

Dear Candidate,

This packet serves as an introduction to the University of Florida, Institute of Food and Agricultural Sciences (UF/IFAS). It includes materials about our programs and services as well as some agricultural background that may be useful.

The agricultural and natural resources sector represents Florida's second largest industry. Our state is home to about 47,700 farms, 300 plus agricultural crops which average 200 acres and collectively account for about 9.6 million acres. In addition, there are almost 5 million acres of planted timberland. **You can find additional information about Florida's agriculture and natural resources industry in a small book included in your packet.**

It is important to know that by 2050, there will be an estimated 10 billion people on Earth who will require food, fuel and timber produced with the same amount of farmland that exists today. UF/IFAS is the largest and most comprehensive agriculture and natural resources program found among Florida's and the nation's public universities. As a land-grant institution, UF operates with a federal mandate to improve the state's agricultural and natural resources industries.

We are the research and develop arm of the agriculture and natural resources industries. We work to fuel the state's economy by helping to grow crops, fight disease, raise beef and dairy cattle, conserve water, preserve wildlife, educate youth, and much more. UF/IFAS is helping hard-working Floridians earn a better living, putting nutritious food on supermarket shelves, creating a culture of learning and educating leaders to give the next generation a future full of possibility.

The UF/IFAS enterprise has three main units, focused on teaching, research and Extension. There are 14 academic departments and two schools based in Gainesville, Extension offices in each county, as well as 17 off-campus research centers and demonstration sites. The implementation of these programs is driven by the needs of the local communities.

We hope we can serve as a resource of information during your administration. Our contact information is included in this packet.

Sincerely,

UF/IFAS Governmental Affairs

A handwritten signature in black ink, appearing to read 'Mary Ann Hooks'.

Mary Ann Hooks, Director
mahooks@ufl.edu
8503227259

A handwritten signature in black ink, appearing to read 'Victoria Price'.

Victoria Price, Assistant Director
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The University of Florida Institute of Food and Agricultural Sciences Briefing

UF/IFAS is the **largest and most comprehensive agriculture and natural resources enterprise found in Florida's public universities**. As a land-grant institution, operating as a federal-state-county partnership, UF receives federal support through a **federal mandate to improve the state's natural resources and agricultural industries**.

There are 14 academic departments and two schools based in Gainesville, Extension offices in each county, as well as 17 off-campus research centers and research demonstration sites. While extending into every community of the state, UF/IFAS has developed an international reputation for its accomplishments in teaching, research and Extension. The implementation of these programs is driven by the needs of the local communities.

Today, the UF land-grant enterprise of IFAS is vast and complex, not operating in isolation, but serving the entire state of Florida. **Being located and operating facilities statewide, within local communities, enables UF/IFAS personnel interact regularly with agriculture producers, elected officials, representatives of academia, government agencies and nonprofit organizations.**

UF/IFAS regularly engaged in collaborations and other activities supporting the Florida Department of Agriculture and Consumer Sciences, the five water management districts, Florida Fish and Wildlife Conservation Commission, and the Florida Department of Environmental Protection providing research and educational services. At the federal level, UF/IFAS research projects often receive financial support from the U.S. Department of Agriculture, the U.S. Environmental Protection Agency, National Oceanic and Atmospheric Administration, U.S. Department of Energy, U.S. Department of Commerce, U.S. Department of Defense and the U.S. Forest Service.

UF/IFAS has a \$610 million economic contribution to the state supplying 8,862 jobs according to a UF Economic Report in 2017-2018. Sponsored research within UF's Agriculture and

Natural Resources or IFAS accounted for \$166.2 Million dollars for the 2017-2018 year and state expenditures for Research and Extension accounting for \$199.5 million. UF/IFAS Extension and Research covers a wide and diverse set of issues that support Floridians and our growing population.

Land-Grant University System

The land-grant university system is the envy of nations and dates back to 1862, to provide access to higher education for people of average means or working class. With practical application of technologies and an accessible education, the working class not only developed the infrastructure and managed land, but also shaped and advanced the research enterprises of the land grant system. The land-grant university system is a national network of public land-grant institutions, responsible for carrying out a tripartite mission focused on teaching, research, and Extension. The land-grant system we have now was established by three separate federal acts: The Morrill Act of 1862, The Hatch Act of 1887, and The Smith-Lever Act of 1914.

Funding for UF/IFAS also comes from numerous public and private sources including federal and state agencies, state appropriations, county governments, grants and contracts and proceeds from the Florida lottery and gifts.

UF/IFAS receives federal funding that supports research and Extension at land-grant institutions like UF, that have state-matching requirements based on the federal mandates:

- Hatch Act for agriculture experiment stations
- Smith-Lever Funds 3(b) and 3(c) for cooperative extension
- Evans-Allen for agricultural research
- McIntire-Stennis for cooperative forestry research
- 1890 Institutions Extension Services

National Institute of Food and Agriculture (NIFA) is a federal agency, within USDA, responsible for administering federal funding that advances agricultural research, education, and extension to help solve national challenges in agriculture, food, the environment, and communities. UF/IFAS received \$74.3 million from USDA in FY 2018.



In conjunction with federal law, the state of Florida established statutes Chapter, 1004.31, 1004.37, and 1011.49 to carry out the land-grant mission of teaching, research and Extension.

State funding allocated by the Florida legislature, annually provides about half the funding needed for the UF/IFAS annual budget and included proceeds from student tuition. Some of the funding is specifically marked for purposes such as construction and faculty hires, but most support our ongoing teaching, research and Extension methods.

Three units at UF, respective to the land-grant mission, are Teaching (or Instruction) within the UF/IFAS College of Agricultural and Life Sciences, Research conducted under auspices of Florida Agriculture Experiment Station and UF/IFAS Extension through Florida's Cooperative Extension Services.

UF/IFAS Teaching

The UF/IFAS College of Agricultural and Life Sciences (CALs) is the 4th largest college at UF, the 4th largest college of agricultural and related sciences in the United States and 10th Global Colleges of Agricultural and Related Sciences.

As of fall semester 2018, there are 4,340 undergraduates, 1,643 graduate students, 383 teaching faculty, representing 14 departments and two schools with an 11:1 Student-to-Faculty ratio. CALs offers 38 online undergraduate and Master's degrees, undergraduate certificates, and graduate certificates that are not available anywhere else in the state.

Ninety-one percent of UF/IFAS CALs alumni are Florida residents with many entering professional programs in fields such as medicine, pharmacy, law, dentistry, and veterinary medicine. Other graduates enter the workforce after earning undergraduate degrees as research scientists, crop managers, economist, industry executives, Extension agents, teachers, entrepreneurs and more.

UF/IFAS Research

The Research Enterprise at UF/IFAS is conducted under the auspices of the Florida Agriculture Experiment Station.



The research enterprise represents work from 558 faculty members in research appointments from all 14 academic departments and disciplines at UF/IFAS. Research projects are conducted at the UF main campus, off-campus at 12 research and education centers, and five research and demonstration sites.

Financial support for UF/IFAS research comes from a variety of sources including federal contracts and grants, state programs and appropriations, check off programs sponsored by agriculture producers, non-profit organizations and private companies, donations and revenues from licensing of crop cultivars, products and technologies developed at UF/IFAS. **Findings from research are used as the basis for Extension programs taught statewide via social media and websites, field and office consultations, publications, distance education, community educational programs, and field day events. They are also the foundation of many classes at UF CALs, providing students with the latest in technology and information.**

