Public Investment in UF/IFAS Yields Significant ECONOMIC BENEFITS AND JOBS
**Agriculture and Natural Resources, Research and Extension**

**$20 IN BENEFITS FOR EVERY $1 INVESTED**

Investments in UF/IFAS research and Extension programs continue to show significant returns that create jobs and improve Florida’s economic vitality. According to an extensive analysis published in 2010 by a team of agricultural economists, for every $1 invested in U.S. agricultural research and development there’s a return of $20 in benefits from increased agricultural productivity.\(^1\) Agricultural research means that farmers can produce more fiber, food and fuel with the same amount of land and inputs; for the rest of us, research also reduces food prices, improves food safety and helps protect environmental quality.\(^2\)

The State of Florida invests more than $150 million annually in UF/IFAS agricultural research and development, as well as Extension.\(^3\) In return, this investment contributes about $3 billion in economic benefits to the state, based on the 20:1 benefit-cost ratio.

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**Citrus**

**WAGING WAR ON DEADLY DISEASES**

Finding solutions for citrus greening and citrus canker continues to be a top priority for UF/IFAS. More than 150 researchers are working on the problems, seeking ways to stop the diseases that threaten to destroy the state’s $10 billion citrus industry.

- Recent discoveries include the potential of benz bromarone as a deterrent to the bacterium that causes citrus greening disease. Commercial use could be five to seven years away due to required field-testing and the government approval process.
- The greening bacterium attacks citrus tree roots long before the leaves show signs of damage, causing a loss of 30 to 50 percent of trees’ fibrous roots before symptoms are visible above ground. This finding may help growers better care for trees while scientists work to find a cure.
- For citrus trees that are already infected, the practice of steaming, or tenting trees in 136-degree steam for 30 seconds, shows promise as a way to help treat citrus greening.
- UF/IFAS scientists have also developed an efficient, easy-to-use and sensitive sensor that can quickly detect whether a tree has citrus greening. The sensor’s accuracy was between 95 to 98 percent in both laboratory and field tests. The whole sensor assembled for less than $1,000.

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**Water**

**IMPROVING WATER QUALITY AND QUANTITY**

Water remains a top priority at the University of Florida.

- UF/IFAS researchers partnered with personnel from the St. Johns River Water Management District and UF’s Water Institute in 2014 to obtain a three-year contract to provide scientific data aimed at helping protect and restore the state’s springs system. Scientists will look at rainfall and runoff; aquifer storage, flow and spring discharge; nitrates in soils and groundwater; and controlling algae.
- Researchers are also studying how algae-eating freshwater snails from the genus Elimia naturally clean Florida’s springs.
- Technology developed by UF/IFAS researchers is also helping Florida farmers measure the water consumption or “water footprint” that their farming activities generate. The WaterFootprint tool is part of the AgroClimate system, a web resource that helps farmers understand and manage risks brought about by climate and weather conditions.
- UF/IFAS researchers and Extension scientists also designed new mobile device “apps” that help citrus, strawberry and urban turfgrass producers conserve water by irrigating only when it’s needed.

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**Community and Economic Development**

**HELPING FLORIDA COMMUNITIES GROW**

UF/IFAS faculty members and Extension agents work with growers, businesspeople and local governments to develop stronger, more resilient communities, whether downtown or many miles from the city. Through extensive research, UF/IFAS scientists help growers boost their businesses in a variety of ways.

- They’ve developed new cultivars in citrus, forage grasses and tomatoes to boost revenue for farming and ranching industries and bring better food to your table.
- Small- and mid-sized growers often cite marketing as one of their greatest challenges, so UF/IFAS is involved with Florida MarketMaker and Florida Food Connect, two new resources to help Florida growers market their products.
- Extension agents helped redevelop the downtown Live Oak area before and after Tropical Storm Debby flooded that North Florida town in 2012.
- UF/IFAS Extension and Bok Tower Gardens recently broke ground on a new partnership to provide onsite demonstration gardens, education programs and conservation research, as well as outreach programs to help people connect with plants and appreciate the natural world.
- UF/IFAS scientists help in bigger cities, too. Researchers are using a $500,000 grant to study how urban water runoff and dust contribute to water pollution. Another UF/IFAS study showed a way to filter arsenic from city water supplies.

