

**Healthy Farms
Conference
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Grazing and Forage Management in 2013

Although the 2013 growing season is still several months away, it is not too early to begin making grazing and forage plans. Of course, there is a tremendous amount of uncertainty with the ongoing drought and just what type of conditions we will see in the spring.

Pastures and the 2012 Drought

Drought conditions were pronounced in late winter and early spring in western Nebraska, resulting in minimal growth of cool-season grasses. Above average temperatures also resulted in an earlier than normal start to the growing season across the state. Many areas in central and eastern Nebraska had a moderate amount of precipitation in April, but

drought conditions intensified in May and remained through the rest of the year. Observations in the Sandhills showed cool-season grasses achieving about 40% to 70% of average growth, while warm-season grasses attained about 30% to 60% of their average growth. Most warm-season grasses had stopped growth by late June and were going into a drought-induced dormancy.

For many livestock producers, carryover or residual grass from 2011 did support stocking rates that were higher than what would have been anticipated just based on 2012 grass production (Figure1). As is often the case during drought, the level of forage use in most pastures during 2012 was higher than normally planned or recommended.

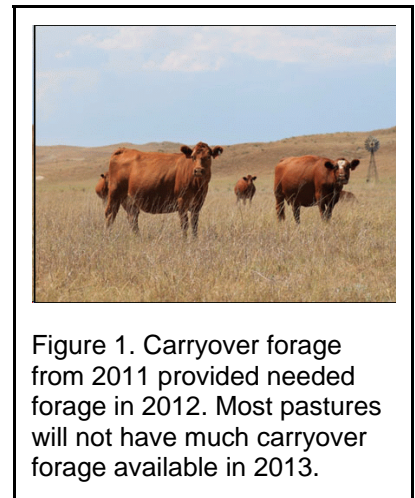


Figure 1. Carryover forage from 2011 provided needed forage in 2012. Most pastures will not have much carryover forage available in 2013.

Grass and Rangeland Response to Drought

The primary response and effects of drought on grasses and pastures include:

- Reduced aboveground growth.
- Reduced root growth.
- Fewer reproductive tillers (seed heads) and plants remain mostly vegetative.
- Severe drought will cause plants to go into dormancy.
- Reduced growth of rhizomes and formation of new buds that will produce next and future year's tillers.
- Lower carbohydrate (energy) reserve storage.

Although most pasture grasses are quite resilient, it is common to expect that production during the year following a drought will be reduced, even with average precipitation. The reasons for this are most likely associated with the reduced root and rhizome growth, formation of new buds and overall energy reserve status of the plants. The exact amount of reduced forage production the year after a drought is difficult to predict because the precipitation patterns and severity of each drought are rarely the same. In addition, the precipitation amounts and timing this coming year are unknown. However, rangeland in a higher ecological state or range condition will recover quicker after drought than lower condition range.

Timing of grazing is an important factor in grazing management and a common recommendation is to avoid grazing in the same pasture at the same time each year. Previous research has shown that repeated annual grazing during the rapid growth stage will reduce the

overall vigor of grasses. This rapid growth phase—the time when grass plants transition from a vegetative to elongation and reproductive stages—typically occurs in May for cool-season grasses and in June and July for warm-season species. With the early start to the growing season in 2012, the start of the rapid growth stage was likely two to three weeks earlier. Because of the 2012 drought, most grasses did not reach a reproductive stage, but went into a drought-induced dormancy. However, cool-season grass pastures grazed in late April to early May and warm-season pastures grazed in late May and June most likely received the most grazing stress. These pastures should receive deferment priority in 2013. Combining drought and grazing stress will greatly increase the likelihood of reduced forage production in the subsequent year.

Timing of Precipitation is Key

When precipitation occurs and how much occurs are the primary factors that drive pasture forage production. For Sandhills rangeland or areas where warm-season grasses dominate, data shows that precipitation from May through mid-July is most important. For cool-season grasses, throughout the state, April and May precipitation is critical. Production of cool-season grass has also been shown to be positively affected by precipitation during the previous fall.

Across the state, both surface and sub-soil moisture levels are very low. In 2012, the decline in soil moisture beginning in May and the low levels going into winter are especially visible. Although the profile of sandy soils can be recharged fairly quickly with adequate precipitation, heavier soils that are moisture depleted will require above average precipitation and additional time before favorable pasture growing conditions are realized.

