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Climate Change in a Changing Climate

Dr. Randi Johnson

Director, Global Climate Change Division
Institute of Bioenergy, Climate and Environment
National Institute of Food and Agriculture

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The Administration's priorities

- Grow the economy
- National security
- Strengthening communities

The Administration's priorities

- Grow the economy
- National security
- Strengthening communities

Strong Resilient Rural Economies

USDA Strategic Goals for FY2018-2022

- Ensure USDA programs are delivered efficiently, effectively, and with integrity and a focus on customer service.
- Maximize the ability of American agricultural producers to prosper by feeding and clothing the world.
- Promote American agricultural products and exports.
- Facilitate rural prosperity and economic development.
- Strengthen the stewardship of private lands through technology and research.
- Foster productive and sustainable use of our National Forest System Lands.
- Provide all Americans access to a safe, nutritious and secure food supply.

https://www.usda.gov/our-agency/about-usda/strategic-goals

USDA
United States Department of Agriculture

2018 Farm Bill & Legislative Principles

The U.S. Department of Agriculture (USDA) uniquely touches the lives of all Americans daily, through the food they eat, the fibers they wear, and the fuels they use. And U.S. producers make it all possible. Agriculture Secretary Sonny Perdue's motto to 'Do Right and Feed Everyone' has served as the inspiration to travel to more than 30 states across the nation, hearing from the men and women on the front lines of U.S. agriculture. Through these interactions, USDA developed a set of principles to share with Congress for consideration as they craft the Farm Bill and other legislation beneficial to the agricultural economy. USDA stands ready to provide counsel to Congress, and strives to be the most efficient, most effective, and most customer-focused department in the federal government. Our goal is to be responsive to the American people and improve services while reducing regulatory burdens on USDA customers.

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USDA supports legislation that will…

Farm Production & Conservation

- Provide a farm safety net that helps American farmers weather times of economic stress without distorting markets or increasing shallow loss payments.
- Promote a variety of innovative crop insurance products and changes, enabling farmers to make sound production decisions and to manage operational risk.
- Encourage entry into farming through increased access to land and capital for young, beginning, veteran and underrepresented farmers.
- Ensure that voluntary conservation programs balance farm productivity with conservation ben the most fertile and productive lands remain in production while land retired for conservation favor more environmentally sensitive acres.
- Support conservation programs that ensure cost-effective financial assistance for improved soi water and air quality and other natural resource benefits.

Trade & Foreign Agricultural Affairs

- Improve U.S. market competitiveness by expanding investments, strengthening accountability of export promotion programs, and incentivizing stronger financial partnerships.
- Ensure the Farm Bill is consistent with U.S. international trade laws and obligations.
- Open foreign markets by increasing USDA expertise in scientific and technical areas to more effectively monitor foreign practices that impede U.S. agricultural exports and engage with foreign partners to address them.

Food, Nutrition & Consumer Services

- Harness America's agricultural abundance to support nutrition assistance for those truly in need.
- Support work as the pathway to self-sufficiency, well-being, and economic mobility for individuals and families receiving supplemental nutrition assistance.
- Strengthen the integrity and efficiency of food and nutrition programs to better serve our participants and protect American taxpayers by reducing waste, fraud and abuse through shared data, innovation, and technology modernization.
- Encourage state and local innovations in training, case management, and program design that self-sufficiency and achieve long-term, stability in employment.
- Assure the scientific integrity of the Dietary Guidelines for Americans process through greater transparency and reliance on the most robust body of scientific evidence.
- Support nutrition policies and programs that are science based and data driven with clear and measurable outcomes for policies and programs.

Marketing & Regulatory Programs

- Enhance our partnerships and the scientific tools necessary to prevent, mitigate, and where appropriate, eradicate harmful plant and animal pests and diseases impacting agriculture.
- Safeguard our domestic food supply and protect animal health through modernization of the tools necessary to bolster biosecurity, prevention, surveillance, emergency response, and border security.
- Protect the integrity of the USDA organic certified seal and deliver efficient, effective oversight of organic production practices to ensure organic products meet consistent standards for all producers, domestic and foreign.
- Ensure USDA is positioned appropriately to review production technologies if scientifically required to ensure safety, while reducing regulatory burdens.
- Foster market and growth opportunities for specialty crop growers while reducing regulatory burdens that limit their ability to be successful.

