

Agriculture and Forestry in a Changing Climate

Resilient Agriculture Conference

Ames, Iowa

July 25, 2014

Ernie Shea – Project Coordinator



Bringing the Vision to Life

25x'25: A National Alliance

- Formed through a grant from the Energy Future Coalition
- Organized to explore agriculture and forestry's role in America's energy future
- Evolved to now include conservation, environment, business, defense and rural development organizations and leaders



The 25x'25 Vision

By the year 2025, America's farms, ranches and forests will provide 25 percent of the total energy consumed in the U.S. while continuing to produce safe, abundant and affordable food, feed and fiber.



Bringing the Vision to Life

America's Mega Challenges

National Security



Economy



Environmental Degradation



Bringing the Vision to Life

Climate Impacts



Crops



Livestock



Pollinators



Pests



Invasives



Disease



Infrastructure



Water



Soil



Biodiversity



Insurance



Forecasting



Bringing the Vision to Life

Adaptation Mission

- Educate agricultural and forestry leaders on the potential impacts of climate change in ways relevant to their daily lives;
- Equip producers with the tools and knowledge they need to make informed decisions and manage new risks under changing conditions;
- Mobilize producers to advocate for needed changes in land-use practices, research, education, and policy; and
- Inspire producers to become leaders in the broader discussion of climate change, including adaptation and mitigation.





