

NUTRITIONAL EVALUATION OF KASHAT (*COIX LACRYAMA-JOBI*) GRASS IN GOATS

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ABSTRACT : An experiment was conducted on Five local bucks (Av. body. wt. 12.98 kg) for 26 days to examine the nutritional quality of Kashat (*Coix lacryama-jobi*) grass in goat. The chemical analysis of Kashat grass revealed that, it contains DM-26.80, OM-91.10, CP-11.60, CF-24.27, EE-2.37, Ash-8.90, AIA-2.23, NFE-52.86, NDF-61.18, ADF- 37.70, ADL- 6.20, Cellulose-29.31, Hemicellulose- 23.48, Lignin- 5.80, Tannin- 0.54, Ca- 0.57 and P- 0.34 per cent on DM basis. The average dry matter intake per 100 Kg body weight was 4.95Kg in goats fed on Kashat grass. The nutritive values of Kashat grass in terms of DCP and TDN were observed as 7.02 and 54.87 per cent, respectively. The experimental bucks showed gain in body weight of 68.46g/day. The nutritive ratio was 1: 6.82 and was classified as a medium nutritive ratio. Mineral balance observed for nitrogen, calcium and phosphorous was 5.96, 1.66 and 0.80 g/day, respectively. From the overall results, it can be concluded that Kashat grass can be used as good fodder for maintenance and growth in goats.

Key words : Kashat, bucks and nutritional quality.

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INTRODUCTION

Kashat (*Coix lacryama-jobi* L.) also known as Kasai or Ran-Jondhala, having family Poaceae/Graminae. Kashat is annual (in the temperate zone) but perennial where frost is absent or mild, freely branching upright or ascending herb 1-2 m tall, the cordate clasping leaf blades 20-50 cm long and 1-5 cm broad. Kashat (*Coix lacryama-jobi* L.) is available grass of Konkan region during rainy months. Kashat is a very useful and productive grass increasingly viewed as a potential energy source. Before Zea it became popular in South Asia. Coix was rather widely cultivated as a cereal in India. Still taken as a minor cereal, it is pounded, threshed and winnowed as a cereal or breadstuff. The pounded flour is sometimes mixed with water like barley for barley water. The pounded kernel is also made into a sweet dish by frying and coating with sugar. It is also husked and eaten out of hand like a peanut. Beers and wines are made from fermented grain. Kashat (*Coix lacryama-jobi* L.) is available grass of Konkan region during rainy months. It is considered as a good source of nutrient supplement

for small ruminants. Kashat is fed to the goats under intensive and semi-intensive systems. The present study was conducted to evaluate the nutritional quality of Kashat (*Coix lacryama-jobi* L.) as feed to goats.

MATERIALS AND METHODS

The experiment was conducted at Department of Animal Husbandry and Dairy Science, College of Agriculture, Dapoli, Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth, Dapoli, Ratnagiri, Maharashtra located in Konkan, India. Five local bucks (Av. body. wt. 12.98 kg) were selected randomly from the goat unit. All the five bucks were stall-fed and offered fresh Kashat (*Coix lacryama-jobi* L.) fodder grass three times a day for 21 days. During the preliminary period of 21 days, *ad lib.* quantity of Kashat grass was offered to each buck. During the collection period of five days, weighed quantity of fodder Kashat grass was offered to each buck separately. Metabolic trial was conducted for five days. During the collection period, animals were kept in metabolic cages. The feeding and watering was done in cages itself. Record of individual feed offered, left over, faeces and urine in

Oat Fodder ($34.80 \pm 0.50\text{g/day}$) and Jungle Rice grass ($26.67 \pm 1.42\text{g/day}$), respectively. The gain in body weight of animals in the present study indicated that the nutrient availability of Kashat grass is sufficient to meet the maintenance and growth requirements of the goats.

CONCLUSION

From the overall results of the present investigation regarding chemical composition, dry matter intake, digestibility coefficient, nutritive value, nutritive ratio, body weight gain and positive mineral balances, it can be concluded that Kashat grass is a good source for the maintenance as well as growth in goats.

REFERENCES

- A O A C (1995) *Official Methods of Analysis*. 12th Edn. Association of Analytical Chemists, Washington, D.C.
- Baruah K K, Saikia B N, Bhuyan R and Borah G P (2005) Nutritive evaluation of Kanchan leaves in goats. *Indian J. Anim Nutr.* **22**(1), 51.
- Godase B M (2005) Nutritive value of Hybrid Napier (*Pennisetum purpurium* × *Pennisetum typhoides*) for goat. *M.Sc. thesis* submitted to the Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth, Dapoli. (M.S).
- Jakhmola R C and Pathak N N (1983) Chemical composition and nutritive value of Dinanath grass for sheep. *Indian J. Anim. Sci.* **53**(1), 94-95.
- Okagbare G O, Akpodiete O and Esiekpe O (2004) Nutritional evaluation of *Gmelina arborea* leaves supplemented with grasses (*Panicum maximum* and *Pennisetum purpureum*) as feed for West African dwarf goats. *Trop. Anim. Hlth Prod.* **36**(6), 593-598.
- Sawal R K and Sharma K C (2009) Nutritional evaluation of Sudan grass hay alone and in combination with Cowpea hay in sheep. *Indian J. Anim. Nutr.* **26**(4), 333-336.
- Singh K K, Samanta A K and Maity S B (2001) Nutritional evaluation of Stylo (*Stylosanthes hamata*) hay in goats. *Indian J. Anim. Nutr.* **18**(1), 96-98.
- Singh K K, Samanta A K and Maity S B (2001) Nutritional evaluation of Stylo (*Stylosanthes hamata*) hay in goats. *Indian J. Anim. Nutr.* **18**(1), 96-98.
- Srinivasulu C, Reddy M R and Reddy G V N (1998) Nutritional evaluation of Gliricidia leaves in sheep and goats. *Indian J. Anim. Nutr.* **16**(1), 44-47.
- Tiwari S P, Jain R K, Nema R K, Dhir R C and Rajagopal S (1998) Nutritional evaluation of Rhea (*Acacia leuco phloea*, Willd L) leaves in goats. *Indian J. Anim. Nutr.* **15**(2), 129-133.
- Van Soest P J and Goering H K (1970) Forage Fibre Analysis ARSC, U.S. Dept. Agri. Handbook No 379. Washington D.C. PP-13.
- Verma D N, Verma A K and Singh R K (1995) Nutritive value of jungle rice (*Echinocola colonum*) grass for goats. *Indian J. Anim. Nutr.* **12**(1), 57-58.
- Vidyardhi V K and Sharma S (2000) Nutritive value of oat fodder for rams. *Indian J. Anim. Nutr.* **17**(4), 344-346.