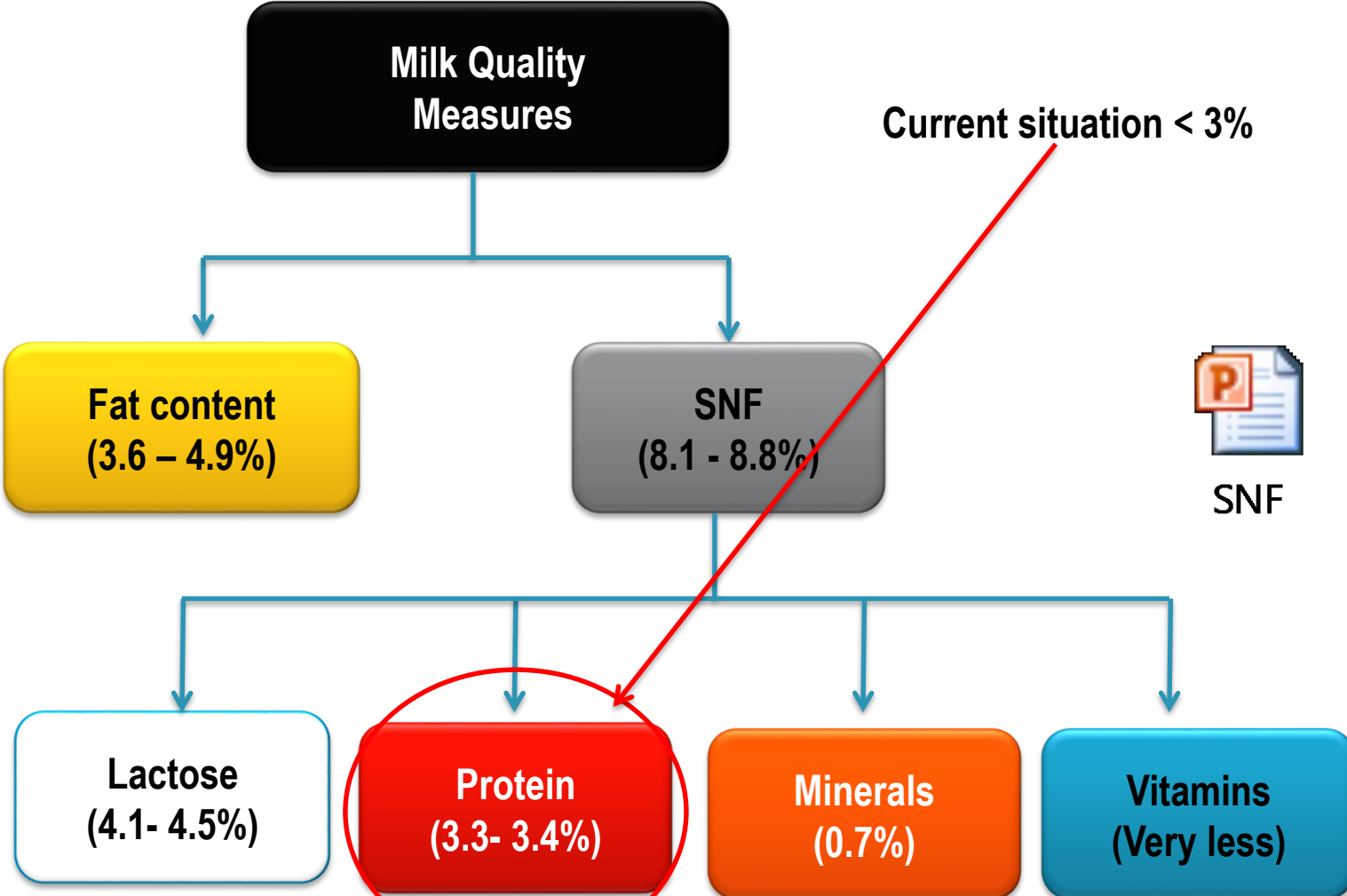


Achieving Precision Nutrition with Amino Acid Balancing



For Milk Quality/ Price



Milk protein ... Why?

