Thank you for joining us today. The webinar will begin in just a few minutes.
Lessons from COVID-19: Positioning Regional Food Supply Chains for Future Crises

An Agriculture and Food Research Initiative project funded by the US Department of Agriculture National Institute of Food and Agriculture.
Welcome to Our Project Webinar Series

University of Minnesota

University of Wisconsin-Madison

University of Florida

University of California, Irvine

Kansas State University
Project Webinar Series

“Lessons from COVID-19: Positioning Regional Food Supply Chains for Future Pandemic, Natural Disasters and Human-made Crises” is one of 17 projects funded by the USDA NIFA AFRI Rapid Response to COVID-19 Program.

Project period: Sept 2020-August 2022

4-part webinar series (Jan-28, Jun-17, Nov-18, Apr-21)

You are not only our audience but a valuable contributor to our project!
Agenda for Today: Webinar #1

Introducing the Project
Supply Chain Survey
Preliminary Findings
• Florida 2020.I-II Surveys
• Consumer Behavior Survey
Online Resources
Expected Outreach Deliverables
Wrap Up - Q&A
Project Overview
Project Overview

The COVID-19 pandemic has disrupted supply chains, compromising their core function of providing safe and appropriate food to people and distressing the livelihoods of individuals and businesses.

This integrated project seeks to generate knowledge and resources to enhance preparedness of the U.S. agrifood supply chains for future disruptions.

We will explore the extent to which regional food systems can effectively augment mainstream supply chains to meet the nation’s food needs, with a focus on ensuring the economic security of our small-scale operations.
Objectives

1. Assess the impact of the COVID-19 pandemic on farm and food supply chain operations.

2. Understand capacities and structural vulnerabilities of regional food systems to support their population needs.

3. Develop resources and strategies for current and future disruptions.

4. Develop and offer training programs to strengthen support and understanding for local and regional supply chain participants at times of disruptions.
Team

University of Minnesota

University of Wisconsin

University of Florida

University of California, Irvine

Kansas State University
North Central Region

**Dr. Hikaru Peterson**, Dept. of Applied Economics, Univ. of Minnesota

**Gigi Digiacomo**, Dept. of Applied Economics, Univ. of Minnesota

**Dr. Cheryl Boyer**, Dept. of Horticulture & Natural Resources, Kansas State Univ.

**Michelle Miller**, Center for Integrated Agricultural Systems, Univ. of Wisconsin-Madison

**Dr. Andrew Stevens**, Dept. of Agricultural & Applied Economics, Univ. of Wisconsin-Madison

**Dr. Lindsey Day Farnsworth**, Division of Extension, Univ of Wisconsin-Madison
Southeast Region

**Dr. Lauri Baker**, Dept. of Agricultural Education & Comm, UF/IFAS Center for Public Issues Education, Univ. of Florida

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**Dr. Angie Lindsey**, Dept. of Family, Youth & Community Sciences, Center for Public Issues Education, UF/IFAS Extension, Univ. of Florida

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Southwest Region

Dr. Gustavo de L. T. Oliveira
Dept. of Global & International Studies, Univ. of California-Irvine

Dr. Li Zhang
Dept. of Global & International Studies, Univ. of California-Irvine
Advisory Board

- **Ben Nauman** Senior Director of Purchasing, National Cooperative Grocers
- **Christine Tran** Executive Director, Los Angeles Food Policy Council
- **Christopher Bacon** Associate Professor, Dept. of Environmental Studies & Sciences, Santa Clara University
- **Helene Murray** Executive Director, Minnesota Institute for Sustainable Agriculture
- **John Walt Boatright** Director of National Affairs, Florida Farm Bureau Federation
- **John Silianoff** Vice President of Sales, Minnesota Regional Transportation
- **Keith Harris** Associate Professor, Dept. of Agricultural Economics, Kansas State University
- **Lauren Gwin** Associate Director, Center for Small Farms & Community Food Systems, Oregon State University
- **Robin Safley** Executive Director, Feeding Florida
- **Steven Helfand** Professor & Chair, Dept. of Economics, University of California-Riverside
- **Tori Rumenik** Commodity Services & Supply Chain Manager, Florida Fruit and Vegetable Association
- **Tracy Irani** Professor & Head, Dept. of Family, Youth and Community Sciences, University of Florida
- **Zhaohui Wu** Professor, College of Business, Oregon State University
Planned Activities
# Research & Outreach Activities

