



Managing Drought Risk on the Ranch

An Introduction

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Nebraska
Lincoln



Drought is a Normal Part of Climate



1930s

Farms wither

Wells dry, herds cut

JUN 23 1988
By Robert C. Bjorklund
Farm editor

Lack of pasture, a shortage of hay, the increasing need to sell cattle and drying of wells is putting Wisconsin farm families to the test as they become more desperate with worsening drought conditions, the Governor's Drought Task Force reported Tuesday.

- There are possible drought winners/3A
- Heat won't let rainfall soak in/3A
- Hay harvests are approved/3A
- Area fireworks are jeopardized/1B
- How some people beat the heat/1B

Peter Senn, state executive director of the Wisconsin Agricultural Stabilization and Conservation Committee, said farmers may not have any crops to harvest if these conditions persist.

"Farmers are cutting everything green but the trees," he said. "They are harvesting canary grass and marsh hay on marshland they haven't been able to put a tractor on in 30 years."

With Wisconsin's 1988 drought, only five dairy farms in the state had up to 100 bushels of water available. Farmers had to pump in water from the state and had to pump in water from the state. The shipment of cattle to bring numbers in line with expected feed supplies had led to panic conditions among farmers in parts of Richland and Trempealeau counties.

Normally, feed supplies would be at their seasonal peak in late June, but this year county Agricultural Stabilization and Conservation Service offices reported that farmers in four counties would be out of feed in July.

An ASCS survey showed feed supplies would be depleted in August in 11 counties, in September in 29 counties, in October in four counties and in November in 10 counties. Only two counties had enough feed to last farmers through February.

The task force met to prepare a set of drought assistance recommendations that Gov. Tommy Thompson will take to Chicago for Thursday's meeting of the National Governors Association Agriculture Committee. The committee will meet with U.S. Secretary of Agriculture Richard Lyng.

One of Thompson's emergency measures, a 30-day authority to get permits to pump water from rivers, streams or lakes, has resulted in 312 permits being granted, Robert Roden, of the state Department of Natural Resources, reported.



