

# Dengie

# RUMIPLUS

EFFECTIVE FIBRE FOR  
IMPROVED RUMEN HEALTH



RUMIPLUS is high temperature dried Lucerne that is chopped to provide the scratch factor and structure to the diet without reducing its nutrient density. Lucerne is the natural buffer for the cow's rumen.

# INCREASING BUFFERING IN THE RUMEN

The rumen operates at an optimum pH of just under 7. The bacteria in the rumen are sensitive to acidity and will not function effectively at a pH below 5.8-6. The cow consuming large quantities of silage at a pH of 4 has to do a lot of buffering to achieve a pH of 6-7. To achieve this, the cow produces large amounts of saliva (100-150 litres, which contains up to 3.5kg of bicarbonate) each day.

To produce this amount of saliva, the cow needs to make 30,000-50,000 chewing movements per day, spending an average of 500 minutes

per day chewing 20-30 minutes chew time per kg DM).

RUMIPLUS chewing time is 40-80 mins per kg DM. This increases rumen activity and creates more saliva to act as a buffer.

To ensure sufficient chewing takes place, the cow must ingest at least 2-2.5kg of long fibre per day with a length of 2-4cm.

RUMIPLUS ensures that your cows are provided with a high quality feed that helps to improve rumination.



Low levels of rumination can reduce the production of saliva, which leads to a build up of acid in the rumen. This build up of acids can result in loss of milk, acidosis, reduced butter fats, laminitis and potentially have a detrimental effect on fertility. RUMIPLUS encourages the natural rumination process and helps avoid these issues.

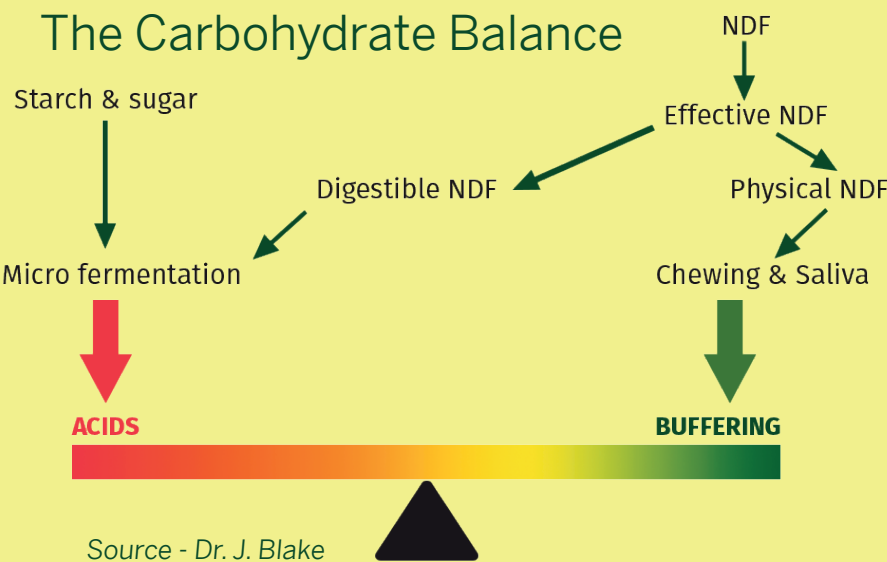
**“RUMIPLUS helps rumen buffering and rumination by providing the scratch factor and structure to the diet through digestible long fibre, without reducing its nutrient density.”**

# IMPROVING RUMEN HEALTH THROUGH NUTRITION

It is well documented that a mixed forage diet improves dry matter (DM) intakes and has an affect on milk yield and milk consumption by minimising nutrient deficiencies and providing a range of energy and protein sources. When formulating diets it's very important to take into account the structure and amount of scratch factor in the diet, particularly in those containing high levels of maize silage, cereals or wet, acidic grass silage to encourage the cow to ruminate effectively.

The production process of RUMIPLUS preserves all the nutrients of the Lucerne.

RUMIPLUS provides fibres without reducing density and improves the diet efficiency compared to most other fibre sources as straw.



