

**Assessing Food Insecurity During
COVID-19 Pandemic**

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Overview

- Assessing Food Insecurity During COVID-19: Project Design
 - Sampling
 - Measurement
- Describing the Food Insecurity Problem Spatially
 - U.S.
 - Regions
 - States
 - Counties
- Risk and/or Consequences of Food Insecurity During COVID-19

Food Insecurity in the U.S.

- Food insecurity: “is the limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways.”
- 1 in 8 Americans live in food insecure households
- Those more likely to experience food insecurity (Vulnerable):
 - Near or below poverty line
 - Single parent households
 - Women living alone
 - Black/Hispanic-headed households
 - Elderly



Study Design Overview

- Nationally representative sample of adults (n = 10,368)
- Online platform; surveys executed by Qualtrics, Inc.
- Data were collected the 3rd week March 2020
- Data were post-strata weighted (income, gender, race/ethnicity, and geography) to ensure adequate representation and mirroring of the U.S. population per U.S. Census estimates
- Survey asked a range of questions regarding fear, perception, social and behavioral response, sociodemographics, etc.

Measurement Overview

- U.S. Adult Food Security 10-item Module
- Questions were revised to address immediate food insecurity (last 3 months) as opposed to last 12 months)
- Questions range from running out of food, not having enough money for food, eating balanced/healthy foods, cutting size of meals, eating less, being hungry etc.
- Items are recoded to create a 10-item scale ranging from 0-10
- Persons scoring 3 or higher are in moderate to high food insecurity group—focus of our work.

Food Insecurity in the U.S. (Apples to Oranges)



United States(2018):

12% of households are food insecure based on USDA estimates



United States(2020):

38% of sampled individuals are food insecure based on our sample (n =10,368)



United States (2020):

South Region (40.8) highest percent of respondents reporting moderate to high food insecurity in our sample (n =10,368)

