



Agricultural Conservation on Working Lands: Trends From 2004 To Present

Agricultural conservation, defined as sustainable agriculture production systems that protect and improve natural resources while also optimizing yields, has been a priority for the U.S. Department of Agriculture (USDA) since the 1930s. The use of conservation practices on farms can produce a variety of benefits, including improved soil and water quality, carbon sequestration, reduced greenhouse gas (GHG) emissions, reduced production costs, and increased yield. Conservation practices on working lands have tradeoffs between different environmental benefits and have variable costs to implement and maintain.

Increased adoption of conservation practices could increase agricultural outputs and improve natural resources while accommodating the growing human population.

The first step toward increasing adoption of conservation practices is to establish a baseline of current adoption rates. Using this knowledge, USDA and other organizations can improve the effectiveness of supporting agricultural conservation, help identify patterns in farmer motivation, and track the environmental and GHG impacts of conservation adoption.

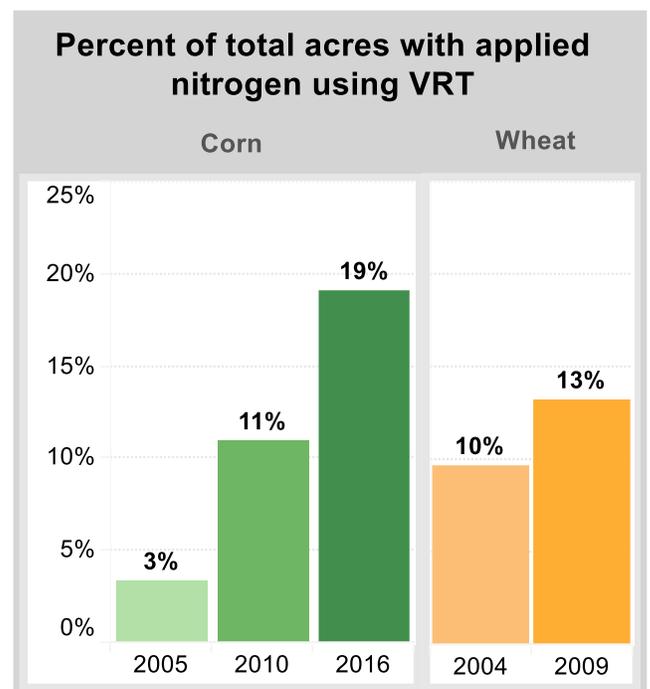
Agricultural Conservation on Working Lands: Trends From 2004 to Present is a USDA report that uses survey data to track U.S. adoption of selected agricultural conservation practices that both reduce GHG emissions and provide additional environmental benefits. Based on data availability, practices tracked in the report include: reduced tillage (mulch tillage and no tillage), nitrogen management, use of cover crops, use of precision agriculture technologies, and recovery and use of biogas from anaerobic digesters for manure management. Data on adoption practices are primarily from the USDA Economic Research Service National Agricultural Statistics Service Agricultural Resources Management Survey (ARMS) and the Environmental Protection Agency's (EPA's) AgSTAR database. Data from the USDA Conservation Effects Assessment Program on tillage are also included.

Adoption rates of the various practices varied widely depending on the specific practice, crop, farm size and regional location.



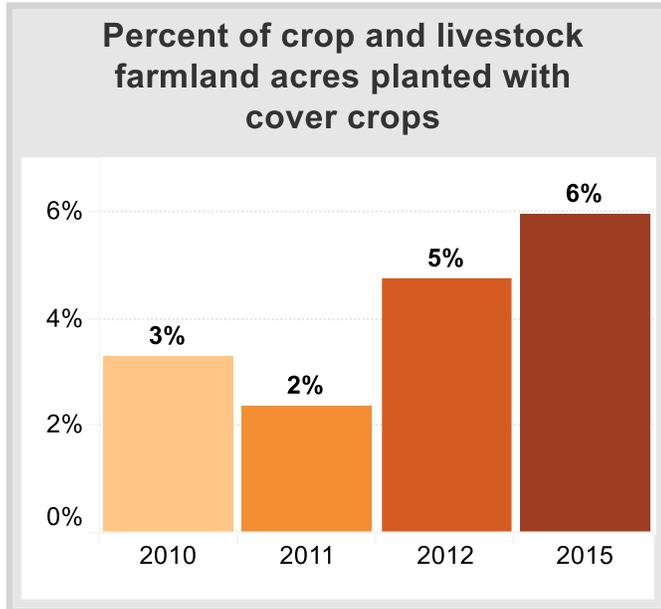
PRECISION AGRICULTURE

The percentage of acres grown using variable rate technology (VRT) for nitrogen application increased for both corn and wheat production at the National level.



