



2007 CENSUS OF AGRICULTURE

2008 Farm and Ranch Irrigation Survey

The 2008 Farm and Ranch Irrigation Survey shows that U.S. farmers and ranchers are irrigating more farmland and changing the irrigation methods they use. According to the report, 54.9 million acres of farmland in the United States were irrigated in 2008. This is an increase from the 52.5 million acres irrigated in 2003.

In addition, more acres were irrigated with sprinkler systems in 2008 than in 2003. During this five year period, the area irrigated by sprinkler systems increased 15 percent to 30.9 million acres in 2008. The area with gravity irrigation continued to decline, down 5 percent to 22.0 million acres in 2008.

Water Applied

Between 2003 and 2008, the total quantity of water applied increased 5 percent to 91.2 million acre-feet of water. With the corresponding increase in acres irrigated the average acre-feet applied by all methods remained the same as 2003 at 1.7 acre-feet.

	2008	2003	% Change
Farms with Irrigation	206,834	210,106	-1.6
Acres Irrigated	54.9 million	52.5 million	+4.6
Acre-feet Applied	91.2 million	86.8 million	+5.2
Sprinkler System Only	1.2 acre-feet	1.3 acre-feet	NA
Gravity Flow Systems Only	2.2 acre-feet	2.0 acre-feet	NA

U.S. Department
of Agriculture

National Agricultural
Statistics Service



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Water Source

The number of acres irrigated using ground water and on-farm water increased from 2003, while the number of acres irrigated using off-farm water decreased.

	2008	2003	% Change
Ground Water			
Acres Irrigated	36.2 million	32.3 million	+12
Acre-feet Applied	48.5 million	43.5 million	+12
On-farm Water			
Acres Irrigated	8.8 million	7.2 million	+22
Acre-feet Applied	13.8 million	11.7 million	+17
Off-farm Water			
Acres Irrigated	13.1 million	13.8 million	-6
Acre-feet Applied	29.0 million	31.6 million	-8

Irrigation Wells

Since 2003, the number of wells with flow meters increased 76 percent to 107,384 wells. The number of wells with backflow prevention devices also increased. In 2008, backflow prevention devices were on 252,242 wells, an increase of 18 percent.

In 2008, the average well depth increased 5 feet to a depth of 243 feet. The average depth to the bowls increased from 158 feet in 2003, to 166 feet in 2008. Furthermore, the average depth to water increased by 3 feet to 100 feet.

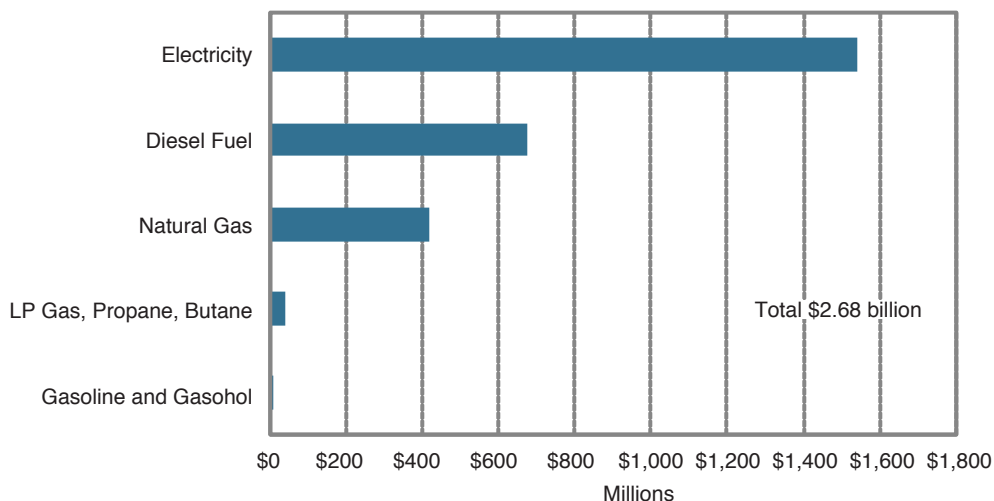
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Irrigation Expenses

Farmers and ranchers spent \$2.1 billion on expenses related to irrigation equipment, facilities, land improvements and computer technology in 2008. Of those expenses, 50 percent was used for replacement of existing equipment, 35 percent for new expansion and 15 percent for water conservation.

The total expenses for energy to power pumps increased 73 percent since 2003. With 12 percent more pumps used in 2008, the energy expenses for pumps totaled \$2.68 billion.

Energy Expenses for Pumps, 2008



The states with the highest acres of irrigated land are:

1. Nebraska
2. California
3. Texas
4. Arkansas
5. Idaho

Energy and Water Conservation

Between 2003 and 2008, a total of 74,846 farms implemented changes in equipment or management practices that reduced energy use and/or conserved water. Nearly 46 percent of these farms reported reduced energy cost and 59 percent reported a reduction in the amount of water applied.

Additionally, in 2008 there were 152 farms that purchased a total of 94,472 acre-feet of reclaimed water at \$28.48 per acre-foot.

	Farms	Acres Irrigated
Recycled Water	9,843	1,806,984
Reclaimed Water	3,205	705,197

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Survey Overview

The Farm and Ranch Irrigation Survey (FRIS) provides data regarding on-farm irrigation activities in the United States for the nation, states and Water Resources Regions. Conducted every five years, FRIS is a supplement to the census of agriculture that expands upon the basic irrigation data collected in the Census. Information on irrigation has been collected from farmers and ranchers since the 1890 Census of Agriculture. The 2008 FRIS is the seventh survey in the series.

The 2008 FRIS sample was selected from all states and included all operations that reported the use of irrigation on the 2007 Census of Agriculture, excluding institutional, research, or experimental farms. The final sample was divided into two groups — a general FRIS group and a horticulture group. The general FRIS group of 23,089 operations excluded operations that reported any horticultural sales in the census year. The horticulture group included 9,996 operations that reported any sales of irrigated horticultural commodities.

The 2003 FRIS sample included operations that reported horticultural production with sales less than \$10,000 during the 2002 census year. For the first time, the 2008 FRIS includes horticultural specialty operations with sales of \$10,000 or greater. Data for these operations will be published in a separate set of horticultural data tables to provide an in-depth look at irrigation practices for this particular sector of the agriculture industry.

The state level general FRIS data are not comparable between the 2008 and 2003 surveys. To provide a measure of comparability, published 2003 U.S. level data were adjusted by removing operations that reported horticultural production with sales less than \$10,000.



For more information:

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www.agcensus.usda.gov

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