



Ridin' Herd

► by Rick Rasby, University of Nebraska

Plan for forage needs now

Even though some areas have received much-needed moisture this spring, there is still a need to begin planning for forage requirements this winter. Although many of us manage our forage resources and production systems so the cow herd meets its nutrient needs through grazing, there is still a need to plan for some harvested forages.

Drought forces forage/livestock producers to develop strategies that deal with indirect economic and biological effects of too many animals for the available feed resources, as well as direct effects of reduced water supply for plants and animals. The results of the recent droughts and high corn prices are a steep reduction in harvested forage supply and an even steeper increase in forage price.

Drought management strategies can be subdivided into three categories: livestock inventory, use of existing forage resources and alternative feeding programs. This article will focus on use of existing forage resources and alternative forages for feeding programs.

Use of existing forages

Use existing forage resources efficiently. It seems the greatest benefit of cross-fencing pastures and having a rotational grazing system occurs in managing through drought conditions. Grazing systems don't have to be extensive, but allowing pastures to have a rest period in drought conditions aids grass persistence. In addition, if carrying capacity is lowered during drought, improved grazing management minimizes the impact of drought on grasses. Consider some of the following grazing-management techniques during drought.

1. Delay turnout to permanent pastures by feeding carryover hay or by grazing meadows, early alfalfa growth, or winter cereal-grain pastures.
2. A one- to two-week delay in turnout can increase forage production 10% or

more when soil moisture is limited.

3. Construct temporary cross-fences within larger pastures to concentrate grazing. This encourages cattle to more completely use whatever forage is available and defers grazing on the other pastures, allowing them to accumulate more growth before being grazed. Be sure to provide enough time for adequate plant recovery before grazing the pasture again.
4. Consider skim- or flash-grazing each pasture very briefly with a high concentration of livestock early in the grazing season to use plants that otherwise would become mature and left ungrazed if grazing were delayed. Typical examples include sedges, cheatgrass and downy brome, bluegrass, and early forbs.

Temporary electric fencing and hauling water may be needed to control when and where cattle graze certain areas. Be especially cautious of poisonous plants, as well as nitrates, prussic acid and grass tetany. Some plants that are not normally consumed may poison livestock when forage supply is low. Avoid overgrazing rangeland, otherwise recovery following drought will be slow and production depressed for an extended time. Time grazing of pastures with questionable water supply or quality when water demand by cattle is lower.

Alternate feeding opportunities

Additional forage supplies can be developed. These options, though, must be chosen with great care because they may be expensive relative to other alternatives, such as de-stocking. Following are some forage feeding opportunities.

- Cut winter wheat for hay instead of grain, especially if low grain yields are expected.
- Consider planting oats as early as possible for grazing or hay. Oats use spring moisture very efficiently to produce forage.
- Plant summer annual forage grasses like Sudan grass and millets. These plants are drought-resistant, but will need some summer moisture for economical growth.
- Always test summer annuals for nitrates. If nitrates are high, mix with low-nitrate feeds and adapt cows.

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► Dave Lalman and the team from the OSU North Range show the steps of hay ammoniation in this SunupTV video produced by the OSU Division of Agricultural Sciences and Natural Resources. Click on the picture to access the video, or go to www.youtube.com/watch?v=zfAiekSLIQw. To access the digital Angus Journal, go to www.angusjournal.com/login_sign_up.html.



► Beef systems specialist Justin Waggoner shows step-by-step how to ammoniate low-quality forages in this video produced by K-State Research & Extension. Kerry Ebert, ag safety specialist, shares safety tips for working with anhydrous ammonia. Click on the picture to access the video, or go to www.youtube.com/watch?v=-fTjtb-umpk.

Treating crop residues such as wheat straw with anhydrous ammonia can make straw almost as digestible as average-quality prairie hay. Ammoniation will increase digestibility of low-quality forages and, therefore, intake will increase. Cattle don't quit eating straw because they don't like it; because of its low digestibility and slow rate of passage, they can't stuff any more into the rumen.

Ammoniation is a management practice for straws and crop residues. The process is temperature-dependent and occurs faster at

higher environmental temperatures like those that occur in July and August.

Ammoniation of low-quality forages must be done right and the anhydrous handled with care. Consider baling straw soon after grain harvest, preferably with some moisture or dew on it. Gather bales into rows that are stacked like a pyramid — leaving space, a couple of inches, between pyramids for the ammonia to filter around the bales. Cover the entire stack with one sheet of 6 mm-8 mm black plastic. Make sure the edges of plastic on the ground are sealed with loose soil to prevent leaking of ammonia. Insert a pipe placed on the ground into the center of your

stack and attach the pipe to the anhydrous tank. Slowly leak anhydrous into the bales sealed with plastic.

Ammonia can be dangerous. Don't inject ammonia too fast or the plastic can rupture. Check and repair any leaks with duct tape. Continue to add anhydrous slowly until you have added 60 pounds per ton of straw. This process will take about 10 minutes for each ton of straw ammoniated. When completed, turn off the tank, remove the pipe, and seal its opening.

Keep the stack sealed for 10 days to two weeks in the summer. About a week before feeding, open one end of the stack to allow

excess ammonia gas to escape. There are a couple of YouTube videos that illustrate and explain the process of ammoniation of low-quality forages at www.youtube.com/watch?v=zfAiekSLlQw and www.youtube.com/watch?v=-JtjJb-umpk. There is also a good fact sheet to read about the process of ammoniation and a worksheet to calculate the cost of ammoniation at <http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1241&context=extensionhist>.

Remember, this process should only be used on low-quality forages or baled crop residues, like wheat straw or baled corn residue. In addition, the greatest benefit of

ammoniation of low-quality forages is the increase in digestibility of the forage, which allows cows to eat more of the low-quality forage. Ammoniated forages work best in cow rations fed before calving without a lot of supplementation. If used after calving, it can be mixed with other forages and supplements. This is probably not a feed that works well in rations for growing calves.

Final thought

Plan now for forage needs this winter. With the reduction in forage acres, forage cost will remain high. Producers will, again, need to be creative to inventory forages that

are inexpensive, yet need minimal supplementation to meet the nutrient needs of the herd. If distillers' grains become inexpensive, then using low-quality forages in cow diets becomes less complicated. If not, proven techniques like ammoniation move to the forefront.



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