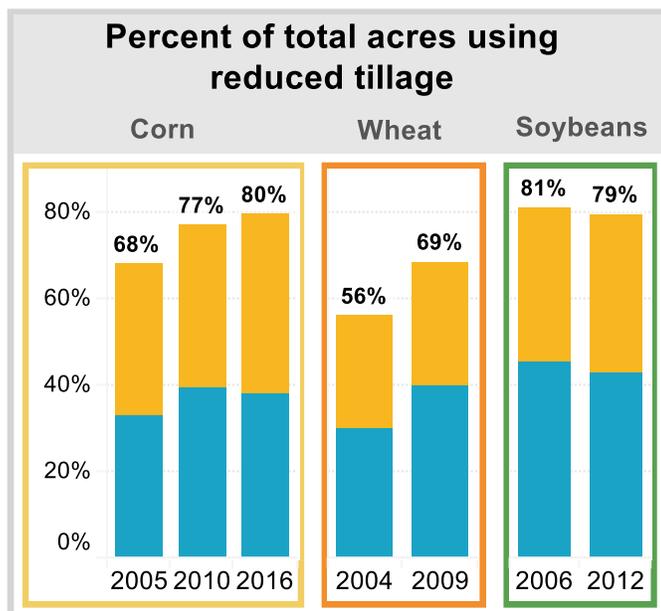
COVER CROPS

The percent of crop and livestock farmland acres grown with cover crops increased at the National level.



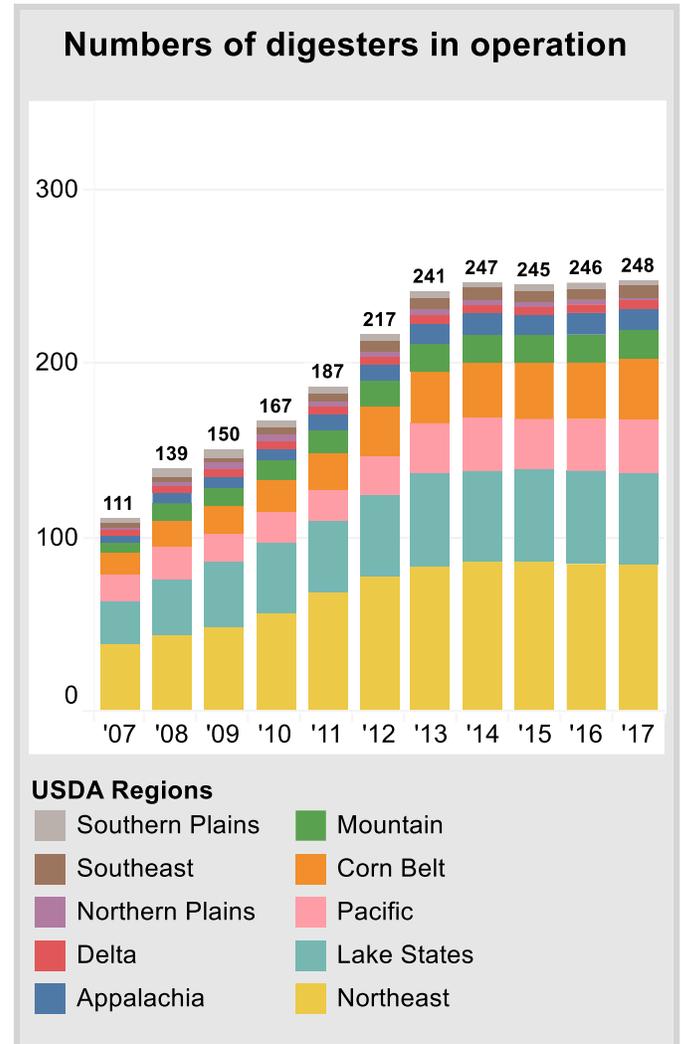
TILLAGE

The blue bars show the percent of acres grown using no-till and the orange bars show percent of acres grown using mulch till. The percent of acres grown using conservation tillage (combined no till and mulch till) showed slight increases for corn and wheat and remained constant for soybean production at the National level.



DIGESTERS

While the cumulative number of digesters in operation increased from 2007 to 2017, the rate of increase slowed between 2013 to 2017. Most digesters in operation during this period were in the Northeast and Lake States Regions. Digesters are more common on relatively large farms compared to small farms, and are more prevalent on dairy operations compared to beef and swine operations.



For more information on conservation practices tracked in the report, including regional data and data on farm size, see the full report at <https://www.usda.gov/oce/ocep/index.htm>.

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