# Contents

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ag and Food Sectors and the Economy</td>
<td>4</td>
</tr>
<tr>
<td>Rural Economy</td>
<td>6</td>
</tr>
<tr>
<td>Land and Natural Resources</td>
<td>9</td>
</tr>
<tr>
<td>Farming and Farm Income</td>
<td>11</td>
</tr>
<tr>
<td>Agricultural Production and Prices</td>
<td>14</td>
</tr>
<tr>
<td>Agricultural Trade</td>
<td>17</td>
</tr>
<tr>
<td>Food Consumption and Availability</td>
<td>20</td>
</tr>
<tr>
<td>Food Prices and Spending</td>
<td>23</td>
</tr>
<tr>
<td>Food Security and Food Assistance</td>
<td>25</td>
</tr>
</tbody>
</table>
A message from the Administrator

USDA’s Economic Research Service (ERS) conducts high-quality, objective economic research to inform and enhance public and private decision making on emerging issues in agriculture, food, the environment, and rural America. Our online product, *Ag and Food Statistics: Charting the Essentials*, covers key food and agricultural indicators and illustrates the scope of ERS’s work through a series of 70 charts and maps. This booklet provides a sample of those maps and charts available on the ERS website at www.ers.usda.gov/essentials.

Organized into nine topics, *Charting the Essentials* anticipates questions, such as how much do agriculture and related industries contribute to the U.S. economy? What economic forces are shaping rural America? What are the top destinations for U.S. agricultural exports? What percent of income do Americans spend on food?

Since its launch, *Charting the Essentials* has provided a resource for public officials, researchers, educators, students, journalists, and anyone looking for current information on these topics.

I invite you to explore this booklet, and visit the ERS website where you can view and download all 70 charts and maps, as well as a variety of reports and other products, such as our daily Charts of Note and our online magazine, *Amber Waves*.

Christopher Hartley, Ph.D.
Acting Administrator
The U.S. agriculture sector extends beyond the farm to include restaurants, food manufacturers, and foodstores.

Employment in agriculture, food, and related industries, 2017

*Full- and part-time jobs.
... and 5.5 percent of U.S. gross domestic product (GDP).

**Value added to GDP by agriculture and related industries, 2007-17**

![Chart showing value added to GDP by agriculture and related industries, 2007-17](chart.jpg)

**Note:** GDP refers to Gross Domestic Product. 
**Source:** USDA, Economic Research Service using data from U.S. Department of Commerce, Bureau of Economic Analysis, *Value Added by Industry* series.

Food ranked third behind housing and transportation in U.S. households’ expenditures in 2017.

**Share of U.S. household consumer expenditures by major categories, 2017**

![Pie chart showing share of U.S. household consumer expenditures by major categories, 2017](chart2.jpg)

**Note:** “Other” includes personal care products, tobacco, and miscellaneous expenditures. 
Rural Economy

Recent trends point to relatively slow employment and population growth in rural areas, and continued higher poverty levels than in urban areas. The trends, however, vary widely across rural America.

The gap between rural and urban indicators of economic well-being persists.

U.S. rural and urban poverty and unemployment rates, 2000-17

Note: Rural/urban determined by nonmetro/metro status as defined by the Office of Management and Budget. Gray bars indicate recessions. Source: USDA, Economic Research Service using data from U.S. Census Bureau (poverty) and U.S. Bureau of Labor Statistics (employment).
Losses to rural population have begun to reverse…

Population change by metro/nonmetro residence, 1977-2017

-0.4 0.0 0.4 0.8 1.2 1.6


Metro Nonmetro U.S.

-0.4 0.0 0.4 0.8 1.2 1.6

Source: USDA, Economic Research Service using data from U.S. Census Bureau, county population estimates.

… but this varies across the United States.

Nonmetro county population change, 2010-17

Nonmetro counties
- Population decline
- Population growth below 5 percent
- Population growth, 5 percent or higher
- Urbanized areas
- Metro counties

Rural areas vary in the industries that underpin their economies.

ERS county economic typology, 2015

Note: The 2015 county typologies use data from 2010-12.
Land and Natural Resources

U.S. agricultural production relies heavily on the Nation’s land, water, and other natural resources, and has a direct impact on the quality of the natural environment.

Agricultural production is a major use of land, accounting for over half of the U.S. land base.

Major land uses in the United States, 1949-2012

*Nonagricultural special uses include rural parks and wilderness areas, rural transportation areas, and defense/industrial lands. Agricultural special uses include farmsteads and farm roads. Source: USDA, Economic Research Service using data from the Major Land Uses series.
Five States—Nebraska, California, Arkansas, Texas, and Idaho—account for just over half of the Nation’s irrigated acres.

