



**progut**<sup>®</sup>  
**RUMEN**

## A New Generation Yeast

**Progut Rumen trials have shown:**

- Unique patented hydrolysed yeast
- Shown to increase milk yield by up to 1.8KG per cow per day
- Works throughout the lactation cycle
- Shown to improve milk quality (somatic cell score)
- Increases propionate and reduces methane
- Works on all of the cows all of the time



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*The agri-technology company*

# What is Progut® Rumen?

Progut® Rumen is a '3 in 1' yeast-based feed ingredient rich in Mannoproteins, Betaglucans, nucleotides and peptides. Whole yeast cells are extracted and processed in a way that enhances all the nutritional and health benefits of both the yeast cell wall and cell contents.

Extensive research has shown these Mannoproteins, Betaglucans, nucleotides and peptides have a number of key benefits in ruminants:

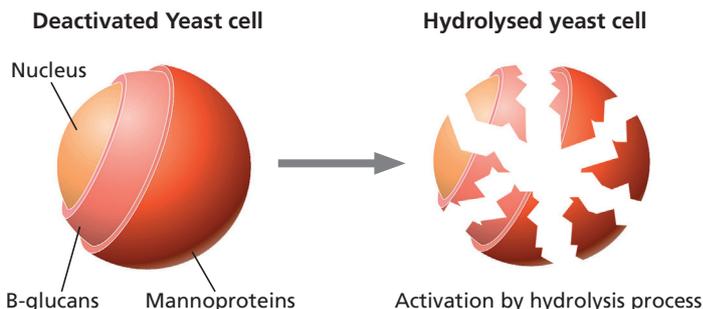
Mannoproteins - Binding of toxins

Betaglucans - Activation of the immune system

Nucleotides and peptides - maintains cells and tissues and support the regeneration of mucosal cells in the gut

## Unique patented hydrolysed yeast

What makes Progut® Rumen unique is the patented hydrolysis process (EP 0946108) used to break down the yeast cell. This is a controlled process which results in a consistent product with outstanding repeatable results.



## Increasing milk yield by up to 1.8kg per cow per day

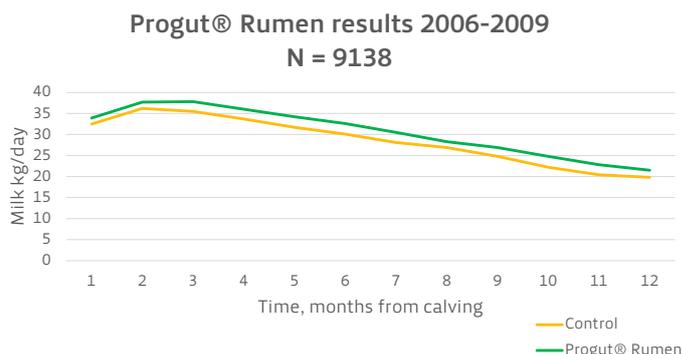
Progut® Rumen has undergone an extensive trialling process, all of which have shown an increase in milk yield. In the most recent of these trials at Portlaoise, (2013), a total of 248 Holstein-Friesian cows were used in 2 separate but identical trials. Cows were divided into 2 groups, control and treatment. The cows were allocated to the groups based on previous milk yield, Body Condition Score (BCS), days in milk and a number of other factors to ensure that the only difference between the groups was that Progut® Rumen was fed to the treatment group.

	Control	Progut® Rumen	Difference	Statistical Significance
Milk Yield (Entire Group) kgs/cow/day	25.32	26.09	0.77	p<0.01
Cows milking >24kgs/cow/day	28.36	29.65	1.29	p<0.01
Cows milking >30kgs/cow/day	33.19	34.97	1.78	p<0.05

The trial showed that cows yielding above 24 litres per day gave 1.29 litres more when fed Progut® Rumen compared with the control; and cows yielding above 30 litres per day gave 1.79 litres more when fed Progut® Rumen.

## Progut Rumen® works throughout the lactation cycle

Trials conducted on over 9000 cows showed that Progut® Rumen consistently outperformed the control for additional production right throughout the lactation cycle. Results showed up to 6% more milk with Progut® Rumen.





## Improving milk quality (Somatic Cell Score)

Milk quality (Somatic Cell Score) was measured as part of the trial at Portlaois in 2013, and as the table below shows, Progut® Rumen significantly reduced the Somatic Cell Score and therefore improved milk quality when compared to the control group.

	Control	Progut® Rumen	Difference	Statistical Significance
Log 10 Somatic Cell Score (Entire Group)	2.17	2.05	0.12	p<0.01
Cows milking >24kgs/cow/day	1.93	1.81	0.12	p<0.05

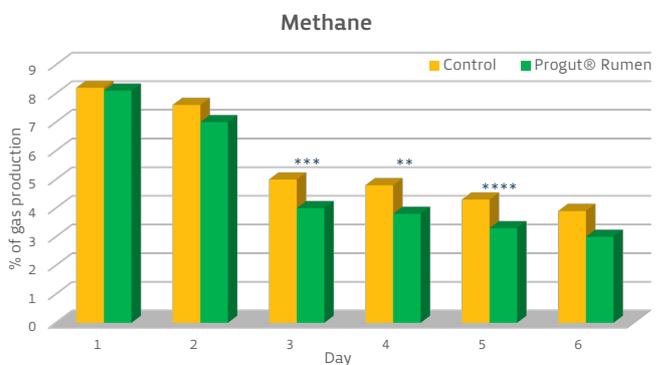
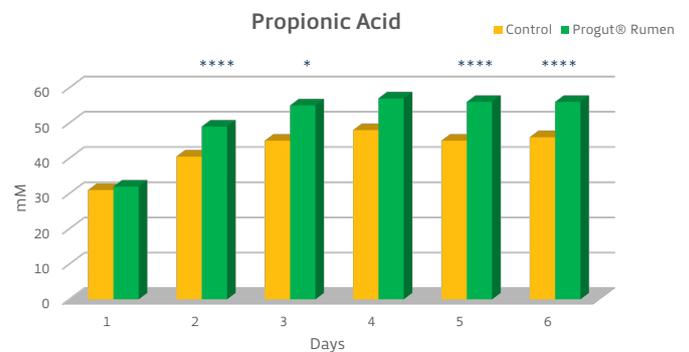
## Increases propionate and reduces methane

Rumen microbes are responsible for producing over 75% of the energy and protein required for milk production. Propionic acid, the main energy source for growth and lactation is one of the Volatile Fatty Acids (VFA's) produced by these microbes.

Trials have consistently shown increased microbes, and in turn more VFA's in the rumen of cows fed Progut® Rumen, which is shown through the additional milk production seen across all trial results.

Propionic acid is the main raw material for blood glucose production. Maintaining a high levels of blood glucose prevents weight loss and fertility problems during early lactation.

Trials have shown modified rumen fermentation resulting in increased propionate and reduced methane production. This results in a reduction in greenhouse gas emissions, as well as an improved dietary energy value.



\* = p < 0.05; \*\* = p < 0.01; \*\*\* = < 0.001; \*\*\*\* = p<0.0001 (Alimetrics, 2009)

**As a result, a return on investment of 7:1 can be achieved\***

\* Based on April 2014 prices



For further details on

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**RUMEN**

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