# Amino acid innovation now protects milk profits by protecting methionine

®vistapass™

AMINO ACID TECHNOLOGY, INTELLIGENTLY APPLIED

ABVista

# **OPTIMISING AMINO ACIDS,** THE NEW PROFITS AND RESILIENCE

## Getting more from less

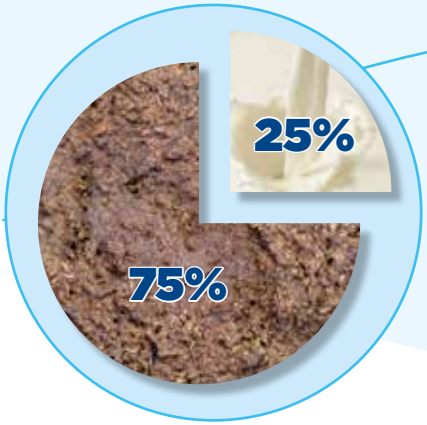
The milk-to-feed price ratio has been dropping since November 2021 (Global Dairy Insights, IFCN, 2023). Therefore, getting more from less has become a top priority for many dairy producers.

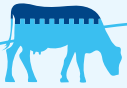
With growing pressure to reduce the environmental impact of milk production and the challenge of rising feed costs, alternative strategies should be considered. However, managing this in a way that does not impact performance or well-being is crucial to overall profitability and success.

**Protein is essential in ruminant nutrition for microbial protein synthesis and plays a crucial role in:**

- Stimulating the growth and activity of rumen microbes for increased VFA production; and
- Tissue maintenance, growth and the development of muscles and organs.

Efficient utilisation of dietary protein depends on formulating diets that deliver the optimal amount of metabolizable amino acids in relation to metabolizable energy.



**Only circa 25% of nitrogen consumed by dairy cows is converted into milk protein, with the remainder excreted in urine and faeces, and this negatively impacts the cost and environmental efficiency of milk production.**

# INTELLIGENT WAY TO BUILD MILK

## Feed ingredients and methionine

A building block of protein, methionine is essential for various biological processes and is also one of the first limiting amino acids (AAs) in most diets. Each feed ingredient provides a different amount of protein and, therefore, methionine (Figure 1). And while some feed ingredients have excellent amino acid profiles, not all do which is why most ruminant diets are limited in methionine.

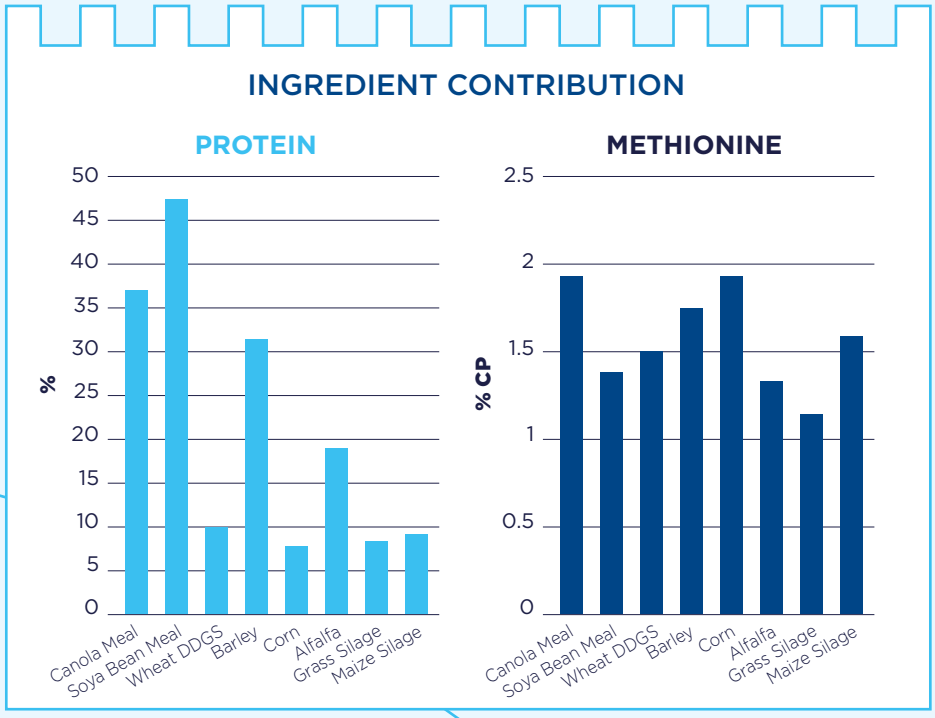
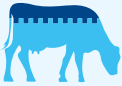



**Figure 1.** Protein level and percentage methionine in some of the most utilised ingredients in dairy diets.

# **OPTIMISING AMINO ACIDS,** THE NEW PROFITS AND RESILIENCE

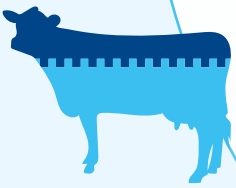


To optimise milk production and overall cow health, it is essential to provide dairy cows with a balanced diet that stimulates ruminal fermentation while meeting their specific amino acid needs. The percentage of methionine varies from ingredient to ingredient, making it a challenge to balance diets for methionine requirements.

