



Specialised feeding technique to produce designer meat / milk

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Specialised Feeding Technique to Produce Designer Meat / Milk

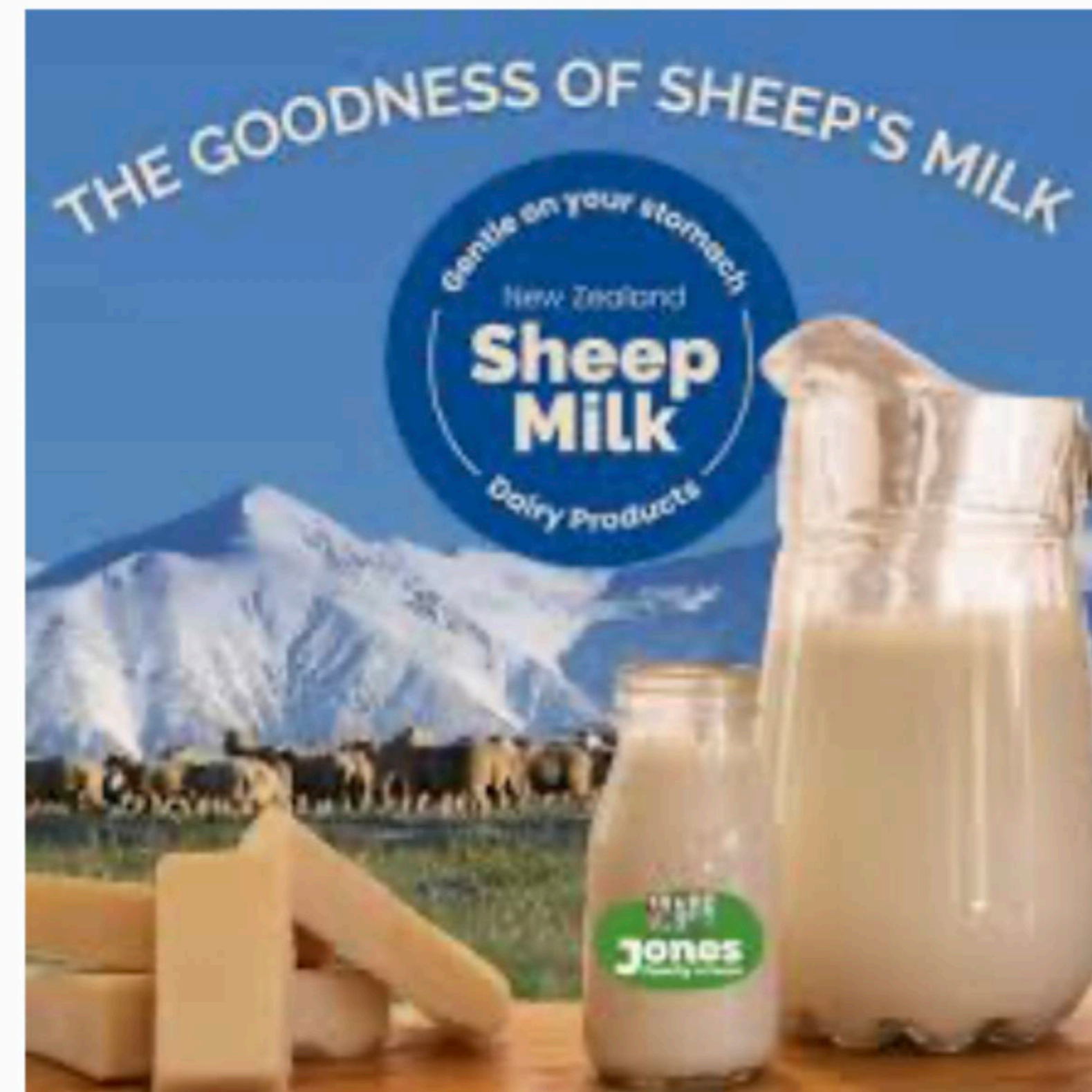


Effective Animal Nutrition for Human Nutrition

- ▶ **Health promoting substances in sheep milk**
- ▶ **Goat milk as a functional food**
- ▶ **CLA enriched milk production**
- ▶ **Designer meat production**

