

AGRICULTURE



SMART SECTORS
A PROGRAM OF U.S. EPA



ECONOMICS

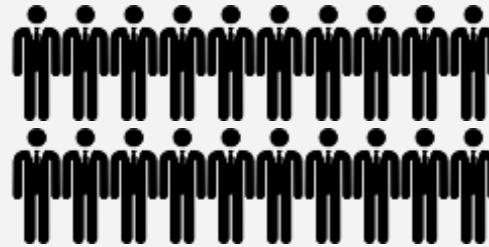


ENVIRONMENTAL
IMPACT



EFFICIENCY

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**On-farm employment in the agriculture sector accounts for 2.6 million jobs in the U.S.
“On-farm employment” includes full- and part-time jobs.**

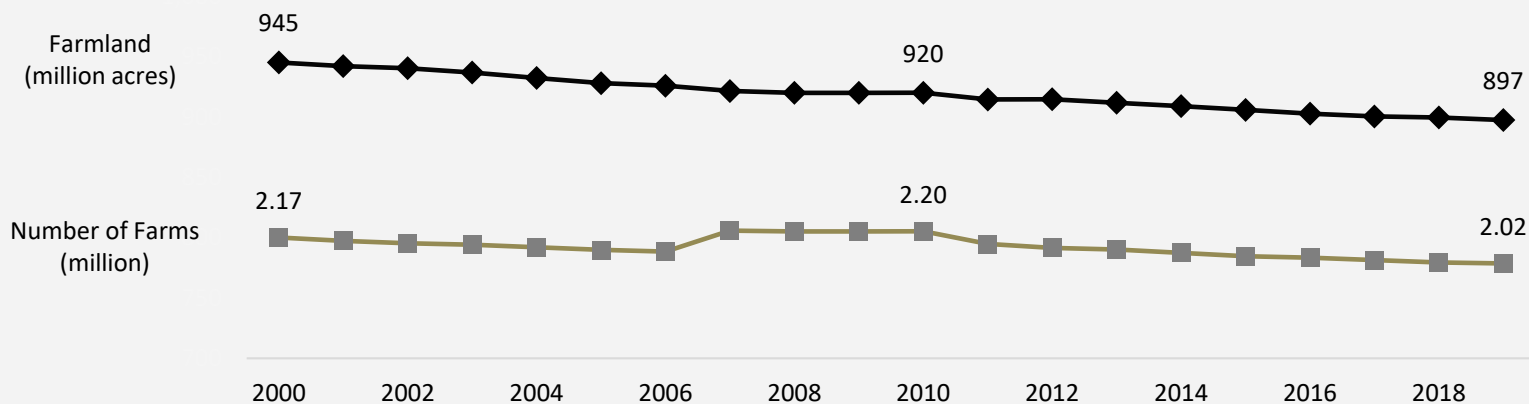
Bureau of Economic Analysis, 2018



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Number of Farms and Farmland in U.S. from 2000-2019



Between 2000 and 2019, the number of farms decreased from 2.17 million to 2.02 million, while farmland decreased from 945 million acres to 897 million acres.

