

Original Research Article

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Production and Reproduction Performance of Large White Yorkshire Pigs Kept under Organized Modern Breeding Farm Condition in Orathanadu, Thanjavur District, Tamil Nadu State

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ABSTRACT

Keywords

Large white yorkshire, Gestation period, Farrowing interval, Production and reproduction performance

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A systematic study was conducted to analyze the production and reproduction performance of Large White Yorkshire pigs under organized modern breeding farm condition in Thanjavur districts of Tamil Nadu state, India. Data on 74 farrowings for the periods from 2017 to 2020 were collected from Modern Pig Breeding Unit, Livestock Farm Complex, Veterinary College and Research Institute, Orathanadu. TANUVAS, Tamil Nadu. Measures of reproductive and production performance assessed in this study were mean litter size at birth, mean litter size at weaning, mean birth weight, mean weaning weight, number of piglets produced per sow per year, age at first farrowing, mean gestation period and farrowing interval. The estimated over all mean of litter size at birth, mean litter size at weaning, mean birth weight, mean weaning weight, number of piglets produced per sow per year, age at first farrowing (days), mean gestation period (days) and farrowing interval (days) were 7.89 ± 0.51 , 7.63 ± 0.50 , 1.38 ± 0.03 , 10.30 ± 0.80 , 9.76 ± 2.29 , 399.5 ± 6.01 , 113.26 ± 0.52 and 206.80 ± 5.90 , respectively. The overall means of production and reproductive parameters estimated in this study indicates that Large White Yorkshire pigs perform well under Cauvery delta conditions of Tamil Nadu.

Introduction

India possesses one of the largest livestock wealth in the world and a quarter of the agricultural gross domestic product is contributed by the livestock sector. Among the livestock species, pig finds an important place in which are certain inherent traits like high

fecundity, better-feed conversion efficiency, early maturity, short farrowing interval and short generation interval. As per the 20th Livestock census (Anon, 2017) pig population in India is 9.06 million, population declined 12% than 19th census. In India majority of the pig population is influenced by socially backward, economically weaker section of the

society. Large White Yorkshire pig, known for its litter size and mothering ability and has been extensively used for several decades to improve Desi pigs through crossbreeding. It can withstand variations in climate and do well in other environmental factors.

Development of good management practices like scientifically rearing and feeding of pigs attract the farmers in right manner.

Improvements in swine production can be made by providing appropriate housing managements with such facilities like farrowing crates, proper lighting and ventilation.

In this present study were carried out in modern piggery shed, fitted with automatic feeding and watering systems and modern housing facilities like gestation stalls, boar and grower pens, farrowing crates with creep area and weaner pens on plastic slats for solid waste collection.

Materials and Methods

The present study data was collected from Modern Pig Breeding Unit, Livestock Farm Complex, Veterinary College and Research Institute, Orathanadu. TANUVAS, Tamil Nadu. The Modern Pig Breeding unit was established on 2017 by National Livestock Mission (NLM) and Tamil Nadu state Government scheme funding. All the pigs were farm-bred and raised under intensive system of rearing with normal feeding, housing and other management practices. Weaning of the piglets was carried at 42 days of age. In this study the production and reproduction parameters such as the mean litter size at birth, mean litter size at weaning, mean birth weight, mean weaning weight,

number of piglets produced per sow per year, age at first farrowing, mean gestation period in Days and farrowing interval documented from 74 farrowings for the period of four years were analysed and presented.

Results and Discussion

Large White Yorkshire pig is a study animal it can withstand and adopt in all environmental conditions. Exotic breeds have higher feed conversion efficiency and faster growth rate and have higher growth potential than Indigenous breeds (Mishra *et al.*, 1989).

Large White Yorkshire is a England based exotic breed widely used in India to upgrade the performance of local indigenous pigs. Performance study is mandatory in different climatic region for scientific advancement. So the study conducted to analysis the performance of Large White Yorkshire at Delta region of Tamil Nadu.

The production and reproductive performances of Large White Yorkshire were represented in Table 1. The average litter size at birth of the present study is 7.89 ± 0.51 . The overall calculated mean in the present study was lower in comparison with earlier reports (Ramesh *et al.*, 2012; Lalrintluanga, 2015).

Average litter size at weaning is one of the important traits in determining the mothering ability of the sow.

In the present study, average litter size at weaning was higher than the findings of Lalrintluanga (2015). The estimated over all mean birth weight and weaning weight is 1.38 ± 0.03 ; 10.30 ± 0.80 , respectively. The present findings were higher than earlier report of Archana *et al.*, (2018).

Table.1 Production and reproduction parameters of large white yorkshire pigs

Sl. No	Economic traits	Mean ±S.E.
1	Mean birth weight (kg)	1.38±0.03(n=570)
2	Mean Weaning weight (kg)	10.30±0.80(n=300)
3	Average litter size at birth	7.89±0.51(n=570)
4	Average litter size at weaning	7.63±0.50
5	No. of piglets produced/female/year	9.76±2.29
6	Age at first farrowing (days)	399.5±6.01
7	Average gestation period- days	113.26±0.52()
8	Farrowing interval – days	206.80±5.90()

Mean of number of piglets produced per sow per year, age at first farrowing (days), gestation period (days) and farrowing interval (days) were 9.76±2.29, 399.5±6.01, 113.26±0.52 and 206.80±5.90, respectively which is in close agreement with the result of Lalrintluanga (2015) for Large White Yorkshire sows under indigenous and organized system of rearing in Indian conditions and the results are 188.70±3.99 and 212.90±3.93 days; respectively. However, shorter farrowing interval was also reported for Large White Yorkshire (Keyho *et al.*, 2017).

The estimated overall means of various traits in this study indicates current production potential of LWY pigs under intensive system of rearing. The values obtained for different production and reproduction parameters will be useful in understanding the performance of LWY pigs under unique conditions prevailing in the Cauvery delta region and also help in suggesting suitable management and crossbreeding plans to assist farmers in ensuring improved productivity and profitability.

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Conflict of Interest

There is no conflict of interest in the present study

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