

Multi-nutritional blocks for feeding Animals

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Abstract

Using of multi-nutritional blocks (MNB) composed of molasses as an energy source and urea as a source of non-protein nitrogen has been extensively evaluated in developing countries, mainly in goats and cattle (Makkar et al 2007). The use of local resources and the adaptation of technologies using participatory approaches are a high-priority for community development (Arriaga et al 1998). This technology can be adapted to animal production in the dry season using local products (Miller and Thomson 2003, Hadjipanayiotou 1996), increasing microbial protein synthesis and improving forage use, whilst providing macro and micronutrients (Leng et al 1991). Technology transfer, process and adoption of MNB are appropriate for small landowners who do not have easy access to extension services. It is practical in arid areas where grazing is subject to prolonged dry seasons, and forage and crop wastes are deficient in energy and nutrients but high in fiber (Forsberg et al 2002, Anindo et al 1998).

Ben Salem and Nefzaoui (2003) defined the feed blocks as a solidified mixture of agro-industrial by-products, urea, a binder and salt used as a preserver. The role of feed blocks is to provide the animal continuously and simultaneously with minerals, vitamins, energy and protein or non-protein nitrogen. It has been shown in many studies that feed blocks improve digestion of low quality roughages by stall-fed or grazing animals. Very few studies have addressed the topic of nutrition and reproduction interactions when sheep and goats are supplemented with feed blocks. Ben Salem and Nefzaoui (2003) in their review on feedblocks, did report some of the available data in this area. We do not intend to review the same data again and readers are invited to consult the paper by Ben Salem and Nefzaoui (2003) for an exhaustive inventory of results linking nutrition and reproduction with reference to feed blocks. We only report here results by Al-Haboby et al. (1999) in Iraq using sheep grazing stubbles and supplemented or not with poultry litter and cotton seed cake-based blocks.

Abdel-Ghani et al., (2008) found that serum blood urea concentrations were increased significantly ($P < 0.05$) with treatments fed on blocks containing tafla as binding material than control treatment and goats fed on blocks containing cement as binding material. They reported that the economy return was higher in treatment fed on blocks containing palm by-products binding with tafla than other treatments. Followed by treatment that fed on blocks containing 12.5% each from olive and palm by-products that used tafla as binding material. Followed by treatment that fed on blocks containing olive by-product and tafla as a binding material. Study concluded that it could be raising local kids on 75% from commercial diets with nutritional blocks ad-libitum especially when using tafla as binding material.

This article review will discuss the effect of multi-nutritional blocks for feeding animals.