1952-56

Baylor University, Texas Collection



1974-77

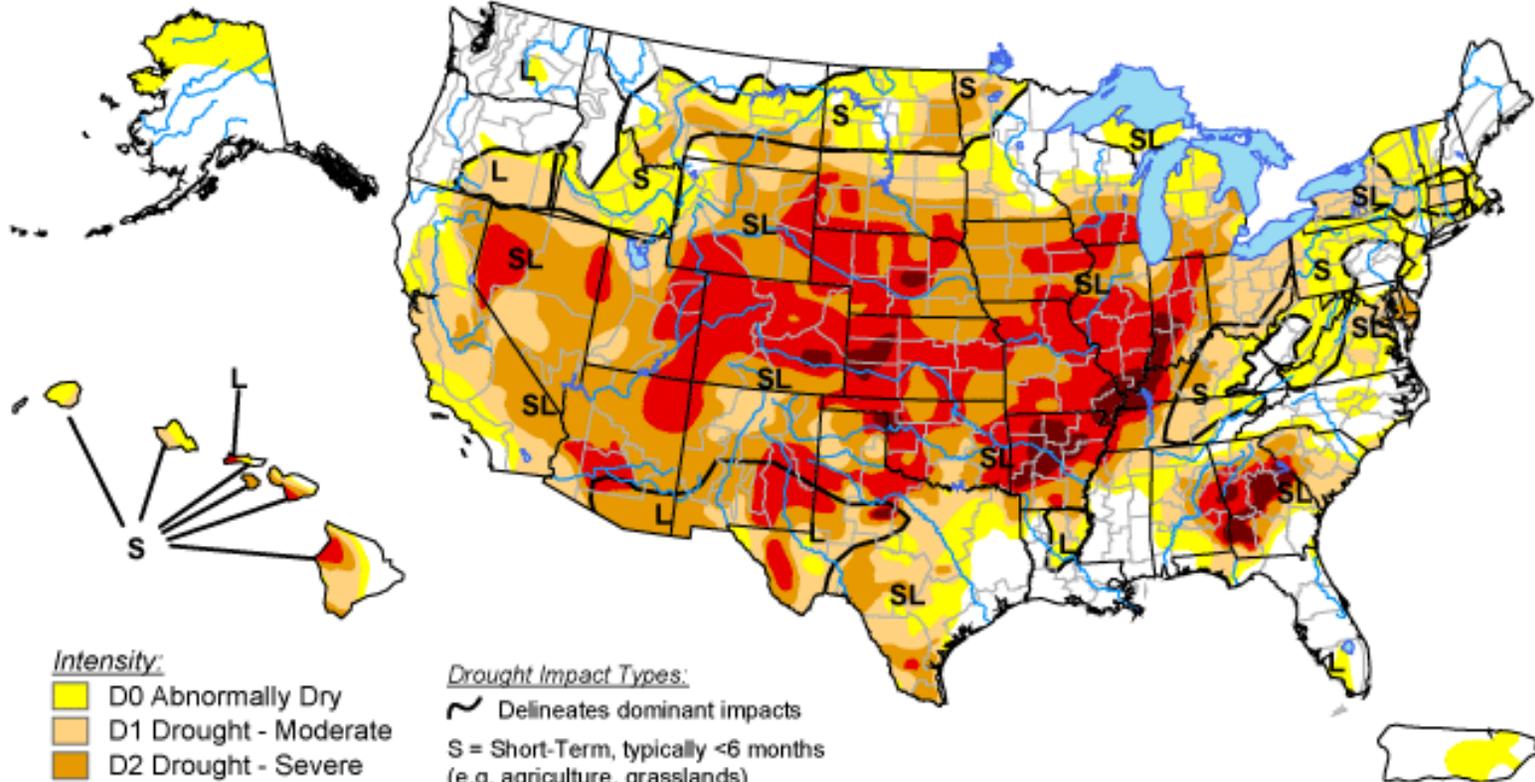
1988-89



1999-2007

U.S. Drought Monitor

July 24, 2012
Valid 7 a.m. EDT



Intensity:

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

Drought Impact Types:

- ~ Delineates dominant impacts
- S = Short-Term, typically <6 months (e.g. agriculture, grasslands)
- L = Long-Term, typically >6 months (e.g. hydrology, ecology)

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

<http://droughtmonitor.unl.edu/>



Released Thursday, July 26, 2012
Author: Richard Heim, NOAA/NESDIS/NCDC

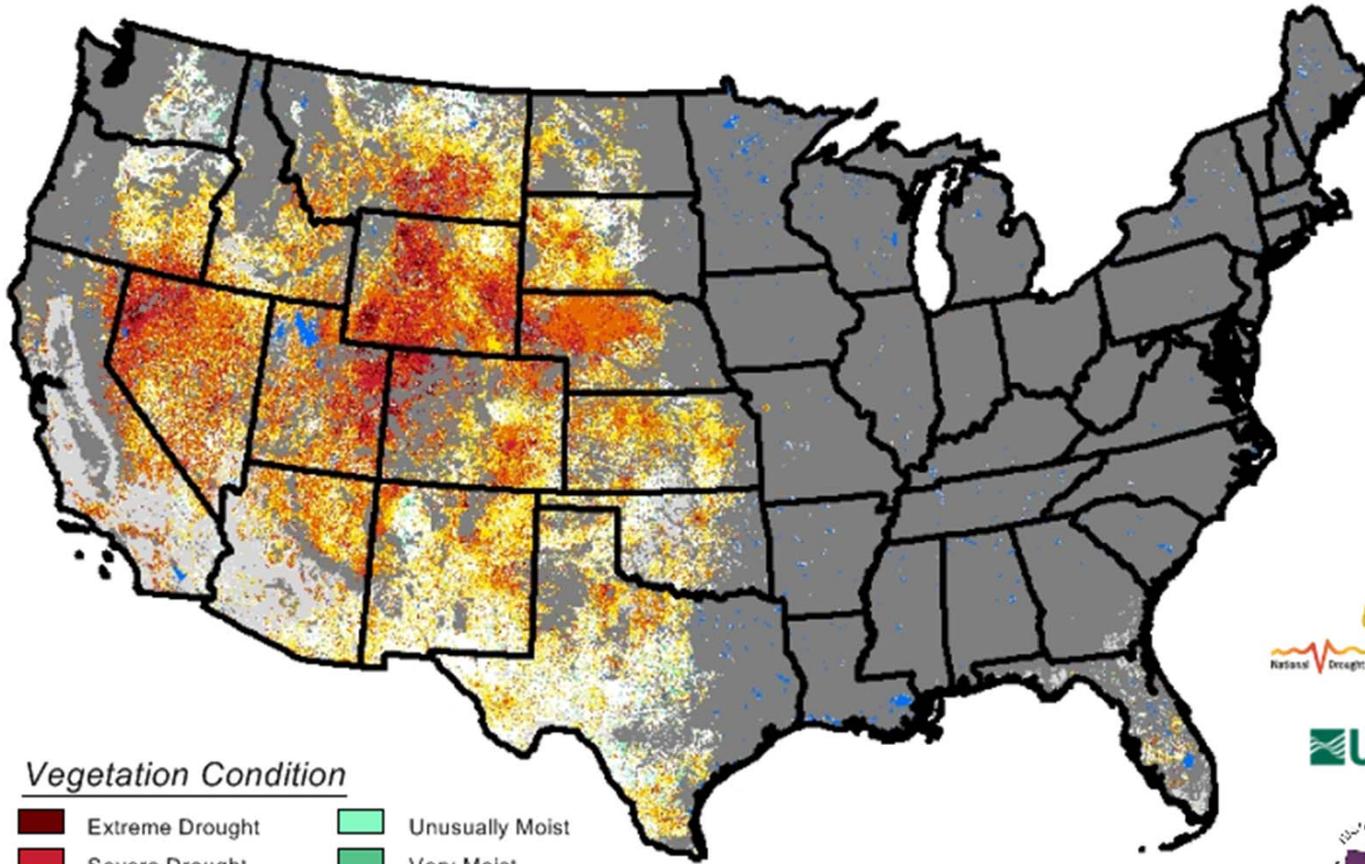
UNIVERSITY OF
Nebraska
Lincoln

54% of the country



Vegetation Drought Response Index Rangelands

July 23, 2012



Vegetation Condition

- | | |
|--|---|
|  Extreme Drought |  Unusually Moist |
|  Severe Drought |  Very Moist |
|  Moderate Drought |  Extremely Moist |
|  Pre-Drought |  Other landcover |
|  Near Normal |  Out of Season |
| |  Water |



