

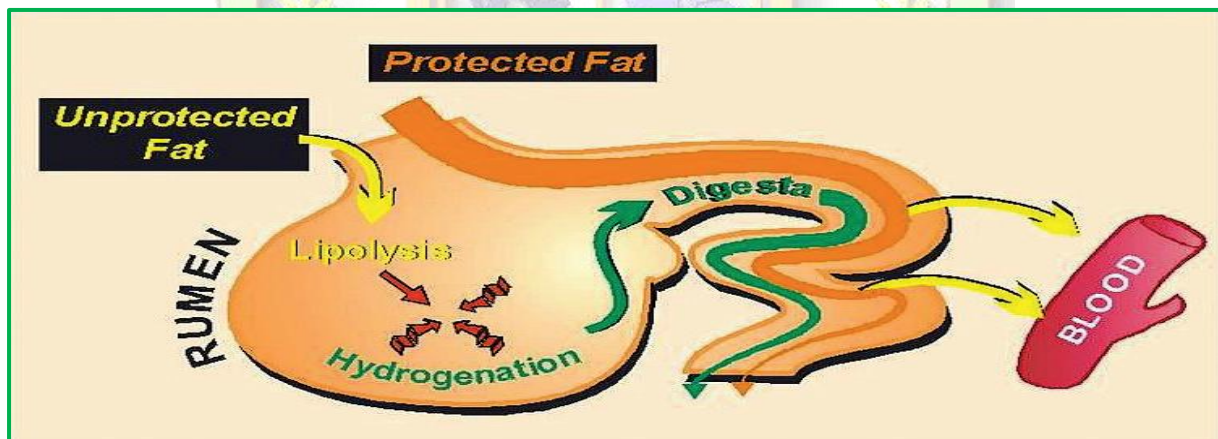
Bypass Fat: It's Importance in Cattle and Buffaloes

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Cattle and buffaloes are the primary sources of high-fat milk in India. During the early stages of lactation, the energy needed for milk production and tissue maintenance often surpasses the energy obtained from diet, resulting in an energy imbalance that necessitates the mobilization of body fat reserves to meet energy demands. Before calving, the negative energy balance period frequently begins because of the decreasing feed intake towards the end of gestation. Apart from its impact on peak milk output and lactation yield overall, the negative energy balance during the early stages of lactation also results in delayed post-partum ovarian activity. Other than very modest amounts, fat is not necessary for ruminants as a whole. Whatever fat is there in the feed, though, is attacked and degraded by microbes. Hydrolysis converts unsaturated fatty acids into saturated fatty acids. Dietary fat is referred to as bypass fat or rumen protected fat since it is broken down in the lower alimentary tract rather than the upper part of the animal's digestive system (the rumen). Dairy cows lose a significant amount of energy through their milk immediately after calving, but they consume less feed overall. This has a negative impact on the animals' ability to reproduce, produce milk, and maintain their bodies. In high-producing animals, the adverse effect is greater. An abundant supply of energy is bypass fat. Moreover, bypass fat is a strong calcium source.



Benefits of Bypass Fat Supplement to Dairy Animals

- Maintains a favourable energy balance in animals and reduces metabolic disorders such as acidosis, ketosis, and milk fever.
- Increases milk yield and milk fat content.
- Enhance peak milk yield and lactation days.
- Improvement in reproductive performances by enhancing follicle size and hormonal level.
- Prevents post-partum weight loss and thus, improves general body condition.
- Prevents heat stress.

Doses of Bypass Fat to Be Provided

15-20 g/kg milk yield per animal per day. Dairy animals can get it as a supplement 15 days prior to calving or 150 days thereafter.

Method of Bypass Fat to Be Provided

Dairy animals can receive bypass fat supplements by combining it with a concentrate mixture. It can be administered in split doses or as a single dose. Not every kind of dairy cow experiences the same effects. High yielding dairy animal's cows that produce more than 15 litres of milk per day and buffaloes that produce more than 8 litres of milk per day tend to have a greater effect. Early lactation usually has a higher effect than mid-lactation. Holstein cows are more likely to experience effects.

Conclusion

The most energy-dense nutrient currently on the market, bypass fat mitigates the negative effects of fats' low melting point on feed intake, fibre digestibility and calcium and magnesium absorption. Overcoming this negative energy balance problem is aided by bypass fat. The risk of metabolic acidosis is decreased by rumen inert fat, which is partly resistant to rumen microorganisms' bio-hydrogenation.