Agriculture

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April 2014 AG/BeefCattle/2014-07

Key Resources of Ranch Management

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There are five essentials for successful ranch management. These essentials consist of: 1) A life-long approach to management needs, both integrative and holistic. 2) Strive for continuous improvement of key resources. 3) Assemble and use good analysis and decision-making tools. 4) Wage war on cost. 5) Place an emphasis on marketing (Teichert, 2014). To accomplish this, Teichert suggests the key resources on most ranches consist of, but are not limited to; land, livestock, and people.

Land

Land is the most important, and most challenging of these resources because without land, you have no need for livestock, wildlife, nor people or agencies. Challenging, because the land and the operations on the land, are respectively variable and unique but also sustainable, which is defined as the ability for the biological systems to endure and remain diverse and productive.

To be sustainable, ranching must convert a natural, self-reproducing resource into a profitable commodity without undermining the long-term viability of the resource (Sayre, 2013). Today is much different than in the past in that ranching must be both economically viable and provide some form of sustainability (Sayre, 2013). This enables the land manager to reach the important goal of land health for the operation.

Land health can be defined and measured in terms of three criteria:

1) **Degree of soil stability and watershed function.** Ranch lands should not be eroding, and they should capture and retain water rather than shed it as run-off. **2) Integrity of nutrient cycles of and energy flows.** Ranch lands should support plants that capture energy from the sun and cycle nutrients from the soil. **3) Presence of function recovery mechanisms.** Ranch lands should be resistant to extreme disturbances and resilient to change. Resistance is being able to recover from ordinary disturbances (Sayre, 2013). This is possible with the presence and activity of cattle through proper grazing techniques.

Grazing Systems

The most used grazing systems used in the United States and other parts of the world include continuous, deferred-rotation, rest-rotation, and short-duration. However, climate, topography, vegetation, species of livestock to be grazed, wildlife needs, watershed protection, labor requirements, and developments are important considerations involved in grazing system selection (Holeche et al., 2004).

Continuous grazing involves grazing a specific unit throughout the year for the entire season. The problem with continuous grazing is that livestock have preferred areas. Often, cattle spend excessive time in those areas, resulting in degradation. Although it has been speculated that desirable plants, particularly grasses, will be grazed excessively under continuous grazing, research does not support this speculation for all areas (Holecheck et al., 2004). On short grass range in southeastern Wyoming, Hart et al. (1988) reported that deferred-rotation, short-duration, and continuous grazing systems at the same stocking rates did not differ in vegetation or livestock production. On mountainous

areas, continuous grazing generally results in degradation, even under light grazing (Holechek et al., 2004).

Rotational systems involve the movement of livestock from one pasture to another on a scheduled basis. The main advantage of rotation is that key forage species are provided with periodic non-use during the critical growing season (Holechek, 2004). Systems with deferment and rest typically involve livestock rotations. Deferment involves delay of grazing in a pasture until the seed maturity of the key forage species (Holechek et al., 2004). This enables the more desirable forage plants to gain vigor and reproduce. Vegetation response under this system has been slightly to moderately better than under continuous grazing on palouse bunchgrass ranges (Stoddard et al., 1975) and mountain coniferous forest ranges (Johnson 1965; Skovlin et al., 1976). It has produced the best results on tallgrass prairie ranges (Herbel and Anderson, 1959; Owensby et al., 1973). However, on flat sagebrush grassland (Hyder and Sawyer, 1951) and shortgrass (Manley et al., 1997) rangelands, it has shown no vegetation benefits over continuous grazing.

Rest-rotation is unique in that one pasture receives 12 months of non-use while the other pastures absorb the grazing load. Most rest-rotation schemes involve three or four pastures. Rest-rotation grazing has shown superiority to continuous grazing on mountain ranges where livestock distributions occur. Short-duration grazing is distinguished from other specialized systems in that a pasture receives several periods of non-use and grazing during the growing season (Holechek, 2004). The main focus is high density of animals for a short period of time. The high stocking density is thought to provide the following benefits: 1) Improve water infiltration into the soil as a result of hoof action. 2) Increase mineral cycling. 3) Reduce selectivity so more plants are grazed. 4) Improve the leaf area index. 5) Give more even use of range. 6) Increase the period when green forage is available to livestock. 7) Reduce the percentage of ungrazed plants (Holechek, 2004).

