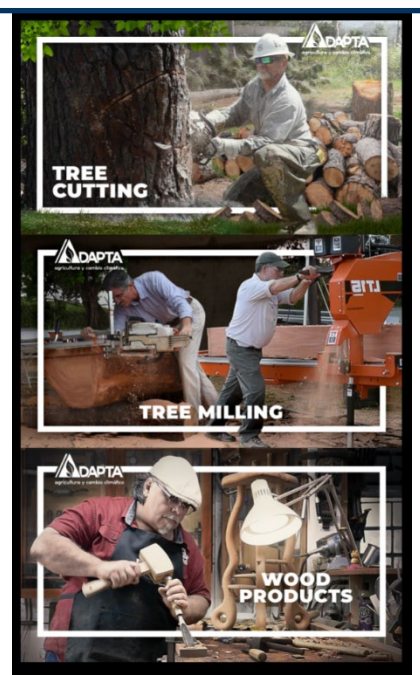


The Climate Hubs reduce climate related risks to agriculture, forestry, and rural communities by working with and through USDA agencies and partners. The hubs develop and deliver science-driven strategies and tools so that USDA programs, advisors, and land managers can make informed decisions to manage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

The landscape of weather/climate information and outlooks can be daunting for general public stakeholders, and specific sectoral stakeholders (such as agriculture) and is often difficult to interpret for specific sectoral issues. To address current and projected weather/climate issues, the [Midwest Climate Hub](#) has partnered with Midwest and Plains regional partners to share information through monthly webinars. The webinars, now in their 10th year of production, compile current conditions and impacts and address potential future impacts associated with the current NOAA outlooks to deliver summarized information to regional stakeholders on a monthly basis.

While extreme climate events can be devastating, their effects can sometimes be transformed into opportunities. When Hurricane Maria left millions of fallen trees in Puerto Rico, most logs were chipped due to lack of processing capacity and a ready local wood market. To help build capacity to better respond to future storms so that downed wood is utilized in ways that promote carbon storage, soil health and rural economic development, the [Caribbean Climate Hub](#) developed a [bilingual video series](#) that shares helpful tips for wood salvage and product development, and highlights the value of trees and locally produced forest products.



Piles of soil at the end of rows along the road demonstrate the effects of wind and water erosion

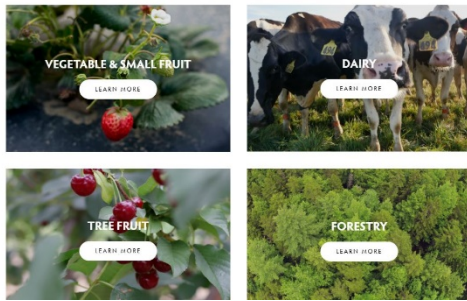
The [Southern Plains Climate Hub](#) (SPCH) has an ongoing demonstration project at [Pope Hilltop Farm](#) in Loyal, OK, highlighting the benefits of utilizing soil health practices and concepts to minimize negative impacts on the natural resource base arising from the conversion of ground enrolled in the Conservation Reserve Program (CRP) to crop and/or livestock production. Check out the [Southern Plains Perspective](#) for more info!

The [Northern Forests Climate Hub](#), American Forests, and the Northern Institute of Applied Climate Science are responding to the need for an understanding of the connections between human health, equity, and climate benefits of urban forests by developing a [Climate and Health Action Guide](#). The guide builds on the concepts described in the [Adaptation Workbook](#), while incorporating human health and carbon mitigation concepts relevant to urban forestry, in an accessible virtual format. The guide was recently used in urban forest adaptation planning by the city of Providence, RI.

The [California Climate Hub](#) staff gave a presentation on the role of severe drought and forest management with special attention to the role of climate change and extreme weather events at the [2020 Natural Areas Conference](#) (held virtually this year). The session evolved from the recently published USFS GTR on drought impacts and forest management in a changing climate, of which CACH staff were co-authors.

Farmer-led climate adaptation education from the ground up.

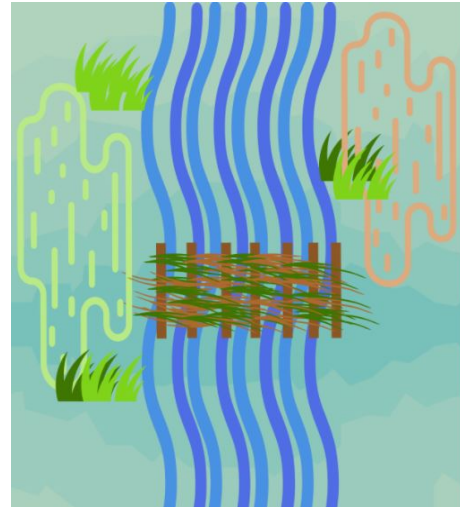
Each Climate Adaptation Fellowship is designed for and by those with expertise in one of the following areas: vegetable and small fruit production, dairy production, tree fruit production, or forestry. Go on and explore the program module that works best for your operation.



January 2021 started a year-long peer learning program for specialty crops growers. The program curriculum was developed by the [Northeast Climate Hub](#) (NECH) and partners, and focuses on climate adaptation. Program participants had an interest in how their operations could contribute to climate mitigation, so NECH and University of Maine integrated soil carbon, energy use, and other climate mitigation topics into a new open-source educational module. “Climate Change Mitigation: What can Agriculture Do?” will be piloted at the opening workshop along with on-farm mitigation resources.

Outreach and education are critical for sharing the most up-to-date science and hearing feedback from stakeholders. The [Southeast Climate Hub](#) developed a seminar series “[Science in Practice](#),” to share research and educate stakeholders. These presentations delivered information and guidance to help agricultural land managers make climate informed decisions and improve productivity and resilience to threats.

Building a comprehensive picture of statewide drought impacts is essential for understanding how droughts affect the various sectors that depend on Utah's natural resources. Further, drought impacts information helps the State of Utah in drought monitoring, planning and response efforts, and U.S. Drought Monitor authors in categorizing drought severity. However, drought impacts in Utah have historically been under-reported, meaning that important information does not consistently reach Utah decision-makers or Drought Monitor authors. The [Southwest Hub](#) and Drought Learning Network partners delivered an [online workshop](#) for land and natural resource managers, Extension, ranchers, farmers and others to learn about evaluating, measuring and reporting drought.



Beaver are natural landscape engineers who currently have small populations in comparison to historical sizes, due to past hunting and control tactics in place because of the perception that beavers are a nuisance. However, using beaver-related stream restoration is a low-cost, nature-based approach to restore habitats, improve water availability and reduce erosion. To support future beaver-related stream restoration efforts, the [Northwest Climate Hub](#) created a [StoryMap that summarizes five case studies](#) of beaver-related stream restoration in western rangelands to share challenges, benefits and lessons learned from efforts throughout rangelands in the West.

The state of Colorado experienced widespread drought during 2020, with the U.S. Drought Monitor showing 100% of the state in abnormal to exceptional drought (D0-D4) during early August and continuing into January 2021. Roughly 77% of the state was experiencing extreme or exceptional drought (D3-D4) in mid-October, when the state’s second largest wildfire on record (the East Troublesome Fire) began. In light of Colorado’s intense drought and wildfires, the Colorado Association of Conservation Districts invited the Northern Plains Climate Hub to deliver an opening presentation about “Agricultural Climate Resilience” for Day 2 of their [2020 Virtual Annual Meeting](#).