

A top-down view of several hands reaching into a wooden crate filled with fresh vegetables. The vegetables include corn cobs, green onions, tomatoes, potatoes, and leafy greens. The hands are positioned around the crate, suggesting a communal or shared activity. The background is a dark, textured surface.

# **Food System Strength**

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**#Food Desert**

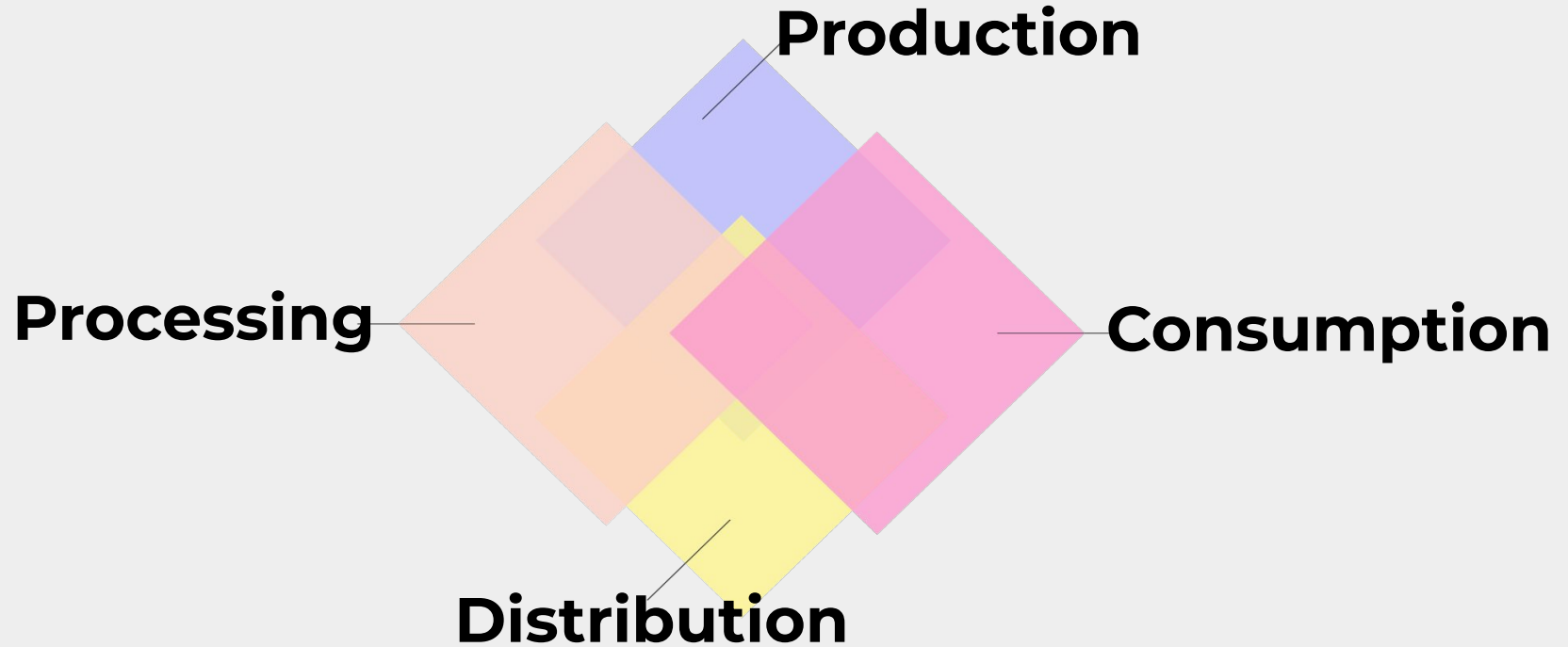
**#equity**



**#Insecurity**

**#Food System**

# Food Accessibility Index



# Data Collection

- The USDA Data Warehouse and Food & Agricultural Mapper & Extension tool
- County population estimates from the BEA were used to calculate per capita estimates
- Then filtered into two categories “**production and processing**” and “**distribution and consumption**” depending on which components of the food system the variables can be attributed to

# Data Details

Production

Processing

Distribution

Consumption

## Data included

- Annual average count - production establishments, per capita
- Farmland, percent of farmland acres designated as prime farmland

## Data sources

- USDA AMS Data and Metrics/Labor
- USDA AMS Data and Metrics/Indicators of Community Wealth

