

2024–2025 Florida Citrus Production Guide: Introduction¹

Lauren M. Diepenbrock, Megan M. Dewdney, and Tripti Vashisth²

Over the past decade, Florida citrus production practices have changed dramatically due to the challenges presented by huanglongbing (HLB). As we have learned more about this disease, how it is spread by the Asian citrus psyllid, and the overall effects on citrus tree health, it is increasingly evident that management of this disease requires changes to *all* aspects of citrus production. Several factors must all be considered together when developing a site-specific management plan for citrus production in the presence of HLB. The *Florida Citrus Production Guide* will continue to be updated annually with the latest information to help growers refine their production practices using the latest research-based findings proven to be effective for Florida citrus production.

For example, in this edition, latest information regarding the changes to the fertilizer recommendation for Calcium, Magnesium, Manganese, and Zinc has been added; please refer to the nutrition management chapter. Also, refer to the PGR chapter for the latest recommendation regarding the use of gibberellic acid for improving the health and productivity of HLB-affected trees. The brown rot chapter has new product recommendations for management of this important pre- and postharvest disease. We also added the plant immune activator, Aura Citrus, for management of canker in the canopy.

In addition to changes in production practices needed to manage emerging pest problems in Florida, the regulatory

environment is also constantly changing. New rules for Worker Protection Standards (WPS) were fully implemented in January 2018, including important changes to worker training, reporting, and posting of pesticide applications. Likewise, compliance with the Food Safety Modernization Act (FSMA) Produce Safety Rule (PSR) was required by January of 2020 for all farm sizes. This rule established minimum food safety standards to be implemented by growers, packers, and harvesters of fresh produce. Compliance with these rules directly impacts day-to-day production practices and costs to Florida citrus growers. The requirements of these rules are explained in the chapters on WPS and food safety. Because changes in these rules are likely to occur, the guide will be updated to reflect the latest information growers need to know to ensure compliance, so please continue to review these chapters in the coming years.

Overall, the goal of the *Florida Citrus Production Guide* is to serve as a reference for information needed to guide decision-making in Florida citrus-growing operations. **It is not intended to replace agricultural product labels that contain important usage information and should be immediately accessible for reference. Violations of directions for use printed on the label are against state and federal laws. Always read and follow label instructions!** Likewise, state and federal regulations on topics such as WPS are constantly changing, and not all the information needed to ensure compliance can be covered in this guide.

1. This document is CPMG01, one of a series of the Plant Pathology Department, UF/IFAS Extension. Original publication date December 1999. Revised annually. Most recent revision May 2024. Visit the EDIS website at <https://edis.ifas.ufl.edu> for the currently supported version of this publication. © 2024 UF/IFAS. This publication is licensed under [CC BY-NC-ND 4.0](https://creativecommons.org/licenses/by-nc-nd/4.0/).

2. Lauren M. Diepenbrock, assistant professor, Entomology and Nematology Department; Megan M. Dewdney, associate professor, Plant Pathology Department; and Tripti Vashisth, associate professor, Horticultural Sciences Department, UF/IFAS Citrus REC; UF/IFAS Extension, Gainesville, FL 32611.

The WPS chapter in this guide covers some of the important highlights of these rules. **It is imperative that growers obtain copies of and follow the detailed rules outlined in the regulatory documents referenced in this guide.** The *Florida Citrus Production Guide* provides general guidance and is NOT the final regulatory document that should be followed!

For specific information on pest identification, biology, damage, or nonchemical management techniques, refer to Ask IFAS/EDIS and other UF/IFAS, USDA, and Florida Department of Agriculture and Consumer Services (FDACS) publications. In addition to the authors listed throughout the *Florida Citrus Production Guide*, the citrus Extension specialists, faculty, and Extension agents listed below can provide assistance with citrus production practices.

