

# **Agriculture's Adaptation to Climate Change**

**California Climate Adaptation Strategy  
Discussion Draft**

# California Climate Adaptation Strategy Discussion Draft

- Document to guide government action
- Collaboration between Agencies, Departments, Divisions
- Multi-sector approach
- Cross sector synthesis

- Easy, right...!

- First, agree on target audience;
- Then come to terms with some definitions:
  - Like,
    - what is adaptation, and
    - what is mitigation

- Okay, what is adaptation?
  - Adaptation involves minimizing the impacts of climate change already set in motion. The ultimate goal of adaptation is to enhance society's long-term resilience to imminent climate impacts.
- And mitigation?
  - Climate mitigation involves reducing greenhouse gas emissions to avoid unmanageable conditions in the future.

- So, what did people tell us about the public draft?
- “...the agricultural chapter fails to include sufficient emphasis on the promotion of sustainable land use management practices such as cover cropping, conservation tillage, composting, and nutrient management, which would reduce greenhouse gas emissions and provide a variety of public health and environmental co-benefits, including reductions in pesticide and fertilizer use.”
- and,...“Sustainable Product Development is not an adaptation strategy and should be removed. The examples given are mitigation strategies.”

- “...organic agriculture is more drought resistant than conventional agriculture. I would like this to be included in our plan for adaptation to climate change. Furthermore, organic ag is a tool to sequester carbon in the soil and to use less oil to grow our food, thus preventing climate change in addition to merely adapting to it.”
- “The promotion of organic systems, ecotourism, or the improved transportation of commodities are in no way adaptation strategies and should be removed from this document.”
- “Research to reduce the use of nitrogen fertilizers and therefore reducing nitrous oxide emissions is a mitigation strategy and not an adaptation strategy. This needs to be removed from this document.”

- “Encourage adoption of advanced integrated pest management, nutrient efficiency, and organic agriculture practices to help farmers cope with the changes in pest pressures that will come with higher temperatures without increasing the use of pesticides and synthetic fertilizers.”
- “The example of hedgerows, riparian restoration and wetlands to provide grower opportunities for diversification of income from carbon sequestration and other environmental services credits, is not an adaptation strategy. This is a mitigation and sequestration strategy. These actions will not help farmers cope with sea level rise or increased temperatures.”

- “Recognizing that California Agriculture is responsible for a sizeable portion of GHG emissions in the state, the agriculture section should include language regarding the need for GHG reduction regulations from machinery used in agriculture and other agricultural GHG emission sources.”
- “Encouraging and support of local and regional markets for the purpose of reducing food miles traveled is a mitigation strategy and should be deleted. Agriculture relies on worldwide markets to maintain its economic sustainability.” “Reducing Transportation Energy Costs is a mitigation strategy and should be removed from this document.”

- “We recommend that California's reliance on large-scale monoculture agriculture must be reexamined in relation to a robust climate adaptation strategy.”
- “Research for crops to use less energy and chemical inputs and support of low carbon fuels are mitigation strategies and are outside the scope of this document.”

- **Balancing the diverse needs of Californian is our task.**
- **This should be easy, right?**