Evaluate 2012 Grazing

The review of 2012 grazing records is an important step in planning for the next season. For each pasture, knowing when the grazing period occurred (days, weeks, months), the stocking rate that was used, and observations of the amount of residual forage left in the pasture will be valuable to your assessment.

2013 Grazing Plans and Management

The uncertainty of how much spring and early summer precipitation will occur suggests the need for plans that include multiple scenarios. These scenarios might include:

1. average or above average precipitation during that period,
2. abnormally dry to moderate drought (60% to 90% of average precipitation), or
3. continued severe drought (< 50% to 60% of average precipitation).

Regardless of which scenario comes true, the primary focus should be about balancing forage supply (growth, production) and demand (animal numbers). Keep in mind that grazing management through consecutive drought years is critical for future pasture health.

For pastures and rangeland, common recommendations for the year after a drought include:

- Delay initial turn-out to pasture.
- Reduce stocking rates.
- Capitalize on growth of weedy species that might occur.
- Use rotation grazing and in central/western Nebraska, graze pastures only once from turn-out to killing frost.
- Use alternative forages.

After a long period of feeding hay, delaying turn-out to pasture is one recommendation that many producers find difficult to follow. Other than cases where a short, early grazing period is used to make use of weedy annuals, like downy brome, delaying turn-out will benefit the perennial grasses. The deferment will allow the grasses to develop more leaves and ideally reach a point where some of their depleted energy reserves can begin to be restored.

Where deferred rotation grazing (four or more pastures) is used, deferment priority should be given to pastures that were grazed when grasses were green and did have some growth occurring before they went into drought dormancy. Overall, the greatest number of cow-days

per acre will be obtained when pastures are not grazed until plants have completed most of their growth for the year.

Using Critical Dates to Help Plan

Many ranch drought plans suggest the use of “critical” or “trigger” dates. The concept is based on monitoring precipitation amounts received by these defined dates and initiating certain management actions when those precipitation amounts are less than anticipated. Management actions vary by individual ranch operation and could include various levels of culling on livestock classes, feeding hay, finding additional pasture, drylot feeding of animals, or using seeded forages. Precipitation amounts and critical dates vary for different pasture and rangeland types and location. Critical date plans and actions are flexible over time. Often it will take several years of records and observations to refine the plan for an individual operation. In general for Nebraska, important periods and dates are as follows:

Previous growing season: 2012 drought suggests the need for some reduction in stocking rate because of drought stress that will be reflected in 2013 production.

April 1: End of dormant season (October through March). Precipitation to this point supports early cool-season grass growth.

May 1: Precipitation to this point is the basis for cool-season grass growth. The amount of moisture in the soil profile at this point will also affect the rapid growth of cool-season grasses that occurs in May and is the basis for early warm-season grass growth.

June 15: Precipitation to this point is the basis for warm-season grass growth. Moisture in the soil profile will also affect the rapid growth of warm-season grasses that occurs during late June and July.

Taken In-part from: <http://droughtresources.unl.edu/web/resources/2013GrazingManagement>

Chemigation Training Dates for 2013

Listed below are the dates, locations, and contact person information for training sessions currently scheduled. Please call the contact person to register for the training so study materials will be sent to you prior to the training.

Date	Time	Location	Contact Person	Phone Number
Jan. 29	3:30 p.m.	Ag Park Club Room, Columbus	Platte Co. Ext. Office	402-563-4901
Feb. 14	9:00 a.m.	Lifelong Learning Center, Norfolk	Wayne Ohnesorg	402-370-4000
March 5	1:00 p.m.	Lifelong Learning Center, Norfolk	Wayne Ohnesorg	402-370-4000
March 26	1:30 p.m.	Courthouse Annex, O'Neill	Holt Co. Ext. Office	402-336-2760
March 26	6:30 p.m.	Courthouse Annex, O'Neill	Holt Co. Ext. Office	402-336-2760

Soybean Management Field Days Research Update January 29, 2013 from 12 noon to 3 p.m. UNL Extension Office in O'Neill

The latest information and yield results gathered from on-farm field day locations will be presented. A complimentary meal is included. To RSVP or for more information, contact the Nebraska Soybean Board to (800-852-BEAN).