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**Economic Benefits of Agriculture and Natural Resource Industries, 2012**

<table>
<thead>
<tr>
<th>Billion Direct Output or Sales Revenues</th>
<th>Million Jobs</th>
<th>Billion in Exports</th>
</tr>
</thead>
<tbody>
<tr>
<td>$141.79</td>
<td>2.1</td>
<td>$65.85</td>
</tr>
<tr>
<td><strong>Total</strong> $212.54</td>
<td><strong>Total</strong> 2.1</td>
<td><strong>Total</strong> $71.85</td>
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</tbody>
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**Impact in Business-Tax Impacts Paid to Local, State and Federal Governments**

- $13.29
Florida Agriculture and Natural Resources
$141.79 BILLION IN DIRECT OUTPUT, 2.1 MILLION JOBS

In 2012, Florida’s agriculture and natural resource industries supported 2.1 million jobs in the state and generated $141.79 billion in direct output (revenue) and $13.29 billion in business taxes to local, state and federal governments. These industries span the market chain, including commodity production, supporting services and food distribution to consumers.

Due to Florida’s subtropical climate, its focus on specialty crops and its access to international ports, exports from Florida to domestic and international markets accounted for more than $65 billion in revenues. As globalization continues to increase — it is expected to double by 2050 — the influx of invasive pests and diseases will put greater demands on UF/IFAS research and Extension to maintain gains in agricultural productivity and develop new technologies to increase competitiveness.

UF/IFAS Animal Agriculture
PARTNERING WITH INDUSTRY TO IMPROVE COMPETITIVENESS

Florida animal agriculture accounts for about $11.3 billion in overall economic impact annually, and supports about 235,000 jobs. In 2012, a $2.24 million annual budget appropriation for the UF/IFAS animal agriculture program was approved to support programs in the Departments of Agronomy, Animal Sciences, Food and Resource Economics, and Wildlife Ecology and Conservation. The annual appropriation is helping the program make upgrades, hire new faculty and staff members, and enhance the sustainability of Florida’s beef, dairy and equine production. Specific goals include:

• Conducting genetic research on new forages, improving beef/forage integrated production systems, identifying animals with better pathogen resistance, and applying the latest technologies to select and breed animals that perform best under Florida’s climatic conditions.

• Hiring new personnel with specialized expertise needed by the state’s livestock producers. As of January 2015, UF has made almost all the needed hires, which include 13 new faculty members, two multicounty Extension specialists and 14 technical support workers.

• Generating an additional $1.2 million in external funding for the Department of Animal Sciences each year.

• Increasing the number of graduate students the Department of Animal Sciences produces by about 40 percent.

Health
WORKING TO IMPROVE THE HEALTH OF FLORIDA RESIDENTS

Getting children to eat more fruits and vegetables may depend upon linking Florida farmers and chefs with school food-service directors to ensure that nutritious school lunches taste great. UF/IFAS’ Family Nutrition Program (FNP) has a Farm to School team that helps forge these relationships.

• FNP works with people eligible for the Supplemental Nutrition Assistance Program (SNAP) and is currently offered in 37 Florida counties.

• In 2013-14, more than 60 percent of parents whose children participated in FNP classes reported that their children helped them prepare more healthy snacks or meals at home.

• Faculty members are researching ways to bring healthy foods to places that lack easy access to these foods. One method is mobile food trucks such as a pilot program in St. Johns County.

• At many of Florida’s public schools, students learn to grow fruits and vegetables as part of UF/IFAS partnerships.

• UF/IFAS is also participating in national research that uses student-developed social marketing to increase fruit and vegetable intake among college students.

Florida Animal Agriculture Facts

$11.3 BILLION IN ECONOMIC IMPACT
235k JOBS
7 DEDICATED UF/IFAS FACILITIES

Florida Health Facts

79.4 LIFE EXPECTANCY IN YEARS FOR CHILD BORN IN FLORIDA IN 2014
23% FLORIDA CHILDREN IN POVERTY
27.5% FLORIDA CHILDREN OVERWEIGHT OR OBESE
50.2% ADULTS EXERCISE

UF RANKED 9TH WORLD’S BEST UNIVERSITIES FOR PLANT AND ANIMAL STUDIES, ACCORDING TO U.S. NEWS AND WORLD REPORT
The Land Grant University System

The University of Florida Institute of Food and Agricultural Sciences (UF/IFAS) is a proud part of the nation’s land grant university system, a system of public institutions established by the U.S. Congress through the Morrill Act of 1862 to provide higher education to citizens of average means. The land grant mission was later expanded through federal legislation that created and helps fund the Florida Agricultural Experiment Station for the purpose of conducting research, and the Florida Cooperative Extension Service, which brings information and technology gained through research to the public.

UF/IFAS and Florida A&M University deliver land grant services to the state of Florida. To fulfill its mission, UF/IFAS has 16 academic departments at the main campus in Gainesville, 13 research and education centers at 19 locations, and an Extension office in each of Florida’s 67 counties.

UF/IFAS Statewide Facilities

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Sources Cited


3. Gosa-Hooks, Mary Ann. UF/IFAS Director of Governmental Affairs.


This report and other UF/IFAS Extension economic contribution reports can be found at:

http://ifas.ufl.edu/economicimpacts.html