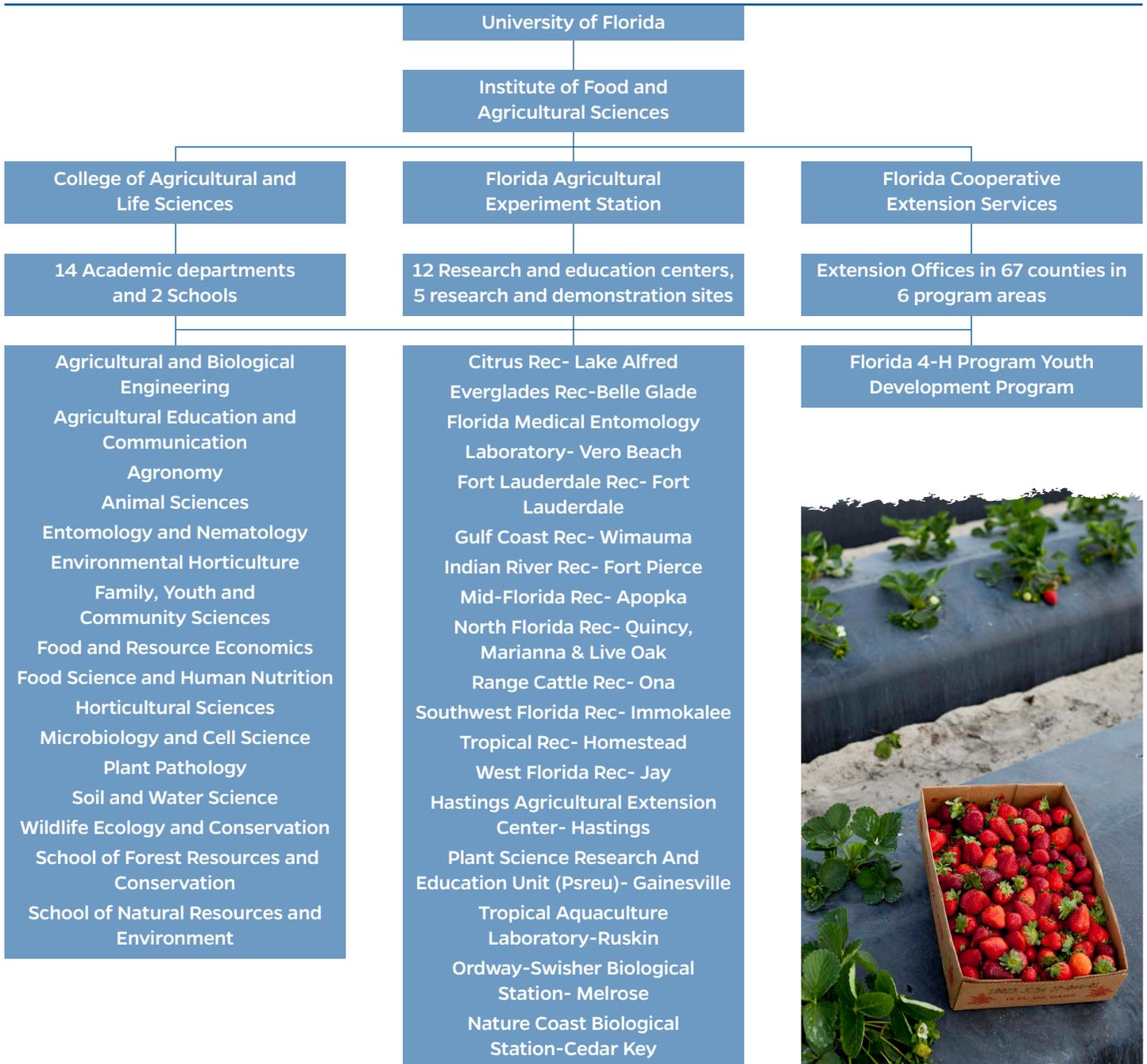
UF/IFAS Extension

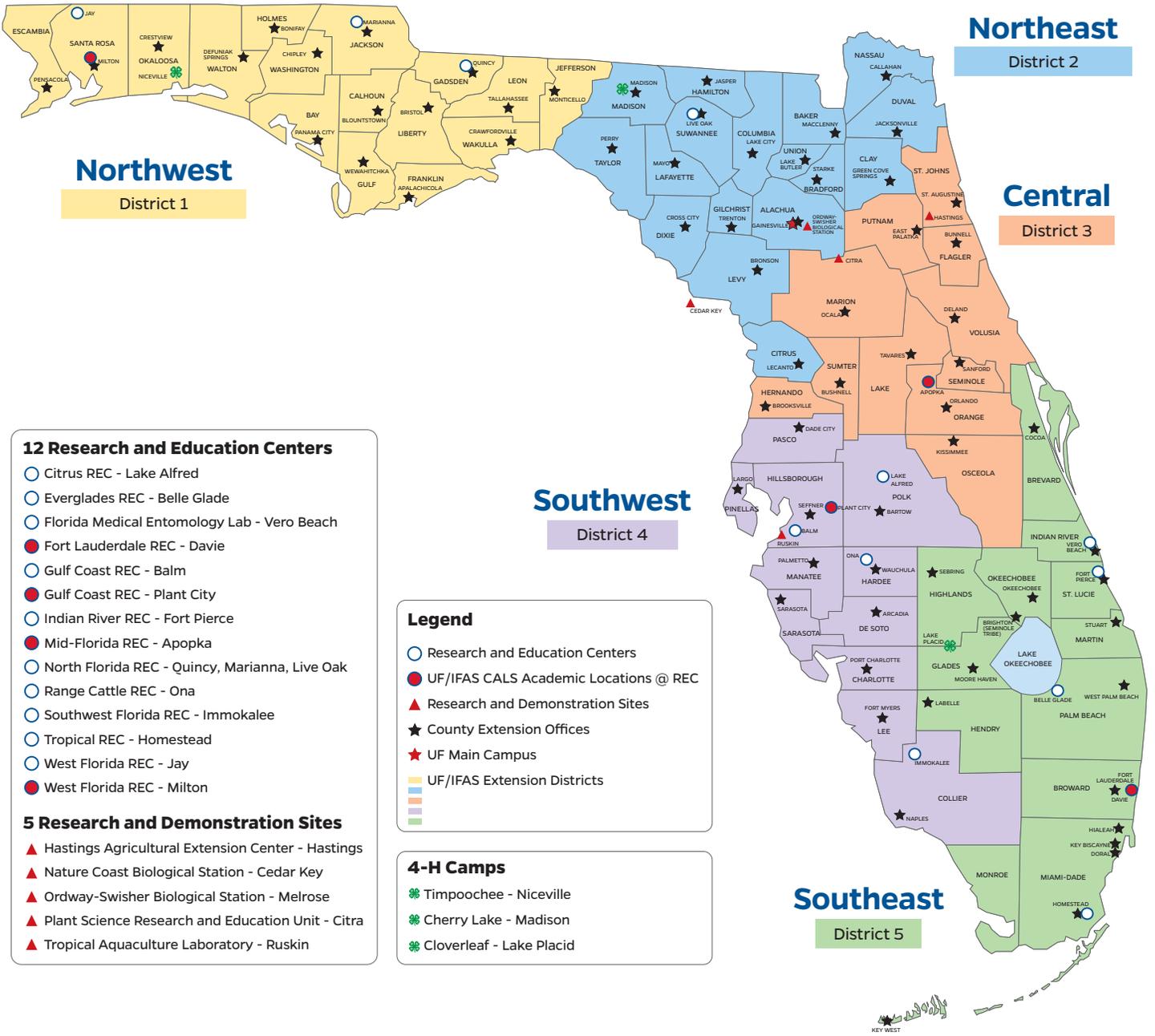
UF/IFAS Extension is the statewide network of experts provides science-based education to residents, agriculture producers and natural resources professionals. In turn, agents relay concerns and questions to UF/IFAS researchers when new solutions are needed. Extension operates through statewide specialists who provide insightful guidance for agricultural commodities such as fruit and vegetable crops, livestock, seafood, aquaculture, and urban horticulture. They also provide the community with information on nutrition, food safety, family resources, youth and development and more. Agents offer trainings for professional development, travel to agricultural operations to provide onsite advice, administer the Florida 4-H Youth Development Program, and other programs such as food safety, nutrition and the Florida Naturalist Program. They maintain the Electronic Data Information Source (EDIS), a massive online Extension document library available for the public on a myriad of topics.



Florida 4-H Youth Development Program

Florida 4-H Youth Development Program is a national partnership within the Cooperative Extension Service providing youth in rural, urban, and suburban communities with programming out-of school, in-school, camping and through clubs with opportunities “to learn by doing.” Florida 4-H has about 200,000 youth engaged ages 5-18, 11,000 adult and youth trained-volunteers, 279,000 county projects, and three UF Educational facilities to operate camps – Cherry Lake, Timpoochee, and Cloverleaf. See Map on the back for detailed locations.





12 Research and Education Centers

- Citrus REC - Lake Alfred
- Everglades REC - Belle Glade
- Florida Medical Entomology Lab - Vero Beach
- Fort Lauderdale REC - Davie
- Gulf Coast REC - Balm
- Gulf Coast REC - Plant City
- Indian River REC - Fort Pierce
- Mid-Florida REC - Apopka
- North Florida REC - Quincy, Marianna, Live Oak
- Range Cattle REC - Ona
- Southwest Florida REC - Immokalee
- Tropical REC - Homestead
- West Florida REC - Jay
- West Florida REC - Milton

5 Research and Demonstration Sites

- ▲ Hastings Agricultural Extension Center - Hastings
- ▲ Nature Coast Biological Station - Cedar Key
- ▲ Ordway-Swisher Biological Station - Melrose
- ▲ Plant Science Research and Education Unit - Citra
- ▲ Tropical Aquaculture Laboratory - Ruskin

Legend

- Research and Education Centers
- UF/IFAS CALS Academic Locations @ REC
- ▲ Research and Demonstration Sites
- ★ County Extension Offices
- ★ UF Main Campus
- UF/IFAS Extension Districts

4-H Camps

- ☘ Timpoochee - Niceville
- ☘ Cherry Lake - Madison
- ☘ Cloverleaf - Lake Placid



Every \$1
invested in agricultural
research will yield
**\$20 in
benefits.**



UF/IFAS College of Agricultural
and Life Sciences is one of the
Top 5
largest colleges of its type
nationwide for
enrolled students.



