THE EFFECT OF VEGETABLE OIL ON THE PERFORMANCE AND CARCASS VALUE IN BROILER WEANED RABBITS

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Introduction

Early weaning could be a way how to avoid some digestive disorders. Kits start to consume solid feed when the milk production of the doe decreases. In practical conditions, kits begin to eat a feed mixture which is designed for does and it does not correspond with their nutritional requirements. This could cause digestive troubles during the fattening period. At weaning, young rabbits adapt their digestive tract from milk based diet to solid feed. The milk of does is rich in fat which is the main source of energy for kits. The does milk has a specific composition because more than a half of fatty acids are medium-chain fatty acids: caprylic and capric. These fatty acids have a pronounced antimicrobial effect (Marounek et al., 2002).

The aim of study

The objective of the present work was to investigate the effect of commercially available oil Akomed R® containing caprylic, capric and lauric acid, lipase addition on growth, feed consumption, mortality and carcass value in early weaned broiler rabbits.

Material and methods

In the balance experiment 42 Hyplus® rabbits (PS59 x PS19) were fattened till 77 days of age. The rabbits were weaned at the age of 21 days and housed in individual metabolic cages with urine. The floor density was 0.15 m^2 per rabbit. Temperature of 16 C and relative humidity about 65% were maintained during the whole fattening period. Water and feed were available ad libitum. Animals were individually weighed every week, feed consumption was measured daily. Rabbits were assigned to 3 groups by 14 animals: the first group was fed a control feed mixture which was based on a commercial diet, the second group received an experimental diet from 21 to 42 days of age, then it was fed the control diet from 43 to 77 days of age. The third group received the experimental diet from 21 to 77 days of age. The experimental diet was the same as the control diet, but supplemented with Akomed R® at 1% and 0.5% lipase (PESS, Inotex, Czech Republic). Akomed R® is a commercially available oil (Karlshamns, Sweeden) which contains 60.8% caprylic acid, 38.7% capric acid and 0.5 % lauric acid. The kids have access the solid feed of the does till weaning. Water and feed mixture were available ad libitum. At the end of the experiment six rabbits from each group of the average live weight were slaughtered in an experimental slaughterhouse. They were fasted overnight and slaughtered the following morning by electric stunning and bleeding by jugular cut. The method of slaughter measurement was harmonised by Blasco and Ouhayoun (1996).

Results

Table Some characteristics of performance and carcass value

Measurement		Group			Significance
		Control	Akomed R® + lipase		
			21 – 42 d	21 – 77 d	
Live weight at 21 days of age	(g)	472	471	472	NS
Live weight at 35 days of age	(g)	926	961	955	NS
Live weight at 77 days of age	(g)	2891	2768	2745	NS
Weight gain 35 – 77 days of age	(g)	45.03	42.04	40.75	NS
Feed intake per day per rabbit	(g)	157^{a}	144^{ab}	137^{b}	0.05
Feed conversion	(kg/kg)	3.52	3.44	3.35	NS
Mortality	(n)	3	2	3	NS
Dressing percentage	(%)	52.5	52.1	52.4	NS
Fore part of the carcass	(%)	49.18	50.01	50.94	NS
Hind part of the carcass	(%)	48.39	50.09	48.52	NS
Loin	(%)	17.84	18.80	17.66	NS
Hind legs	(%)	30.70	31.35	30.82	NS
Thigh muscles	(%)	22.28	22.77	21.87	NS
Renal fat	(%)	2.99	2.59	2.10	NS

NS = nonsignificant difference; ^{ab}means marked with a different superscript letter within each column are significantly

Conclusion

Akomed R® as a source of medium-chain fatty acids in rabbits weaned at the age of 21 days reduced the intake of feed. There was no significant effect of supplement of Akomed R® and lipase on growth of rabbits. There was a positive effect of Akomed R® and lipase on feed conversion where rabbits had a not significantly lower feed conversion in comparison with rabbits without Akomed R®. Mortality and dressing value were not significantly influenced by supplement of Akomed R®. The proportion of renal fat was positively affected by the supplement.

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