



# SIGNIFICANCE TO THE RISK MANAGEMENT AGENCY

## USDA CLIMATE HUBS

### PURPOSE

The Climate Hubs reduce climate related risks to agriculture, forestry, and rural communities by working with and through USDA agencies and partners. The Hubs develop and deliver science-driven strategies and tools so that USDA programs, advisors, and land managers can make informed decisions to manage risk.

### OUTCOME

Agencies and stakeholders have the region-specific information they need to manage and reduce climate related risks so that farmers, ranchers and forest managers adopt practices which sustain production, have economic gains, conserve soil and water, reduce erosion, enhance wildlife habitat, and reduce the impacts of fire.

### RISK MANAGEMENT AGENCY BENEFITS

The Hubs **enhance** the Risk Management Agency (RMA)'s capacity to deliver on its mission to preserve and strengthen economic stability of America's agricultural producers by **communicating** regional and local climate risk scenarios and adaptive strategies to RMA and its' partners, **delivering** climate risk management information and outreach to land managers through two-way engagement with stakeholders, and **strengthening** partnerships among USDA agencies.

### ENHANCING RMA CAPACITY

Vulnerability assessments developed by the Hubs add value. Understanding how natural resource conditions on working lands are affected by the changing climate, including extreme and variable weather, is essential to improve the performance of programs (e.g., assessing patterns of drought.)

- The Hubs are **supporting regional- and Agency-specific priorities**, such as RMA crop loss assessments.
- Hub Liaisons from across USDA agencies are **developing tools and resources for land managers**.
- Climate Hub Fellows, located in all ten Hub regions, are **engaged in innovative and cross-cutting research** that targets stakeholder-relevant management applications.

Enhancing RMA capacity

Communicating science and practices to risk managers

Delivering climate risk information to stakeholders

Strengthening partnerships and collaboration

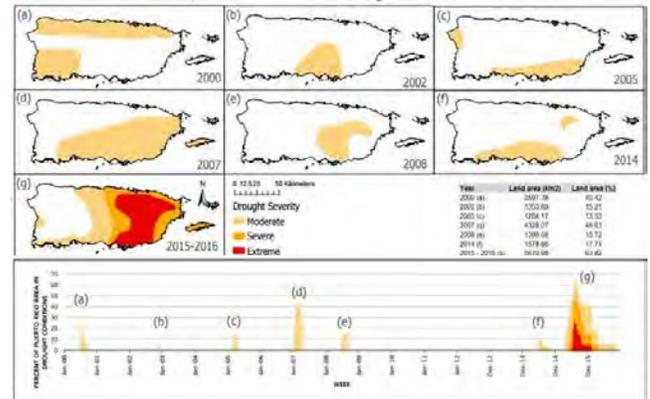
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## Case Studies

### Working together: RMA and USDA Climate Hub Fellows

#### Caribbean Climate Hub

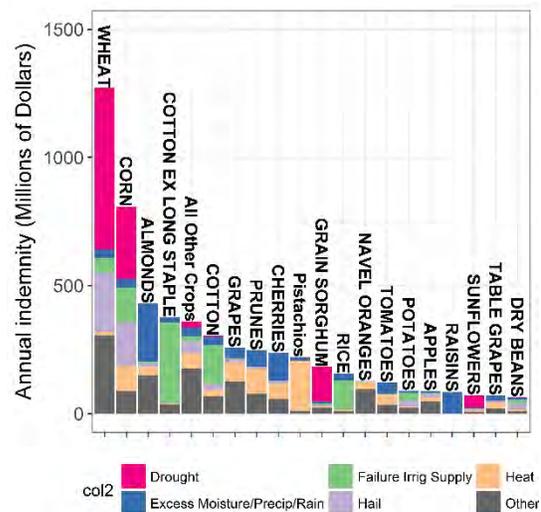
The Caribbean Climate Hub is conducting research to understand farmers' participation in U.S. Farm Bill Conservation and Disaster Programs to understand how the programs help land managers mitigate the risks of climate extremes, variability, and change in the U.S. Caribbean. To this end, the Hub has strengthened relationships and communication with Farm Service Agency (FSA), Natural Resources Conservation Service (NRCS) and the Agricultural Insurance Corporation of Puerto Rico (local intermediary of RMA which provides crop insurance) to gather spatially-explicit information on damages from climatic events, programs implemented on individual farms, and monetary investments in insurance policies and other programs.



Spatial distribution of recent droughts in Puerto Rico. The Caribbean Hub Fellow is analyzing drought occurrence in relation to crop insurance and relief programs enrollment and dollars.

#### Southwest Climate Hub

The Southwest Climate Hub is investigating climate risks related to various commodities and regions by linking weather and climate trends with crop insurance payments (i.e. indemnity amounts). The Hub has worked closely with our RMA co-liaisons in accessing and understanding insurance data for later analysis. The Hub has increased the usability and relevance of RMA data, and how these may be used for various audiences and project applications. Soon, the Hub will produce information on trends in cause of loss with weather and climate variables. This information will be useful to assess future climate risks for commodity groups and RMA programs.



Aggregate indemnity from 1989-2016 for the American Southwest. Shaded portions of individual crop indemnities are attributed to various cause of loss. The COL presented make up at least 75% of total indemnities for this region.

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