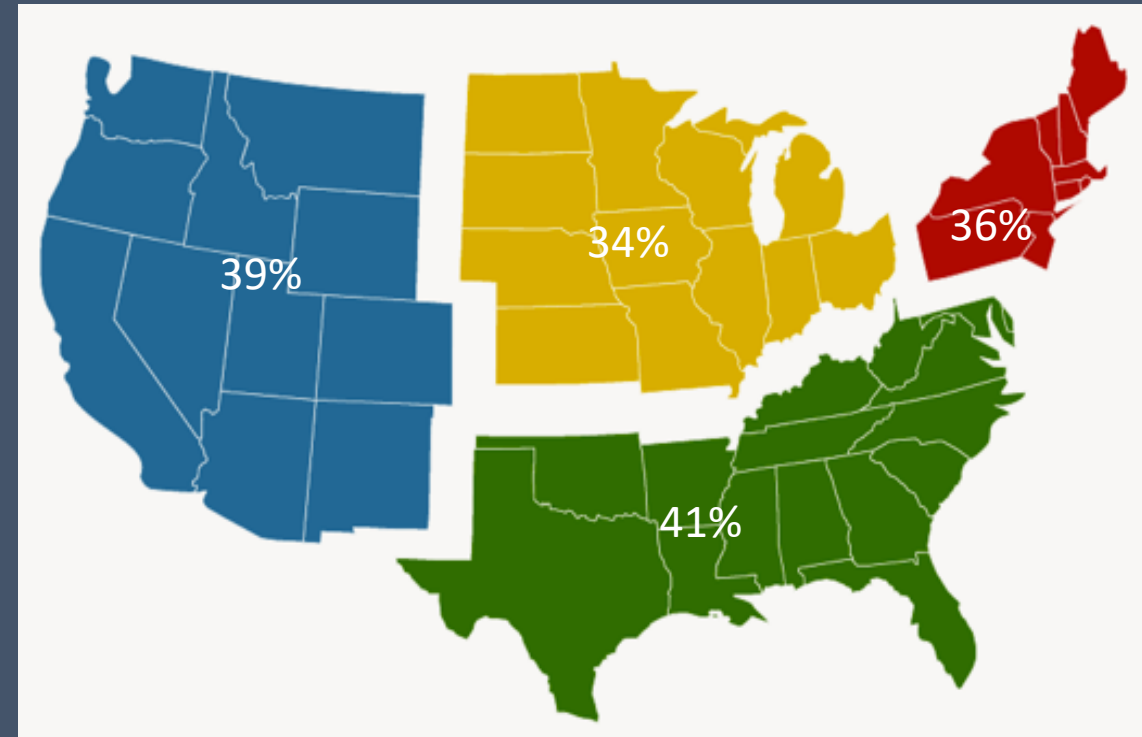


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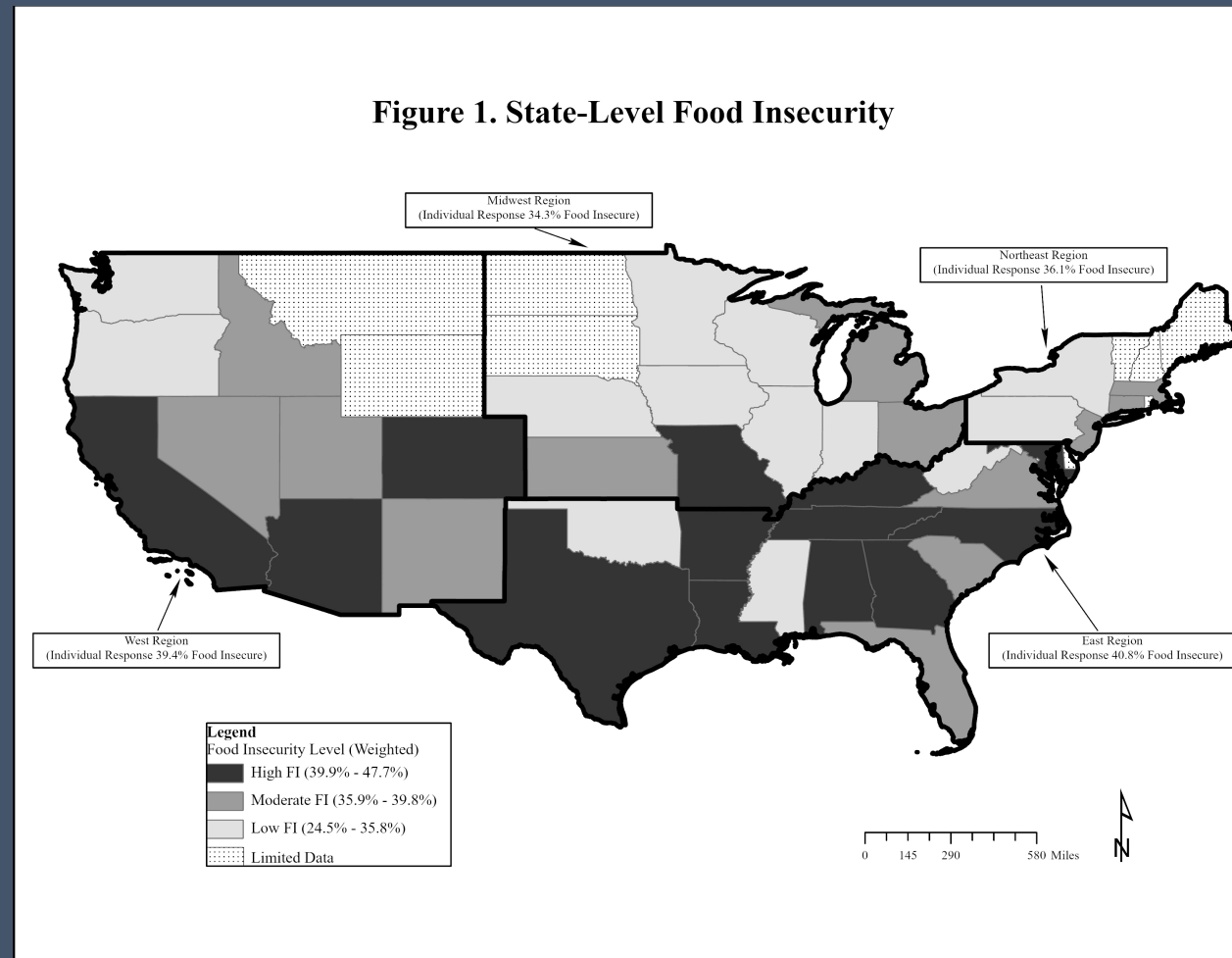
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Food Insecurity Across U.S. Regions

