# ANALYSIS OF PIG HUSBANDRY PRACTICES IN SEMI- ARID REGION OF TAMIL NADU

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## ABSTRACT

The present study was carried out to analyse the pig husbandry practices in semi- arid region of Tamil Nadu. The study revealed that, 95.00 per cent of farmers reared the pigs in shed covered with asbestos sheet (53.83 per cent) followed by thatches (34.64 per cent) on concrete flooring (92.28 per cent). The majority of the farmers (76.92 per cent) maintaining Large White Yorkshire pigs and followed natural service using boars. The farmers followed stall feeding and 50 % of the farmers fed swill feeding along with poultry offal waste with small quantity of own mix concentrate feed. Majority of the farmers (50 % ) vaccinated their pigs against both swine fever and FMD and 19.23 per cent of the farmers did not give any vaccination. 61.54 % farmers followed deworming using allopathic medicine. Similarly, only 65 per cent of the farmers protected their piglets against piglet anemia with iron injection and 32.5 % of them used ectoparasitic drugs in their farms. The farmers followed weaning at 2 months of age and castration of male piglets at 2 to 3 weeks of age. Pigs were marketed at 8 to 9 months of age when they attained the body weight of 90 to 100 kg at the rate of Rs.90 to 95 per kg live weight.

**KEY WORDS:** Pig, Management practices, Constraints

## INTRODUCTION

Commercial pig farming is a developing livestock enterprise and is mostly in the hands of educated progressive farmers. According to 18$^{th}$ Livestock Census, population of pigs in Tamil Nadu is 2.84 lakhs, which include non descript pigs reared under scavenging system by the privileged section of the society and improved purebred and crossbred pigs (mostly Large White Yorkshire) under intensive system of rearing by educated farmers for commercial pork production. The demography of the pig farming activities in Tamil Nadu reveals that pig rearing is mostly concentrated in southern regions of Tamil Nadu. Out of 2.84 lakhs pigs available in Tamil Nadu one lakh pigs are contributed by four districts of southern Tamil Nadu i.e. Tirunelveli, Thoothukudi, Ramnathapuram and Viruthunagar, which account for 35.38 per cent of total population.

Over the past ten years pig farming is promoted as an alternative livestock enterprise with a promise of high profit margin. Hence, the number of people entering into the industry is also increasing in rural areas. Hence, a study is required to analyse the existing pig husbandry practices, identify the constraints and to find suitable solutions to make the pig farming as a more profitable and sustainable enterprise. The information of socioeconomic status, herd size, housing, feeding, breeding, health management practices and marketing followed by pig farmers had not been documented. Therefore a survey was taken up to study the existing management practices followed by the farmers for rearing pigs under field conditions so that resulting information would help to identify the pig farmers problems and to draw a road map to improve the profitability in pig farming which in turn benefit the pig farmers.

## MATERIALS AND METHODS

The present work was undertaken with an aim to study the importance of pig farming activities in semi-arid region of Tamil Nadu. To empower the farmers, an one day training programme on

scientific pig farming cum pig farmers meet was organized by Department of Livestock Production Management, Veterinary College and Research Institute, Namakkal. In this programme, progressive pig farmers (63) from all over Tamil Nadu had participated. To record the information on housing, breeding and management practices followed by the farmers, information was collected through formal interviews using a semi structured questionnaire. The management practices were also collected in respect of type of breed and size of the farm, housing, breeding, feeding, health care, marketing and general care and management and constraints faced by the pig farmers.

## RESULTS AND DISCUSSION

### Breed and herd size:

The majority of the farmers (76.92 % ) were maintaining Large White Yorkshire in their farms and remaining 23.08 % of the farmers were rearing cross-bred pigs (Large White Yorkshire X Landrace X Duroc ) in their farms. The study revealed that the average herd size of young and adult stock were 42.46 and 58.38 pigs per farm, respectively. An average herd size of 82.73 pigs per farm in semi-arid region of Tamil Nadu was recorded. Gyaneshwari *et al*. (2014) reported that 48 per cent of the farmers maintained 2 to 4 pigs per herd in north eastern region of Kyrdem village in Ri-Bhoic district of Meghalaya. An average herd size of 15.7 pigs per farm in Kiambu district of Kenya was reported by Wabacha *et al.* (2001). The size of the farm is determined mainly by feed availability (hotel waste and kitchen waste collected from nearby hotels, hostels and town) and timely availability of breeding stock. Majority of the farmers (69.24 % ) were maintaining both breeding cum fattening unit followed by fattening unit alone (15.38 % ).

### Breeding practices:

The majority of the farmers were rearing purebred pigs in their farms and the farmers breed female pigs at the age of 8 to 10 months and male pig used for breeding above one year of age with sex ratio of 1: 8 to 10. 100 % of the farmers followed natural service using boars. The farmers practiced triple services (83 %) and double services (17%) to the sow per oestrus period at 12 hours interval. During the triple and double services per oestrus period, majority (56%) of the farmers were using different boars and 44 % of the farmers used same boar. The findings are similar with Kumar *et al*. (2002) and Rahman *et al.* (2008). But it was in contrast with findings of Gyaneshwari *et al*. (2014) who reported that 68 % of the farmers practise two services to the sow and the farmers breed female pigs at the age of 10 to 12 months.

