Grazing Management for 'Drier than Normal' Forecast

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The seasonal precipitation and temperature forecast for spring and early summer in Wisconsin and Minnesota is predicting above normal temperatures with no signs of drought. The forecast across the northern Great Lakes region is predicting a 40-50% chance of drier than normal conditions (Figures 1 and 2). Historical patterns show that frequently after an El Niño year, with characteristic warmer temperatures in the northern tier states, a La Niña usually follows. This scenario for the Upper Midwest is associated with warmer and drier summers. There is no way to be certain what this year's climatic outcome will be, but proper grazing management can be implemented to minimize the effects of the not-so-ideal scenario should it happen.

Figure 1: Temperature outlook for April-June issued 2016 March 15 (climate.gov; data: CPC).

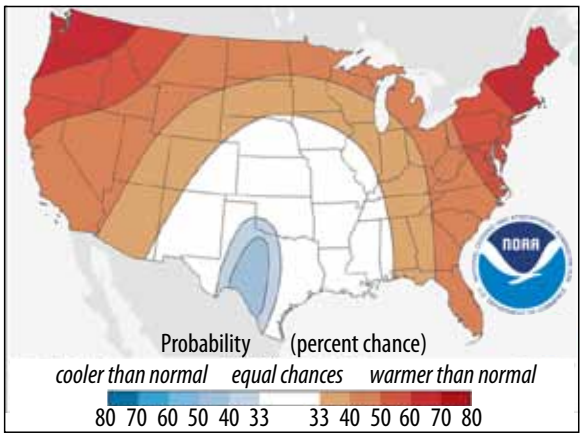
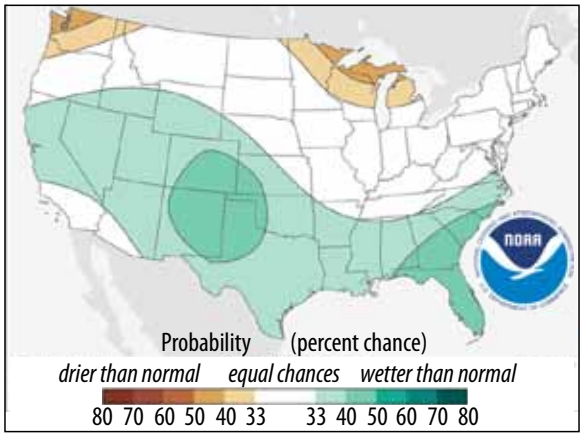


Figure 2: Precipitation outlook for April-June issued 2016 March 15 (climate.gov; data: CPC).



Grazing management is a constant test of options … "How many animals should I graze in my paddock?" … "How long should I let my animals graze?" (grazing intensity) … "Should I start grazing now or should I wait a week or two?" (grazing timing) … "Should I help the pasture with hay bales?" Sound grazing management is about meeting the requirements of the animal but also those of the forage plant. The grazing requirement in animals is to supply an adequate quantity of forage, with matching quality for the animal type. On the other hand, the grazing requirement for the forage plant is to favor conditions leading to as much plant reserves, leaf area, and bud sites as necessary for regrowth once the plant has been grazed or defoliated. This management is further put to the test in critical growing conditions. Too much moisture may impact the soil through the hoof action of the animals but too little moisture, plus warm temperatures, will likely increase water requirements of the forage plant.

How should sustainable grazing be achieved?

There are a couple of tools under the control of the grazer. One is the grazing intensity or the residual stubble height of the pasture. A second is the frequency of grazing. Both are important, but residual height is a main determinant for long-term persistence of your pastures.

How short or close should pastures be grazed?

The key to plant persistence is to leave a 'generous' grazing stubble height that will allow for quick regrowth of leaves and stems. For example, pastures planted to bunch grasses of medium size like orchardgrass or orchardgrass mixes take longer to recuperate when grazed to a very short stubble of 2-3″. However, when taller stubbles of 6-7″ are left, orchardgrass pastures recover quickly.

Residual height not only affects productivity of the grass but also the growth of tillers, which is one mechanism of persistence in temperate perennial grasses. In addition to growth source, tillers are carbohydrates or energy reserves. Some species keep their carbohydrate reserves in structures below ground, others keep them in the lower one-third section of the canopy where the thicker tillers are. Forage species with growth that is in bunches will be less tolerant of low residual grazing height than those with a sod-type growth. This fact will gain even

more relevance under stressful situations such as the dry conditions that prevail in some summers.

Recommendations from grazing trials conducted by the University of Wisconsin and the U.S. Dairy Forage Research Center using temperate grasses like meadow fescue, orchardgrass, and reed canarygrass suggest these species are best utilized when at mid to vegetative stage, and when paddocks were grazed at a taller residual height. Using this management, the animals could be returned for grazing at an earlier time. This research also showed grazing drought-stressed grass multiple times had the greatest negative effect on annual pasture production.

Bison grazing a grass mixture in the driftless region showing adequate grazing residue. *(Photo by Yoana Newman)*

A more lax grazing leaving a taller stubble height will result in more leaf area for growth, which will help grow the new leaves more rapidly afterwards. In doing so, a more rapid rotational grazing schedule can be feasible.

Summary

- Routinely grazing below 2˝ is generally not an ideal practice.
- As conditions become more stressful, a more relaxed grazing is prescribed.
- Start with your normal rotation schedule and as dry conditions set in, rotate the animals quicker so the leaf defoliation is not demanding on the plant.
- If dry field conditions are extreme, it will be necessary to temporarily close pastures for grazing.
- It is cheaper to feed hay for a few weeks than to totally renovate an overgrazed pasture.