, if a grower has to come in and spray, it won't disrupt the biological control," he said. Osborne previously developed a resistant strain of another predatory mite.

For more information on Chilli Thrips, see <http://mrec.ifas.ufl.edu/lso/thripslinks.htm>.

Book Review



Diseases of Herbaceous Perennials

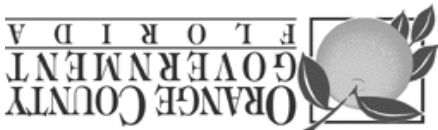
is a new book that helps identify and solve common disease problems of more than 150 perennials. It is arranged alphabetically by plant and includes more than 700 color images of diseases commonly found on perennials. The book includes symptom descriptions to help tell major diseases apart along with basic cultural requirements of each plant. Divided into 3 sections, the first section describes basic strategies for diagnosing and managing diseases of perennials. The 2nd section includes short profiles of 12 major types of diseases that attack perennials. The 3rd and main section is organized alphabetically by the genus of each plant. It also includes a common name to Latin name index.

The 300-page book is available from the American Phytopathological Society for \$79 plus shipping and handling. Order online at: <http://www.shopapspress.org> or toll free 1.800.328.7560.

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