Food Safety & Inspection Services

- Protect public health and prevent foodborne illness by committing the necessary resources to ensure the highest standards of inspection, with the most modern tools and scientific methods available.
- Support and enhance FSIS programs to ensure efficient regulation and the safety of meat, poultry and processed egg products, including improved coordination and clarity on execution of food safety responsibilities.
- Continue to focus USDA resources on products and processes that pose the greatest public health risk.

Research, Education & Economics

- Commit to a public research agenda that places the United States at the forefront of food and agriculture scientific development.
- Develop an impact evaluation approach, including the use of industry panels, to align research priorities to invest in high priority innovation, technology, and education networks.
- Empower public-private partnerships to leverage federal dollars, increase capacity, and investments in infrastructure for modern food and agricultural science.
- Prioritize investments in education, training and the development of human capital to ensure a workforce capable of meeting the growing demands of food and agriculture science.
- Develop and apply integrated advancement in technology needed to feed a growing and hungry world.

Rural Development

- Create consistency and flexibility in programs that will foster collaboration and assist communities in creating a quality of life that attracts and retains the next generation.
- Expand and enhance the effectiveness of tools available to further connect rural American communities, homes, farms, businesses, first responders, educational facilities, and healthcare facilities to reliable and affordable high-speed internet services.
- Partner with states and local communities to invest in infrastructure to support rural prosperity, innovation and entrepreneurial activity.
- Provide the resources and tools that foster greater integration among programs, partners and the rural development customer.

Natural Resources & Environment

- Make America's forests work again through proactive cost-effective management based on data and sound science.
- Expand Good Neighbor Authority and increase coordination with states to promote job creation and improve forest health through shared stewardship and stakeholder input.
- Reduce litigative risk and regulatory impediments to timely environmental review, sound harvesting, fire management and habitat protection to improve forest health while providing jobs and prosperity to rural communities.
- Offer the tools and resources that incentivize private stewardship and retention of forest land.

Management

- Provide a fiscally responsible Farm Bill that reflects the Administration's budget goals.
- Enhance customer service and compliance by reducing regulatory burdens on USDA customers.
- Modernize internal and external IT solutions to support the delivery of efficient, effective service to USDA customers.
- Provide USDA full authority to responsibly manage properties and facilities under its jurisdiction.
- Increase the effectiveness of tools and resources necessary to attract and retain a strong USDA workforce that reflects the citizens we serve.
- Recognize the unique labor needs of agriculture and leverage USDA's expertise to allow the Department to play an integral role in developing workforce policy to ensure farmers have access to a legal and stable workforce.
- Grow and intensify program availability to increase opportunities for new, beginning, veteran, and under-represented producers.

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GREENWIRE

THE LEAD

<< Back to search results.