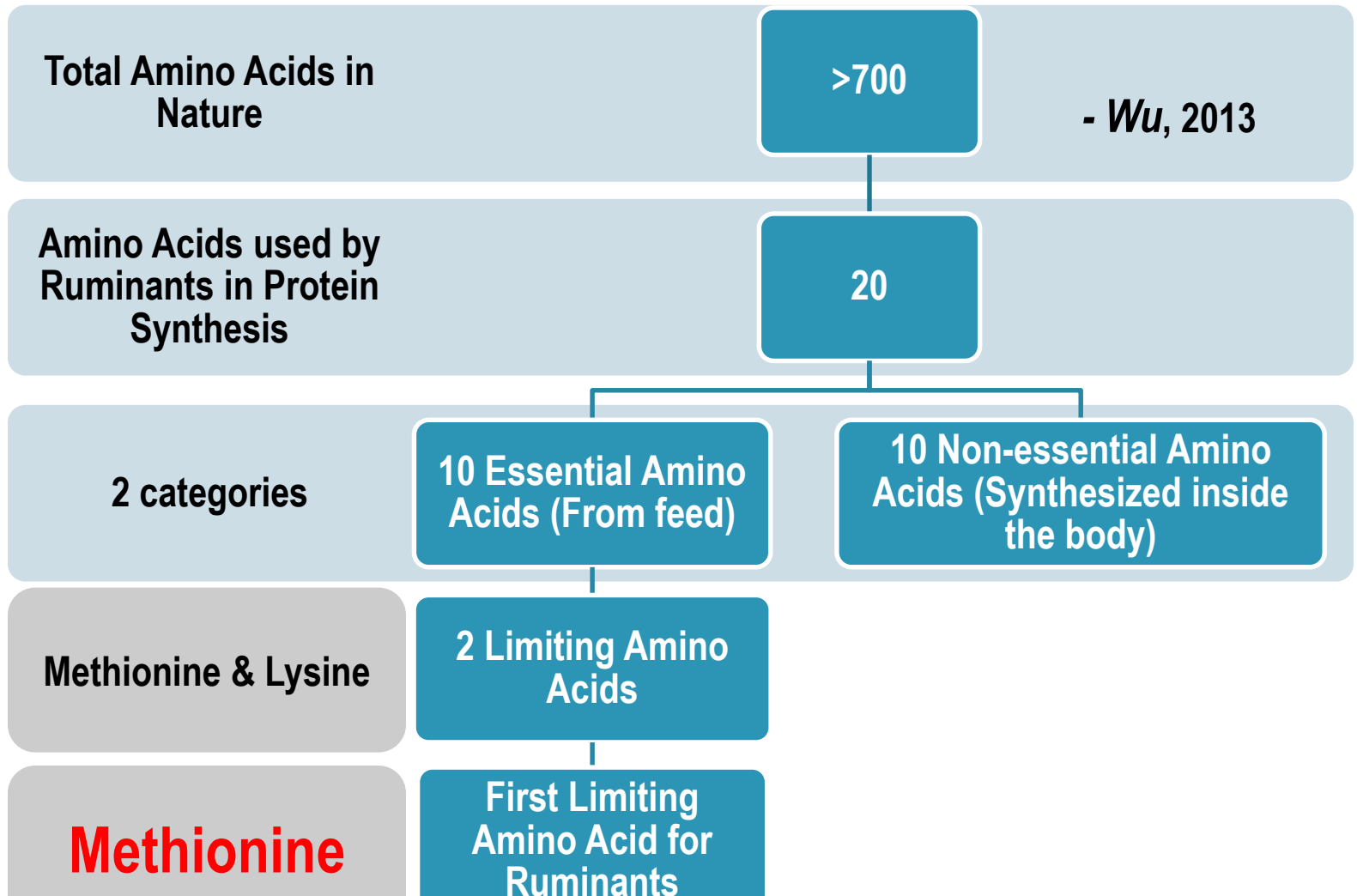
Milk Products	Protein (%)	Fat (%)	Energy (kcal/100 g)
Chhana/ Paneer	18.3	20.8	265
Khoa	24	41	580
Dried Whey	11	1	350



