

# **IMPACTS OF COVID-19 ON FLORIDA'S AGRICULTURE AND MARINE INDUSTRIES**

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**PREPARED FOR:**

**STATE OF THE SCIENCE MEETING**

**SOUTHEASTERN COASTAL CENTER FOR AGRICULTURAL HEALTH AND SAFETY**

SEPTEMBER 18, 2020

**UF IFAS**  
UNIVERSITY of FLORIDA

**ECONOMIC IMPACT  
ANALYSIS PROGRAM**

# Florida Agriculture

- **Production agriculture in Florida is literally the A-Z of commodity production in the U.S. and a world leader as well.**
  - Estimate 200 - 300 different commodities
  - Some form of agriculture is present in every county
- **National rank by agricultural commodity groups**
  - **#2** for Vegetables, melons, potatoes, sweet potatoes
  - **#3** for Fruits, tree nuts, and berries
  - **#2** for Nursery, greenhouse, floriculture, and sod



Photo Sources: UF/IFAS Photo

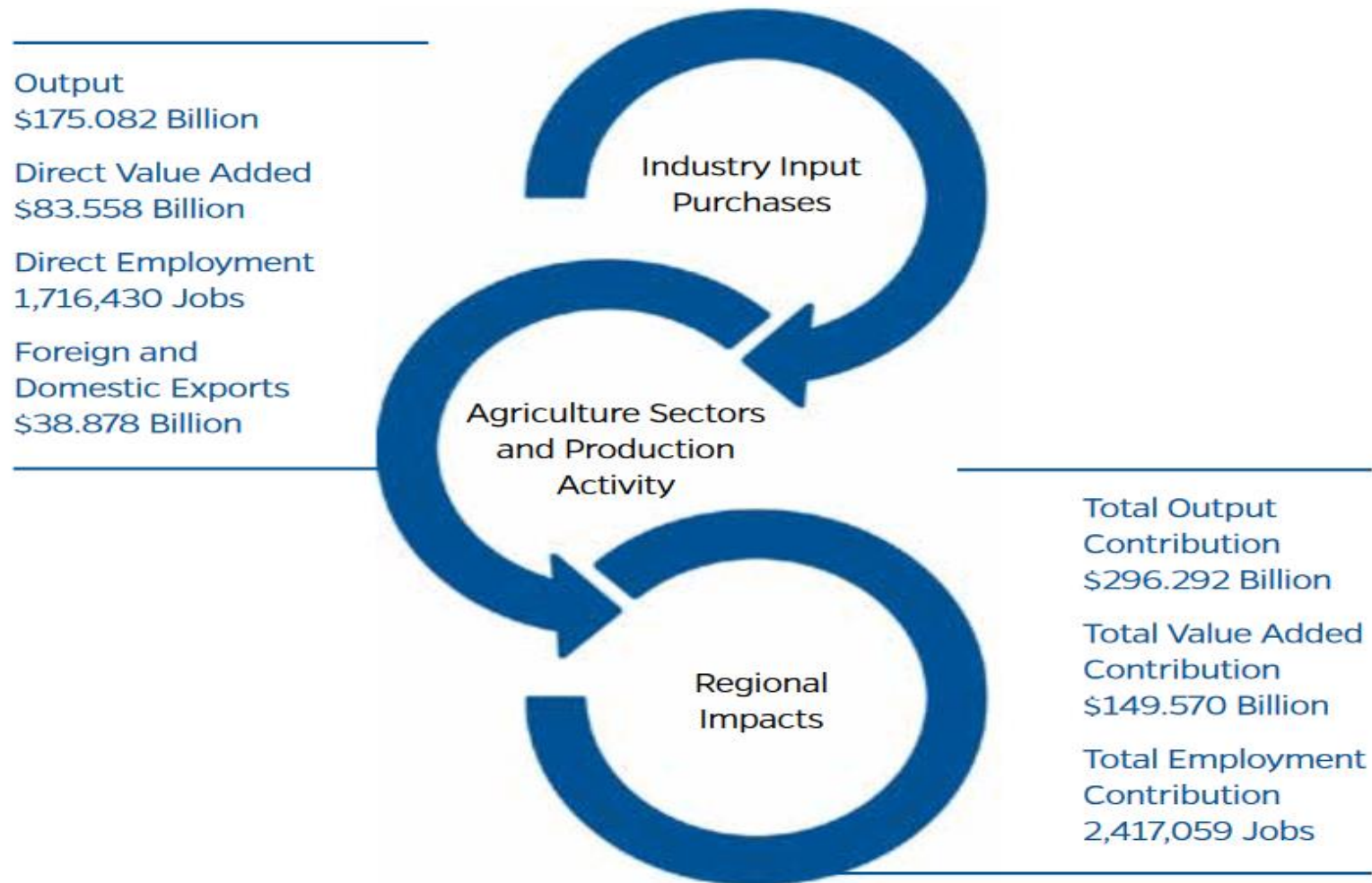


# Florida's Food System



- In addition to production agriculture, Florida has robust food processing and distribution sectors
  - **76,146 jobs** in Food and Kindred Products Manufacturing
  - **1,238,570 jobs** in Food and Kindred Products Distribution

# Economic Importance of Agriculture, Natural Resources and Food Industries to the State



**Figure 1.** Structure of economic activity and summary of economic contributions of agriculture, natural resources, and food industries in Florida in 2018.



# Disaster Impact Assessment

- Hurricane Irma
- Hurricane Michael
- Hurricane Dorian
- Winter 2020 Freeze events
- Florida experiences \$5 – 10 billion in economic losses annually resulting from natural disasters