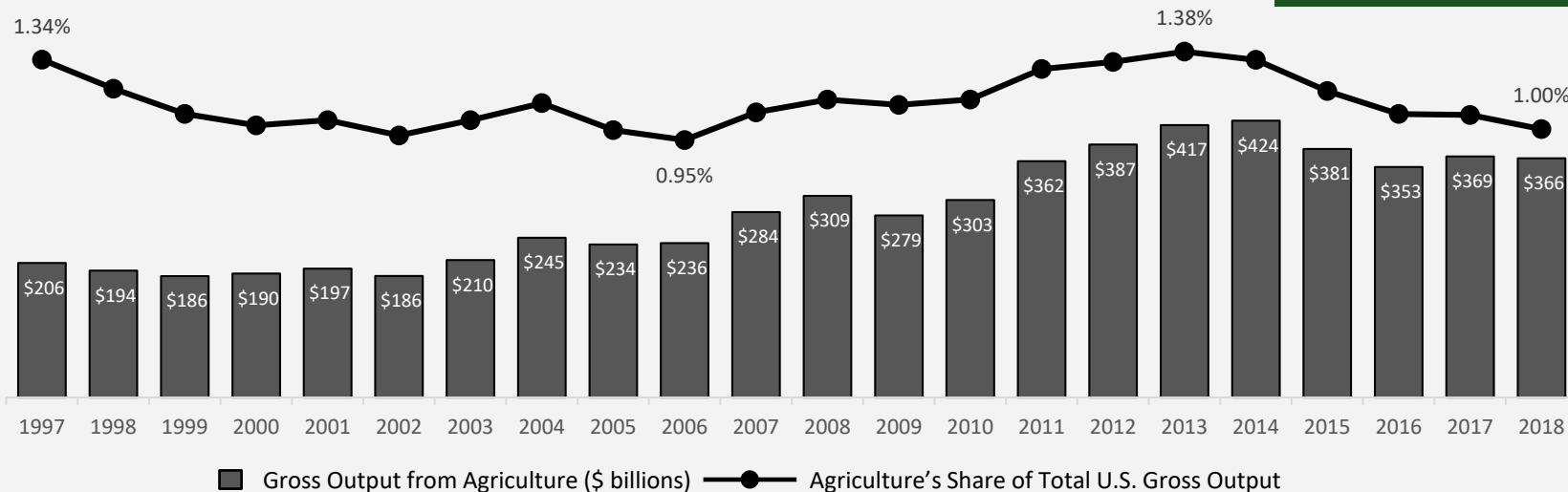
USDA Economic Research Service, 2020



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Agricultural Share of U.S. Economy



Between 1997 and 2018, the agriculture sector's gross output increased from \$206 billion to \$366 billion while its share of the U.S. economy stayed steady at approximately 1%.

Bureau of Economic Analysis, 2019



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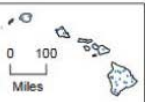
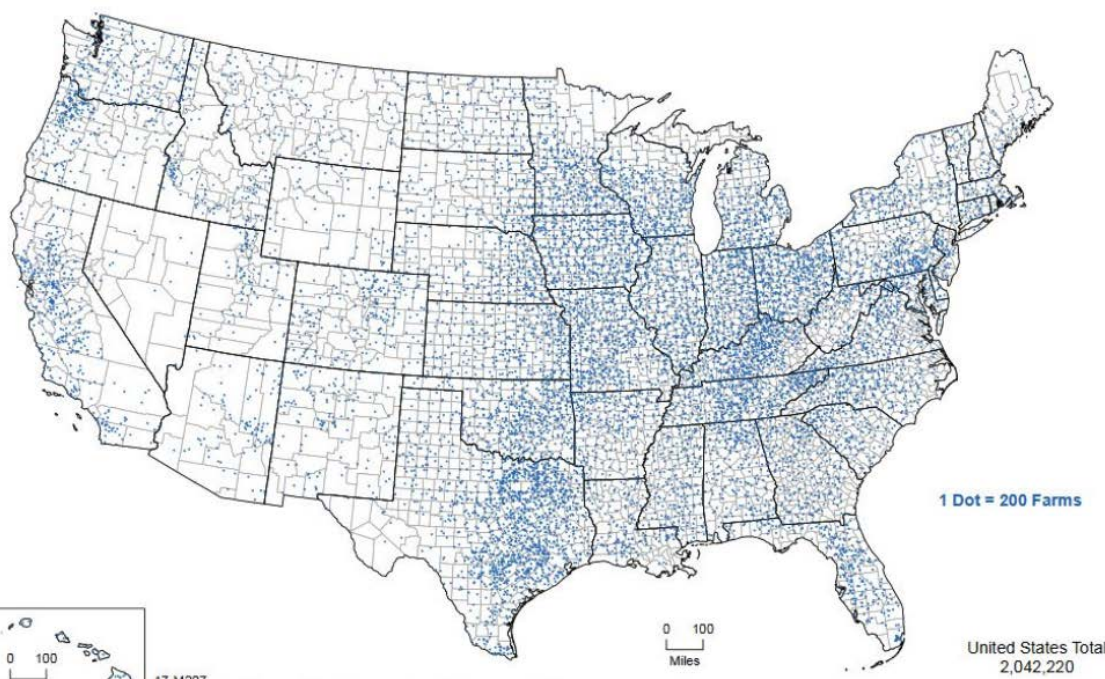
In 2017, the 2,042,220 farms accounted for roughly 40% of all U.S. land.