<http://vegdiri.unl.edu>





Plains ranchers sell **cattle** as US **drought** spreads

Knoxville News Sentinel - 19 hours ago

WICHITA, Kan. — Kansas cattleman Ken Grecian sold 20 pairs of **cows** and calves a few weeks after **drought** had sucked his pastures dry and ...

2012 **drought** will shrink **livestock's** profit margins

CattleNetwork.com - 6 days ago

Pictures of wilting corn in the Midwest may dominate the evening news, but the **2012 drought** is also shrinking **livestock's** profit potential ...

Drought squeezes **livestock** producers

Minnesota Public Radio - 2 days ago

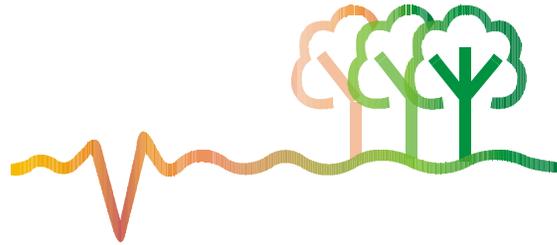
More than half the United States is in **drought**, including parts of southern and western Minnesota. But even in areas where there's been ...

Drought dries up hay crop, prices in **Colorado** climbing sky-high ...

www.denverpost.com > News > Breaking News

Jul 17, 2012 – **Colorado's drought** is taking a big bite out of the state's hay crop, knocking the ... July 17, 2012 11:34 PM GMT Updated: 07/17/2012 05:34:08 PM MDT ... will force **cattle** off leased grazing lands on the range early this year.