Average over all 4 regions = 38.3%

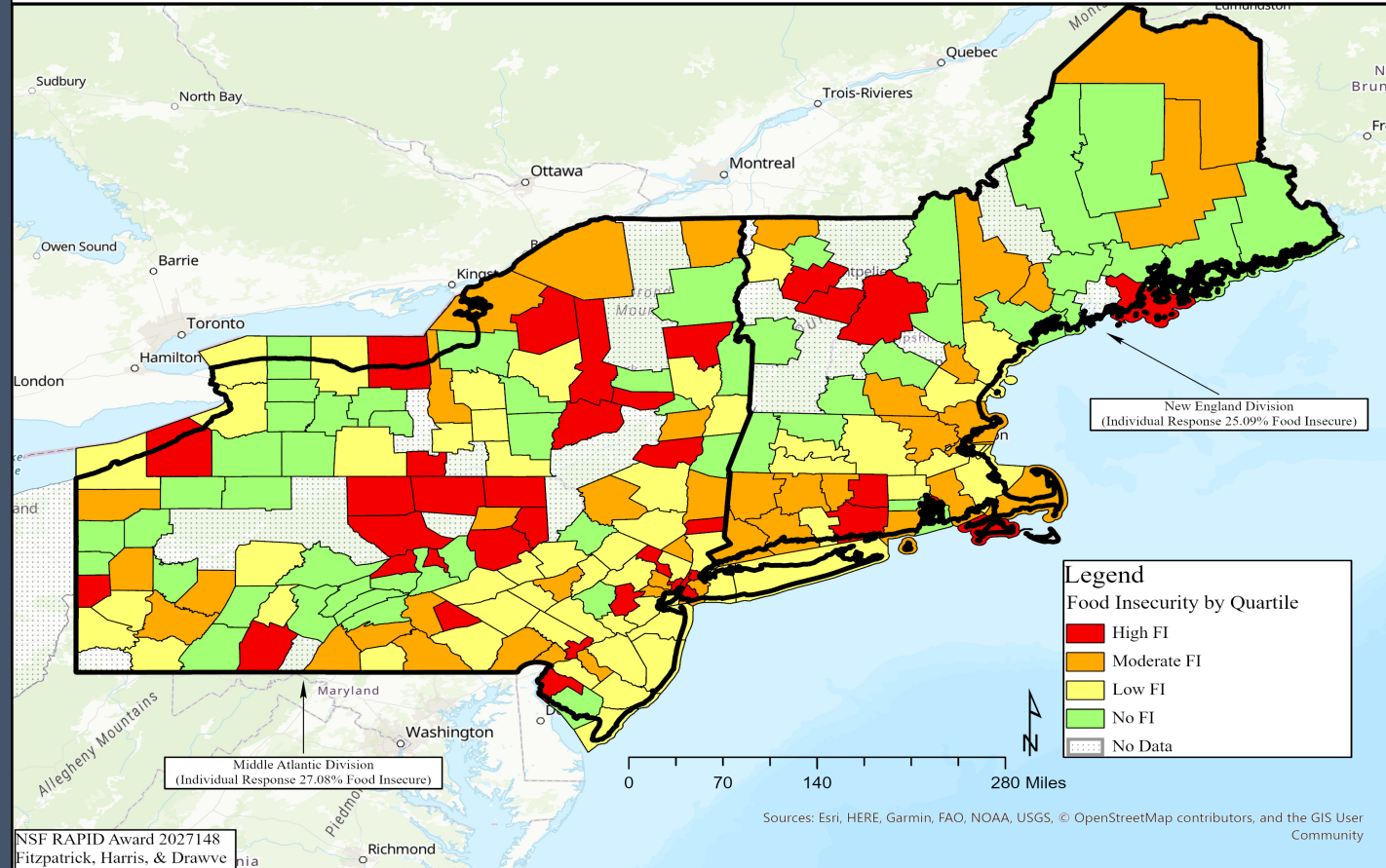


Food Insecurity Across Regions and States



Northeast Region

Percent Food Insecurity Aggregated to County-Level in Northeast U.S. Census Region



