Drought Plan Development and Tools for Producers

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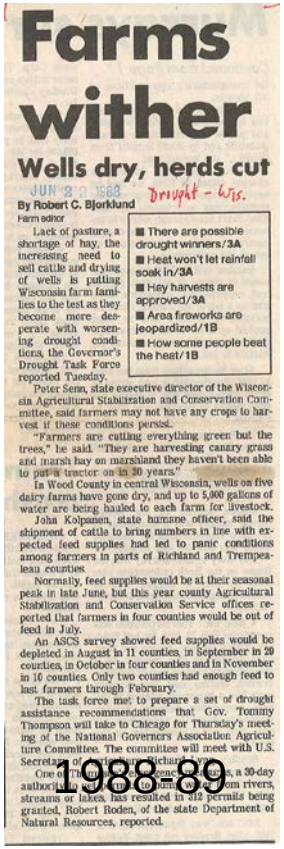
University of Nebraska Lincoln

National Drought Mitigation Center

Why Plan?

- We can't control whether or not it rains
- We can control what we do before drought, during drought, and in drought recovery



Farms wither

Wells dry, herds cut

JUN 22 1988 Drought - Wis.

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.

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 20 years."

In Wood County in central Wisconsin, wells on five dairy farms have gone dry, and up to 5,000 gallons of water are being hauled to each farm for livestock.

John Kolpanen, state humane officer, said 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 16 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. Secret[illegible]

One [illegible], a 30-day authori[illegible] from rivers, streams or lakes, has resulted in 412 permits being granted, Robert Roden, of the state Department of Natural Resources, reported.

Baylor University, Texas Collection

Lynn Myers: Drought Planning

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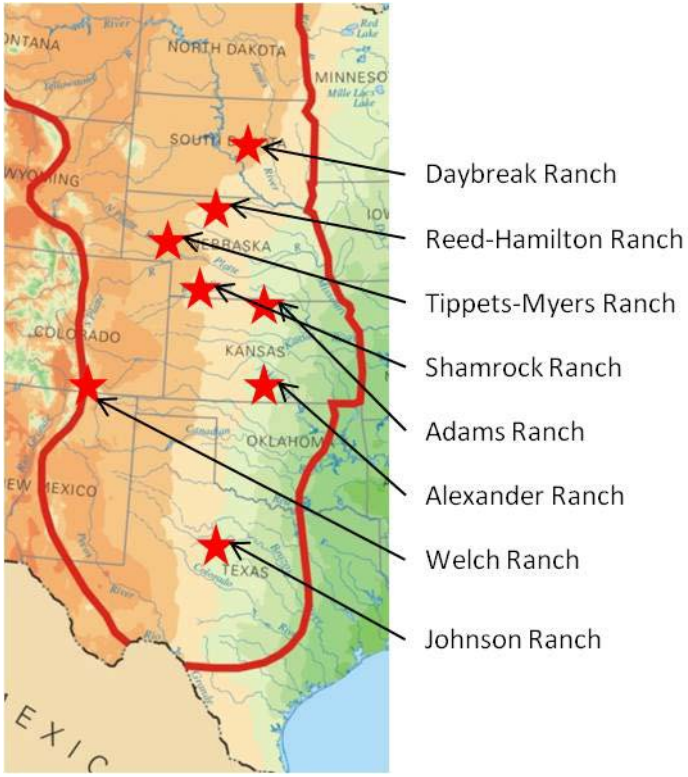
How do Ranchers Plan for Drought?



