

Nutritional Status of Cattle and Buffaloes reared by Non-commercial Farmers in Nepal AHTCS, Nepal (2008)

Abstract

Livestock farming is an integral part of the Nepalese agricultural sector and a major contributor (31 %) to the AGDP. This contribution clearly indicates the importance of livestock development activities in Nepal. The animal industry in Nepal is suffering from many problems relating to animal health, husbandry, nutrition and breeding. This research is purely field based. It focuses on the DM and DCP requirement of animals-based body weight and level of production, along with the DM and DCP supply to animals through feeds and forage.

Three districts of Nepal namely Kaski, Okhaldhunga and Morang were selected as the research area. Two surveys were conducted, one in the winter (dry) season and one in the summer (wet) season. 180 farming families were selected as the respondents for the data collection, including 90 in Kaski, 30 in Okhaldhunga and 60 in Morang.

The DM requirement for cattle and buffaloes was 2.5% of the body weight (CTEVT, 1996). To estimate body weight the formula given below was used (Quesenberry and Birmingham, 2000).

Weight of animal (Kg) = $\frac{\text{Girth (cm)} \times \text{Girth (cm)} \times \text{Length (cm)}}{10840}$

10840

The DCP requirement, depending on the stage of production of the animal, was calculated based on Indian standards (Ranjan, 1998).

A spring balance was used to measure the weight of the feed and forage supplied. The DM and DCP contents of the feed and forage were calculated using existing tables (CTEVT, 1996; Upreti and Shrestha, 2006). Where the DCP contents of the feed and forage was unavailable, the following formula was used (PTC+, 2005) $\%DCP = \%CP - 4$

The research showed that farmers keep 1 milking animal (Cow/Buffalo) and on average, 2.4 animals per household. Daily milk production was found to be 2.1 kg and 3.3 kg from cows and from buffaloes respectively. The DM and DCP supply were found to be negatively balanced, and therefore insufficient for livestock (-18% & -55.7%). The DM supplied from dry forage, green forage and concentrates was found to be 61.1%, 22.1% and 16.8% respectively. This is against the principle 22.2 % DM should be fulfilled from dry forage, 44.5 % from green forage and 33.3 % from concentrate (CTEVT, 1996). There is both quantity and quality feed deficit within the livestock industry of Nepal. This has resulted in low productivity from animals, although there is a high animal population density.

Training and awareness programs are recommended for farmers because of this study, namely; the use of improved varieties of fodder and forages, the production and use of quality forage seeds, techniques to upgrade the nutritional value of crop residues and other low quality feed stuffs. Provision of facilities like fodder/legume/grass nursery establishments and the supply of forage seeds to farmers are also recommended. Further research related to fodder and pasture development should be conducted regularly so that the major constraints of this sector can be identified, and action taken accordingly.

Key Words: Livestock, Fodder/forage, Dry Matter, Digestible Crude Protein, Deficiency