One dot on the map equals 2000 farms. A farm is defined as an area where \$1,000 or more of agricultural products were produced and sold, or normally would have been sold, during the census year.

USDA National Agricultural Statistics Service, 2019



Number of Farms: 2017



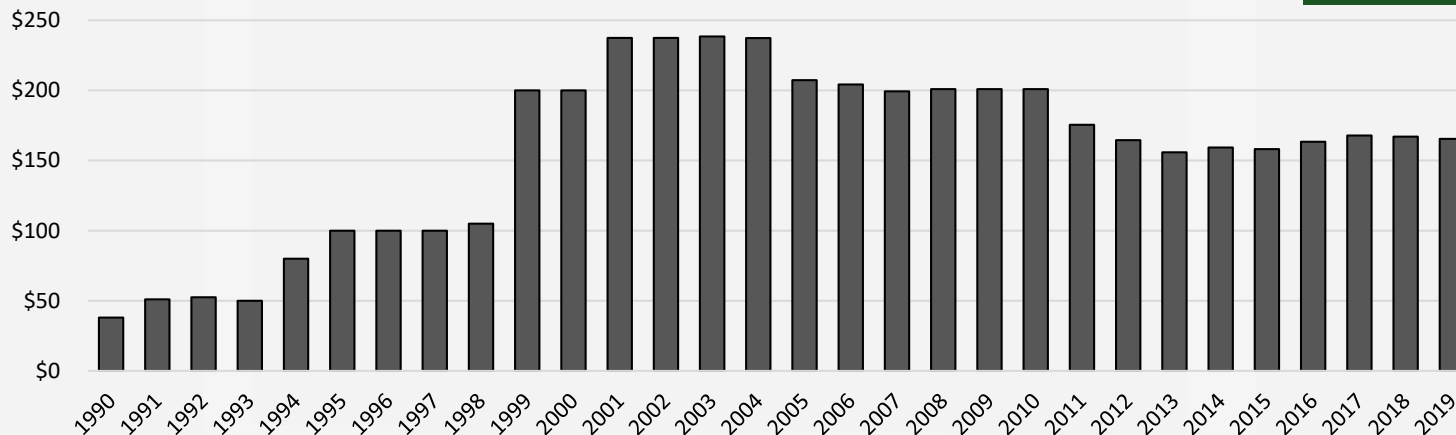
17-M207
U.S. Department of Agriculture, National Agricultural Statistics Service



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**Total \$319 (Nonpoint Source Management Program)
Funding per Year (in \$ million)**



Of Clean Water Act \$319 funds that go to watershed projects, 30-40% annually address agricultural sources. These funds often work in conjunction with USDA program funding to implement innovative best management practices.

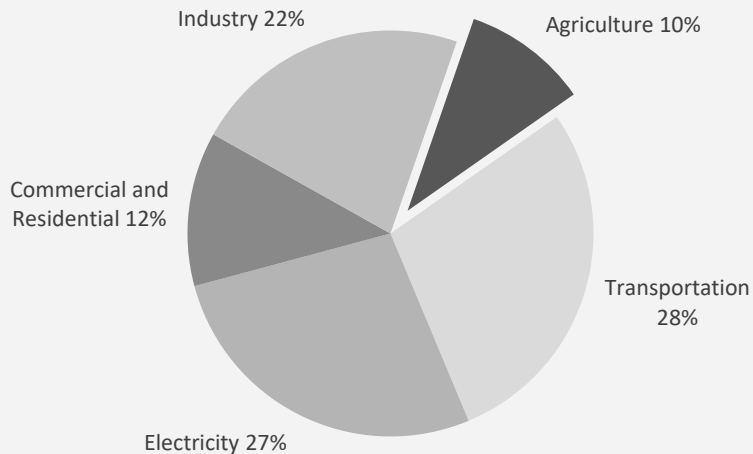
U.S. EPA, 2019



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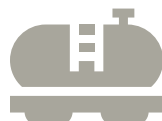


2018 U.S. Greenhouse Gas Emissions by Economic Category



The agriculture sector was responsible for 10% of U.S. greenhouse gas emissions in 2018.

