THE WEBINAR WILL BEGIN SOON
Lessons from COVID-19:
Consumers' Interactions
with the Food Supply Chain

November 18th, 2021 | 1:00 pm CT
Welcome to Our Project Webinar Series
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 #3

1. Brief Overview of Project:
   Cheryl Boyer, Associate Professor of Horticulture at Kansas State University

2. Consumer Behavior Survey:
   Lauri M. Baker, Associate Professor of Agricultural Communication at the University of Florida.
   Hikaru Peterson, Professor of Applied Communication at the University of Minnesota

3. Activity Updates:
   Christa Court, Assistant Professor of Regional Economics at the University of Florida
   Michelle Miller, Associate Director, Center for Integrated Agricultural Systems at the University of Wisconsin Madison
   Hikaru Peterson, Professor of Applied Communication at the University of Minnesota

4. Closing and Questions:
   Cheryl Boyer, Associate Professor of Horticulture at Kansas State University
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.
Project objectives

1. Assess the impact of the COVID-19 pandemic on farm and food supply chain operations.
2. Understand capacities & structural vulnerabilities of regional food systems to support their population needs.
3. Develop resources & strategies for current & future disruptions.
4. Develop and offer training programs to strengthen support and understanding for local and regional supply chain participants at times of disruptions.
Project team
Project team
Advisory committee members

- **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
<table>
<thead>
<tr>
<th>Research &amp; outreach activities</th>
<th>2021.1</th>
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<tbody>
<tr>
<td>COVID-19 Impact Survey: Farmers &amp; Supply Chain Businesses/Workers</td>
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<td>Behavioral Change Survey: Consumers</td>
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<td>Equilibrium Displacement Modeling</td>
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<td>Food Flow/Network Analysis</td>
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<td>Brainstorming Solutions: Focus Groups/Interviews</td>
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<td>Professional Development Training</td>
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Consumer Survey
Methods & sampling

• July - August 2021

• Non-probability opt-in sample
  • U.S. residents 18 years of age or older
  • Stratified sampling
    • Income, race, region
    • 1,004 total responses in final sample

• Survey structure
  • Food purchase/acquisitions during three time periods over the pandemic
  • Choice experiment
Timeframes

Early Pandemic: March-April 2020

Mid Pandemic: August-September 2020

Current: June 2021
Changes in dollars spent for food
Asked to compare

- Change in dollars spent
- By food category
- Pre-pandemic with Time 1
Changes in Dollars Spent - Pre-pandemic to Time 1: March-April 2020

- Beer, wine, and other alcoholic beverages
- Frozen fruits, vegetables, meats, and seafood
- Frozen ready-to-eat meals or entrées
- Frozen desserts and baked goods
- Condiments and dressings
- Coffee, tea, non-alcoholic beverages (excluding dairy and dairy substitutes)
- Canned goods
- Snack foods, chocolate products, and confectionary products
- Breakfast and bakery (including cereal, bread, and spreads)
- Pantry and dry goods (including pasta and rice)
- Dairy and dairy substitutes
- Fresh meat, seafood, and eggs
- Fresh deli
- Fresh fruits and vegetables

- spent less
- spent about the same
- spent more
- didn’t buy
Early Pandemic: March-April 2020

Mid Pandemic: August-September 2020

VS.
Changes in Dollars Spent - Time 1: March-April 2020 to Time 2: August-September 2020

- Fresh fruits and vegetables
- Fresh deli
- Fresh meat, seafood, and eggs
- Dairy and dairy substitutes
- Pantry and dry goods (including pasta and rice)
- Breakfast and bakery (including cereal, bread, and spreads)
- Snack foods, chocolate products, and confectionary products
- Canned goods
- Coffee, tea, non-alcoholic beverages (excluding dairy and dairy substitutes)
- Condiments and dressings
- Frozen desserts and baked goods
- Frozen ready-to-eat meals or entrées
- Frozen fruits, vegetables, meats, and seafood
- Beer, wine, and other alcoholic beverages
- Frozen fruits, vegetables, meats, and seafood
- Dairy and dairy substitutes
- Fresh meat, seafood, and eggs
- Fresh deli
- Fresh fruits and vegetables

spent less  spent about the same  spent more  didn’t buy
Mid Pandemic: August-September 2020

