

Florida Department of Agriculture & Consumer Services

Research Involvement



FDACS Research

- **FDACS is not a research institution;** however, the Department is heavily reliant on research to carry out key duties and responsibilities
- A big part of FDACS' focus is the protection and enhancement of Florida's agricultural resources, including regulatory oversight of our water, food and fiber resources



FDACS Research

Areas of Interest

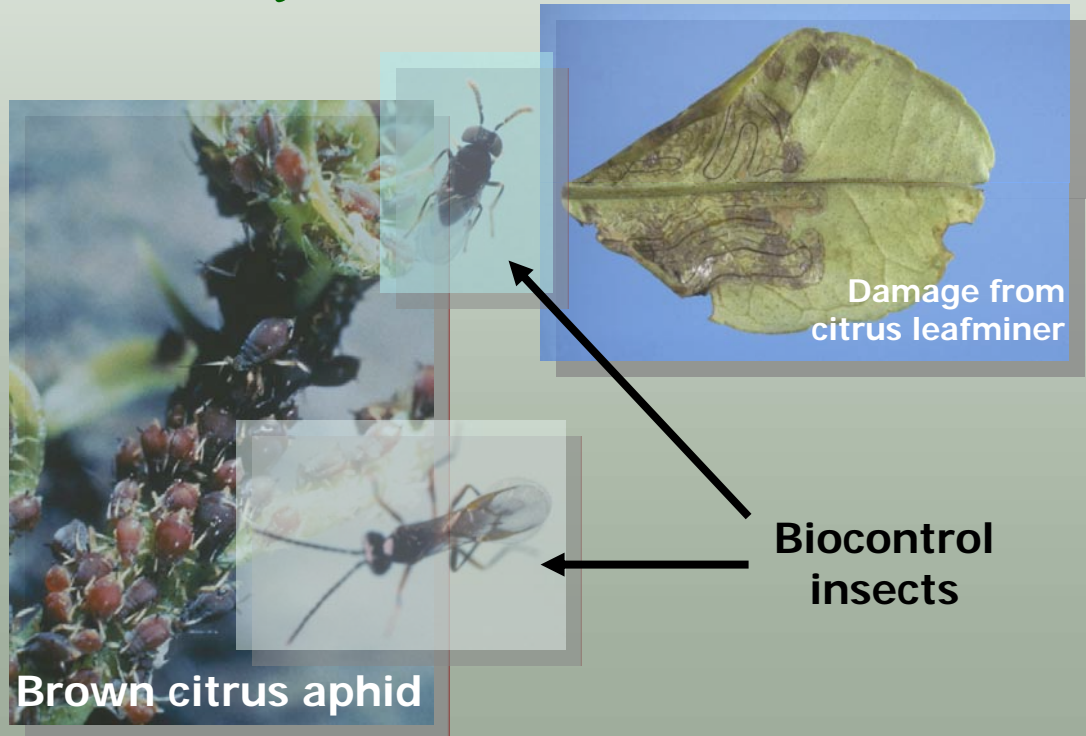
- **Agriculture pest and disease exclusion, detection and response**
- **Crop improvement and alternative crops: viticulture, peanut and peach**
- **Citrus research**
- **Water quality**



Bureau of Methods Development & Biological Control Projects

FDACS' DPI took basic biological agents and further developed rearing and release techniques and is releasing these insects where they are needed

- Asian Citrus Psyllid
- Brown Citrus Aphid
- Citrus Black Fly
- Citrus Root Weevil
- Citrus Leafminer



Biological Control Projects

- Basic classical bio-control research is accomplished by UF/IFAS and other state land grant colleges, as well as the USDA
- FDACS, with emphasis on the Division of Plant Industry, takes classical and basic research results and applies them to agricultural protection programs through our **Bureau of Methods Development and Biological Control**



Bureau of Methods Development & Biological Control - Additional Projects

Pink Hibiscus Mealybug (PHM)

- USDA identified and worked out rearing techniques for two very effective parasitic wasps that attack PHM
- FDACS established a rearing facility in Gainesville to mass produce and release the bio-control agents
- Program funded by USDA contract and grants



