



# MEGA-MAX™

The multi-purpose rumen-protected fat



**MEGA-MAX™**

Optimum balance

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Mega-Max is a multi-purpose fat supplement for dairy cows and other ruminants targeted to improve milk yield, milk fat, fertility and body condition score throughout lactation.

Fat supplements differ depending on the type of fatty acid building blocks they contain and this is the key factor determining the effects of a product when included in a diet. Mega-Max is uniquely-formulated with a specific balance of palmitic (C16:0) and oleic (C18:1) fatty acids to achieve performance benefits through the whole lactation.



Properties	Typical value (%)
<b>Fat</b>	<b>84</b>
<b>Calcium</b>	<b>9</b>
Typical fatty acid profile (% total fatty acids)	
<b>C16:0</b>	<b>58</b>
<b>C18:0</b>	<b>5</b>
<b>C18:1</b>	<b>28</b>
<b>C18:2</b>	<b>6</b>
<b>Others</b>	<b>3</b>

## Importance of C16:0 to C18:1 ratio

Research has demonstrated that supplements with high levels of C16:0 fatty acids increase milk fat while C18:1 increases fat digestibility and fertility. These fatty acids also affect the partitioning of nutrients between milk and body fat in dairy cows.

Supplements with high C16:0 concentrations and low C18:1 lead to increased milk and milk fat production, but increase condition loss in early lactation, while supplements with higher levels of C18:1 and lower C16:0 are more effective in maintaining body condition through early lactation.

## Why is Mega-Max unique?

Manufactured to Volac Wilmar's unique specification, Mega-Max combines C16:0 and C18:1 fatty acids in the ratio determined to be most effective in the critical early lactation period to balance milk production and body condition.

In later stages of lactation, Mega-Max supplies C16:0 to increase milk fat and C18:1 to improve fertility, offering an ideal one-product solution to fat supplementation for dairy farmers.

## Proven by research

In research at Michigan State University, USA, freshly-calved cows were offered a Control or Mega-Max-supplemented diet from days 1-24 post-calving, before groups were split again for the peak period of production from days 25-67 of lactation.

Cows supplemented with Mega-Max produced more milk at higher milk fat % at all feeding periods, increasing production by up to 5.1 kg/day compared to Control group cows. Importantly, this additional production was achieved while maintaining live weight and body condition.



### Fresh period (days 1-24 of lactation)

	Control (no fat supplement)	Mega-Max group
<b>Dry matter intake (kg/day)</b>	21.4	21.2
<b>Milk yield (kg/day)</b>	39.1	40.6
<b>Milk fat (%)</b>	4.62	4.94
<b>Milk fat yield (kg/day)</b>	1.80	1.96
<b>Live weight (kg)</b>	692	700
<b>Body condition score</b>	3.37	3.39

### Peak period (days 25-67 of lactation)





Diet offered	Control	Control : days 1-24 Mega-Max : days 25-67	Mega-Max : days 1-24 Control : days 25-67	Mega-Max
<b>Dry matter intake (kg/day)</b>	27.7	28.2	28.4	28.3
<b>Milk yield (kg/day)</b>	50.4	52.4	52.6	55.5
<b>Milk fat (%)</b>	3.47	3.79	3.55	3.67
<b>Milk fat yield (kg/day)</b>	1.76	1.96	1.88	2.07
<b>Live weight (kg)</b>	677	672	675	680
<b>Body condition score</b>	3.26	3.12	3.22	3.13

# How to feed Mega-Max

Mega-Max should be mixed with other ingredients in the diet and can be included as part of a total mixed ration, blend or compound pellet.

For feed mills, Mega-Max offers the potential to increase C16:0 concentration of compound pellets without compromising pellet quality (hardness) as is the case when products with very high concentration of standard high-C16 supplements are used.

## Typical feed rates\*

Species	g/head/day	
Lactating dairy cows	300 - 800	
Beef cattle	150 - 300	
Sheep	50 - 100	
Goats	50 - 100	

\* For more specific recommendations consult with a nutritionist

## Mega-Max description and packaging

- Dry, free-flowing granules
- Off-white / grey in color
- 24 x 25 kg bags per pallet
- Mini-bulk bags (2 x 650 kg bags/pallet)



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