**\$3.23
billion**
in benefits from
UF/IFAS expenditures
on agricultural
R&D for
FY 2018-19.



UF/IFAS
research garnered
\$161.3 million
in sponsored
projects in
FY 2018-19.



28,404,945
UF/IFAS Extension
personal
client contacts
in CY 2018

Public Investment in
UF/IFAS Yields Significant

**Economic
Benefits
and Jobs**

Precision Agriculture

Precision agriculture uses high technology to address crop-management issues more efficiently than traditional methods can. At UF/IFAS, we've harnessed precision agriculture since the 1980s. Innovations we're developing today will help growers tomorrow — by reducing expenses, limiting environmental impact and boosting yields.



Today, the smart sprayer's accuracy ranges from **55% to 90%**. Researchers believe it could be improved to nearly **100%**.

A computer-guided “smart sprayer” device promises to reduce herbicide use in outdoor vegetable production with plasticulture systems. The sprayer can recognize openings in the plastic sheeting that covers the crop beds — the only place herbicide is needed — and apply a small amount of herbicide to each opening.



In tests, the citrus app correctly identified problems in **89%** of samples submitted.

A high-tech breakthrough from UF/IFAS will soon enable citrus growers to diagnose nutrient deficiencies and other problems right in the grove using a smart phone. Citrus experts have developed an app that can analyze photos of citrus leaves and detect any of four nutrient deficiencies, three diseases and one arthropod pest that might be affecting tree health. The research team plans to expand the suite of problems the app can diagnose.



Studies show that the UV system reduced the presence of powdery mildew by **80% to 95%**.

Researchers with the UF/IFAS Gulf Coast Research and Education Center believe they've found a more sustainable method for protecting strawberry plants from the disease powdery mildew — ultraviolet light. They developed a self-guided robot that emits bursts of UV light as it traverses strawberry fields at night — enough to kill the powdery mildew pathogen but not enough to harm plants or fruit.



Water Quality and Supply

By 2025, Florida's population is projected to reach 22 million and the state's demand for potable water will reach 9.1 billion gallons per day — a 26.4% increase from 2015. In order to ensure that all Floridians have access to the water they need, UF/IFAS experts are conducting cutting-edge research and bringing the results directly to growers and the public.

The **Florida-Friendly Landscaping™** (FFL) program educates residents on protecting water quality by applying nine FFL principles.



In 2018, FFL helped homeowners conserve **386,541,761** gallons of water by following science-based advice and Best Management Practices.



Use of FFL principles saved residents **\$1,279,453** in billings.



220,000 Florida homeowners and landscaping professionals participated in water-conservation programming offered by UF/IFAS Extension during 2018.

Biological Control

Florida is home to more than 1,400 non-native plant species. These “worst of the worst” plants are called invasive species. UF/IFAS researchers have found natural enemies that could help control these pest plants. This practice is known as biological control, and UF/IFAS has successfully used it against tropical soda apple, melaleuca and pest mole crickets.

During 2019, a UF/IFAS project conducted government-authorized releases of a tiny, flying insect that should help manage the Brazilian peppertree. Commonly called the Brazilian peppertree thrips, this insect feeds on the peppertree in its native Brazil, and appears able to survive in Florida.



Brazilian pepper trees, an invasive species that occupy about **700,000** acres in Florida, grow up to 30 feet tall and take over space where native plants should be.

On average, **77%** of Florida Brazilian peppertrees are susceptible to attack by the biological control species.



In 2016, the South Florida Water Management District spent **\$2.6 million** in herbicidal controls for the Brazilian peppertree.

One rancher indicated that his operation spends about **\$250,000** annually to fight Brazilian peppertree on **40,000** acres.

UF/IFAS Providing Science & Solutions

While the words natural resources, water, healthy living, sustainability and ecosystems may not be in our name, they certainly are in our DNA. Across the state, hundreds of University of Florida Institute of Food and Agricultural Sciences (UF/IFAS) faculty and staff members are working on teaching, research and Extension programs that protect Florida's environmental quality and provide an improved quality of life for our 21.7 million-plus residents.

UF/IFAS is the largest and most comprehensive natural resources and life sciences enterprise among Florida's public universities and a leader in the nation. Areas of focus include:

- Climate Variability
- Land-Use Issues
- Forest Science
- Sustainability
- Water Quality And Conservation
- Wildlife
- Ecotourism
- Carbon Sequestration
- Energy Conservation
- Invasive Species
- Ecology
- Greenhouse Gases
- Fisheries
- Ecosystem Services

Water



UF/IFAS experts are at the forefront of protecting our water resources, tackling tough issues and anticipating the next challenge to our statewide water system. UF/IFAS faculty experts in programs from **the UF Water Institute, Florida Sea Grant** and multiple departments serve on the **Governor's Blue-Green Algae Task Force** and the **revived Red Tide Task Force**. UF/IFAS Extension, research and science-based educational programs in urban water provide the professional horticulture industry, homeowners and builder-developers with Best Management Practices and skills necessary to create and manage landscapes, reduce risk to the environment and protect natural resources. UF/IFAS provides advice about using water effectively and efficiently through **the Florida-Friendly Landscaping™, Florida Master Naturalist and Florida Master Gardener Volunteer** programs that engage thousands of residents who apply or promote science-based best practices. The UF/IFAS "Water in the Environment" program

includes educational materials on **aquifers, surface waters, watersheds and wetlands**.

UF/IFAS Water Results with Impact

- Landscape water conservation is a priority for UF/IFAS Extension, and in just one year (2017), UF/IFAS Extension programs were able to demonstrate savings of 386,541,761 gallons statewide.
- In Marion County, the planned community On Top of the World has worked with UF/IFAS for many years to incorporate Florida-Friendly Landscaping™ into its plans for home and common-area landscapes and is participating in a research project to determine whether the addition of compost to new lots will increase soil moisture retention, a perennial issue in Florida. On Top of the World also helped develop requirements for the Florida Water StarSM certification with guidance and education from a UF/IFAS Florida Yards & Neighborhoods Coordinator.

- Florida LAKEWATCH, a “citizen science” program, facilitates “hands-on” participation in the management of Florida lakes, rivers, and coastal sites through monthly monitoring activities. LAKEWATCH seeks to solve water-management problems with more than 1,800 trained volunteers monitoring more than 600 sites in 40 counties.

Water chemistry data and water-depth maps are available for more than 1,100 lakes, 175 coastal sites, 120 rivers, and five springs in Florida, thanks to LAKEWATCH’s long partnership with Florida’s Department of Environmental Protection.

Ecosystems



From our forests, wetlands and coasts to our urban and rural communities, UF/IFAS is working to conserve natural resources for use today and for future generations. UF/IFAS is helping conserve imperiled species and restore ecosystems on which they depend. Wildlife viewing in Florida contributes nearly \$5 billion to Florida’s economy and supports nearly 45,000 jobs. Through research and Extension programs, UF/IFAS supports those who use and manage our fisheries and we help keep forests healthy through initiatives in **fire science, disease prevention and Best Management Practices.**

Because Florida has a constant flow of international products and visitors introducing thousands of non-native animals, plants, fungi and microbes every year, UF/IFAS scientists have long been monitoring newly arrived organisms and taking steps to control those that prove to be **invasive species.** The UF/IFAS Entomology and Nematology Department develops methods of managing insect and nematode pests and managing important vectors of pathogens that cause diseases in plants, animals and humans. The UF/IFAS Department of Soil and Water Sciences is one of the few programs in the nation to offer comprehensive programs (molecular to landscape level) involving **terrestrial, wetlands and aquatic ecosystems.**

UF/IFAS Ecosystems Results with Impact

- UF/IFAS Fort Lauderdale Research and Education Center is home to Florida’s “Croc Docs,” a team of wildlife

biologists, ecological modelers and outreach specialists in south Florida. The Croc Docs’ long-term, applied research and monitoring focuses on Florida’s alligators and crocodiles, invasive reptiles, threatened and endangered species, climate change and human dimensions of wildlife ecology. This work addresses pressing wildlife management needs and provides scientific support for Everglades restoration.