## Cellwall composition of RUMIPLUS

Total walls 46%	Pectins		4%
	NDF 42%	Hemicellulose	12%
		ADF 30%	21%
		Cellulose	9%

**“RUMIPLUS is the ideal feed that provides effective fibre and the scratch factor to the diet.”**



# INCREASED BETA-CAROTENE, IMPROVED FERTILITY RATES

Beta-carotene, as well as being a precursor for Vitamin A, has a role in the synthesis of progesterone and therefore can influence the fertility of the cow. It has been shown that cows receiving increased levels of Beta-carotene in their diet have a high rate of conception. RUMIPLUS has much higher levels of Beta-carotene compared to other commonly fed forages.

The tables opposite clearly show the relationship between conception rate and Beta-carotene and the levels available in a RUMIPLUS diet. The need for extra Beta-carotene is even greater when maize silage is included in the diet, which is why the addition of RUMIPLUS to a cow's diet can help to increase fertility rates.

Effect of Beta-carotene		
	Control	B-carotene
Conception rate to 1st services	40.0	68.4
Conception rate to 2nd services	55.0	69.5
Number of inseminations	2.0	1.4
% Luteal Cysts	30	0
% Follicular Cysts	10	5

“Including 2.5kg of RUMIPLUS into the diet can supply the average cow’s daily requirement of Beta-carotene.”

Beta-carotene content of forage	
Grass silage	20 - 40 mg/kg (as fed)
Maize silage	10 - 15 mg/kg (as fed)
RUMIPLUS	80 - 100 mg/kg

## PROVIDING QUALITY PROTEIN

The high temperature drying process used to produce RUMIPLUS, not only removes the water content of the plants, but at the same time reduces the degradability of the proteins, protecting approximately 50% of the protein for digestion later in the small intestine. This gives RUMIPLUS a good balance of Rumen Degradable Protein (RDP) and By-pass Protein (DUP).

Typical Analysis (Dry matter basis)		Values for MP & PDI Systems	
Dry matter	88%	PDIN	102
Protein	16 - 18%	PDIE	91
Fibre	28%	PDIA	53
Metabolisable energy	10.0 MJ/kg DM	UFL	0.61
FME	8.8 MJ/kg DM	UFV	0.54
NDF	42 - 45%		
ADF	32 - 35%	A	0.52
Oil	3%	B	0.38
Ash	11%	C	0.04

Beta-carotene	80 - 100mg/kg	Deg	0.6
Vitamin E	120mg/kg	Dsi	0.6
Calcium	3%	Lysine DI 5PDIE	6.7
Phosphorous	0.3%	Met DI % PDIE	1.63

“...Farmers who have included 2-4kg per cow per day of Rumiplus in their rations have seen a significant improvement in foot health, a reduction in lameness and an improvement in conception rates.”

	Cows	Goats	
Inclusion rates	2 - 4kg/day	0.5 - 1kg/day	
Bale size	1.15m x 1.15m x 0.7m		
Bale weight	400 - 420kg approx.		

RUMIPLUS is a natural product and the above figures are given as indicative values only



# Feeding balanced rations for better results through improved rumen health



**RUMIPLUS** is high in quality effective structural fibre. It improves rumen function and provides a floating mat in the rumen

**RUMIPLUS** is 88% dry matter, which stimulates dry matter intake

**RUMIPLUS** provides the scratch factor in the ration without reducing the nutrient density or bulk of the diet as straw does

**RUMIPLUS** helps increase saliva production, which contains high levels of natural bicarbonate to help buffer the rumen and reduce acidosis

**RUMIPLUS** is consistently high in quality proteins

**RUMIPLUS** has a pH 6.5-7. It helps to buffer the rumen when feeding large amounts of cereals, maize silage, compounds, acidic or wet silages

**RUMIPLUS** has high levels of naturally occurring beta-carotene, antioxidants and vitamins which aid fertility through stronger heats and more viable eggs being flushed

**RUMIPLUS** is consistent and fully traceable; each bale is individually numbered

**RUMIPLUS** contains natural Biotin, which improves hoof quality

**RUMIPLUS** is easy to handle and store - every tonne you buy gets fed, so there's no wastage

RUMIPLUS should be stored inside, in a clean and dry environment



Talk to **James Collantine** on **07802 829525** and find out what benefits quality Lucerne has to offer your cows and dairy goats.

# Dengie

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