

Economic Impact of Agriculture in Florida

Gene McAvoy

UF/IFAS Hendry County Extension

Agriculture

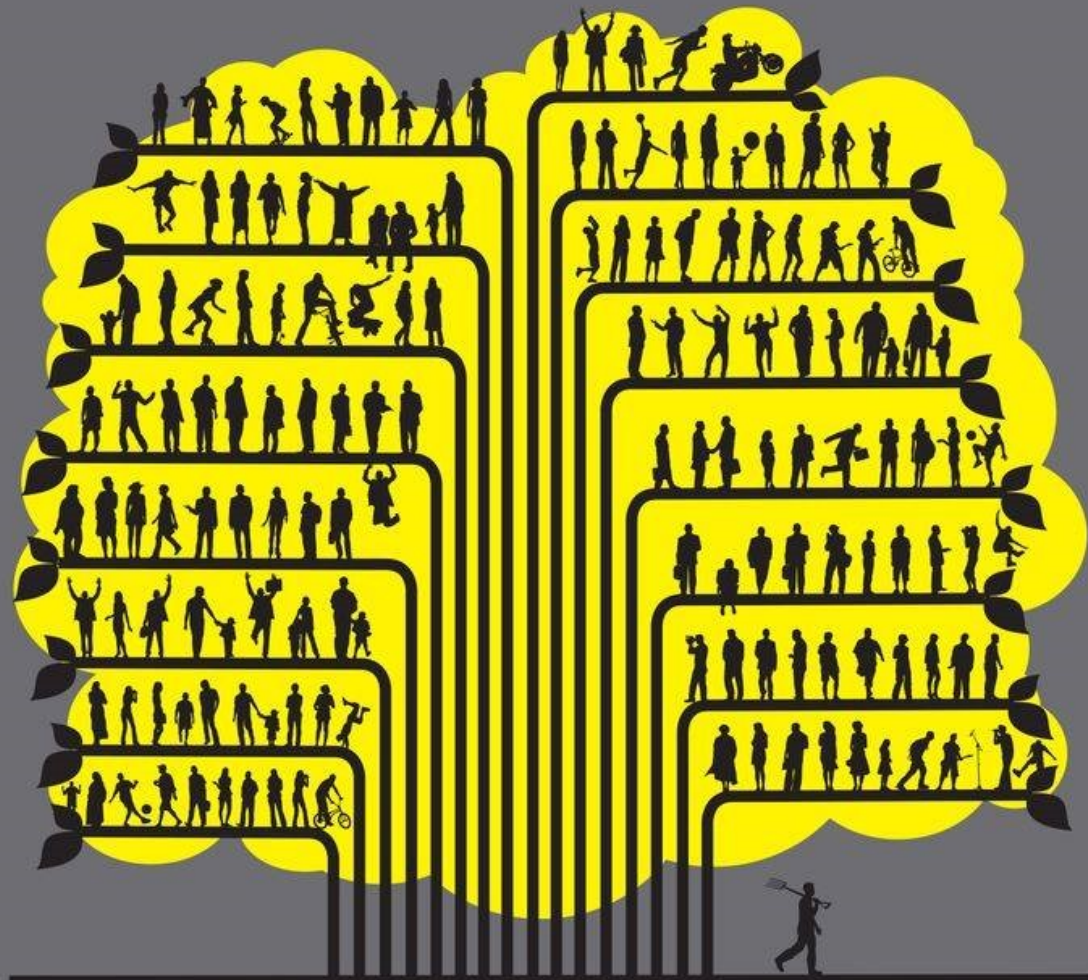
- Agriculture plays a critical role in our economy.
- Agriculture provides more than just basic needs like food, clothing, and shelter.
- In addition to providing food and raw materials, agriculture also provides employment opportunities to very large percentage of the population.



Agriculture

- Agriculture is the only sustainable renewable source of resources on the planet.
- Provides cosmetics, food, fiber, fuel, shelter, pharmaceuticals, plastics and many products to numerous to name
- Without it you would be hungry, naked and sober!