# Demand Issues related to COVID-19

- **Food Service Industry Demand**
  - 54% of food money spent away from home ('18)
- **Effect of social distancing and stay-at-home orders**
  - Demand for food in theme parks, restaurants, hotels, schools, etc. ↓
- **A large portion of Florida's production goes into the hospitality and food service industries**
  - Tomatoes alone are 80%
- **This caused a major disruption to our food system**





# South Florida Food Production

- South Florida supplies much of the fresh fruits and vegetables throughout the winter along the East Coast
- Immokalee, FL alone ships:
  - 400 to 500 semi-trailer loads of vegetables each day from March through mid-May
  - This equates to 15 – 17.5 million pounds of vegetables every day



# COVID-19 Assessment Tool

- An online survey instrument was designed by UF/IFAS Extension to harmonize the collection of information for assessing the impacts of COVID-19 on Florida's agriculture industries
  - Responses were collected April 16 – May 15

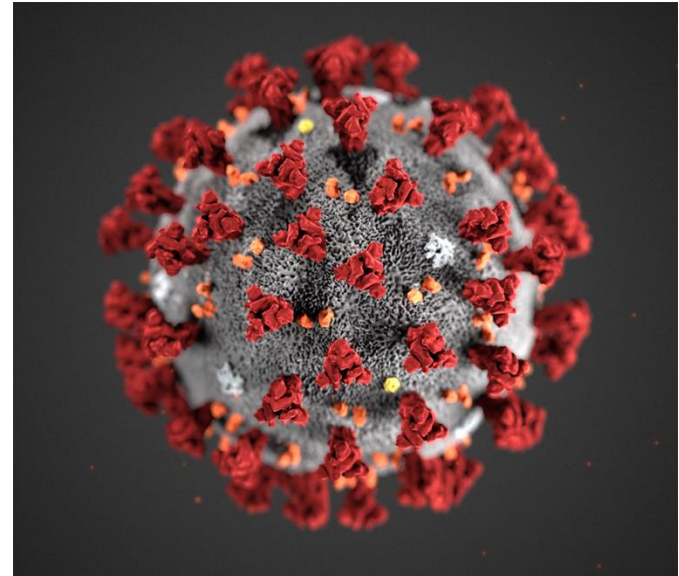


Photo Source: U.S. Centers for Disease Control



Photo Source: Colleen Larson



# Survey Topics

- **Background information**

- Operations
- Revenues
- Employment
- Market channels

- **Current status**

- Open or closed
- Business changes, if open
- Reasons for closure, if closed

- **Impacts**

- Change in revenues
- Employment
- Customer base
- Products/services offered

- **Willingness to participate in potential follow up or similar surveys for related businesses**