NSF RAPID Award 2027148
Fitzpatrick, Harris, & Drawve

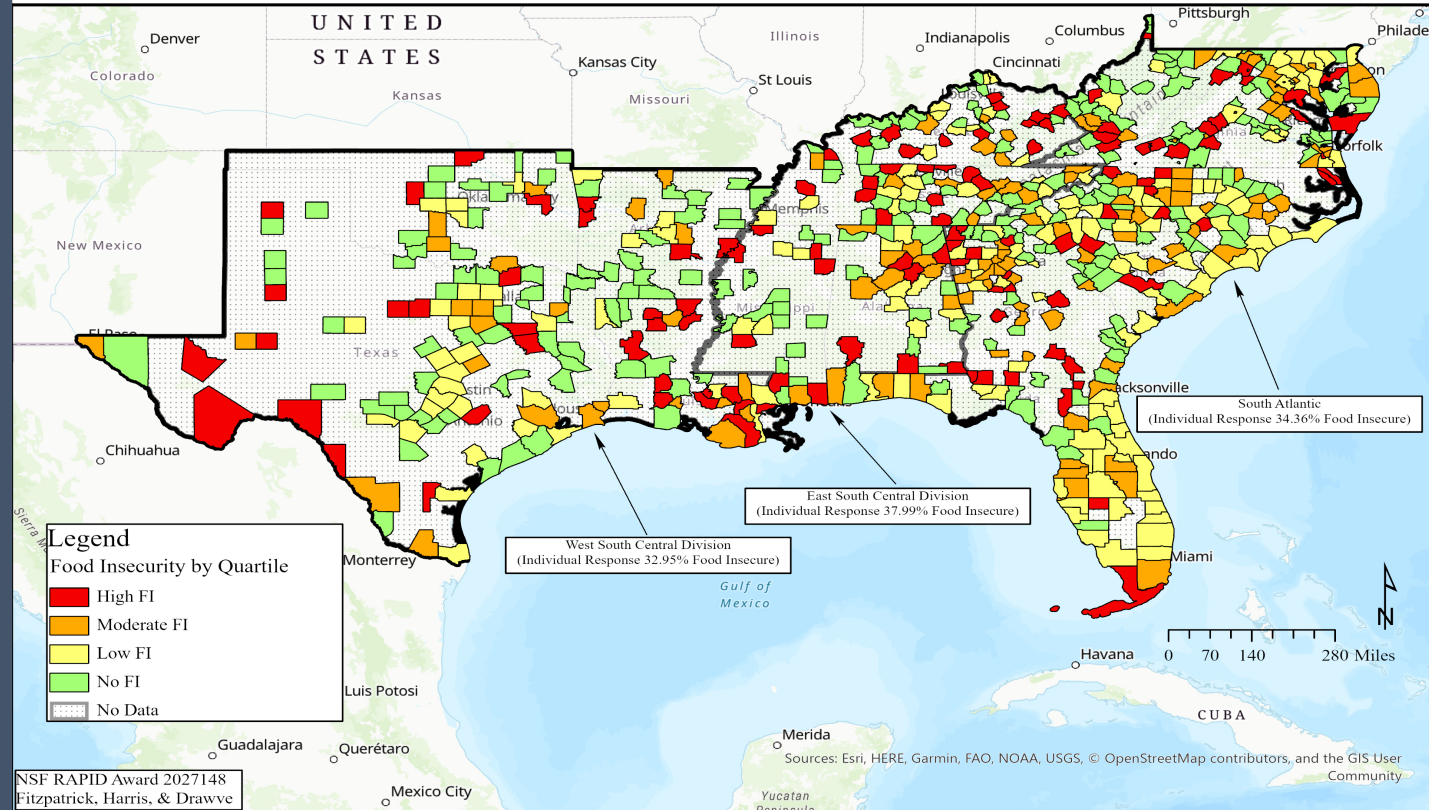