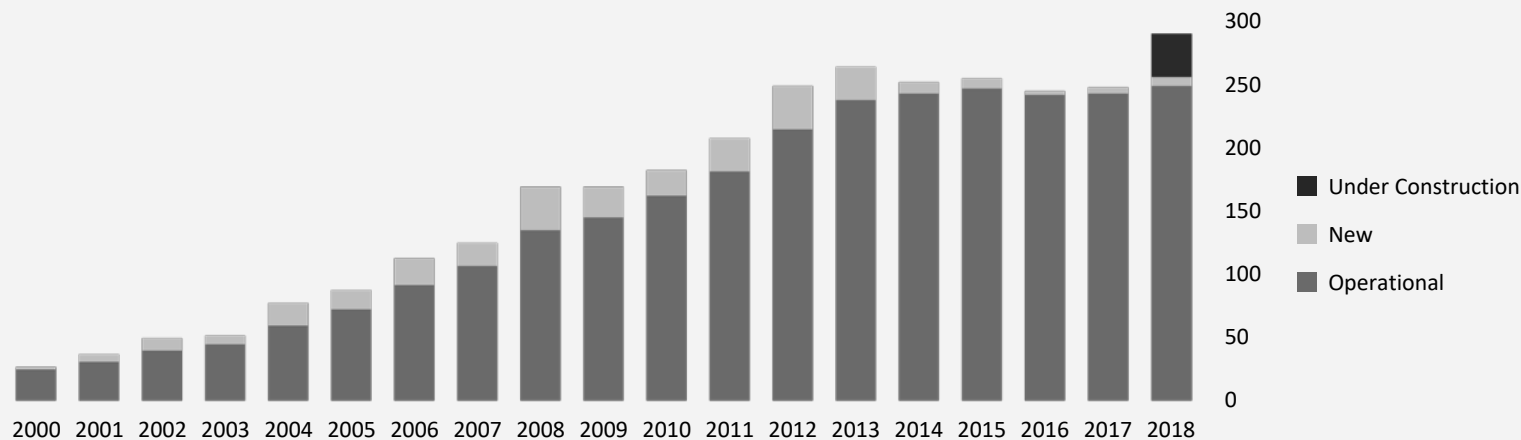
U.S. EPA, GHG Inventory 2020



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Number of Anaerobic Digesters on U.S. Livestock Farms



The number of anaerobic digesters on U.S. livestock farms has grown from 25 in 2000 to 248 in 2018, a 1,000% increase. These digesters use bacteria to break down organic matter such as manure without oxygen. As the bacteria “work,” they generate biogas, a renewable energy source.

U.S. EPA, AgSTAR, 2018



Potential for U.S. Farms to Turn Methane into Energy



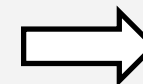
8,100
Livestock
Farms in the
U.S.



Produce 186
billion ft³
Methane Gas



Which could generate 15.8
million megawatt hours of
energy per year through
anaerobic digestion



Enough to power
1.3 million homes

If all U.S. livestock farms had anaerobic digesters, they could collectively generate enough energy to power 1.3 million homes for one year.

