DETERMINATION OF FAECAL DRY MATTER DIGESTIBILITY IN RABBITS WEANED AT 25 DAYS OF AGE

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ABSTRACT

The aim of this work was to study dry matter digestibility (DMd) in rabbits weaned at 25 d of age to discuss the best procedure to determine nutrient digestibility.

Fifteen New Zealand × Californian rabbits from five litters (3 rabbits/litter) weaned at 25 d of age were fed ad libitum a diet containing 20.0% crude protein and 33.5% neutral detergent fiber (on DM basis). Feed intake and faeces excretion were recorded daily from day 25 to day 40 of age and DM digestibility determined.

Litter had a significant effect on DM intake and excretion (P = 0.032 and 0.012, respectively) but only affected slightly DMd (P = 0.14). Dry matter intake and DM excretion increased from day 26 to 40 of age by 158 and by 480%, respectively (P = 0.001). A broken line regression model was fitted to DMd. It decreased linearly from weaning to day 32 of age (2.17 ± 0.25 percentage units per day), whereas from day 32 to 40 remained constant (69.4 ± 0.47%).

Accordingly, it would be advisable to begin a digestibility trial not before the day 32 of age, using the first week after weaning as adaptation period. Average standard deviation of DMd decreased 54% with the length of the collection period. Consequently, the number of animals required to detect a difference among means as significant depend on the length of the collection period. For a conventional collection period of four days a difference of 2 percentage units could be detected by using 9 animals/treatment.

Key words: dry matter digestibility, rabbits.