

Effects of adding *Bacillus coagulans* in diet on the growth performance, blood biochemical values and fecal microbials of weaned pigs ⁽¹⁾

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Received: Jan. 8, 2020; Accepted: Jun. 15, 2020

Abstract

The purpose of this study aims to evaluate the effect of dietary supplementation of *Bacillus coagulans* on growth performance, blood biochemical values and fecal microbial of weaned pigs. Thirty-two weaned pigs (Landrace × Duroc) at 4-wks of age were used and grouped in two by weight as the control and treatment groups. *Bacillus coagulans* was added in the diet for the treatment group with the concentration of 10^8 CFU/kg. Feed intake, body weight gain, blood cells, biochemical values, and fecal microbial were measured during the study period. The results showed that feed intake of piglets in the two groups was 0.866 and 0.863 kg/piglet/day, respectively, and the body weight gain was 0.249 and 0.262 kg/piglet/day, respectively, which did not show significant difference in feed intake and weight gain *Bacillus coagulans* added to feed improved the feed efficiency (body weight gain/feed intake), up 6.2% and resulting in 0.286 and 0.305 in the groups, respectively. The statistical significance ($P = 0.10$) reached significance level by the 8 weeks of age (0.283 and 0.325; $P < 0.05$). The ratios of neutrophil to lymphocytes between the two groups were close, with no indication of significant influence of adding *Bacillus coagulans* to the feed in order to reduce stress on weaned pigs, or placing weaned pigs under more stressed conditions. The bacterial counts of *Escherichia coli*, Coliforms, Gram-negative bacteria, and *Lactobacillus* colonies in the feces of the two groups were also close. In conclusion, the addition of *Bacillus coagulans* in diet could not significantly improve the feed intake and daily weight gain in weaned pigs, which however can improve the feed efficiency, especially when piglets are 8-week old.

Key words: Weaned piglet, *Bacillus coagulans*, Growth performance.

(1) Contribution No. 2642 from Livestock Research Institute, Council of Agriculture, Executive Yuan.

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