Sheep's milk is rich source of health promoting substances

- ▶ Rich in bioactive substances needed for the proper development of young organisms.
- ▶ High content of fatty acids, immunoglobulins, proteins, hormones, vitamins and minerals.
- ▶ Due to having the highest linoleic acid content of all ruminants, sheep's milk is effective in preventing
 - ▶ Obesity,
 - ▶ Type 2 diabetes and
 - ▶ Cancer.
- ▶ Many active biopeptides found in milk have proven
 - ▶ Antiviral,
 - ▶ Antibacterial and
 - ▶ Anti-inflammatory properties.



Goat milk as a functional food

- ▶ Compared with other milk, goat milk is a viable option due to its low allergy levels and is preferred for infants with cow milk allergies.
- ▶ Goat milk provides higher levels of calcium, potassium, and phosphorus.
Small fat globules in goat milk make it easily digestible
- ▶ Goat milk includes quite a few bioactive peptides with effective antioxidant capacity.
- ▶ The immunomodulatory properties of goat milk can be attributed to the compounds such as peptides and oligosaccharides that were reported to modulate host inflammatory cytokines.



Conjugated linoleic acid (CLA) enriched milk production

Benefits

- ▶ Anticarcinogenic
- ▶ Antidiabetic
- ▶ Antiobesity
- ▶ Antiatherosclerotic

▶ CLA leads to lean meat production

Pasture feeding has been demonstrated to have a positive impact on the nutrient profile of milk, increasing the content of some beneficial nutrients such as

- ▶ Omega-3 polyunsaturated fatty acids,
- ▶ Vaccenic acid, and
- ▶ Conjugated linoleic acid (CLA),

while reducing the levels of Omega-6 fatty acids and palmitic acid.

