1320 Research Park Drive
Manhattan, KS 66502
785-564-6700
www. agriculture.ks.gov

Kansas
Department of Agriculture

900 SW Jackson, Room 456
Topeka, KS 66612
785-296-3556

Mike Beam, Secretary

Laura Kelly, Governor

Written Testimony
Earl D. Lewis, Jr. PE, Chief Engineer
Kansas Department of Agriculture, Division of Water Resources

Submitted to the
Senate Agriculture Committee
Subcommittee on Conservation, Climate, Forestry and Natural Resources
June 26, 2024

Chairman Bennet and Ranking Member Marshall, thank you for the opportunity to appear today at this Hearing on the High Plains: Combating Drought with Innovation. My name is Earl Lewis and I serve as the Chief Engineer of the Kansas Department of Agriculture's Division of Water Resources. In this role, I and my staff deal with water issues across the state of Kansas as well as with our neighboring states. Our primary responsibility is the allocation, management, and regulation of water which becomes even more important and challenging during times of drought.

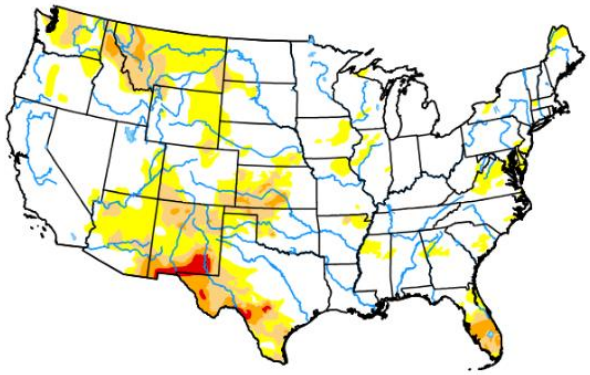
The federal government plays a vital role in addressing drought across the High Plains, particularly the U.S. Department of Agriculture. Those roles range from data collection to drought response. I appreciate the opportunity to provide input on these roles to the subcommittee.

National Integrated Drought Information System (NIDIS) and Drought Monitor

NIDIS is a multi-agency partnership that coordinates drought monitoring, forecasting, planning, and information at national, state, and local levels across the country. The U.S. Drought Monitor (USDM) is a multi-agency product updated each Thursday to show the location and intensity of drought across the country. A recent USDM is shown on the following page. Drought categories show experts' assessments of conditions related to dryness and drought including observations of how much water is available in streams, lakes, and soils compared to usual for the same time of year.

The federal government's role in monitoring drought and brining consistency in the evaluation across the entire country is critical to better preparation and response. I would encourage the committee to support efforts that ensure that USDA participation and input into the development of the USDM be clear and well supported.

Agencies at all levels of government use the USDM to inform decisions about the severity of, and necessary response to, ongoing drought throughout the High Plains region. While drought by its nature is a slow-moving event, the situation on the ground can degrade quickly. As such it is necessary to have the most up to date information when developing the monitor. I would encourage efforts to allow for the submission of additional credible information to be submitted to NIDIS so that the full extent of drought can be properly reflected. The map at right shows the June 13, 2024, USDM. We have heard from local constituents, particularly in Western Kansas that the USDM underestimates the severity of situation on the ground. This can delay access to some emergency response programs described below.



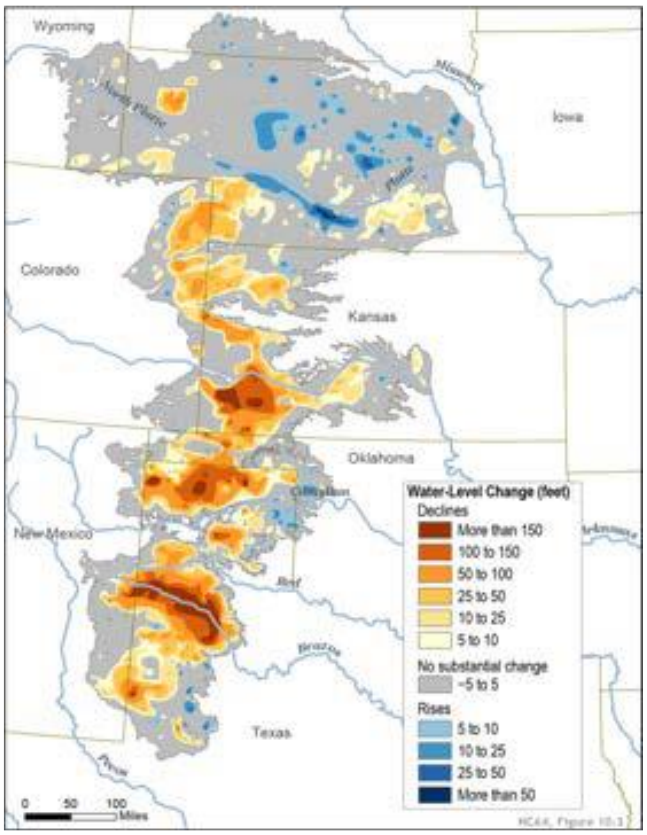
USDA, Agricultural Research Services

In the Great Plains, the Ogallala Aquifer underlies about 112 million acres, or 175,000 square miles, in parts of eight states, including: Colorado, Kansas, Nebraska, New Mexico, Oklahoma, South Dakota, Texas and Wyoming. It is the principal water source for agriculture, public water supply, industry, and the environment. USDA indicates that 30 percent of all groundwater pumped in the United States is pumped from the Ogallala Aquifer. The Aquifer serves as an extensive underground reservoir providing water to grow cash crops making up the difference between crop needs and precipitation.