- In summer 2019, a UF/IFAS Wildlife Ecology and Conservation student participated in a research project that collected distribution and abundance data on threatened green turtles in the northeastern Gulf of Mexico. The surveys also identified population hotspots for threatened loggerhead turtles, critically endangered Kemp’s ridley turtles and large coastal sharks across 528 miles of in-water habitat between Apalachee Bay and Hernando Beach.
- In recent decades, UF/IFAS’ world-class Entomology and Nematology Department has built an impressive record for managing invasive species with biocontrol. Biocontrol efforts for Brazilian peppertree in southeast Florida launched during fall 2019 are expected to save the state of Florida millions in control costs. Another effort to combat the invasive plant tropical soda apple led to federally approved releases of a South American beetle that feeds exclusively on the plant, saving money for ranchers.

- UF/IFAS Tropical Aquaculture Lab has developed breeding and rearing methods for more than 20 species of freshwater and marine fish destined for ornamental and food markets. In 2016, the lab was the first in the world to successfully spawn, hatch and rear the Pacific blue tang, popular in the film “Finding Dory,” reducing collection pressures on wild populations of the fish and providing

Florida farms with an opportunity to secure part of a \$2 million annual market.

- Supported by UF/IFAS Extension, the Natural Areas Training Academy offers hands-on workshops covering ecosystem management, wildfire suppression and the use of prescribed burns for habitat enhancement. In 2018, the academy’s training sessions were attended by 144 individuals statewide who represented 54 organizations.

Coastal Resiliency



From **habitat protection, to hurricane preparedness, to sustainable fishing**, it takes a combination of innovative research and local knowledge to meet these challenges. UF/IFAS Extension Florida Sea Grant agents, who live and work within coastal communities, use their experience and expertise in developing municipal plans for dealing with **sea-level rise and storm damage, enhancing aquaculture and fisheries, helping local businesses market ecotourism, promoting safe and sustainable offshore recreation, and conserving the beauty and viability of coastal ecosystems**. Supported by UF/IFAS, Florida Sea Grant is one of 33 university-based programs that form the National Sea Grant College Program, a partnership between state university systems and the National Oceanic and Atmospheric Administration. Florida Sea Grant supports specialized academic and Extension faculty positions that advance UF/IFAS’ broad missions. Florida Sea Grant conducts UF/IFAS Extension programs concerning **marine fisheries, aquaculture, healthy coastal habitats and disaster resilience for coastal communities**; top priorities include harmful algal blooms, sustainable fisheries and sea-level rise.

UF/IFAS Coastal Resiliency Results with Impact

- When Hurricane Irma struck the Florida Keys in 2017, Florida Sea Grant helped lobstermen get back to business by contributing funds to hire spotter planes equipped with cameras and GPS systems to locate traps below the water’s surface. This effort saved the industry nearly \$4 million in expenses and lost fishing income.
- The Tampa Bay region is low-lying and densely populated, making it especially vulnerable to impacts from sea-level rise. Responding to requests from two dozen local governments, a UF/IFAS Florida Sea Grant agent worked with the Tampa Bay Regional Planning Council to develop guidance on sea-level rise adaptation planning for Hillsborough, Manatee, Pasco and Pinellas counties.
- UF/IFAS researchers have found that the declines of oyster reefs can be reversed via construction of artificial reefs that attract free-floating larval oysters. In coastal Hernando County, a team of Florida Sea Grant agents, specialists and more than 90 volunteers planned, prepared and placed a new oyster reef in Centipede Bay.

Human Systems



Numerous UF/IFAS programs and departments focus on aspects of healthy living, striving to engage and inspire Florida residents who wish to make positive changes. Studies by UF/IFAS researchers investigate topics in human systems such as **human nutrition, community development, global competitiveness, labor-saving technologies, marketing, consumer behavior, financial management, sustainable development, economics, chronic disease and nutrition, youth and family development, and disaster preparation and recovery.**

UF/IFAS' teaching, research and Extension programs have long worked with a holistic view, making meaningful interventions along the whole spectrum of human health. These researchers are housed in many UF/IFAS departments, including family, youth and community sciences; food science and human nutrition; and microbiology and cell science. Within this area, UF/IFAS Extension offers advice and recommendations for cooking and nutrition with diets and recipes – on buying and preparing foods for all ages and a variety of health conditions and needs. UF/IFAS conducts research, develops modern teaching approaches and communicates findings to help consumers and decision-makers make a difference across global food systems in the area of food safety. UF/IFAS educational materials help residents cope with challenges that range from managing relationships and sustaining communities to infant care and child discipline to blended families and end-of-life issues, to improving your home's energy efficiency and preparing for future natural disasters, such as hurricanes.

When disaster threatens, UF/IFAS Extension has several critical roles to play – not only providing expertise for preparation and recovery, but also directly serving in local

emergency operations. The UF/IFAS Disaster Preparation & Recovery website and manual offer resources to help Floridians cope with natural disasters – before, during and after the event itself.

The 4-H Youth Development Program is part of the land-grant university system in every state; in Florida, the program serves youth ages five through 18, and is delivered through UF/IFAS Extension in all 67 counties. Today, youth can get involved in a range of project areas, including STEAM (science, technology, engineering, arts and math), community service, healthy living and leadership. 4-H members develop critical life skills and workforce readiness to succeed as adults.

UF/IFAS Human Systems Results with Impact

- Pioneering studies by UF/IFAS Food Science and Human Nutrition Department faculty established the folic acid requirement during pregnancy, which led to the establishment of food-fortification procedures worldwide to prevent birth defects.
- UF/IFAS Extension faculty federally funded through the Family Nutrition Program and the Expanded Food and Nutrition Education Program provide health and nutrition outreach to limited-resource individuals and families in nearly every county in Florida. These outreach programs are held at locations where people normally gather, such as schools, community centers, libraries and churches. This team works closely with Department of Children and Families Economic Sustainability personnel administering the SNAP program.
- Living 10 miles from the nearest grocery store, seniors in a low-income Jacksonville apartment building made do with packaged foods from a nearby mini-mart. Consistent access to fresh fruits and vegetables was not an option until the UF/IFAS Family Nutrition Program teamed up with Urban Folk Farm, a local grower, to provide free nutrition education and fresh produce on-site.
- Through Florida 4-H, youth have the opportunity to participate in programs such as 4-H Legislature, a multiday mock legislative session in the Florida State Capitol Building in Tallahassee; 4-H University, a week on the University of Florida campus exploring opportunities in the UF/IFAS College of Agricultural and Life Sciences; and Citizenship Washington Focus, a leadership and citizenship program open to teen 4-H'ers from across the country. Nearly 200,000 Florida youth participate in Florida 4-H.

FLORIDA

Agriculture

FAST FACTS 2018

UF | IFAS
UNIVERSITY *of* FLORIDA

ifas.ufl.edu

Dear Friends,



*Jack Payne, UF Senior Vice President
Agriculture and Natural Resources*

In calendar year 2015, Florida's crop, livestock, forestry and fisheries production accounted for 212,959 jobs, \$11.277 billion in direct output (revenues) and \$12.715 billion in total value-added contributions for Florida's economy.

This booklet provides a snapshot of these industries and, while impressive, they represent only part of the business activities that are combined and classified together as "agriculture, natural resources and food industries."

Florida's agriculture and natural resources industries are essential to the state's economic and environmental health. At UF/IFAS we are proud to support these industries with cutting-edge research, innovative teaching programs and strong, producer-focused outreach efforts.

Sincerely,

A handwritten signature in black ink that reads "Jack M. Payne". The signature is written in a cursive, flowing style.

Jack M. Payne

Source: UF/IFAS EDIS document FE1020, "Economic Contributions of Agriculture, Natural Resources, and Food Industries in Florida in 2015," <http://edis.ifas.ufl.edu/fe1020>

Other sectors of Florida's overall agriculture, natural resources and food industries provided employment and value-added contributions in 2015, as follows:

Food and Kindred Products Distribution

Example: Supermarkets, restaurants
1.47 million jobs, \$78.833 billion

Agricultural Inputs and Services

Example: Fertilizer manufacturers
271,940 jobs, \$15.053 billion

Food and Kindred Products Manufacturing

Example: Frozen-food companies,
citrus juice processors
151,432 jobs, \$13.898 billion

Forest Products Manufacturing

Example: Pulp and paper mills, sawmills
73,040 jobs, \$6.550 billion

Mining

Example: Phosphate mining companies
48,826 jobs, \$2.651 billion

Nature-Based Recreation

Example: Everglades airboat tour providers,
golf courses
42,475 jobs, \$2.336 billion

Florida Overview

- Considered the U.S. gateway to Latin America and the Caribbean, due to the constant flow of people and goods between Florida and nations to the south.
- Mixture of sub-tropical and tropical climates, enabling year-round production of freeze-sensitive crops.
- Highly productive pine and hardwood forest resources.
- Longest coastline in contiguous U.S. and extensive marine fisheries.
- Average annual rainfall 54 inches.
- Vast underground reserves of high-quality water.