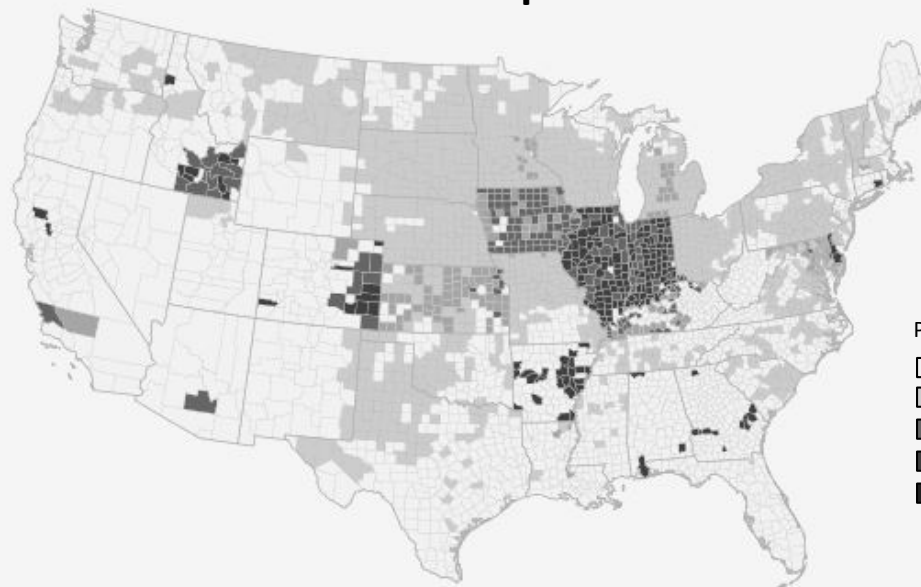
U.S. EPA, AgSTAR, 2018



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Cover Crops



Percentage of land covered by cover crops

- 0.0% - 0.1%
- 0.1% - 0.5%
- 0.5% - 1.0%
- 1.0% - 2.0%
- 2.0% +

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In 2019, there were 5.3 million planted acres of cover crops across the contiguous U.S. Cover crops reduce the need for fertilizer, and improve soil structure, moisture, and nutrient content.

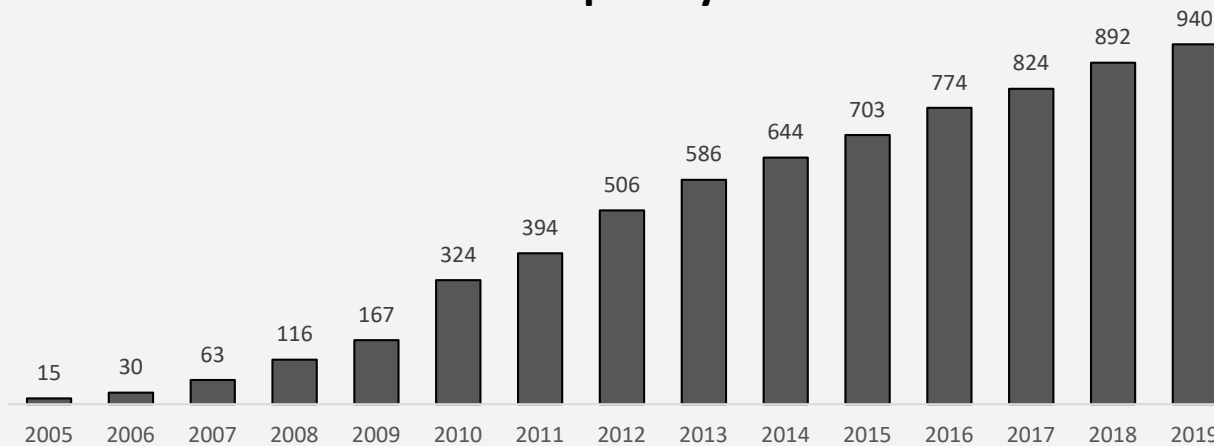
Note: This is likely a low estimate because not all producers report their acreage to the Farm Service Agency.

USDA Farm Service Agency, 2019





Number of Water Bodies Partially or Completely Restored



Restoration efforts to water bodies, some with multiple pollutants addressed, (largely from \$319 grant funds) have led to a significant increase in water quality improvements across sectors. About 60% of these improvements were achieved with agriculture as a contributing source.

