

**LIVESTOCK**

# Signs to Watch When Making Decisions on Stocking Rates



by Brian Hays, pasture and range consultant | kbhays@noble.org



In Hugh Aljoe's article, the third key component of intentional management is the stocking rate management plan. This plan entails the matching of grazing livestock numbers to forage production as well as managing and adapting livestock numbers as forage production

changes within and over years.

So how can a manager determine if the stocking rate should be adjusted during the year? One way is to use an intuitive approach to the assessment, using a producer's own experience, intuition and historical ranch information.

One easy way to do this is to monitor and record the amount and timing of rainfall

events. Rainfall is likely the most limiting factor determining the amount of forage that will be produced during the year. In the southern Great Plains, about 50% of plant growth for the year is usually accumulated by June 15 and 75% of plant growth by July 15. Since rainfall can vary significantly in a given year and from year to year, intentional managers who monitor and record rainfall received will begin to see if they are below or above average throughout the year. A water year table for the operation is a simple means to monitor current year rainfall in relation to the long-term, indicating the variance from average at any given time. Based on their experiences with the land and how their forages respond to rainfall, intentional managers can determine if they should lower stocking rates when rainfall is below normal or if they should stockpile forage or increase animal units if above normal.

*Story continues on next page*

---

**A WATER YEAR TABLE FOR THE OPERATION IS A SIMPLE MEANS TO MONITOR CURRENT YEAR RAINFALL IN RELATION TO THE LONG-TERM, INDICATING THE VARIANCE FROM AVERAGE AT ANY GIVEN TIME.**

---

## MORE SIGNS TO MONITOR FOR STOCKING RATE MANAGEMENT

- Bare ground and brush and weed encroachment in the pasture: If these are increasing over time, this could be a result of a too-high stocking rate or not enough rest or recovery time before grazing the pasture again.
- Body condition score (BCS) of cows at critical times: If cattle BCS at calving and weaning are much below 5.0-5.5, stocking rates might need to be reduced.
- Amount of hay you are feeding, or the need to force cows to “hustle” on range for an extended period over winter: For example, if you planned on feeding hay for three months of the year and it turns out you actually have to feed five months, you are overstocked at least two months-worth of grazing, which comes to 16.67% of the year. The same can be said if cows are forced to “hustle” on range or consume more than the leaf portion of the pastures (leaving little residue and creating bare ground) over the winter. If forced to “hustle” the last two months of winter, then again you are at least 16.67% overstocked.



Learn more about the intuitive ranch assessment at [www.noble.org/stocking-assessment](http://www.noble.org/stocking-assessment).

- Actual forage production throughout the year: This can be done with grazing enclosures, clipping plots or using a grazing stick to measure forage height throughout the growing season. A simple guideline to remember is we never want to graze below a 3- to 4-inch residual height in pastures with introduced forage like bermudagrass, or a 6- to 8-inch residual height in native range. A good resource for setting up tables to monitor rainfall and forage production for the year can be found at [www.noble.org/rainfall-stocking-decisions](http://www.noble.org/rainfall-stocking-decisions). Over several years of monitoring rainfall and vegetative productivity you can refine the stocking rate and better match it to the available forage produced.

The important things to remember are that stocking rates should be determined annually, monitored at least seasonally and adjusted as needed based on rainfall and forage production, while providing planned rest and recovery for each pasture. An intentional manager will graze intentionally, leaving adequate forage residuals at all times to protect the soil surface and improve the water cycle. Such a manager also actively manages the stocking rate by stocking conservatively and adjusting stocking levels according to current rainfall patterns. 🐄

## STOCKING RATES

It is important to remember that:

- Are the most important decision a producer makes.
- Should be conservative, flexible and adaptable.
- Can change throughout the year.
- Are set based on amount of forage production.
- Must consider grazeable acres.

Determine if stocking rate should change throughout the year by using an intuitive ranch assessment and monitoring rainfall, vegetative production and animal performance using metrics including:

- Water year rainfall variance from long-term average
- Forage residual heights
- Percent bare ground
- Body condition scores of cows at calving and weaning
- Months of hay feeding over planned, for introduced-pasture ranches
- Months of “hustling” on native-range-dominated ranches

