

It has often been argued that cattle producers are actually grass farmers that simply market the grass *through* their cattle. As you know, grass production is a key factor in managing a successful cow/calf operation. Though there are many studies proving the importance of managing the quality of the forage that is produced, this is not the sole area of production to be managed. Do not be so focused on managing the above ground production in a pasture that you neglect to take into consideration what is going on below the ground. This week we will discuss the importance of soil health, and offer some low-input suggestions for improving the soil health in your operation.

The first step in improving soil quality is to protect the soil. Having bare ground is one of the quickest ways to decrease the soil quality in your pastures. Bare ground can result in a loss of organic matter in the soil. It can also cause an increase in soil temperature, which may limit the amount of biological activity that takes place. One way to minimize the amount of bare ground is to make sure that the soil is covered with forage. This helps reduce soil temperature, and improve organic matter, both of which are important in order to maintain healthy soil.

Two of the main causes of bare ground are from overgrazing and soil disturbance. To help prevent overgrazing it may be helpful to incorporate a rotational grazing program in your operation. Rotational grazing is best implemented if each pasture involved is allowed adequate time to rest so the forages can recover before they are grazed again. This is the key to proper rotational grazing. Further, rotational grazing promotes a more uniform grazing of all forages in the pasture, as cattle are less likely to overgraze their favorite plants and leave the others ungrazed. If done correctly, rotational grazing helps recycle nutrients, reduce plant selectivity, and increases plant diversity. When stocking your pastures for rotational grazing you should stock according to how much forage the pasture can produce. That is, balance the animal demand with forage production so that overgrazing does not occur. Overgrazing may cause soil disturbance as well, which in turn causes bare ground and compacted soil, resulting in a disrupted soil microbial activity. If soil disturbance is minimized and the soil is kept covered, organic matter in the soil has a greater chance of being productive. Proper grazing management helps promote ample levels of organic matter, creating healthier soil for forage to grow in.

The next step that a producer can take to improve soil quality is to increase his plant diversity in a way that ensures living roots will be in the pastures all year long. Studies show that a more diverse above ground plant community causes a more diverse community underground. This is especially noteworthy because certain soil microbes require specific plant types. The more diverse that the microbial population is in the soil helps the forage respond better to the biological activity, resulting in higher quality forage. Increasing the plant diversity may prove to be multi-purpose, as using the right plants can extend the grazing season so that the winter grazing gap is filled. This is most commonly achieved with the use of cool season forages, such as legumes, which facilitate carbon and nutrient cycling. Using cool and warm season plants in your pastures limits the dormant seasons, thus making it more possible to have living roots in the pastures all year. This not only reduces the amount of hay that may need to be supplied during the winter months, but provides a food source for beneficial soil bacteria and ensures that an interdependent relationship between the plant roots and mycorrhizal fungi will continue to appear throughout the year.

Fertilizer costs can quickly add up and may prove to be overwhelming. Before spending countless dollars on inputs we encourage you to consider implementing these recommendations in your operation. Using your livestock to improve the soil health has the potential to reduce costly inputs by utilizing available resources, thus increasing the potential level of profitability of your operation. If you have any questions about the five tips mentioned to manage soil health, please contact us.

Thanks,

Dr. Jesse Richardson, DVM

Henderson County Veterinary Hospital

903-675-5613

hcvethosp@me.com

hcvethospital.com