Current: June 2021

Vs.
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<tr>
<th>Category</th>
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<td>Snack foods, chocolate products, and confectionary products</td>
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<td>Breakfast and bakery (including cereal, bread, and spreads)</td>
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<td>Dairy and dairy substitutes</td>
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<td>Fresh meat, seafood, and eggs</td>
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Changes in Dollars Spent - Time 2: August-September 2020 to Time 3: June 2021
Types of food outlets and logistics
Super centers and/or supermarkets: By acquisition type

- In-store purchases/eat in
- Online ordering for in-store or curbside pickup
- Phone ordering for in-store or curbside pickup
- Online ordering for at-home delivery
- Phone ordering for at-home delivery
- Online ordering for bundled at-home delivery (e.g., DoorDash, Instacart)

Survey Data:
- 2022 (n = 1300)
- Time 3 (n = 1269)
- Time 2 (n = 1264)
- Time 1 (n = 1279)
Health, natural, smaller format grocery store chains (e.g., Whole Foods): By acquisition type

- not sure
- no
- phone ordering for at-home delivery
- online ordering for bundled at-home delivery (e.g., DoorDash, Instacart)
- online ordering for at-home delivery
- phone ordering for in-store or curbside pickup
- online ordering for in-store or curbside pickup
- in-store purchases/eat in
- not used

2022 (n = 1201)
Time 3 (n = 1193)
Time 2 (n = 1203)
Time 1 (n = 1213)
Convenience store, corner store, and/or smaller store with limited selection (e.g., 7-Eleven): By acquisition type

- In-store purchases/eat in
- Online ordering for in-store or curbside pickup
- Online ordering for at-home delivery
- Online ordering for bundled at-home delivery (e.g., DoorDash, Instacart)
- Phone ordering for at-home delivery
- Phone ordering for in-store or curbside pickup
- Not used
- Not sure

Time points:
- Time 1 (n = 1208)
- Time 2 (n = 1189)
- Time 3 (n = 1180)
- 2022 (n = 1175)
Independent grocery store and/or food co-op: By acquisition type

- Not sure
- No
- Phone ordering for at-home delivery
- Online ordering for bundled at-home delivery (e.g., DoorDash, Instacart)
- Online ordering for at-home delivery
- Phone ordering for in-store or curbside pickup
- Online ordering for in-store or curbside pickup
- In-store purchases/eat in
- Not used

- 2022 (n = 1196)
- Time 3 (n = 1191)
- Time 2 (n = 1218)
- Time 1 (n = 1196)
not used

in-store purchases/eat in

online ordering for bundled at-home delivery (e.g., DoorDash, Instacart)

phone ordering for at-home delivery

online ordering for at-home delivery

phone ordering for in-store or curbside pickup

online ordering for in-store or curbside pickup

in-store purchases/eat in

not sure
Direct from farmers and/or food makers, excluding farmers markets (e.g., farm stand, CSA): By acquisition type

- not sure
- no
- phone ordering for at-home delivery
- online ordering for bundled at-home delivery (e.g., DoorDash, Instacart)
- online ordering for at-home delivery
- phone ordering for in-store or curbside pickup
- online ordering for in-store or curbside pickup
- in-store purchases/eat in
- not used

2022 (n = 1172)  Time 3 (n = 1178)  Time 2 (n = 1170)  Time 1 (n = 1194)
Meal and/or meal-kit delivery service (e.g., Blue Apron, Schwan's): By acquisition type

- not sure
- no
- phone ordering for at-home delivery
- online ordering for bundled at-home delivery (e.g., DoorDash, Instacart)
- online ordering for at-home delivery
- phone ordering for in-store or curbside pickup
- online ordering for in-store or curbside pickup
- in-store purchases/eat in
- not used

2022 (n = 1170)  Time 3 (n = 1183)  Time 2 (n = 1181)  Time 1 (n = 1194)
Large, national restaurant chain: By acquisition type

