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Caecotrophy Behaviour of the Rabbits (Oryctolagus cuniculus)

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Abstract : One of the most unique characteristics of rabbit feeding behaviour is caecotrophy, which involves the excretion and immediate consumption of specific faeces known as soft faeces. Caecotrophy in rabbits is the instinctual behaviour of eating soft faeces; reduced caecotrophy decreases rabbit growth and lipid synthesis in the liver. Caecotroph ingestion is highest when rabbits are fed a diet high in indigestible fibre. The colon produces two types of waste: hard and soft pellets. The hard pellets are expelled, but the soft pellets are re-ingested by the rabbit directly upon being expelled from the anus by twisting itself around and sucking in those pellets as they emerge from the anus. The type of alfalfa hay in the feed of the rabbits does not affect volatile fatty acid concentration, the pattern of fermentation, or pH in the faeces. The cecal content and the soft faeces contain significant amounts of retinoids and carotenoids, while in the tissues (blood, liver, and kidney), these pigments do not occur in substantial amounts. Preventing caecotrophy reduced growth and altered lipid metabolism, depressing the development of new approaches for rabbit feeding and production. Relative abundance is depressed for genes related to metabolic pathways such as vitamin C and sugar metabolism, vitamin B2 metabolism, and bile secretion. The key microorganisms that regulate the rapid growth performance of rabbits may provide useful references for future research and the development of microecological preparations.

Keywords : caecocolonic microorganisms, caecotrophy, fasting caecotrophy, rabbits, soft pellets
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