

EFFECT OF FEEDING DIETS WITH GRADED LEVELS OF AJAR SEED ON THE GROWTH PERFORMANCE AND NUTRIENT UTILIZATION IN RABBITS

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ABSTRACT : Thirty six weanling (42 days, average weight 998 g) male New Zealand White Rabbits were divided into 4 groups of 9 each on the basis of body weight. Four isonitrogenous (18% CP) and isocaloric (3.0 Kcal DE /g) concentrate mixture (T₁, T₂, T₃ and T₄) containing 0, 9, 18 and 27% Ajar seed kernel (ASK) replacing a mixture of wheat bran and cereals were prepared. Rabbits of group 1, 2, 3 and 4 were fed individually on their respective concentrate mixture (T₁, T₂, T₃ and T₄) and green paragrass in the ratio of 80 : 20, on dry matter basis for 42 days. Daily feed intake and changes in weekly body weight were recorded. At the end of the feeding trial 9 animals were slaughtered to determine the dressing percentage. Average daily gain was 25.92, 22.61, 18.14 and 10.58 g with feed/ gain

ratio of 3.47, 3.93, 5.24 and 9.79 in group 1, 2, 3 and 4 respectively. A metabolism trial of 5 days duration in the last week in 4 rabbits per group revealed no significant difference on dry matter intake, however, digestibility of nutrients, balances of nitrogen and energy differed significantly among the groups. No incidence of mortality was recorded. Dressing percentage was linearly decreased along with increase level of ASK in group 3 and 4. Higher level of ASK (18 and 27%) in diet depressed growth rate, feed / gain ratio, digestibility, balances of nutrient and dressing percentage in rabbits. Ajar seeds kernel could be incorporated into the diets of growing rabbit up to a level of 9 % as a replacement of a mixture of wheat bran and cereal grain without any adverse effect on performance.

RÉSUMÉ : Effets d'un aliment à taux d'incorporation croissant de graines décortiquées de *Lagerstroemia flos-reginae* sur les performances de croissance et l'utilisation des nutriments chez le lapin. Trente six lapins sevrés (42 jours, poids vif moyen 998g), mâles et femelles Néo-zélandais Blancs, ont été divisés en 4 groupes de 9 chacun tenant compte de leurs poids vifs. On a fabriqué quatre aliments concentrés (T₁, T₂, T₃ et T₄) isoprotéiques (18% CP), isocaloriques (3.0 Kcal DE /g) contenant 0, 9, 18 et 27% de graines décortiquées de *Lagerstroemia flos-reginae* (ASK) en remplacement d'un mélange de son de blé et de blé. Les quatre groupes de lapins ont été nourris avec leurs aliments respectifs (T₁, T₂, T₃ et T₄) plus de l'herbe de Para fraîche aux taux de 80 : 20, compte tenu de la matière sèche, pendant 42 jours. La consommation journalière et les changements de poids hebdomadaire ont été enregistrés. A la fin de l'expérimentation, 9 lapins ont été abattus afin de déterminer le rendement de la carcasse. La croissance moyenne

quotidienne a été de 25.92, 22.61, 18.14 et 10.58 g avec un indice de consommation de 3.47, 3.93, 5.24 et 9.79 pour les groupes 1, 2, 3 et 4 respectivement. Une mesure digestibilité durant les 5 jours de la dernière semaine, sur 4 lapins par groupe, n'a pas révélé de différence significative dans la consommation de matière sèche, mais la digestibilité des nutriments, la balance protéines/énergie diffèrent significativement selon les groupes. Aucune incidence sur la mortalité n'a été constaté. Le rendement de la carcasse décroît de façon linéaire avec l'accroissement du taux d'incorporation de l'ASK pour les groupes 3 et 4. Les taux d'incorporation les plus élevés (18 et 27 %) diminuent la vitesse de croissance, l'indice de consommation, la digestibilité, l'équilibre nutritionnel, le rendement de la carcasse. Les graines décortiquées de *Lagerstroemia flos-reginae* peuvent être incorporées dans un aliment pour lapin jusqu'à un taux de 9%, en remplacement de son et grain de blé, sans influence néfastes sur les performances.

INTRODUCTION

Due to the high cost of cereal grains, it has become necessary to explore alternative and inexpensive feed resources that are locally available, preferably not important as an item of human food. Ajar (*Lagerstroemia flos-reginae*) tree is a large deciduous plant and abundantly grow in the forest of India mostly in North eastern States. It provides durable timber for constructional purposes and bears a large amount of seeds. The population density of Ajar tree in 24.061 km² forest area of the State of Assam is 3.279 million Cubic meters which can produce about 13,116 metric tonnes of seed per year (FSI, 1995). Limited studies have clearly revealed the palatability of Ajar seeds on goats (BARUAH *et al.*, 1994) and its successful utilisation as an ingredient in the concentrate ration of goats up to 25% by replacing cereal grains like maize (SAIKIA, 1996). Chemical composition of different fraction of Ajar seed showed that Ajar seed hulls and kernel contain 3.26,

7.96 % crude fibre and 3.19, 1.23% tannic acid respectively (SAIKIA, 1998). The objective of this study was to evaluate the effect of feeding graded levels of Ajar seed kernel as a replacement of a mixture of bran and cereals on the performance and utilisation of weanling rabbits.

MATERIALS AND METHODS

Ajar seed were collected and manually separated into kernel and hulls. Seeds contained 55.9 per cent kernel and 44.1 per cent hulls. In this experiment hulls was not used because of high fibre and tannic acid content. Four isonitrogenous (18% CP) and isocaloric (3.0 kcal DE/g) concentrate mixture (Table 1) was prepared of which the control ration (T₁) was prepared with conventional feed ingredients. However, the experimental mixtures (T₂, T₃ and T₄) contained 9, 18 and 27 % Ajar seed kernel (ASK), respectively as replacement of a mixture of wheat bran and cereals.

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