# Data Details (cont.)

Production

Processing

Distribution

Consumption

## Data included

- Annual average count - manufacturing establishments, per capita
- Annual average count - warehousing establishments, per capita
- Number of meat processors, per capita

## Data sources

- USDA AMS Data and Metrics/Labor
- USDA AMS Data and Metrics/Business Development and Infrastructure/Storage
- USDA AMS Data and Metrics/Business Development and Infrastructure/Meat and Poultry

# Data Details(cont.)

Production

Processing

Distribution

Consumption

## Data included

- Annual average count - stores, per capita
- Annual average count - food service establishments, per capita
- Annual average count - truck transportation establishments, per capita
- Annual average count - wholesalers establishments, per capita
- Number of SNAP Retailers

## Data sources

- USDA AMS Data and Metrics/Nutrition Security and Food Access/Food Retail/Food Store
- USDA AMS Data and Metrics /Labor/Labor/Employment
- USDA AMS Data and Metrics /Labor/Labor/Employment
- USDA AMS Data and Metrics /Labor/Labor/Employment
- [Historical SNAP Retailer Locator Data](#)

# Data Details(cont.)

Production

Processing

Distribution

Consumption

## Data included

- Food Insecurity Rate of Individuals
- Food Insecurity Rate of Children
- Cost per Meal
- Number of Households receiving Food Stamps/SNAP

## Data sources

- Feeding America
- Feeding America
- Feeding America
- Food Stamps



# Creation of the Index

- Group each variable into 1st, 2nd, and 3rd quartiles
- Assign point values 1-4 for each variable depending on which quartile each individual county's data falls within

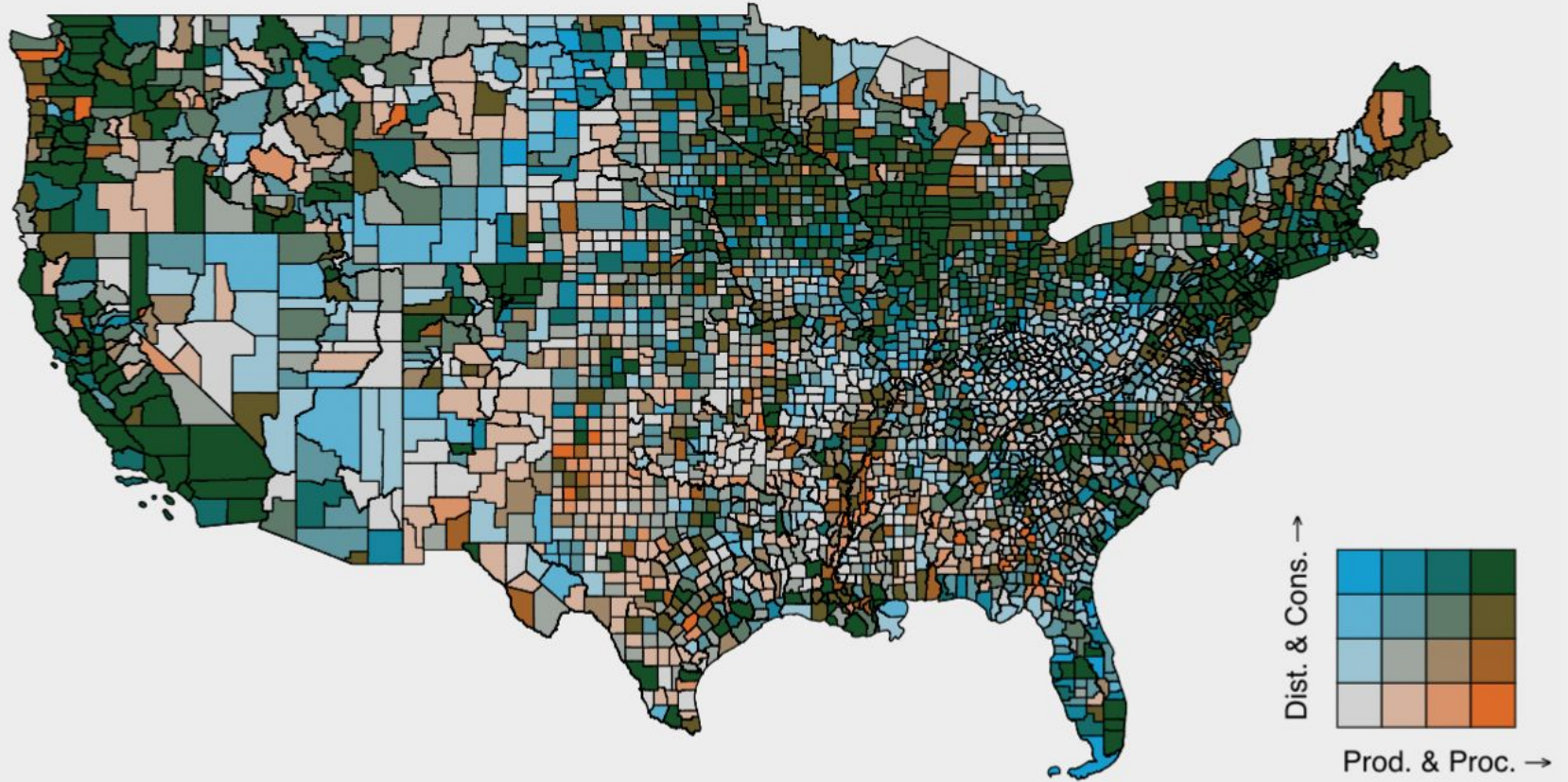
Quantile	Points
$\leq 25\%$	1
$> 25\%, \leq 50\%$	2
$> 50\%, \leq 75\%$	3
$> 75\%$	4

