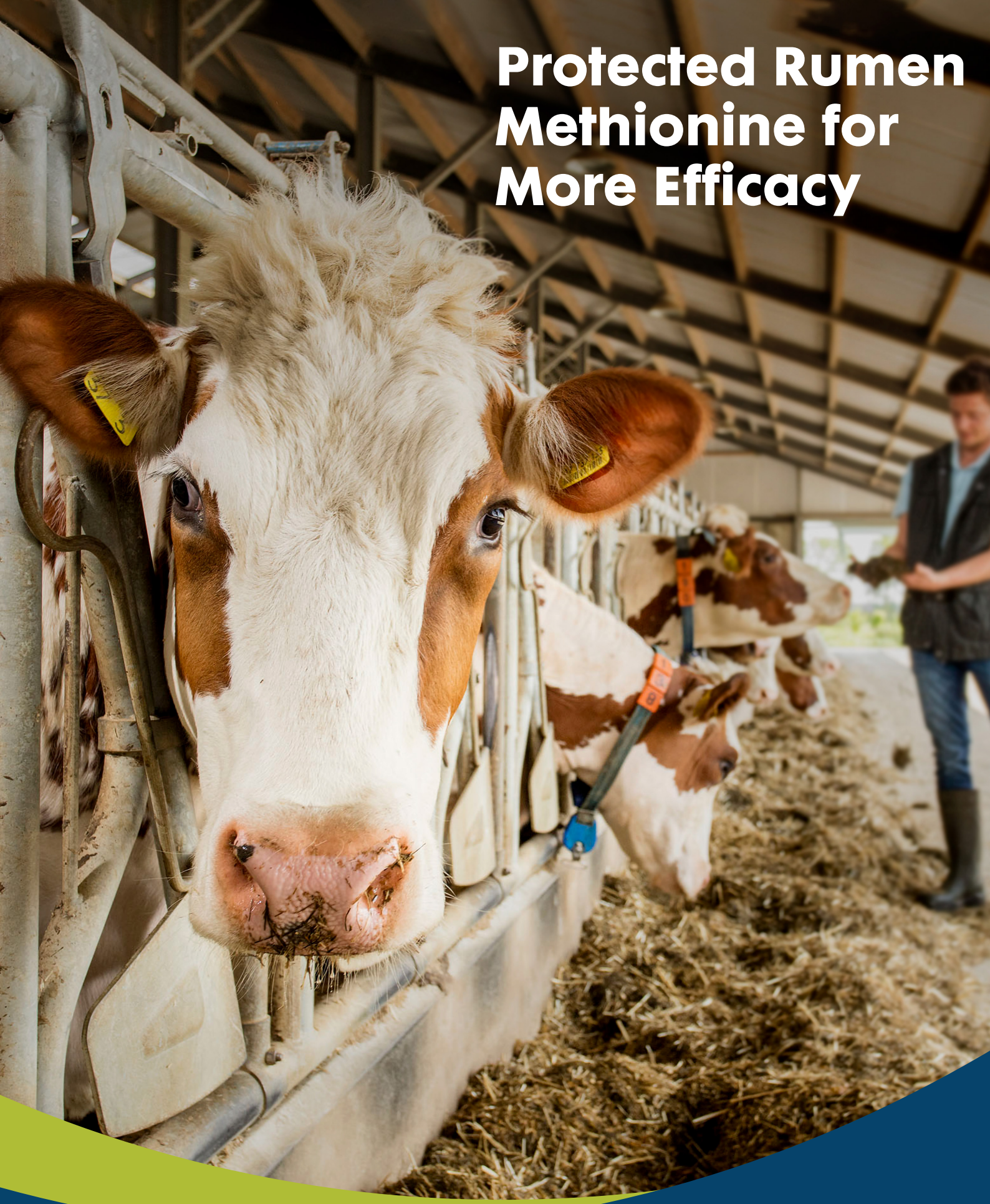


Protected Rumen Methionine for More Efficacy

NorMet 50

NUTRI PRO

NorMet 50

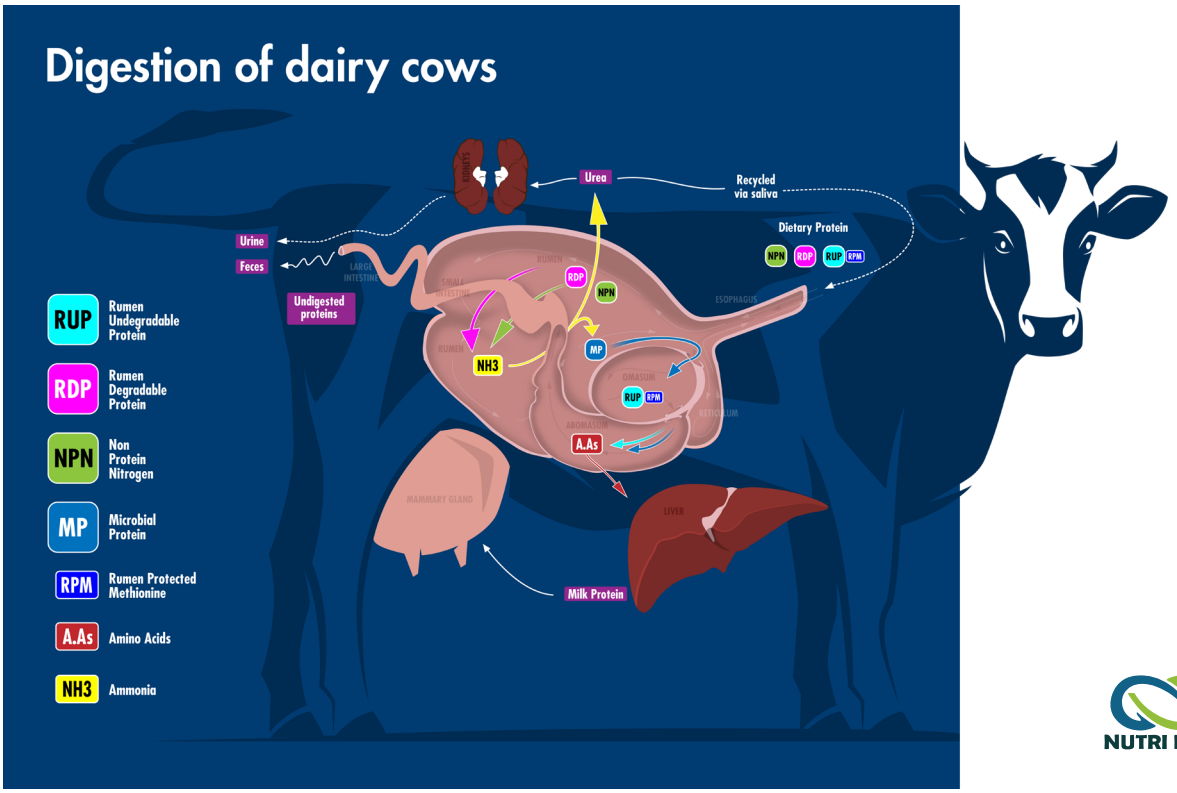
- DL Methionine coated with saturated organic fatty acid

- Importance of rumen-protected methionine (RPM)

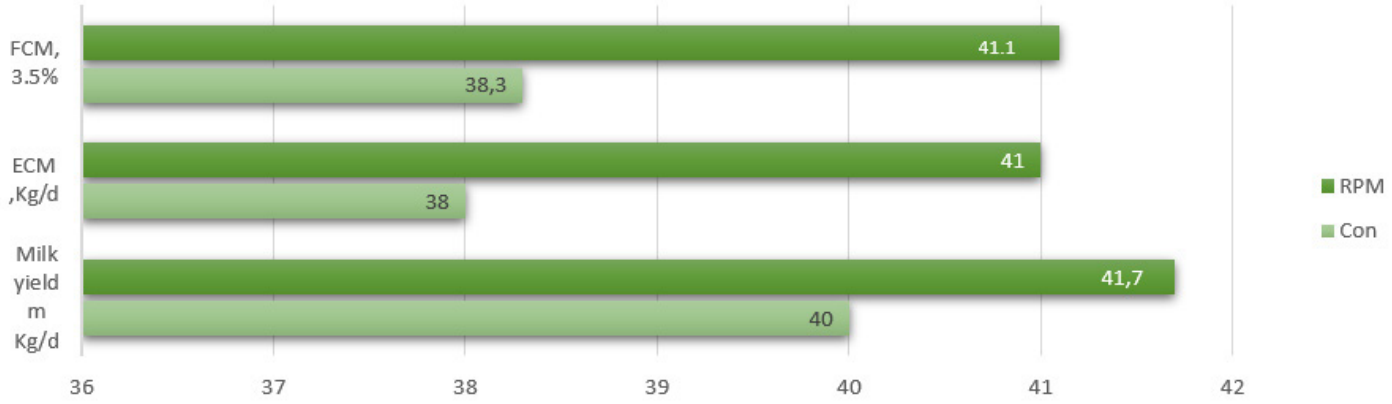
Modern dairy farms ask for solutions that allow their cows to reach their genetic potential. That is why today's nutritionists look for the missing nutrients. Rather than looking at the quantity of crude protein and its digestibility, nutritionists now aim for the quality of the protein and specifically at the balance of amino acids (AA). Research shows that Methionine is the first limiting amino acid in milk production.

