

# What's Growing On?

## BASTROP COUNTY MASTER GARDENER ASSOCIATION

August 2021

### Leaffooted Bugs

By Wizzie Brown

Leaffooted bug adults may be mistaken for stink bugs while the immatures may get confused with assassin bug nymphs. Leaffooted bugs are larger than stink bugs and have an elongated body. Often, leaffooted bugs have an expanded region on their hind leg that looks similar to a leaf, hence the name leaffooted bug. Adults are fairly large and grayish-brown.



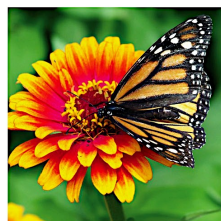
Immatures, or nymphs, look similar to adults, but are often reddish-orange in color and do not have fully developed wings. Assassin bug immatures will not have the

leaf shape on their hind leg and also tend to have a thicker mouthpart. Also, if you see insects clustered together, like in the photo below, then they most likely will be feeding on the plant since predaceous insects don't want to hang out with other predators.

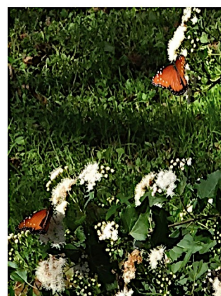
Leaffooted bugs feed on a variety of fruits, nuts and seeds, such as tomatoes, peppers, pecans or sunflower seeds. They have piercing-sucking mouthparts with which they puncture fruit to suck out juices. The opening left behind after the mouthpart is withdrawn can allow access to secondary invaders like bacteria or fungus.

Leaffooted bugs can be managed by hand-picking (be sure to wear gloves if utilizing this

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### 2021 Fall Plant Sale Saturday, October 2, 2021 (9am-3pm)



Mayfest Park  
 25 American Legion Dr.  
 Bastrop, TX 78602  
 Find us at [tsmg.org/bastropcounty](http://tsmg.org/bastropcounty) or on Facebook at [BastropCountyMasterGardeners](https://www.facebook.com/BastropCountyMasterGardeners)

Proceeds benefit the Bastrop County Master Gardener Association's garden & horticulture education programs

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method), using hand-held vacuums to suck the insects off the plant, or by treating the plants with pesticides. If choosing to use a pesticide, read the product label and make sure it can be used in the area you are treating (i.e. vegetable garden).

For more information or help with identification, contact Wizzie Brown, Texas AgriLife Extension Service Program Specialist at 512.854.9600. Check out my blog at [www.urban-ipm.blogspot.com](http://www.urban-ipm.blogspot.com)

This work is supported by Crops Protection and Pest Management Competitive Grants Program [grant no. 2017-70006-27188 /project accession no. 1013905] from the USDA National Institute of Food and Agriculture.

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## **Why Texas Retail Citrus Trees are Sprayed with Neonicotinoids**

**By Howard Nemerov**

Growing your own citrus can be rewarding and tasty, but did you know that every citrus tree sold in Texas has been treated with a class of systemic insecticides called neonicotinoids? While any insecticide—even organic ones—places pollinators at risk, a little research and planning will resolve any concerns about killing bees that show up to fertilize your fruit trees.

### **What are neonicotinoids?**

Neonicotinoids are a class of systemic insecticide. “Systemic” means if you spray or water with the insecticide, the plant absorbs it through leaves and roots, respectively, transporting it throughout the entire plant, including flowers, pollen, and nectar. One of the benefits of using neonicotinoids is their water

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## **Volunteering**

Master Gardeners volunteer in the community to teach others about horticulture. We follow the research-based recommendations of Texas A&M AgriLife Extension. Members who complete 50 hours of volunteer service in the year after training earn the designation “Texas Master Gardener.” We use our title only when engaged in Texas A&M AgriLife Extension activities.

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solubility, allowing them to be watered into the soil and taken up by target plants, eliminating the risk of drift to non-target plants. Water solubility makes it easier to apply to a large nursery range via irrigation water, too.

Neonicotinoids are potentially toxic to bees and other beneficial insects.