AGRICULTURE

Perdue defends cuts to insurance, conservation

Marc Heller, E&E News reporter

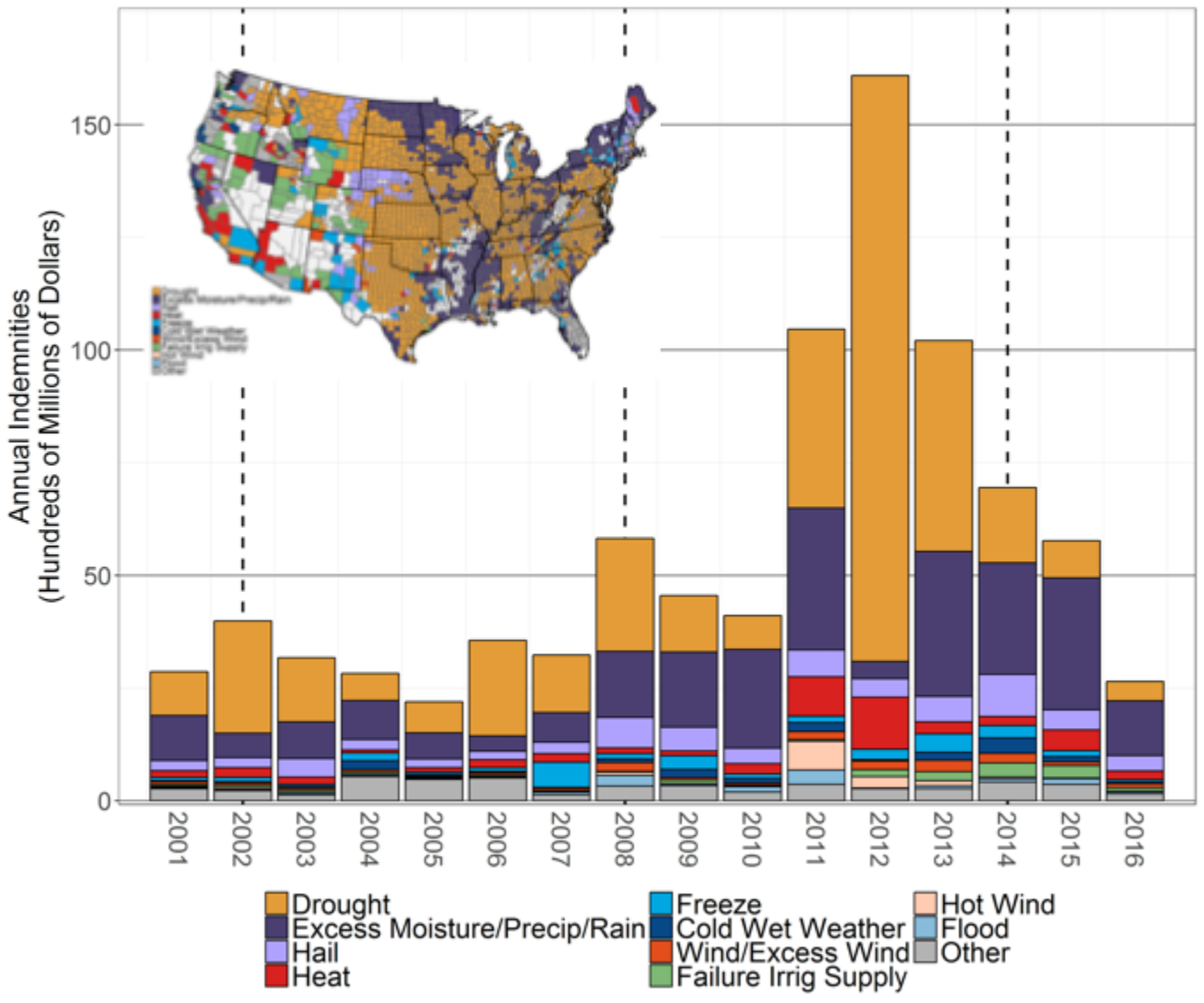
Published: Thursday, February 22, 2018

Agriculture Secretary Sonny Perdue spoke this morning at the 2018 Ag Outlook forum. @USDA/Twitter

Helping farmers with conservation and crop insurance.

Reducing the costs of crop insurance

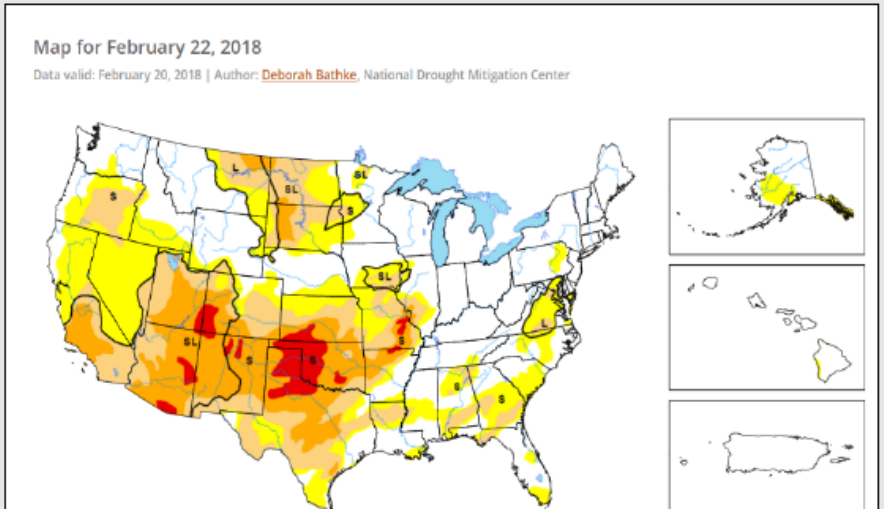
Indemnity due to price decline was less than 3% of the total in 2016