note: variables pertaining to food insecurity rates and cost per meal apply the point system where lower quartiles receive higher point-values, as higher levels of food insecurity and cost-per-meal indicate lower food-accessibility

## Creation of the Index (cont.)

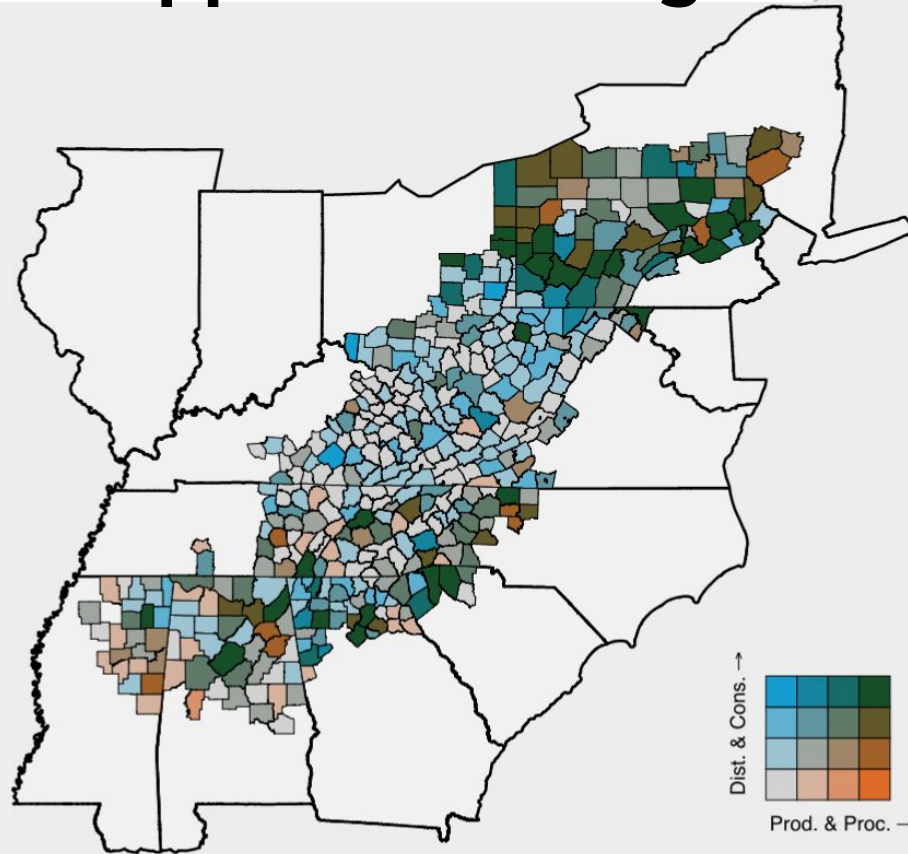
- The index was applied to each variable individually
- Point values for each variable were then summed across their respective category to establish a “total index value” for “production and processing” and “distribution and consumption”
- Each total index value was then divided by the total number of variables included in their respective categories in order to maintain a standard 1-4 index scale

