ED&F MAN
EST. 1783

Liquid Products

Molasses: Powering the Rumen

RESEARCH PROVEN

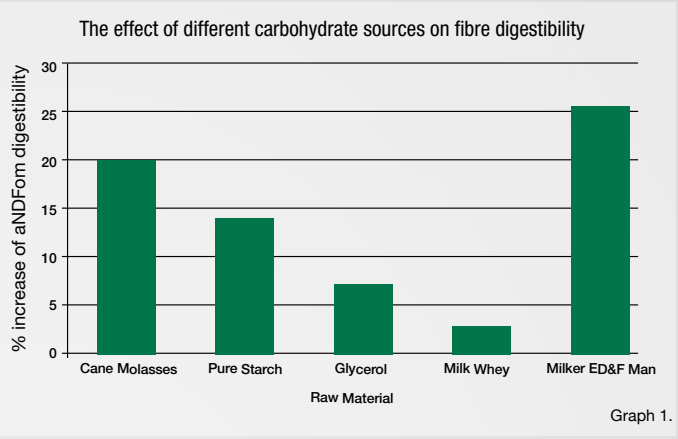
Why feed molasses?

The addition of sugars to a ruminant diet has a significant effect on both fibre digestion (Graph 1) and microbial protein production (Table 1) which are the two key drivers for maximising animal performance.

Feeding a molasses based liquid feed has been shown to stimulate rumen fermentation and microbial activity, leading to an increase in fibre digestion.

Maximising rumen function and efficiency is essential for cost effective production on farm, both in terms of milk yield and live weight gain. By enhancing rumen function, this will:

- Generate energy in the form of volatile fatty acids (VFA's)
- Stimulate the production of microbial protein



Graph 1.

	Silage Alone	Added Sucrose 6-carbon (from molasses)	Added Starch	Added Xylose	Added Lactose	Added Fructose
Microbial Protein production g/d	64	**93**	74	82	89	86

Table 1.

Fibre Digestion

Silage whether it be grass, maize or wholecrop is the lowest cost nutrient supply available to livestock farmers. Therefore, maximising the fibre digestion of home-grown forage is vital for cost effective milk production or live weight gain. Farm trials carried out by ED&F Man have shown significant improvement in fibre digestion (Figure.1) with a 17% improvement in fibre utilisation after using a molasses based liquid feed.

Adding sugar to replace a proportion of the starch has also been shown to increase fibre (NDF) digestibility. Ideally the starch to sugar ratio should be around 3:1 for optimal rumen function. This can only be achieved by incorporating additional sugars. Depending on the base level of sugar in the ration feeding a product such as Stockmol 20 or Molale can ensure the optimum sugar level, and starch to sugar ratio is achieved.

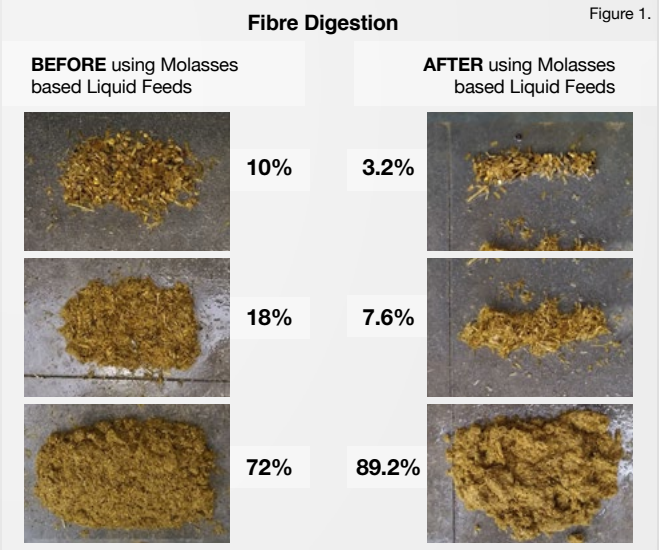


Figure 1.

Sugars & Milk Quality

For many farmers it is critical to improve milk quality in order to maximise returns per litre and improve enterprise margins. An improvement of 0.2% fat and 0.1% protein can result in a significant increase in milk price. Using a molasses based liquid feed can help improve milk constituents by maximising forage intake, improving fibre digestion and optimising rumen function.

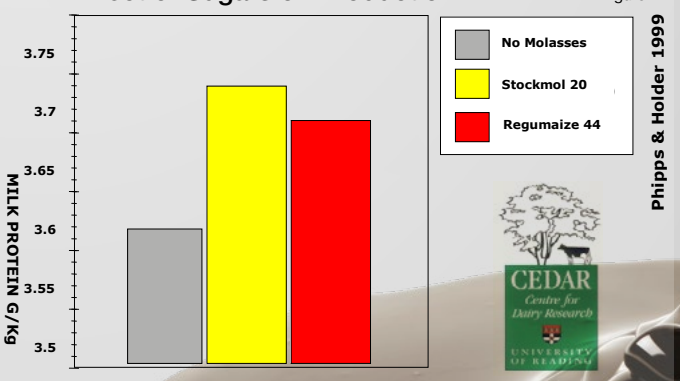


Figure 2.