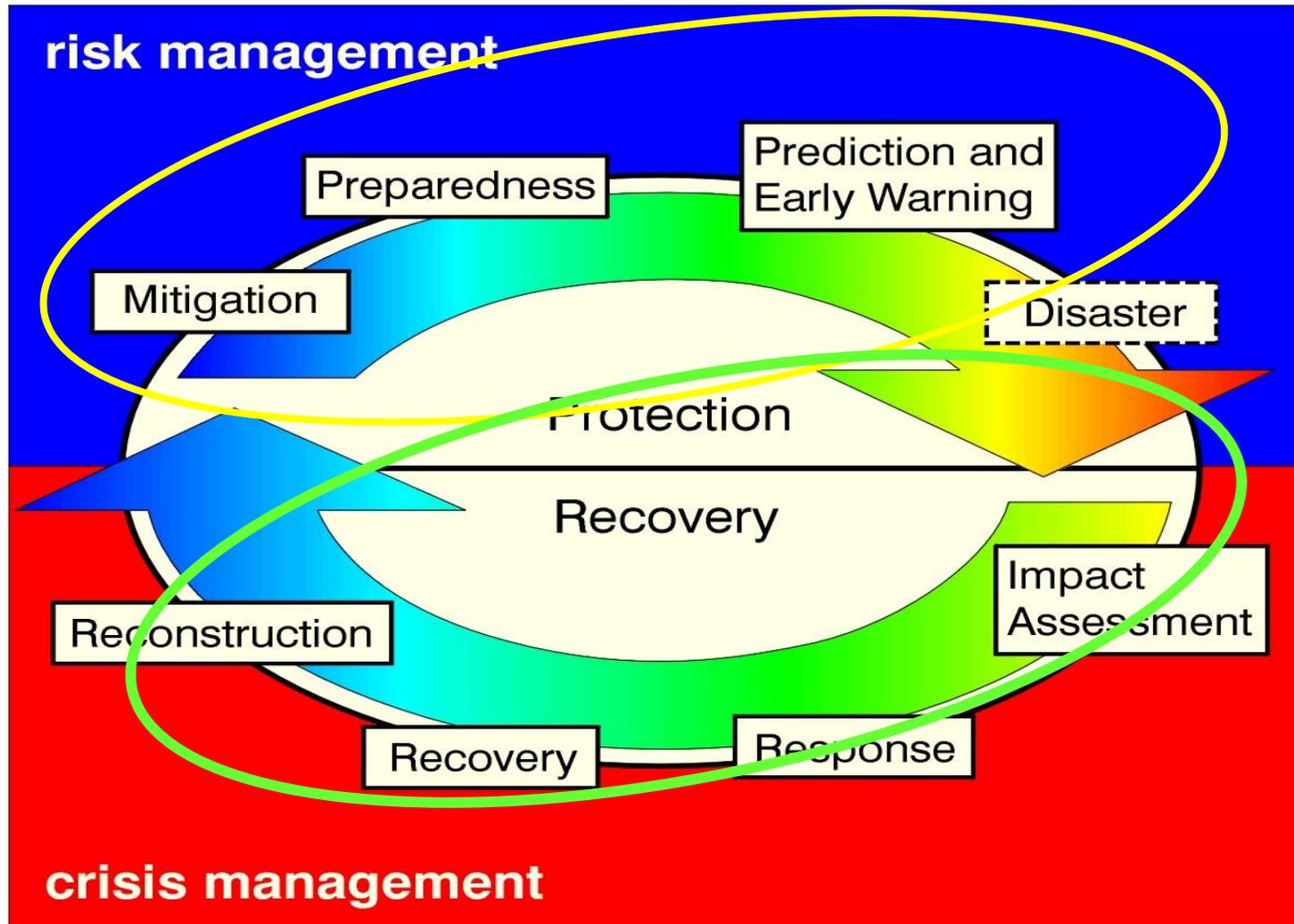
National Drought Mitigation Center



Mission: To lessen societal vulnerability to drought by promoting planning and the adoption of appropriate risk management techniques.

<http://drought.unl.edu>

Crisis management replaced by risk management



Ted Alexander

- Rancher in south-central Kansas
- Working with NRCS and university researchers to improve ranch management over the last 25 years
- Including development of long- and short term drought plans



Kansas NRCS Featured Customers



Ted Alexander - Ranching with a Passion

"*Ancora Imparo*" (I am still learning) is the philosophy by which rancher Ted Alexander lives and works. He reminds his fellow ranchers and others that he doesn't have it all figured out, but he has the passion to push onward to improve.

[...More Info](#)

Existing “Buffet” Website Approach



The screenshot displays the IANR website interface. At the top, there is a navigation bar with the text "DROUGHT INFORMATION AND RESOURCES FOR NEBRASKANS" and the IANR logo. Below this, a secondary navigation bar lists various organizations: "U.S. Drought Monitor | National Drought Mitigation Center | Nebraska Climate Assessment & Response Committee | High Plains Regional Climate Center | USDA Drought Info (Nebraska Department of Agriculture) | Nebraska State Climate Office".

The main content area is divided into two columns. The left column, titled "IANR RESOURCES", lists several categories with brief descriptions and small thumbnail images:

- Beef Cattle Production**: The NU Beef Cattle Production Web site offers recommendations to help producers facing drought manage and make decisions about their cattle. The site features information on a range of timely beef management issues. IANR specialists also answer producer questions at the site.
- Crop Watch**: Ongoing drought coverage from the NU Cooperative Extension Crop Watch newsletter.
- Drought photos**: A selection of print-ready drought images for public information and educational uses.
- Extension publications**: NU Cooperative Extension publications deal with a variety of drought issues, as well as issues involving stress that can affect families during tough times. A sampling can be found here.
- Market Journal**: Don't miss Market Journal's continuing drought coverage.

The right column, titled "DROUGHT NEWS COVERAGE FROM IANR", features a search bar with the text "Choose a topic" and a "GO" button. Below the search bar, a list of news items is displayed, each with a date, a source, a headline, and a brief summary:

- October 2, 2006, (IANR News)**: **Nebraska Groundwater Declines as much as 30 Feet Over Last Six Years**. LINCOLN, Neb. — Spurred by increasing irrigation use and a statewide drought now in its seventh year, parts of Nebraska are experiencing groundwater declines of more than 30 feet, according to annual monitoring by the University of Nebraska-Lincoln. [More](#)
- September 27, 2006, (IANR News)**: **Early Frost Expected, Precipitation Needs Vary Across State**. LINCOLN, Neb. — Frosts are predicted to occur as much as two weeks earlier than normal, while precipitation patterns have drawn a distinct line between the needs of south central and eastern Nebraska and the Sandhills, a university climatologist said. [More](#)
- September 26, 2006, (IANR News)**: **Test Nitrogen Levels this Fall, Begin Planning for Spring Fertilization**. LINCOLN, Neb. — Testing nitrogen levels this fall can save producers time and money next spring, a University of Nebraska-Lincoln soils specialist said. [More](#)
- September 8, 2006, (IANR News)**: **Australian Drought Expert to Speak at UNL Sept. 14**. LINCOLN, Neb. — An Australian drought expert will speak Sept. 14 at the University of Nebraska-Lincoln about her country's experience with drought. [More](#)
- August 10, 2006, (IANR News)**: **UNL Forms Public Water Resources Advisory Panel**. LINCOLN, Neb. — A recently formed 10-member panel will help provide state decisionmakers with guidance on water research, education and outreach programs by the University of Nebraska-Lincoln. [More](#)
- August 4, 2006, (IANR News)**: **Irrigation and Energy Conservation Field Day Offered at UNL's ARDC Near Mead**. LINCOLN, Neb. — A Sept. 6 Irrigation and Energy Conservation Field Day at the University of Nebraska-Lincoln's Agricultural Research and Development Center near Mead will help producers save water and money. [More](#)
- August 3, 2006, (IANR News)**: **Be Aware of High Nitrates in Drought-stressed Corn to Prevent Livestock Poisoning**. LINCOLN, Neb. — Dry conditions this summer have many producers turning to alternative methods of salvaging what's left of heat damaged corn, a feed source that can be dangerously high in nitrates, a University of Nebraska-Lincoln forage specialist said. [More](#)