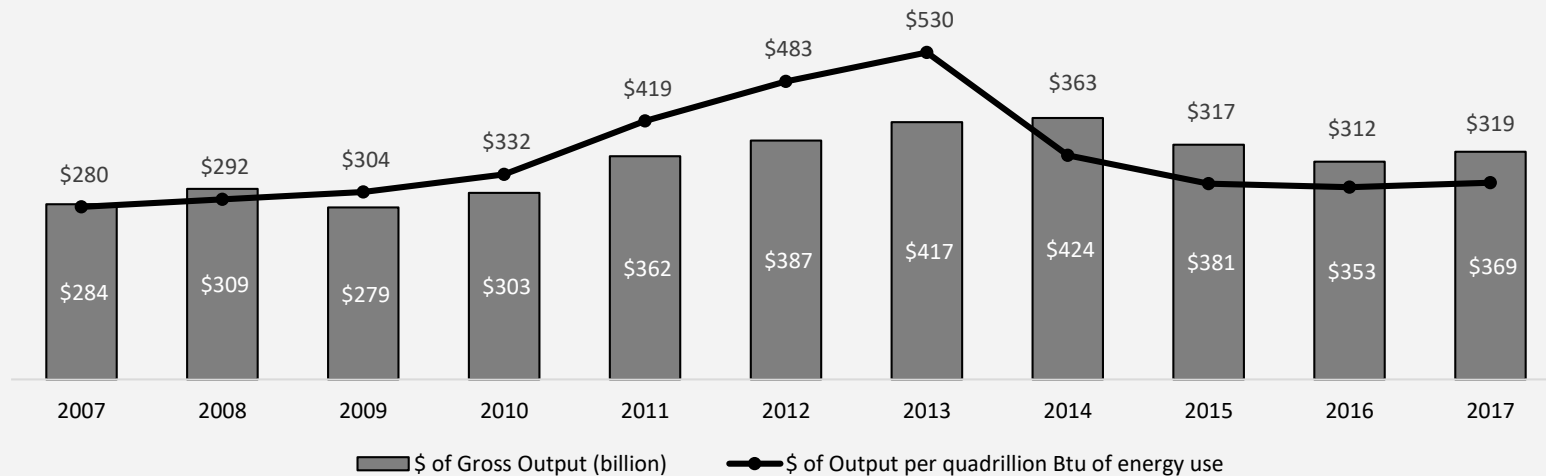
U.S. EPA, 2019



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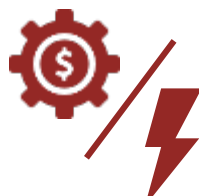


Agriculture Sector Output per Unit of Energy Consumed



In 2017, the agriculture sector produced \$369 billion of goods and used 1.16 quadrillion Btu of energy. Energy efficiency increased from \$280 to \$319 billion/quadrillion Btu between 2007 and 2017.

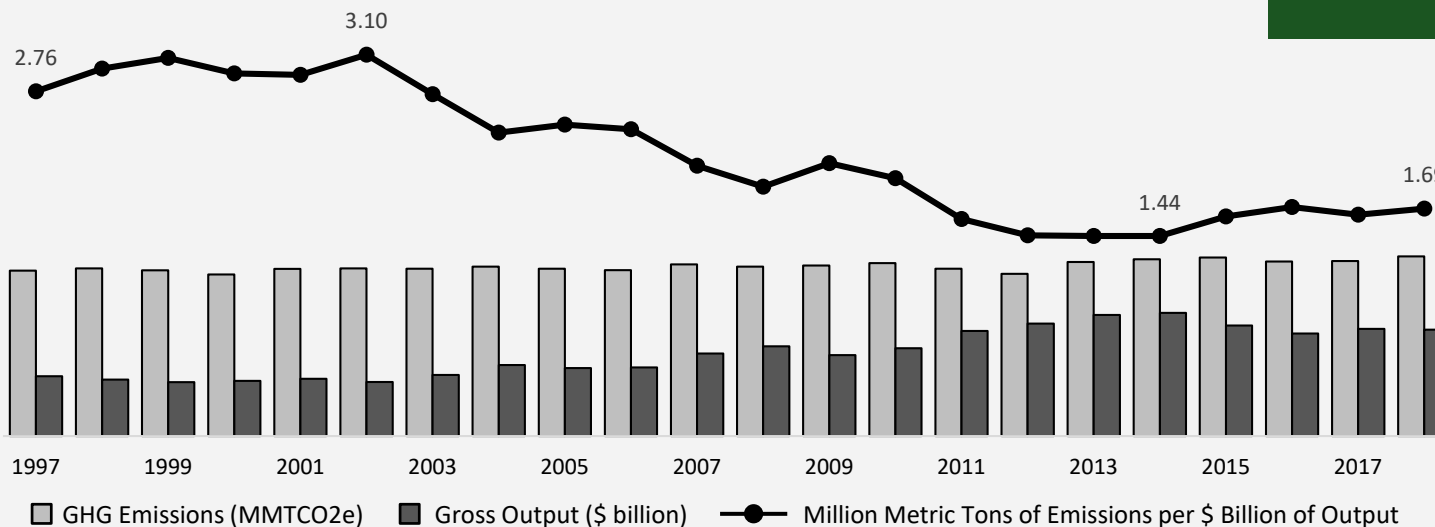
Bureau of Economic Analysis, 2019 | Energy Information Administration, 2020