State population **21 million** (third most populous U.S. state).

Because Florida produces a wide range of commodities — about 300 — it's known as a “**specialty crop state.**”

Florida's agricultural and natural resources industries manage about **two-thirds of the state's land area.**

Florida

ECONOMIC CONTRIBUTION

AGRICULTURE, NATURAL RESOURCES AND FOOD INDUSTRIES IN FLORIDA IN 2015

Of all Florida industries, **the sectors employing the largest number of people represent agriculture, natural resources, and food manufacturing, distribution and services.**

Source: UF/IFAS EDIS document FE1020.

1,616,235

full-time and part-time direct jobs, plus 655,877 indirect jobs in other sectors, representing 19.8 percent of all Florida jobs.

\$160.714 billion

in total industry output (revenue) contributions, including multiplier effects.

\$132.035 billion

in total value-added contributions (including multiplier effects), representing 14.7 percent of Florida's Gross State Product.

\$60.529 billion

in revenues from Florida products and services exported to other states and nations.

\$13.000 billion

in taxes on production and imports paid by Florida businesses to local, state and federal governments.



Florida

FARMS & FARMLAND

47,000
total number of farm operations

9,450,000 acres
(14,766 square miles)
total area in farms

201 acres
average farm size

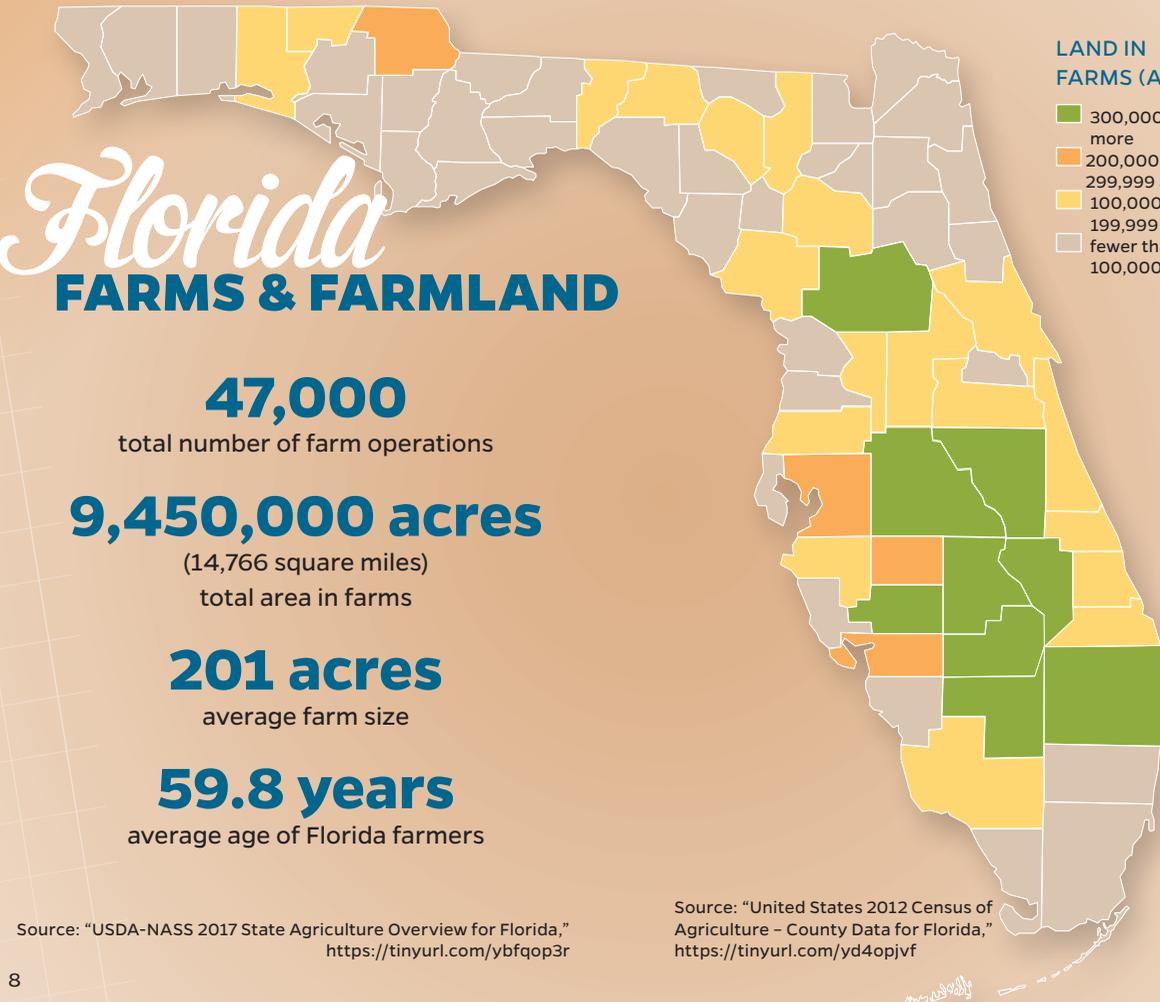
59.8 years
average age of Florida farmers

Source: "USDA-NASS 2017 State Agriculture Overview for Florida,"
<https://tinyurl.com/ybfqop3r>

Source: "United States 2012 Census of
Agriculture - County Data for Florida,"
<https://tinyurl.com/yd4opjvf>

LAND IN FARMS (ACRES)

- 300,000 acres or more
- 200,000 to 299,999 acres
- 100,000 to 199,999 acres
- fewer than 100,000 acres



Florida NATIONAL RANKINGS

- **1st** in the value of production for oranges, grapefruit and watermelons.
- **1st** in the value of tropical foliage plants and cut cultivated greens.
- **1st** in value of fresh-market snap beans, cucumbers and fresh-market tomatoes.
- **1st** in the value of sugarcane.

Source: "2016 Florida Agriculture by the Numbers," Florida Department of Agriculture and Consumer Services, <https://tinyurl.com/yd74ff85>

- **2nd** in value of production for bell peppers, strawberries, fresh-market sweet corn and squash.
- **2nd** in value of greenhouse and nursery crops.
- **3rd** in value of honey and fresh-market cabbage.
- **3rd** in value of turfgrass sod.
- **4th** in value of peanuts.
- **13th** in number of beef cows.
- **14th** in egg production.
- **19th** in number of dairy cows.

Sources: "2016 Florida Agriculture by the Numbers," "2014 U.S. Census of Horticultural Specialties," <https://tinyurl.com/ycd5ab3d>



FLORIDA CROP PRODUCTION VALUES, 2017 (unless noted)

Crop	Million Dollars
Floriculture Crops	1,039 ¹
Oranges	886.5
Nursery Crops	574.7 ²
Strawberries	336.9
Tomatoes, in the open	262.0
Peppers, Bell	206.3
Sweet Corn	158.3
Peanuts	153.9
Cucumbers	137.6
Watermelon	135.6
Potatoes	124.9
Hay (excl. alfalfa)	117.0
Grapefruit	109.6
Snap Beans	70.8
Blueberries	53.7 ³
Cotton, upland	52.5
Cabbage	42.0

Crop	Million Dollars
Tangerines	36.2
Squash	29.7
Corn, grain	24.7
Avocados	19.1 ³
Cantaloupe	10.3
Tangelos	8.8 ³
Soybeans	4.2
Wheat, winter	2.1

¹ 2015 figure

² 2014 figure

³ 2016 figure

Sources: "USDA-NASS 2017 State Agriculture Overview for Florida;" "Economic Contributions of the Environmental Horticulture Industry in Florida in 2015," UF/IFAS, <https://tinyurl.com/y9vzuxvc>; "2014 U.S. Census of Horticultural Specialties;" USDA-NASS Quick Stats 2016, <https://tinyurl.com/yc5hm23a>



County-by-County EMPLOYMENT

EMPLOYMENT CONTRIBUTIONS OF AGRICULTURE, NATURAL RESOURCES AND FOOD INDUSTRIES IN FLORIDA COUNTIES AND THE PERCENTAGE OF OVERALL COUNTY EMPLOYMENT THESE INDUSTRIES REPRESENTED IN 2015.

