Keeping North Carolina Farms and Forests Vibrant and Resilient:

An Adaptive Management Planning Strategy

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NC – ADAPT Mission

- Explore the impacts of increasingly significant weather events and changing climatic conditions on the state’s two biggest industries – agriculture and forestry;

- determine whether producers were adequately prepared for what science is projecting; and

- develop a process for constructing a comprehensive adaptive management strategy for the agricultural and forestry sectors of North Carolina.
NC – ADAPT Work Group

- R.C. Hunt and Chip Miller (Co-Chairs)
- Farmers
- Foresters
- Conservationists
- Academics
- Government Resource Professionals
- Business Partners
Listening Sessions

• North Carolina agriculture and forest sectors face many challenges:
  - Regulatory uncertainty
  - Changing market structures
  - Plant and animal disease
  - Transportation and infrastructure barriers
  - Land fragmentation/ownership profiles
  - Water quality/quantity
  - Energy security/costs

• Changing climatic conditions will exacerbate these challenges.
Science is telling us to expect:

- Increasingly erratic weather
- More frequent and prolonged droughts
- More intense precipitation events
- Declines in productivity from weeds, diseases, insect pests and invasive species
- Less winter chilling hours; higher nighttime summer temperatures
- Less predictability
Climate Impacts

Crops
Livestock
Pollinators
Pests
Invasives
Disease
Infrastructure
Water
Soil
Biodiversity
Insurance
Forecasting
Impacts of Climate Change:

1 out of 5 = 16 Million
Kids in America Struggle with Hunger
Principal Findings

- The climate is changing;
- Ag and forestry are already being impacted;
- Climate related disruptions will create significant economic challenges;
- Ag and forest sectors are not prepared;
- Adaptive management planning is needed
Path Forward

1. Form an Adaption Planning Team;
2. Hold an information and needs assessment summit;
3. Produce an Adaptive Management Planning Strategy for the ag and forestry sectors;
4. Develop and implement an outreach and engagement program using peer-to-peer grower leader dialogues and information networks.
# Timeline for Statewide Adaptive Management Plan

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<thead>
<tr>
<th>Event</th>
<th>2015</th>
<th>2016</th>
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<tbody>
<tr>
<td>Finalize Phase I Report</td>
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<td>Release Phase I Report</td>
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<td>Adaptation Summit Planning</td>
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<td>Adaptation Summit Event</td>
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<td>Stakeholder Sub Teams Input</td>
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<td>Develop Adaptive Management Strategy</td>
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<td>Organize Communications and Outreach Team</td>
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<td>Develop Producer Outreach and Engagement Program</td>
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<td>Release Adaptive Management Strategy</td>
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<td>Adaptive Management Strategy Outreach and Plan Implementation</td>
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Why is this work important?

- 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.
- 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.
Climate Smart Agriculture: Work Platform

Adaptation & Resiliency
- Production & conservation systems
- Research & risk management
- Planning & decision support tools

Productivity (sustainable intensification)
- Feed
- Food
- Fiber
- Energy
- Ecosystem Services

GHG Reduction
- Carbon sequestration
- Biofuels

Place Based Planning
States, provinces and regions

Knowledge Sharing
Global Alliance for Climate Smart Agriculture & North American Climate Smart Agriculture Alliance

Commodity Specific Strategies
e.g. Soy, Corn, Hogs
Projected changes in agricultural productivity to 2080 due to climate change

Figure courtesy of: http://www.grida.no/publications/rr/food-crisis/
CLIMATE CHANGE

“Business as usual will not be enough”
Surge Forward!

with

Climate Smart Agriculture

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