The poster features a blue and orange color scheme. At the top, it displays the logos for UF IFAS Extension and Sea Grant Florida. Below the logos, the title 'Assessment of COVID-19 Impacts on Florida' is written in white. The main heading 'AGRICULTURE AND AQUACULTURE PRODUCTION, PROCESSING, AND TRANSPORTATION' is in large, bold, white letters. The body text is split into two columns, explaining the survey's purpose and inviting participation. At the bottom, a prominent orange button-like area contains the text 'Click Here to Take the Survey Now' and a thank you message.

UF IFAS Extension  
UNIVERSITY of FLORIDA

Sea Grant  
Florida

**Assessment of COVID-19 Impacts on Florida**

**AGRICULTURE AND AQUACULTURE  
PRODUCTION, PROCESSING,  
AND TRANSPORTATION**

Agriculture, natural resource, and food systems in Florida are undergoing considerable large-scale disruptions as a result of the COVID-19 situation. UF/IFAS remains committed to serving stakeholders as they navigate through this time of great uncertainty.

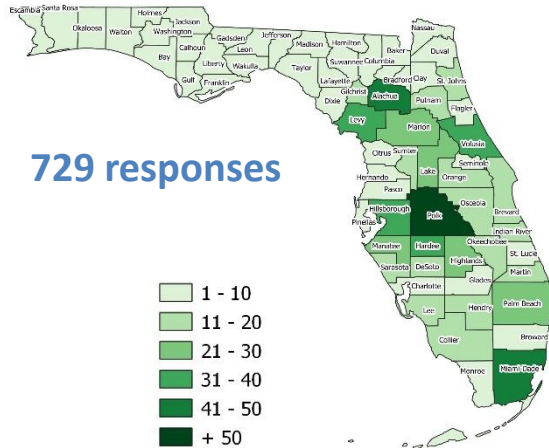
To gain insights into the changes occurring for operations involved in agriculture and aquaculture production, post-harvest processing, and transportation, you are invited to take a 15-20 minute survey at the link below.

**Click Here to Take the Survey Now**

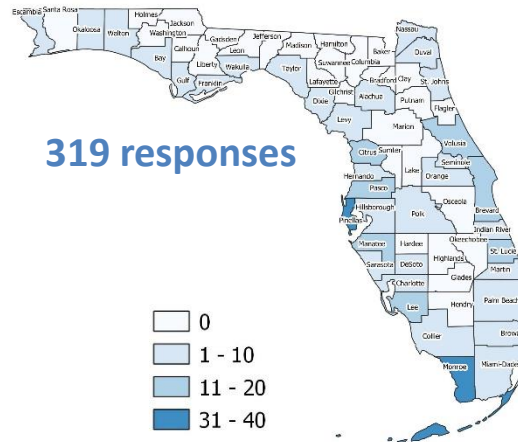
Thank you for your cooperation and participation!