Ranchers pick-and-choose from a list of information

Managing Drought Risk on the Ranch Project



- **Project was initiated** in 2006, with funding from the USDA Risk Management Agency (also 2011)
- **Project Goals:** Develop a model drought planning process and web-based educational delivery system for livestock and forage producers
- **Initial Collaborators:** National Drought Mitigation Center, University of Nebraska-Lincoln, South Dakota State University, and Texas A&M

Expanded Collaborators

University Researchers

- Cody Knutson (PI), Water Resources/Social Scientist, NDMC, UNL
- Tonya Haigh, Rural Sociologist, NDMC, UNL
- Barry Dunn, Dean of Agriculture, SDSU
- Brian Fuchs, Climatologist, NDMC
- Roger Gates, Range Management, SDSU
- Sandy Smart, Range Scientist, SDSU
- Matt Stockton, Agricultural Economist, West Central Research and Extension, UNL
- Jerry Volesky, Range/Forage Specialist, West Central Research and Extension, UNL

Rancher Advisors:

- Ted Alexander, KS
- Brian Alexander, KS
- Cal Adams, KS
- Lynn Myers, NE
- Jim Faulstich, SD
- Homer Buell, NE

Federal Advisors:

- Dwayne Rice, Range Specialist, NRCS-Kansas
- Stan Boltz, State Range Management Specialist, NRCS-South Dakota
- Gale Dunn, Soil Scientist, USDA-ARS

University Advisors:

- Dick Clark, Agricultural Economist, Retired UNL
- Mike Hayes, Director and Climate Impacts Specialist, NDMC
- Terry Klopfenstein, Ruminant Nutrition, Retired UNL
- Rick Rasby, Beef Specialist, Animal Science, UNL
- Scott Cotton, Extension Educator, UNL

Private Advisor:

- Pat Reece, Consultant/Rangeland Ecologist, Prairie and Montane Enterprises, LLC



Managing Drought Risk on the Ranch

Drought is a normal part of climate...it will happen again. Fortunately, there are things you can do before, during, and after drought to reduce your risk. Ranchers are increasingly implementing new ways to better prepare for and respond to drought.

The information, strategies and resources on this site are designed to provide livestock producers in the [Great Plains region](#) with information on how to incorporate management strategies to reduce the threat drought poses to livestock and forage operations.

Managing Drought Risk on the Ranch: Great Plains Examples

South Dakota



[Daybreak Ranch](#)
(Central)

Nebraska



[Tippets-Myers Ranch](#)
(Western Sandhills)
[Reed Hamilton Ranch](#)
(Sandhills)
[Shamrock Ranch](#)
(Southwestern)

Kansas



[Alexander Ranch](#)
(South Central)
[Adams Ranch](#)
(North Central)

Colorado

[Welch Ranch](#)
(Southern)

Texas

[Johnson Ranch](#)
(West Central)

Where to Start

[Start here if you are in a drought](#)

[Start here if you are recovering from a drought](#)

[Start here if you are preparing for a drought](#)

[Write a Drought Plan](#)

[How to use this site](#)

Drought Conditions

[U.S. Drought Monitor](#)

[Water Year Precipitation \(Oct. 1st to present\)](#)

[Precipitation - past 30 days](#)

[Weather forecast](#)

[Long Term Outlook](#)

Tools and Resources

[Inventory and Monitoring Tools](#)

[Grazing Management Tools](#)

[Financial Tools](#)

[Drought Planning Tools](#)



Drought Basics

The objective of this section is to describe how drought impacts your ranching operation.

If you'd like to gain a better understanding of how drought affects your area, how drought affects grasses, livestock, and grazing management, how drought impacts cattle market cycles, or how planning for drought can make a difference in your bottom line, this is the place to start.