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Pre-Drought Actions Shape Choices

- Maximize health of resources
- Build flexibility into operation
  - "We build enough in the good years that we can stand a two-year drought….In the good years we build lots of reserve. In the drought years we take off… "
- Ongoing monitoring

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Developing a Drought Plan

- Plan Components:
  - Decisions that need to be made
  - Information or benchmarks that will be used to make decision
  - Critical date when decision needs to be made
  - Options or strategies for carrying out each decision

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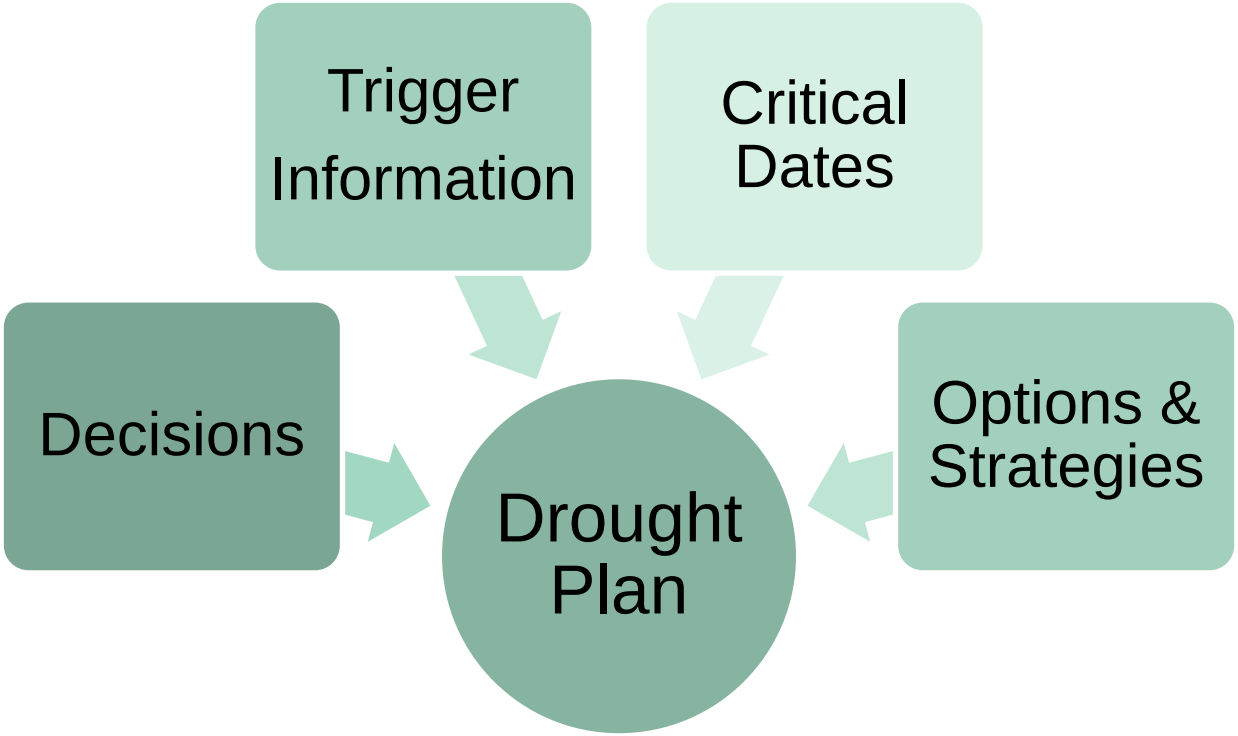
Developing a Drought Plan