*New research points to potential toxicity to bees and other beneficial insects through low level contamination of nectar and pollen with neonicotinoid insecticides used in agriculture. Although these low-level exposures do not normally kill bees directly, they may impact some bees' ability to foraging for nectar, learn and remember where flowers are located, and possibly impair their ability to find their way home to the nest or hive.<sup>1</sup>*

This makes it imperative that neonicotinoids be applied responsibly.

## Why are citrus trees treated with neonicotinoids?

Neonicotinoids are effective against sap-feeding insects, which brings us to the Asian Citrus Psyllid, an insect that “inserts its mouthparts into the plant phloem and sucks the liquid sap.”<sup>2</sup> This invasive insect spreads the deadly citrus disease called “Asian citrus greening disease.”

*The Asian citrus psyllid is a very efficient vector of Asian citrus greening disease which was discovered in Florida in August, 2005, and has been confirmed in over 30 Florida counties. This disease is deadly to all citrus trees, without regard to rootstock or scion variety.<sup>3</sup>*



## What is citrus greening disease?



Citrus greening is an international threat, which is why governments mandate quarantines and insecticidal treatments.

*Citrus greening, also known as Huanglongbing (HLB) or yellow dragon disease, is the most important threat to citrus production worldwide. The disease devastates citrus plants, reducing fruit yield and quality, and killing the plants in as little as 2 years.<sup>4</sup>*

It's caused by bacteria carried by Asian citrus psyllids, in-

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## New Website Features

Check out our website, which features project slideshows, a new photo gallery section, and an events calendar to check out upcoming activities. Find news articles and our newsletters. Thanks to Dave Posh for keeping the info timely for us <https://txmg.org/bastropcounty/>

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jected into the plant as the insect feeds. Currently there is no cure. The psyllid feeds on all varieties of citrus and citrus relatives. Once infected, any of these plants can serve as transmission vectors. The “most viable” treatment option is systemic insecticides such as imidacloprid, a neonicotinoid.<sup>5</sup>

## Citrus quarantine and insecticide mandate

The psyllid has spread to 32 Texas counties, resulting in a quarantine order by both the USDA and Texas Department of Agriculture, referring back to the need for neonicotinoids.

*The quarantines require special insecticidal treatments for any citrus trees, plants or budwood before such materials can be transported from any quarantined county to any non-quarantined county in the state. None can be exported to any other citrus-producing state, regardless of insecticidal treatment.*<sup>6</sup>

The USDA has placed the entire state of Texas into quarantine:

*To reduce the risk of spreading the Asian Citrus Psyllid (ACP), Citrus Greening, to other states, the United States Department of Agriculture (USDA) quarantined the entire state of Texas for ACP on January 28, 2009.*<sup>7</sup>

By Texas law, neonicotinoid treatment is mandatory before selling any citrus plant:

*Prior to any sale, distribution or movement shall be treated as specified in the “Interstate Movement of Citrus and other Rutaceous Plants For Planting From Areas Quarantined for Citrus Canker, Citrus Greening, or Asian Citrus Psyllid” as published by the United States Department of Agriculture, Animal and Plant Health Inspection Service, Plant Protection and Quarantine...*<sup>8</sup>

Texas Code is referring to USDA regulation detailing how and when treatment happens:

*The facility must treat all citrus nursery stock with an APHIS-approved systemic insecticide (soil drench) at least 30 days but no more than 3 months (90 days) before shipment. This must be followed by an APHIS-approved foliar spray no more than 14 days before shipment.*<sup>9</sup>

## How do I keep pollinators safe?

First, talk to your retailer and read the label and any documentation accompanying your plant. According to AgriLife Extension agent David Rodriguez, plants are generally safe by the time they reach retailers:

*The pesticide formulations that are used usually last about 6 to 8 weeks (not years as reported incorrectly) as most trees are shipped out of the only two remaining modified wholesale growing facilities in the state, typically after they have bloomed out as not to have any potential ill affects to bees on the flowers.*

If you’re buying a citrus tree in bloom, the safest option would be pruning these flowers. Get the plant settled into its new home and attend to making it as healthy as possible, so that when it blooms again, not only will pollinators be safe but will help produce a good crop.