Grasses & Drought

[How Does Drought Impact Grasses?](#)

[Why is Soil Moisture Important to Plant Growth?](#)

[Will Limited Plant Growth This Year Hurt Next Year's Growth?](#)

[What's a Rapid Growth Window?](#)

Grazing & Drought

[How Do Grazing & Drought Interact?](#)

[Do Diverse Pastures Hold Up Better During Drought?](#)

[How Do Last Year's Grazing Practices Affect My Grass This Year?](#)

[Can My Grazing Practices Influence How Much Moisture is in the Soil?](#)

Financial Considerations

[What are the Financial Considerations in Planning for Drought?](#)

Planning

[How Am I Affected by Drought?](#)

[How do I know when I am In Drought?](#)

[How Does Forage Growth Vary within the Great Plains Region?](#)

Weather & Drought

[What is Drought?](#)

[What is "Normal Precipitation?"](#)

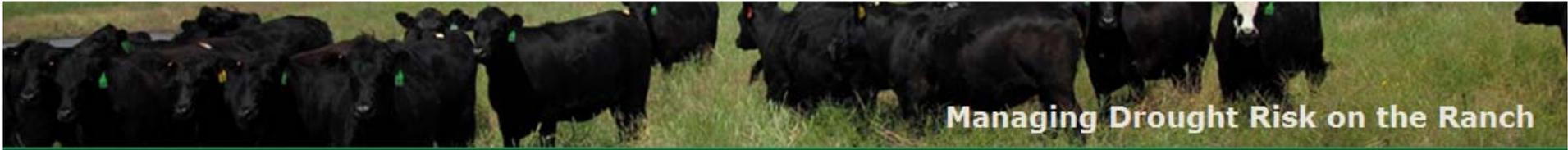
[What's the Difference between a Short-term and Long-term Forecast?](#)

[How Do We Measure Drought?](#)

[How Do We Monitor and Forecast Drought?](#)

Livestock & Drought

[How Does Drought Affect Livestock Nutrition and Gain?](#)



Managing Drought Risk on the Ranch

Inventory and Monitor

Ranch management cannot be optimized without inventorying and monitoring all natural resources.

Precipitation



Inventory

- ▶ **Average Precipitation and Drought** - average precipitation and timing, historical frequency and severity of drought

Monitor

- ▶ **Precipitation and Drought** - plant year and monthly precipitation, drought status, short and long term forecasts

Forage / Range



Inventory

- ▶ **Range Site** - plant communities, growth curves, indicator species
- ▶ **Range Condition** - successional plant community, hydrologic health

Monitor

- ▶ **Range Condition** - trend in plant community and health, photopoints, check list
- ▶ **Forage Production** - carrying capacity, clip and weigh method

Livestock



Inventory

- ▶ **Herd** - class, number, feed needs, stocking rate

Monitor

- ▶ **Grazing Records** - numbers, class, dates enter and exit pastures





Managing Drought Risk on the Ranch

Ranch Management Strategies Before a Drought

This section contains information about management steps you can take to maximize the overall health, resilience, and productivity of your ranch operation.

Healthy systems are better able to tolerate drought. Incorporating the likelihood of periodic drought into your overall ranch plan and grazing strategy will increase the likelihood that your pastures, livestock, finances, and family will successfully make it through the next one.

[Start Here Before Drought](#)

Ranch Goals & Strategic Plan

Drought is only one of the management challenges that ranchers need to plan for. It is important that the decisions you make before, during, and after drought fit into your overall plan. The decisions you make before, during, and after drought should help move you closer to the vision or goals that you have for your ranch.

[Resources for Strategic Planning](#)

Grazing Management

Implementing a grazing strategy that increases vigor and abundance of desirable forage species and that improves hydrological condition of the range is one of the most effective ways you can prepare for drought.

- [Grazing Strategy](#)
- [Choosing a Grazing System](#)
- [Grazing Pressure & Stocking Rates](#)
- [Season-long Continuous Grazing](#)
- [Rotation Grazing Alternatives](#)
- [Skim or Flash Grazing](#)
- [Decision Support Tools](#)

Forage Resources

To further improve pasture resources, you may need to remove undesirable shrubs or trees, overseed pastures, or plant new pasture land. You may also want to consider annual forages and irrigated pasture as part of a drought management plan.



What to Do During a Drought

This section contains information about steps you should consider during a drought. Topics include drought monitoring, grazing management, supplemental feeding, de-stocking, and financial options.

[Drought Plan Principles](#)

[Where to Start During Drought](#)

Pasture Management

When too little grass was left last year...

- ▶ [Pasture Management](#)

Finding Feed

One of the most difficult parts of drought planning is determining viable feed options. This section provides

- ▶ [Finding Feed](#)
- ▶ [High-Grain Rations](#)
- ▶ [Alternative Forages](#)
- ▶ [Testing for Toxins](#)
- ▶ [Hay-Exchange Links](#)

Reducing Demand for Feed

The other choice in balancing resources during drought conditions is to reduce inventory size. The best time to make this decision, according to livestock producers and advisors across the Great Plains, is sooner rather than later.

- ▶ [De-Stocking - Financial Considerations](#)
- ▶ [When to De-Stock](#)
- ▶ [Culling and Early Weaning](#)

Water and Heat Stress

Livestock water needs during drought, quality issues, and lessening the risk of heat stress



Managing Drought Risk on the Ranch

[Home](#) > [After Drought](#)

[Register](#) [Login](#)

What To Do After Drought

This section contains information about steps you should consider after a drought.

