



# RUMIFAT

## Rumen-inert/ protected fat

### BENEFITS

- Higher energy density of feed
- Healthy and functional rumen
- High bypass rate
- Increase milk fat & yield
- Improve reproductive performance

“Calcium salt and prilled fat provided high energy without the risk of disrupting rumen fermentation.”

- A 100-Year Review:  
Fat feeding of dairy cows.  
D. L. Palmquist and T. C. Jenkins.  
*J. Dairy Sci.* 100:10061–10077

### Provide bypass fat to enhance energy intake to improve milk production

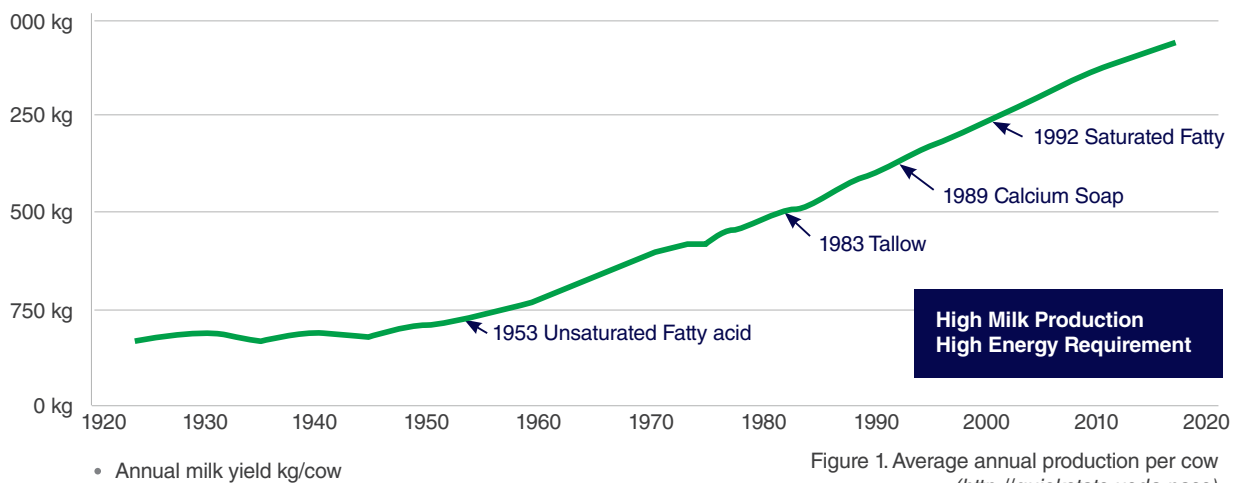
It is a common practice to feed rumen-inert and protected fats to dairy cows to achieve a higher milk yield. This increase can be achieved by providing dairy cows with a high energy density diet. RumiFat series offers a more convenient and sustainable alternative for your dairy farming experience that refines rumen-inert and protects fats. Undergoing the fractionation process of refining, bleaching, and deodorizing palm oil, this product contains high amounts of palmitic acid - an essential fatty acid that translates into a highly digestible energy source for the animal when bypassed in the rumen.

## From oil seeds to rumen bypass fat

In 1894 (Wood, A. H., 1984), the first report of feeding oil to enhance milk fat production was published. For centuries, professionals have studied and mastered the knowledge of applying fat to increase milk yield without

disrupting rumen fermentation. Upon studying the matter, cotton seeds, tallows, calcium salt and prilled fat, are discovered to provide high energy density and fatty acids to achieve different purposes.

### The relationship between fat and milk yield



**1950-1980** Tallow and vegetable soap stocks become readily available as livestock feed. (Brooks et al., 1956)

**1980-1990** Preformed calcium salts of fatty acids are fed to cows, marking the beginning of the “bypass fats” era. (Jenkins and Palmquist, 1984)

**1990** High palmitic fats are examined for their benefits on milk fat yield. (Mosley et al., 2007; Lock et al., 2013; Mathews et al., 2016)

## Different fatty acids, different functionality

In the modern dairy industry, farmers have increased palmitic acid (C16:0) inclusion rate to enhance the yielding of milk fat and milk. There was also an increase

