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Title	Preparation Influences of Breed, sex and Sodium Butyrate Supplementation on the Performance, Carcass Traits and Mortality of Fattening Rabbits
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Abstract	<p>Twenty four New Zealand white rabbits (12 does and 12 bucks) and twenty four Flanders (12 does and 12 bucks) rabbits, allotted into two feeding regime (6 for each breed, 3 males and 3 females) first one fed commercial ration and second one fed commercial diet plus sodium butyrate (300 g/ton). The obtained results showed that at end of 8th week experimental period New Zealand white rabbits were heavier body weight than Flanders rabbits (1934.55+39.05 vs. 1802.5+30.99 g); significantly high body weight gain during experimental period especially during 8th week (136.1+3.5 vs. 126.8+1.8 g/week); better feed conversion ratio during all weeks of experiment from first week (3.07+0.16 vs. 3.12+0.10) till the 8th week of experiment (5.54+0.16 vs. 5.76+0.07) with significantly high dressing percentages (0.54+0.01 vs. 0.52+0.01). Also all carcass cuts were significantly high in New Zealand white rabbits than Flanders. Females rabbits (at the same age) were lower body weight than males from start of experiment (941.1+39.8 vs. 972.1+33.5 g) till the end of experiment (1833.64+37.69 vs. 1903.41+36.93 g); gained less during all weeks of experiment except during 8th week (132.1+2.3 vs. 130.9+3.4 g/week), with lower dressing percentage (0.52+0.01 vs. 0.53+0.01) and lighter carcass cuts than males, however, they had better feed conversion ratio during 1st week, 7th week and 8th week of experiment. Addition of 300g sodium butyrate/ton of rabbit increased the body weight of rabbits at the end of experimental period (1882.71+26.45 vs. 1851.5+49.82 g); improve body weight gain at 3rd, 4th, 5th, 6th and 7th week of experiment and significantly improve feed conversion ratio during all weeks of the experiment from 1st week (2.85+0.07 vs. 3.30+0.15) till the 8th week of the experiment (5.51+0.12 vs. 5.77+0.12). Also the dressing percentage was higher in Sodium butyrate fed groups than control one (0.53+0.01 vs. 0.52+0.01) and the most important results of feeding sodium butyrate is the reducing of the mortality percentage in rabbits during 8 week experiment to zero percentage as compared with 16% in control group. These results have recently been summarized. The seriousness of the problem is indicated by the 18-20% mortality rate and 40-55% health risk with antibiotic-free diets despite different natural substitution under suboptimal conditions. Data for this issue on rabbits are scarce when compared to pigs or poultry. The lack of consistency in the results obtained with additives such as probiotics, prebiotics, enzymes and organic acids can be partly explained by different experimental protocols and hygienic conditions. Studies with complex preparations are useful but explanations of the results can be difficult. Organic acids have been shown to have beneficial effects on performance. Some (e.g. butyric acid) also decrease the incidence of subclinical necrotic enteritis caused by <i>C. perfringens</i>, an additional beneficial effect which is highly relevant for the poultry industry. Organic acids are widely distributed in nature as normal constituents of plants or animal tissues. They are also formed through microbial fermentation of carbohydrates predominantly in the caeca of poultry. A wide range of organic acids with variable physical and chemical properties exists, of which many are used as drinking water supplements or as feed additives (acidifiers) acidifiers). Many are also available as sodium, potassium or calcium salts (and/or partially esterified). The advantage of salts over acids is that they are generally odorless and easier to handle in the fee manufacturing process owing to their solid and less volatile form. They are also less corrosive and may be more soluble in water. The objectives of the present study were to investigate the effects of supplementing weanling rabbit diet with sodium butyrate on the growth performance, carcass traits, and survivability.</p>
Keywords:	rabbit, productive performance, carcass quality, sodium butyrate
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