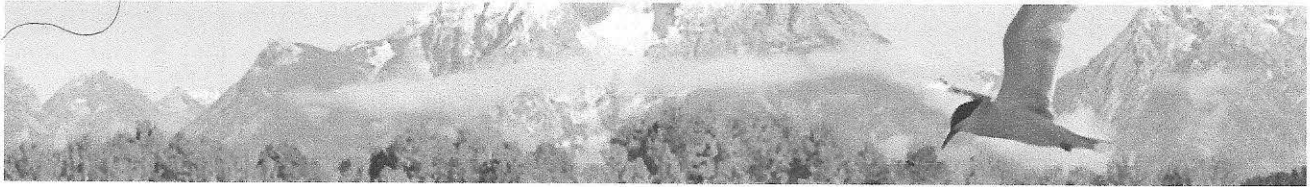




United States Department of Agriculture  
Economic Research Service

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## Agriculture and Climate Change



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*maybe*  
The Earth's temperature ~~is~~ rising as a result of increased atmospheric concentrations of greenhouse gases (see Basic Information on Climate Change from U.S. Environmental Protection Agency). If greenhouse gas (GHG) emissions continue increasing at a high rate (essentially business-as-usual), climate models predict that global warming could increase 4.7-8.6° F above 1986-2005 levels by the end of this century (Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report Vol. I, Summary for Policy Makers). While alternative scenarios with lower rates of increase in atmospheric greenhouse gases and temperatures exist, they all call for more frequent and lengthy heat waves in the future. *Le* ~~As~~ the Earth warms, currently wet regions are ~~expected~~ *might* to receive more rainfall, and currently dry regions receive less, although there will be exceptions and there is considerable uncertainty on how and how much climate change will affect specific locations.

Human activities across the globe—including fossil fuel use, deforestation, and agricultural practices—~~are~~ contributing to the buildup of atmospheric carbon dioxide and other greenhouse gases. Since 1750, land-use change has been responsible for roughly 32 percent of human emissions of carbon dioxide (IPCC Fifth Assessment Report, Vol. I).

Within the United States, agriculture and forestry together accounted for 9.1 percent of U.S. greenhouse gas emissions in 2014. If electricity sector emissions are allocated to the sectors using electricity, agriculture and forestry's share of GHG emissions increases to 10.0 percent.

*maybe*