Milk composition



Protein: Amino acids



Methionine: First limiting Amino Acid



Feed Ingredients are also deficient in methionine



Barley



Wheat



Maize



**Cotton seed
Cake**



**Soybean
Cake**



**Brewers'
grain**



Milk

1.7

1.6

2.1

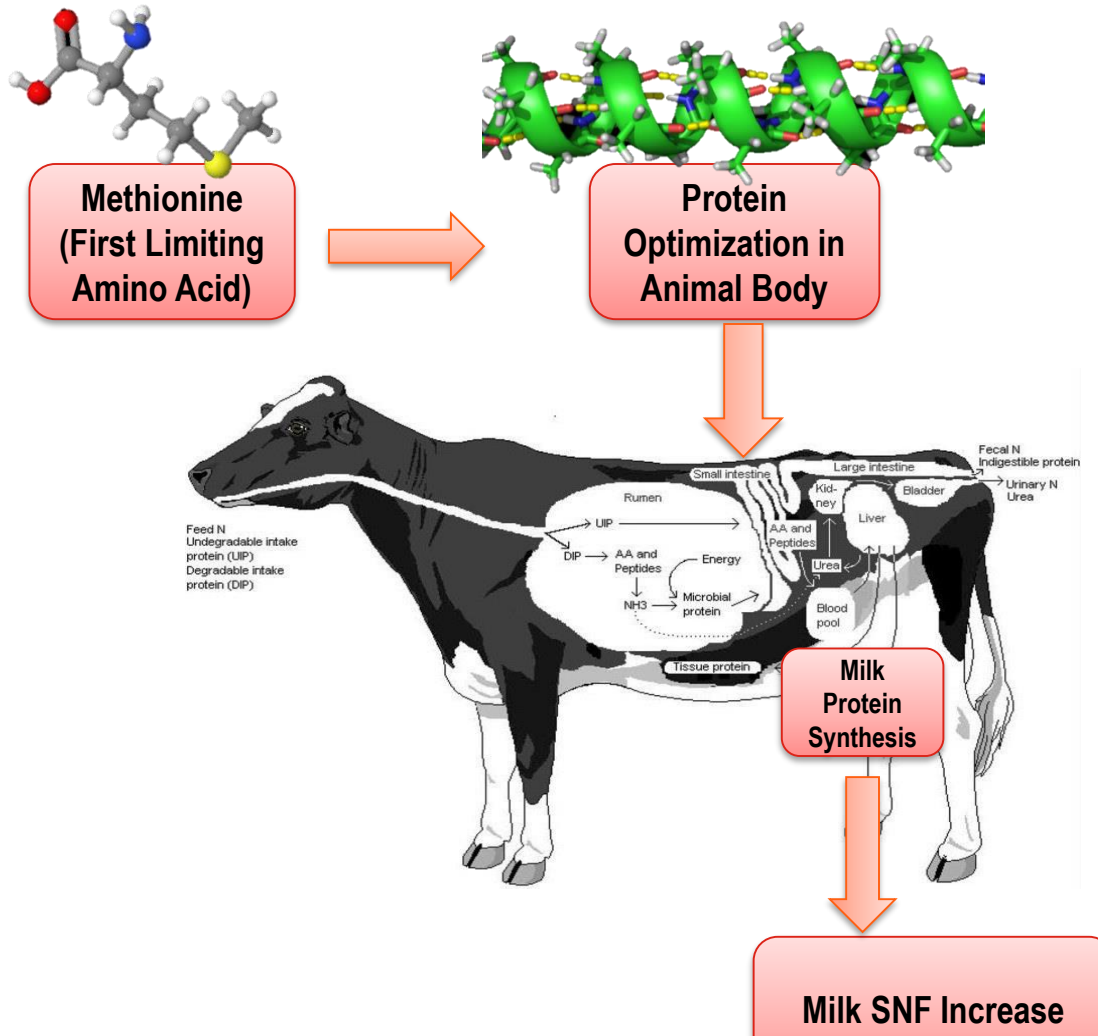