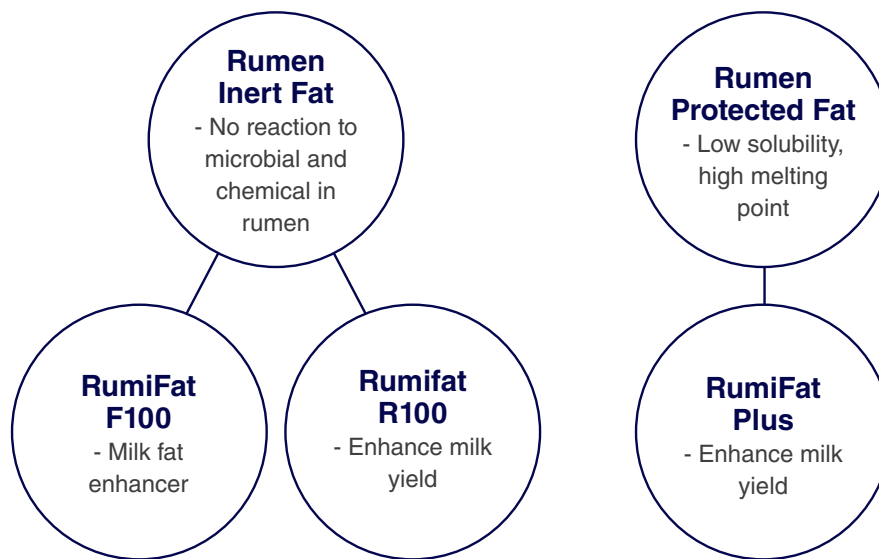
in protected linoleic (C18:1) and linolenic acids(C18:2) in animal feed to improve reproductive performance.

## Different forms of bypass fat, different application

The major forms of bypass fat in the market are calcium soap of palm fatty acid distillate (rumen-protected fat) and palmitic-rich prilled fat (rumen inert fat). Calcium soap allows higher bypass rates of C18:1 and C18:2 to keep body condition score, enhance fertility rate, etc. Palmitic-rich prilled fats are segregated into two forms -

forms of free fatty acids and triglycerides. The free fatty acids often contain higher C16:0, which results in higher levels of milk fat. That said, a recent research involving fatty acid blends containing C16:0 and C18:0 showed that dairy cows responded with a higher milk fat and milk yield. (Bruch et. Al., 2021)

### Bypass Fat - Only fat Ruminant



## Dairy farm trial

During an isoenergetic experiment, a trial period of one week was conducted, with a total of 20 dairy cows allocated in each group.

	ADDITIONAL (g/cow/day) isoenergetic	C 16:0 Intake (g/cow/day)	DMI (kg/day)	Milk Yield (kg/day)	Milk Fat (%)	Lactose (%)	Milk Protein (%)
RumiFat R100	200	150	26.45	38.55	3.66	4.70	3.14
RumiFat F100	200	170	25.32	37.92	3.75	4.62	3.17
RumiFat Plus	240	92.7	24.23	37.54	3.49	4.53	3.04

The result showed the same energy level, the dry matter intake and milk yield are similar, with only differences in the milk fat. Higher C16:0 intake will increase milk fat production.

As a result, the dry matter intake and the milk yield showed similar production of energy levels while differing in milk fat production. It also depicts that a higher C16:0 intake increases the milk fat production.



#### APPLICATIONS

- Used as a feed additive in the production of complete feeds or ruminant TMR feeds.



#### PACKAGING

- 25kg (55 lb) laminated PP woven paper bag.



#### FEEDING RECOMMENDATION

- 100-400g/com/day of completed feeds or TMR for dairy cows.



#### KEY BENEFITS

- Increase energy density of feed
- Rumen Health
- High bypass rate
- Increase Milk fat & yield
- Improve reproductive performance



#### STORAGE

- Store in a cool and dry place, keep away from direct exposure to sunlight and heat. 12 months shelf life.

*Disclaimer: The information and recommendations contained herein are to the best of our knowledge reliable. However, nothing herein is to be construed as a warranty of representation in respect of safety in use, suitability, efficacy or otherwise including freedom from patent infringement. Users should conduct their own tests to determine the suitability of our product for their own specific purposes and the legal status for their intended use of the product.*

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