

9-28-2012

Management Tips for Drought-stressed Forages

Stephen K. Barnhart

Iowa State University, sbarnhar@iastate.edu

Follow this and additional works at: <http://lib.dr.iastate.edu/cropnews>

 Part of the [Agricultural Science Commons](#), [Agriculture Commons](#), and the [Agronomy and Crop Sciences Commons](#)

Recommended Citation

Barnhart, Stephen K., "Management Tips for Drought-stressed Forages" (2012). *Integrated Crop Management News*. 138.
<http://lib.dr.iastate.edu/cropnews/138>

The Iowa State University Digital Repository provides access to Integrated Crop Management News for historical purposes only. Users are hereby notified that the content may be inaccurate, out of date, incomplete and/or may not meet the needs and requirements of the user. Users should make their own assessment of the information and whether it is suitable for their intended purpose. For current information on integrated crop management from Iowa State University Extension and Outreach, please visit <https://crops.extension.iastate.edu/>.

Management Tips for Drought-stressed Forages

Abstract

The Midwest has seen some of the most extreme drought conditions of recent memory. Some rain has come recently for most of this area, but not enough for most of us to feel comfortable. Pastures may still be in poor condition. Many hayfields are showing enough recovery to maybe yield at least one more cutting. Regionally, hay supplies are tight and prices are high. Forage management considerations are many. Here are some things to think about as you prioritize your options.

Keywords

Agronomy

Disciplines

Agricultural Science | Agriculture | Agronomy and Crop Sciences

[ICM Home](#)[ISU Extension Calendar](#)[Publications](#)[Extension News](#)[County Offices](#)[Contact Us](#)
[Subscribe to Crop News](#)

Archives

[2014](#)[2013](#)[2012](#)[2011](#)[2010](#)[2009](#)[2008](#)[Previous Years](#)

ISU Crop Resources

[Extension Field Agronomists](#)[Crop & Soils Info](#)[Pesticide Applicator Training](#)[Agronomy Extension](#)[Entomology Extension](#)[Plant Pathology Extension](#)[Ag and Biosystems Engineering Extension](#)[Agribusiness Education Program](#)[Iowa Grain Quality Initiative](#)[College of Agriculture and Life Sciences](#)[ISU Extension](#)

Integrated Crop Management NEWS

[PRINT STORY](#)
[EMAIL STORY](#)
[ADD TO DELICIOUS](#)
[ATOM FEED](#)
[FOLLOW ON TWITTER](#)

Management Tips for Drought-stressed Forages

By Stephen K. Barnhart, Department of Agronomy

The Midwest has seen some of the most extreme drought conditions of recent memory. Some rain has come recently for most of this area, but not enough for most of us to feel comfortable. Pastures may still be in poor condition. Many hayfields are showing enough recovery to maybe yield at least one more cutting. Regionally, hay supplies are tight and prices are high. Forage management considerations are many. Here are some things to think about as you prioritize your options.

Hay and Pastures

The goal is to help keep perennial forage plants 'perennial.' During the fall weeks, perennial forage legumes and grasses respond to shortening days and cooling average daily temperatures and progress through their gradual "cold hardening" process. The genetics of the variety and local climatic conditions determine how cold tolerant the plant crown and taproot can be during the winter months. Most successfully winterhardened perennial forage legumes and grasses can withstand soil temperatures in the crown area to about 0 to 4 degrees F without crown tissue damage. At lower soil and crown temperatures, varieties and individual plants will vary in the degree of cold damage they may experience.

To best acquire their potential for winter survival, these forage plants should get five to six weeks of uninterrupted growth to accumulate root carbohydrates and proteins before going dormant for the winter. A 'killing freeze' is about 23-24F for several hours. Then, no more cutting or grazing until next season.

If you do decide to cut one more hay cutting or grazing, it is important to manage fall harvests or grazings to give the plants the best chance for strong winter survival. It is best to wait until at or after the killing freeze (23-24 F) for the last hay cutting, then leave a 5- to 6-inch stubble. It is not recommended to take a late season harvest from a new (2012) seeding.

The same goes for late season growth management of pastures. Try to allow three to four weeks of fall recovery before a killing freeze, and then, if you are going to graze again, leave an average of 3 inches or so of lower stem bases on the grasses.

The practical problem with these management strategies is that it involves removing livestock from pasture. And no more hay harvest – in an already hay shortage season. I can't decide what is most important for you.

Fertilization

Fall is a good time to soil test and fertilize both hay and pastures with needed

potassium (K) and phosphorus (P). This will help drought-stressed forage stands to overwinter and improve regrow and yields next spring. Applying 25 to 40 lbs of nitrogen to grass pastures during the last few weeks of their fall growth will aid in stimulating more fall tillering (branching) and for more vigorous recovery in the spring.

Give recovering hay and pasture stands time to 'catch up' or regain more vigor next spring.

If fall recovery was not favorable, or you did cut or graze late in the season in 2012, the recovering forage plant may still be under some physiological stress. Hay and pasture plants will benefit from allowing a bit more recovery and growing time next spring before they are cut or grazed. For best 'recovery management,' delay the first cut of alfalfa stands until they reach early- to mid-bloom. For pastures, allow 3 to 4 inches of growth in the spring before livestock turnout.

Repairing and Reseeding

Consider 'interseeding' or 'frostseeding' drought-thinned pastures next late winter or early spring. Frostseeding is the broadcasting of legumes or additional grass seed in late winter when the last few weeks of night-freeze and daytime-thaw aids in seed coverage. Interseeding is using a drill to no-till legumes or forage grasses into an existing sod. Spring interseeding dates are mid-March through late-April.

Frostseeding works best with legumes on the thinnest, least competitive sod areas. Grasses are generally more effectively established with interseeding than with frostseeding. With both frostseeding and interseeding, having the existing pasture sod grazed closely (like many of our pastures following the summer drought stresses) reduces early season competition. Further competition for shade, sunlight and soil moisture can be reduced by timely and thoughtful rotational grazing for the first few months of new seedling establishment. For more details, see these ISU Extension and Outreach publications: Pm-856, [Improving Pasture by Frost Seeding](#), and Pm-1097, [Interseeding and No-till Pasture Renovation](#).

Stephen K. Barnhart is a professor of agronomy with extension, teaching, and research responsibilities in forage production and management. Barnhart can be contacted at (515) 294-7835 or by email sbarnhar@iastate.edu.

This article was published originally on 9/28/2012. The information contained within the article may or may not be up to date depending on when you are accessing the information.

Links to this material are strongly encouraged. This article may be republished without further permission if it is published as written and includes credit to the author, Integrated Crop Management News and Iowa State University Extension. Prior permission from the author is required if this article is republished in any other manner.