USDA Climate Hubs
U.S. DEPARTMENT OF AGRICULTURE

USDA Climate Hub Response to Current Drought Conditions

The ten regional USDA Climate Hubs develop and deliver science-based, region-specific information and technologies, with USDA agencies and partners, to agricultural and natural resource managers that enable climate-informed decision-making, and provide access to assistance to implement those decisions. During times of drought, the Hubs work closely with their regional partners to ensure the latest information, resources, and tools are shared with stakeholders (e.g., NRCS, FSA, NOAA, and Extension) and land managers so that they can mitigate the acute effects of drought on their land. The USDA Climate Hubs are currently monitoring drought in their region and working with NOAA, State Climatologists, the National Drought Mitigation Center, Cooperative Extension, and others to enhance drought preparedness.



Conservation

HOME › TOPICS › CONSERVATION

Animals
Biotechnology
Climate Solutions
Conservation
Wildlife
Data

USDA recognizes that conservation by farmers, ranchers and forest owners today means thriving and sustainable agriculture for our future. Seventy percent of the nation's land is privately owned and conservation of our nation's private lands not only results in healthy soil, water, air, plants, animals and ecosystems, it also provides productive and sustainable working lands.

Working with Individual Landowners on Conservation

FACT SHEETS

President Donald J. Trump's Year of Regulatory Reform and Environmental Protection at the EPA

ENERGY & ENVIRONMENT | Issued on: December 14, 2017

★ ★ ★

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"We're ending intrusive EPA regulations that kill jobs, hurt family farmers and ranchers, and raise the price of energy so quickly and so substantially."

President Donald J. Trump

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The work we do!

Develop the germplasm and management practices that provide a resilient agroeconomy that results in higher productivity, profit and ecosystem benefits.

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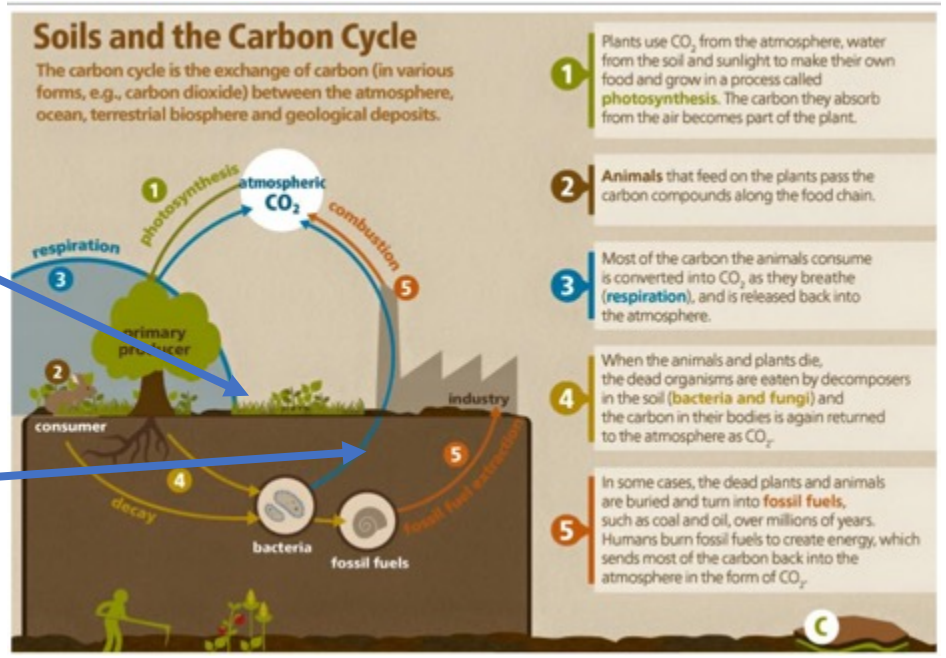
Do we still study Carbon?