# Visualization - United States



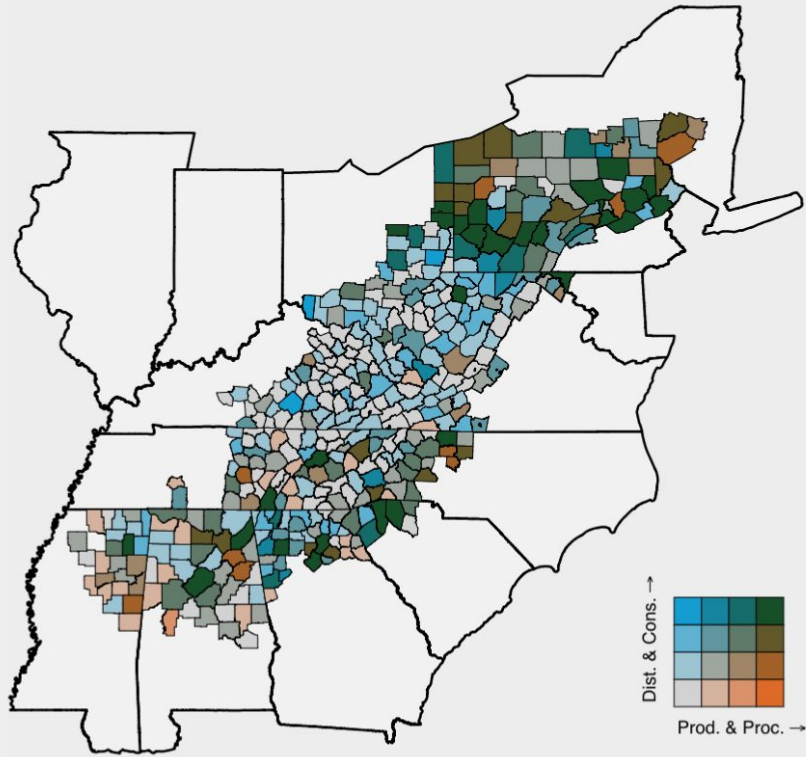
**Figure 1:** Food System Strength in the U.S., 2021

# Visualization - Appalachian Region

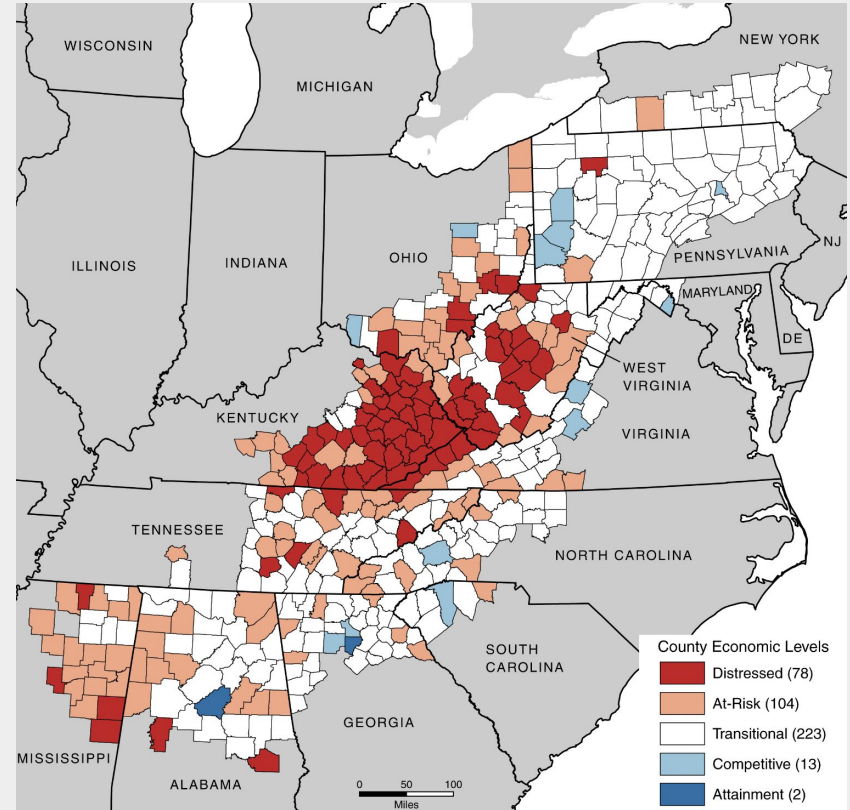


**Figure 2:** Food System Strength in Appalachian Region, 2021

# Visualization - Appalachian Region



Food System Strength in Appalachian Region, 2021



County Economic Status in Appalachia, FY 2021

Source: <https://www.arc.gov>

**Q&A**