**1 FARMER
FEEDS 155 PEOPLE**

C H E W O N T H A T

Agriculture is Big Business

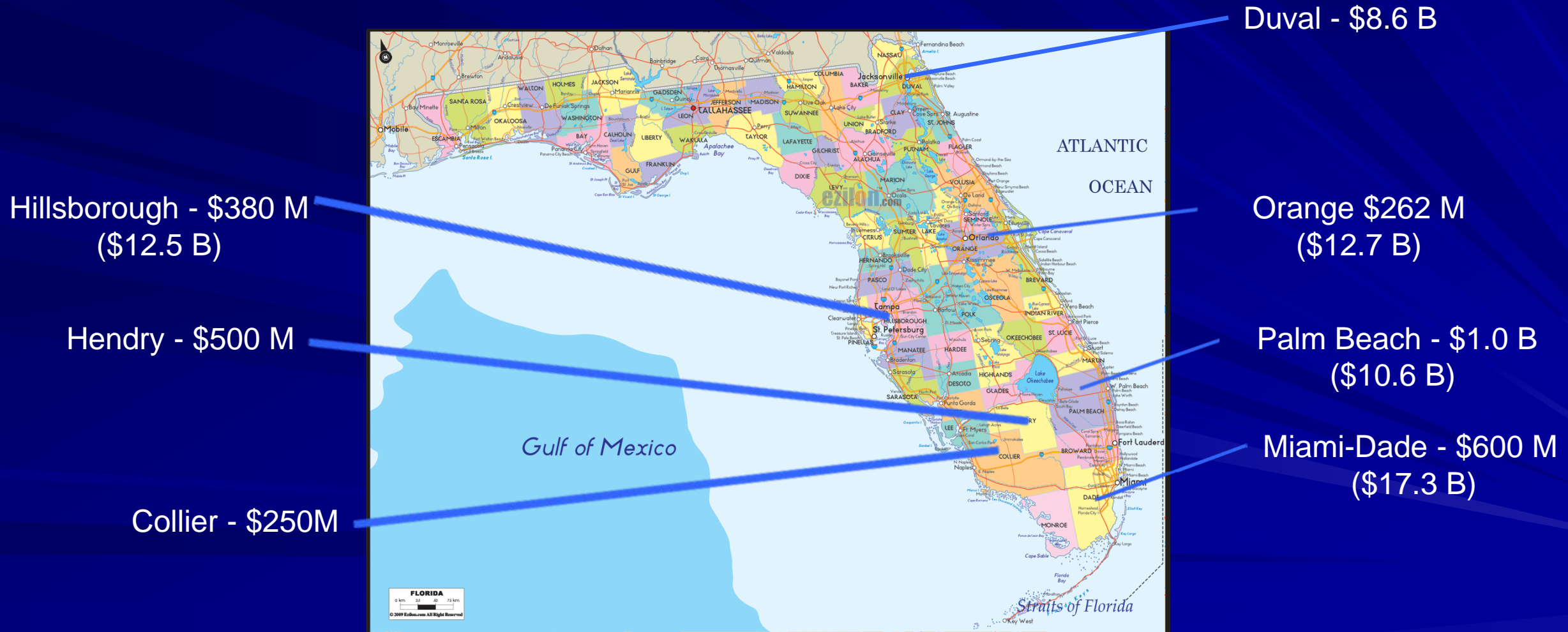
- Agriculture, natural resources, and food industries remain a significant force in the economy of Florida, and it is important to recognize the economic contributions of these industries
 - Industry output or sales revenues were \$160.7 billion.
 - Foreign and domestic exports were \$60.5 billion.
 - Agriculture, natural resources, and food industries had 1,616,235 full-time and part-time direct jobs, representing 14.1 percent of all jobs in the state.
 - An additional 655,877 jobs were indirectly connected to these industries for a total employment impact of 2,272,113 jobs, representing 19.8 percent of total state employment.

Florida Agriculture



- Agriculture is second only to the tourist industry in economic importance
- \$160.7 billion dollars in economic activity
- Florida has 47,300 commercial farms and ranches, using a total of 9.45 million acres
- Florida agriculture is diverse producing over 300 different commodities

Florida Agricultural Impacts



Agriculture has a much greater multiplier effect compared to other industries

Florida is # 1

- Florida is first in production value for oranges, fresh market tomatoes, watermelons, grapefruit, sugarcane, fresh market snap beans and fresh market cucumbers
- Second in the production of greenhouse and nursery products, bell peppers, strawberries, fresh market sweet corn, spring potatoes, peanuts, tangerines and avocados;



Cattle Industry



- Cattle were introduced Florida in 1521 by Spanish explorer Juan Ponce de Leon.
- Florida ranks 10th in the production of beef cattle in the US
- Beef cattle sales and sales of breeding stock generate a total economic impact of over \$900 million annually.

