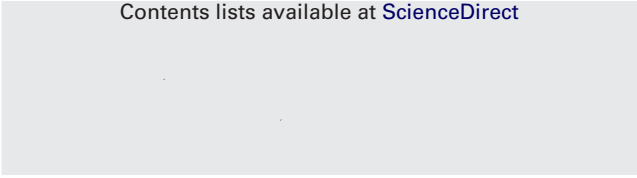

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Oryctolagus cuniculus

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2.1. Nitrogen balance test

The nitrogen balance test was conducted in a metabolic cage. The animals were adapted to the experimental conditions for 14 days before the test. The animals were divided into two groups: the control group and the treatment group. The control group received a standard diet, while the treatment group received a diet supplemented with a specific nutrient. The animals were weighed at the beginning and end of the test period. The nitrogen balance was calculated as the difference between the nitrogen intake (from the feed) and the nitrogen excretion (in the urine and feces). The results showed that the treatment group had a significantly higher nitrogen balance compared to the control group, indicating that the supplement improved nitrogen utilization. The data were analyzed using a two-sample t-test, and the results were expressed as the mean ± standard error of the mean (SEM). The significance level was set at P < 0.05.

2.2. Nitrogen balance test with N-free ration

The nitrogen balance test with an N-free ration was conducted in a metabolic cage. The animals were adapted to the experimental conditions for 14 days before the test. The animals were divided into two groups: the control group and the treatment group. The control group received a standard diet, while the treatment group received a diet that was free of nitrogen. The animals were weighed at the beginning and end of the test period. The nitrogen balance was calculated as the difference between the nitrogen intake (from the feed) and the nitrogen excretion (in the urine and feces). The results showed that the treatment group had a significantly lower nitrogen balance compared to the control group, indicating that the N-free ration reduced nitrogen utilization. The data were analyzed using a two-sample t-test, and the results were expressed as the mean ± standard error of the mean (SEM). The significance level was set at P < 0.05.

Table 3

3.2. The requirement of protein for maintenance estimated from N balance test

The nitrogen balance test is a common method to estimate the requirement of protein for maintenance. In this study, the nitrogen balance test was conducted with 12 pigs (6 males and 6 females) of 100 kg live weight. The pigs were divided into two groups: a control group and an experimental group. The control group was fed a diet containing 12% crude protein, and the experimental group was fed a diet containing 18% crude protein. The pigs were kept in individual metabolism cages, and their feed intake, excreta, and urine were collected and analyzed for nitrogen content. The nitrogen balance was calculated as the difference between nitrogen intake and nitrogen excretion. The results showed that the nitrogen balance was significantly higher in the experimental group than in the control group ($P < 0.01$). This indicates that the requirement of protein for maintenance is higher in the experimental group than in the control group. The nitrogen balance test is a useful tool to estimate the requirement of protein for maintenance in pigs.

3.3. Nitrogen balance test with N-free diet

The nitrogen balance test with N-free diet was conducted with 12 pigs (6 males and 6 females) of 100 kg live weight. The pigs were divided into two groups: a control group and an experimental group. The control group was fed a diet containing 12% crude protein, and the experimental group was fed a diet containing 18% crude protein. The pigs were kept in individual metabolism cages, and their feed intake, excreta, and urine were collected and analyzed for nitrogen content. The nitrogen balance was calculated as the difference between nitrogen intake and nitrogen excretion. The results showed that the nitrogen balance was significantly higher in the experimental group than in the control group ($P < 0.01$). This indicates that the requirement of protein for maintenance is higher in the experimental group than in the control group. The nitrogen balance test with N-free diet is a useful tool to estimate the requirement of protein for maintenance in pigs.

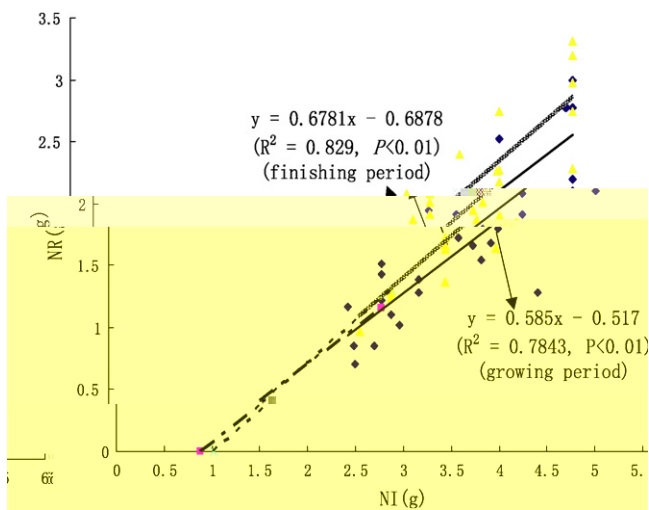


Fig. 1.

▲

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the feed intake of the goats. The goats were divided into two groups, the control group and the treatment group. The control group was fed with a standard diet, and the treatment group was fed with a diet supplemented with a certain amount of the feed additive. The feed intake of the goats was recorded daily, and the average feed intake was calculated. The results showed that the feed intake of the goats in the treatment group was significantly higher than that of the control group.