



With milk price under pressure this summer, cost effective production is vital. Using a molasses based liquid feed can help achieve this by maximising forage intake, fibre digestion helping optimise rumen function. All of which contribute to efficient milk production

**Molasses
The
Essential
Ingredient**

The right type of sugar

Sugars are simple carbohydrates but the term sugar covers a wide range of different types. It is vital to understand that in terms of ruminant nutrition the different types of sugar have significantly different values. The most effective sugars are 6-Carbon sugars such as sucrose and glucose. Research has shown that 6-Carbon hexose sugars are more effectively fermented than 5-carbon pentose sugars. Many processed feeds are sources of 5-Carbon sugars. Molasses based liquid feeds are excellent sources of 6-Carbon sugars. The tables below highlight the difference between different types of sugar both (6-Carbon v 5-Carbon) in terms of rumen breakdown and VFA (Butyrate production) and the effect on fibre digestion and microbial protein production. All vital in maximising livestock performance

6-Carbon (Hexose) vs 5-Carbon (Pentose)
Pentoses are less well utilized by rumen bacteria

	Ruminal degradation (%)	Butyrate production (%)
Glucose (6c)	73,1	20,54
Fructose (6c)	89,0	20,26
Sucrose (6c)	-	20,22
Xylose (5c)	53,6	12,73
Arabinose (5c)	-	12,77

University of Pretoria, 2012

	6-Carbon sugars	5-Carbon sugars
Sources	Molasses Grazed grass SBP	Wheat syrup Fermentation co-products Fermented silage Processed feeds
Structure		
Rumen digestibility	84%	<50%
Improved fibre digestion	Yes	No
Increased microbial protein production	+45%	+28%
Stimulate rumen fungi	Yes	No

* Griffin & Tucker. Herts Dairyman Sept 2011

No one ingredient can magically improve the performance of livestock rations, it about getting the balance right. Buying cheaper feed or using more of a cheaper ingredient this winter because the milk price is low is not the right option. Putting together a well-balanced high quality diet will always produce the best result in the long term across all areas of herd performance including herd health and fertility not just cost effective production.