



High growth rates in the first few weeks of life have been shown to demonstrate clear long term benefits on fertility, survivability and lactation performance providing a clear return on the investment in early life nutrition.

The latest science shows that the first eight to ten weeks of a calf's life provide a huge opportunity to optimise the lifetime performance of the cow. The key scientific principle behind the LifeStart Programme and the observed increase in animal production is known as metabolic programming; whereby an animal's productive potential as an adult is influenced by the growth achieved early in life.

The LifeStart Programme is dedicated to providing the information and expertise to help both farmers and the industry take advantage of this exciting discovery.

## LIFESTART® SETS LIFE PERFORMANCE

Combined with the LifeStart Programme, Milkivit helps to rear calves that grow into healthy and productive cows. For more information: lifestartscience.com

#### The benefits of following LifeStart calf feeding schedules.

Trouw Nutrition has carried out research comparing LifeStart calf feeding schedules with elevated planes of nutrition to more traditional calf feeding schedules. Trials show that by applying LifeStart scientific principles and feeding schedules during the first 70 days of a calf's life, calf nutrition improves and farmers benefit from;



Higher average daily weight gain



**Earlier breeding** 



Better udder development



Higher milk production



A lower culling rate during 1st and 2nd lactation





#### **Milkivit Calf Milk Replacers**

Milkivit stands for dedication to quality milk replacers for over 60 years, and this experience combined with the latest scientific knowledge can help you ensure a healthy future for your farm. The ingredients in Milkivit Calf Milk Replacers ensure improved solubility and stability in solution.

#### Formulation: focus on nutritional quality

All calf milk replacers in the Milkivit dairy calf portfolio are carefully formulated to comply with the LifeStart accredited guidelines. This ensures the nutritional and physical parameters have been carefully considered to satisfy calf requirements, providing you with the confidence that they are safe to feed at an elevated level to capture long term performance benefit.

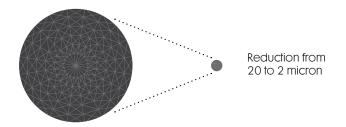
### LIFESTART® SETS LIFE PERFORMANCE

#### Manufacturing: focus on consistent quality

The specialised raw materials are produced by Trouw Nutrition. The process begins by mixing the fresh dairy products with vegetable oils and fats. This mix is pasteurised and then high-pressure homogenised and spay-dried, utilising advanced technology. This results in miniscule fat globules of uniform size, similar to the small fat molecules in cows' milk.

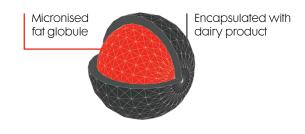
#### **Homogenisation**

Creates an optimal fat globule size, similar to cows' milk, for improved solubility and stability in solution.



#### **Encapsulation**

The micronised fat globules are encapsulated with dairy products to improve the absorption and increase intake.



## **Energized Calf Milk:** a revolution in early life nutrition

LifeStart science indicates that there are benefits to be gained in modern dairy herds from having higher energy levels and lower osmolality in milk replacers.

Milkivit Energizer is the first in a range of Energized Calf Milk (ECM) products designed to revolutionise the way we feed calves. ECM has been designed to support the LifeStart objectives:





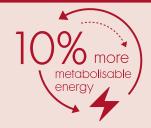
OPTIMAL DEVELOPMENT PRESILIENCE TO DISEASE ( LONGEVITY







With an osmolality of 350 mOsm/kg, ECM is the closest to the 330 mOsm/kg in cow's milk.



There are 2.9 MJ of ME in 1 L mixed at 135 g/L.



Reformulated for elevated planes of nutrition.

#### The key benefits of ECM vs whole milk



Eliminates contamination reducing the risk of AMR.



Consistency of manufacture ensures safe feeding every time.



Winner of the Award for Innovation.



#### **Milkivit Energizer**

Energized Calf Milk has been developed with whole milk as the biological reference; the best of whole milk combined with the best of CMR.

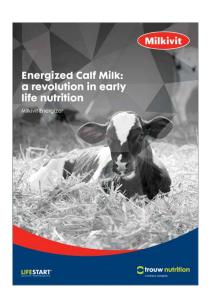


Oil 25.0% Protein 22.5%

Ash 7.0%

Fibre 0.0%

For more details on Energized Calf Milk please request the Milkivit Energizer brochure or visit **trouwnutrition.co.uk/ecm** 



## Milkivit product range

Every calf rearing system is different. The Milkivit portfolio of products, endorsed by LifeStart Science, aims to provide a complete offering in order to deliver the solution for the needs of the modern farmer.

Careful mineral and vitamin supplementation in young calves is essential to support development, health and performance. The Milkivit portfolio is the first calf milk replacer range to utilise chelated minerals in the form of Selko® Optimins® as well as natural vitamin sources. These carefully selected sources help to optimise bioavailability whilst supporting gastro intestinal environment.



#### Skimmed milk based calf milk replacers

Skimmed milk based calf milk replacers offer a highly digestible protein source to support optimum growth and performance in early life, ensuring that the genetic potential is captured.

#### **Milkivit Optimizer**

Milkivit Optimizer is an energy dense, high quality skimmed milk based product. Excellent digestibility supports optimal development allowing the genetic potential of the calf to be captured.

