



# MEGALAC<sup>®</sup>

Rumen-protected fat,  
providing energy for improved  
milk yield and fertility



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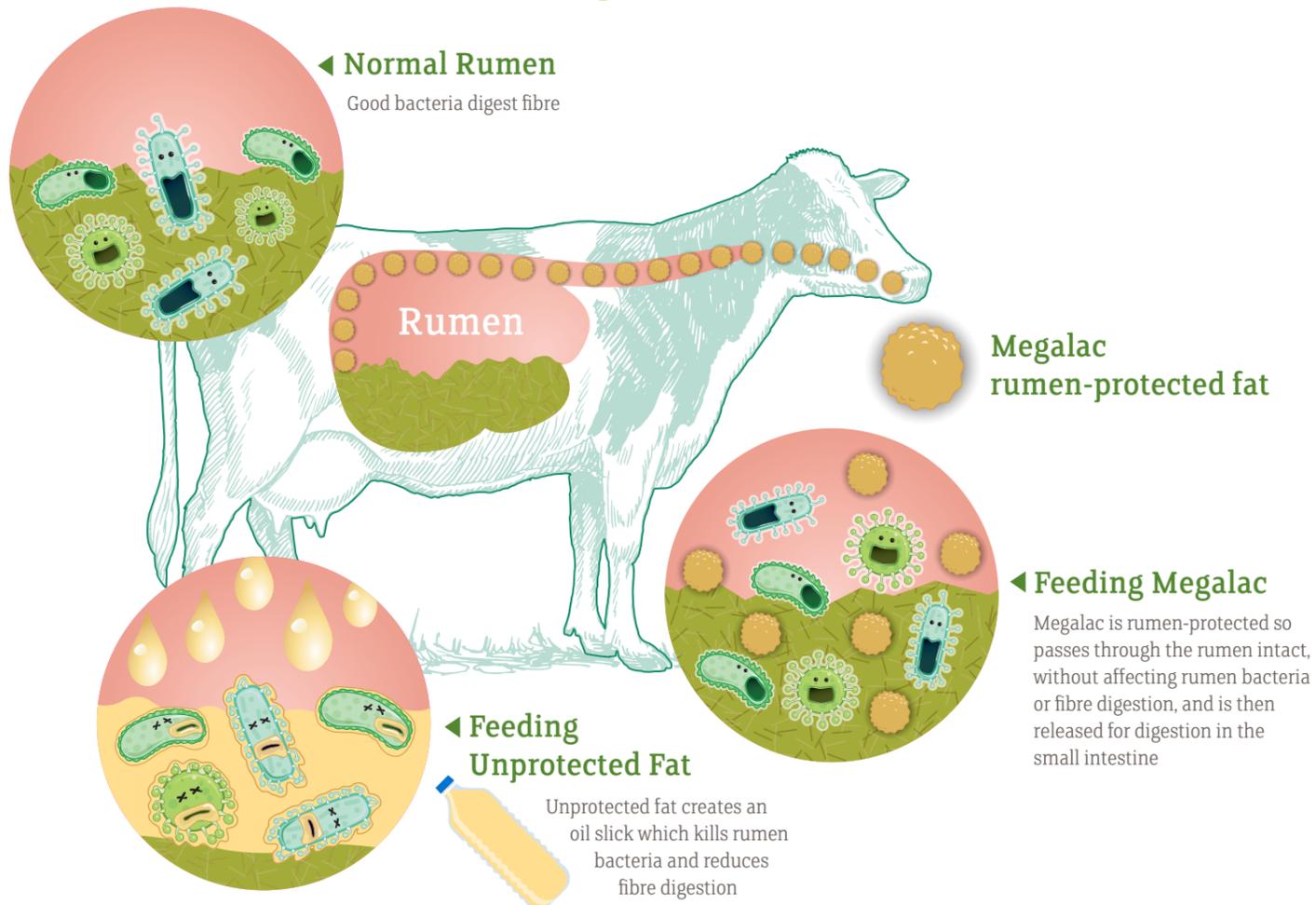
More milk, better fertility