1.6

1.4

1.7

2.7

Methionine: For Milk Protein & SNF

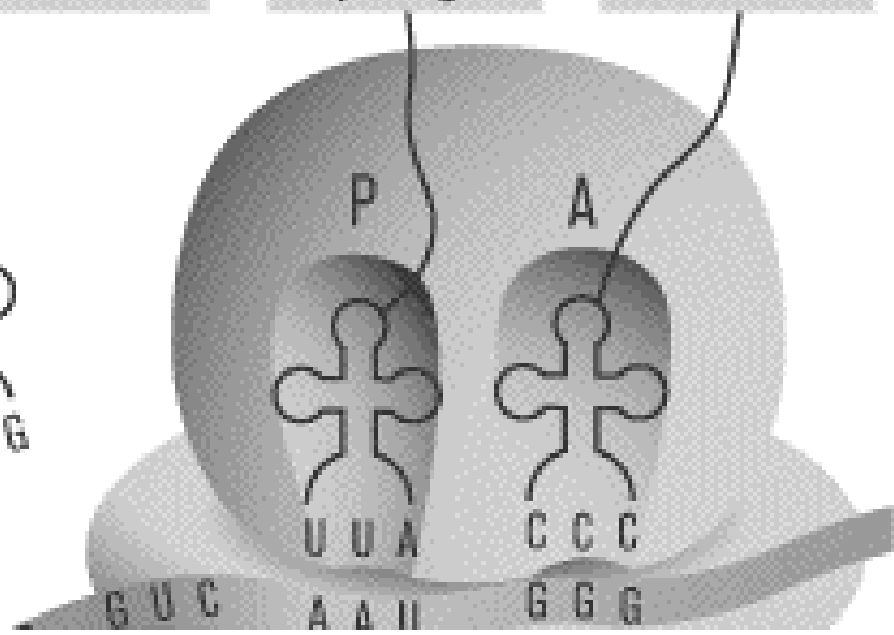


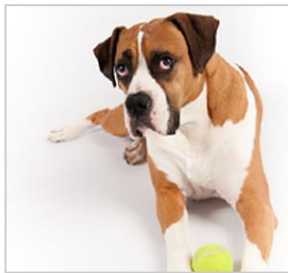
Why only Methionine?



The first amino acid is always Methionine (in form of Formyl-Methionine) to start the protein synthesis.

