

Wheat growers in the following states will participate in the 2017 ARMS:

Arizona, California, Colorado, Idaho, Illinois, Kansas, Michigan, Minnesota, Missouri, Montana, Nebraska, North Dakota, Ohio, Oklahoma, Oregon, South Dakota, Texas, and Washington.



The 2017 ARMS will be conducted in three phases. Growers will be surveyed during the following data collection periods:

**ARMS I: Survey screening**  
May - July 2017

**ARMS II: Production practices and costs survey**  
September – December 2017

**ARMS III: Costs and returns survey**  
January - April 2018

For more information, visit us at:  
[www.nass.usda.gov/go/ARMS](http://www.nass.usda.gov/go/ARMS)

The results of this survey will be available in aggregate form only, ensuring that no individual operation or producer can be identified, as required by federal law.

## Because Better Data = *Better Decisions*

Results of the 2017 ARMS will help USDA better analyze financial well-being, production practices, and production costs of the U.S. wheat sector. Below are some examples of findings based on previous ARMS surveys for wheat:

- Wheat prices above \$7 per bushel at harvest during 2011-13 fell to under \$4 per bushel by 2016, resulting in much tighter margins for wheat production. Operating margins (production value less operating costs) for wheat fell from a peak of \$216 per acre in 2012 to around \$100 per acre in both 2015 and 2016. Despite higher average wheat yields in 2016, operating returns per bushel of wheat were close to \$5 in 2012, but only about \$2 in 2016.

- Operating costs per acre of producing wheat have fallen significantly over the past few years, from above \$125 per acre each year from 2012 through 2014, to \$108 in 2016, a decline of about 14 percent. Lower fertilizer and fuel prices in 2016 accounted for most of the decline, with fertilizer costs falling about \$12 per acre and fuel costs falling more than \$8 per acre.

- Total costs of wheat production increased each year from 2009 to 2014, peaking at \$316 per acre, but then trended downward toward \$300 in 2016. Since 2014, lower costs are primarily due to the decline in operating costs, but land costs have also declined. Wheat profitability has fallen in response to lower wheat prices, lowering rents on wheat land. Wheat prices improved somewhat in 2017, but are still well below the highs of 2011-13.

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United States Department of Agriculture  
National Agricultural Statistics Service

## 2017 Agricultural Resource Management Survey (ARMS)

# WHEAT



# The Agricultural Resource Management Survey (ARMS) is the U.S. Department of Agriculture's primary source of information on the production practices, resource use, and economic well-being of America's farms and ranches. This survey gives farmers a chance to tell the accurate story of American farming to people in the United States and abroad.



**Just about every federal policy and program that affects U.S. farmers and farm families is based on information from ARMS.**

In addition to measuring many key factors of U.S. agriculture as a whole, ARMS targets selected commodities on a rotating basis. The 2017 survey takes a close look at the costs and returns, input use, and practices of wheat production. The 2017 ARMS will help USDA and others examine U.S. winter, durum, and other spring wheat production practices and conduct research about input use, precision agriculture, production costs, farm finances, and other topics important to wheat growers.

- The 2017 ARMS wheat data will provide the basis for monitoring and evaluating wheat production costs and returns over the next several years. U.S. wheat is produced at a much lower input cost than the other large acreage crops. Despite higher average wheat yields in 2016, operating returns per bushel of wheat were only about \$2, compared to close to \$5 in 2012.

- Winter, durum, and other spring wheat will each be surveyed in the 2017 ARMS. Winter wheat is the most common type of wheat grown in the United States, accounting for more than 70 percent of wheat acres in 2017. However, winter wheat acreage has fallen nearly 25 percent since 2013, while the acreage of other wheat types has been relatively stable.

- The 2017 ARMS data will reveal whether conservation tillage has continued to grow in wheat production. Conservation tillage farming practices increased for winter wheat during the previous ARMS data period, 2004 to 2009. Tillage trips over winter wheat fields fell more than 50 percent during this period.

- The 2017 ARMS data will help evaluate the impact of new crop insurance offerings for wheat on farm production decisions and financial outcomes. About 80 percent of wheat acreage was covered by federal crop insurance, according to the 2009 ARMS for wheat. The 2014 Farm Bill expanded the range of crop insurance options while eliminating several commodity support programs.

- 2017 ARMS data will show whether pesticide-treated winter wheat acreage has continued to grow, along with fungicide use on all wheat types. Pesticide use in wheat production varies significantly by wheat type. ARMS data in the 2009 survey show that 63 percent of winter wheat acres were treated with pesticides, while nearly all the acreage of spring wheat types were treated.

- The 2017 ARMS will measure the extent to which wheat producers have been adopting precision farming technologies in recent years. In 2009, over half of winter wheat acreage was farmed using some type of precision farming technology, with 36 percent using a yield monitor, 14 percent a variable rate technology, and 35 percent a guidance system. Recent ARMS data for other crops show an increase in the use of precision farming, particularly guidance systems.

- The 2017 ARMS will take a closer look at applying nitrogen fertilizer after planting on wheat acres. Applying nitrogen fertilizer after planting helps ensure that it is used by the crop rather than being lost to surface or groundwater. Over 90 percent of spring planted wheat received nitrogen, compared with 83 percent of winter wheat acreage as reported in the 2009 ARMS. In 2009, less than 10 percent of spring wheat and only half of winter wheat had nitrogen applied after planting.

- Data from the 2017 ARMS will examine the extent to which wheat producers are substituting non-genetically modified herbicide-tolerant seed varieties for homegrown seed, and their impact on wheat yields and production costs. More than 60 percent of wheat seed planted by U.S. producers was homegrown seed in 2009. Unlike the other large acreage crops – corn, soybeans, and cotton – genetically modified wheat seed is not an option for producers.