

## SEMEN BIOCHEMISTRY AND MINERAL CONTENT OF INDIGENOUS COCKS IN NIGERIA

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The study was conducted to evaluate the genetic effect on semen biochemistry and mineral of three strains of Nigerian indigenous cocks. Sixty (60) adult local breeding cocks comprising of 20 normal, 20 fizzle and 20 naked neck were selected randomly from the poultry breeding unit of the Teaching and Research farm Ambrose Alli University Ekpoma. Semen was collected from using abdominal massage technique and analyzed. Semen biochemistry and minerals was affected by strain. The naked neck feathered cocks had the highest semen total protein while the frizzle feather cocks had the least with corresponding values of  $2.59 \pm 0.04$  and  $1.28 \pm 0.02$  ng/dL, respectively. The normal feather strain had the highest semen Albumin while naked neck feather had the least with the corresponding mean values of  $0.65 \pm 0.04$ ,  $0.53 \pm 0.03$  and  $0.53 \pm 0.02$  ng/dL, respectively. Means values of semen glucose was significantly ( $P < 0.05$ ) different among the strains. The semen glucose for all the strains ranged from  $181.95 \pm 0.38$  for to  $126.35 \pm 0.34$  nmol/L. Semen cholesterol, was highest and significant ( $P < 0.05$ ) for naked neck feather cocks with mean value of  $101.63 \pm 0.22$ , while the frizzled cocks had the least value of  $53.24 \pm 0.29$  nmol/L. A significant ( $P < 0.05$ ) difference was obtained in the, chloride and potassium content of the semen mineral samples. The frizzle feather strain had the highest semen sodium while normal feather had the least with the corresponding mean values of  $154.76 \pm 0.14$ ,  $150.16 \pm 0.30$  and  $137.85 \pm 0.41$  nmol/L, respectively. Semen chloride, was highest and significant ( $P < 0.05$ ) for frizzled cocks with mean value of  $92.90 \pm 0.31$ , while the naked neck feather cocks had the least value of  $68.90 \pm 0.56$  nmol/L. It was concluded that large genetic variation existed in semen quantity traits in the cocks used for the study and can therefore be included in genetic improvement as gene contributors.

**Keywords:** Frizzle, Indigenous Cocks, Naked Neck, Semen Biochemistry, Semen Minerals