The starting point





MetiPEARL

High Milk Protein & SNF



MetiPEARL

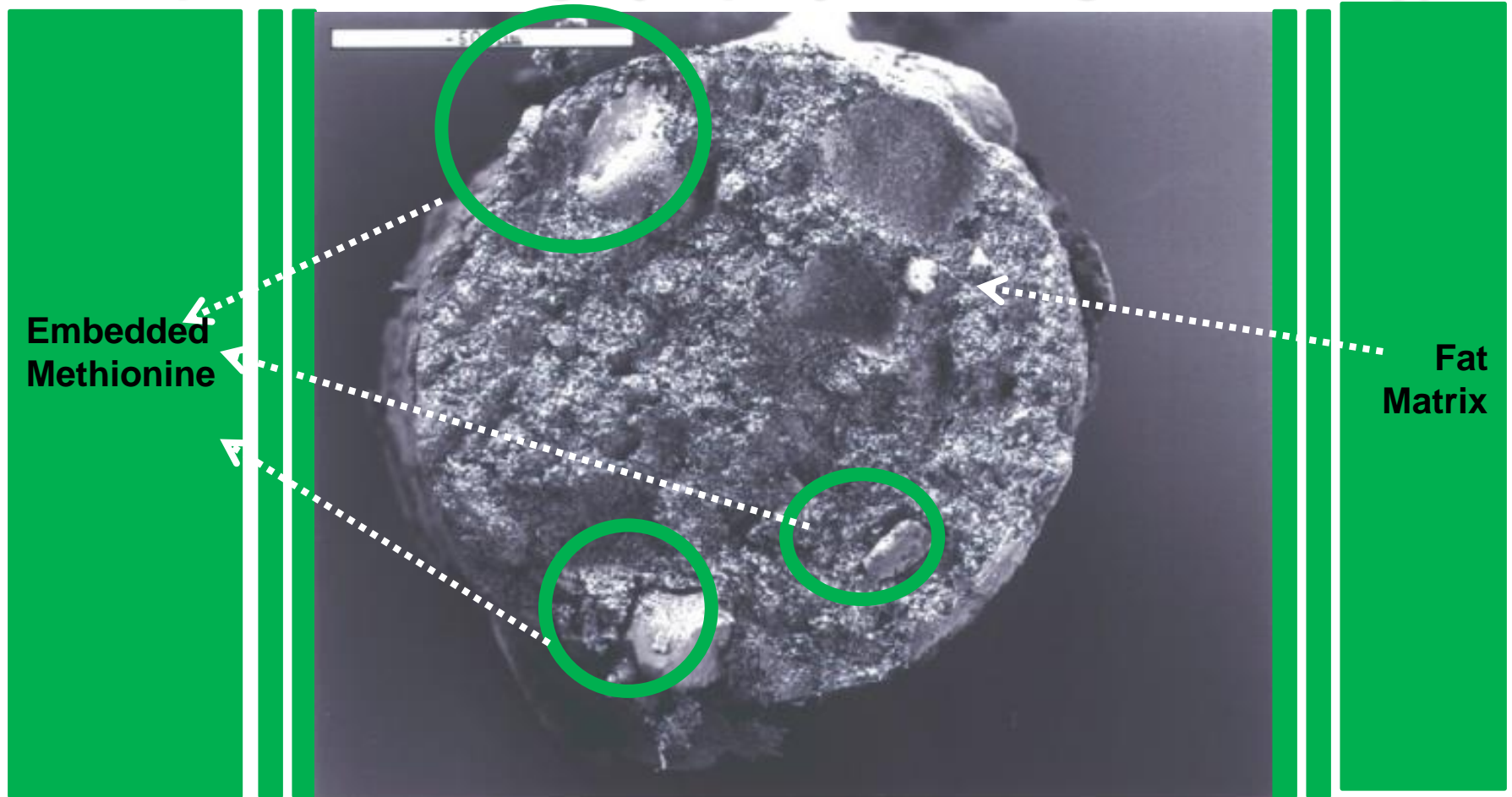
- ✓ Rumen protected Methionine (55% DL Methionine) with higher intestinal availability
- ✓ Made in Kemin Cavriago (imported in India)

**Made in
Kemin
Cavriago**



Unique Technology

Superior Coating by Spray Freezing Technology



MetiPEARL

Higher Milk Protein & SNF

Application Guidelines

- 5-10 g/animal /day for improving milk protein and SNF
- 500-750 g/ton for amino acid balancing in feed

