



PRODUCTION D'UN ALIMENT APPROPRIE: suffisant, sain, durable

Farm made Urea-Molasses Blocks schedule

1. Introduction

Ruminant's (cows, sheeps, goats) diets in developing countries are based on fibrous feeds like mature pastures and crop residues. These feeds are deficient in protein, minerals and vitamins and are poorly digestible. Both these characteristics keep intake and productivity low. Supplementation with Urea Molasses Blocks (UMB) can increase digestibility of fibrous feeds by up to 20%, increase the nutrients animals receive and can increase feed intake by 25 to 30%. Blocks are a convenient way to make and store molasses and urea and also feed to animals. They can easily be made and used in villages. A person may make and sell blocks to farmers as a source of income.

2. Raw material for a UMB of approximately 10kg

N°	Raw material	Quantity (kg o L)	Process notes
1	Urea	1kg	
2	Molasses	4kg	Jaggee 2,4 kg + water 1,6 kg? (Must be dense)
3	Rice bran	3,5kg	
4	Cement	1 kg	(+400 g of water)
5	Salt	0,15 kg	
Total		10,05 kg	

3. Process

Urea Molasses blocks can be manufactured on the farm. Manufacture is easy and simple and different processes exist which may be used according to local conditions. The manufacturing can be divided into the this stages:

- Mix thoroughly urea with molasses for 20 minutes
- Add rice husks and mix again
- Prepare cement paste and add salts before mixing to the previous mixture
- Once the ingredients are thoroughly mixed, place the mixture into molds. Any local container, such as tin cans or small buckets can be used as a mold. Using a plastic sheet to line the molds will make block removal from the mold easier.
- Remove the blocks from the molds after 24 hours and place on racks to dry. Leave the blocks to dry for at least 5 days depending upon the weather condition.

Figure1. Major ingredients: Urea (1) , molasses or Jaggee in Meghalay (2)), rice bran (3)





UNIVERSITÀ
CATTOLICA
del Sacro Cuore



PRODUCTION D'UN ALIMENT APPROPRIE: suffisant, sain, durable

Figure 2: Mixing of the major ingredients



Figure 3: Molding (e.g. using small tin cans)



Figure 4: Drying



3. Precautions while supplementing Urea Molasses Blocks

- Feed to **ruminants only** (sheep, goats, cattle, camels).
- Do not feed to monogastrics, i.e., horses, donkeys, or pigs.
- Do not feed to young ruminants less than six months of age (kids, lambs).
- Blocks should be used as a supplement and not as the basic ration. A minimum of coarse forage in the rumen is essential.



UNIVERSITÀ
CATTOLICA
del Sacro Cuore



PRODUCTION D'UN ALIMENT APPROPRIE: suffisant, sain, durable

- Never give blocks to an emaciated animal with an empty stomach. There is the risk of poisoning due to excessive consumption.
- The amount of blocks fed to sheep and goats should be limited to 100 grams/day; The blocks should never be supplied in ground form or dissolved in water as this can result in over consumption.
- Supply sufficient amount of water.