UF/IFAS Research and Education Centers

UF/IFAS Citrus REC

700 Experiment Station Road
Lake Alfred, FL 33850-2299
<http://crec.ifas.ufl.edu>
(863) 956-1151

Dr. Michael E. Rogers, Center Director/Entomology

Dr. John M. Chater, Horticulture

Dr. Michelle D. Danyluk, Food Safety

Dr. Megan M. Dewdney, Plant Pathology

Dr. Lauren M. Diepenbrock, Entomology

Dr. Larry W. Duncan, Nematology

Dr. Manjul Dutt, Horticulture

Dr. Chooa El-Mohtar, Plant Pathology

Dr. Fred G. Gmitter, Horticulture

Dr. Jude W. Grosser, Horticulture

Dr. Davie M. Kadyampakeni, Soil, Water, and Ecosystem Sciences

Dr. Nabil Killiny, Plant Pathology

Dr. Amit Levy, Plant Pathology

Ms. Taylor O'Bannon, Food Safety

Dr. Ahmad Omar, Horticulture

Dr. Arnold W. Schumann, Soil, Water, and Ecosystem Sciences

Dr. Ariel Singerman, Economics

Dr. Lukasz L. Stelinski, Entomology

Dr. Tripti Vashisth, Horticulture

Dr. Christopher I. Vincent, Horticulture

Dr. Nian Wang, Microbiology and Cell Science

Dr. Yu Wang, Food Science

UF/IFAS Indian River REC

2199 South Rock Road
Ft. Pierce, FL 34945-3138
<https://irrec.ifas.ufl.edu/>
(772) 468-3922

Dr. Mark Kistler, Center Director/Agricultural Education

Dr. Liliana Cano, Plant Pathology

Dr. Sandra Guzmán, Agricultural Engineering

Dr. Mark A. Ritenour, Postharvest Physiology

Dr. Lorenzo Rossi, Horticulture

Dr. Alan Wright, Soil, Water, and Ecosystem Sciences

Dr. Flavia Zambon, Horticulture

UF/IFAS Mid Florida REC

2757 S. Binion Road
Apopka, FL 32703
<https://mrec.ifas.ufl.edu>
(407) 884-2034

Dr. Kirsten Pelz-Stelinski, Center Director/Entomology

UF/IFAS North Florida REC

155 Research Road
Quincy, FL 32351
<http://nfrec.ifas.ufl.edu>
(850) 875-7100

Dr. Dean Pringle, Center Director/Animal Science

Dr. Xavier Martini, Entomology

Dr. Muhammad A. Shahid, Horticulture

UF/IFAS Range Cattle REC

3401 Experiment Station
Ona, FL 33865
<http://rcrec-ona.ifas.ufl.edu/>
(863) 735-1314

Dr. Brent Sellers, Center Director/Weed Science

UF/IFAS Southwest Florida REC

2686 State Road 29 N
Immokalee, FL 34142-9515
<https://swfrec.ifas.ufl.edu/>
(239) 658-3400

Dr. Michael Burton, Center Director/Agronomy

Dr. Ute Albrecht, Horticulture/Plant Physiology

Dr. Fernando Alferez, Horticulture

Dr. Ioannis Ampatzidis, Agricultural and Biological Engineering

Dr. Ozgur Batuman, Plant Pathology

Ms. Stephanie Brown, Food Science

Dr. Ramdas Kanissery, Weed Science

Dr. Kimberly Morgan, Economics

Dr. Jawwad Qureshi, Entomology

Dr. Sarah Strauss, Soil, Water, and Ecosystem Sciences/Soil Microbiology

Dr. Nicolaos Tziolas, Soil, Water, and Ecosystem Sciences

Dr. Tara Wade, Economics

UF/IFAS Tropical REC

18905 SW 280 Street
Homestead, FL 33031-3314
<https://trec.ifas.ufl.edu/>
(305) 246-7000

Dr. Edward “Gilly” Evans, Center Director/Economics

Dr. Jonathan H. Crane, Associate Center Director/
Horticulture

Dr. Daniel Carillo, Entomology

UF/IFAS Extension Agents—Citrus

Alissa Hevesh

Extension Agent I, Highlands County, Agriculture and
Natural Resources
UF/IFAS Extension Highlands County
4509 George Blvd.
Sebring, FL 33875
(863) 402-6540

TBD

Extension Agent I, Multi-County, Citrus
DeSoto, Hardee, and Manatee Counties
UF/IFAS Extension DeSoto County
2150 NE Roan St
Arcadia, FL 34266
(863) 993-4846

TBD

Extension Agent I, Multi-County, Sustainable Agriculture
and Food Systems, Commercial Horticulture
Sumter, Pasco, and Hernando Counties
UF/IFAS Extension Sumter County
7620 SR 41 Suite 2
Bushnell, FL 33513
(352) 569-6872

Mr. W. Chris Oswalt

Extension Agent IV, Multi-County, Citrus
Hillsborough and Polk Counties
UF/IFAS Extension Polk County
PO Box 9005, Drawer HS03
Bartow, FL 33831-9005
(863) 519-8677
Email: wcoswalt@ufl.edu

Dr. Amir Rezazadeh

Extension Agent II, Multi-County, Fruit/Field Crops
UF/IFAS Extension St. Lucie County
8400 Picos Rd., Suite 101
Ft. Pierce, FL 34945
(772) 462-1660
Email: amir2558@ufl.edu

Mr. Matt T. Smith

Extension Agent II, Multi-County, Commercial Crop
Production & Food Systems
UF/IFAS Extension Lake County and Orange Counties
1951 Woodlea Rd.
Taveres, FL 32778
(352) 343-4101
Email: smith197@ufl.edu

Mrs. Danielle Williams

Extension Agent II, Multi-County, Commercial
Horticulture
UF/IFAS Extension Gadsden County
2140 W. Jefferson St.
Quincy, FL 32351
850-875-7255
Email: dsprague@ufl.edu

Dr. Mongi Zekri

Extension Agent IV, Multi-County, Citrus
UF/IFAS Extension Charlotte, Collier, Glades, Hendry, and
Lee Counties
PO Box 68
LaBelle, FL 33975-0068
(863) 674-4092
Email: maz@ufl.edu