“Natural Florida”

- Nearly one-half of all Florida agricultural land is involved in cattle production.
- Florida has 3.2 million acres of pastureland and 1.3 million acres of grazed woodland.
- Working ranches provide habitat for wildlife and native plant system populations



Florida Dairies

- Florida's dairies supply milk and dairy products which are mostly consumed in-state, creating cash receipts in excess of \$400 million.
- Florida is home to over 100,000 dairy cows which produce over 2 billion pounds of raw milk annually.



Citrus



- Bought by the Spanish, citrus has been grown commercially in Florida since the mid-1800s
- Citrus generates a nearly \$9 billion per year impact on Florida's economy.
- Nearly 76,000 Floridians work in the citrus industry or a related business.

Citrus

- Florida is 2nd only to Brazil in orange production
- Florida produces more than 70 % of the United States' supply of citrus, with major overseas export markets.
- 87% of Florida citrus is processed into juice.



Field Crops

- Corn, cotton, peanuts, small grains, soybean, tobacco
- Bio-fuels
- Polymers and plastics
- Value is over \$380 million and generates 13,000 jobs



Forestry

- Nearly 17 million acres in Florida in public and private ownership
- The forestry industry employs more than 124,000 Floridians and infuses \$25 billion into the state's economy.
- More than 5000 items are made from forest products, ranging from furniture to pharmaceuticals.



Green Industry



- Florida is one of the top ornamental horticulture producers in the United States, ranked second only to CA.
- Sod, nursery, trees, shrubs, landscaping services
- Total industry sales were estimated at over \$12.33 B generating nearly 250,000 jobs

Sugarcane



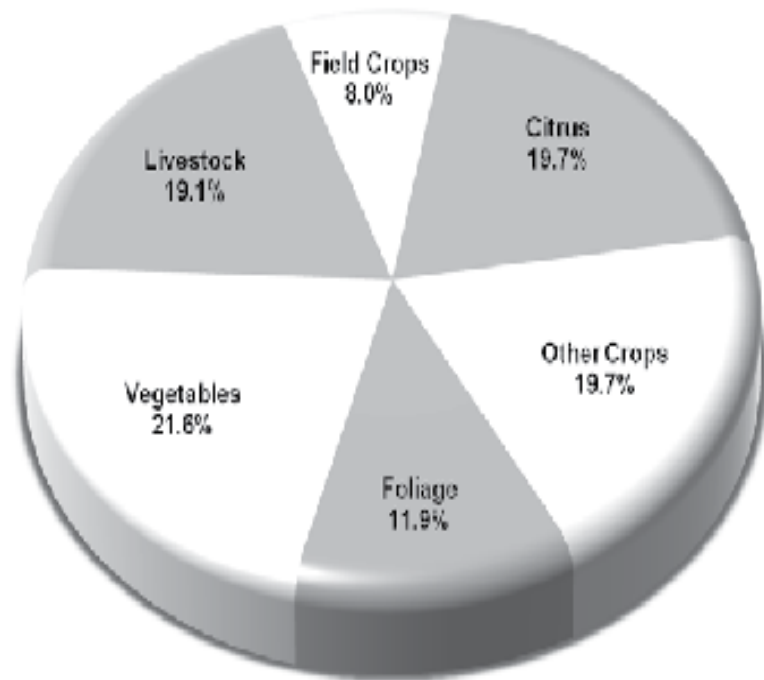
- Florida's most valuable field crop, worth more than the combined value of Florida-grown corn, soybean, tobacco, and peanut crops.
- Florida produces 50% of US sugar cane and 25% percent of the total sugar
- 450,000 acres valued at \$800 M

Vegetable Production in South Florida

- Florida is America's winter garden
- Florida produces over 60 different vegetables – arugula - zucchini
- South Florida produces 70% of all vegetables consumed in the eastern US from Nov – April
- Over 10 billion dollar economic impact



Vegetable Production



- Recently, vegetables have passed citrus as the number one commodity in the state accounting for over 21% of all agricultural sales



Honey bees

- Florida is 4th honey production in the US
- Pollination services – 1 in 3 crops
- \$120 million dollar impact
- Bee keeping is alive and well in FL