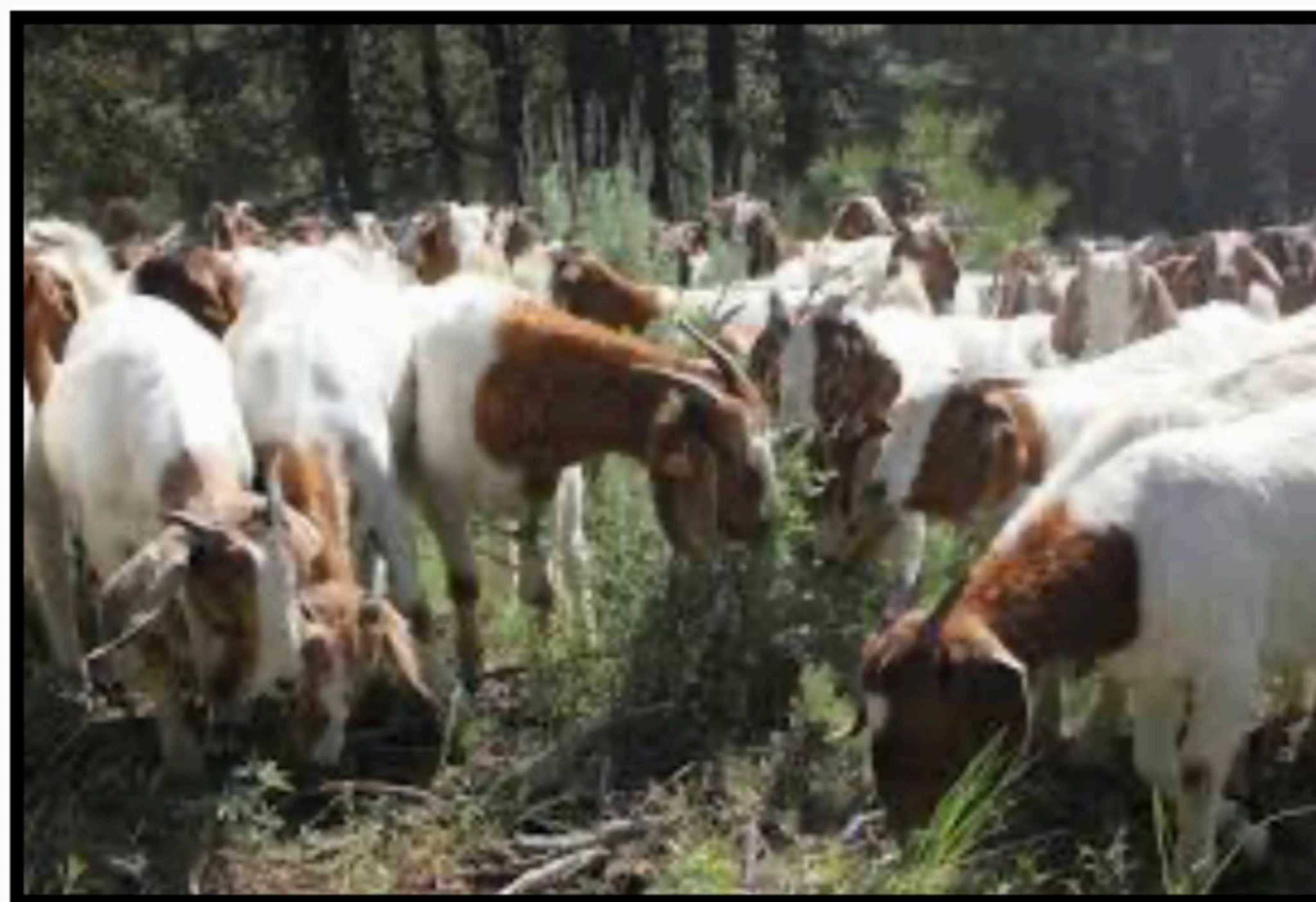
Designer meat Production

Good quality meat

- ▶ Intramuscular fat concentration is found to be a key element for its tenderness.
- ▶ It depends upon largely of genotype, carcass weight and fatness.