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## Endnotes

- <sup>1</sup> “What is a neonicotinoid?” Texas A&M AgriLife Extension. Accessed July 22, 2021. <https://citybugs.tamu.edu/factsheets/ipm/what-is-a-neonicotinoid/>
- <sup>2</sup> Bográn, CE, Villanueva, RT, and Setamou, M. “Identification and Management of Asian Citrus Psyllid and Citrus Greening Disease in Texas Nurseries.” Texas A&M AgriLife Extension. Accessed July 24, 2021. <https://agrilifeextension.tamu.edu/library/landscaping/identification-and-management-of-asian-citrus-psyllid-and-citrus-greening-disease-in-texas-nurseries/>
- <sup>3</sup> Sauls, Julian W., “Asian Citrus Psyllid—An Invasive Threat to Texas Citrus.” Texas A&M AgriLife Extension. Accessed July 24, 2021. <https://aggie-horticulture.tamu.edu/citrus/diagnostics/psyllids/psyllids.htm>
- <sup>4</sup> Bográn, CE, Villanueva, RT, and Setamou, M. “Identification and Management of Asian Citrus Psyllid and Citrus Greening Disease in Texas Nurseries.” Texas A&M AgriLife Extension, May 2012. Accessed May 18, 2021. <https://cdn-ext.agnet.tamu.edu/wp-content/uploads/2018/10/E-597-identification-and-management-of-asian-citrus-psyllid-and-citrus-greening-disease-in-texas-nurseries-1.pdf>
- <sup>5</sup> Ibid.
- <sup>6</sup> Sauls, Julian W., “Asian Citrus Psyllid—An Invasive Threat to Texas Citrus.” Texas A&M AgriLife Extension. Accessed July 24, 2021. <https://aggie-horticulture.tamu.edu/citrus/diagnostics/psyllids/psyllids.htm>
- <sup>7</sup> “Asian Citrus Psyllid.” Texas Department of Agriculture. Accessed May 18, 2021. <https://www.texasagriculture.gov/RegulatoryPrograms/PlantQuality/PestandDiseaseAlerts/AsianCitrusPsyllid.aspx>
- <sup>8</sup> Texas Administrative Code, Title 4, Part 1, Chapter 19, Subchapter X, Rule 19.622 (2)(A) [Won't provide live link, must search on "Texas Administrative Code, Title 4" which will take you to page that lets you select each of the subsidiary sections.]
- <sup>9</sup> “Interstate Movement of Citrus Nursery Stock from Areas Quarantined for Citrus Canker, Citrus Greening, and/or Citrus Psyllid.” United States Department of Agriculture, November 25, 2019, page 5, Part III, c(2). Accessed May 18, 2021. [https://www.aphis.usda.gov/plant\\_health/plant\\_pest\\_info/citrus/citrus-downloads/citrus-nursery-stock/citrus-nursery-stock-protocol-interstate-movement.pdf](https://www.aphis.usda.gov/plant_health/plant_pest_info/citrus/citrus-downloads/citrus-nursery-stock/citrus-nursery-stock-protocol-interstate-movement.pdf)

## Why Bother Growing Citrus?

Text and Photos By Howard Nemerov

I considered growing citrus for one reason: Giant Swallowtails.<sup>1</sup> With my garden already dedicated to various trials and horticultural projects, I considered shoehorning a cold-hardy Satsuma hybrid into a protected corner, only to realize it’s beyond the number of gardening commitments I can handle.



If you see this angel sipping on your nectar plants and want to invite them to hang around more, *and* you have the commitment to grow citrus in your garden, then you might see more of these.

### Endnote

- <sup>1</sup> “Giant Swallowtail.” Butterflies and Moths of North America. Accessed August 7, 2021. <https://www.butterfliesandmoths.org/species/Papilio-cresphontes>