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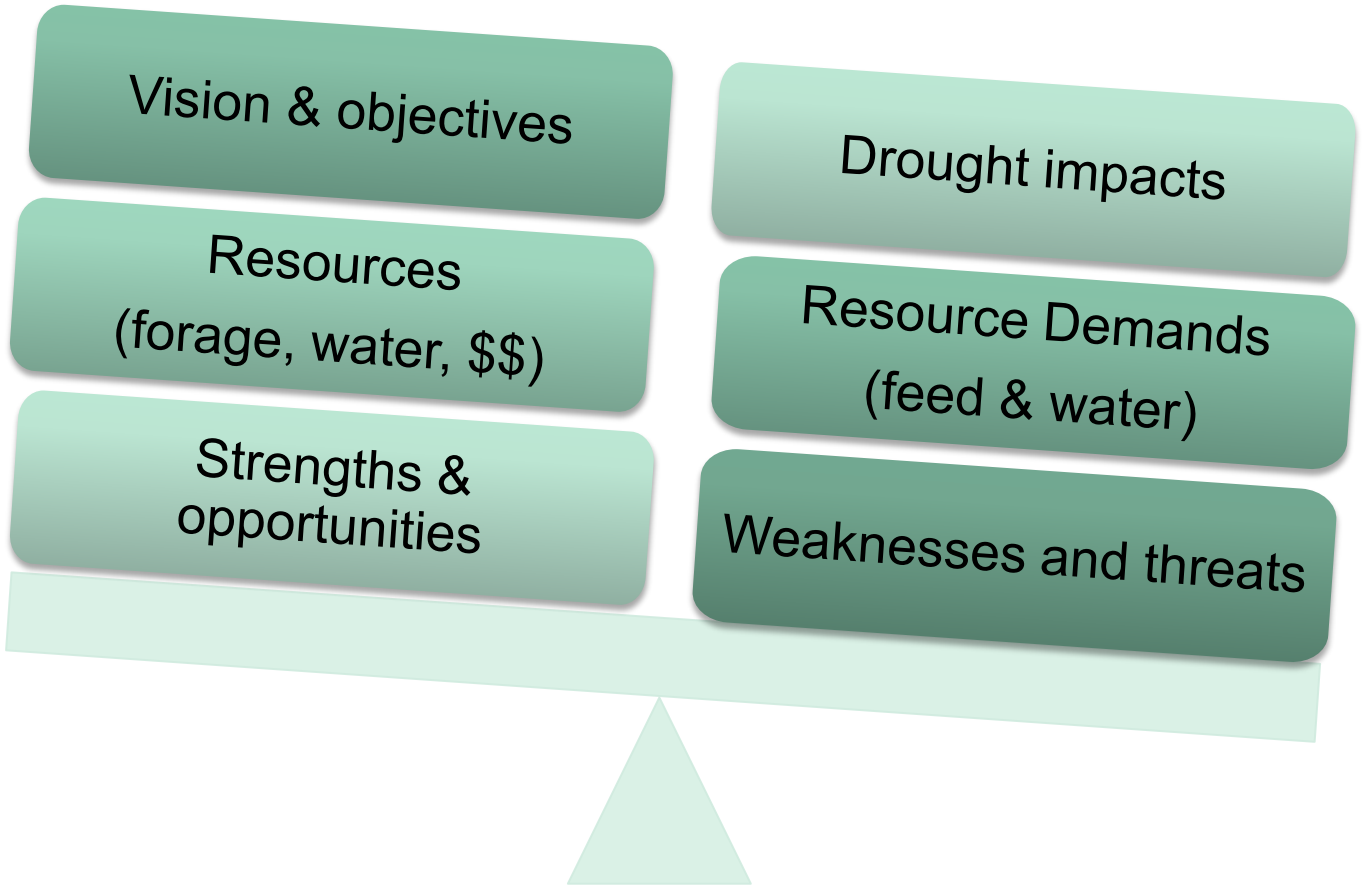
Plan is built on understanding of ranch's…



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Write it down!

"I think it's real important to have that discipline, and writing it out is probably as good a way as any to get that discipline."

CRITICAL DATES

AVERAGE ANNUAL RAINFALL- 21 inches/year.
CRITICAL DATES- April 1, June 15, August 15, & Nov 1

April 1

- End of the winter dormant season and the beginning of the growing season for warm season grasses
- < 4" of moisture during the winter dormant season (killing frost or Nov 1 till April 1) No prescribed burns should be conducted.
- Plan to increase the length of rest periods earlier than usual.

June 15

- About half of the forage is produced by June 15
- 75%(15.75") of the annual average rainfall is received between Nov 1 & June 15
- If the rainfall is <80% (12.60") of the 75% (15.75") then the stocking rate should be decreased 30% by weight. (Finish culling herd C)
- If the rainfall is < 60%(6.30") of the 75%(15.75") then the stocking rate should be decreased 40-50% by weight (Cull herd B deep)
- The 3 weeks following June 15th is very critical. By July 15 the destocking should be completed.
- Rest periods should be as long as possible by June 1 if any indicator of a drought is present.
- Graze periods should be as long as possible to allow the other paddocks to rest for as long as possible.

