



United States Department of Agriculture

USDA Accomplishments 2009-2011

Secretary Tom Vilsack

Research

Each day, the work of USDA scientists and researchers touches the lives of every American: from the farm field to the kitchen table, from the air we breathe to the energy that powers our country. USDA science is on the cutting edge, helping protect, secure, and improve our food, agriculture and natural resources.

Strengthening our Research System

- USDA has restructured its science agencies to ensure the most effective and efficient use of its resources, while leveraging the strengths of our partners across the scientific community.
- Through the newly created Office of the Chief Scientist, USDA research is coordinated with that done by scientists and researchers across the federal government, as well as with our university and private partners, making the best use of taxpayer research investments.
- The National Institute of Food and Agriculture (NIFA) was created to advance knowledge by supporting research, education and extension programs in the Land-Grant University system and other partner organizations. NIFA has reorganized and streamlined USDA's funding for external research focused on delivering results for rural America and agriculture.

Enhancing the Productivity of American Agriculture and our Food Supply

- USDA scientists and research funding have supported America's farmers and producers in their work to produce a safe and abundant food supply for over 100 years. This work has helped feed the nation and sustain an agricultural trade surplus since the 1960s. Studies have shown that every dollar invested in agricultural research now returns over \$20 to our economy.
- Work done by USDA scientists and their university partners revealed the genetic blueprints of a host of plants and animals including the genomes of apples, pigs, and turkeys. Thanks to USDA and USDA-funded research, we can bypass generations of selective breeding to bring more abundant, nutritious food to the American table.
- USDA researchers and their university collaborators developed a tool that offers researchers a much more comprehensive view of an individual animal's economically important traits, opening the door to passing that information to animal breeders so they can pick the best animals to use for breeding stock.
- Our scientists have identified the primary site where the virus that causes foot-and-mouth disease begins infection in cattle and developed an improved vaccine against the disease.
- USDA scientists have worked to protect the global wheat crop, leading an international consortium that sequenced the genome of a pathogen that can decimate wheat and conducting studies to provide insights into how the wheat crop will cope with climate change in the decades to come.

- Building on already-significant plant and animal genetic materials collections, USDA maintains genetic diversity while developing stronger and more nutritious agriculture products. We make gene banks available to scientists across the world for breeding.
- USDA researchers developed a method to allow poultry inspectors to rapidly screen for the Avian influenza virus (H5N1), a danger to human health as well as poultry.

Improving Nutrition and Fighting Obesity

- USDA scientists are part of an international team that has found a way to boost the nutritional value of broccoli, tomatoes and corn, and have worked to find ways to bolster the nutritional content of other staple crops like oats and rice.
- USDA-supported science is investigating the causes of childhood obesity so that our country can address the epidemic. It has also provided the research foundation for changes in school cafeterias that encourage children to eat more nutritious foods like fruits and vegetables.
- In other efforts to combat the obesity epidemic, USDA supports nutrition education programs to help communities looking for ways for to improve their diets.
- USDA conducted the first-ever national assessment of food deserts – low income areas with limited access to affordable and nutritious food – and a created a mapping tool to help identify new opportunities for business and employment in these communities.

Conserving Natural Resources; Combating Climate Change and Global Hunger

- To help farmers and ranchers adapt and respond to global warming and changing weather patterns, USDA researchers partnered with researchers across the globe in looking for ways to help producers limit greenhouse gas emissions.
- Our research will help improve the productivity of agriculture at home and around the globe and support efforts to combat global hunger. USDA

scientists are developing hybridized crops that are drought- and flood-resistant, developing crops to help improve the productivity of soil, as well as production systems that require increasingly smaller amounts of pesticides.

- USDA researchers created i-Tree, urban forest management software to help cities understand the value of urban trees through carbon sequestration, erosion protection, energy conservation and water filtration.
- USDA researchers conduct research on the use of wood, helping companies meet green building design standards and creating jobs using forest products. We also worked with Major League Baseball to reduce the occurrence of broken baseball bats.

Boosting Rural Prosperity and Promoting Domestic Production of Renewable Energy

- USDA statisticians constantly monitor agricultural production, helping farmers price their crops and providing marketplace stability. Our economists collect and analyze the data that policymakers need to keep rural communities thriving, with easy-to-use online tools that make the data accessible to all.
- Policy makers and the public are being provided with easily accessible data on rural areas through the ‘Atlas of Rural and Small-Town America,’ which helps decision makers pinpoint the needs of particular areas and develop strategies to build on their assets.
- USDA used advanced technologies to create a new tool to monitor agriculture and help assess our national farmlands’ status on conservation, restoration, and the effects of climate change.
- We established five regional research centers to focus, accelerate, and coordinate the science and technology needed to develop a national biofuels industry powered by feedstocks – like grass, wood and agricultural waste. –

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