

Received date: 31-07-2023 | Accepted Date: 02-08-2023 | Published Date: 16-10-2023

## **Comparative study of the impact of forage- and pellet-based diets on sperm parameters in captive grasscutters**

**Okon A J L<sup>1</sup>, Zouh Bi Zf<sup>2</sup>, Soro D<sup>2</sup>, Gnangoran Y V<sup>3</sup> and Diomande M I Jm<sup>1</sup>**

<sup>1</sup>Félix Houphouët Boigny University, Côte d'Ivoire

<sup>2</sup>University of Nangui Abrogoua, Côte d'Ivoire

<sup>3</sup>Alassane OUATTARA University, Côte d'Ivoire

This work aims to improve the reproductive performance of grasscutters in captivity. Thirty (30) grasscutters (*Thryonomys swinderianus*) aged six (6) months were selected. They were divided into (two) 2 batches (batch 1 and batch 2) of fifteen individuals in order to receive distinctly (two) 2 types of food. Batch 1 and batch 2 received forage and pellets respectively for one month. The feeding was carried out at the Ecological Research Center (CRE) in the Treichville district of Abidjan. The grasscutters were then transported to the Histology and Molecular Biology laboratory of the UFR Medical Science of the Université Félix Houphouët Boigny (UFHB) to collect their semen using the flotation method. Spermogram and spermocytogram tests were then carried out on the semen of each grasscutters in order to make a quantitative and qualitative assessment. Spermogram and spermocytogram examinations showed that grasscutters fed within the pellet had a higher average sperm concentration and a lower percentage of sperm abnormalities than those fed within the forage. The pH, vitality and mobility percentages were not significant in either batch. It should be noted that pellet-fed aulacods had better body weight gain, testicular weight gain and semen quality than forage-fed aulacods.

**Key words:** grasscutter, spermogram, flotation, pellet, forage.

### **Recent Publications:**

1. Comparative analysis of sperm quality of the Greater cane rat (TS) collected by masturbation and epididymal puncture in Côte d'Ivoire, Asian Journal of Research in Animal and veterinary sciences, vol 11, issue 2, page 60-66, 2023
2. Stimulation folliculaire chez les rattes wistar à partir d'extraits aqueux *Cissus araliodes* issue de la pharmacopée Ivoirienne, Universal Journal of Life and Environmental Sciences, vol 5, 1, 2023
3. Impact of farming systems on the physical characteristics of Carcass of local breeds ducks in the south forest of Côte d'Ivoire, ISSN (2522-6584), 95-98, 2021
4. Effect of rearing on the zootechnical performances of quail raised in Côte d'Ivoire, 2019, vol 7, 3, 30-42.
5. Effect of rearing on the zootechnical performances of quail raised in Côte d'Ivoire, Journal of International Academic Research for Multidisciplinary, 2019, vol 7, 3, 30-42.

### **Biography**

Abou Joel Landry OKON, holder of a Unique University Thesis and a Diploma in Tropical Human Biology, and a Certificate of Advanced Studies in Management and Development of Natural Resources option: Animal Production. He was registered on the list of aptitude research officers of the African Malagasy Council for Higher Education (CAMES) 2019. His research areas are Histology of organs, Cytology, and Biology of Reproduction.

jlokony@yahoo.fr