County	Total County Employment	Ag-Food Employment	% of County Employment
Alachua	169,134	32,445	19.2%
Baker	9,856	214	2.2%
Bay	106,372	25,452	23.9%
Bradford	10,287	3,870	37.6%
Brevard	287,579	42,232	14.7%
Broward	1,169,282	188,484	16.1%
Calhoun	4,642	1,250	26.9%
Charlotte	71,724	12,943	18.0%
Citrus	50,621	8,990	17.8%
Clay	72,656	13,396	18.4%
Collier	213,343	50,142	23.5%
Columbia	29,664	6,082	20.5%

County	Total County Employment	Ag-Food Employment	% of County Employment
DeSoto	11,874	5,658	47.7%
Dixie	4,573	1,852	40.5%
Duval	690,537	122,095	17.7%
Escambia	181,978	30,670	16.9%
Flagler	27,241	6,710	24.6%
Franklin	6,102	1,394	22.8%
Gadsden	19,148	5,009	26.2%
Gilchrist	6,000	2,322	38.7%
Glades	4,389	2,157	49.1%
Gulf	6,060	1,068	17.6%
Hamilton	4,271	3,558	83.3%
Hardee	11,003	6,910	62.8%
Hendry	17,511	13,604	77.7%
Hernando	61,058	12,467	20.4%
Highlands	37,489	12,533	33.4%
Hillsborough	875,373	180,161	20.6%
Holmes	7,734	1,828	23.6%
Indian River	71,306	18,152	25.5%
Jackson	19,381	5,141	26.5%
Jefferson	5,729	1,875	32.7%
Lafayette	2,454	1,061	43.2%
Lake	135,239	32,531	24.1%
Lee	350,988	76,765	21.9%
Leon	193,527	33,250	17.2%

County	Total County Employment	Ag-Food Employment	% of County Employment
Levy	13,882	4,373	31.5%
Liberty	2,880	1,202	41.8%
Madison	6,739	2,989	44.4%
Manatee	182,838	49,085	26.8%
Marion	141,616	31,493	22.2%
Martin	99,620	24,617	24.7%
Miami-Dade	1,705,110	273,336	16.0%
Monroe	64,812	18,437	28.4%
Nassau	30,546	13,030	42.7%
Okaloosa	131,804	23,223	17.6%
Okeechobee	15,820	7,868	49.7%
Orange	1,004,300	199,200	19.8%
Osceola	112,940	24,072	21.3%
Palm Beach	894,456	172,133	19.2%
Pasco	143,380	27,022	18.8%
Pinellas	580,120	89,083	15.4%
Polk	278,089	108,340	39.0%
Putnam	21,993	8,937	40.6%
Santa Rosa	53,848	10,277	19.1%
Sarasota	260,237	44,463	17.1%
Seminole	249,815	43,778	17.5%
St. Johns	91,429	23,411	25.6%
St. Lucie	113,791	23,362	20.5%
Sumter	33,748	9,579	28.4%
Suwannee	16,943	7,265	42.9%
Taylor	8,817	7,946	90.1%

County	Total County Employment	Ag-Food Employment	% of County Employment
Union	5,331	1,092	20.5%
Volusia	214,905	44,254	20.6%
Wakulla	10,075	1,808	17.9%
Walton	34,027	10,353	30.4%
Washington	8,462	1,811	21.4%
Total	11,478,496	2,272,112	19.8%

Source: UF/IFAS
EDIS document
FE1020.



Florida CITRUS

- **412,662** commercial fruit-bearing acres in the 2016-2017 season.
- **94.2 million** boxes of citrus fruit (all varieties) harvested in the 2015-2016 season.
- **\$1.248 billion** total value of production for the 2015-2016 season.
- **\$8.63 billion** in total industry output (revenue) contributions in 2015-2016, including multiplier effects.
- **45,422** full-time and part-time jobs employment contribution (including multiplier effects).

Source: "USDA-NASS Commercial Citrus Inventory, August 2017," <https://tinyurl.com/yaf653xs>; "Economic Contributions of the Florida Citrus Industry in 2015-16," UF/IFAS, <https://tinyurl.com/y7wcf7tt>

BOXES OF CITRUS



Source: "Economic Contributions of the Florida Citrus Industry in 2015-16."

Citrus

PRODUCTION AREA

FLORIDA CITRUS BEARING ACREAGE, 2017

Oranges	367,588
Grapefruit	33,846
Tangerines	7,331
Tangelos	2,095
Other	1,802
Total	412,662

FLORIDA CITRUS PRODUCTION VALUE, 2017

Commodity	Value (million dollars)
Oranges	886.5
Grapefruit	109.6
Tangerines	36.2
Total (including other varieties)	1,032.0

Source: "USDA-NASS 2017 State Agriculture Overview for Florida."



Source: "USDA-NASS Commercial Citrus Inventory, August 2017."

Citrus

GREENING DISEASE

- Citrus greening disease, also known by the Chinese term Huanglongbing or the acronym HLB, is a malady that weakens and eventually kills citrus trees. It's caused by a bacterium known as *Candidatus Liberibacter asiaticus*. At present, there is no reliable method for curing HLB or protecting healthy trees from infection.
- The bacterium is transmitted by the feeding activities of an invasive flying insect, the Asian citrus psyllid (*Diaphorina citri*).
- Since August 2005, when citrus greening was first detected in Florida, the disease has spread extensively and now infects virtually 100 percent of commercial groves.
- Economists estimate that Florida's citrus industry has lost \$8.934 billion in cumulative industry output from the 2006-07 through 2015-16 growing seasons.

Sources: "Economic Impacts of Citrus Greening (HLB) in Florida, 2006/07-2010/11" <https://tinyurl.com/ychjllw9>; and "Economic Contributions of the Florida Citrus Industry in 2015-16."

UF/IFAS SUCCESSES AGAINST GREENING

Since late 2005, citrus greening disease has been the No. 1 priority for faculty and staff with UF/IFAS citrus programs statewide.

SOME EXAMPLES:

- Successful release of several greening-tolerant rootstocks and the first HLB-tolerant citrus scion, Sugar Belle®.
- Development of gene-editing techniques specific to citrus trees that may lead to greening-resistant varieties.
- Optimization of tree-care practices to sustain productivity of HLB-infected trees.
- Establishment of the Citrus Health Management Areas program, which helps participating growers coordinate their insecticide applications for maximum effectiveness.
- Creation of Florida-specific designs for protective screen houses, used to grow high-value citrus for the fresh market.

Florida

FORESTS

17.16 million
acres of forestland

50.0 percent
of Florida's total land area

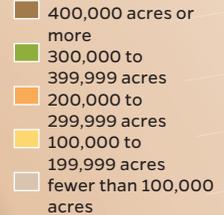
74 million
trees planted annually on 122,000 acres

1,843
business establishments

78
primary wood-using mills

363
secondary wood-
and paper-product manufacturers

FORESTLAND ACREAGE



Sources: "Economic Contributions of the Forest Industry and Forest-Based Recreation in Florida in 2016," UF/IFAS, <https://tinyurl.com/y7gffn2l>; and "USDA Forest Inventory and Analysis Update 2016," <https://tinyurl.com/yddvejnz>

Florida

FORESTRY & FOREST PRODUCT MANUFACTURING

IN 2016

124,104

full-time and part-time jobs

\$10.957 billion

in value-added contribution to state GDP

\$25.045 billion

in total industry output (revenue)
contributions, including multiplier effects

\$1.801 billion

value of forest product exports to other
states and nations

\$2.603 billion

in federal, state and local taxes paid

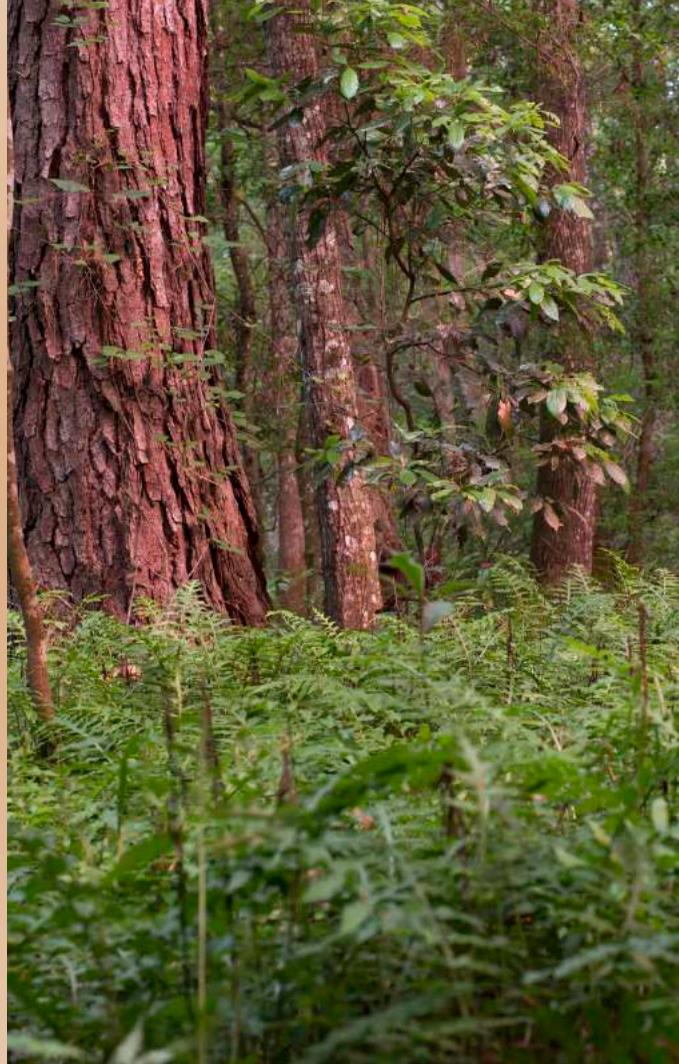
Source: "Economic Contributions of the Forest Industry
and Forest-Based Recreation in Florida in 2016."