Tropical Fish



- 90% of tropical fish sold in pet stores around the US are produced in Florida
- \$120 million dollar economic impact
- Over 200 farms producing over 800 different species

Fishing and Seafood Products



- With more than 2,270 miles of tidal shoreline, more than 11,000 miles of waterways and ideal climate, FL supports a rich seafood industry
- Impact - \$730 million and 13,745 jobs



New crops

- Artichokes
- Blueberries
- Hemp
- Hops
- Pomegranates
- Pongamia
- Tea
- Vanilla



Tax Revenues



- Taxes on production and imports paid to local, state, and federal governments totaled \$13 billion.
- For every dollar paid in taxes, agriculture receives 35 – 50 cents in government services
- For every dollar paid in taxes for urban and suburban dwellers receive \$1.35 - \$1.65 in services

Intangible Benefits

- Florida agriculture provides a number of intangible benefits including environmental services that must not be discounted
- Wildlife and native plant system populations thrive on Florida's farms, ranches, and forests.

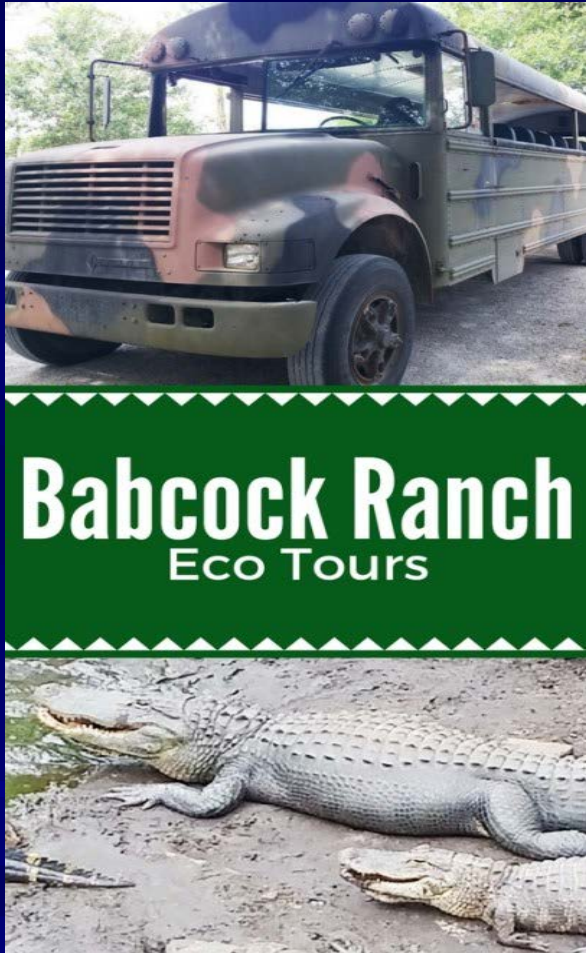


Wildlife

- Conserving wildlife is a priority for many Floridians and attracts visitors
- Wildlife resources enhance quality of life and provide recreational activities
- Farms and ranches provide needed food and habitat for hundreds of species