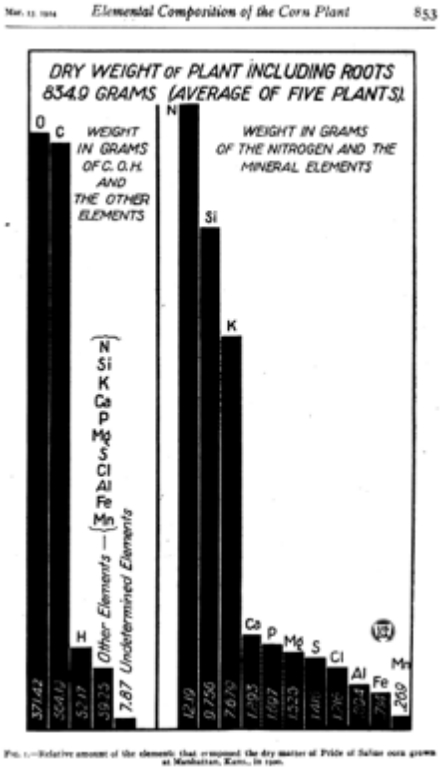
Above-ground carbon is associated with production. More carbon equals more yield

Below-ground carbon is associated soil organic matter. More carbon equals better soil health



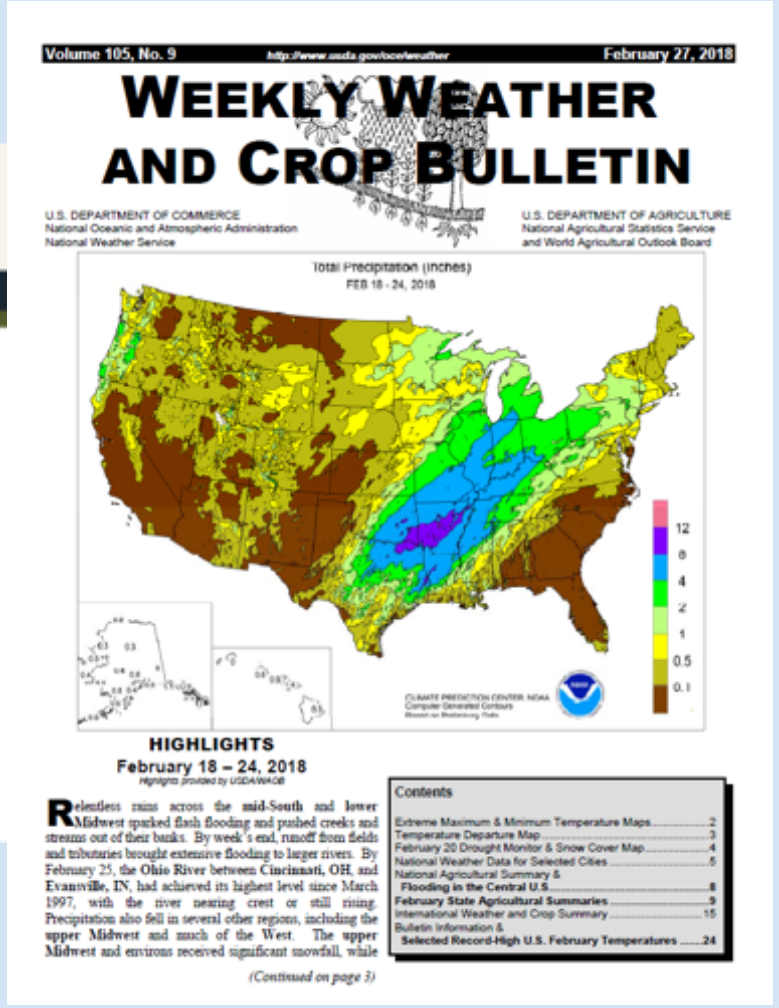
Carbon?

- Water infiltration rate and holding capacity
- Soil erosion
- Availability of other nutrients (N, P, K, etc.)
- Productivity and nutrient quality of food impacted by atmospheric CO_2
- Weeds, pests, and invasive species are impacted by atmospheric CO_2
- Carbon-neutral marketing (agriculture in the US / pellets overseas)



Carbon is 46% of corn dry wt

USDA Departmental Level:



https://www.drought.gov/drought/

USDA Climate Hubs
U.S. DEPARTMENT OF AGRICULTURE

About Us | Original Site | Contact Us

REGIONAL HUBS | TOPICS | CLIMATE IMPACTS | ACTIONS & RESOURCES

Search

WELCOME TO THE USDA CLIMATE HUBS WEBSITE!