August 15

- About 90% of the annual forage has been produced. Warm season grasses are preparing for next year growing season. Rest between now & frost will benefit next year's grass production.
- Length of grazing season-Based on the rainfall in July & August
- If rainfall is <70% (1.50") of the average 5" during July & August end herd C grazing by Sept 1(Cull Deep)

November 1

- End of the growing season and the beginning of the winter drought(drought season)
- < 80%(16.80") of the 21" average annual precipitation would indicate the beginning of a drought for the next growing season unless the winter is exceptionally wet

"…your first loss is your least loss. **You've got to make the decision**."

"I've never known I'm going into a drought…so what you've got to do is you've got to say, for my present, current conditions, how do I need to adjust my stocking rate. …**And I think that's a mindset that's important, because like I say, every time you get a little shower during a drought, that gives you false hope if you're not careful.**"

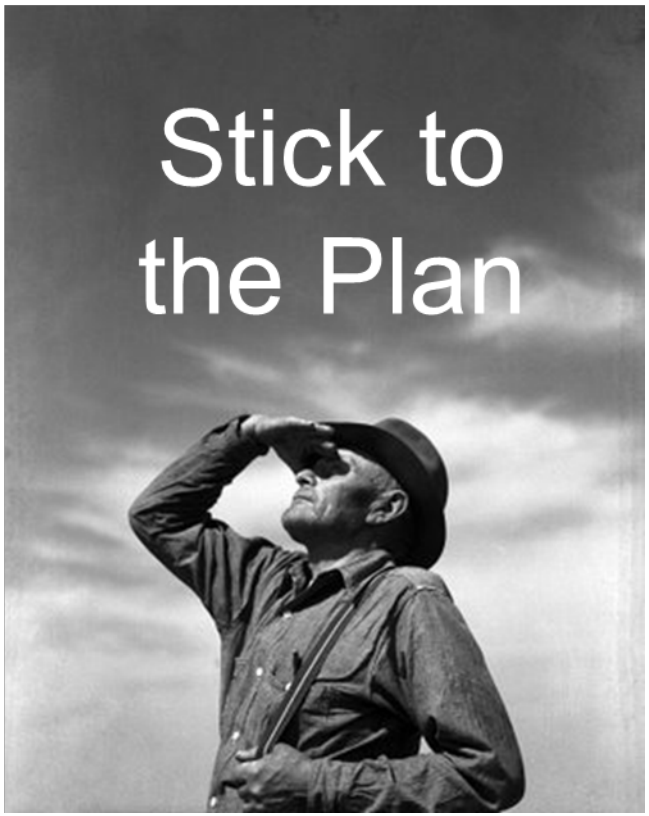


Photo:
http://www.dpi.nsw.gov.au/agriculture/livestock/beef/husbandry

http://drought.unl.edu/ranchplan

National Drought Mitigation Center

Monday, August 20, 2012

Overview | Drought Basics | Inventory & Monitor | Before Drought | During Drought | After Drought | Write a Plan

Overview

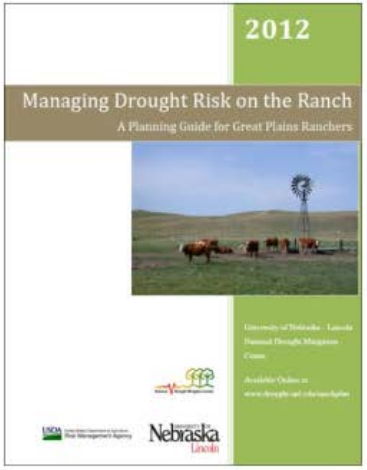
Register | Login

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.