[Start Here After a Drought](#)

Related Pages

Recovering after Drought - Lessons from [Shamrock Ranch](#)

Grass Recovery after Drought



The end of a prolonged severe drought will be memorable. When drought ends, vegetation recovery should become a primary management objective.

[Grass Recovery](#)

Management Priorities after Drought



Restoring range health and meeting production goals are both priorities after a drought that require careful planning.

[Management Priorities](#)

Financial Considerations after Drought



After a drought period is over is a good time to reflect and assess the performance of your response to drought conditions.

[Financial Options](#)



Write a Drought Plan

Many range publications recommend that managers develop drought plans. The planning steps provided here have been developed by ranchers throughout the Great Plains, as well as forage, range, and agricultural economics specialists. These steps will help range managers develop a solid plan of action for situations (such as drought) that lead to forage shortages.

Drought Planning Steps

- Step 1: [Form Planning Team](#)
- Step 2: [Set Ranch Vision and Strategic Objectives](#)
- Step 3: [Take Inventory](#)
- Step 4: [Identify Critical Dates and Target Conditions](#)
- Step 5: [Learn to Monitor Resources](#)
- Step 6: [Develop Strategies for Preparing for Drought, Responding to Drought, and Recovering from Drought](#)
- Step 7: [Implement and Evaluate the Plan](#)

Sample Drought Plans

Colorado

[Southern Colorado Case Study - Welch Ranch](#)

Kansas

[South-Central Kansas - Alexander Ranch](#)

[North-Central Kansas - Adams Ranch](#)

Nebraska

[Southwest Nebraska - Shamrock Ranch](#)

[Western Nebraska Sandhills - Tippets-Myers Ranch](#)

[Nebraska Sandhills - Reed Hamilton Ranch](#)

South Dakota

[Central South Dakota - Daybreak Ranch](#)

Texas

[West-Central Texas - Johnson Ranch](#)



Managing Drought Risk on the Ranch

Home > Write a Plan > Sample Drought Plans

Login

Sample Drought Plans

These sample drought plans have been contibuted by ranchers, consultants, and advisors throughout the Great Plains. They range from very simple to quite detailed. While they do not all follow the planning methods suggested here, they may help you decide what sort of plan is needed for your ranch operation.

A key point to remember with any planning process is the old saying, "garbage in - garbage out." The better job you do collecting information about your operation and evaluating your options before, during, and after drought, the better the results of your plan will be.

Sample Plans

South Dakota

[Central South Dakota - Daybreak Ranch](#)

Nebraska

[Southwest Nebraska - Shamrock Ranch](#)

[Western Nebraska Sandhills - Tippets-Myers Ranch](#)

[Nebraska Sandhills - Reed Hamilton Ranch](#)

Kansas

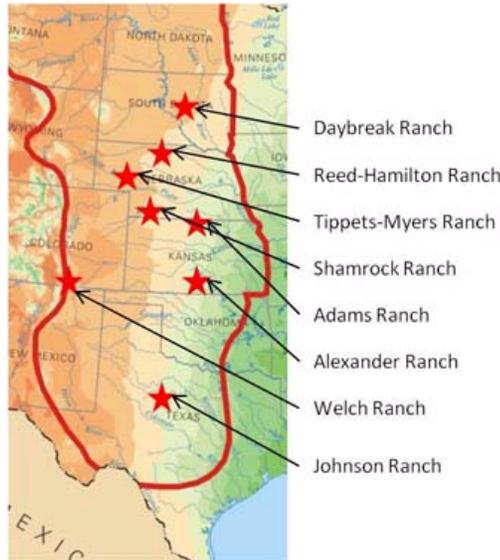
[South-Central Kansas - Alexander Ranch](#)

[North-Central Kansas - Adams Ranch](#)

Colorado

[Southern Colorado Case Study - Welch Ranch](#)

Texas



Content: Sample Plans

[Central South Dakota - Daybreak Ranch](#)

[Nebraska Sandhills - Reed Hamilton Ranch](#)

[Nebraska Sandhills - Tippets-Myers Ranch](#)

[Southwest Nebraska - Shamrock Ranch](#)

[North Central Kansas - Adams Ranch](#)

[South Central Kansas - Alexander Ranch](#)

[Southern Colorado - Welch Ranch](#)

[West Texas - Johnson Ranch](#)

Related Pages

Steps to Writing a Drought Plan:

1. [Form Planning Team](#)
2. [Set Goals/Strategic Objectives](#)
3. [Inventory](#)
4. [Identify Critical Dates and Targets](#)
5. [Develop Monitoring Plan](#)
6. [Develop Strategies](#)
7. [Implement and Monitor Plan](#)



Managing Drought Risk on the Ranch

[Home](#) > [Write a Plan](#) > [Sample Drought Plans](#) > [Southern Colorado - Welch Ranch](#)

[Register](#) [Login](#)

Southern Colorado - Welch Ranch

Ranch Locations

Colorado operation (family business) – Southern Colorado, with leased lands in Montana, Kansas, Texas

