

EVALUATION OF AN IMMUNOMODULATOR ON THE PERFORMANCE OF WEANED PIGLETS

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INTRODUCTION

Weaning is one of the most stressful events in the pigs' lives, which can contribute to intestinal and immune system dysfunctions. This factor results in reduced health, growth and feed intake by the piglets. Therefore, mitigation of the activation of the inflammatory immune response is critical and products that help in this modulation can improve the performance of piglets after weaning.

OBJECTIVES

This study aimed to evaluate the use of an immunomodulator based on algal beta-1,3-glucan on the performance of piglets in the nursery phase.

MATERIALS AND METHODS

EXPERIMENTAL DESIGN:

240 piglets of 23 days of age, were divided in two treatments: control (basal diet without the use of the additives – an immunomodulator diet (basal diet with 200g/ton of algal beta-1,3-glucan). Each treatment had 10 replicates and 12 animals per experimental unit.

MEASUREMENTS:

The average daily gain (ADG), average daily feed intake (ADFI) and feed conversion ratio (FCR) were calculated based on feed supply and leftovers, such as body weight at the beginning of the experiment and at the end of each phase (7, 14, 21 and 49 days). Statistical analysis was performed using the program SAS 9.4 model.

RESULTS

In phase pre-starter 1, the use of algal beta-1,3-glucan had better results in body weight, ADG, ADFI e FCR compared to control treatment (P < 0.05). In phase pre-starter 2, the ADG and ADFI were increased with algal beta-1,3-glucan use (P < 0.05). Body weight and ADG were also positively impacted by the use of the additive in the period from 14 to 21 experimental days (P < 0.05), as it promoted the improvement in FCR (P < 0.10).

Figure 1. Results of average daily gain (ADG), average daily feed intake (ADFI) and feed conversion ratio (FCR) for pre-starter 1 and pre-starter 2 phases.