Presentation

5 kg





LysiGEM

Attain Higher Milk Yield



Lysine

**Second Limiting Amino Acid in
Dairy Diets next to Methionine**



Lysine in Feed and Milk



Barley

3.6



Wheat

2.8



Maize

2.8



**Cotton seed
Cake**

4.1



Soybean Cake

6.3



**Brewers'
grain**

4.1



Milk

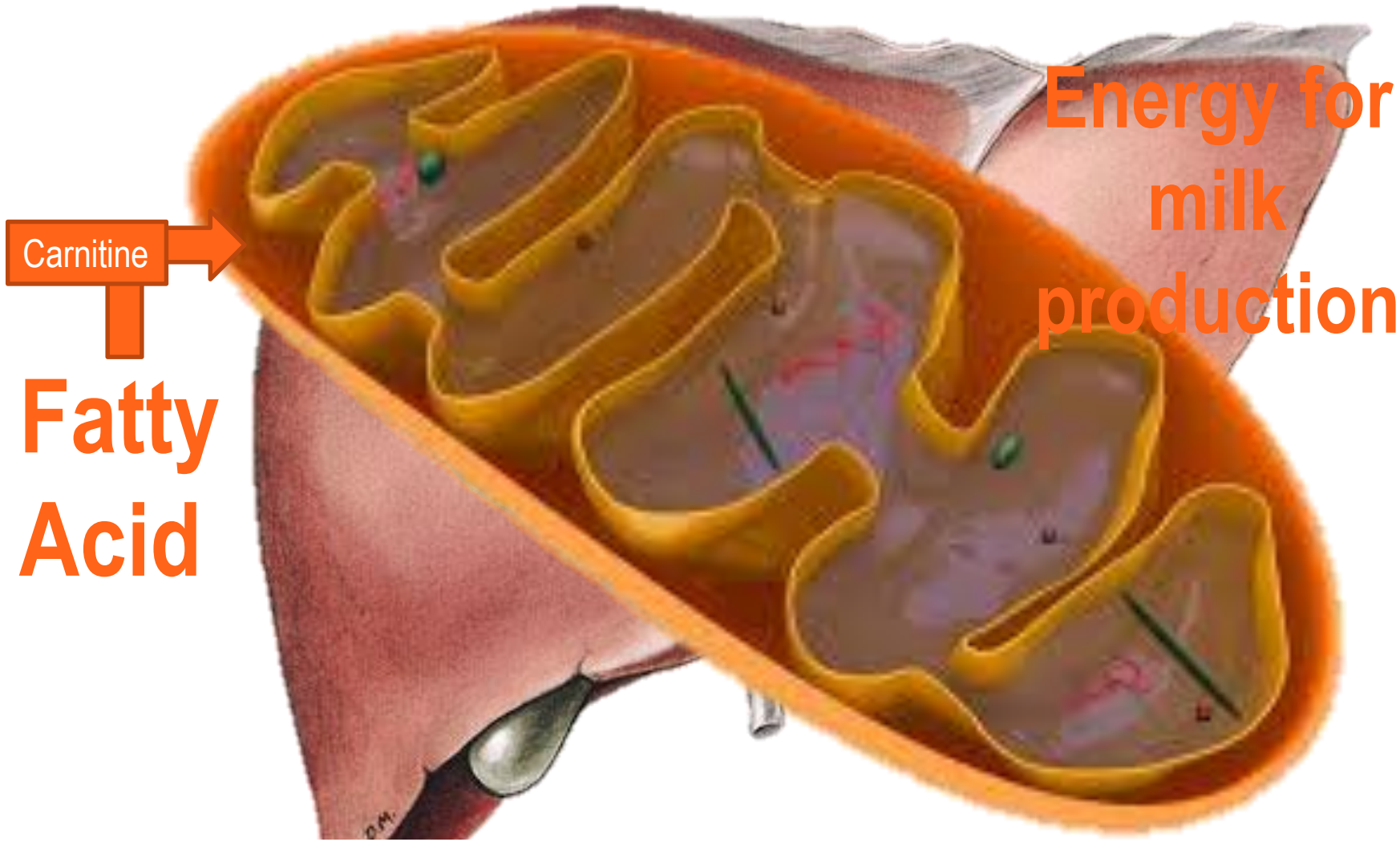
7.6

The bypass protein portion of above ingredients may be inadequate to provide the required lysine at intestinal level