Our new national and regional websites are designed to ensure that stakeholders from around the Nation can quickly and easily find the information they need to manage climate change risks and ensure the resilience of their production systems.

READ MORE »

California Wildfires Information

This page contains links for information about California wildfires, and resources to help prepare for and recover from the impacts of fire.

Planning for Planting

Design an effective riparian buffer during the off-season by using AgBufferBuilder to aid against intense rain events in the future.

The Future of Winter Roads

Recent warmer and shorter winters mean that winter freeze and spring thaw periods for roads are less dependable. Learn how this variability impacts industry, management and communities, and how a new tool can now better assess roadway freeze-thaw conditions.

Related Topics

- Effects
- Mitigation
- Adaptation
- Food Security
- Estimation Tools
- Greenhouse Gas Inventory
- Climate Change Science Plan
- Climate Change Across USDA
- USDA Regional Climate Hubs
- Third U.S. National Climate Assessment

Climate Change Program Office

The Climate Change Program Office (CCPO) coordinates USDA's responses to climate change, focusing on implications of climate change on agriculture, forests, grazing lands, and rural communities. CCPO ensures that USDA is a source of objective, analytical assessments of the effects of climate change and proposed response strategies both within USDA and for our partners. CCPO is also responsible for coordinating activities with other Federal agencies, interacting with the legislative branch on climate change issues affecting agriculture and forestry, and representing USDA on U.S. delegations to international climate change discussions. CCPO's responsibilities include:

- Analysis, planning, research coordination, and the development of climate change response strategies;
- Providing liaison with other Federal agencies;
- Informing the Department of scientific developments and policy issues relating to the effects of climate change on agriculture and forestry, and recommending responsive courses of action; and
- Ensuring that recognition of the potential for climate change is fully integrated into USDA's research, planning, and decision-making processes.

COMET Farm | NRCS USDA Colorado State University

Whole Farm and Ranch Carbon and Greenhouse Gas Accounting System.

HOME TOOL INFO HELP (Sign in or Register)

Why should I use COMET-FARM?

USDA GHG methods

What information do I need?

How are my results calculated?

Is my information safe?

How do I use COMET-FARM?

Overview video

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ABOUT TOOLS DATA GATEWAY BUDGET & LEGISLATION CONTACT LANGUAGE

TOPICS PROGRAMS GRANTS NEWSROOM IMPACTS RESOURCES

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Division of Global Climate Change

The Division of Global Climate Change researches and applies methods that make agricultural and natural resource systems adaptable to such dramatic climate events as droughts, floods, and temperature extremes. Priorities include development of plant and animal breeds that are less vulnerable to climate change, increased removal of carbon dioxide from the atmosphere, development of climate-change adaptation methods for agriculture and forests, implementation of sustainable practices for natural resources consumption, and improved energy and water conservation.

GOALS

- Implement methods to make farms, rangelands, and forests more adaptable to climate change Reduce the impact of climate change on environmental elements such as air and water
- Mitigate the effects of climate change on ecosystem functions
- Build land grant institutions' capacity for research and extension a
- Support sustainable agricultural practices for water use

USDA United States Department of Agriculture
National Institute of Food and Agriculture

