“Here’s what my dad used to tell me. He said, if you bet on dry weather in this country, you’ll be right more than half the time”

(Nebraska Rancher 2005)
Ted Alexander

• Rancher in south-central Kansas

• Working with NRCS and university researchers to improve ranch management over the last 20 years

• Including development of long- and short term drought plans

• Long-term: make ranch resilient to drought (prescribed burning, rotational grazing, water distribution, stocker)

• Short-term: identifying critical condition, dates and actions

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.

**Average Annual Rainfall** – 21 inches/yr

**Critical Dates** – April 1, June 15, August 15, and Nov. 1

**April 1**
- beginning of the grass growing season
- If less than 4” of moisture during winter season - limit prescribed burns

**June 15**
- Half of the forage has been produced
- 75% of the annual average rainfall has been received
- If rainfall is < 80% of the 75%, decrease stocking rate 30%
- If < 60% is received by July 15, decrease stocking rate 40-50%
- Graze/rest periods should be as long as possible by June 1 if drought is present

**August 15**
- Length of the grazing season (based on rainfall in July and August)
- If rainfall is < 70% of the 5” July-August average, grazing period ends Sept. 1

**November 1**
- End of the growing season
- Less than 80% of the 21” average indicates drought for the next growing season
Began hearing and reading that best management practices and holistic management made producers more resilient to drought

Needed more information....
Nebraska Holistic Management Study (2005)

» Mail survey and face-to-face interviews with members of the former Nebraska Holistic Management group

» Asked questions about:
  • the effects of recent drought from 2000-2004
  • strategies implemented to prepare for/respond to drought
  • drought-related needs and barriers to change

» Found wide variety of impacts and suggestions to better prepare for and respond to drought
Reported Effects of Drought from 2000 – 2005

- Cattle culling and reduced stocking rates
- Reduced grass/hay production
- Surface water/ground water quantity and quality problems
- Increased supplemental feed costs
- Crop losses
- Emotional stress
- Increased pests such as grasshoppers
- Wind erosion
- Increased irrigation
- Reduced cattle pregnancy rates
- Increased weed pressures
- Tree losses
- Hindered pasture burns
- Increased disease
## What practices have you implemented to reduce the effects of drought?

<table>
<thead>
<tr>
<th>Rank</th>
<th>Practices Implemented</th>
<th>(N=79)</th>
<th>Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Reduce cattle numbers</td>
<td></td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>(culling, early weaning, heifers, feedlots)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Grazing management</td>
<td></td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>(rotational and modified grazing, leasing)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Forage production and supplemental feed</td>
<td></td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>(interseeding, crop grazing, hay, distillers grain)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Developed new water sources - EQIP</td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>5</td>
<td>Financial and management strategies</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>(reduced inputs, record keeping, other income)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Prepared a drought plan</td>
<td></td>
<td>8</td>
</tr>
</tbody>
</table>

Some best management practices and others specifically for drought
What are the barriers that limit your ability to prepare for drought?

<table>
<thead>
<tr>
<th>Rank</th>
<th>Possible Barriers</th>
<th>N</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Lack of capital to modify operation</td>
<td>69</td>
<td>3.1</td>
</tr>
<tr>
<td>2</td>
<td>Market/need to maximize production</td>
<td>48</td>
<td>3.0</td>
</tr>
<tr>
<td>3</td>
<td>Landlord control over your operation</td>
<td>40</td>
<td>2.4</td>
</tr>
<tr>
<td>4</td>
<td>Lack of drought planning knowledge</td>
<td>60</td>
<td>2.3</td>
</tr>
<tr>
<td>5</td>
<td>Federal farm programs</td>
<td>51</td>
<td>2.3</td>
</tr>
<tr>
<td>6</td>
<td>Unreliability of weather data and forecasts</td>
<td>64</td>
<td>2.1</td>
</tr>
<tr>
<td>7</td>
<td>Feel that nothing can be done about drought</td>
<td>60</td>
<td>2.1</td>
</tr>
<tr>
<td>8</td>
<td>Bank control over your operation</td>
<td>47</td>
<td>2.1</td>
</tr>
<tr>
<td>9</td>
<td>Peer Pressure</td>
<td>40</td>
<td>1.6</td>
</tr>
<tr>
<td>10</td>
<td>Lack of access to weather/forecast sources</td>
<td>52</td>
<td>1.3</td>
</tr>
</tbody>
</table>
## Rancher Thoughts on How to Overcome Barriers