Work Group Members



Farmers



Ranchers



Foresters



Academia



Conservation



Industry



Bringing the Vision to Life



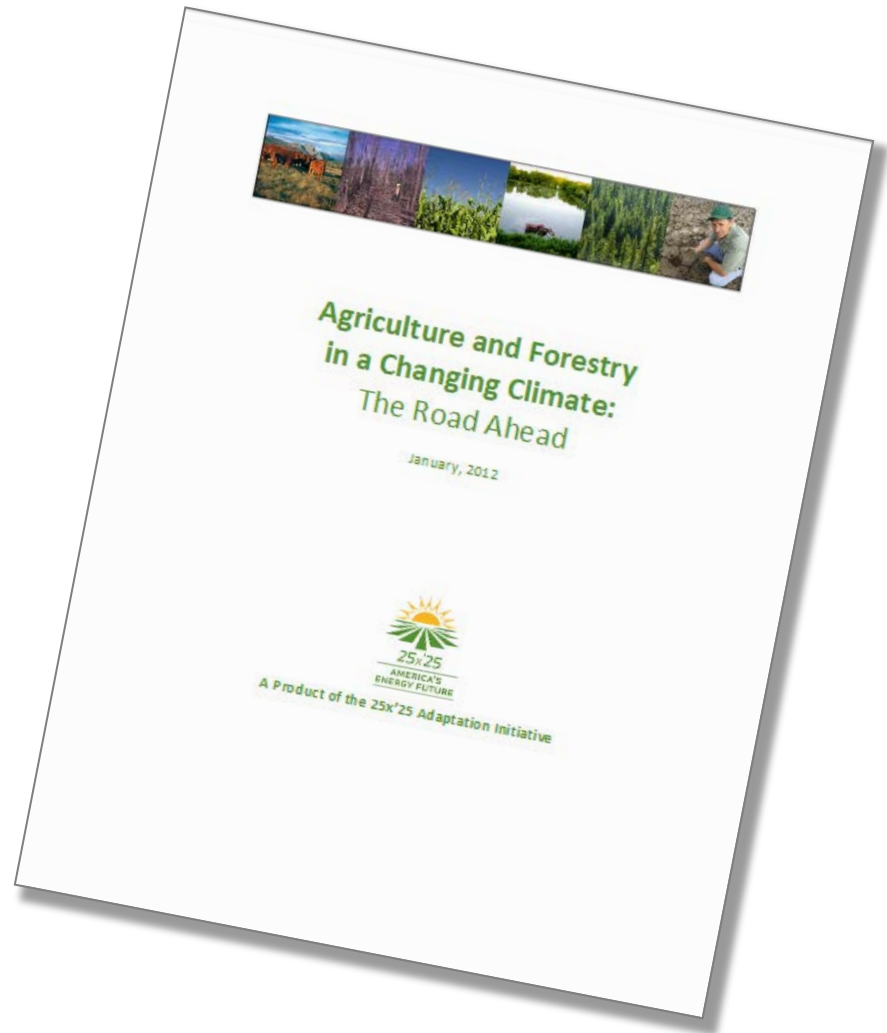
Bringing the Vision to Life



Climate Impacts

Agriculture and
Forestry in a
Changing
Climate:
The Road
Ahead

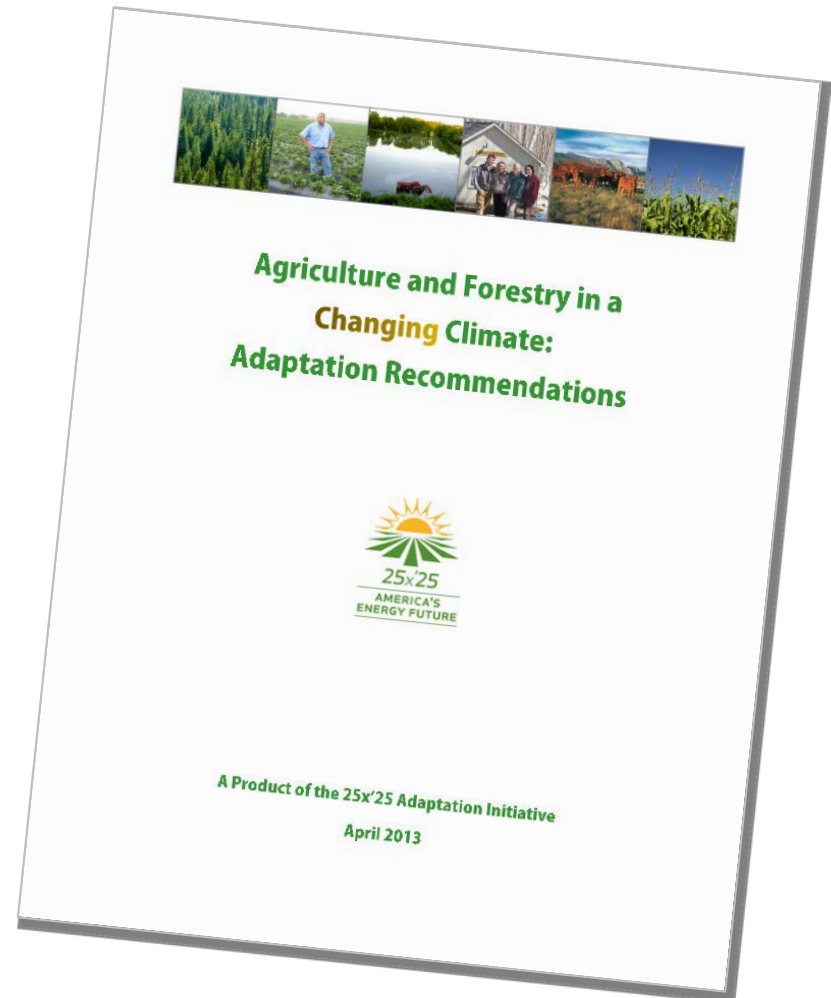
January 2012





Adaptation Recommendations

Agriculture and
Forestry in a
Changing
Climate:
Adaptation
Recommendations



Bringing the Vision to Life



Recommendation Targets



Producers



Policymakers



Agencies



Universities



Researchers



Business





Adaptation Strategies

1. Actions to increase **resistance** to changes in climate in order to maintain existing practices
2. Actions to improve **resilience** by investing in steps that preempt disasters and restore systems in the wake of them
3. Actions to **transform** operations





Adaptation Recommendations

1. Research
2. Production Systems and Practices
3. Risk Management
4. Planning and Decision Support Tools
5. Communications, Outreach, and Education





Conservation Practices

1. Increase the soil's water holding capacity by improving soil organic content.
2. Engage in conservation tillage practices to improve soil quality.
3. Plant cover crops to provide additional soil protection.
4. Install buffers to reduce runoff and enhance ecosystem services.
5. Utilize wetlands and new field drainage practices.





Conservation Practices

- 6 Diversify and lengthen cropping systems that enhance soil structure.
- 7 Consider biochar to improve soil health.
- 8 Improve irrigation and water-use efficiency.
- 9 Diversify ag & forestry operations to increase revenue and reduce risks.
- 10 Adopt new subsurface water management systems.



Key Messages

- Climate change will present new opportunities and challenges for agriculture and forestry
- Through dialogue and the appropriate measures, producers can adapt to a changing climate
- Producers are already taking steps to adapt, as they have in the past
- Adaptation is an investment into the future of our nation and its producers
- Many adaptation actions will have added benefits such as reducing costs, increasing productivity, and expanding market access





Path Forward

1. Launch information/education outreach programs
2. Facilitate the development of state adaptation plans
3. Support farmer leadership teams in developing real-world adaptation and resiliency strategies
4. Establish a U.S. Climate Smart Agriculture Alliance
5. Engage globally via the Global CSA to be launched in September at the UN Climate Summit in New York.



“The policies and practices of the past will not meet the needs of tomorrow”



Bringing the Vision to Life





For additional information on this project,
contact Ernie Shea at
adaptation@25x25.org or 410-252-7079.



Bringing the Vision to Life