ABOUT TOOLS DATA GATEWAY BUDGET & LEGISLATION CONTACT LANGUAGE

TOPICS PROGRAMS GRANTS NEWSROOM IMPACTS RESOURCES

PROGRAMS > CURRENT PAGE

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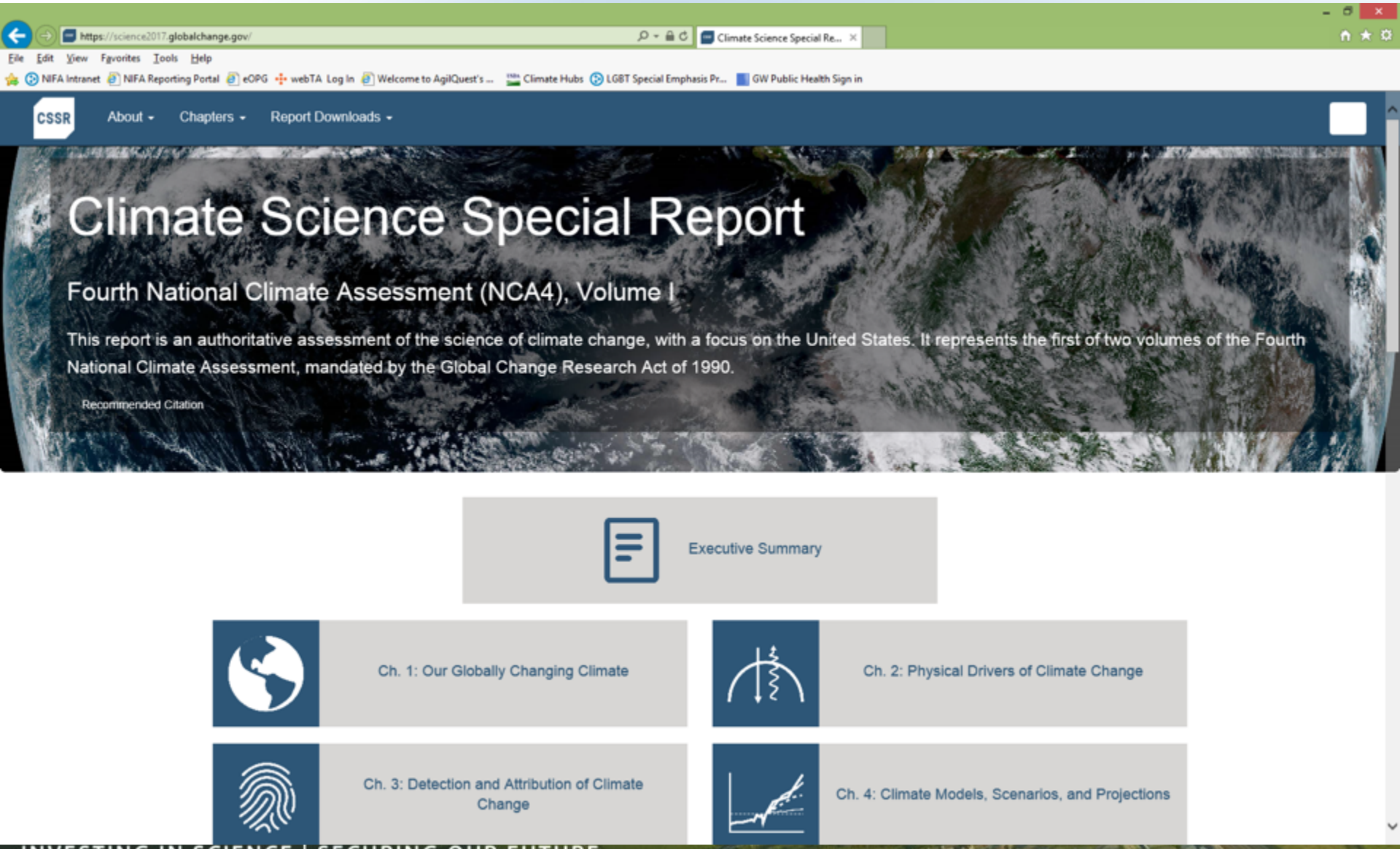
Global Change and Climate Programs

2016 Agroclimatology Annual Project Directors Meeting

Global Change and Climate Programs

One of the most pressing issues facing plant and animal producers today is the ever-changing conditions and impacts of climate variability. Another critical issue is the need for scientific information that producers can use to plan and make decisions to ensure economic viability while facing these challenges. NIFA-supported global change and climate projects are addressing these issues through research, extension, and education activities.

GENERAL INFORMATION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Climate Science Special Re...
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Climate Science Special Report
Fourth National Climate Assessment (NCA4), Volume I
This report is an authoritative assessment of the science of climate change, with a focus on the United States. It represents the first of two volumes of the Fourth National Climate Assessment, mandated by the Global Change Research Act of 1990.
Recommended Citation
Executive Summary
Ch. 1: Our Globally Changing Climate
Ch. 2: Physical Drivers of Climate Change
Ch. 3: Detection and Attribution of Climate Change
Ch. 4: Climate Models, Scenarios, and Projections

Thank you!

Questions?