### Housing practices:

It was observed that most of the farmers constructed the sty as partly closed and partly open type (95 %). The roof of the sty was mainly covered by asbestos sheet (53.83 %) followed by thatches (34.64 %), G.I.sheet (7.69 %) and very less with concrete roof (3.84%). Majority of the farmers (92.28 %) were rearing their pigs on concrete floor followed by stone flooring (7.72 %). Similarly, Gyaneshwari *et al*. (2014) observed that all the pig farmers in north eastern region of Meghalaya constructed the sty with half closed and half open type (88%) with mostly locally available materials like bamboo and woods with raised platform above 2 to 3 feet from ground level for easy cleaning, prevention from damping of floors during the rainy season.

The farmers had less awareness about recycling of piggery farm waste and they were not properly utilizing the waste generated from the swine farm. Pig rearing fits in very well with mixed farming and can also be complementary to intensive crop production operations. Besides pig-fish-algae protein production is an integral approach for maximizing profit. This not only reduces the problem of disposing manure but increases the income through fish farming, as pig faeces serve as a food for fish as well as for algal protein.

**Feeding practices:**

Fifty per cent farmers follow intensive rearing and 50 % of the farmers fed swill feeding along with poultry offal wastes with small quantity of concentrate feed prepared by themselves. Nearly 34.62 % of the farmers maintained their breeding stock only with concentrate feed (own preparation). As the breeding stock were fed *ad libitum* with energy rich hotel waste by 15.38 per cent of the farmers, the adult breeding stock were becoming over weight, resulting in low reproductive performance. Similar finding was observed by Varma *et al.* (1982). Due to cost factor involved in feeding concentrate, they were not following balanced compounded ration or giving restricted diet to the breeding stock. Feeding equipment include mainly iron vessel for cooking of food wastes, broken plastic buckets and cans and cemented feeder attach with the wall as feeding trough.

The feed supplements like mineral mixtures, vitamins and probiotics were used by only 15 per cent of the farmers. The concentrates, vitamins and mineral mixture were mixed with locally available food. Swill feed and other food wastes should be boiled before feeding to pigs so as to kill the microorganisms, toxin materials present and for easy digestion of food. Majority of the farmers (100 %) offered feed twice daily, in morning and evening. This was supported by other workers (Pandey, 2000 and Kumar *et al*., 2002.

**Health cover:**

In the present study it was found that 19.23 per cent of the farmers did not give any vaccination to their pigs. Majority of the farmers (50%) vaccinated their pigs against both swine fever and FMD, whereas,19.23 % of the farmers for FMD alone. About 61.54 % of farmers followed the deworming programme. This value was more when compared to observation made by Gyaneshwari *et al*.(2014) who reported that 20 % of the farmers only followed the deworming programme in north eastern region of Ri-Bhai district of Maghalaya. Similar findings were reported by Rahman *et al.(*2008) in Mizoram.

The farmers were not vaccinating the animals against important diseases like swine fever, FMD etc either due to lack of knowledge or non availability of vaccines in the market. However, deworming is followed in majority of the farms. Few of the farmers have experienced sudden mortality in their farm in which more than half of their stock were lost. The clinical symptoms described by the farmers were suggestive of swine fever.

**Marketing:**

The animals were marketed through middlemen as well as directly to Meat Products of India Limited, a public sector undertaking of Government of Kerala, Koothattukulam. The animals were procured at the rate of Rs.90 – 95 per kg live weight. The weaned piglets were sold for Rs.2500 – 3000 per animal. In the market, pricing system is based on general appearance and weight. Similar studies were reported by Kumar (2002) and Rahman *et al*.(2008) who reported that the farmers sold their pigs at the age of one year or above when they are reached the body weight of 70 – 90 kg.

**General management practices:**

The general care and management practices followed by the farmers were weaning of piglets at 2 months of age, castration at 2 to 3 weeks of age by open method. Cutting of needle teeth and administration of iron injection to prevent piglet anemia was carried out at 3$^{rd}$ day. Identification of piglets usually followed at the time of weaning by ear tagging.

**Need analysis of pig farming:**

As a part of the programme, a need analysis survey was conducted among the pig farmers through a structured interview schedule to document the present status, constraints of their farming system

including performance indices to assess the efficiency of the production system. Based on the analysis of data, some of the areas were identified as critical for scientific intervention such as need of superior genetic stock for breeding and multiplication, need of good quality piggery feed for scientific feeding of breeders, lab facility for disease diagnosis and monitoring, continuous disease monitoring system, supply of vaccine for swine fever, farm advisory services, awareness creation on pork consumption, proper marketing channel to avoid involvement of middleman and modern pig slaughter house.

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