



**SEMEN CHARACTERISTICS AND HAEMATOLOGICAL INDICES OF NIGERIAN LIGHT ECOTYPE
LOCAL COCK FED VARYING DIETARY LEVELS OF ETHIOPIAN PEPPER (*XYLOPIA AETHIOPICA*)
FRUIT MEAL**

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Introduction

- ▶ **The poultry industry:** attributes local chicken
- ▶ **Infertility in animals** - 30% male related (Barkhordari *et al.*, 2013)
 - ▶ Contributory Environmental factors :
meteorological factors and the resultant stress,
Age, poor nutrition and poor management
 - ▶ Unique structure of avian spermatozoa (high
level of polyunsaturated fatty acid): GOOD and
BAD.
 - ▶ Lipid peroxidation is the major cause of
infertility in males (Zaniboni *et al.*, 2006)

Materials and Methods

- ▶ **Study Location and Duration**
- ▶ **Preparation of Ethiopian pepper**
- ▶ **Experimental animals**
- ▶ **Experimental diet**
- ▶ **Data analysis**
 - ▶ Semen collection and evaluation
 - ▶ Haematological analysis
- ▶ **Statistics**

Results

Table 2: Effect of Ethiopian pepper fruit meal on the semen characteristics of Nigerian light-ecotype local

chicken			Levels of EPFM per kg diet		
Parameters	0g	2g	4g	6g	8g
Volume (ml)	0.31±0.01 ^a	0.34±0.01 ^a	0.29±0.02 ^b	0.18±0.01 ^c	0.27±0.01 ^b
Concentration (x 10 ⁶ /ml)	4.09±0.39 ^c	4.77±0.57 ^b	5.07±0.22 ^a	4.21±0.45 ^b	4.08±0.24 ^c
Motility (%)	62.33±1.09 ^c	85.33±0.67 ^b	97.33±1.61 ^a	55.33±1.41 ^d	55.67±0.95 ^d
Live sperm. (%)	63.33±1.21 ^c	76.33±0.95 ^b	88.17±1.38 ^a	53.00±0.86 ^d	52.67±0.99 ^d
Dead sperm. (%)	36.33±1.09 ^b	23.67±1.09 ^c	11.67±1.41 ^d	46.33±1.41 ^a	48.00±1.46 ^a
Normal sperm. (%)	71.33±0.84 ^b	74.67±1.12 ^b	83.67±1.20 ^a	71.00±1.24 ^b	57.60±1.77 ^c
Abnormal sperm. (%)	29.00±0.68 ^b	25.33±1.12 ^b	17.33±1.52 ^c	28.66±1.23 ^b	41.66±1.89 ^a
Total sperm. (x 10 ⁹ /ejac.)	1.28±0.05 ^b	1.61±0.06 ^a	1.44±0.11 ^{ab}	0.87±0.03 ^c	0.73±0.06 ^c

Means ± SEM in the same row with different superscripts differ significantly (p < 0.05); Sperm: Spermatozoa; ejac: ejaculation; Sig: Significance; * Significant

Table 3: Effect of *Xylopia aethiopica* fruit meal on haematological characteristics of Nigerian light ecotype local cocks.

	Levels of EPFM per kg diet					
Parameters	0g EPFM/kg Diet	2g EPFM/kg Diet	4g EPFM/kg Diet	6g EPFM/kg Diet	8g EPFM/kg Diet	Sig
PCV (%)	35.00±1.00	37.00±1.00	38.00±1.00	37.00±1.00	37.00±1.00	0.41 ^{NS}
RBC (x10 ⁶ /ml)	11.17±0.55	11.16±0.52	11.80±0.12	11.80±0.13	11.46±0.47	0.54 ^{NS}
WBC (10mm ³)	10800±400	11000±400.00	11200±100.00	11600±200.00	11300±450.00	0.56 ^{NS}
HB (g/dl)	10.30±0.20	10.70±0.00	10.80±0.10	11.20±0.00	11.35±0.45	0.10 ^{NS}
NEUT. (%)	24.00±6.00	21.50±2.50	26.00±0.00	29.00±1.00	29.50±0.50	0.14 ^{NS}
LYM. (%)	74.00±6.00	80.00±2.00	78.50±0.50	70.00±0.00	70.00±0.00	0.15 ^{NS}

Sig: Significance; NS = Not significant (P>0.05); PCV: Packed cell volume; RBC: Red blood cell; WBC: White blood cell; HB: Haemoglobin; NEUT: Neutrophils; LYM: Lymphocytes

Conclusion

▶ *Conclusion:*

▶ *Recommendation:*



▶ THANKS FOR LISTENING