FLORIDA FOREST LAND AREA BY FOREST TYPE AND STAND ORIGIN, 2015

Forest Type	Natural stands	Artificial regeneration	Total	% of total
	Acres			
Longleaf/slash pine group	2,679,400	2,983,014	5,662,414	33.0%
Loblolly/shortleaf pine group	786,603	1,044,530	1,831,134	10.7%
Other eastern softwoods group	22,010		22,010	0.1%
Oak/pine group	1,247,773	249,665	1,497,438	8.7%
Oak/hickory group	2,681,221	114,400	2,795,621	16.3%
Oak/gum/cypress group	3,711,618	44,554	3,756,172	21.9%
Elm/ash/cottonwood group	201,300		201,300	1.2%
Other hardwoods group	26,688		26,688	0.2%
Tropical hardwoods group	690,782	7,882	698,663	4.1%
Exotic hardwoods group	50,078	11,942	62,020	0.4%
Non stocked	426,489	176,446	602,935	3.5%
Total	12,523,962	4,632,434	17,156,396	100%

FLORIDA FOREST LAND AREA BY OWNERSHIP AND LAND USE, 2015

Ownership class	Timberland	Reserved Forestland	Other	Total
Acres				
National Forest	1,107,573	54,083	9,571	1,171,227
National Park Service		729,502		729,502
Fish and Wildlife Service		184,785		184,785
Dept. of Defense	520,956		24,527	545,483
Other federal	39,207			39,207
State	2,411,775	448,218	38,166	2,898,158
County and Municipal	336,622	175,665	37,729	550,017
Other local govt.	3,377		5,971	9,348
Private	10,856,821		171,848	11,028,669
Total	15,276,332	1,592,253	287,811	17,156,396



Source: USDA-Forest Service, Forest Inventory and Analysis.

Environmental Horticulture

NURSERY & GREENHOUSE CROPS, LANDSCAPE SERVICES & HORTICULTURAL RETAILERS

- Florida is the **2nd** largest producer of greenhouse/nursery crops in the United States.
- **3,710** commercial nursery and floriculture producers in 2015.

- In 2015, Florida floriculture, greenhouse and nursery products had a wholesale value of **\$1.039 billion**.
- **7,828** acres of greenhouse or shadehouse covered area, and **6,853** acres of open ground.
- Among U.S. states, Florida dominates the foliage plant industry, with production accounting for **73.0 percent** of total U.S. value.
- Florida's green industries in 2015 supported **232,648** full-time and part-time jobs.
- Total industry output (revenue) contributions were **\$21.080 billion**, including multiplier effects.
- Total value-added contributions were **\$13.172 billion** to state GDP.



Source: "Economic Contributions of the Environmental Horticulture Industry in Florida in 2015."

Vegetables

FRUIT AND VEGETABLE CROPS

Florida's fruit and vegetable farming and processing industries in 2015 provided **90,050** full-time and part-time jobs and total value-added contributions of **\$6.03 billion** to state GDP, including multiplier effects.

Source: UF/IFAS EDIS document FE1020.



FRUIT & VEGETABLE CROPS, 2017

Crop	Planted acres	Value (million \$)	U.S. rank
Bell pepper	13,500	206.26	2
Cabbage	8,000	41.98	3
Cucumber	26,000	137.60	1
Snap bean	24,400	70.79	1
Squash	5,900	29.71	2
Strawberry	10,800	336.89	2
Sweet corn	41,700	158.34	2
Tomato	29,000	262.02	1
Watermelon	20,000	135.56	1

Source: "USDA-NASS 2017 State Agriculture Overview for Florida."

AVERAGE VALUES PER ACRE FOR FLORIDA CROPS, 2017 OR 2016*

Commodity	Value Per Acre
Avocado	\$3,208*
Beans, snap	\$2,962
Blueberries	\$11,445*
Cabbage	\$5,526
Cantaloupe	\$4,682
Corn, grain	\$668
Cotton, upland	\$535
Cucumber	\$5,313
Floriculture	\$49,120*
Grapefruit	\$3,243
Hay	\$432*
Oranges	\$2,412
Peanuts	\$789
Peppers, bell	\$15,748
Potatoes	\$4,348
Rice	\$788*
Sod	\$2,752*
Soybeans	\$300
Squash	\$5,211

Commodity	Value Per Acre
Strawberries	\$31,486
Sugarcane	\$1,249*
Sweet corn	\$4,059
Tangelos	\$3,468*
Tangerines	\$3,851
Tomatoes	\$9,357
Watermelon	\$6,954
Wheat	\$150
Woody ornamentals	\$11,596*

Sources: "USDA-NASS 2017 State Agriculture Overview for Florida;" USDA-NASS Quick Stats (2016).



Crop

YIELDS PER ACRE

One acre of land can produce many types of crops, depending on factors such as soil fertility, rainfall and sunlight exposure.

During one year, an acre of suitable land in Florida can produce...

22,500 lbs. of strawberries.

30,000 lbs. of tomatoes.

759 lbs. of cotton.

Source: "USDA-NASS 2017 State Agriculture Overview for Florida."



One acre of land is about the size of a football field, minus the end zones. Using modern methods, in a year's time one acre in Florida could produce:

\$377 of beef.

8,000 lbs. of pine.

\$11,596 of nursery crops.



Sources: "Beef cow-calf budget," UF/IFAS Range Cattle Research and Education Center; "The Evolution of Pine Plantation Silviculture in the Southern United States," USDA General Technical Reports SRS 75, 2004; 2012 U.S. Census of Agriculture.

SNAP BEANS

- 23,900 acres harvested
- \$70.8 million total value of production in 2017

SWEET CORN

- 39,000 acres harvested
- \$158.3 million total value of production in 2017

TOMATOES

- 28,000 acres harvested
- \$262.0 million total value of production in 2017

CUCUMBERS

- 25,900 acres harvested
- \$137.6 million total value of production in 2017

BELL PEPPERS

- 13,100 acres harvested
- \$206.3 million total value of production in 2017

SQUASH

- 5,700 acres harvested
- \$29.7 million total value of production in 2017

CABBAGE

- 7,600 acres harvested
- \$42.0 million total value of production in 2017

WATERMELONS

- 19,500 acres harvested
- \$135.6 million total value of production in 2017

STRAWBERRIES

- 10,700 acres harvested
- \$336.9 million total value of production in 2017

BLUEBERRIES

- 4,700 acres harvested
- \$53.7 million total value of production in 2016 (most recent data available)

Sources: "USDA-NASS 2017 State Agriculture Overview for Florida;" "2016 Florida Agriculture by the Numbers."



Florida

FIELD CROPS

The 2017 values for Florida production of field crops included...

Peanuts - \$153.9 million

Cotton - \$52.5 million

Potatoes - \$124.9 million

Corn for grain - \$24.7 million

Soybeans - \$4.2 million

Hay (excluding alfalfa) - \$117.0 million

Sugarcane - \$654.2 million (2016)

Sources: "USDA-NASS
2017 State Agriculture
Overview for Florida;"
USDA-NASS Quick
Stats (2016).

Grain and oilseed farming and processing supported **3,702** full-time and part-time jobs, and provided **\$332 million** in value-added contributions, including multiplier effects.

Sugarcane farming and manufacturing of refined sugar and confections supported **18,765** full-time and part-time jobs and provided **\$1.64 billion** in value-added contributions to state GDP.

