

Cattle Producer's Handbook

Drought and Other Natural Disasters Section

910

Tips for Dealing with Drought on Range

*John Lacey, Extension Range Management Specialist
Montana State University*

Drought is a serious obstacle to successful range livestock management. Producers must understand how drought affects plants, grazing animals, and livestock management, and what options exist.

- Forage production is decreased dramatically, but reductions are less on ranges in good and excellent ecological condition.
- Ability of perennial plants to recover after drought is closely related to their vigor before and during the drought. Excessive grazing (more than 60 percent of current year's growth) decreases the ability of some plants to recover. Moderate use (25 to 55 percent) does not seem to affect the recovery rate.
- Livestock numbers must be reduced according to forage supply. Yearlings should be marketed early, while calves should be weaned early and fed at home, at another feedlot, or sold. Cull low-producing cows.
- Retaining a rotational grazing system during drought is recommended over continuous grazing. Periodic rests help plants maintain vigor. Plants are not able to regrow if grazed repeatedly.
- Concentrating more animals into a single herd is recommended over having several smaller herds. By having more animals in a pasture, the entire pasture will be grazed more uniformly, and more use will be made of the less-preferred plants.
- Supplement low-quality feed. Feed supplements can often be used to correct low forage quality. However, feed supplements are usually not an economical substitute for range forage.
- Try not to buy, or put up, weed-infested hay. The future cost of feeding weed-infested hay far outweighs its feed value in the short-run. If weedy hay must be fed, feed in an area or holding pasture that is removed from streams, riparian areas, and wooded areas. Be sure to keep your stock confined for several days after

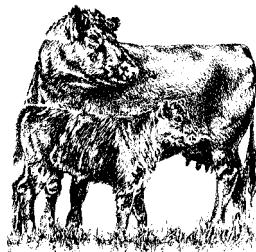
feeding the bad hay to prevent them from spreading viable seed through their digestive tract. Observe holding pastures and feeding areas closely, and treat weed infestations.

- Try to take advantage of areas dominated with annual species. They should be grazed early in the season when their nutrient value is high. This will allow grazing deferment on the higher-condition range dominated with perennial plants.
- Graze crested wheatgrass early and longer than normal. It is one of our plants most tolerant of grazing.
- Keep cattle on subirrigated sites longer than usual. Fertilizer could be used to increase forage production on many of these sites. However, fertilizer is a cash cost, and soils should be tested before fertilizer is applied.
- If irrigation water is less than usual, concentrate it on your best-producing hay meadows. Graze the rest.
- Keep accurate cost data during normal years. Management decisions are easier to make if production costs during a drought year can be compared to the normal situation.
- You must maintain adequate water for the livestock. Dry cows use less water than lactating cows and will graze farther from water. In some areas you may be able to develop a spring or seep (a flow of 1/2 gallon per minute amounts to 720 gallons per day). Consider the possibility of installing a larger storage tank and piping water to troughs. You may need to install high-pressure plastic pipe to carry water from a central source. Although expensive initially, pipelines will prove useful for many years. Hauling stock water is expensive. However, it may be a viable strategy in some situations.
- Do not restock until you are certain that your range has recovered.



Issued in furtherance of cooperative extension work in agriculture and home economics, Acts of May 8 and June 30, 1914, by the Cooperative Extension Systems at the University of Arizona, University of California, Colorado State University, University of Hawaii, University of Idaho, Montana State University, University of Nevada/Reno, New Mexico State University, Oregon State University, Utah State University, Washington State University and University of Wyoming, and the U.S. Department of Agriculture cooperating. The Cooperative Extension System provides equal opportunity in education and employment on the basis of race, color, religion, national origin, gender, age, disability, or status as a Vietnam-era veteran, as required by state and federal laws.

Fourth edition; December 2016 Reprint



Cattle Producer's Handbook

Drought and Other Natural Disasters Section

919

Drought and Climate Related Web Sites

*Barron Orr, University of Arizona Extension**Kevin Heaton, Utah State University Extension**Norman Suverly, University of Nevada Reno Extension*

The internet provides timely climate information for local, statewide, regional, national, and international sites. This fact sheet identifies the most important climate and drought related web sites and provides short descriptions for them. Additionally, links to drought sites are provided for specific interests. It is anticipated that these sites will benefit livestock producers facing, enduring, or recovering from drought conditions. The sites have information that can be used to make day-to-day strategic decisions.

