

# ABSTRACT

## **The Conceptualisation of An Intensive Production Model for the Agouti (*Dasyprocta leporina*) a Neotropical Rodent in Trinidad, West Indies.**

Roxann C. L. Brown-Uddenberg

The agouti (*Dasyprocta leporina*) is widely hunted for its meat and may be at risk. An approach to conceptualise an intensive production model for its production was described. It consisted of two phases. Phase I involved the conceptualisation and the partial testing of the intensive production models, which lasted from August 1996 to June 1999. The major limitation existed was the acquisition of females already in captivity, which had proven reproductive successes, and this imposed a constraint on the animal numbers. In this phase 14 females were used. The testing stage revealed that agoutis can be reared in an intensive manner; the group breeding system appeared more efficient. The young agoutis were weaned at 8 weeks and became sexually mature at 13-15 months and produced their first litter at 17-18 months of age. Linear regression equations reveal that a direct relationship exists between weight and age, and length and age for both male and female offspring. The experience also suggested that the males could be left with the females and the young postpartum to achieve postpartum fertilisation in about 20 days. Coprophagy, food hoarding and consumption of the "after birth" in the caged environment were observed. Phase II involved the analysis of the production systems displayed at two agouti colonies one located at the Emperor Valley Zoo and another at the Wildlife Section of the Forestry Division of the Ministry of Agriculture Land and Marine Resources of Trinidad and Tobago. Analysis on the annual parturitions during 1991-1998 at both locations revealed that agoutis were not seasonal and prolific breeders. They produced an average of 1.25 litters per female per year, with an average litter size of 2. A modified intensive production model illustrated by flow charts was suggested and the above results have produced target performance coefficients, which would give a degree of predictability to the model.

**Keywords:** Agouti, Intensive Production Models, Target Performance Coefficients.