

Typical Dry Matter Analysis	Regupro Syrup*	Suga-Fix
Dry Matter (%)	50	50
Crude Protein (%)	38	22
Sugar (%)	20	20
ME (MJ/Kg DM)	12.6	12.7

\*Contains urea

## REGUPRO SYRUP

**Regupro Syrup is designed to be a cost effective and reliable alternative to low dry matter 'syrops' produced from various industrial processes. With the included Regulated Release technology, Regupro Syrup can provide additional protein to the diet when other sources are unavailable or not cost-effective.**

Regupro Syrup has all the benefits of a molasses based liquid feed, such as reduced sorting, stimulating fibre digestion and improving rumen fermentation. However, it also provides the ideal combination of readily available energy and both natural and Regulated Release protein. This synchronised supply of energy and protein allows the rumen to thrive and increases microbial protein synthesis. With a higher yield of microbial protein less extra protein, in the form of soya or bypass protein, needs to be fed. Microbial protein is the most economic source of protein for ruminants with a high digestibility value and optimal amino acid profile.

The utilisation of protein in the rumen is dependent on a good supply and intake of readily fermentable energy, i.e. sugar, rumen degradable protein (RDP) and an ideal rumen environment. ED&F Man's high protein liquid feeds can help with all three of these points. The sugar and protein content in Regupro Syrup has been designed to produce a synchronous environment in the rumen. Along with the added benefit that 6-Carbon sugars in molasses help to maintain the ideal rumen environment keeping the pH within optimal levels, which should be above 5.8.

Highly effective protein supplementation doesn't have to be an expensive cost on farm. By utilising the ruminant's natural ability to produce microbial protein this can allow for cost effective production.

ED&F Man's Regulated Release range provide cost effective protein in a limited market. Research that was carried out using Regumaize 44 has shown the ability to replace 1.6kg of a rape/soya blend @ £0.51 with 2kg high protein liquid feed @ £0.44 – for a 300 cow herd this can mean a saving of +£3000!

## SUGA-FIX

**Suga-Fix has been designed to be a cost effective and reliable alternative to low dry matter 'syrops'. Suga-Fix provides a high-quality source of both sugar and energy helping to encourage intakes on farm as well as reduce sorting and dust levels.**

Sugar is an essential part of a well-balanced ration. Sugar has a high nutritional value, and acts as a functional ingredient which stimulates the rumen microbial population, drives fibre digestion and increases microbial protein production. Rumen microbes utilise sugars as a source of rapidly fermentable carbohydrates, providing

instant energy to the microbes, this increases and maintains the rate of microbial multiplication.

An abundant rumen microflora is essential for rumen efficiency as it can enhance the ability of ruminants to extract energy from fibre and non-protein amino acids from nitrogen. Molasses has been shown to increase populations of bacteria within the rumen which are linked to increased fibre digestion and lactic acid utilisers, helping to maintain an optimum rumen pH.

Maximising the fibre digestion of home-grown forages 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 with a 17% improvement in fibre utilisation after using a molasses based liquid feed.

Sugars are simple carbohydrates, but the term sugar covers a wide range of different molecules. It is vital to understand how the different types of sugar exert different effects on the rumen microorganisms. All ED&F Mans molasses based liquid feeds are based on cane molasses which contains high levels of 6-Carbon (hexose) sugars. Research has shown that 6-Carbon sugars such as sucrose and glucose are utilised more efficiently and support more effective rumen fermentation. Whereas, 5-Carbon sugars such as xylose and arabinose, mainly found in forage, are less degradable and produce a lower proportion of the VFA butyrate.

Historically, liquid feeds have been used for their non-nutritional benefits such as reducing dust levels, reducing sorting and increasing dry matter intakes. ED&F Man's continued research into the effects of liquid feeds has shown us that liquids have a greater functionality in the diet beyond those non-nutritional benefits. Such as their influence on rumen activity, volatile fatty acid production, rumen pH, milk quality, fibre digestibility and the list can go on. The effect a liquid feed can have within a diet goes beyond its protein or energy level.

Adding liquid feeds to a dairy, beef or sheep diet can help improve dry matter intakes, reduce sorting as and reduce the risk of sub-acute ruminal acidosis (SARA). This helps improve efficiency and animal health which in turn supports cost effective production.

## Availability, Handling & Stability

Regupro Syrup and Suga-Fix are manufactured to a guaranteed specification and are produced to order, giving users the confidence to build a ration that can be consistent and reliable in terms of quality, nutritional value and availability. Low dry matter co-products are often assigned a 'typical analysis', which can vary significantly, this can impact greatly on performance.

For efficient and cost-effective production, livestock rations needs to be consistent, in terms of both nutrient content and ingredients used. Whenever a ration is changed, it can take up to 2 weeks for animals to adapt to the new ration and get back to optimum levels of performance.

All ED&F Man liquid products are just that: *Liquid*. They are free flowing and easy to handle. Some liquid co-products can be extremely thick and difficult to handle, especially once they have cooled down. We have had to help more than one customer clean out their tank following a trial with a low dry matter 'syrup'. Our products are also inherently stable with a long shelf life, something you should always check before taking a new product. Some materials must be used within 1 week! Available in full loads only.