- not sure
- no
- phone ordering for at-home delivery
- online ordering for bundled at-home delivery (e.g., DoorDash, Instacart)
- online ordering for at-home delivery
- phone ordering for in-store or curbside pickup
- online ordering for in-store or curbside pickup
- in-store purchases/eat in
- not used

2022 (n = 1305)  Time 3 (n = 1282)  Time 2 (n = 1268)  Time 1 (n = 1285)
Local, independent restaurant: By acquisition type

- not sure
- no
- phone ordering for at-home delivery
- online ordering for bundled at-home delivery (e.g., DoorDash, Instacart)
- online ordering for at-home delivery
- phone ordering for in-store or curbside pickup
- online ordering for in-store or curbside pickup
- in-store purchases/eat in
- not used

2022 (n = 1289)  Time 3 (n = 1271)  Time 2 (n = 1264)  Time 1 (n = 1242)
Consumer choice experiment
Choice experiment

- **Three situations**
  1. Life is normal with no major health crisis
  2. A disease outbreak: the local health office recommends “choose delivery or curbside pickup instead of shopping in person”
  3. A disease outbreak: the local health office recommends “you can lower risk while grocery shopping by keeping your visits as short as possible; consider using delivery or curbside pickup instead”
In all cases:

- A regular assortment of food groceries
- A retail outlet 3 miles away (8 minutes by car)
- Fixed delivery fee $3.99

<table>
<thead>
<tr>
<th>Logistics</th>
<th>In-store purchases, online ordering for curbside pick up, online ordering for at-home delivery</th>
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<tbody>
<tr>
<td>Outlet</td>
<td>Farmers market, food co-op, supermarket</td>
</tr>
<tr>
<td>Food origin</td>
<td>Local/regional foods where available, foods from anywhere</td>
</tr>
<tr>
<td>Value of groceries</td>
<td>$35, $45, $60</td>
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Demand under “normal life”

A little less than half of people are willing to pay for grocery delivery services.

More than half are willing to pay for local foods.
Demand for logistics & public health risk

- Demand for curbside doubled under high public health risk.
- Demand for grocery deliveries is more inelastic than demand for curbside pickup.
Demand for outlets & public health risk

Demand for farmers markets over supermarkets declines initially, then increases, as public health risk heightens.

Demand for coop over supermarkets declines as public health risk increases.
Demand for local foods & public health risk

Demand for local foods increases initially, then declined, as public health risk heightens.
Summary of findings to date

- **Food purchases by category remained consistent** for the majority of Americans across 3x periods.
- The way Americans acquired food shifted throughout the 3x periods.
- Demand for purchase logistics is **drastically affected by public health concerns**.
  - Demand for grocery delivery is more inelastic than demand for curbside pickup.
- Changes in demand for local outlets and local foods during the pandemic seem sensitive to levels of public health risks.
Activity Updates
Activity 1: COVID-19 Impact Survey

• Data files are cleaned and ready!
• Overall summary
  • Academic publication
  • Podcast/Media interviews
• Extension Factsheets
• Conference presentations
• Additional academic publications
Activity 5 food flows: what counties are critical to the national meat supply chain?
Activity 5 food flows: how do regions function in the national meat supply chain?

**California study region**

**MN/WI study region**
Communication

- Website Update!
- Media releases
- Extension Factsheets
- Podcast interviews
- Conference presentations
- Academic publications

Learning opportunities

- **Webinar** series (this is 3 out of 4)
  - Recordings available

- **Train-the-Trainer Conference**
  - May 5, 2022
  - Online, synchronous

- **Online Course**
  - Available July/August 2022
  - Asynchronous + office hours with project leaders

Focus group conversations

• Scheduled for Jan-Apr 2022
• Opportunities to exchange ideas for improving resilience of our food system with other food supply chain business professionals
• Sign up at https://ruralengagement.org/lessons-from-covid-19-project-sign-up/
Thank you for learning with us!

Join us for our last webinar on April 21, 2022 to hear results from the regional foodshed analysis, foodflow network analysis, and more

https://tinyurl.com/lessonsfromcovid-webinar

Save the date for the train-the-trainer conference: May 5, 2022

Contact: Hikaru Peterson (hhp@umn.edu)
Questions?