

Urea Molasses Mineral Block Lick (UMMB) - An Ideal Feed Supplement For Ruminant Livestock In Kerala

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In Kerala fibrous crop residues are the major feed sources for ruminant livestock. Due to a high degree of urbanisation occurring in the state, the land for fodder cultivation is getting reduced day by day and a time will come, when the fodder component in the ration will have to be met from fibrous crop residues alone. In the survey conducted at Muthalamada Panchayat of Palghat District of Kerala, where the main source of income to the farmers comes from the animal husbandry sector, it was observed that almost 93 percent of the farmers were depending on paddy straw, for feeding their livestock. The fibrous crop residues like paddy straw, wheat straw, jowar straw etc. are poor source of protein, energy and minerals and cannot satisfy the needs of rumen microbes. The nitrogen content of straw is considered to be of a very little biological value and is undoubtedly inadequate to meet even the growth requirements of the microbial populations in the rumen. Energy of straw in the form of cellulose and hemicellulose is only partially available due to the existence of ligno cellulose complex.

With respect to the feeding of ruminants the first and foremost requirements is the feeding of rumen microbes in terms of nitrogen, energy and minerals, and straw cannot meet these requirements. So various methods have been evolved for better utilisation of straw of which supplementation of Urea Molasses Mineral Block Licks (UMMB) is the

simplest and easiest method. The National Dairy Development Board has standardised the formulation for commercial production of these blocks. These blocks are prepared using ingredients like urea molasses, mineral supplements, common salt and

brans/cakes. Sodium bentonite and lime are used as binding agents. The proportions at which these ingredients can be used for the preparations are provided in table. I

The urea molasses mineral block licks are produced in solidified form either by way

of steam heating of ingredients (Hot Process) or by addition of gelling agents followed by thorough mixing. (Cold Process).

Advantage of feeding UMMB licks to ruminants.

In a study conducted on the adequacy of rations provided to livestock by the farmers of Muthalamada Panchayat it was observed that 60 percent of the cows were fed with rations deficient in dry matter. This is mainly attributable to the fact that the animals are mainly fed with fibrous straws, which are having reduced palatability and digestibility. Supplementation of UMMB licks to the straw diet has been found to increase the straw intake by 26 to 37 percent in cattle (Singh 1994). This will result in increased intake of digestible dry matter from straw due to improved microbial activity in the rumen.

Another observation that was obtained in the study cited above was that 37 percent of the farmers were providing rations deficient in energy to the livestock. Since UMMB contains molasses which is a readily available source of energy and its supplementation will lead to increased microbial growth and in turn to improved digestion of fibre and production of volatile fatty acids, animal get sufficient energy to maintain itself. Similarly a reduction in the methane and total gas production as a result of UMMB supplementation also indicates efficiency of utilisation of energy.

Another observation that was obtained in the study was that almost 96 percent of the farmers were not following scientific feeding practices with the result that deficiency of minerals are very common among livestock, leading to decreased production. The supplementation of UMMB licks has been found to bring the animals in a positive calcium and phosphorus equilibrium which were highly negative on feeding straw alone.

All these parameters show improved rumen fermentation which leads to more intake of dry matter, increased availability of energy, nitrogen and minerals, thereby enabling to improve the productive performance of ruminant livestock in Kerala. □

Table 1

Ingredients	Proportions(%)
Urea	10-125
Molasses	40-50
Mineral Mixture	4-8
Common Salt	3-8
Lime	6-9
Sodium bentonite	2-4
Rice Polish (fine)	20-30

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