# Overall Participation

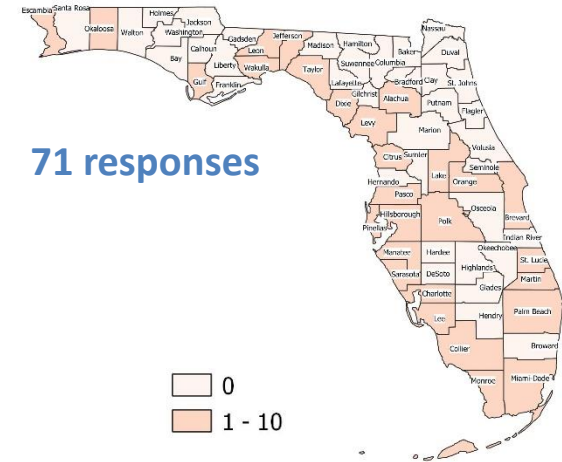
## Agricultural Operations



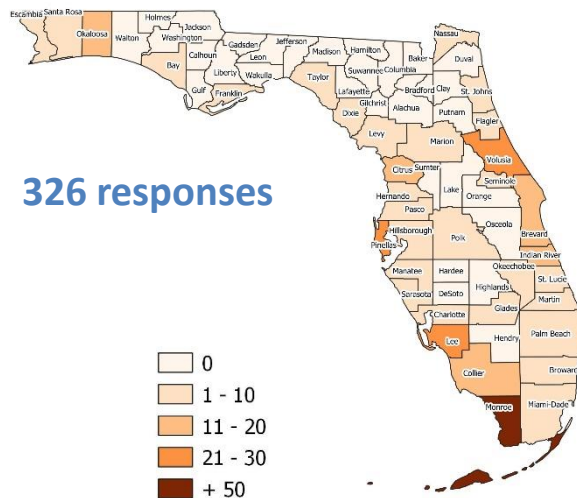
## Commercial Fishing



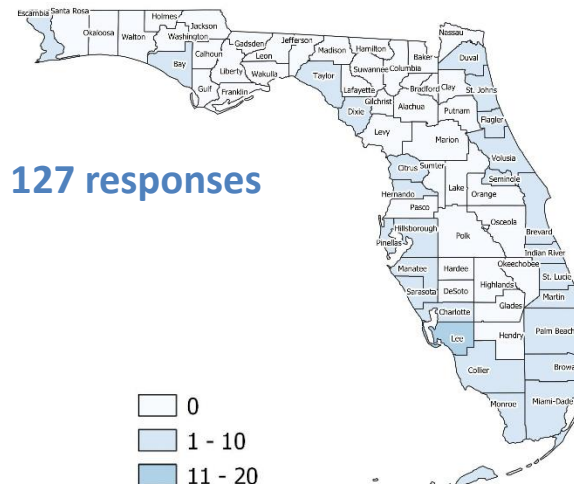
## Seafood Wholesale Dealers



## For-hire / Charter



## Marine Recreation Support

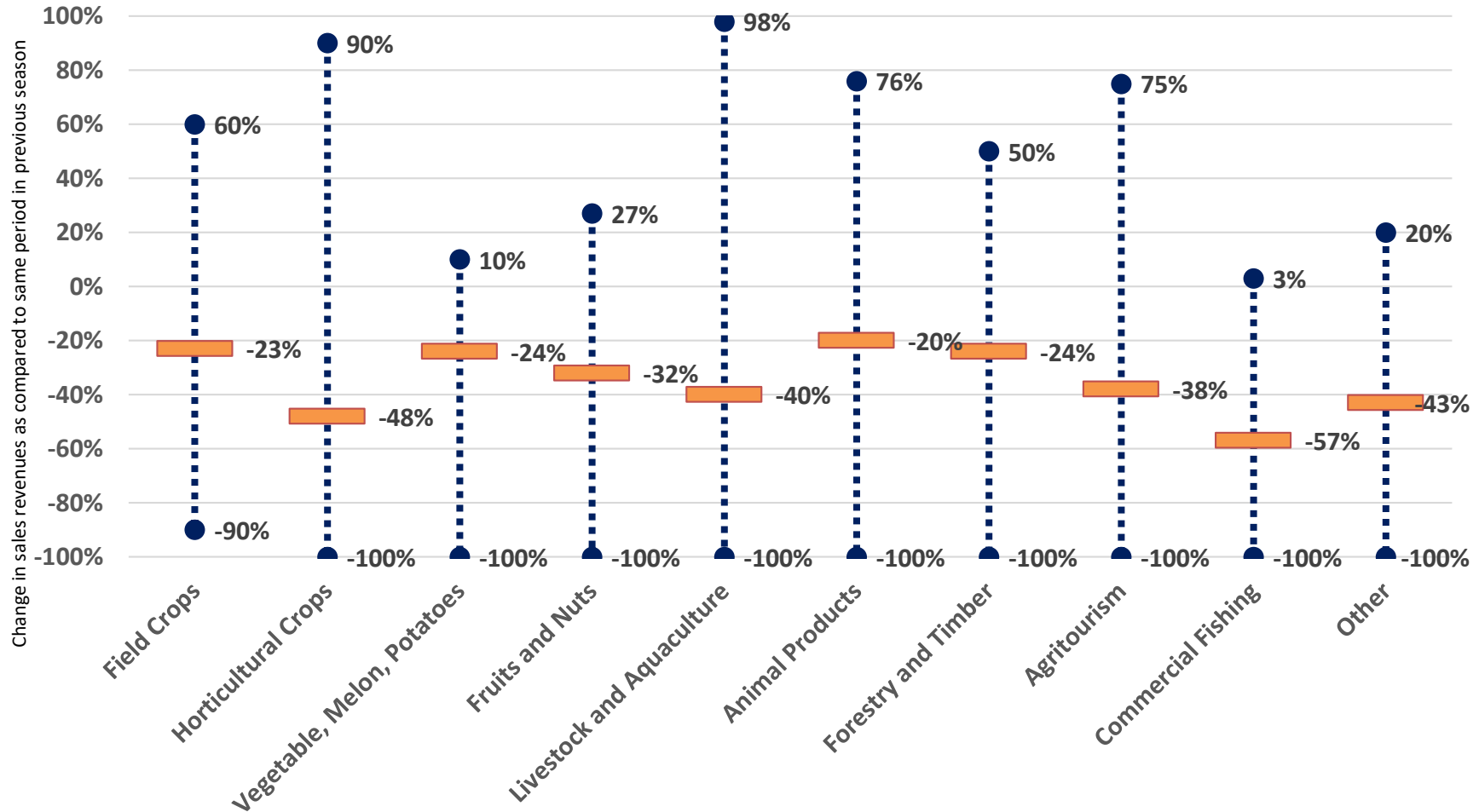




# Agriculture Respondent Characteristics

- **729 responses were collected**
  - 424 were a full and complete response
  - Use as much of these data as possible
- **About half of the production operations were small businesses**
- **Many businesses are open and operating in some capacity**
  - 90% of operations report that they are open in the production, post harvest, and transportation sectors

