

Feed with different energy distribution to mink kits from July to mid September

Tove N. Clausen & Peter Sandbøl

Danish Fur Breeders Research Center (PFC), Hemningvej 112C, 7500 Holstebro

Introduction

Investigations on the energy distribution in the feed for mink kits in the whole growing furring period has shown that 24 – 29 % of the metabolizable energy from protein (ME) results in the longest skins, whereas 29 - 34 ME from protein gives the best skin quality. Later it has been shown that a reduction in ME from 29 to 24 in middle September gives skins with the same length and quality as 29 ME from protein in the whole growing period, no matter if the energy from protein is replaced by carbohydrate or fat energy. (Clausen et al., 2006; Hejlesen & Clausen, 1999; Hejlesen & Clausen, 2000; Hejlesen & Clausen, 2001). The main purpose of this investigation was to evaluate the effect of energy distribution on kit growth in July. The feeding was continued to observe any long term consequences of the different trial feed.

Materials and methods

We used 14 groups of each 112 brown male- and female kits. The kits were fed investigation feed from July 3 to September 15. Thereafter all groups were given feed from the local Feed Kitchen. The amount of ME from protein varied from 26 – 32 percent, the amount of ME from fat varied from 44 – 59 percent and carbohydrate varied from 15 – 27 percent of ME (Table 1).

Energy distribution
32:53:15
32:50:18
32:47:21
32:44:24
29:56:15
29:53:18
29:50:21
29:47:24
29:44:27
26:59:15
26:56:18
26:53:21
26:50:24
26:47:27

Table 1. Investigation groups in the early growth period

Results and discussion

The body weight increased from July 3 to August 2 was dependent of the interaction between the amount of energy from protein, fat and carbohydrates (Figure 1). Thus, the body growth was reduced when ME from protein and fat was reduced and when ME from carbohydrates increased. The amount of ME from protein in July should be at least 32 %, the amount of fat 53 to 56 % and the amount of ME from carbohydrates not more than 18 %, to get the best body growth in July. Skin length and fur quality was dependent of the carbohydrate content in the feed in July. Skin length was reduced with increasing ME from carbohydrates. Fur quality was good when mink kits were fed 27 ME from carbohydrates, but the skins were short (Table 2).

Table 2. Importance of carbohydrates for skin length and fur quality.

% ME from carbohydrates	Skin length, cm	Quality *
15	88.4 (4.0) A	6.5 (2.6) AB
18	88.1 (3.6) AB	6.8 (2.5) A
21	88.1 (4.1) AB	6.5 (2.3) AB
24	87.7 (4.0) BC	6.2 (2.4) B
27	87.1 (4.3) C	6.8 (2.6) A
p-value	0.004	0.02

* 1 – 12. 12 best quality.

Conclusion

To achieve the best growth in July the amount of energy from protein should be at least 32 percent, the amount of energy from fat should be from 53 to 56 percent and carbohydrate should not exceed 18 percent of ME in that period. Within these levels we also saw the longest skins and the best fur quality. It is still to be seen how the kits will respond to a higher protein content in July and witch energy distribution is the best from August to September.

Referencer

Clausen, T.N., Sandbøl, P. & Hejlesen, C., 2006. Proteiniveau til mink i pelssætningsperioden. Betydning af fedt/kulhydrat forholdet og kulhydratkilde. Faglig Årsberetning 2005, 89 - 98. Pelsdyrervervets Forsøgs- og Rådgivningsvirksomhed, Holstebro, Danmark.

Hejlesen, C. & T.N. Clausen, (1999). Fasefodring med protein til mink i vækstperioden. Faglig Årsberetning 1998 (2. udg.), 73-81 (47-50). Pelsdyrervervets Forsøgs- og Rådgivningsvirksomhed A/S, Holstebro, Danmark.

Hejlesen, C. & T.N. Clausen, (2000). Fasefodring med protein til mink i vækstperioden. Faglig Årsberetning 1999, 93-95. Pelsdyrervervets Forsøgs- og Rådgivningsvirksomhed, Holstebro, Danmark.

Hejlesen C. & T.N. Clausen, (2001). Fasefodring af mink i vækstperioden. Faglig Årsberetning 2000, 77-80. Pelsdyrervervets Forsøgs- og Rådgivningsvirksomhed, Holstebro, Danmark

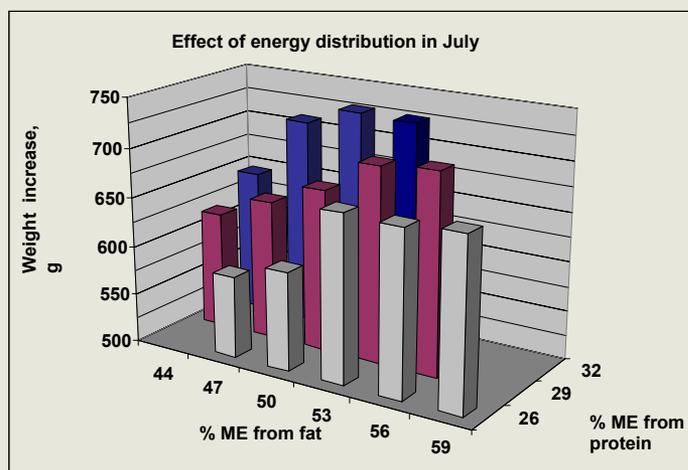


Figure 1. Body weight increased from July 3 to August 2