Oil 21.0%

Protein 23.0%

Ash 7.0%

Fibre **0.02**%

#### **Milkivit Rearing**

Milkivit Rearing is a digestible skimmed milk based product that supports elevated levels of feeding to allow calves to achieve excellent performance.

Oil 17.0%

Protein 23.0%

Ash 7.5% Fibre **0.02**%







#### Whey based calf milk replacers

Whey based calf milk replacers offer a consistent and cost effective feeding option to support growth and performance.

#### **Milkivit Elevate**

Milkivit Elevate is an energy dense, whey based milk replacer that offers the building blocks to ensure growth and development to support lifetime performance.

Oil 21.0%

Protein 23.0%

Ash 7.5%

Fibre **0.02**%

#### **Milkivit Premium XL**

Milkivit Premium XL is a versatile whey based milk replacer that supports strong, cost effective growth and development at this critical stage in life.

Oil 17.0%

Protein 22.0%

Ash 7.5% Fibre **0.02**%



# LifeStart sets life performance Colostrum feeding

Colostrum is the first critical step in calf nutrition. Colostrum contains antibodies which give immunity to the calf at the start of life; adequate colostrum intake is crucial for protecting against early life health conditions as well as supporting optimal growth rates and performance.

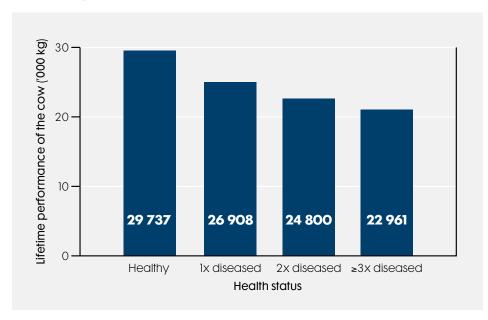
It is our recommendation that all calves receive 4 litres of clean, high antibody colostrum within the 4 hours after birth. This should then be followed up by a further 2 litres within 12 hours of birth. Use of a refractometer is recommended.

Milkivit Calf Milk Replacer or Energized Calf Milk should be introduced once your on farm colostrum protocol has been completed.

Following successful passive transfer, Milkivit Calf Milk Replacers can be the next step in rearing more robust calves that are healthy and more productive for their entire life.

Most of the studies that proved the LifeStart principle used high quality milk replacer and a simple, intensive feeding schedule. Shown on page 11 is an example of such a schedule that we have developed to help you achieve the LifeStart effect using Milkivit. This has already achieved some excellent results.

#### Healthy calves grow to produce more milk<sup>1</sup>



### **LifeStart with Milkivit**

## Calf rearing plan and management

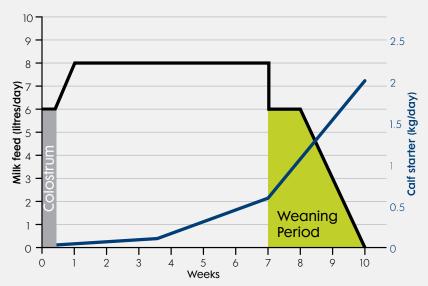
#### LifeStart enhanced performance:

Feed at least twice per day (calves may benefit from increased feeding frequency).

Mixing temperature: 42°C Feeding temperature: 38-40°C

Mixing rates at 150g per litre of mixed Milkivit Calf Milk Replacer

or 135g per litre of Milkivit Energizer.

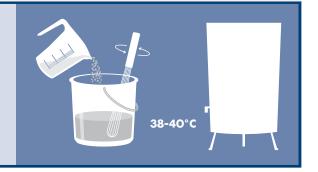


- If calves are easily consuming the allowance, as per the minimum LifeStart calf feeding plan, increase volume to satisfy appetite.
- A suitable concentrate should be offered as soon as possible, fed fresh daily with rejected feed removed.
- Good quality straw should be made available at all times.
- Clean fresh water should be available at all times.
- The calf should be consuming at least 2kg of concentrates per day for three consecutive days at weaning.
- During periods of cold weather increase intake of mixed calf milk replacer by 0.5-1.0 litre/calf/day.

Milkivit Calf Milk Replacers can be easily prepared manually with a bucket and a whisk. For larger amounts it is very convenient to use a milk mixer.

A feeding machine should be set for the correct dry matter proportion.

Feed Milkivit Calf Milk Replacers to your calves at a temperature of 38-40°C.





Reference: 1. Trilk, J and Münch, K (2010) Studies on the influence of animal health and the breeding behaviour of calves on the future performance of the dairy cow. Landesamt für Ländliche Entwicklung, Landwirtschaft und Flurneuordnung, Frankfurt.

Milkivit®, LifeStart® and Selko® are brands of Trouw Nutrition, a Nutreco company.

Trouw Nutrition is a global leader in innovative feed specialities, premixes and technical services for animal nutrition. Quality, innovation and sustainability are the guiding principles behind everything we do – from research and raw material procurement, to the delivery of cutting-edge products and services for agriculture.

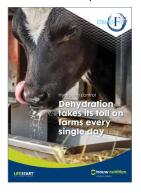
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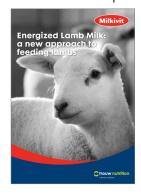
# For more information trouwnutrition.co.uk

#### Other calf products available:





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