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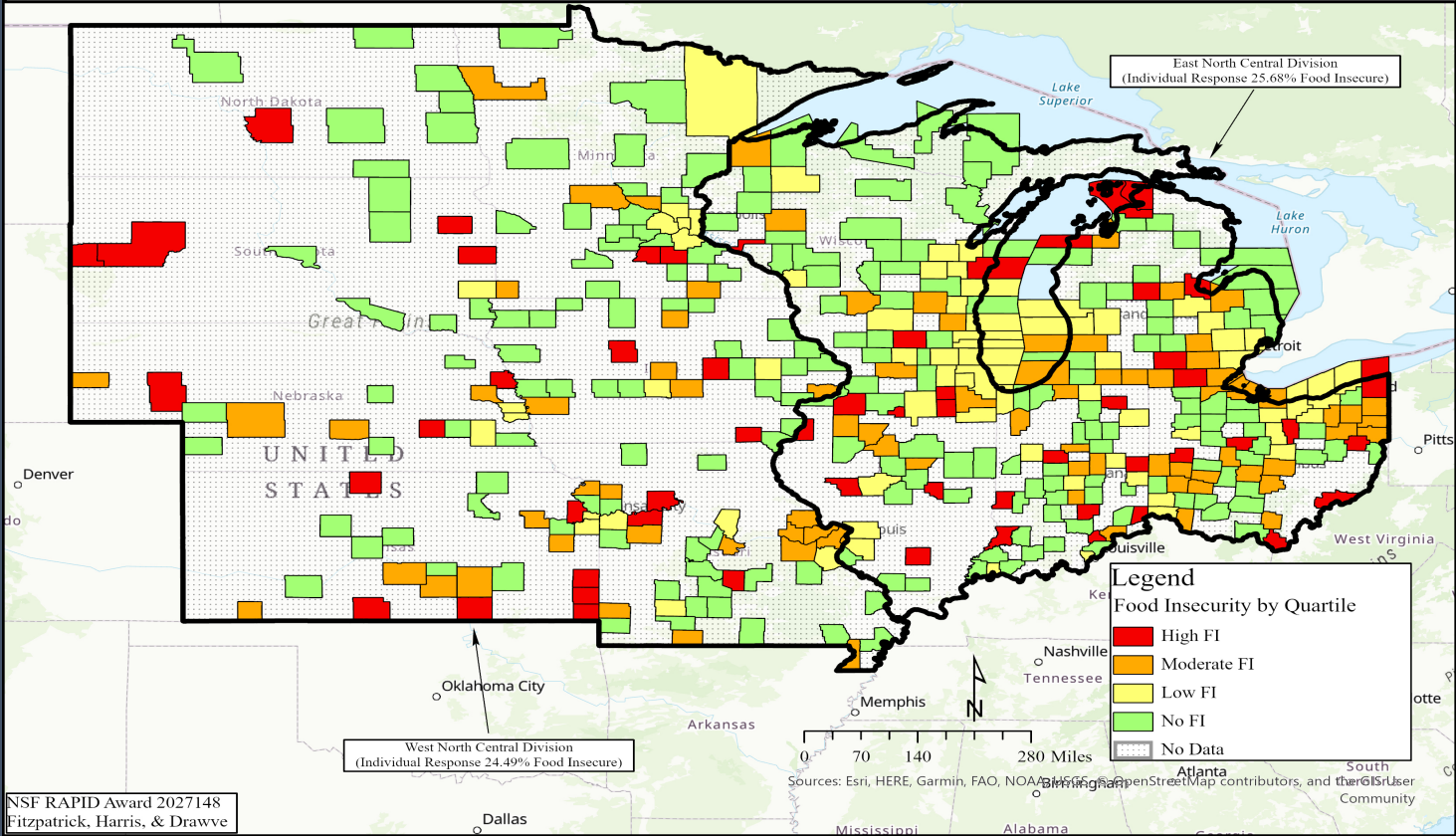
South Region

