The Best yeast product for Dairy Cows

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Summary

There are only two realistic classes of functional yeast products used in dairy production. Active (live) Dry Yeasts and Yeast Metabolites.

Based on meta-analysis of research supporting claims and security in application Yeast Metabolites (Diamond V) provide the better option.

Benefits of using yeast products in dairy surround the following:

• Improved milk production.

• Greater dry matter intake (DMI). This only refers to yeast metabolites (Diamond V).

• Better body weight maintenance

• Improved feed efficiency

Types of yeast products for dairy cows

There are three categories of Yeast products are available; Brewer's yeast, Live yeasts (DFM) and Yeast metabolites.

1. Brewer's Yeast

   Brewer's yeast is a by-product from the breweries. Brewer's yeast is obtained by the removal of yeast after the brewing process and subsequent inactivation by means of organic acids. The yeast by-product is not live and offers no functional properties beyond its nutritional profile.

   Brewer's yeast is used as a flavouring ingredient in the food industry, and as feedstuff for pigs, ruminants, poultry and fish. Brewer's yeast **is mainly a source of protein, vitamins and minerals.**

2. Active dry yeasts (ADY)

   The most common ADY species used in the feed industry is Saccharomyces cerevisiae and guarantee a live coliform unit per gram (CFU/gm)

   In regard to the mode of action most suppliers lean towards oxygen scavenging as their primary selling point. For microbes to survive in the rumen they require an anaerobic environment. As the yeast grows it creates a more hospitable environment for microbe life. Adding live yeasts to the rumen are intended to utilize this oxygen for their metabolism.

Once the oxygen is removed, the rumen bacteria attach efficiently onto the fiber particles and digest the forage. The extent somewhat depends on the exact strain of the yeast and the rumen condition.

There is a significant amount of research indicating that ADY improve performance of dairy cows in defined controlled trials, whatever the mode of action.

People question if live yeasts can in fact survive the harsh acidic environment of the rumen and that delivering viable units effectively in the field is compromised.

3. Yeast Metabolites (eg. Diamond V)

Yeast Cultures are produced during anaerobic fermentation of *Saccharomyces cerevisiae.* The bioactive components are the metabolites produced during fermentation. Most residual yeast cells are killed in the process.

The purpose of fermentation is the production of extracellular metabolites by the yeast cell. There are three groups of biochemicals we are interested in: compounds that affect the taste of the feed (palatability factors), the smell of the feed, and those that **stimulate bacterial growth** in the digestive tract (nutritional metabolites of nutrilites). It is the later that appear to provide the performance attributes associated with this class of yeast. Growing more bugs in the rumen is a good start.

This class of products has by far the largest research data set supporting performance claims.