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Effect of different weaning procedures on the growth performance of the weaned piglets [1]

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Abstract

The purpose this study was to evaluate the effect of different weaning procedures on the growth performance of weaned piglets. A total of 48 weaned piglets (Landrace × Duroc), 4-week-old, were randomly divided into 3 groups by gender and body weight. Group A was conducting one-stage weaning: piglets were moved away from sow, grouping and provided weaning diet on the same day. Group B involved two-stage weaning: (1) moving away from sow and grouping on the first day, and (2) weaning feed was provided on the 4th day after weaning. Group C involved three-stage weaning: (1) away from sow on the first day, (2) grouping on the 4th day after weaning and (3) weaning feed was provided on the 7th day after weaning. During 4 weeks experiment, the feed intake, body weight and hematological profile were measured, and the diarrhea of the piglets was recorded. The result showed that there were no significant differences on growth performance of piglets among group A, B and C, throughout the whole period. On the 5-week-old, growth performance (body weight, feed intake and feed efficiency) of group C was significantly higher than group A and B ($P < 0.05$). However, for the 6-week-old, feed intake of group C, tended to be lower than group A and B ($P = 0.06$). Moreover, the 6-week-old, daily weight gain of group C was significantly ($P < 0.05$) lower than A and B groups and the feed intake was not different among groups at 6-weeks of age. The results showed that the two-stage or three-stage weaning procedures increased body weight gain of piglets at 5 week of age. Although the negative effect of changing diet (group C) on feed intake and body weight gain appeared at 6 weeks, it also can increase the poor body weight in the early stage after weaning. There was no significant difference on feed intake, weight gain and feed efficiency for 7- and 8-week-old piglets between the three groups. In hematological profile, the ratio of neutrophils to lymphocytes (NET/LYM) of group C was significantly ($P < 0.05$) lower than groups A and B, indicating that three-stage weaning can reduce the stress of weaned piglets at 6-weeks of age. The rate of diarrhea (severe soft feces) of piglets at each group was between 0.0 and 7.5%, and the highest ratio was 7.5% at 5-week-old of group A, which was significantly ($P <0.05$) lower than group B and C. In conclusion, the two- or three- stage weaning procedures can improve the poor body weight gain of piglets in the early stage of postweaning.

Key words: Weaned piglet, weaning procedure, Growth performance.

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