

WHAT IS CALCIUM SALT OF LONG CHAIN FATTY ACIDS ?

The calcium soap of long chain fatty acid or CaLCFA is a type of rumen bypass fat made specially for high milk–yielding dairy ruminants (animals with 4 stomachs) such as cows, goats and sheep. Due to high requirement of energy to produce more milk and to recover from birthing (needed to get the animal to lactate), there is a need to provide a diet of highly intense energy feed. In addition to this, ruminants have a very specific digestive system that would not tolerate the presence of oil (triglycerides + glycerol) in the 1st stomach or rumen. And hence this energy feed must be able to stay inert to be digested in the later part of the system.

The CaLCFA is one such product made specially for such a purpose. It is categorized as a rumen bypass fat eventhough technically, it is more of a soap as it's name implies ! The CaLCFA is made by combining long chain fatty acids with a calcium source resulting in a soap that will stay inert in the rumen or 1st stomach. Because it main structure consists of fatty acids which essentially is unattached triglycerides – the main ingredient in an oil or fat that is converted to energy, the CaLCFA once broken up in the acidic 4th stomach, allows the fatty acids to be digested and converted into energy.

The fatty acid types in our CaLCFA as of the long chain types which are similar to the ones found in cows milk and have been proven to be conducive to the well–being of lactating animals.

WHY CALCIUM SOAPS ?

As demand for higher productivity increases, farmers of dairy cows are increasing faced with the need to supplement energy sources that could not longer be assuaged by the feeding of more dry matter.

Moreover, in the balance of economics, the cheapest energy source based one calorimetric contribution has to be derived from oils & fats.

However the feeding of more oils & fats will invariably cause more harm than good because oils & fats break down in the rumen, into fatty acids. These same fatty acids will then be subjected to bio–hydrogenation processes that will inhibit microbial activities in the same rumen. This disruption will lead a variety of problems that reduce the health of the animal such as :

- Reduce appetite
- Slow recovery after calving

- Low milk–yield
- Fertility problems
- Ketosis, Acidosis
- Death

If rumen activities are so crucial, then energy supplements via oils & fats will have to be modified in a way that it by-passes the rumen before it could be absorbed. The Calcium Soap offers one such alternative. The calcium bonding with fatty acids prevents the product from being reacted upon in the rumen stage thereby providing the crucial “inertness”.

This simplistic effect actually took away a majority of the problems mentioned above and will allow the modern **high milk–yielding cows** the much needed energy to stage a recovery after calving and since rumen activities were not affected, nutrients absorption from dry matters intake is also optimized.

The calcium soap stays inert in the rumen and then passes on through to the abomasums where the relative acidity condition there will naturally break down the calcium bonding and allow for optimal intestinal digestions.

SPECIFICATIONS (Typical)

Fat content	84 %
Ash content	13 %
Calcium	9%
Moisture	3%
Fatty acid composition	Short Chain Saturated C12:0 Lauric – 0.2% C14:0 Myristic – 1.2% Long Chain Saturated C16:0 Palmitic – 47% C18:0 Stearic – 5% Long Chain Unsaturated C18:1 Oleic – 38% C18:2 Linoleic – 8%
Appearance	<ul style="list-style-type: none"> • Light yellow–brownish granules • Free flowing
Taste / Smell	Bland with a slight but not unpleasant acidic nose
Digestion efficiency	@ 95%

NEL	@ 5.9 Mcal/kg
ME	@ 7.1 Mcal/kg
UFL	@ 3.3 UFL/kg

DOSAGE

Medium yielder of 4000–5000 litres – dairy cows	300 – 500 gm per day
High yielder of more than 5000 litres – dairy cows	500 – 1000 gm per day
Lactating ewes and goats	100 – 150 gm per day
Young animals	Upto 3% of feed intake

Notwithstanding the above, as a rule of thumb, the dosage should contribute to a total maximum of 7% fat of the weight of the dry matter consumed. For example if dairy dry matter consumed is 20kg. Fat content derived from dry matter is 600gm (normally about 3%). Max CaLCFA to be fed would be 4% or 800gm.

BENEFITS FROM USING OUR CaLCFA

- Faster recoveries for your calvers.
- Quick return to optimum fertility condition.
- Optimum milk production.
- Increase in milk yield.
- Decrease in metabolic complications such as ketosis, acidosis, milk fever.
- Optimal nutrients absorption for your animals.

WHY IS OUR CaLCFA DIFFERENT FROM OTHERS ?

- Our CaLCFA is produced from a dedicated plant where only vegetable oil based fatty acids are being used as opposed to some others where the production of animal origin feed materials also takes place.
- The palm fatty acid distillates sources are specially scrutinized and as soon as they are produced, the raw materials are delivered to the factory for almost immediate processing into the CaLCFA. The proximity of the factory to the sources of the raw materials means that our CaLCFA is probably the freshest calcium soap that one can ever get.

- Our CaLCFA is 100% Malaysian origin. Malaysia is the world's largest producer of palm oil and has the most developed & efficient refining industry where the Palm Fatty Acid Distillates are produced.
- Location at the country of origin also brings about a host of other economic benefits as the raw materials are not subjected to longer logistical chains that will increase it's costs.