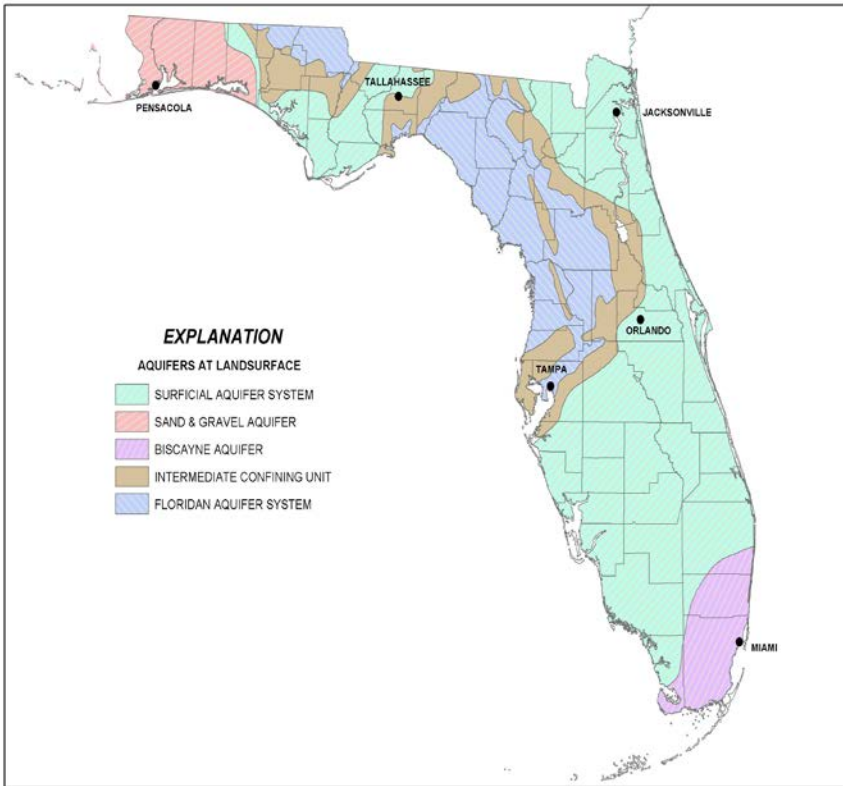
Agro/Eco-Tourism



- Growing demand for Agro/ecotourism opportunities - “Agritainment”
- Bringing Florida's two economic engines (tourism and agriculture) together to increase the value of farms and to expand the array of recreation experiences offered in Florida
- Many people are generations removed from the farm and are hungry for such experiences
- Birding to mudding



Aquifer Recharge



- Unlike parts of N Florida which utilize the Floridan aquifer, much of the state depends on superficial aquifers
- All the water we have to drink is what falls on the ground during the summer rainy season
- Ag provides healthy “green spaces” which filter and recharge underground water supplies.

Water Farming

- Use of agricultural lands to capture and hold water on property in an effort to prevent it from traveling to ecologically sensitive areas.
- Intercept and hold water to reduce discharges



Agricultural Water Trading



- Traditional groundwater sources not sufficient to meet the future water demands without unacceptable impacts to the natural system.
- Public supply and irrigation account for 82% of groundwater withdrawals
- More efficient irrigation coupled with use of reclaimed water could result in more water for public supply

Challenges

- Global market place
- Shrinking labor force
- Pests and disease
- Growers can't compete on the basis of cheap land or labor – they must compete on the basis of technology



Precision Agriculture



- Exciting new technologies are emerging
- Precision GPS guided equipment
- UAV/Drones
- Creating new jobs



Cloud based technology

- U.S. Sugar has the largest, contiguous, privately owned Wi-Fi network in the country, providing wireless network coverage for its operations in a 270-square-mile area.
- Coordinates the timing of harvesting operations with railroad transportation and its mill operations and more.
- Data analysis – increased efficiency



Precision Agriculture



- Sensors and information technology to grade produce
- Use of robotics to sort and pack crops eliminating tedious labor

Smart Sprayers



90% reduction in chemical usage



Sensors detect size of trees turning off and on nozzles to apply precise amount of products precisely where needed

Drip and microjet irrigation



Precision irrigation spoon feed crops with 30% of the water – controlled remotely via smartphone

Improved Genetics

- Improved yields, resistance to pests and diseases
- Cold, heat, drought tolerance
- Classic plant breeding
- Genetic engineering
- CRISPR-Cas9 – gene editing



Going forward



- The world will have to produce more food in the next 50 years than we have in the last ten thousands years since civilization began
- With fewer resources and less environmental impact

**"My grandfather used to say that once in your life
you need a doctor,
a lawyer, a policeman,
and a preacher,
but every day,
three times a day,
You need
a
FARMER."**



State and County Information



ECONOMIC CONTRIBUTIONS

of Agriculture, Natural Resources and Food Industries in Florida Counties, 2015



Agriculture, natural resources and related industries are an economic powerhouse in Florida, providing more than 2 million jobs, \$160.7 billion in direct output (revenues), \$132.0 billion in value added contributions, and accounting for 14.7 percent of total economic activity in 2015.¹

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.² The State of Florida invests approximately

\$160 million annually in UF/IFAS agricultural research and Extension. In return, this investment contributes about \$3.2 billion in economic benefits to the state, based on the 20:1 benefit-cost ratio.

Driven by innovation and new technology, agriculture and related industries will continue to increase jobs and economic well-being in Florida.

This sheet and additional information can be found at <http://ifas.ufl.edu/economicimpacts.html>.

Questions



UF/IFAS Hendry County
Extension Office