

Oil palm (*Elaeis guineensis* Jacq.) frond feeding of goats in the humid tropics

ABSTRACT

Twenty four goats were allocated to three groups (n = 8) and fed either a control diet Without Oil Palm Fronds (CON), a diet incorporated with 25% Oil Palm Fronds (OPFM) or 50% Oil Palm Fronds (OPFH) for 100 days to evaluate their growth rates, carcass characteristics and subcutaneous fatty acid profiles. Animals in all three groups exhibited similar final body weights ($p>0.05$). The OPFH group showed a significant linear reduction ($p<0.05$) in dressing percentage, warm carcass weight and back fat thickness and total muscle when compared to the CON group. The total n-3 Polyunsaturated Fatty Acid (PUFA) concentrations in the subcutaneous fat of the OPFH animals were significantly higher (linear, $p<0.05$) than the CON group. The diet containing 25% of oil palm fronds did not produce any adverse effects on the growth performance and carcass characteristics. This demonstrates an environmental-friendly way of utilizing agricultural waste by products for the small ruminant industry in tropical countries growing oil palm tree.

Keyword: Carcass characteristics; Chevon; Fatty acid; Goat; Oil palm fronds