<table>
<thead>
<tr>
<th>COVID-19 Impact Survey: Farmers &amp; Supply Chain Businesses/Workers</th>
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<tbody>
<tr>
<td>Behavioral Change Survey: Consumers</td>
</tr>
<tr>
<td>Equilibrium Displacement Modeling</td>
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<tr>
<td>Regional Foodshed Analysis</td>
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<tr>
<td>Food Flow/Network Analysis</td>
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<tr>
<td>Brainstorming Solutions: Focus Groups/Interviews</td>
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<td>Communication Platform &amp; Online Resources</td>
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<td>Professional Development Training</td>
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Supply Chain Survey
Asking farm and supply chain businesses in our study regions:

- How has your food or farming business been affected by the pandemic, public health measures, and economic crisis?
- Did you find business innovations to improve the resilience of our food supply chains?
- Tell us more about it!

Examining differences in impacts across:

- Sectors & commodities
- Regions
- Business scale & scope
Block 1: Introduction

Block 2: Business closed

Block 6: Operator and operation characteristics

Block 7: Wrap up

Block 2.5: Business open, but had been temporarily closed

Block 3: Business open

Block 4.1: Production

Block 4.2: Processing

Block 4.3: Wholesaling

Block 4.4: Retailing

Block 4.5: Food Service

Block 5: Business outlook and innovation

Block 6: Operator and operation characteristics

Block 7: Wrap up
Q2.7. For **calendar year 2019**, how many **total individuals did your business employ** across the entire year?

*Note: Only use numbers. Do not include commas, dashes, or other special characters.*

<table>
<thead>
<tr>
<th></th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fulltime</td>
<td></td>
</tr>
<tr>
<td>Seasonal/Part-time</td>
<td></td>
</tr>
<tr>
<td>Contract Labor</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>0</td>
</tr>
</tbody>
</table>
Survey Timeline

• Sept-Nov 2020: design

• Dec 2020: testing

• Jan/Feb 2021: electronic distribution
  • Media blast: emails
  • Email reminders
  • Phone calls
Sample Outputs from Past Work

Overall Participation

- **Agricultural Operations**: 729 responses
  - 1 - 10
  - 11 - 20
  - 21 - 30
  - 31 - 40
  - 41 - 50
  - > 50

- **Commercial Fishing**: 319 responses
  - 0
  - 1 - 10
  - 11 - 20
  - 21 - 30
  - 31 - 40

- **Seafood Wholesale Dealers**: 71 responses
  - 0
  - 1 - 10

- **For-hire / Charter**: 326 responses
  - 0
  - 1 - 10
  - 11 - 20
  - 21 - 30
  - 31 - 40

- **Marine Recreation Support**: 127 responses
  - 0
  - 1 - 10
  - 11 - 20

ASSESSING THE IMPACT OF COVID-19 ON FLORIDA’S AGRICULTURE AND MARINE INDUSTRIES

Changes in sales revenues by commodity group

Note: Orange bars represent the average reported sales revenue change for each commodity group and black lines represent the full range of answers across the commodity group.
Sample Outputs from Past Work

**WHAT DO LEADERS IN AGRICULTURE AND NATURAL RESOURCES THINK ABOUT THE ECONOMIC IMPACT OF COVID-19?**

**I AM CONCERNED ABOUT THE EFFECT OF COVID-19 ON:**

- **State Economy**
  - YES
  - 97.8%

- **Labor Shortages**
  - YES
  - 89.3%

- **Personal Finances**
  - YES
  - 82.7%

- **Increased Food Cost**
  - YES
  - 54.7%

Data was collected between March 16 and April 21, 2020 by the UF/IFAS Center for Public Issues Education. This survey was conducted nationwide with 225 participants.