Bureau of Methods Development & Biological Control - Additional Projects

Invasive Weed Control

- Tropical Soda Apple, *Solanum viarum*

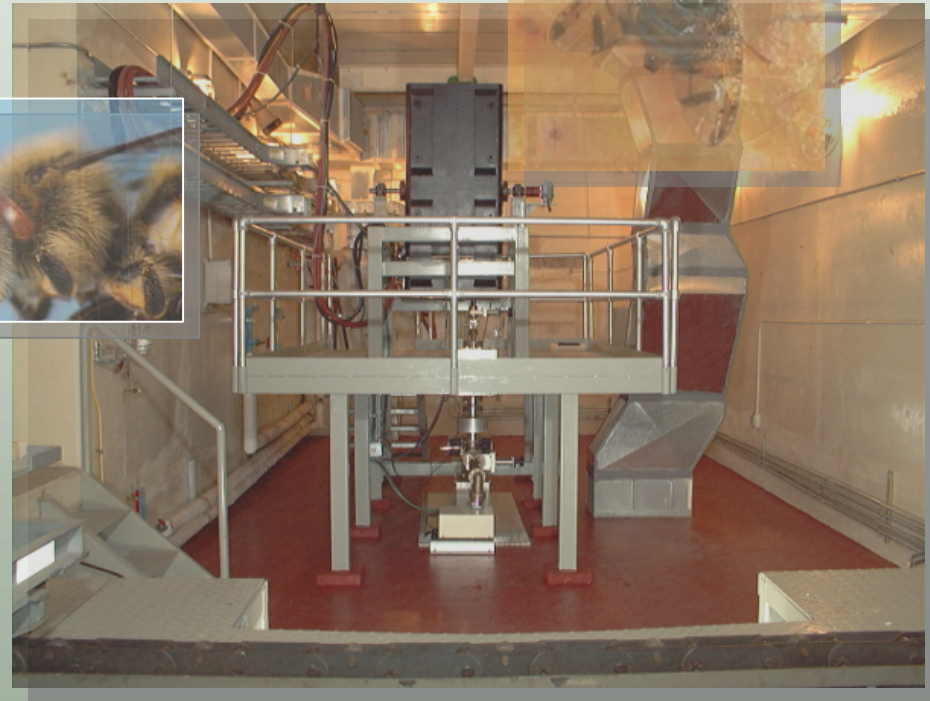
FDACS is assisting with biocontrol agent rearing and herbicide trials as part of an Integrated Pest Management approach to control and are releasing biocontrol agents in areas infested with this invasive weed.



TSA joint agency biocontrol release

Bureau of Methods Development and BioControl – Additional Projects

- Other projects:
 - Fruit fly detection and response (Medfly)
 - Apiary research coordination
 - Insect sterilization



FDACS – Research Improved Diagnostics

FDACS works closely with USDA and University of Florida to improve diagnostic tools and techniques to combat pathogens, insects and diseases that threaten our processed food as well as production agricultural

Examples:

- Investigating more user-friendly diagnostic tools for citrus disease identification (Citrus Greening and Citrus Canker)
- Assisting with methods to improve fruit sanitizing in packing houses
- Assisting with methods to prove that packed citrus fruit is not a pathway for the spread of citrus canker



*Over 300,000 samples processed
annually at FDACS/DPI*

FDACS – Research Resources Citrus Budwood Registration

The FDACS DPI Bureau of Citrus Budwood Registration maintains the state's horticulturally-superior citrus selections that are used to propagate all citrus nursery stock, produce better trees, improve yields, and provide disease-free nursery trees

Program funded by industry via the Citrus Industry Trust Fund (CITF)



FDACS – Research Resources

USDA's APHIS Contract and Grants

- Imported Fire Ant



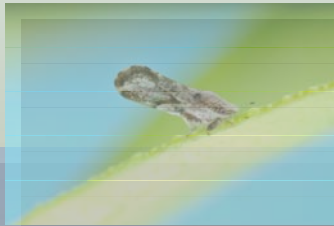
- Tropical Soda Apple



FDACS – Research Resources

USDA's APHIS Contract and Grants

- **Asian Citrus Psyllid**



- **Leaf damage from Asian Citrus Psyllid**



- **Cactus Moth Larva**

FDACS – Research Resources USDA's APHIS Contract and Grants

Pink Hibiscus Mealybug

- Pest has devastated agriculture in many parts of world
- Several effective biocontrol agents exist; FDACS/USDA rearing two species



Florida Citrus Production Research Advisory Council

Through a marketing order, this council applies citrus box tax funds collected by FDACS and deposited in the CITF to support various research projects deemed to be important to Florida citrus production

- **Examples:**
 - Risk Reduction for Citrus Budwood (FDACS' DPI)
 - Development of high throughput tech for rapid detection of HLB (FDACS' DPI)
 - Reduced risk of citrus canker through biocontrol of citrus leafminer (UF-IFAS)
 - HLB research (USDA-ARS)



FDACS Research: Water Quality

- **Office of Agricultural Water Policy**
 - **Established in 1995 to facilitate communications between governmental agencies and the agricultural industry regarding water quality and water quality best management practices. The office addresses both water quality and water conservation on a site specific regional and watershed basis**
 - **Contracted agricultural water quality research is important to help underpin the above mission**



Agricultural Water-Quality Based Research

- **Examples of Research Project:**
 - **Verification Monitoring of Ridge Citrus Nitrogen BMPs – UF-IFAS**
 - **Use of Organic Amendment to Produce Loads of Nitrogen and Phosphorus in Surface Runoff from Citrus Groves and Vegetable Fields – UF-IFAS**
- **Funding sources document stamp tax revenues and fertilizer tonnage fees**
- **FS 201.15(8)**
- **FS 576.045**