# Megalac - More milk, better fertility

## What is Megalac?

- Megalac is a high-energy rumen-protected fat made by reacting fatty acids and calcium to produce a rumen-insoluble fat supplement.
- Megalac avoids the disruption to fibre digestion associated with liquid oils and high-oil ingredients in the ration.
- Megalac granules pass through the rumen (ideal pH >6) but are broken down in the acidic small intestine (pH 2.5) to release the fat and calcium for digestion.

## How does Megalac work?



## Why Feed Megalac?

Megalac is a proven ingredient for increasing milk yield and cow fertility. It also supplies fat, one of the essential nutrients for productivity in dairy cows.

With over thirty years of research work at universities and research centres, and practical experience on farms, Megalac is one of the most proven feed ingredients on the market.

### ► More milk

- The average increase in milk yield, recorded across 18 research studies, is 2.3 litres/cow/day from a standard supplement of 500 g of Megalac.
- This additional milk is produced primarily from the increase in energy supply from Megalac which has an energy concentration over 2.5-times that of cereals.
- Megalac also has the highest measured net energy of lactation (NE<sub>L</sub>) value of any ingredient, indicating its very high efficiency for milk production.
- Adding Megalac to diets improves feed efficiency, producing more milk/kg feed.

### ► Better Fertility

- As a concentrated source of energy, Megalac increases energy supply and is targeted to improve energy balance and reduce body condition loss of dairy cows to increase the likelihood of successful pregnancy
- As a guideline, conception rate decreases by 10% for every 0.5 unit decrease in body condition score (5-point scale)
- Megalac also increases production of progesterone, the essential hormone for pregnancy, and improves quality of eggs and development of embryos, all of which contribute to improved fertility.
  - In research work at the University of Florida (USA), Holstein cows offered 450 g of Megalac/day for 120-days from calving had higher conception and pregnancy rates.



	Control Diet	Megalac-supplemented
Conception rate to 1st service (%)	33.7	45.5
Conception rate to 2nd service (%)	28.8	75.0
Pregnancy rate (%)	52.3	86.4

University of Florida (USA)



## 'Safer' diets

Megalac is an excellent ingredient to help formulate more-balanced rations which can help reduce risk of digestive disorders.

Energy without acid

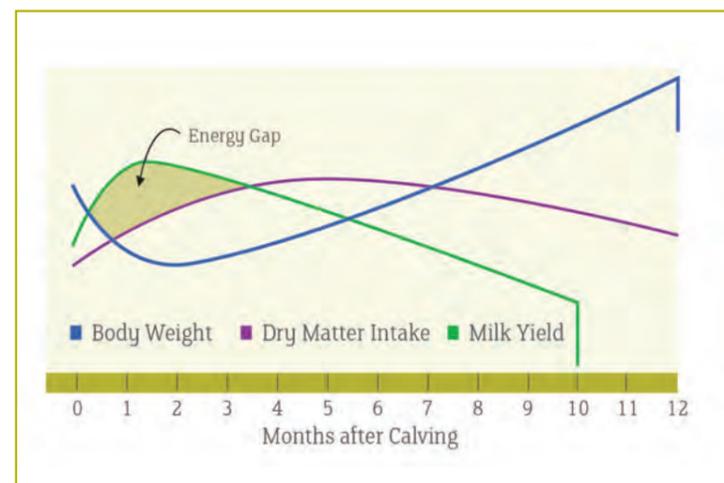
Megalac supplies energy as fat which, unlike starchy sources of energy such as cereals, is not fermented to acid in the rumen. This enables increased energy supply without increasing risk of acidosis and associated health problems such as lameness.