Operations

Colorado – cow/calf

KS – cow/calf

MT – cow/calf and yearlings

Inventory

- Native range, multiple locations

Critical Dates

- Makes decisions when moving through rotation, based on forage availability

Monitoring

- Monitors rainfall and forage production

Contents: Sample Plans

[Central South Dakota - Daybreak Ranch](#)

[Nebraska Sandhills - Reed Hamilton Ranch](#)

[Nebraska Sandhills - Tippets-Myers Ranch](#)

[Southwest Nebraska - Shamrock Ranch](#)

[North Central Kansas - Adams Ranch](#)

[South Central Kansas - Alexander Ranch](#)

[Southern Colorado - Welch Ranch](#)

[West Texas - Johnson Ranch](#)

Colorado Drought Plan Examples

[Drought Impacts on Colorado Livestock Operations](#) – by Scott Cotton



Managing Drought Risk on the Ranch

[Home](#) > [Write a Plan](#) > [Sample Drought Plans](#) > [Nebraska Sandhills - Tippets-Myers Ranch](#)

[Register](#) [Login](#)

Nebraska Sandhills Drought Plan - Tippets-Myers Ranch

Operation

Cow-calf and bred heifer operation

Inventory

Mean Annual Precipitation - 14 - 17 inches

Plant Community - Prairie Sandreed/Sand Bluestem

- warm season dominant, cool season sub-dominant, mid and tall grasses

Critical Date

July 1

- June and July produce most growth of warm-season forages

Monitoring Plan

Forage Production and Condition

- Uses SANDRIS



The Tippets-Myers Ranch

Contents: Sample Plans

[Central South Dakota - Daybreak Ranch](#)

[Nebraska Sandhills - Reed Hamilton Ranch](#)

[Nebraska Sandhills - Tippets-Myers Ranch](#)

[Southwest Nebraska - Shamrock Ranch](#)

[North Central Kansas - Adams Ranch](#)

[South Central Kansas - Alexander Ranch](#)

[Southern Colorado - Welch Ranch](#)

[West Texas - Johnson Ranch](#)

More About Tippets-Myers Ranch

[Lynn Myers receives Panhandle Outstanding Service to Ag Award](#)



Managing Drought Risk on the Ranch

[Home](#) > [Write a Plan](#) > [Sample Drought Plans](#) > [South-Central Kansas - Alexander Ranch](#)

 [Login](#)

Sample Drought Plan - South Central Kansas

Goals/Strategic Objectives

The declaration of purpose for the Alexander Ranch is to manage all integrated resources in order to maximize the production of protein, shape a harmonious existence with nature and maintain economic viability.

The strategic plan and goals for the Alexander Ranch include:

1. Regenerating the range while utilizing the optimum percent of forage grown.
2. Improve the quality and quantity of the water cycle, mineral cycle, and energy flow.
3. Maximize the forage utilization and flexibility.
4. "Ancora Imparo"(I am still learning) Continue the management education process.

Operation

Seasonal custom grazing with cows and calves, no haying, no tractor

Inventory [\(see details\)](#)

- Annual Rainfall - 18-22 inches per year
- Native mixed-grass prairie

Critical Dates

- April 1
- June 15
- August 15
- November 1

Monitoring Plan

- precipitation - uses Davis Vantage Pro 2 which downloads data onto home computer
- forage growth - in early years used clip and dry method, now uses arazina stick and Forage Production



Ted Alexander and son Brian

Content: Sample Plans

[Central South Dakota - Daybreak Ranch](#)

[Nebraska Sandhills - Reed Hamilton Ranch](#)

[Nebraska Sandhills - Tippets-Myers Ranch](#)

[Southwest Nebraska - Shamrock Ranch](#)

[North Central Kansas - Adams Ranch](#)

[South Central Kansas - Alexander Ranch](#)

[Southern Colorado - Welch Ranch](#)

[West Texas - Johnson Ranch](#)

Alexander Ranch Links

[Kansas ranch wins top environmental award](#)

2012

Managing Drought Risk on the Ranch

A Planning Guide for Great Plains Ranchers



University of Nebraska - Lincoln
National Drought Mitigation
Center



Available Online at:
www.drought.unl.edu/ranchplan



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This guide to help rangeland managers better prepare for and manage drought is a project of the National Drought Mitigation Center (NDMC) at the University of Nebraska-Lincoln (UNL) and other collaborators at UNL, South Dakota State University, and Texas A&M Kingsville. This project was made possible through funding from the U.S. Department of Agriculture Risk Management Agency.

Much of the content of this handbook and the companion website was developed with information provided by Dr. Pat Reece, Professor Emeritus at UNL and now owner/consultant with Prairie Montarie Enterprises, LLC.

The handbook and website were developed by, and will be maintained by, the National Drought Mitigation Center. Comments and questions about the handbook and website can be directed to the NDMC at ranch_ndmc@unl.edu or 402-472-6781.

<http://drought.unl.edu/ranchplan>





Thank you!

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<http://www.drought.unl.edu/ranchplan>



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