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Animal Nutrition for augmenting livestock productivity

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Abstract

To maximize profitability from the animals, one needs to ensure that they receive the required quantity of nutrients, preferably from locally available feed resources. Improving animal productivity through feeding a balanced ration is one of the most promising ways to reduce methane emissions in ruminants. Increase in milk production and production efficiency and thereby increase in net daily income of farmers. Specialized systems had higher production and better utilization of feed and fodder along with hygienic milk quality, milking and container equipment are critical for maintaining milk sanitary quality.

Introduction

Both productive and nonproductive cattle are extremely prevalent in India. Roughages of low quality, which are deficient in protein, energy, minerals, and vitamins, make up the majority of the diet of ruminants. By providing nitrogen to the rumen microorganisms, the addition of cereal and leguminous fodder to ruminant diets can increase the utilization of low-quality roughages. The basis of livestock systems is feeding since it has a direct or indirect impact on every aspect of the livestock industry, including animal welfare, production, and the environment. Feeding as per the nutrient requirement of animals, using locally available feed resources, is fundamental for improving the genetic potential of low-producing dairy animals in tropical countries. Despite a feed shortage in the region, considerable potential exists to improve milk production efficiency in dairy animals by addressing the problem of imbalanced nutrition. In the dry season, when both feed supply and quality are low, extra forage should be saved as hay. To make hay, chopped grasses and legumes should be allowed to dry in the field for two to three days. The dried hay should next be securely kept in a shaded area, either after being baled or in a loose state. Throughout the year, a stable supply of feed can be achieved by conserving fodder. (Tolera, A et al)

Importance of balanced ratio

Hydroponic fodder increase milk yield by 10.07% in dairy cows (Reddy GVN et .al). Feed and fodder requirement given to the table no.1

Table No. 1

	Requirement	Availability
Green Fodder	827 MT	734.2 MT
Dry Fodder	426 MT	326.4 MT

Desirable characteristics of ration

1. Ration must be palatable (avoid foul smelling, musty, mouldy material)
2. Ration should be fairly bulky to satisfy the hunger.
3. Ration should be properly prepared to render it more digestible and palatable.
4. Ration should be fairly laxative

Significance of feed and fodder sources

1. Livestock rearing is gradually moving from farming to industrial and business enterprises.
2. To earn profit, suitable feeding strategies with proper inclusion of feed and fodder resources is needed.
3. Feeding account 70-75% of the total cost.

Conclusion

We provide animals with energy or nutrient sources to increase milk productivity from various sources. For instance, molasses is a highly palatable and rich energy source that's used as an appetizer. It also reduces dustiness in feed and is rich in niacin and pantothenic acid. Another source is milling byproducts like wheat bran, which constitutes the outermost layer of the seed along with some flour. It contains NPS beta glucan due to its swelling and water holding capacities, which help prevent constipation. For marine tissue protein, fish meal is commonly used. It is obtained by cooking, pressing, drying, and milling fresh raw fish or fish trimmings. Fish meal is a good protein source and provides omega-3 fatty acids. However, a toxic substance called gizzerosine can be formed when fish meal is dried at a temperature of 180 degrees Celsius. This can lead to gizzard erosion and black vomiting in poultry.

References

Tolera, A., Merkel, R.C., Goetsch, A.L., Sahlu, T. and Negesse, T., 2000. Nutritional constraints and future prospects for goat production in East Africa. Proceedings of the opportunities and challenges of enhancing goat production in East Africa, pp.10-12.

Reddy GVN, Reddy MR, Reddy KK. 1988.Nutrient utilization by milk cattle fed on rations containing artificially grown fodder. Indian Journal of Animal Nutrition.5(1):19-22.

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