Download "Managing Drought Risk on the Ranch" Handbook



How to use this site

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)

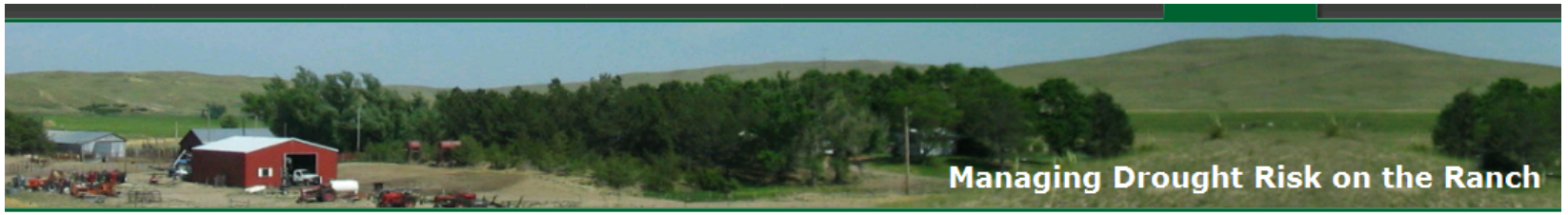
Texas

Johnson Ranch (West Central)

Drought Conditions

U.S. Drought Monitor

Water Year Precipitation (Oct. 1st to present)



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

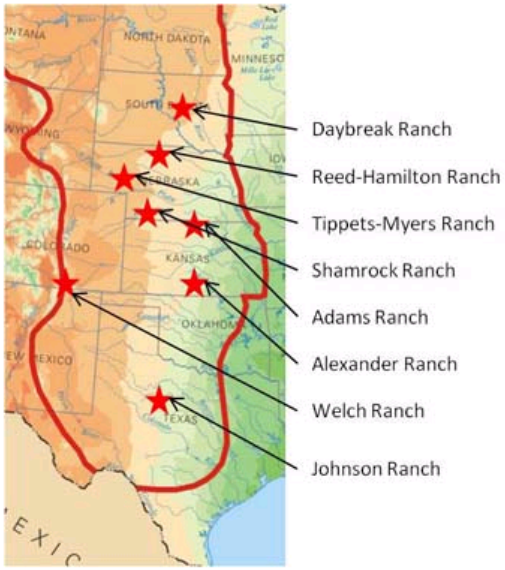
Nebraska Sandhills - Reed Hamilton Ranch

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

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

The Tippets-Myers Ranch

Critical Date

July 1

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

Monitoring Plan

Forage Production and Condition

- Uses SANDRIS

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

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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

USDA United States Department of Agriculture Risk Management Agency

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TABLE OF CONTENTS

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 Montane 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

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WORKSHEET 4: CRITICAL DATES AND TARGET CONDITIONS

Date_____ Form Completed by _____

Critical dates are timely monitoring points in annual management cycles. Current and predicted forage resources are the primary focus of critical dates.

Each **critical date** should have an **action plan** that clearly states **target points** for initiating the plan.

Target points may be based on carrying capacity of current forage or a percentage of average precipitation, i.e., 75%.

See "Identify Critical Dates and Targets" at http://www.drought.unl.edu/ranchplan for suggested critical dates by region.

CRITICAL DATE	TARGET CONDITION

WORKSHEET 7: EVALUATE MANAGEMENT STRATEGIES DURING DROUGHT

Date_____ Form Completed by _____

DROUGHT STRATEGIES	IS IT FEASIBLE?	WILL IT HAVE AN IMPACT?	WILL BENEFITS OUTWEIGH COSTS?	TO CONSIDER?
FORAGE SAVING STRATEGIES				
FINDING ALTERNATIVE FEEDS & FORAGES				
FINANCIAL STRATEGIES				
FAMILY & PEOPLE STRATEGIES				
OTHER				

http://drought.unl.edu/ranchplan

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National Drought Mitigation Center

Managing Drought Risk on the Ranch Professional Development Webinar Series

10 am Central Time

January - May, 2013

Last Wednesday of each month

Each session will include a briefing on current drought status, followed by a session on a specific topic or tool related to drought planning.