Also, premature rumen degradation of dietary methionine by the microorganisms further reduces availability to the animal. Therefore, the addition of a rumen-protected methionine, such as VistaPass M, can ensure delivery to the animal where it is needed – and adopting this strategy can help build the cows' resilience and protect milk profits.

**How to ensure optimal AA uptake:**

- Ensure correct fermentation in the rumen; higher fermentation means higher energy and more amino acids going to the intestine.
- Drive fibre fermentation to reduce Sub-Acute-Ruminal-Acidosis (SARA) and support ruminal health.
- Monitor ingredient quality, mixability and digestibility; monitoring intake and output helps to define AA inclusion.



®vistapass m

# INTELLIGENT WAY TO BUILD MILK

®vistapass M

VistaPass M is a rumen-protected methionine produced under a unique microencapsulation technique to target optimal bioavailability to the animal and support methionine requirements.

Depending on the goal, it should be formulated into diets accordingly – something AB Vista's feed intelligence approach can help with, providing the expertise and support to meet various objectives.

**VistaPass M's benefits:**

**REDUCED**
**protein feed costs**

**IMPROVED**
**milk components and yield**

**REDUCED**
**environmental impact**

**BUILDS RESILIENCE**

ABVista

# AB VISTA HAS SEVERAL TECHNICAL **APPLICATION OF VISTAPASS M**

## NIR

Forage quality highly varies across farms, harvest years, and calendar years which may impact the estimation of methionine content in the forage, particularly when it is expressed as a percentage of crude protein. The AB Vista NIR (Near InfraRed Spectroscopy) Service measures forage and feed ingredient composition, providing producers and nutritionists with accurate methionine levels for precise nutrition and ration optimization.

Our AB Vista network of labs can provide NIR predictions of the amino acid content of cereals, vegetable by products and protein sources. While reducing the cost of analysis along with turnaround time, the amino acid predictions maximize the value of the feed concentrates and purchased ingredients in the ration, with an accurate determination of the methionine content.

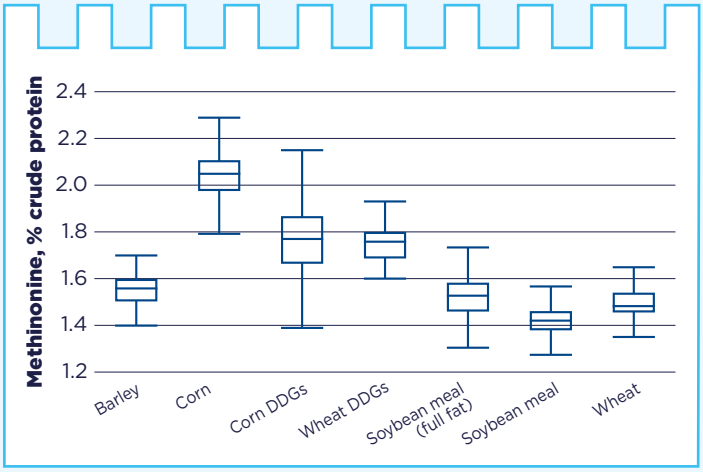



**Figure 2.**
Data refers to the ratio of NIR predicted Methionine to NIR predicted crude protein by ingredient type. Internal data, January to June 2023.

vistapass m

# SERVICES TO **SUPPORT THE**

## Emissions Service

A big proportion of cow emissions come from the production of feed. Changes to feed formulation and the use of additives to enhance nutrient utilisation can have a big impact on the reduction of overall emissions of the farm.

AB Vista's Emissions Service uses the GLFI database, an internationally-recognised table reporting the carbon emissions factors for raw materials by geography. The model follows the IPCC Guidelines, under Scope 3 emissions standards and PAS 2050 methodology.

The inclusion of VistaPass M in the dairy ration can reduce the crude protein content from 16% to 14% (Abedal-Majed *et al.* 2023) This enabled a 12% reduction in milk carbon footprint (gCO2e/kg fat and protein corrected milk). Additionally, it was shown to decrease feed costs and have no impact on performance.

**Depending on the objective, the production data of the farm is collected and entered into the carbon footprint model with the support of an AB Vista representative.**

**We perform an in-depth review of the outputs, applying our nutritional expertise to develop clear and actionable insights into the mitigation of GHG emissions of the animal product, and adapted to the customer objective.**

**Outputs are delivered to the customer in a tailored report.**

Find out more at: **www.abvista.com**



®vistapass™

AMINO ACID TECHNOLOGY, INTELLIGENTLY APPLIED

ABVista