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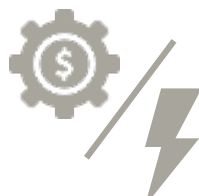


Agriculture Sector GHG Emissions vs. Gross Output



In 2018, GHG emissions from the agriculture sector were 619 MMTCO₂e, while gross output was \$366 billion. Between 1997 and 2018, the ratio of GHG emissions to gross output decreased from 2.76 to 1.69.

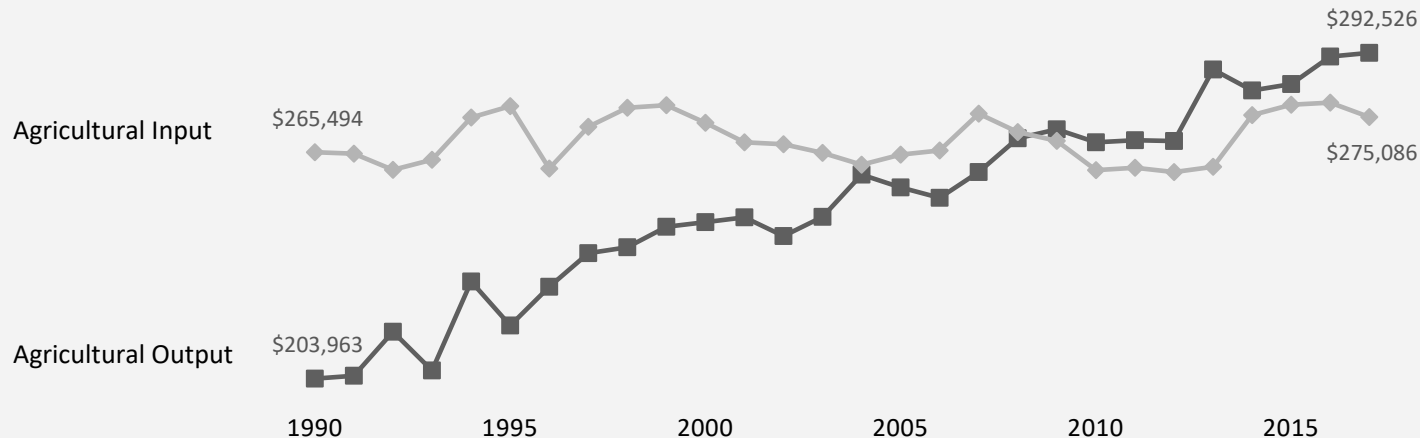
Bureau of Economic Analysis, 2019 | U.S. EPA, GHG Inventory 2020



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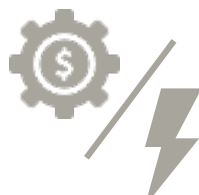


U.S. Farm Productivity Benchmarked with Resource Consumption (\$ million 2015)



Since 2009, the value of agricultural output has consistently exceeded the value of agricultural input; the ratio of output value to input value has increased from 0.77 in 1990 to 1.06 in 2017.

USDA Economic Research Service, 2020



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The agriculture sector includes crop production (NAICS 111) and animal production and aquaculture (NAICS 112). Establishments in this sector are involved in the production of crops, animal husbandry, and the harvest of fish and other animals from farms or their natural habitats.

Companies classified into these NAICS range from large, multinational agriculture and produce corporations to small, individually owned or family-owned farms.

For more information about the EPA Smart Sectors program, visit: epa.gov/smartsectors.

For more information about the agriculture sector, visit:

- [U.S. EPA – Agriculture](#)
- [U.S. EPA - AgSTAR](#)
- [U.S. EPA – Nonpoint Source Program](#)
- [U.S. EPA – Greenhouse Gas Inventory](#)
- [U.S. Bureau of Labor Statistics – Agriculture Industry: Workforce Statistics](#)
- [U.S. Census Bureau, NAICS 111 and 112](#)
- [U.S. Department of Agriculture](#)