PARTIAL MILK YIELD, MILK CHOLESTEROL AND BODY WEIGHT OF LACTATING WEST AFRICAN DWARF DOES

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INTRODUCTION

- Goats in Nigeria are kept mainly for meat productions, the milk is not substantially consumed (Midau *et al*., 2010, Adewumi *et al*., 2015).

- However, there is a growing awareness of the importance of goats as source of milk for man (Malau-Aduli *et al*., 2001, Adewumi *et al*., 2015).

INTRODUCTION

- One of the controversial components of goat milk is the cholesterol content

- Cholesterol concentration depends on year or season, feeding system, stage of lactation and breed (Park, 1990, 1991)

INTRODUCTION

- The aim of this research work is to investigate the partial milk yield, milk cholesterol and body weight of lactating West African Dwarf does

MATERIALS AND METHODS

- **Experimental site**
- **Experimental animals and their management**
  - A total of twelve (12) lactating West African Dwarf (WAD) does with mean initial weight of 24.5 ± 1.58 kg and 2 years of age were used for the experiment.
  - The WAD does were sourced from teaching farm of FUNAAB. They were housed intensively in a well-ventilated pen, in an open-sided pen with corrugated aluminium roofing sheet and a wooden slatted floor.

MATERIALS AND METHODS

- **Experimental diet**
  - The animals were fed at 5 % of their body weight. Concentrate diets were offered once daily at 09:00 hours. *Panicum maximum* was used as basal diet and clean water was offered *ad libitum* to all the animals.

MATERIALS AND METHODS

- **Milk sample collection and analysis**
  - Milk samples were taken at weekly intervals for 70 days from day 7 postpartum; this was done to allow the kids have access to all their dams' colostrum.
  - Prior to milking, dams were separated from their kids in the evening (19:00 hrs) till (07:00 hrs) the next morning. The two halves of the udder were hand-milked once weekly within (08:00 – 10:00 hrs).
  - The quantity of milk collected from each doe was measured using a measuring cylinder and recorded before sub-samples of 20 ml were collected, bulked and refrigerated until needed for milk cholesterol analysis.

MATERIALS AND METHODS

- **Chemical analysis**
  - Milk cholesterol was determined using A.O.A.C. (2010) procedures.

- **Statistical analysis**
  - The data obtained from the study were subjected to One way analysis of variance (ANOVA) using SPSS (1999) software procedures in a completely randomized design. Significant differences were separated using Tukey's studentized test.

RESULTS AND DISCUSSION

Table 1: Effect of weeks of lactation on milk yield, milk cholesterol and weight of lactating West African Dwarf does

Weeks of lactation	Milk yield (ml)	Milk cholesterol (mg/100g)	Weight (kg)
1	257.50^{bcd}	21.06^{b}	25.41^{a}
2	307.66^{abc}	$17.36b^{c}$	24.00^{b}
3	334.83^{ab}	42.36^{a}	23.54^{b}
4	360.25^{a}	22.26^{b}	23.54^{b}
5	272.16^{abcd}	12.96^{cd}	23.45^{b}
6	283.25^{abcd}	11.13^{d}	23.58^{b}
7	259.75^{abcd}	9.73^{d}	23.45^{b}
8	213.41^{cd}	9.60^{d}	23.50^{b}
9	198.08^{d}	9.36^{d}	22.87^{c}
10	182.50^{d}	8.43^{d}	22.58^{c}
SEM	31.70	1.91	0.18
P value	0.00	0.05	0.00

^{a,b,c,d} Means in the same row with different superscripts are significantly different ($P<0.05$)

CONCLUSION

- The study concluded that weeks of lactation significantly affected milk yield, milk cholesterol content and body weight.

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