

North-Central Nebraska



Introduction

The Hipke Ranch is a cow-calf operation run by Myra Hipke Richardson and her father. Located in north central Nebraska, the ranch uses perennial and annual grasses and groundcover to improve rangeland health and productivity.

Ranch inventory

- Precipitation: An estimated average of 25 inches a year.
- Range: Native warm-season forage with mixed-grass prairie. Sandy, shallow and gravelly soil. Five main pastures divided into eight paddocks using temporary electric fencing. Other grazing resources include three fields of annual seeded forages and one former crop field now seeded to perennial cool season grasses and legumes. The Hipkes plan to seed another annual crop field to perennial grasses.
- Additional feed sources: Raise own hay.

Strategies for preparing for drought

- Create drought plan: Following a flash drought in 2017, the Hipkes outlined a drought plan for the ranch based on several trigger dates and actionable data points that will help guide future drought decision-making. "You get to the point where, when you're that dry, every week counts, and you can't take two weeks to try and make a decision. You can't be making decisions when you feel like your hands are tied."
- Water infrastructure: Some pastures rely on surface water which limits flexibility and

- cross-fencing options. Cross-fences are built inside a larger fenced-in area to create smaller grazing paddocks. The Hipkes plan to drill additional wells to establish more reliable water supply and allow for increased grazing flexibility.
- Rotational grazing: The five main native grass pastures are divided into eight smaller paddocks with temporary electric cross-fencing. These smaller grazing areas, combined with increased water supplies, allow the Hipkes to manipulate cattle grazing patterns. Two herds are rotated throughout the paddocks, which builds in rest time for forage resources.

Critical dates and target conditions

"Sometimes I think it's better just to have [a critical date] than to worry about having the perfect one."

- April 1: Prolonged drought can deplete groundwater aquifers. The Hipkes check recharge levels to determine current water supply.
- May 1: Usually by early May, there is sufficient forage to graze cattle on cool-season grasses. Grazing is also used to help manage bluegrass.
- June 1: In June, the Hipkes transition their cattle to warm-season grass pastures. De-

Read the full case study at,

drought.unl.edu/ranchplan/WriteaPlan/SampleDroughtPlans.aspx.

- pending on conditions in May, they may also destock.
- July 1: Growing season is generally about 75% complete, so the Hipkes check and reevaluate the grazing plan if needed.

What is monitored and how

- Forage resources: Grass-Cast (https:// grasscast.unl.edu) offers predictions of forage productivity, but the Hipkes also visually assesses pasture conditions. "You're watching what the grass is telling you and trying to see what you think growth rates and recovery rates are."
- Weather and climate: The Hipkes use the U.S. Drought Monitor (https://droughtmonitor.unl.edu) for a big-picture view of drought conditions. Hipke Richardson also attends the High Plains Regional Climate Center (https://hprcc.unl.edu) monthly climate and drought outlook webinars and accesses the HPRCC's Station Data Explorer, which shows cumulative precipitation, temperature data and historic averages. The Hipkes recently invested in on-farm rain gauges and digital weather stations to begin tracking relevant weather and climate information.

Strategies during drought

- Flexible grazers: Including yearlings in the operation offers flexibility. The Hipkes can reduce yearling stocking rates when there is less forage available during drought.
- Increase rest periods: The Hipkes can create more pasture subdivisions to let paddocks rest more.
- Annual forage crops: The Hipkes have planted oats late in the season to take advantage of light fall rains and could graze the annual crop fields and rest the pastures.

Strategies for recovering from drought

Hipke Richardson notes that recovery does not happen at one single point in time. She tries to not push things (i.e., increase to full stocking rate) just because it starts to rain again, and drought starts to ease. "Rain doesn't equal recovery. My hope is that our grazing investments made before a drought will yield returns in our rate of recovery after [drought]."

Lessons learned during drought

A flash drought in 2017 highlighted the need for, and value of, having a formal drought management plan on the ranch. "Flash drought in 2017 was really the thing that got me [thinking that] we really need something more formal... and that's kind of started the process, or at least the struggle, to understand the process [of developing a drought plan]."

Some general recommendations

Hipke Richardson recommends forming a drought plan step by step. She says, "The idea of a whole, formal drought plan is still intimidating to me, but I can handle the small pieces [like] setting up cow culling groups, looking at average rainfall, and finding examples of critical dates."

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"Start the conversations [about drought planning] early with your partners or family. Bouncing ideas off one another is helpful, and it puts things on everyone's radar." – Hipke Richardson