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Grazing Planning, The Cornerstone

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The Evening Crew
Scott Bean

GRAZING PLANNING, THE CORNERSTONE

Standing upon a hilltop in the Flint Hills of Kansas and peering across the tallgrass prairie landscape is an extraordinary experience.

The hike to obtain such a view likely involves careful steps over and across steep, stone-covered slopes. The stones that are traversed to obtain such a view are the very stones that kept the plow from eliminating this prairie landscape.

Livestock grazing in lieu of crop production became the dominant enterprise among settlers from Europe because of this stone. Barbed-wire fence is the main means of controlling livestock in the Flint Hills. While many are thankful for the stone that kept the plow away, ranchers and those who contract to build fence may have a differing view. Never is there such disappointment in a rancher's face as when the post hole digger scratches and hops after making it only a foot deep. The realization that a couple more feet of depth will be needed to properly set a corner post is a tough one. It means hours of work with a bar or having expensive equipment to take on the job. The reason they accept the challenge is because this stone-covered landscape provides diverse, nutritious forage for their livestock and because they desire to remain good neighbors and control their animals.

With the fence comes a subdivision to the landscape. No longer are the native grazers accessing this vast landscape and being influenced by hunting or herding, droughts, and fire. The fence now defines the spatial extent of grazing that can occur. The rancher now determines the frequency and extent of intentional fire, the density of grazing animals on the landscape, and the season those grazers will be present. The fenced landscape requires a highly

skilled manager to establish site-appropriate stocking rates, monitor the flora, and fauna, and make critical management decisions so the pasture remains a healthy, functioning prairie.

Site-appropriate stocking rates must be the cornerstone of the ranch's grazing management plan. Averages are a good starting point for decision making in any business, but one must realize that a lot of highs and lows go into making an average. If pasture production is higher than average and an average stocking rate is used, the rancher could miss out on potential income from increased livestock numbers. On the flip side, when pasture production is less than average but an average stocking rate is used, negative impacts to prairie health can result. In my twenty years of inventorying and assessing rangeland, I've yet to find that "average" pasture. Recognizing the variability among fenced pasture is the key to developing site-appropriate stocking rates. Obtaining a forage inventory by pasture is a keystone step in the process.

The key difference among fenced pastures is the soil types that can be found within the fence. While many fence lines are straight and square, soil lines often follow contours and are anything but straight and square. For management purposes, soil types are grouped into units called ecological sites, a distinctive kind of land with specific soil and physical characteristics that differ from other kinds

of land in its ability to produce a distinctive kind and amount of vegetation and its ability to respond similarly to management actions and natural disturbances. Parents of multiple children can easily relate to this concept. Each child is unique and responds to instruction and discipline differently. They also each have unique skills and abilities. You know from experience that you couldn't use the same parenting technique on all the children or expect them to all do the same thing. The same goes for the various ecological sites and their ability to produce forage; sustain plant diversity; and respond to grazing, fire, and variable weather.

Resource guides known as ecological site descriptions (ESDs) have been developed to inform ranchers and land managers about the unique characteristics of the site; the plants that can be expected to be found on the sites; and how management could affect the soils, hydrology, plants, and wildlife on the site.

Utilizing ESDs, ranchers and land managers optimize their knowledge of potential plant communities, how past management has developed a current plant community, and what management practices could be used to turn a plant community that is only surviving into one that is thriving. Pastures rarely have only one ecological site present within the fenced boundary. The forage inventory considers each of the sites present in the



Stone Fence Post
Gary Gackstatter



Forgotten Farmer Fence
Mark Feiden

pasture, the unique plant community present on each site, and each site's specific ability to produce forage. With this information in hand, the rancher can design a grazing plan to enhance the productivity and health of the prairie plant community with livestock.

Livestock demand varies based on the type and size of the livestock, stage of growth, and length of time livestock will be present on the pasture unit. Cow/calf, stockers, sheep, goats, horses, or bison and full-season, short-season, or year-round grazing are among the variables with livestock type and length of season (time). Knowing and controlling these variables will dictate the amount and types of vegetation that are consumed and the long-term impact to those plants that are most desirable to the grazing livestock.

Like the visitor traversing the path to that hilltop view, the rancher carefully and skillfully implements the grazing plan. With a landscape view in mind, the rancher's path to achieve it often isn't predictable. Droughts, floods, wildfire, invasive plants, and shifts in livestock markets can quickly alter the steps taken. By navigating the site and situation variability and adjusting livestock forage demand accordingly, the rancher and land manager can positively sculpt the flora on the tallgrass prairie landscape.

It's estimated that less than four percent of the pre-settlement acreage of tallgrass

prairie remains and that a majority of that remaining amount is concentrated in the Flint Hills. Human nature often leads us into taking for granted those things we have in abundance. Locals could easily become immune to the views this prairie landscape provides. The local abundance could even callous a response to degradation or loss of additional acres. Thankfully, many ranchers and land managers understand the regional rarity of this ecosystem. Their management incorporating prescribed fire and a site-specific grazing plan, along with the stone that evaded the plow, affords us the opportunity to peer across a healthy and diverse tallgrass prairie.

Doug Spencer is a Rangeland Management Specialist assisting producers and field staff in the Flint Hills region of Kansas.