

Post Rock Extension District Column

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Grass management is key to sustainability of your pasture.

Wow, Kansas has definitely been experiencing some extremely hot temperatures during the month of August! Hopefully we will start to receive some significant moisture. However, with the limited moisture, pastures around northcentral Kansas are experiencing some difficult growing conditions, so it is important to remember the proper grass management practices. Stay tuned and I will share with you some management guidelines to remember with managing your pastures.

According to Dr. Keith Harmony, our K-State Research and Extension, Range scientist at the KSU Hays Experiment Station, “Over the years, cattle producers develop rules of thumb, or short phrases, to try to help them simplify decisions that need to be made to manage their pastures. Some of these rules of thumb have merit and scientific or economic data to support the rules of thumb; however, some rules of thumb may be unfounded and lack informational support.”

Dr. Harmony stresses that one such rule of thumb that definitely holds true is: “What you see aboveground in a pasture is what you get belowground or in the root system!”

Rangeland grasses prioritize leaf growth to perform their main functions which are capturing sunlight for photosynthesis and manufacturing carbohydrates. The photosynthesis process provides leaf growth while the sugars or carbohydrates also provide growth for the leaves, but also building blocks for developing and growing more roots. Dr. Harmony points out that grasses with abundant **aboveground** biomass or yield will also have an abundant **root system**. More than half of a grass plants total **biomass** is actually belowground in the root system. So, grasses that are constantly defoliated or heavily grazed, and produce little aboveground biomass will have shorter root systems that essentially absorb water and nutrients from a **smaller** volume of soil. Grasses that are grazed heavily with little **aboveground** growth also offer **less** protection for the soil and allow greater water runoff and less water infiltration.

In a study that compared heavy pasture grazing to light pasture grazing, water infiltration rates were nearly two times **greater** in the **lightly** grazed pasture with greater aboveground biomass and soil cover.

According to Dr. Harmony, Because of these **two** characteristics, extracting water from **less** soil volume **and** capturing less **precipitation**, pastures with **heavy grazing** can create their **own** drought occurrence even in the midst of an average year of moisture. So be sure and watch your stocking rates, especially in dry conditions.

If you have additional questions on pasture management, give me a call or stop by any of our Post Rock District Offices in Beloit, Lincoln, Mankato, Osborne or Smith Center.

Post Rock Extension District of K-State Research and Extension serves Jewell, Lincoln, Mitchell, Osborne, and Smith counties. Sandra may be contacted at swick@ksu.edu or by calling Smith Center, 282-6823, Beloit 738-3597, Lincoln 524-4432, Mankato 378-3174, or Osborne 346-2521. Join us on Facebook at "Post Rock Extension" along with our blog site at postrockextension.blogspot.com. Also remember our website is www.postrock.ksu.edu and my twitter account is @PRDcrops.