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Protect the Value of High Quality Alfalfa Haylage

(Wisconsin) – With alfalfa prices on the rise – some running up to \$300 per ton according to the USDA’s California Weekly Hay Report - the advent of this year’s haylage season certainly bears its challenges.

Lallemand Forage Products Specialist Dr. Renato Schmidt recommends preserving the value of what producers already have, especially in today’s volatile market. High quality haylage contributes both energy and protein to the ration, reducing the amount of concentrate/grain that needs to be brought in. In addition, it will also help promote a healthier, more stable rumen.

But preserving precious dry matter and nutrients isn’t easy. “Alfalfa has lower levels of fermentable sugar, high levels of minerals, proteins and organic acids, which result in greater resistance of pH decline compared to grasses and corn,” Schmidt said. “If ensiled on the wet side, there is a risk of clostridial fermentation.” A quick drop in pH is a result of an efficient fermentation. To ensure an adequate pH drop, producers can inoculate their haylage with a quality bacterial inoculant proven to dominate the front-end ensiling fermentation.

In addition, enzymes, present in all Biotal forage inoculants, break down complex carbohydrates into water-soluble sugars, ensuring adequate sugars are available to complete a rapid, cool fermentation.

Schmidt added that the goal is “to provide a fast and efficient fermentation thus preventing losses of dry matter and nutrients, and to inhibit the growth of deleterious microorganisms. Typically inoculation improves dry matter recovery by 2-4 percent. This alone leads to a positive return on investment from inoculation.

On the other hand, alfalfa ensiled too dry can be difficult to pack adequately, meaning excess air (oxygen) may be trapped in the silage. This can promote growth of aerobic organisms, e.g. yeast, during the initial stages of the ensiling fermentation, causing energy and DM losses. This can also lead to higher yeast populations at feedout, resulting in more losses of feed value, heating and potentially mold spoilage.”

“In this case, the goal is to extend the shelf life of the silage when exposed to air,” Schmidt said. “Only *Lactobacillus buchneri* 40788 has been reviewed by the FDA for “increased aerobic stability of silage and high moisture corn stored for not less than 60 days”. Using the high dose rate of *L. buchneri* 40788 in combination with a proven front-end dominator provides cover in case haylage crop DM levels are variable, often the case in haylage crops harvested in the late spring or early summer”.

In summary, producing high quality haylage faces a number of challenges:

1. The levels of the homofermentative lactic acid producing bacteria (LAB) required to drive the ensiling fermentation are typically lower on grass and alfalfa crops than on corn.
2. Haylage crops tend to have lower contents of fermentable sugars compared to corn.
3. High protein levels increase the buffering capacity (resistance to pH drop) of the crop, meaning that more acid has to be produced. Typically alfalfa has one and a half to two times the buffering capacity of corn.
4. Lower DM haylages produced in the spring and early summer when wilting may be limited can be especially challenging. Growth of undesirable microbes like clostridia and *Listeria* is promoted at higher (>65%) moistures.

5. Haylage crops are much more prone to soil contamination, which is indicated by higher ash levels. Soil can contain very high levels of spoilage bacteria (e.g. clostridia), which can cause high total dry matter (DM), energy and protein losses if they take over the ensiling fermentation. Soil also further increases the buffering capacity of the crop.

Producers can protect their valuable forages by selecting a research proven quality forage inoculant. "Overall, inoculation produces better and more consistent quality and hygiene of the silage," Schmidt concluded.

For more information, visit www.QualitySilage.com

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