

The nutritive value of *Prosopis chilensis* “Molina” • Stuntz (mesquite) pods for feeding goats

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SUMMARY

Feeding of mesquite pods alone or in combination with concentrate in a digestibility trial using goats as an experimental animal not only maintained their body weight but also exhibited tangible gain. Apparently mesquite pods could form an adequate maintenance ration for goats and sheep, particularly when the presence of other pasture plants is scarce in the long dry summer season.

INTRODUCTION

Prosopis chilensis “Molina” Stuntz (mesquite) is a leguminous tree well adapted to grow and to produce large amount of pods in arid and semi-arid areas of the Sudaii. Pods are well relished by domestic animals.

The aim of this study was to assess the ability of *Prosopis chilensis* “Molina” Stuntz (mesquite) pods as an unconventional feed resource for feeding goats.

MATERIALS AND METHODS

Eight entire male desert goats ranging in liveweight between 15-17 kg were used. They were assigned to two treatments (A and B) of four animals each. Animals in group (A) were fed mesquite pods whereas

animals of group (B) were fed a diet composed of 55% mesquite pods plus 30% wheat bran and 15% cotton seed-cake. All animals were individually kept in metabolism crates for a ten-day preliminary period followed by ten-day collection period. Each animal was offered the average (600 grammes) of the diet. The amount was that voluntarily consumed during the preliminary period. Salt-lick and water were freely available. Representative samples (100 grammes each) of feed were taken from each offering. Faeces and urine were collected daily and stored at -20°C until the end of collection. Composite samples from feed (500 grammes) and excreta were used for proximate analysis according to A.O.A.C. (1970).

RESULTS AND DISCUSSION

The chemical composition of the ration fed during the digestibility trial is presented in table (1). Differences in crude protein and crude fibre were presumably due to variation in the mesquite pods portion of the rations. The results of the digestibility studies are also summarized in table (1). The crude protein in the ration containing supplementary cotton seed cake and wheat bran, ration (B) was more digestible than ration (A). Nitrogen free-extract and ether extract were also more digestible than that of ration (A). Apparently the digestibility of ether extract is affected, to a great extent, by the nature and amount of ether in the rations. The slight variation in the digestibility of dry matter is attributed to difference in composition of the two diets.

It seems that the animals not only maintain their live body weight but also exhibited considerable gain (10 and 53 grammes). This is in line with the recommendations of ARC (1965) for small ruminants.

Apparently mesquite could form an adequate ration for goats and sheep, particularly when the presence of other pasture plants is rather scarce in the long dry season.

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