# Changes in sales revenues by commodity group



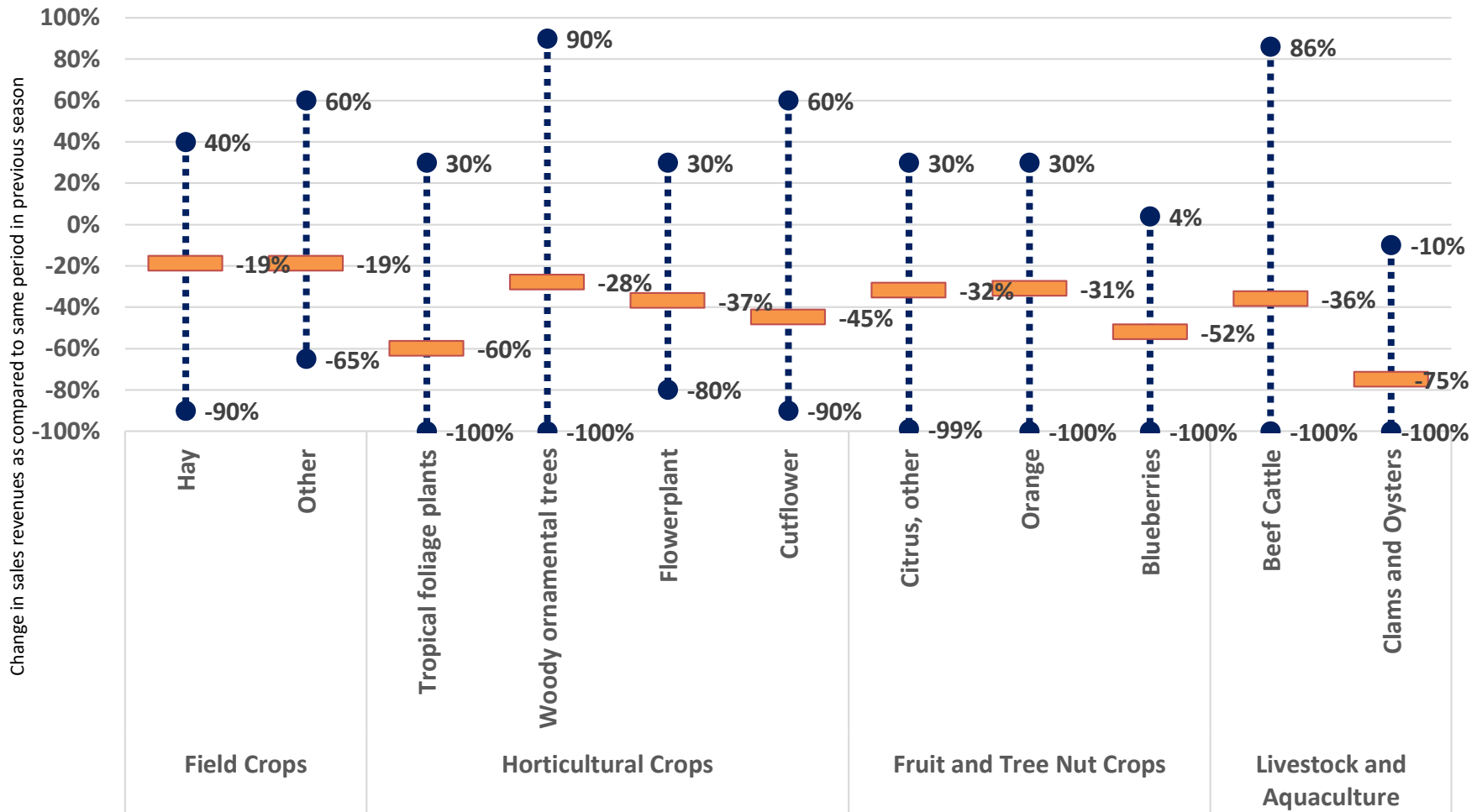
Note that orange bars represent the average reported sales revenue change for each commodity group and dotted blue lines represent the full range of answers across the commodity group.



# Estimated Losses in Sales Revenues (March to Mid-May)

	Total Annual Sales Revenues (5 year average, \$millions)	% Annual Revenue March to Mid-May	Output at risk (\$millions)	% loss from survey (average with 90% confidence interval)	Estimated Losses (\$ Millions)
Field Crops	\$720.36	10%	\$72.04	<b>-22%</b> [-30%,-15%]	<b>\$15.85</b> [\$10.81,\$21.61]
Horticultural Crops	\$1,935.52	44%	\$846.79	<b>-46%</b> [-54%,-39%]	<b>\$389.52</b> [\$330.25,\$457.27]
Vegetable, Melon, Potatoes	\$1,421.97	40%	\$568.79	<b>-24%</b> [-38%,-12%]	<b>\$136.51</b> [\$68.25,\$216.14]
Fruits and Nuts	\$1,593.90	40%	\$637.56	<b>-32%</b> [-39%,-24%]	<b>\$204.02</b> [\$153.01,\$248.65]
Livestock and Aquaculture	\$1,455.65	21%	\$303.26	<b>-40%</b> [-46%,-34%]	<b>\$121.30</b> [\$103.11,\$139.50]
Animal Products (Milk, Honey, Eggs)	\$653.69	21%	\$136.19	<b>-20%</b> [-32%,-8%]	<b>\$27.24</b> [\$10.89,\$43.58]
Sum Total	<b>\$7,781.09</b>		<b>\$2,564.62</b>		<b>\$894.44</b> [\$676.33,1,126.75]

# Changes in sales revenues by commodity



Note that orange bars represent the average reported sales revenue change for each commodity and dotted blue lines represent the full range of answers across the commodity.