Source: UF/IFAS EDIS
document FE1020.



Livestock & Animal PRODUCTS INDUSTRY

Florida's combined beef and dairy cattle herds total around **1.63 million** animals. Among U.S. states, Florida has the 13th largest herd of beef cows and 18th largest overall herd of beef cattle.

BEEF CATTLE

- **886,000** head of beef cows as of January 2018.
- **360,000** calves for beef and dairy cattle as of January 2018.
- **\$546.71 million** in cash receipts from cow and calf sales in 2016.

DAIRY/MILKING COWS

- **124,000** head of dairy cows as of January 2018.
- **2.496 billion** pounds of milk produced in 2017, valued at \$536.64 million.

Source: "USDA-NASS 2017 State Agriculture Overview for Florida."

2015 CONTRIBUTION

- Livestock and animal products industries in Florida in 2015 supported **34,442** full-time and part-time jobs and provided **\$1.921 billion** in value-added impacts, including multiplier effects.
- **Nine of the top 25** cow-calf operations in the nation are located in Florida.

Sources: UF/IFAS EDIS document FE1020; National Cattlemen's Beef Association "Directions" annual report, <https://tinyurl.com/y86msc4v>



HONEY

- 10.75 million pounds produced in 2016.
- 215,000 honey bee colonies.
- \$26.23 million total value of production in 2016.

POULTRY & EGGS

- 378 million pounds of broiler chickens produced in 2016, valued at \$203.15 million.
- 2.364 billion eggs produced in 2016, valued at \$110.03 million.

Source: "2016 Florida Agriculture by the Numbers."

HORSES

- 121,034 horses and ponies in 2012.
- 13,755 farms.
- \$162.0 million in sales in 2012.

Florida ranked **5th** nationally for horse ownership in 2012, after Texas, Oklahoma, California and Kentucky. Marion County is home to more than **2,300** horse farms, **17 percent** of the state total, **13,755**.

Source: 2012 U.S. Census of Agriculture.



Seafood Production

Florida ranked among the **top 12** U.S. states for fresh seafood production. Florida's commercial fishing operations caught more than 84 percent of the nation's supply of grouper, pompano, mullet, stone crab, pink shrimp, spiny lobster and Spanish mackerel.

Commercial fishing and seafood products industries in Florida in 2015 provided **13,745** full-time and part-time jobs and had value-added contributions of **\$730 million** (including multiplier effects).

Florida currently has **404** commercial aquaculture operations.

The Cedar Key area is the **largest producer** of farm-raised clams in the eastern U.S.

Source: UF/IFAS EDIS document FE1020.

FLORIDA COMMERCIAL FISHERIES LANDINGS, 2016

Species - Type	Weight (Million lbs.)	Value (Million \$)
Shrimp, Pink	11.94	31.39
Mullet, Striped	9.47	7.07
Shrimp, White	6.14	16.02
Grouper, Red	5.29	17.85
Lobster, Caribbean Spiny	5.18	42.19
Crab, Blue	5.09	9.37
Mackerel, King	3.53	7.76
Crabs	3.31	5.20
Mackerel, Spanish	3.21	3.27
Shellfish, Unclassified, Marine, Ornamental	2.92	0.70
Crab, Florida Stone Claws	2.88	28.60
Mollusks	2.81	0.46
Snapper, Red	2.33	8.61
Snapper, Yellowtail	2.30	7.09
Herring, Atlantic Thread	2.21	0.45
Shrimp, Marine, Other	2.03	9.52
Shrimp, Brown	1.88	3.95
Shellfish	1.82	0.19
Finfishes, Marine, Other	1.68	13.28
Ladyfish	1.64	1.36
Sardine, Spanish	1.61	0.30
Echinoderms	1.56	1.15
Finfishes, Unclassified, For Food	1.40	0.64
Snapper, Vermilion	1.24	3.51
Gag	1.15	5.06
Ballyhoo	1.03	0.94
All Others Less Than 1 Million Pounds	16.15	35.38
Total	101.82	261.30

Source: National Ocean Economics Program, <https://tinyurl.com/yck8h84u>

FLORIDA FISHERY LANDINGS BY COUNTY, 2015

County	Weight (Million lbs.)	Value (Million \$)
Monroe	12.639	\$71.26
Pinellas	8.116	\$23.64
Lee	7.228	\$16.84
Gulf	5.621	\$5.77
Duval	5.434	\$11.47
Manatee	3.992	\$4.77
Brevard	3.980	\$7.88
Bay	3.228	\$9.67
Franklin	3.213	\$9.22
Hillsborough	2.597	\$4.81
St. Lucie	2.251	\$5.37
Volusia	2.159	\$4.27
Hernando	1.815	\$7.31
Collier	1.651	\$9.25
Citrus	1.551	\$6.00
Charlotte	1.534	\$1.55
Martin	1.484	\$2.29
Palm Beach	1.449	\$2.83

County	Weight (Million lbs.)	Value (Million \$)
St. Johns	1.408	\$3.13
Okaloosa	1.320	\$4.00
Nassau	1.252	\$2.94
Miami-Dade	1.210	\$5.31
Wakulla	1.172	\$2.56
Dixie	1.126	\$3.51
Escambia	1.002	\$1.64
Levy	0.948	\$3.39
Indian River	0.817	\$1.57
Taylor	0.685	\$2.14
Broward	0.658	\$2.64
Pasco	0.448	\$2.13
Santa Rosa	0.378	\$0.90
Sarasota	0.230	\$0.29
Putnam	0.201	\$0.76
Clay	0.091	\$0.15
Jefferson	0.087	\$0.15
Walton	0.083	\$0.11
Flagler	0.008	\$0.01

Source: "Florida Seafood and Aquaculture Overview and Statistics," Florida Department of Agriculture and Consumer Services, <https://tinyurl.com/yc7fuo29>

Florida

AGRICULTURAL EXPORTS

International exports of Florida's agricultural and natural resources products in 2017 were valued at **\$5.778 billion**.

FLORIDA INTERNATIONAL EXPORT VALUE OF AGRICULTURAL, FOOD AND FIBER PRODUCTS, 2017

Commodity	Value (Million \$)	% Change 2012-17
Oilseeds & Grains	24.49	-3.6%
Vegetables & Melons	327.83	-2.9%
Fruits & Tree Nuts	258.60	-24.2%
Mushrooms, Nursery & Related Products	107.01	45.4%
Other Agricultural Products	53.90	61.3%
Cattle	2.06	-11.7%

Commodity	Value (Million \$)	% Change 2012-17
Swine	0.82	89.3%
Poultry & Eggs	20.72	-51.9%
Sheep, Goats & Fine Animal Hair	0.31	1454.8%
Farmed Fish & Related Products	4.90	-25.5%
Other Animals	61.53	96.8%
Forestry Products	19.24	9.9%
Timber & Logs	26.08	237.9%
Fish, Fresh/Chilled/ Frozen & Other Marine Products	309.77	17.0%
Animal Foods	58.34	-42.2%
Grain & Oilseed Milling Products	172.77	-9.3%
Sugar & Confectionery Products	155.97	12.1%
Fruit & Vegetable Preserves & Specialty Foods	387.20	-32.7%
Dairy Products	317.34	88.3%



Commodity	Value (Million \$)	% Change 2012-17
Meat Products & Meat		
Packaging Products	710.84	-2.0%
Seafood Products, Prepared, Canned & Packaged	19.80	-29.8%
Bakery & Tortilla Products	110.76	3.0%

Commodity	Value (Million \$)	% Change 2012-17
Foods, not specified	552.25	17.7%
Beverages	310.48	0.6%
Tobacco Products	35.94	-26.2%
Sawmill & Wood Products	133.17	80.1%
Veneer, Plywood & Engineered Wood Products	54.45	39.6%
Other Wood Products	234.50	48.9%
Pulp, Paper & Paperboard Mill Products	1,069.37	-0.7%
Converted Paper Products	237.49	-6.7%
Total	5,777.91	2.3%

Commodities defined using the North American Industry Classification System code.

Source: U.S. Census Bureau, USA Tradeonline.

Export Destination	Product Category (Million \$)
	Cereals, vegetables, fruits and nuts
Africa	3.03
Asia	34.11
Australia and Oceania	1.00
Europe	88.64
North America	462.49
South and Central America	182.55

Product Category (Million \$)			
Animals, meat and animal products	Forest, wood and paper products	Processed food and beverage products	Total
6.00	20.51	9.36	38.89
143.75	330.63	236.09	744.59
10.98	2.94	19.70	34.63
106.21	488.91	179.15	862.91
268.14	321.42	265.34	1,317.39
913.01	609.87	1,074.06	2,779.49



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