**Acres of irrigated land, 2012**

U.S. total = 55,822,231 acres


USDA’s mix of conservation efforts has shifted from removing environmentally sensitive land from production (primarily though CRP) toward programs that target working land.

**Major USDA conservation program expenditures, 1996-2017**

Note: Working land programs include the Environmental Quality Incentives Program, the Conservation Stewardship Program, Conservation Technical Assistance, and predecessor programs. Predecessors of the Agricultural Conservation Easement Program include the Wetlands Reserve Program, Farmland Protection Program, and part of the Grassland Reserve Program. Other programs include Voluntary Public Access and Habitat Incentive Program, Healthy Forests Reserve Program, Agricultural Management Assistance, and watershed programs.

Source: USDA, Economic Research Service using data from Office of Budget and Program Analysis budget summary data.
Farming and Farm Income

Early 20th century agriculture was labor intensive, and it took place on many small, diversified farms. Much of today’s agricultural production takes place on large, specialized farms.

The number of farms has leveled off at about 2.05 million …

<table>
<thead>
<tr>
<th>Farms, land in farms, and average acres per farm, 1850-2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Million farms, billion acres, or hundred acres per farm</td>
</tr>
<tr>
<td>Farms (million)</td>
</tr>
<tr>
<td>Land in farms (billion acres)</td>
</tr>
<tr>
<td>Average farm size (hundred acres per farm)</td>
</tr>
</tbody>
</table>
... but agricultural output has grown, along with improvements in agricultural productivity.

U.S. agricultural output, inputs, and total factor productivity, 1948-2015

Index, 1948 = 1

Data as of October 2017.
U.S. net farm income has fallen since 2013 …

… but most farmers (especially small-scale operators) supplement their household income with income from off-farm sources.

Median household income of farm operators by source and sales class, 2016

Agricultural Production and Prices

Markets for major agricultural commodities are typically analyzed by looking at supply-and-use conditions and the implications for prices. Many interactions and relationships exist between and among different commodities. For example, corn production and prices affect feed costs in the livestock sector.

U.S. crop production is concentrated in California and the Midwest, while livestock production is more spread out across the country.

Market value of crops sold in 2012

Market value of livestock, dairy, poultry, and their products sold in 2012

1 dot = $20 million

1 dot = $30 million

Corn and soybean acreage has increased since 1990, while fewer acres are planted with wheat.

### U.S. planted area: Corn, wheat, soybeans, and upland cotton, 1990-2018

**Million acres**

- **Corn**
- **Soybeans**
- **Wheat**
- **Upland cotton**


Agricultural prices remain below their 2014 peak ...

### U.S. prices received by farmers, 1990-2017

**Index, 2011 = 100**

- **All agricultural production**
- **Livestock**
- **Crops**

... directly affecting farm sector cash receipts.

**Gross cash farm income components, inflation adjusted, 2000-17**

Note: Values are adjusted for inflation using the chain-type Gross Domestic Product (GDP) deflator, 2018 = 100.
Agricultural Trade

The leading U.S. exports are grains and feeds, soybeans, livestock products, and fruit, vegetables, and other horticultural products. The leading U.S. imports are horticultural and tropical products. Canada, Mexico, and East Asia are major U.S. trade partners.

The United States exports more agricultural goods than it imports, but the surplus fell to $17.4 billion in 2017, as the value of U.S. imports continued to rise …

U.S. agricultural trade, 2000-17

Source: USDA, Economic Research Service using data from U.S. Census Bureau, Foreign Trade Database.
... and the value of U.S. agricultural exports has grown slightly after declining in 2015 due to falling commodity prices, slowing of the global economy, and an appreciating dollar.

**U.S. agricultural exports, 2000-17**

![Graph showing U.S. agricultural exports, 2000-17](image)

Source: USDA, Economic Research Service using data from U.S. Census Bureau, Foreign Trade Database.

Canada, China, and Mexico are the top destinations for U.S. agricultural exports.

**Top five markets for U.S. agricultural exports, 2000-17**

![Graph showing top five markets for U.S. agricultural exports, 2000-17](image)

Source: USDA, Economic Research Service using data from U.S. Census Bureau, Foreign Trade Database.
Overseas customers account for 40 percent or more of the market for U.S. cotton, almonds, rice, soybeans, and wheat.

**Export share of U.S. farm production, 2015-17**

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cotton</td>
<td>80</td>
</tr>
<tr>
<td>Almonds</td>
<td>60</td>
</tr>
<tr>
<td>Rice</td>
<td>50</td>
</tr>
<tr>
<td>Soybeans</td>
<td>40</td>
</tr>
<tr>
<td>Wheat</td>
<td>30</td>
</tr>
<tr>
<td>Pork</td>
<td>10</td>
</tr>
<tr>
<td>Corn</td>
<td></td>
</tr>
<tr>
<td>Beef</td>
<td></td>
</tr>
</tbody>
</table>

Note: Data are reported for the 2015/16-2017/18 marketing years. Specific marketing years vary by commodity type.