## Other Benefits

- As a source of unsaturated fatty acids, adding Megalac to diets reduces the concentration of saturated fatty acids in milk fat.
- Megalac is not fermented in the rumen and reduces production of methane, one of the so-called 'greenhouse' gases. This not only has environmental benefits but also improves efficiency of use of energy in the diet.

## When to feed Megalac?

- Megalac can be fed throughout lactation, but is particularly targeted to early lactation rations.
- Milk yield increases rapidly after calving, while dry matter and energy intake rise at a much slower rate. This leads to an 'energy gap' in early lactation when cows 'milk off their backs' to meet the energy shortfall and therefore lose body condition.
- Megalac increases energy density in rations (more energy per bite) to supply additional energy despite lower intakes.



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## What the expert says...



“Megalac was developed to provide energy for high producing cows. It is a calcium salt of fatty acids, providing fatty acids for energy in a form that is insoluble, thus unreactive, in the rumen. Standard fat sources are reactive in the rumen, inhibiting fibre-digesting bacteria, and promoting formation of unsaturated fatty acid isomers that cause milk fat depression. The unreactive fatty acids of Megalac are highly digestible in the intestine and contribute directly to milk production with greater energetic efficiency than non-fat energy sources. Research has shown that Megalac increases milk yield more consistently than other fat supplements and contributes to improved fertility.”

**Prof Don Palmquist**

*Ohio Agricultural Research and Development Center /  
The Ohio State University, USA*

## What the farmers' say...



“Megalac is a key part of the ration for my cows all year round. With an average milk yield of 13,000 litres/cow, energy demands are high and Megalac allows me to increase energy supply without compromising herd health. The farm also maintains high levels of fertility with a calving interval of 392 days, supported by attention to detail and sound nutrition.”

**John Hannan**

*Friarstown, Crecora, Co. Limerick, Ireland*



“Megalac has been an integral part of our all-year-round feeding regime for many years to help promote milk yield and fertility. Maintaining body condition score on high yielding cows is very challenging, particularly in early lactation, so boosting the energy density of the diet with Megalac helps support yields while preserving body condition and fertility.”

**Richard Best**

*Marsh Farm, Saltash, Cornwall, UK*



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FEED INGREDIENTS

# How Much Megalac To Feed ?

Research indicates that the amount of fat required by a dairy cow (neither gaining nor losing body weight) is equal to the amount of fat produced in milk each day.

Example fat requirements	
Milk yield	<b>40 kg/day</b>
Milk fat	<b>4.0 %</b>
Milk fat yield	<b>1.6 kg/day</b>
Diet fat requirement	<b>1.6 kg/day</b>

Estimates of fat supply from a diet and requirements of cows at particular levels of production can be determined using the Volac fat calculator.

See Fat Calculator: [www.volac.com/fat-calculator](http://www.volac.com/fat-calculator)

Species	Typical feed rate (g/head/day)*
Lactating Cows	<b>400-800</b>
Dry Cows	<b>125</b>
Beef Cattle	<b>150-500</b>
Sheep & Goats	<b>50-100</b>

Megalac should always be mixed with other ingredients in the diet and can be included as part of a total mixed ration, blend or compound feed.

Ideally Megalac should be incorporated into the ration over a few days to help acclimatise the animal to the new ingredient.

\* For more specific recommendations consult with a nutritionist

## Megalac - Description

A dry free-flowing granular product with consistently-sized large granules and minimal fines.

### Typical Analysis (%)

Fat 84	Ash 12.5	Calcium 9	Moisture 5
<b>ME 33.3 MJ/kg DM</b>			

### Fatty Acid Profile (% of total fatty acids)

C16.0 48	C18.0 5	C18.1 36	C18.2 9
<b>Saturated</b>		<b>Unsaturated</b>	

## How is Megalac packed ?

Available in 25 kg bags on pallets, mini-bulk bags and true bulk.

### Storage

Store in cool, dry conditions.



For further information:

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