The sessions are free and open to the public. Registration is required to receive the Adobe Connect webinar link. Register: http://go.unl.edu/uwk.

More information can be found at http://drought.unl.edu/ranchplan. Contact Tonya Haigh, 402-472-6781, thaigh2@unl.edu, with questions.

January 30: Managing Drought Risk on the Ranch: The Planning Process
Jerry Volesky, Range and Forage Specialist at the West Central Research and Extension Center, and Lynn Myers, Tippets-Myers Ranch

February 27: Avoiding Analysis Paralysis: Monitoring and Setting Critical Dates for Decision Making During Drought
Dwayne Rice, Rangeland Management Specialist, NRCS, Kansas; Ted Alexander, Alexander; and Cal Adams, Adams Ranch

March 27: The New Cumulative Forage Reduction (CFR) Index: Assessing Drought Impacts and Planning a Grazing Strategy
Pat Reece, owner and senior consultant of Prairie Montane Enterprises and Professor Emeritus of the University of Nebraska – Lincoln

April 24: Using a Drought Calculator to Assist Stocking Decisions
Stan Boltz, State Range Management Specialist, NRCS-SD and Jeff Printz, Range Management Specialist, NRCS -ND

May 29: Economic Factors to Weigh in Making Decisions during Drought
Matt Stockton, Agricultural Economist at the West Central Research and Extension Center in North Platte, Nebraska

Sponsored by the National Drought Mitigation Center at the University of Nebraska-Lincoln. The series was developed with support from the Sustainable Agriculture Research and Education (SARE) program, which is funded by the U.S. Department of Agriculture — National Institute of Food and Agriculture (USDA-NIFA). Any opinions, findings, conclusions or recommendations expressed within do not necessarily reflect the view of the SARE program or the U.S. Department of Agriculture. USDA is an equal opportunity provider and employer.

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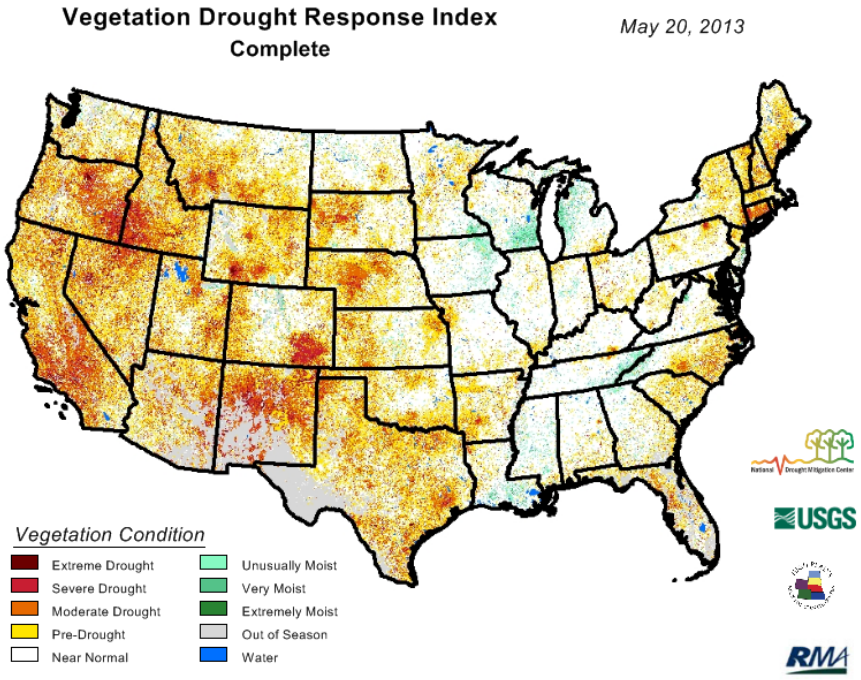
Monitoring Tools
Vegetation Drought Response Index (VegDRI):



vegdri.unl.edu

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Coming Soon!

