

Introduction:

Adequate balanced diet should be provided to the dairy cattle to get desired production such as milk, regular calf, well health etc. from them. Our livestock mostly depend on straw. This straw contains low level of nitrogen so that rumen microorganisms unable to show their desired activity due to lack of necessary amounts of ammonia and amino acids. UMB may be used for supplementation of straw based diet in dairy cattle production under smallholder village farmers of Bangladesh. Supplementation with straw based diet could increase feed intake, daily milk yield, and longer lactation period, live weight gain in cow and calves. Besides these, it acts as a storage feed during rainy season and other critical periods like periods of livestock feed scarcity.

What is urea molasses block (UMB)?

The UMB is a high protein concentrated feed containing necessary amount of minerals and vitamins. It supplies Non Protein Nitrogen (NPN) to the rumen microbes without risk.

Constituents of UMB (for 10 kg mixture):

SL. No	Ingredients	Percentage %	Amount (kg)
1.	Molasses	39	3.9
2.	Wheat bran	20	2
3.	Rice polish	20	2
4.	Urea	10	1
5.	Lime	06	0.6
6.	Salt	05	0.5
	Total	100	10

Procedure for making 10 kg. UMB in rural level at least cost:

1. At first 3.9kg. molasses is weighed and put in a large bowl.
2. 500g. common salt and 1 kg. of urea is added and admixture well manually.
3. This mixture is kept for one night or at least 12 hours.
4. After 12 hours, the mixture in the bowl is again mixed well by hand.
5. Then wheat bran, rice polish, and lime, which were previously kept into separate bowls, are added with this mixture and also mixed well.
6. Now, this mixture is placed in a 9" long, 5" wide and 5" height wooden form or disc, and then pressure is applied by wooden cover to give it block shape, block so prepared usually weighs 2.5 kg.
7. The block is now displaced from the disc and kept for 15 hours for hardening and ready for animal consumption.
8. Besides, the above procedures, the mixture can be pressed in the bowl that results the bowl shaped block. This bowl shaped block with bowl can be supplied in front of an animal and others gradually.

Methods of UMB feeding:

The UMB may be provided to the animal by-

1. Preparing brick shaped hard block.
2. Preparing by pressing on bowl/bucket

Bricks are given to the animals to eat by licking. For this occasion, a wooden box (9"× 5"× 5") is used. Care should be taken so that the animals cannot bite it.

It is proven by experiments that by licking the block, the nitrogen level in the rumen remain longer period of time which increases the digestibility of coarse roughage (e.g. straw). Therefore, use of brick like hard block (which the animal can lick) is better for desired production. Initially if the animal neither does nor want to lick the block, it should be habituated by spreading salt or bran on it. 2.5kg block to be fed for 4-6 days in case of cattle 4 buffalo and 20-40 days for sheep a goat.

Usefulness of feeding UMB:

1. It increases palatability and thus enhances intake of feeds.
2. By feeding UMB the body weight gain, draught power and milk yield of cattle, buffaloes, sheep and goat is increased.
3. The digestibility and absorbability of coarse roughages (straw) is increased by feeding UMB.
4. It increases the nutritive value of hard feed.
5. The female animals come to heat earlier and become pregnant by feeding UMB.
6. Calving interval of cow decrease by feeding UMB.
7. If supplied to the pregnant animals, strong and healthy calves are born.

Precaution of feeding UMB:

1. Block should provide to cattle over 1 year and for sheep and goat over 6 months of age.

PREPARATION OF UREA MOLASSES BLOCK (UMB) AND IT'S USE IN LIVESTOCK

2. Not more than 500g block daily for cattle and buffalo and for sheep goat should be supplied not more than 100g block daily.
3. The blocks never be supplied in ground form or dissolved in water.
4. Not provide to non- ruminants and calves.
5. The animals should be supplied with other usual feeds like straw, fresh green grass, concentrates and sufficient amounts of clean drinking water in addition to UMB.



Conclusion:

The use of UMB for supplementation as catalytic agent of straw based diet in dairy cattle production in the resource poor, zero grazing village level farmers in Bangladesh is very much significant. It has been observed from the experiments that the supplementation of UMB with straw based diet could increase feed intake, daily milk yield, longer lactation period, fertility and live weight gain in cows/animals. If UMB is properly disseminated and extended in the village level farmers of Bangladesh, it will play a vital role for poverty alleviation of poor livestock farmers.

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