Materials and Methods

The study was carried out at Sheep Breeding Research Station, Sandynallah, Nilgiris. The samples were collected during the winter months and dried by using hot air oven. Dried samples were sent to Institute of Animal Nutrition, Kattupakkam, Chennai for the proximate analysis and In vitro dry matter degradability for 24hrs and 48hrs. Standard laboratory procedures were followed for analysis of the samples.
Results and Discussion
The tree fodder has 47.50% of dry matter content. Proximate analysis showed, 13.66% of CP, 36.75% of crude fibre, 3.52% of Ether extract, 5.95% of Total ash, 40.12% of NFE, 0.89% of Calcium and 0.25% of Phosphorous. In-vitro dry matter degradability for 24 hrs and 48 hrs was 15.31 and 36.68%. Fodder trees are nutrient-rich and enable them to produce bulky biomass almost round the year makes a significant alternative for animals feed. The minimum threshold for crude protein is 10% \(^1\), if it is lower than this value it will affect rumen fermentation. The studied tree fodder species had crude protein content in the ranges of 12.05 – 13.15% and it is moderately higher from the threshold. High level of crude protein results in increased ruminal ammonia nitrogen concentration that in turn enhances microbial activity and growth resulting in better dry matter digestibility. Crude protein with this amount is adequate to support the requirements of cattle, sheep, and goats at medium production levels \(^4\). The ash content of most of the tree leaves varied from 6 to 15% \(^5\) and the result of the present study is also within the range. Reports indicate that the content of ash to a level 8% in the feed increase productive response and digestibility of feed in goats \(^3\). This seemingly studied fodder tree species have good mineral concentrations with considerable percentage of calcium and phosphorous therefore be suggested as livestock feed supplement with low-quality roughage.

The nutrient content of Acacia is an indication of the tree fodder as a feed supplement for livestock. During the frost and drought period of about five to six months in a year, it serves as source of nutrient to the ruminants. This study proved that supplementation of *Acacia* can meet out the protein and mineral deficiency of animals grazing in dry and inefficient pasture land especially during drought period. For the grazing animals in hilly tract areas, after the winter frost, this fodder variety can be very well utilized.

Conclusion
The tree fodder has CP value of above 10% which is above the minimum requirement in the diet for adequate digestive activities \(^6\). Hence this variety can be used during the winter and dry summer periods in hilly tract region especially for grazing small ruminants when there is no lush green pasture. Further studies are required to evaluate the nutrient composition during different seasons and methane emission by the tree fodder.

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