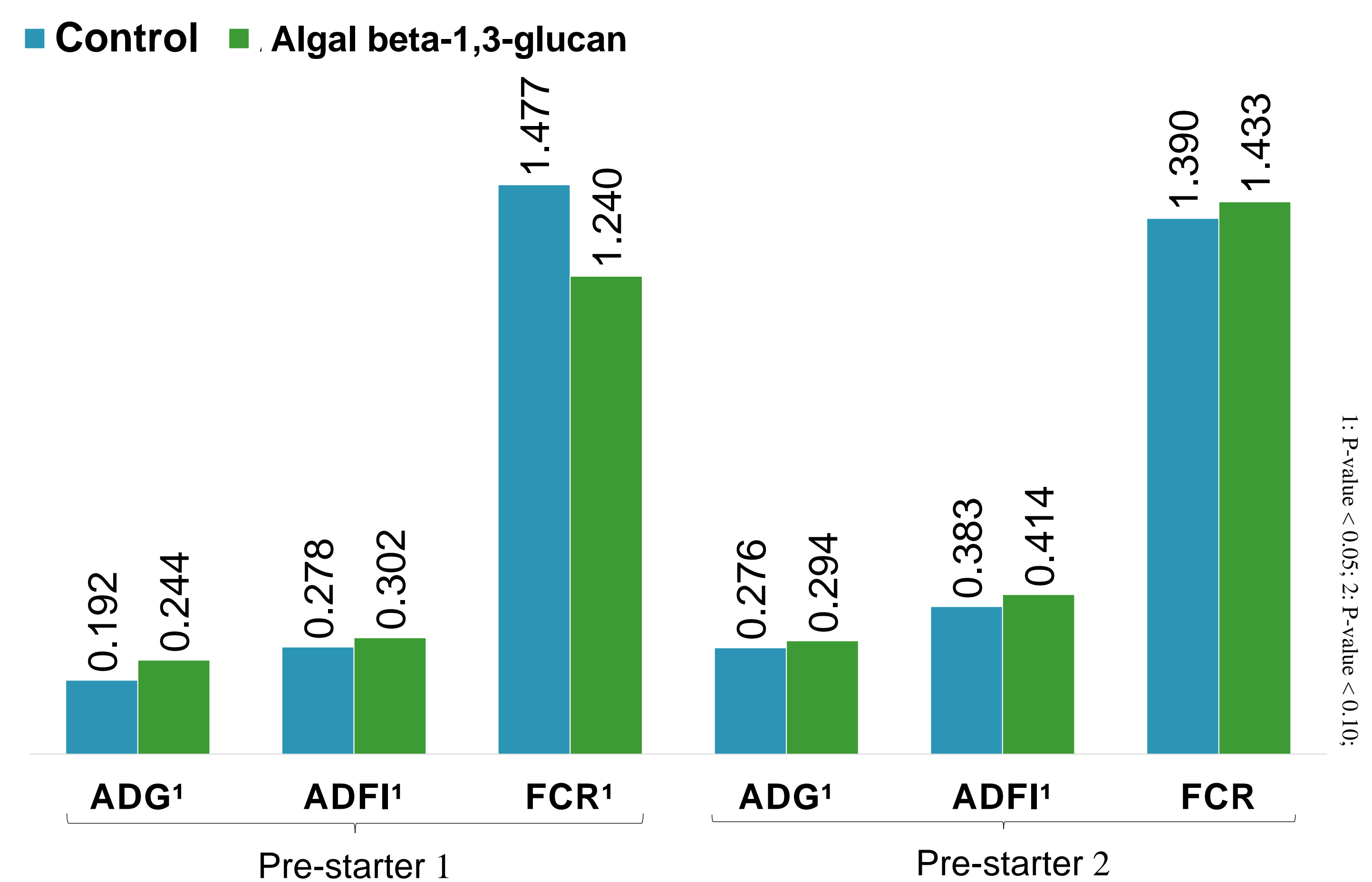
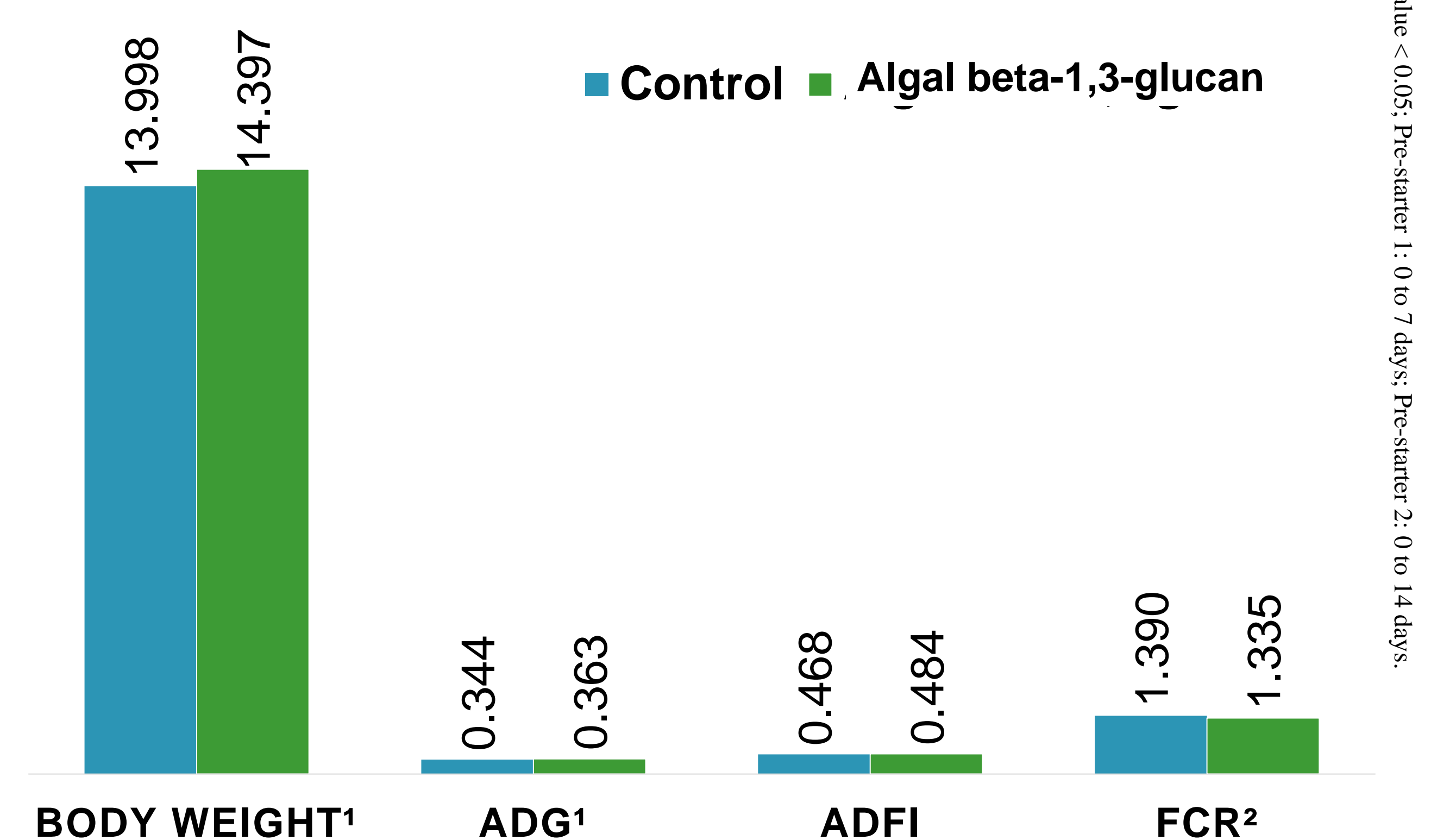


Figure 2. Results of average daily gain (ADG), average daily feed intake (ADFI) and feed conversion ratio (FCR) for initial 1 phase (0 to 21 days)



DISCUSSION and CONCLUSIONS

In weaning, the animal is challenged by several stressful factors, and this management occurs when the animal has not yet a fully formed immune system. The animal health and performance in nursery phase depends heavily on the post-weaning recovery.

In this study, the algal beta-1,3-glucan enhanced diet showed improvement in animal health by better performance in post weaning period through the immunomodulation action.

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