Drought Risk Atlas (DRA)

http://drought.unl.edu

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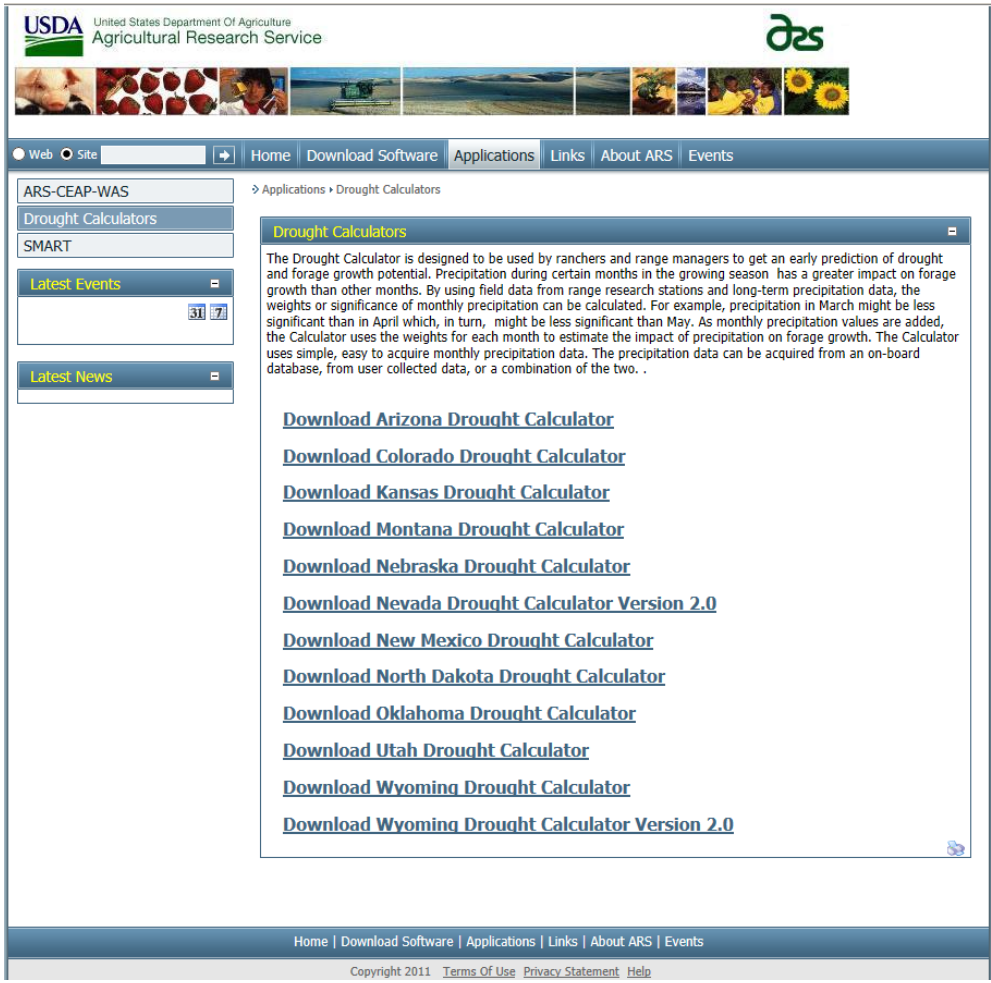
National Drought Mitigation Center

New Mexico Drought Calculator

http://arsagsoftware.ars.usda.gov/

- "How To" webinar found on ranch planning website (drought.unl.edu/ranchplan)
- Contact:

Megan Christensen
(970) 492-7363
Megan.Christensen@ars.usda.gov



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New Mexico Monitoring Resources

http://jornada.nmsu.edu/monit-assess/manuals/monitoring

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Next Session

- Facilitated Brainstorming on Drought Planning Questions:
  - What decisions need to be made during and after drought?
  - What do you need to know to make decision?
  - Where to find information?
  - When should decisions be made?
  - What resources and opportunities are available to support potential strategies?
  - What are some mitigation and recovery strategies to consider?

Thank you!

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