ERS’s Food Availability data measure per capita annual supplies of several hundred food commodities moving through the U.S. marketing system. A second data series—Loss-Adjusted Food Availability—adjusts for losses from farmgate to fork—such as damaged products, spoilage, and plate waste—to more closely approximate per capita consumption.

According to ERS’s Loss-Adjusted Food Availability data, U.S. diets are out of balance when compared to the Dietary Guidelines’ recommendations.

### Estimated average U.S. consumption compared to recommendations, 1970 and 2016

<table>
<thead>
<tr>
<th>Food Group</th>
<th>1970</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meat, eggs, and nuts</td>
<td>150%</td>
<td>120%</td>
</tr>
<tr>
<td>Grains</td>
<td>120%</td>
<td>100%</td>
</tr>
<tr>
<td>Vegetables</td>
<td>80%</td>
<td>60%</td>
</tr>
<tr>
<td>Dairy</td>
<td>60%</td>
<td>40%</td>
</tr>
<tr>
<td>Fruit</td>
<td>40%</td>
<td>30%</td>
</tr>
</tbody>
</table>

Our diets have made some progress; we are consuming fewer caloric sweeteners …

U.S. per capita caloric sweetener availability, 1970-2016

- Refined cane and beet sugars
- Corn sweeteners
- Honey and edible syrups


… and eating more vegetables …

U.S. per capita loss-adjusted vegetable availability, 2016

- Potatoes
- Tomatoes
- Onions
- Head lettuce
- Sweet corn
- Romaine and leaf lettuce
- Carrots

Note: Loss-Adjusted Food Availability data are proxies for consumption.
… and fruit, though we still need to eat more and increase the diversity to achieve a healthier diet.

U.S. per capita loss-adjusted fruit availability, 2016

Note: Loss-Adjusted Food Availability data are proxies for consumption.
Even large swings in farm commodity prices result in modest changes in food prices…

Food Prices and Spending

Retail food prices partially reflect farm-level commodity prices, but packaging, processing, transportation, and other marketing costs—along with competitive factors—have a greater role in determining prices on supermarket shelves and restaurant menus.

Change in all-food CPI and field crop prices, 1993-2017

*Production-weighted average for corn, wheat, and soybeans.
Note: CPI = Consumer Price Index.
... as much of Americans’ retail food dollar pays for more stable processing, retailing, and foodservice costs.

**2016 food dollar (nominal): Industry group**

Note: “Other” includes two industry groups: Agribusiness plus Legal & Accounting.

Spending on food away from home continued to outpace food-at-home spending in 2017.

**Food-at-home and away-from-home expenditures in the United States, 1960-2017**

ERS monitors the food security of U.S. households through an annual, nationally representative survey. While most U.S. households are food secure, a minority of U.S. households are food insecure—they struggle to afford enough food for all household members. Some experience the more severe very low food security, where food intake of one or more members is reduced and normal eating patterns are disrupted.

U.S. households in the middle-income quintile spend about 14 percent of their incomes on food, but lowest-income families spend over 30 percent.

Food spending and share of income spent on food across U.S. households, 2017

Some of these families may find themselves facing food insecurity…

Prevalence of food insecurity by selected household characteristics, 2017

<table>
<thead>
<tr>
<th>Category</th>
<th>Low food security</th>
<th>Very low food security</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income below poverty line</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married with children</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single mothers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single fathers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multi-adults, no children</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women alone</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Men alone</td>
<td></td>
<td></td>
</tr>
<tr>
<td>With elderly</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White, non-Hispanic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black, non-Hispanic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other, non-Hispanic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Principal cities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suburban</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


… and seek support from USDA’s food and nutrition assistance programs.

Inflation-adjusted USDA expenditures for food and nutrition assistance, fiscal 1985-2017

<table>
<thead>
<tr>
<th>Year</th>
<th>All other</th>
<th>Child and Adult Care Food Program</th>
<th>School Breakfast Program</th>
<th>National School Lunch Program</th>
<th>WIC</th>
<th>SNAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1989</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1993</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1997</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Participation in SNAP—the largest of these assistance programs—varies across States, reflecting differences in need and program policies.

Percent of population receiving SNAP benefits in fiscal 2017

Note: SNAP = Supplemental Nutrition Assistance Program.
Read ERS’s *Amber Waves* magazine, Charts of Note, and the latest reports and data online, or have them delivered right to your email!

Sign up at [www.ers.usda.gov/updates](http://www.ers.usda.gov/updates) to receive ERS’s email notifications, including *Amber Waves*, Charts of Note, and our latest reports or data of interest.


USDA is an equal opportunity provider and employer.