Lance Van Sluys
LANCE@VANSLUYSDAIRY.CA
403 892 8891

Clint Van Sluys
CLINT@VANSLUYSDAIRY.CA
403 382 0664

Emily Cunningham
EMILY@VANSLUYSDAIRY.CA
289 924 0433

VAN SLUYS EST. 2010 vDs DAIRY SOLUTIONS

146 Broxburn Bvld.
Lethbridge AB

August 1st 2024

Ken Barwegen
KEN_BARWEGEN@VANSLUYSDAIRY.CA
403 393 9550

Joel Maljaars
JOEL@VANSLUYSDAIRY.CA
587 394 5241

Visit our website: Vansluysdairy.ca

TOP NEWS OF THE MONTH

Fire Prevention: Forages

>>> Keep the Heat Out of Forage Storage

Dry conditions have increased fire risk, particularly for forages. Fires can start when heat builds up in high-moisture material, causing spontaneous combustion. Producers should be aware of heat levels and use a thermometer rather than a hay moisture probe to check temperatures. A sweet smell or musty odour are signs that hay should be checked.

Gut Health=Animal Health <<<

Rumen Care is a cost effective supplement which contains live yeast cells, a pre and probiotic with trace minerals to enhance gut microbiota and rumen pH levels. Helps address oxidative and heat stress! **Rumen Care** optimizes the digestibility of all types of forages and protects the rumen from molds, toxins and aids to prevent diseases!

Trust the Gut: Rumen Care

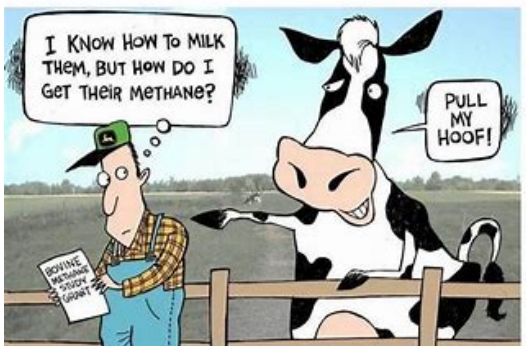


PHOTO CONTEST!

Submit your best harvest photo

- 1st Place: $100 & Prize Pack
- 2nd Place: $75 & Prize Pack
- 3rd Place: $50 & Prize Pack

Entry Deadline: **August 31st, 2024**

UPCOMING EVENTS:

Customer Appreciation
August 14th- John Martin Park

FROM HARVEST TO FEED: UNDERSTANDING SILAGE MANAGEMENT

Jones, C. M., Roth, Ph.D, G. W., Heinrichs, J., & Ishler, V. A. (2023, March 8). From harvest to feed: Understanding silage management. Penn State Extension. https://extension.psu.edu/from-harvest-to-feed-understanding-silage-management#section-88

STAGES OF SILAGE FERMENTATION & MEANINGS BEHIND THE STAGES

The fermentation process of silage involves several phases, starting with plant respiration, which occurs when forage is cut. This phase, also known as the aerobic phase, occurs when green plants continue to live and respire for several hours. The process involves aerobic bacteria growing on the stems and leaves of plants, which consume carbohydrates stored in the plant and produce carbon dioxide, water, and heat. The heat produced by these bacteria causes an initial rise in silage temperature, which should be no more than 20˚F greater than the ambient temperature at ensiling.

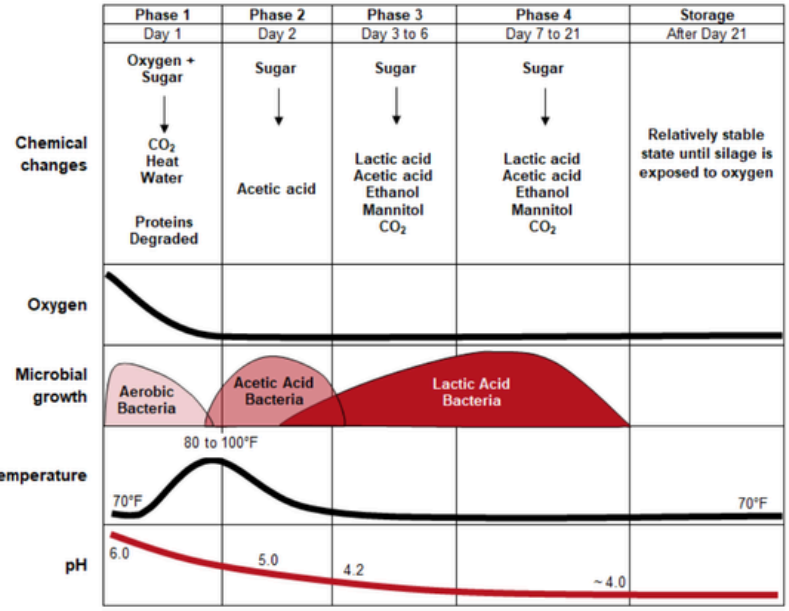
The second phase, acetic acid production, begins as oxygen supply is depleted, causing anaerobic bacteria to multiply. These bacteria convert plant carbohydrates to acetic acid, which lowers the pH of the forage mass, causing the acetic acid bacteria to decline in numbers. This phase continues for one to two days and merges into phase 3.

The third phase, initiation of lactic acid production, begins as the acetic acid-producing bacteria decline in numbers. This phase encourages the growth of lactic acid-producing bacteria, which convert plant carbohydrates to lactic acid, acetic acid, ethanol, mannitol, and carbon dioxide. Homolactic bacteria are preferred due to their ability to convert plant sugars to lactic acid exclusively.

Phase 4 is the peak lactic acid production and storage, continuing for about two weeks or until the forage mass's acidity is low enough to restrict bacterial growth. Proper fermentation can result in a stable silage mass within 21 days.

MOLDS & MYCOTOXINS: HOW MUCH OF AN EFFECT IS ENOUGH

Molds can grow on forages or concentrates at any point in the crop production cycle, requiring favorable environmental conditions. Ensiled forage typically meets these requirements, but eliminating oxygen is crucial to restrict mold growth. Conditions that encourage mold growth increase the risk of mycotoxin problems, such as wet weather, insect damage, and frost. Proper agronomic practices and fermentation in silo can prevent mycotoxin production. Mycotoxin poisoning is less of a concern in dairy cattle than in monogastric animals, as toxins are partially degraded in the rumen. Test all feed ingredients, including concentrates, and add a binder ingredient (adsorbent) to inactivate mycotoxins. Consult a dairy nutritionist for guidance in testing forages and feeds for mycotoxins.



SPOILAGES, SOURS AND OXYGEN LEVELS

Spoilage organisms in silage can be controlled by limiting oxygen levels and pH, but exposure to oxygen can allow yeast growth, causing spoilage. This can lead to increased temperature, pH, and fiber content, reducing the nutritional quality of silage. Factors affecting bunk life include oxygen levels, carbon dioxide levels, spoilage organism population, temperature, incomplete fermentation, forage dry matter, and fermentation species. Proper storage and sealing can help limit spoilage and maintain silage stability.