Methionine in rumen protected methionine (RPM) becomes available in the abomasum, avoids degradation by rumen microbes and becomes directly available for absorption to the blood in the intestine of the dairy cow. Methionine in its active form is now delivered to the liver where it is processed into milk protein.

Rumen Protected Methionine can enhance the animal performance:



Supplementation of RPM during the peripartal period, may increase milk yield, milk protein, and milk fat soon after calving. Milk yield was increased with 2,0 kg/d by supplementing with RPM (Wang et al., 2010) . Milk yield had a linear relationship with RPM ($p = 0.026$) and increased from 38.1 kg/d to 39.7 kg/d ($p = 0.019$). Mordenti et al. 2005.



Furthermore, investigative work feeding RPM during the periparturient period has detected positive responses in maintaining consistent rates of DMI prepartum (last 21 d) and "higher rates of DMI during the first 30 to 60 d after calving (Osorio et al., 2013; Zhou et al., 2016c; Batistel et al., 2017).

RPM supplementation seems to impact the pre-implantation of the new embryo in a way that enhances its capacity for survival because there is strong evidence that endogenous lipid reserves serve as an energy substrate.

RPM can enhance:

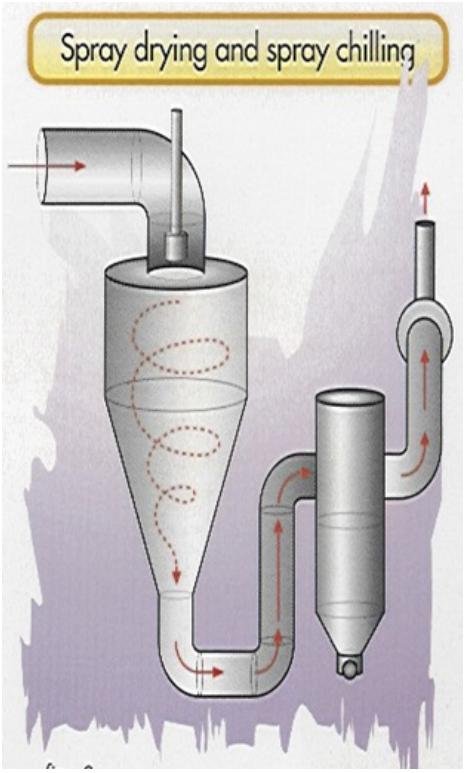
- **Milk yield**
- **Milk protein**
- **Milk fat**
- **DMI prepartum and postpartum**
- **Feritlity and reduce embryo mortality**

Nutri Pro's solution to supply sufficient RPM?

Nutri Pro and their partners have created an exclusive method of coating nutritional substances with saturated long chain fatty acids.

The rumen by-pass products by TN are made using the INCLUSION method: in which saturated long-chain fatty acids are included to the particle fatty matrix.

Rumen Protected Methionine stability during industrial manufacture: The amino acids are dispersed in the strong fatty matrix instead of traditional fine film coating.



- Rumen Protected Methionine stability during storage: The very low moisture content, the high grade of saturation of the fatty acids and the minimum solubility maintain the quality of the methionine during its shelf life.

- Rumen Protected Methionine stability during chewing: In the case of breakage and/or deformation the matrix is affected without losing its bypass function.

- Rumen degradation resistance: Fatty acids are not degradable by the rumen microflora because they are unaffected by the interaction with rumen lipase.

- Digestibility: In the intestine, the fatty matrix is totally digested and the nutrients absorbed.

- 1,000 g NorMet 50 apport 500 g Met. The bypass level is 60% and therefore offers an additional 300 g/kg of Methionine directly to the animal.

Moisture	%	0,5
DL-Methi-onine 98	mg	500.000
Crude fat	g	495
Ash	g	50
BHT	mg	90
NorMet 50	10-40 gram	20 gram
	Close up	Growth
	Peak lact.	Period
Bag	25 kg	
Shelf life	12 months	

For more information, please contact local representative (distributors).

Contact

- 416-J, Third Floor, EME Society, Multan Road, Lahore.
- tnc@nutriprollp.com
- www.nutriprollp.com

NUTRI PRO