Date: August 25th 2021

Bailey's Bit About Nutrition

Why Do We Ferment Forage

Fermenting forages is very beneficial to cattle nutrition and production - wise. When forage is fermented it causes a breakdown of forage material, making it easier for animals to digest. Since the fermented forage is easier to digest, the bodies can digest forage quicker and releases more energy for the animal. The cattle can utilize the feed more efficiently and this will result in less waste in the undigested material that they excrete.

Breaking it down to the molecular level, microbes multiply and break down the forage through the fermentation process. When the microbes break down the forage, they produce volatile fatty acids that act as a natural preservative. When the cattle consume this forage they also consume probiotic microbes that boost the beneficial population in the animals gut. There is a great example of what the fermented feeds look like on the second page. It points out the different zones in the feed. The aerobic zone will be the outer layer of the forage. The transition zone, between the aerobic and anaerobic layers, is where the beneficial yeast grows. The anaerobic zone is where the microbes are the most active. This zone is the darker layer and is referred to as "caramelized." The animals get very excited about it. Fermented forage has great nutritional value and leads to a stronger and healthier cow.

Product of the Week

Fermentation "Plus"

Fermentation "Plus"™ Silage Inoculant contains live and naturally occurring microorganisms to ferment most plant materials. It can help you produce superior silage with low pH and high lactic acid. Fermentation "Plus" also helps prevent silage spoilage by inhibiting growth of harmful organisms.

Benefits include:

- Reduced heat damage.
- Reduced harvest loss
- Improves feed palatability
- Increases feed digestibility and value

This product is available in both dry-granular and water-soluble forms. There is a guaranteed analysis of a lactic acid bacteria count of 100 billion ($1x10^{11}$) CFU per pound for dry-granular and 90.8 billion CFUs per gram for water-soluble forms.

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Why Silage is great for Dairy Cows

- Nutritious and delicious: fermentation converts grass sugars into acids (volatile fatty acids). These acids preserve the nutritional value of the silage by preventing spoilage micro-organisms from utilizing the nutrients.
- Silage trumps hay: silage preserves more nutrients from the original pasture. Nutritional losses are smaller when you convert pasture to silage as opposed to hay.
- Cost-effective: As a home-grown food source, silage is a cost-effective and sustainable way to provide your herd health with many of the nutrients and calories they need to stay healthy and productive.
- Bunk life is increased: minimize exposure of fermented feeds to oxygen will hinder the growth of spoilage yeasts and molds will increase bunk life and preserve the quality of the silage
- High net energy: The net energy of silage is highly variable. Nutritional content depends on the quality of pasture as well as the fermentation process and storage. However, research shows that in dry matter grass silage provides 9-12 MJ/kg.
- Boost milk yields: Energy from nutritional silage aids in body condition and the energy necessary for each cow to reach its milk production potential.

MidwesternBioAg.com | Phone: 608.437.4994 | Nutrition@midwesternbioag.com