Protect Your Hard Work with Inoc-U-Lock™

By Brian Hoffelt, B.S.

With the rising cost of forages and concentrates, it becomes increasingly important that producers put up the highest quality feedstuffs possible. Poor quality feed leads to increased costs for purchased protein, grain and forages along with additional harvest costs. An abundant supply of high quality feedstuffs helps to keep input costs low and maximizes production. A rapid, complete fermentation is essential to preserve the nutritional quality of any stored feed. The most effective way to ensure that your feedstuffs are rapidly and completely fermented is to use the Inoc-U-Lock™ line of inoculants.

How Does Inoc-U-Lock™ Work?

The Inoc-U-Lock™ line of products is designed to promote the fermentation of feedstuffs from start to finish with a process known as 'controlled fermentation.' 'Controlled fermentation' is a process that reduces the producers risk of putting up improperly ensiled feedstuffs by providing bacteria and enzymes that are designed to function in specific pH ranges. Each bacteria lowers the pH in its range of function and hands off the continued process to the next bacteria which takes it down the next pH step, driving the fermentation process from a pH of 7.0 to a pH of 4.0. This process involving bacteria and enzymes prevents the stalling out of fermentation at any point in the process. This fermentation process is similar to a relay race with each bacteria doing its part until final complete fermentation has taken place. Complete fermentation results in a proper pH which helps to assure the quality of the feedstuffs harvested.

A combination of five bacteria and four enzymes promote 'controlled fermentation' and drive the pH down to 4.0 quickly (See Figure 1). A rapid fermentation and pH drop is paramount in reducing the number of harmful bacteria and nutrient robbing yeast found in any feedstuff. The four enzymes found in Inoc-U-Lock™: Cellulase, Hemicellulase, Pentosanase and Amylase release water soluble carbohydrates (sugars) from the plant. These sugars are used to ensure that the good bacteria have a readily available food source to support fast fermentation.

All inoculants are not created equal. Many are missing key bacteria and/or enzymes that could derail the fermentation process. The five bacteria and four enzymes work together to create a controlled fermentation from start to finish. A Crystal Creek Nutritionist can help in comparing Inoc-U-Lock™ to other inoculants and provide the most accurate information regarding inoculant quality and function.

What Are The Benefits of Utilizing Inoc-U-Lock™?

Reduces Dry Matter Loss: When a feedstuff goes through the fermentation process, it can naturally lose 8-12% of the dry matter that was harvested. Utilizing Inoc-U-Lock™ can reduce lost dry matter by 4%. This 4% dry matter savings is like having an extra 4 acres worth of feedstuff for every 100 acres of feed harvested.

Example: If a dairy producer fed: 30 lbs of Corn Silage ($35/ton) and 50 lbs of Haylage ($50/ton), forage value would equate to $1.78/head/day. A 4% dry matter increase from using Inoc-U-Lock™ on a $1.78 forage value equates to $0.07/head/day or $7.00/day on a 100 cow herd. Annual savings as a result of using Inoc-U-Lock™ on a 100 cow herd would equal $2,555. The cost/cow/day for Inoc-U-Lock™ is $0.0375 on these forages.

A 1.9:1 return on investment is achieved just because of the additional dry matter available to feed. This return is based on dry matter savings alone and does not take into account the increased forage quality, which can often lead to improvements in animal production and performance.

Increased Available Protein And Energy: Heating, caramelization and mold growth, associated with a slow or incomplete fermentation, all destroy the protein and carbohydrates found in your feedstuff. Because of the controlled and rapid fermentation that Inoc-U-Lock™ produces, nutrients such as protein and carbohydrates are better preserved.

Improved Face Quality and Bunk Life With P. freudenreichii: Feedstuffs that have been fermented to a pH of 4.0 have a reduced risk of heating and molding upon exposure to air. However, some molds (like penicilliums) can thrive at a pH of 4.0 resulting in heating/spoilage and reduced animal performance. To address these low pH functioning molds, Inoc-U-Lock™ contains P. freudenreichii bacteria specifically targeting the stabilization of storage face quality and improved bunk shelf life when feedstuffs are exposed to air. When Inoc-U-Lock™ is utilized, proper fermentation down to a 4.0 pH preserves the feedstuff quality and then the P. freudenreichii bacteria stabilizes feedstuffs during face exposure, mixing and bunk life to prevent heating in the bunk. This comprehensive approach to fermentation will do a better job of supporting optimum dry matter intake and animal performance.

Profitable Animal Performance: Better feedstuffs lead to increases in animal performance, either through milk and/or meat production. This ultimately means more money in the producer's pocket.

The decision to utilize an inoculant is simple (see how the dairy producers in Germany view the use of inoculants in Dan Leiterman's article on page 6 of this newsletter). Without an inoculant, losses in dry matter, feed quality, bunk-life and productivity in your livestock will cost you significantly more than the cost of application. Research proves that Inoc-U-Lock™ will protect your hard work and help you to feed the best forage possible.

As a Crystal Creek Nutritionist I can see that feedstuffs put up with Inoc-U-Lock™ commonly test and feed better. Make the decision to utilize Inoc-U-Lock™ in your harvest this year and become more efficient and profitable - Protect Your Hard Work!

Call Crystal Creek to order your Inoc-U-Lock™ today!

Figure 1