Values are based on % of CP in substrate

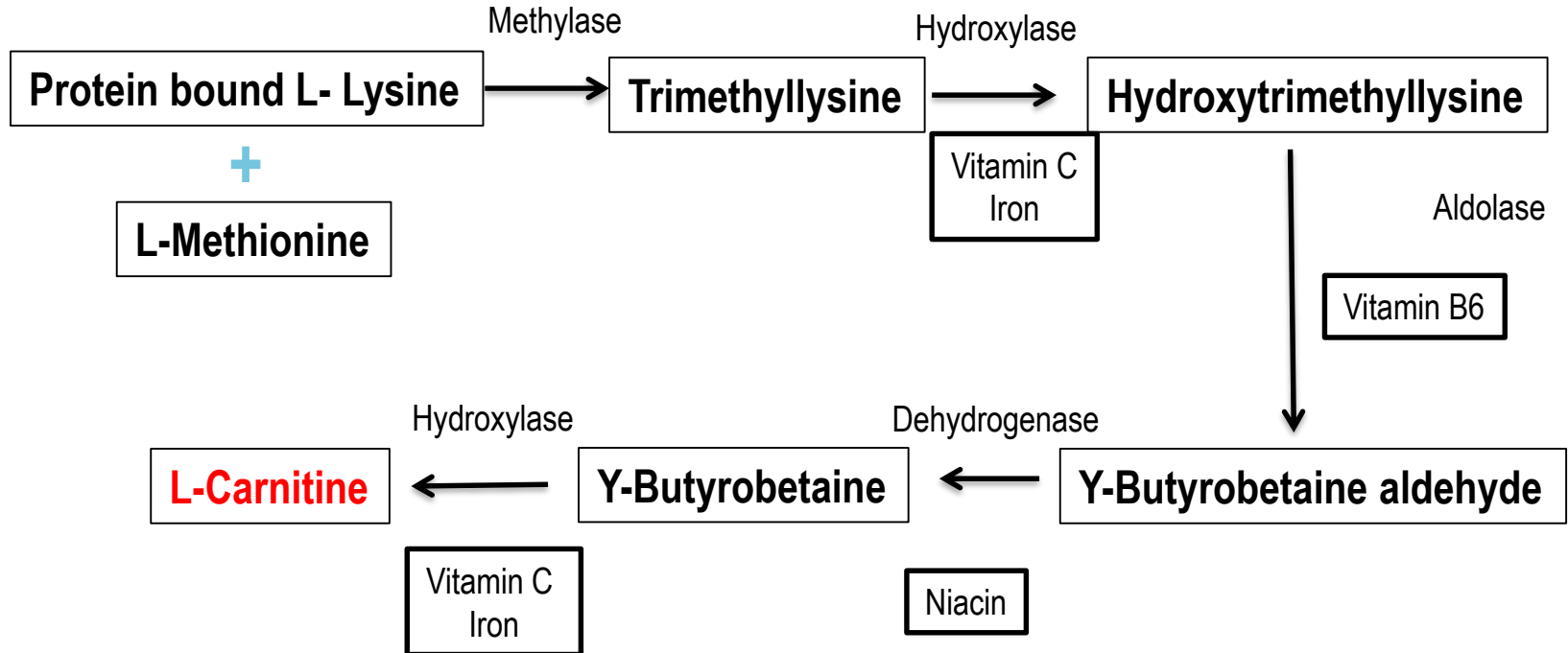


Carnitine in Fat metabolism for energy



Lysine (In Fat and Energy Metabolism)

Carnitine synthesis - (from epsilon N-Trimethyllysine)



LysiGEM

- ✓ Rumen protected Lysine (68-72% Lysine) with higher intestinal availability
- ✓ Made in Kemin Cavriago
(imported in India)



**Made in
Kemin
Cavriago**



LysiGEM

Attain Higher Milk Yield

Application Guidelines

- 10-20 g/animal/day for improving milk yield
- 1000-1500 g/MT for amino acid balancing in feed

Presentation

5 kg



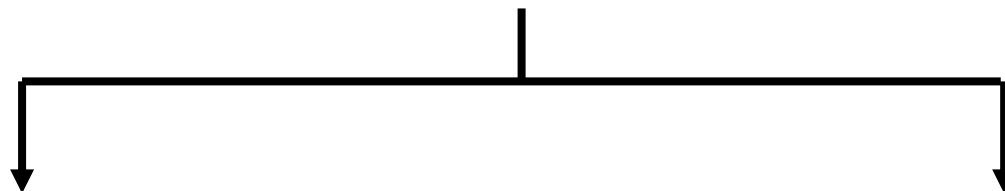
Lactation Study



Growth Study



Amino Acid Balancing in Dairy Animals



MetiPEARL

LysiGEM

- Milk protein
- Milk SNF



- Milk yield

Ideal ratio of Lys to Met in diet: 3:1



Thank You