<table>
<thead>
<tr>
<th>Rank</th>
<th>Suggested Ideas from Interviews</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Expanded or more effective assistance and insurance programs (more cost-share, allow grazing of CRP, reduced paperwork, more insurance products and proactive assistance, and tax breaks)</td>
<td>15</td>
</tr>
<tr>
<td>2</td>
<td>More education on sustainability and grazing management</td>
<td>8</td>
</tr>
<tr>
<td>3</td>
<td>Involve producers in planning/get people to plan on their own</td>
<td>6</td>
</tr>
<tr>
<td>4</td>
<td>Stop farm and ranch subsidies</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>More interstate and intra-university collaboration</td>
<td>2</td>
</tr>
</tbody>
</table>

**Assistance – Education – Collaboration – Personal Responsibility**
Managing Risk on the Ranch

A guide to help better prepare for and manage drought

Project initiated in 2006

Project Goals: Develop a model drought planning process and web-based educational delivery system for livestock and forage producers

Collaborators: National Drought Mitigation Center, University of Nebraska-Lincoln, South Dakota State University, and Texas A&M-Kingsville

Available for review in the Fall of 2009 and release to the general public in the Fall of 2010
Project Collaborators

PI: Cody Knutson, **Water Resources/Social Scientist**
National Drought Mitigation Center, University of Nebraska-Lincoln

Tonya Haigh, **Research Specialist**, NDMC
Barry Dunn, **Ranch Management**, Texas A&M-Kingsville
Brian Fuchs, **Climatologist**, NDMC
Roger Gates, **Range Management**, South Dakota State University (SDSU)
Pat Reece, **Rangeland Ecologist**, Prairie and Montane Enterprises, LLC
Sandy Smart, **Range Scientist**, SDSU
Matt Stockton, **Agricultural Economist**, West Central Research and Extension, UNL
Jerry Volesky, **Range/Forage Spec.**., West Central Research and Extension, UNL

**Advisory Group**
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
Current “Buffet” Website Approach

Ranchers pick-and-choose from a list of information.
Drought Management on Range and Pastureland: A Handbook for Nebraska and South Dakota

Pat Reece, Jack Alexander, and James Johnson (1991) Lincoln, NE: University of Nebraska-Lincoln Cooperative Extension Division

I. Plant Responses to Drought
II. Management Preparation For Drought
III. Herd Management
IV. Animal Responses to Drought
V. Predicting Forage Production and Stocking Rates
VI. Drought Management Plans
VII. Rangeland Resource Inventory
VIII. Grazing Management
IX. Plant Recovery After Drought
10-Step Drought Planning Process

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How to Reduce Drought Risk

Preparedness and Mitigation Working Group
March 1998

Principal Authors:

Cody Roseth, National Drought Mitigation Center
Mike Hayes, National Drought Mitigation Center
Tina Phillips, U.S. Bureau of Reclamation
# National Range and Pasture Handbook