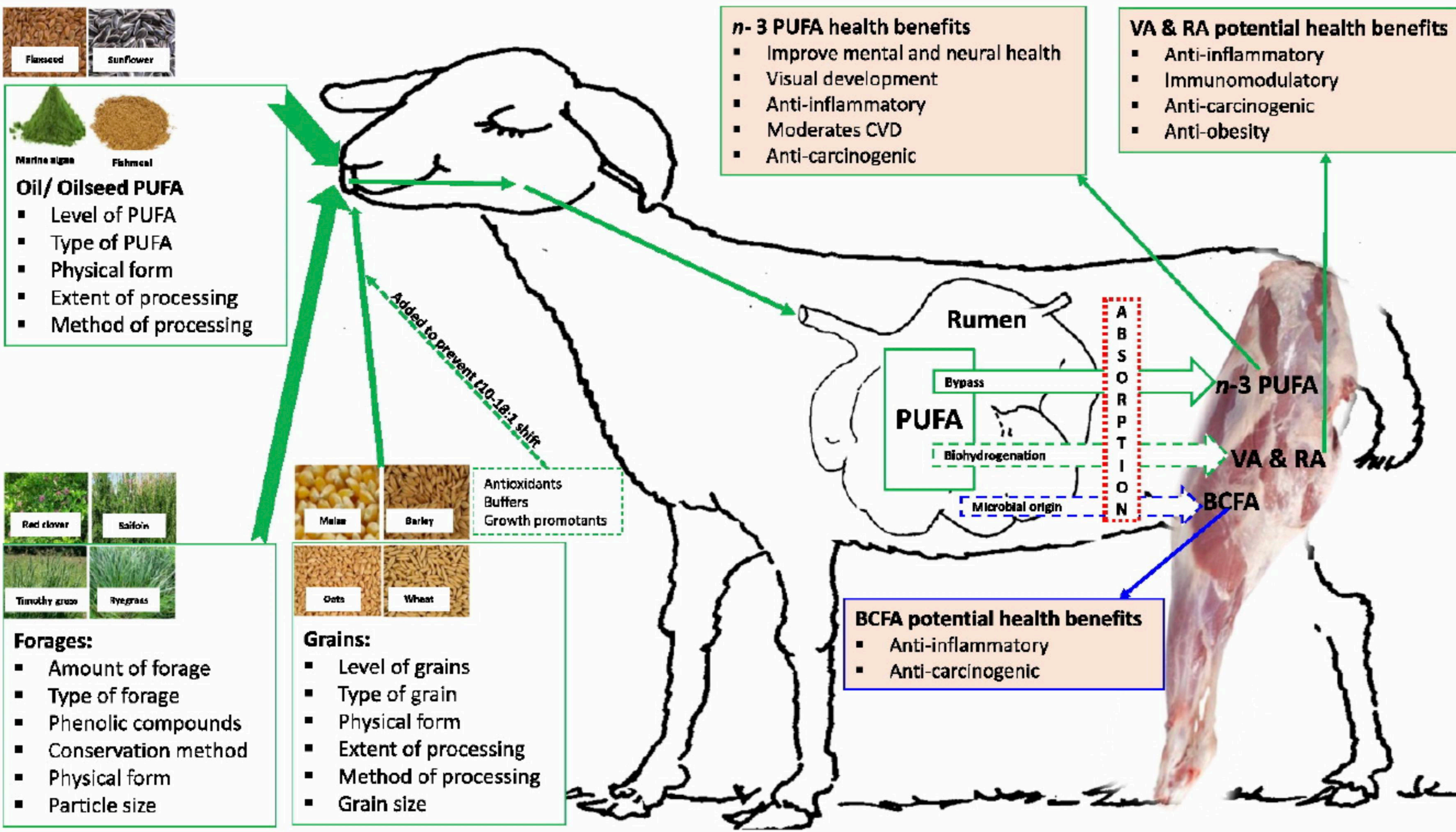
Designer meat

- ▶ Omega 3 fatty acids content of meat can be increased when lambs / kids finished on green pasture.





Designer meat Production



VA- Vaccenic acid, RA-Rumenic acid, BCFA-Branched chain fatty acid

Conclusions

- ▶ **Sheep / goat meat or milk is perceived as unhealthy due to its high levels of SFA.**
- ▶ **These also contain higher proportions of n – 3 FA, rumenic and vaccenic acids.**
- ▶ **Omega-3 FA, rumenic and vaccenic acids have potential human health benefits.**
- ▶ **Beneficial FA in meat / milk can be increased by strategic feeding of FA and forages.**
- ▶ **Green pasture is an excellent source of ALA and is one of the most effective feeds in shifting the milk FA composition towards a healthy spectrum.**
- ▶ **Linseed, soybeans, safflower , sunflower and rumen protected marine oils are the most commonly used sources of unsaturated plant lipids to enhance CLA and unsaturated FA content in milk fat.**

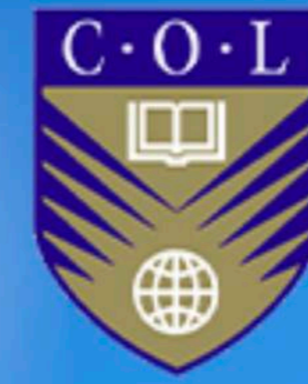


Sheep and Goat Nutrition- a Practical Approach



Sheep and Goat Nutrition- a Practical Approach

- 1. Integrated pasture management systems for sheep and goats**
- 2. Ration formulation for sheep and goats**
- 3. Feeding management of sheep in various life stages**
- 4. Feeding management of goats in different life stages**
- 5. Specialised feeding technique to produce designer meat / milk**



Thank you