

The effect of applying *Bacillus coagulans* on the growth performance of weaned piglets ⁽¹⁾

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Abstract

The variety of antibiotics that can be added to livestock feed have been reduced in the following years, which is a trend for the international and domestic future. In response to this new trend, *Bacillus* has been developed as a feed additive for economic animal health. In this study, total of 30 heads of 28-day-old piglets was used, which was divided into control, R6 and S10 groups, each group with 5 repeats. The piglets of control group were given the normal feed. The R6 and S10 groups were added *Bacillus coagulans* R6 and S10 (10^8 CFU/kg), respectively. The results showed that the feed intake of the piglets in groups control, R6 and S10 was 0.40 ± 0.05 , 0.47 ± 0.06 and 0.50 ± 0.03 kg/day/piglet, respectively. The feed intakes of the *Bacillus* added groups (R6 and S10) were significantly higher than those of the control group ($P < 0.05$). It was shown that the addition of *Bacillus coagulans* R6 or S10 in the feed could increase feed intake of the piglets. On body weight gain of the piglets in the control, R6 and S10 groups were 0.22 ± 0.01 , 0.23 ± 0.05 and 0.27 ± 0.04 kg/day/piglet, respectively. The daily weight gain of the *Bacillus* added groups (R6 and S10 groups) was higher than that of control group ($P = 0.064$ / R6 group; $P = 0.067$ / S10 group). But there was no significant effects on the feed efficiency. In addition, the addition of *Bacillus* (R6 and S10) in feed had no significant effects on the colonies of Coliform or Lactobacillus in the feces. We concluded that the piglets were fed with the *Bacillus coagulans* R6 or S10 feed, which had higher feed intake and body weight gain, but no significant effect on the feed efficiency, and also had no significant effects on the colonies of Coliform and Lactobacillus in the piglets feces.

Key words: *Bacillus coagulans*, Feed additives, weaned piglet.

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