AgriCos e-Newsletter
ISSN: 2582-7049
AgriCos e-Newsletter
Open Access Multidisciplinary Monthly Online Magazine
Volume: 02 Issue: 11 November 2021 Article No: 17

Importance of UMMB for Livestock of Ladakh

Shamim Ali and Rauf ul Hassan
Research Associate HMAARI (SKUAST-K) Leh and VAS (SHD) Leh Ladakh

SUMMARY

The combination of urea, molasses and other feed ingredients can be used to produce Urea-Molasses Mineral Blocks (UMMB) that can be fed to livestock as a supplement. The main objective of UMMB supplementation is to provide a constant source of degradable nitrogen throughout the day to promote growth of rumen microbes in ruminants fed poor quality forage particularly during winter when there is complete shortage of green fodder.

INTRODUCTION

Urea molasses mineral block is prepared by mixing urea, molasses, mineral mixture and other ingredients in a suitable proportion. Poor and balanced nutrition is the biggest constraint in the animal production of Ladakh region. This problem arises mainly due to ruminants are basically fed on fibrous forages and low quality roughages such as straws especially during winter season and limited or no concentrate feed and vitamin-mineral supplement to the livestock. Thus UMMB is a readily available source of energy, protein and minerals for the livestock. Supplementing an animal with UMMB would provide adequate quantity of these nutrients and slow ingestion of urea leads to efficient microbial protein production and improved digestibility. Molasses is a major by-product of the sugar industry in Mauritius. It is a good, palatable and cheap source of energy for ruminants. Use of liquid molasses by small farmers, however, is very limited due to problems related to transport, storage and legislation. One strategy to get over this obstacle and increase the use of molasses in the animal industry is through the manufacture of urea-molasses mineral blocks (UMMB).

Urea-Molasses Mineral Blocks (UMMB)

The technique consists of mixing the required feed ingredients in a container and pouring the mixture into moulds and leaving to solidify into blocks. Ruminants have the unique ability to convert NPN compounds in their diet to a microbial protein of high biological value. Keeping this fact in mind urea containing blocks known as urea molasses mineral block (UMMB) were developed to supplement the diet of ruminants fed on poor quality roughage (Garg and Gupta,1992: Thu and Uden 2001). The Urea provides small amount of extra nitrogen required for utilization of the dry matter. Nitrogen must be sufficient to maintain the ammonia level in the rumen, at a constant and sufficient amount for better development of the rumen microbes leading to better degradation of the cellulosic components. Molasses: a good source of energy, being a concentrated plant juice, provides a range of minerals (except phosphorus) and a complete mixture of vitamins. Minerals: they correct the macro and trace minerals deficiency in animal diet .Cement or quick limes is used as binding agent. The use of UMMB feed as supplement is to improve on the nutrient contents and straw utilization. The blocks are easy to handle, transport, and commercially feasible to manufacture (Avilla 2006). The feeding of UMMB to cattle usually results in increasing in feed intake by 25 - 30% and its digestibility (Aarts et al. 1990, Upreti 2008). UMMB supplementation in animal feed increases microbial protein in the animal body which saves the expensive concentrates. It has also been documented that feeding UMMB increases or maintains body condition, and production of ruminant animals during winter on straw based diet.

Advantage of UMMB

- Density of UMMB is much higher than the ingredients, which facilitates long distance transportation, at a cheaper rate.
- UMMB blocks are suitable for supplementing dry fodder based diets for sustainability of ruminants during droughts and winter season.
- UMMB licks are hard enough to control gradual intake limited to about 700 g in adult bovines and 800 - 1000 g in growing bovines of about 200 kg body weights.
- UMMB is a cheap source of nitrogen to ruminants in a safe way.
- UMMB increases feed intake of diets based on poor quality roughages.

- UMMB supplementation has been shown to increase growth rates of cattle, sheep and goats.
- UMMB supplementation can substantially improve the reproductive performance of cows, ewes and does in situations where feed quality is marginal

Proportion of different Ingredients required to made UMMB

S.No	Ingredients	Percentage	Parts per 100 kg Mix
1	Urea	8 %	8 kg
2	Molasses	40%	40 kg
3	Mineral Mix	5%	5 kg
4	Salt	1%	1 kg
5	Wheat Bran	36%	36 kg
6	Calcium Oxide/Cement	10%	10 kg
	Total	100	100 kg

Precaution while feeding UMMB

- Feed only as a supplement.
- Never form the main feed.
- Feed only to the ruminants.
- Don't feed to non-ruminants i.e Horse, Donkey etc.
- Don't feed to young ruminants less than 6 months of age.
- Never give to animal with empty stomach.
- Supply the block after feeding with sufficient roughages.
- Supply sufficient amount of water.

Urea Molasses Mineral Block

ACKNOWLEDGEMENT

I would like to express my special appreciation and thanks to Dr.Tundup Namgial (DSHO) Leh for his valuable support, guidance and encouragement. I am highly thankful to the entire staff of Stakna sheep farm for their great support.

REFERANCES

Aarts, G., R. Sansoucy and G.P. Levieux.1990. Guideline for the manufacture and utilization of molasses urea blocks. Animal Production and Health Division, FAO, Rome, Italy. 7pp.

Avilla, H. F. 2006. Production and utilization of urea molasses mineral block (UMMB). FAO/ Ag./AGP/ doc/publicat/VIET95, Pp. 199-204.

Garg, M. R. and B. N. Gupta. 1992. Effect of supplementing urea molasses mineral block lick to straw based diet in DM intake and nutrient utilization . Asian-Aust J. Anim Sci. 5 (5):39-44.

Thu, N. V. and P. Uden. 2001. Effect of work and urea molasses cake supplementation of swamp buffaloes fed rice straw or grasses on rumen environment, feed degradation and intake. Asian-Aust J. Anim Sci. 14(5):631-639.

Upreti, C. R. 2008. Buffalo. In: Livestock poultry and fish nutrition in Nepal. B. Upreti publisher, Kathmandu. Pp. 117-120.