Forages

Making the most of low quality forages

When hay is in short supply and much of what is available is of lower quality, what can you do when buying better hay isn't an option? What would you say if I told you that I could find you 10% more hay this season? Would you jump at the opportunity? Well, research has shown that protein supplementation can increase digestibility of low quality forages up to 10%. That's like having 10% more hay in your barn! Here's how it works…

The feed value of low quality hay is improved by digestion and conversion to microbial protein. As a rule of thumb, when the crude protein content of forages are less than 13-15%, ruminal protein output is greater than input. When feeding low quality hay, the majority of protein that the ruminants use comes from microbial protein (60% to 100%). Put simply, the ruminant is digesting the microbes. Thus the more microbes we grow, the better the ruminant does. To grow more microbes, they have to digest more hay.

With bulky, high-fiber, low-quality forages, intake is limited by the amount that can fit in the rumen at one time. The faster the bulky forage can be digested and moved out of the rumen into the lower gastrointestinal tract (rumen turnover), the faster more forages can be consumed. Quicker rumen turnover is advantageous in that more microbes are grown in the same amount of time. More microbes mean more nutrients, thus improving overall animal performance.

Ruminally available protein is a limiting factor in fiber fermentation. Remember, low quality hay contains high amounts of fiber. Protein is a key component needed for microbial adhesion to fiber which begins the fiber digestion process. Protein is also needed for the enzymes responsible for breaking down fiber. Additionally, inadequate dietary protein depresses appetite, reducing the amount of fiber available for the microbes to eat. For all of the stated reasons, protein supplementation improves the microbes' ability to digest low quality forages and increases forage intake, which in the end increases the number of microbes available for digestion by the ruminant.

As far as the microbes are concerned, it doesn't matter if this protein comes from natural protein sources or NPN. In fact, research has shown that microbes digest fiber in low quality hay moderately better with the addition of NPN-containing protein supplements vs. all natural protein supplementation. This is because 100% of NPN is ruminally available, while not all of the natural protein is ruminally available to the microbes.

However, both NPN-containing and all natural protein supplements improved fiber digestibility over hay alone. Just as you and I like three regular meals and between meal snacks throughout the day instead of one huge meal, rumen microbes respond better to small regular doses of protein rather than slug feeding once a day or less frequently. Research repeatedly shows that regular daily supplementation of protein yields better results than less frequent protein supplementation. Studies conducted at Kansas State University reflect this. In one study, reducing supplementation frequency resulted in cows losing more weight during the winter. In another, daily supplementation was shown to improve forage intake and digestibility as opposed to twice a week supplementation.

Research shows that it doesn't take much protein to enact a positive influence. Supplementation with limited amounts (less than 2 pounds) of a high protein supplement increased digestibility and intake of lower quality forages in numerous studies.

When it comes to providing supplemental protein to cattle for the purpose of stimulating microbial forage utilization and intake, there is no better method than the use of self-fed **SWEETLIX® EnProAl® poured blocks**. SWEETLIX EnProAl technology results in high quality supplement blocks with consistent hardness and intake. This results in cattle consuming small, regular doses of ruminally available protein throughout the day, every day. This continuous delivery of protein to rumen microbes results in optimum fiber utilization and helps improve rumen turnover.

SWEETLIX EnProAl weather-resistant blocks can be used under even the harshest winter conditions. These blocks don't require special feeders and will not blow away or spoil as opposed to commodity supplements like soyhull pellets or dried distillers' grains. Just roll them off of the truck bed or trailer and forget them. These highly palatable protein supplement tubs are also an excellent source of magnesium to aid in the prevention of grass tetany in early spring pastures.

In summary, dietary protein is a key factor in the microbial digestion of low quality forages. Research confirms that regular, daily intake of even a small amount of protein helps aid forage digestibility and increase rumen turnover rate. **SWEETLIX EnProAl** self-fed, poured blocks deliver 1 to 2 pounds of supplementation daily in a convenient, weather-resistant, no-waste form. **SWEETLIX EnProAl protein supplement** products are available in multiple formulations and product sizes to allow the greatest amount of flexibility for cattle producers.

For more information, contact your **local SWEETLIX dealer** or call **1-87-SWEETLIX** to speak to a SWEETLIX nutritionist.