Cattle

Every cattle producer should aim to maximize their profits at all levels of production of the cattle cycle in order to generate the necessary profits to operate and grow their business (Metzger, 1994). To attain maximum profits, producers need to prepare and manage for issues that may occur on any given day throughout the operation. Producers should also strive to meet Beef Quality Assurance (BQA) standards when producing beef. These standards can be met through the producer's devotion to bring the best quality product to the consumer. A producers understanding and effective utilization of BQA standards is necessary to produce a quality product and promote stewardship.

The top priority of cattlemen is to raise healthy cattle, which are the foundation of a safe, wholesome and nutritious food supply (NCBA, 2014). Producers need to maintain efforts to continually improve the knowledge and ability to raise healthy cattle. Beef producers should not overlook proper nutrition as well. As an example, if minerals such as copper, zinc, manganese and selenium are out of balance, a cow could have problems with immune function, reproduction, digestion and metabolism, and onset of puberty, among other issues.

Another BQA priority is reducing the incidence of bruising which costs the cattle industry millions of dollars annually (Grandin, 2001). There are different ways to minimize bruising such as non-slip flooring to prevent falls and crippling injuries and humane, efficient handling. All areas where livestock walk should have a non-slip surface with gates, fences and chutes having smooth surfaces to prevent bruises. Sharp edges with a small diameter, such as angle irons, exposed pipe ends, and channels, should be avoided. These are all management practices under the BQA program.

Relative to animal health, the judicious use of antibiotics represents an important technology cattle ranchers use to provide comprehensive herd-health plans to prevent problems and treat issues, when they arise (NCBA, 2014). The approval and use of antibiotics to treat sick animals and to maintain animal health is a science-driven process. The Food and Drug Administration (FDA) approves antibiotics to treat specific diseases or conditions at specific dosage rates, and producers are legally required to follow these precise label directions. Antibiotics and are important and necessary

technologies utilized by cattle producers to protect animal health and well-being (NCBA, 2014).

People

Successful ranch management involves working with family, neighbors, the public, interest groups, and a variety of agencies. Often, those representing the public and agencies are concerned with the same resource or topic as the producer. They may have a different idea of how to get there, but none-the-less, their concern is genuine.

Ranchers, especially in the West, will deal with agencies such as: The Bureau of Land Management (BLM), National Resource Conservation Service (NRCS), and United States Forest Service (USFS). Many cattle operations have allotments on BLM or USFS lands at some point of the grazing season. The allotment rights allow a certain amount of Animal Unit Months (AUMs) per growing season in a given area. These AUMs can fluctuate depending on moisture, events such as fire, and species being listed. Often times, disagreements form by reduction in AUMs varying from year to year, as well as implementation of facilities and costs. The NRCS normally is hired by private landowners to facilitate and aid their property to a more desired state. For example, many land owners need financial aid to implement fences for a new rotational grazing system. The NRCS gives the private land owner advice on how a certain project should proceed but should never address the land owner with ignorance or disrespect.

Many issues, as the ones described above, between cattle ranchers and other agencies can be settled over time. One way to make this a reality is to follow the Coordinated Resource Management Planning (CRMP, 1989) guidelines. A CRMP group can be formulated by private land owners, the public, federal agencies, state agencies, etc., CRMP's are not formed out of legal obligation or necessity. These groups come together to discuss issues or potential opportunities. The CRMP groups formulated, all share a desire for a specific resource.

Conclusion

Ranch management's key resources consist of land, cattle, and people. All three resources play an instrumental role in the ranch management process. It is important that the land, where the operation resides, is ecologically and economically stable. For the cattle, natural resources must be maintained and enhanced. Often times to reach an equilibrium on a specific controversial issue, the public, agencies, and ranchers alike, need to come together to facilitate the process of achieving a goal. This is not always easily proven, but necessary in order for all parties to appreciate the other.

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This publication is issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Kenneth L. White, Vice President for Extension and Agriculture, Utah State University.