Percent Food Insecurity Aggregated to County-Level in South U.S. Census Region



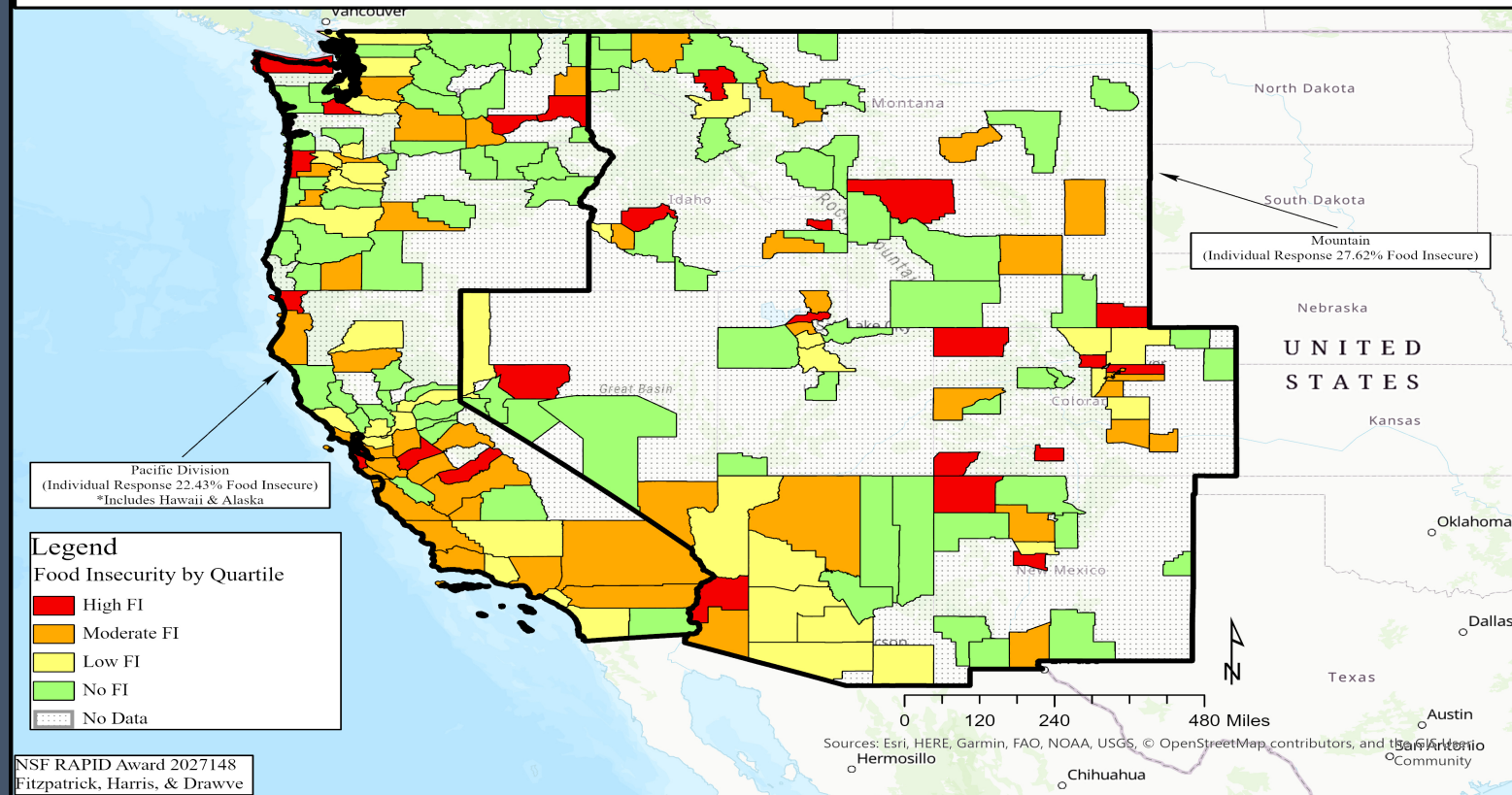
Midwest Region

Percent Food Insecurity Aggregated to County-Level in Midwest U.S. Census Region



West Region

Percent Food Insecurity Aggregated to County-Level in West U.S. Census Region



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State Level Food Insecurity (Top 10 Most Food Insecure)

State	Percent Food Insecure	Number of Respondents
Alabama	47.7%	153
Arkansas	47.4%	95
Tennessee	45.1%	215
Kentucky	44.0%	141
Georgia	43.6%	335
Texas	42.1%	922
Maryland	41.9%	198
California	41.7%	1250
Missouri	40.9%	193
North Carolina	40.7%	332

Individual Responses on Food Insecurity Items (n = 10,368)



General Observations (Preliminary Findings)

- Food insecurity is highest among vulnerable populations (African-Americans; Hispanics, Low-income, and younger respondents)
- Food insecurity is significantly correlated with measures of mental health (anxiety and depression)
- COVID-19 Fear (How would you rate your fear of COVID-19 currently on a scale of 0-10?) is significantly related to food insecurity
- Food insecurity appears to be geo-spatially correlated with outbreak hotspots, aggregate FI estimates (Feeding America) and disadvantaged communities (Gini, % Nonwhite, Median Family Inc.)

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