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**COVID-19 IMPACTS ON FLORIDA SHELLFISH AQUACULTURE**

The Economic Impact Analysis Program and several affiliated colleagues within the Food and Resource Economics Department at UF designed an online tool to collect and process data on the impacts of the COVID-19 situation on agriculture and marine operations in the state of Florida. Respondents were recruited through the use of media releases and postings on social media by UF/IFAS Communications as well as through social media and via email. The survey was distributed to producers in the state of Florida, with 225 responses received.

**Expected production and revenue for March to mid-May 2020**

<table>
<thead>
<tr>
<th>Item</th>
<th>Expected production (tons)</th>
<th>Average price ($/ton)</th>
<th>Expected revenue ($/ton)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oysters</td>
<td>681,563</td>
<td>$4.53</td>
<td>$3,071,227</td>
</tr>
<tr>
<td>Clams</td>
<td>10,010,554</td>
<td>$0.11</td>
<td>$1,102,176</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>$4,173,393</td>
</tr>
</tbody>
</table>

Source: Authors' calculations using data obtained from IFAS, Division of Aquaculture and personal communications with off-white seafood dealers.

*We assume the production is evenly distributed among the month of May, using half of the total production value for this month.*

2. Impacts of COVID-19 on the Florida Shellfish Aquaculture Industry
Findings 2020 Q 1&2
Changes in sales revenues by commodity group in Florida (March - Mid-May)
## Estimated losses in sales revenues in Florida due to COVID-19 pandemic (March - Mid-May)

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

Data collection in April 2021

- Major Areas:
  - Adoption of alternative channels
  - Food purchasing preferences and needs
  - Build on and compare to past data collection
  - Comparable to the producer & supply chain survey data
Economic Concern: Increased Food Prices

- PO 1: 75.6
- ANR 1: 54.7
- PO 2: 81
- PO 3: 83.4
Alternative Supply Chains

- 72.2\% \ (n = 1111) purchased local food in the past month
The Center for Public Issues Education in Agriculture and Natural Resources is conducting a series of national public opinion surveys to examine the perceptions of Americans related to COVID-19. The PIE Center launched the series of surveys in mid-March and has plans to continue public opinion surveys related to COVID-19 through August. In addition, the PIE Center surveyed leaders in agriculture and natural resources sectors to explore their unique concerns and beliefs. Learn more below about findings from the survey and how the findings can be applied to your organization’s communication efforts.
Environmental Scan Research

**Audience channels are...**
- Direct to consumer
- Farm to institution
- Policy
- Intermediated and/or wholesales
- Niche and non-commodity foods
- Retail and restaurant

_and are further broken down into specific audience members like..._

- Academics
- Community member
- Consumer
- Extension assistance
- Food processor
- Food service/chef
- Government
- Producer

_and more._

**Resource types are...**
- Reports (5+ pages)
- Directories
- Factsheet briefs
- FAQ pages
- Google Sheets
- Innovation briefs
- Lunch and learns
- Blogs
- Videos
- Webinars
- Listservs
- Webpages
- Newsletters

**A few topic areas...**
- Adopting new technology
- Best practices of online/remote/curbside
- Consumer messaging and promotion
- Human resources and worker safety
- Food safety
Looking for Resources Now?
USDA’s Local Food Systems Response to COVID resource page

https://lfscovid.localfoodeconomics.com/
https://ruralengagement.org/lessons-from-covid-19

CENTER FOR RURAL ENTERPRISE ENGAGEMENT

A generator and source of knowledge about new-media marketing for rural and agriculture-based businesses and organizations

LESSONS FROM COVID-19:

POSITIONING REGIONAL FOOD SUPPLY CHAINS FOR FUTURE PANDEMICS.

Also on the CREE site:

Touchless Transactions series
Expected Outreach Deliverables
Extension Education Components

- Online Resources
  - Website for curating resources

- Training
  - Webinar series
  - Online course
  - Train-the-trainer conference

- Communication of Project Deliverables
  - Media releases
  - Extension publications
  - Podcast interviews
  - Conference presentations
  - Academic journal articles
How Can You Help?
COVID-19 Impact Survey

- Media blast
- Circulate survey to eligible participants
- Sign up to participate: sites.uci.edu/criticalfoodstudies
- Identify survey targets for low-response groups
- CONTACT Gigi Digiacomo if interested in helping out: gigid@umn.edu
What questions can we answer?

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