

Original Research Article

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Effect of Early and Split Weaning on Carcass traits of Large White Yorkshire Piglets

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ABSTRACT

A study was carried out in 30 Large White Yorkshire piglets to find out the effect of early and split weaning on carcass characteristics. Four weaning age groups, 56 days of conventional weaning age as group 1 (n=8), early weaning of entire litter at 28 days as group 2 (n=10), split weaned piglets with heavy litter weaned at 28 days as group 3 (n=6), weak litter left with sow up to 56 days as group 4 (n=6) were compared. By the end of study period pigs were slaughtered and the carcass traits studied included dressing percentage and Meat: Bone ratio. The dressing per cent is significantly low in 2nd group of piglets (73.29±0.51) compared to 1st (78.14±0.91), 3rd (76.49±0.53) and 4th (77.91±0.25). However no significant difference in dressing per cent was observed among 1st, 3rd and 4th group piglets. The meat:bone ratio is significantly high in 3rd group of piglets (3.20±0.02) compared to 1st (3.07±0.06), 2nd (3.03±0.05) and 4th (2.80±0.05).

Keywords

Early weaning, Split weaning, Dressing percentage and Meat-Bone ratio

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Introduction

Swine rearing is a profitable venture as this species is very prolific and is good source of meat. In India, the demand and awareness towards nutrition is increasing day by day with increasing human population. Out of 60 g of daily protein requirement as per Indian Council of Medical Research

recommendation, about 20 g should be from animal protein source. But in India animal protein consumed per capita per day is less than 10 g which is lower than the requirement. So, in order to meet the protein demand, alternate meat production apart from chicken and mutton is required. Now-a-days, pork production gained momentum which has both good nutritional status and also economical

value. There is a need for scientific pig farming along with post-slaughter pork processing and development of products with improved shelf-life to promote the pork industry in India. The aim of present study is to explore the economic advantage of early or split weaning in comparison to conventional weaning in commercial swine production.

Materials and Methods

Four weaning age groups, 56 days of conventional weaning age as group 1, early weaning of entire litter at 28 days as group 2, split weaned piglets with heavy litter weaned at 28 days as group 3, weak litter left with sow up to 56 days as group 4 were compared. The piglets were fed with pig creep, grower and finisher rations in ad libitum basis. By the end of the study period pigs were fasted for 24 hours with free access to water ad libitum and then slaughtered as per the standard procedure (USDA, 1970) for carcass analysis. Dressing percentage of slaughtered animals was calculated by using the following formula

$$\frac{\text{Weight of the hot carcass} \times 100}{\text{Pre slaughter weight}}$$

Meat bone ratio was calculated by separating the meat from the bone.

Statistical analysis

The data were subjected to one way ANOVA using a software package SPSS for statistical significance as per the methods laid down by Snedecor and Cochran (1995).

Results and Discussion

Significant differences (P<0.01) were observed in dressing per cent and meat- bone ratios among different groups of piglets (Table 1). The dressing per cent is high in 1st group piglets followed by 4th, 3rd and 2nd groups and the corresponding dressing per cent are 78.14±0.91, 77.91±0.25, 76.49±0.53 and 73.29±0.51, respectively.

The dressing per cent is significantly different (P<0.01) in 2nd group of piglets compared to other groups. The results were similar to earlier reports of ⁵ and ⁶. However the difference in dressing per cent among 1st, 3rd and 4th groups are not significant. The meat bone ratio is high in 3rd group followed by 1st, 2nd and 4th groups. Meat bone ratios are 3.20±0.02, 3.07±0.06, 3.03±0.05 and 2.80±0.05 respectively. The meat-bone ratio is significantly different (P<0.01) in 3rd group of piglets compared to 4th group. The present findings were similar to ⁶ and contrast to ⁴.

Table.1 Effect of weaning on carcass traits of piglets

(N=30)

	Conventional group (Group1)	Early weaned (Group 2)	Split weaned heavy (Group 3)	Split weaned light(Group 4)
Dressing percent	78.14 ^b ±0.91	73.29 ^a ±0.51	76.49 ^b ±0.53	77.91 ^b ±0.25
Meat:Bone ratio	3.07 ^b ±0.06	3.03 ^{ab} ±0.05	3.20 ^b ±0.02	2.80 ^a ±0.05

Means with similar superscripts in a row does not differ significantly (P>0.05)

Fig.1 Splitting of carcass after evisceration



Fig.2 Total meat and bone obtained after separation



Based on the results obtained in the present study early weaned piglets showed higher feed efficiency over split and conventionally weaned piglets used for pork production.

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Competing interests

The authors declare that they have no competing interests.

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