The reduction in precipitation during drought results in producers pumping more water for irrigation to ensure a reliable food and fiber supply. The correlation is clear that as we have more and longer droughts, the amount of water pumped from the Ogallala Aquifer increases as do the related water level declines. The Ogallala is not an inexhaustible supply as many of the early users believed that it would be. The USGS map on the following page shows the levels of decline across the aquifer from predevelopment (roughly the 1940s) through 2015. There are many localized areas where the aquifer is effectively dewatered to the point that it is no longer useful for agriculture.

The Ogallala Aquifer supports a significant amount of the nation's food and fiber production. As such conserving and extending the life of the aquifer is of critical importance to both individual states, such as Kansas and Colorado, and the nation as a whole. For several years, U.S. Department of Agriculture's Agricultural Research Services, led by the Bushland, Texas facility, has been active with research universities in the Ogallala states to coordinate and fund research. The collaborative research

covers areas of monitoring, crop research, water management, and others. I would encourage the subcommittee and Congress to provide adequate resources to expand the ongoing research into other areas and topics.



As more areas lose access to significant water across the High Plains Region, producers will need to adapt and move to alternative crops to continue the economic activity that has been vital to the area. Additional research is needed to better understand how to make that happen, as well as outreach to share the information with producers. Additionally, development of additional markets or incentives to grow crops that use less water and are more drought tolerant are needed.

Emergency Haying and Grazing to CRP

Much of High Plains Region economic activity is driven by livestock and animal agriculture. During times of drought, access to feed and forage become even more important, and often difficult to find. Our producers are grateful for the opportunity to access existing Conservation Reserve Program acres for haying or grazing. This can provide a critical stopgap for livestock producers to maintain herds and continue to feed cattle.

One comment we often hear is the time and effort that it takes to release acres for haying and grazing during drought. At times, much of the nutritional value can be lost while the process to make it available is underway. I would encourage the subcommittee to evaluate efforts that would streamline the process to make additional resources available more quickly and ease the requirements for local counties and individual producers.

USDA, Risk Management Agency, Federal Crop Insurance Corporation

Crop insurance is one of the most important and widely supported programs within the U.S. Department of Agriculture. Administered through the Federal Crop Insurance Corporation it has a stated

mission that "promotes the economic stability of agriculture through a sound system of crop insurance and providing the means for the research and experience helpful in devising and establishing such insurance." The development and use of crop insurance has limited the volatility of the agricultural economy and over the years has undoubtedly saved many farms from bankruptcy due to drought and other natural hazards. Like other programs, there are improvements that can be made.

As farmers see a declining water resource and wish to take positive action to reduce their use, crop insurance can be seen as an impediment to that effort. Approximately 10 years ago, the state of Kansas worked with Kansas State University and the University of Nebraska to research the potential for limited irrigation crop insurance. This group worked successfully with the Risk Management Agency covering this region in Kansas City to develop a limited irrigation insurance alternative. While the option has been established, more work needs to be done. Currently, a producer needs to enter into an additional agreement to access this option. In addition, corn is the primary crop for which the limited option exists. Building the limited irrigation option into the existing system without additional agreements and for a broader range of crops would help producers be more aggressive in conserving our water resources.

There also appears to be a lack of clarity about the need to continue irrigation of a covered crop at a time when drought has effectively terminated the growth. Producers are often told that they need to continue to irrigate the crop until an adjuster can visit the site in person and confirm that the crop is no longer viable. Whether this is a policy issue or an education issue is unclear. Additional educational resources need to be made available to both the insurers and the producers on how to deal with this situation. Putting water on a crop that has already died is clearly not in anyone's best interest.

USDA, Rural Development

Drought not only affects farmers and ranchers but industries and local communities. There are resources available both from the Bureau of Reclamation and USDA Rural Development. The communities that are most at risk for emergency related to drought are also the smallest. As with many of the other items both preparation and response are important and can be improved.

In Kansas, we encourage any public water supply system to have multiple sources as well as interconnections to other systems. USDA Rural Development has been supportive of this to the extent that they are allowed. Often those costs are beyond what is considered reasonable for either the grant or loan portion of the programs. Changes to expand eligible costs would be a positive investment versus responding to catastrophe later.

Responding to local water supply emergencies is a multi agency effort lead in Kansas by our Department of Emergency Management. USDA Rural Development has funds that may be used for construction or repair of transmission lines or development of new wells or other sources of supply As our water supply in the high plains becomes more challenged, the options become more limited and the costs become greater. This often comes at a time when local ability to fund solutions is lessened. I would encourage the subcommittee and program administrators to broaden the eligible activities and the funding cap so that better solutions can be implemented.

Summary

Addressing the impact of droughts across the high plains takes commitment at all levels of government as well as individual citizens. The U.S. Department of Agriculture is a key partner in that effort and has provided valuable resources and leadership for decades. Building on that history and continuing to improve the research, programs, and outreach will help to ensure viable communities and economy across the region.

Thank you for the opportunity to testify on this important topic.