

The effect of palm oil supplementation on growth and carcass composition of growing lambs

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Palm oil is considered as a cheap source of energy supplementation in a commercial feed for sheep. However there is a scarcity of report on the effect of oil supplementation on the growth performance of lambs and their carcass composition. Therefore this would be the objective of the study.

Fifteen weaner lambs which live weight ranged from 15 to 18 kg were divided into three diet groups and placed in individual pens. They were all fed with common basal diet consisting of *ad libitum* of urea-treated paddy straw and a commercial feed concentrate at the rate of 200 g per head per day (Alimon, Azila and Saparin, 1993, Proc XVI MSAP Conf, 88-89). While Diet A animals received no other supplements, Diet B and Diet C animals were, respectively, supplemented with 20 g and 40 g of palm oil per animal per day for a duration of 12 weeks. At the end of the feeding trial, the animals were fasted for 24 h and then slaughtered by exanguination of the neck. The carcasses were dressed, halved and the right sides were dissected into three major carcass components ; namely, muscles, fat and bone, according to procedure of Butterfield (1963, Symp on Carcass Composition and Appraisal of Meat Animals, CSIRO Melbourne, Doc 4-1).

The result in the table below shows that increasing the amount of energy in the feed by increasing the level of palm oil, significantly improved the average daily gain ($P < 0.05$) of the lambs but the body composition was not significantly different. The empty body weight at slaughter was higher for Diet C suggesting that energy supply may not be sufficient to promote maximum growth in Diet A. This could indicate the energy level in the diets was adequate to deposit the necessary fat in the carcass while the excess fat may be deployed to the non carcass parts as storage fat as indicated by the tendency for animals on high level of palm oil supplementation to have lower the dressing percentage.

It can be concluded that the palm oil can be used as an energy supplement with the advantage of improving average daily gain and maintaining low level of carcass fatness.

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Parameters	Diet A	Diet B	Diet C	sig
Number of lambs	5	5	5	
Initial liveweight (kg)	17.3	17.7	17.4	ns
ADG (g/d) 12 weeks	42.1	48.3	66.2	**
Dressing %	47.3	47.5	46.9	ns
Total fat %	7.16	7.04	7.72	ns
Total muscle %	64.0	64.9	64.9	ns
Total bone %	27.8	26.8	26.3	ns