National Drought Mitigation Center

Web site: <http://drought.unl.edu/>

The National Drought Mitigation Center (NDMC) helps people and organizations reduce the impacts of drought through preparation and risk management rather than crisis management. This site describes drought and gives strategies for monitoring, planning and risk management. The site includes 10 fact sheets.

National Oceanic and Atmospheric Administration

Web site: <http://www.noaa.gov/climate.html>

The National Oceanic and Atmospheric Administration (NOAA) is home to a wealth of information on climate and drought. It monitors regional and global climates that can be an indicator for potential drought areas. NOAA provides the following services: Climate Prediction Center (forecasts the impacts of short-term weather variability), The Palmer Drought Severity Index (PDSI) and Crop Moisture Index (CMI) (indices of the relative dryness or wetness effecting water sensitive economies), Current Crop Moisture Index Map, Experimental Drought Indicator Blends, Top Soil Moisture Maps, Soil Moisture Monitoring, Drought Assessment, Drought Termination and Amelioration, and Climate Data.

National Water and Climate Center

Web site: <http://www.wcc.nrcs.usda.gov/>

The National Water and Climate Center (NWCC) is a water supply and precipitation web site hosted by the Natural Resource Conservation Service. The site has information on water supply forecasts, reservoir storage, SCAN Data Networks, SNOWTEL, snow course, and other climate products.

Rangeview.net

Web site: <http://rangeview.arizona.edu/>

RangeView, "Geospatial Tools for Natural Resource Management," includes interactive tools that provide assistance in understanding vegetation dynamics across large areas and over time. These tools incorporate satellite imagery and digital maps in ways that complement traditional rangeland management tools, such as field-based inventory and monitoring techniques. The site offers documentation and a tutorial to aid new users in their efforts to interpret geospatial information and understand the underlying technology. It also reports the status of research on cattle-wildlife-forage interactions that are based on the spatial and temporal analysis of vegetation dynamics.

Western Region Climate Center

Web site: <http://www.wrcc.dri.edu/>

The Western Region Climate Center (WRCC) is home to the Standardized Precipitation Index (SPI). SPI measures precipitation and can provide early warning signs of an oncoming drought.

Other Links

Arizona: <http://ag.arizona.edu/extension/drought/>

California Drought Preparedness:

<http://watersupplyconditions.water.ca.gov/>

Colorado Climate Center:
<http://climate.atmos.colostate.edu/>

Farm Service Agency:
<http://www.fsa.usda.gov/pas/default.asp>

Meso West: <http://www.met.utah.edu/mesowest/>

Montana Drought Monitoring:
<http://nris.state.mt.us/drought/>

National Agriculture Statistics Service:
<http://www.usda.gov/nass/>

Nebraska Climate Assessment and Response
Committee: <http://linux1.nrc.state.ne.us/carcncl/>

New Mexico Drought Planning Team:
<http://weather.nmsu.edu/drought/index.htm>

North Dakota State University Coping with Drought:
<http://www.ag.ndsu.nodak.edu/drought/drought.htm>

Texas Drought: <http://agnews.tamu.edu/drought/>

USGS Drought Watch:
http://water.usgs.gov/cgi-bin/dailyMainW?state=us&map_type=dryw&web_type=map

Utah State University Drought Resources:
<http://extension.usu.edu/drought/>

Washington: <http://drought.wsu.edu/pubs.html>

Western Drought Coordination Council:
<http://drought.unl.edu/wdcc/>

Wildland Fire Assessment System:
<http://www.fs.fed.us/land/wfas/welcome.htm>

Wyoming: http://www.uwyo.edu/ces/Drought_Drought_Main.html



Issued in furtherance of cooperative extension work in agriculture and home economics, Acts of May 8 and June 30, 1914, by the Cooperative Extension Systems at the University of Arizona, University of California, Colorado State University, University of Hawaii, University of Idaho, Montana State University, University of Nevada/Reno, New Mexico State University, Oregon State University, Utah State University, Washington State University and University of Wyoming, and the U.S. Department of Agriculture cooperating. The Cooperative Extension System provides equal opportunity in education and employment on the basis of race, color, religion, national origin, gender, age, disability, or status as a Vietnam-era veteran, as required by state and federal laws.

Fourth edition; December 2016 Reprint