## Chapter 11 Conservation Planning on Grazing Lands

<table>
<thead>
<tr>
<th>Contents</th>
<th>600.1100 General</th>
<th>11-1</th>
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<tbody>
<tr>
<td></td>
<td>600.1101 Objectives</td>
<td>11-1</td>
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<tr>
<td></td>
<td>600.1102 Developing conservation plans</td>
<td>11-2</td>
</tr>
<tr>
<td></td>
<td>(a) Areawide conservation plan</td>
<td>11-2</td>
</tr>
<tr>
<td></td>
<td>600.1103 Conservation planning process</td>
<td>11-3</td>
</tr>
<tr>
<td></td>
<td>(a) Preplanning</td>
<td>11-3</td>
</tr>
<tr>
<td></td>
<td>(b) Nine steps of conservation planning on rangeland, grazed forest, naturalized pasture, pastureland, hayland, and grazed and hayed cropland</td>
<td>11-4</td>
</tr>
<tr>
<td></td>
<td>(c) Identify the problem</td>
<td>11-5</td>
</tr>
<tr>
<td></td>
<td>(d) Determine the objectives</td>
<td>11-6</td>
</tr>
<tr>
<td></td>
<td>(e) Inventory the resources</td>
<td>11-7</td>
</tr>
<tr>
<td></td>
<td>(f) Analyze resource data</td>
<td>11-8</td>
</tr>
<tr>
<td></td>
<td>(g) Formulate alternative solutions</td>
<td>11-9</td>
</tr>
<tr>
<td></td>
<td>(h) Evaluate alternative solutions</td>
<td>11-10</td>
</tr>
<tr>
<td></td>
<td>(i) Make decisions</td>
<td>11-11</td>
</tr>
<tr>
<td></td>
<td>(j) Implement plan</td>
<td>11-13</td>
</tr>
<tr>
<td></td>
<td>(k) Evaluation of results</td>
<td>11-15</td>
</tr>
</tbody>
</table>
Strategic and Scenario Planning in Ranching: Managing Risk in Dynamic Times

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This manual was developed by the South Dakota State University Extension Service and the King Ranch Institute for Ranch Management, Texas A&M University-Kingsville with funding provided by North Central SARE.

UNIVERSITY OF Nebraska Lincoln

National Drought Mitigation Center
Rancher and Advisor Interviews (Summer 2009)

**Drought planning steps:**
- Identify objectives
- Inventory ranch and monitor conditions
- Identify long-term best management strategies
- Identify critical trigger dates
- Weigh options at critical dates
- Identify recovery options
**Project Goal:** Incorporate this type of information into a drought planning process and training website.
“Here’s what my dad used to tell me. He said, if you bet on dry weather in this country, you’ll be right more than half the time.”
—Nebraska rancher, 2006

**Making** management decisions is an every day exercise for livestock and forage producers. Producers manage for things they can control and things they can’t; for conditions that persist and those that change daily. All regions are prone to some form of extreme weather events such as thunderstorms, blizzards, and drought. These extremes and the unknowns that seem to be around every corner, and the disastrous effects they can cause, demonstrate why long-term planning is essential to effectively manage agricultural risk.

Drought is one hazard that affects every portion of the United States sooner or later, and producers are increasingly implementing new ways to better prepare and respond to it. The information, strategies, and resources on this site are designed to provide producers with information on how to incorporate management strategies to reduce the threat drought poses to livestock and forage operations.

**Our Philosophy and Purpose**

- Drought is a normal part of climate...it will happen again.
- There are things you can do before, during, and after drought to reduce your risk.
- You should have both a long-term management plan and a drought response plan.
- The goal of this website is to help you become more resilient to hazards such as drought.

**How to Use This Site**

The Introduction section of this site provides in-depth information on climate and historical drought occurrence; the effects drought has on livestock, grasses, and grazing management; and drought-related financial considerations.

The Before Drought, During Drought, and After Drought sections detail long- and short-term management strategies that can be implemented to make your operation more resilient and prepared for drought conditions.

The Write a Drought Plan section describes how appropriate strategies can be identified and included in a drought plan for your operation, and the Contacts and Resources section provides examples of other producers who have developed drought plans, as well as, experts and other information sources to help you better prepare for and respond to drought.
Goals of This Meeting

• Outline a drought planning process

• Discuss components of the planning process
  • how to conduct an inventory?
  • how to determine critical dates?
  • suggestions for drought recovery?

• Reflections on the website and dissemination

Thank you for attending!