# Final thoughts from respondents



# Marine Industry Surveys: Overview

Survey	Respondents	Respondents Reporting Decreased Revenue	Respondents Closed Due to COVID-19
Charter/For-Hire (included sightseeing and dive charter operators)	326	100%	51%
Commercial Fishing	319	96%	48%
Marine Recreation Support Businesses (included boat rentals, boat storage, fishing supplies, etc.)	127	86%	18%
Seafood Wholesale Dealers	71	93%	16%

# Commercial Fishing Survey Results

- Divided commercial fishers by species targeted and revenue into the following groups:
  - Shrimp, reef fish, spiny lobster, stone crab, blue crab, coastal migratory pelagics, other pelagics, mullet, oysters, bait fish/shrimp, other species

Fisher Group – Main Species Target	# of Observations	Avg. Change in Revenue	90% CI of Avg. Change in Revenue
All Commercial Fishers	209	-74%	[-78%,-70%]
Shrimp	18	-63%	[-78%,-47%]
Reef Fish	58	-76%	[-83%,-69%]
Stone Crab	24	-82%	[-94%,-71%]
Coastal Migratory Pelagics	24	-72%	[-83%,-62%]
Other Species	11	-75%	[-95%,-55%]
Multiple Species Groups	51	-75%	[-83%,-68%]
Spiny lobster, blue crab, mullet, other pelagics, oysters, bait fish/shrimp	7 or less	N/A	N/A



# Commercial Fishing Revenue Losses

- Overall revenue change calculations
  - Survey average monthly revenue impact \* FWC monthly revenue values (2015-2019)

Month	Monthly Avg. Value of Landings (\$ millions)	Estimated Avg. Change in Revenue	Estimated Total Revenue Loss (\$ millions)	Estimated Revenue Loss Range (\$ millions)
February	\$20.15	-2.9%	\$.60	\$.29 - \$.90
March	\$19.95	-37.8%	\$7.53	\$6.78 - \$8.29
April	\$16.46	-71.3%	\$11.74	\$11.07 - \$12.40
May (through 5/15)	\$8.11	-73.6%	\$5.97	\$5.68 - \$6.27
Total	\$64.67	NA	\$25.84	\$23.82 - \$27.86

# Seafood Wholesale Dealer Survey Results

- Divided seafood wholesale dealers by revenue from different customer types:
  - Distributors, restaurants, supermarkets, own retail operation, seafood markets, other customer types

Main Customer Type	# of Observations	Avg. Change in Revenue	90% CI of Avg. Change in Revenue
All Seafood Wholesale Dealers	44	-70%	[-77%, -63%]
Distributors	14	-62%	[-76%,-48%]
Multiple Customer Types	12	-85%	[-90%,-80%]
Restaurants	8	-66%	[-88%,-44%]
Own retail, supermarkets, seafood markets, other customer types	5 or less	NA	NA

# Labor Issues related to COVID-19

- **Labor capacity**
  - Small window for harvesting fruits and vegetables
  - Specialty crops are labor intensive
  - Need for large crews of workers
- **Labor safety**
  - Growers are taking aggressive steps to protect workers from COVID-19: provide space, social distancing, sanitation, etc.
- **Immigration and travel**
  - Much farm labor is migrant which can cause issues with the ability to move among locations
  - Domestic travel restrictions
  - International travel restrictions



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# Not the end of our effort ...



- Release a detailed report on Round 1 results
- Round 2 of survey effort ongoing to capture continued and new impacts
- Collaboration between UF (Lead), FGCU, and FAMU to collect the stories behind these impacts - interviews are ongoing for the foreseeable future
- Compound disaster assessment
  - Hurricane Sally

# Questions and Discussion

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