



Disaster Preparedness in the Southern Plains

By Clay Pope, Coordinator, USDA Southern Plains Climate Hub

As part of its mission, the USDA Southern Plains Climate Hub works with farmers, ranchers, and rural communities to prepare for and respond to the impacts of extreme weather and climate events, within the context of a changing climate system. Since 2014, the Climate Hub has undertaken demonstration projects, facilitated educational programs, and developed new regional partnerships to show how producers and land managers can undertake strategies to reduce weather- and climate-driven risks to their operations. Highlights of these efforts include:

- Wildfire training courses and workshops showcasing prescribed fire as a tool to reduce wildfire fuel load.
- Regional drought workshops to educate producers and professionals on drought early warning and impacts reporting resources.
- Soil health demonstrations highlighting erosion control and water retention.
- Agricultural recovery workshops in response to hurricanes, wildfires, and other natural disasters.



Image 1. Firefighters, burn association members and landowners participate in a prescribed fire training school at the Cheyenne and Arapaho Tribal headquarters at Concho, OK (photo credit: Clay Pope).

Extreme Events in the Southern Plains

2015-2019

Wildfire, floods, droughts, and other extreme weather and climate events are a fact of life for producers in Oklahoma, Texas, and Kansas.

2016-2018 saw wildfires burn millions of acres in the Southern Plains due to changes in summer/fall rainfall patterns resulting in increased vegetation for wildfire fuel load coupled with unseasonably dry late winters and early springs.

Heavy spring rain events in 2015 and 2019 resulted in record flooding and created harvesting and planting delays.

Hurricane Harvey's landfall in 2017 impacted numerous agricultural systems along and near the Texas coast.

Southern Plains Climate Hub

The USDA Southern Plains Climate Hub continues to work with local, state, and regional partners to develop and showcase strategies for extreme weather and climate adaptation. From soil health practices that reduce soil erosion and increase soil water infiltration and holding capacity, to the use of prescribed fire as a tool to help reduce wildfire risk through fuel load reduction, the Hub is dedicated to assisting producers in the Southern Plains prepare for and respond to the weather and climate risks.



Image 2. Soil health practices such as no-till and cover crops (field on the left) can help farmers and ranchers better weather heavy rain events than conventional methods (field on the right) (photo credit: Russ Jackson, Mt. View OK).

Future Climate Hub Initiatives



- Case studies highlighting on-farm implementation of USDA climate adaptation strategies.



- Continued training for rural fire departments and prescribed burn associations on the use of prescribed fire as tool for wildfire suppression.



- Additional research on the effects of heat stress on livestock production.



- Outreach on improved irrigation and water management strategies.



- Continued review of USDA program response to natural disasters and additional support and training opportunities for USDA staff, cooperative extension specialists, and conservation partnership personnel .

For more information on the USDA Southern Plains Climate Hub extreme weather and climate adaption efforts, contact our office at (405) 262-5291 or visit the website below.



Southern Plains Climate Hub
U.S. DEPARTMENT OF AGRICULTURE

For more information on the Southern Plains Climate Hub, please visit:
<https://www.climatehubs.oce.usda.gov/hubs/southern-plains>