



Research Article

STUDY ON SOCIO-ECONOMIC PROFILE OF SWINE FARMERS IN THE TAMIL NADU: A CASE OF NORTH EASTERN AGRO-CLIMATIC ZONES OF TAMIL NADU

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Received: October 10, 2019; Revised: October 25, 2019; Accepted: October 26, 2019; Published: October 30, 2019

Abstract: The study was conducted in Tamil Nadu State with the objectives of studying the Socio-Economic Status of swine farmers. The study employed random sampling procedure subjected to stratified classification for farmers category which consists of total 45 sample farmers which were exclusively selected from North-Eastern agro-climatic zone of Tamil Nadu, with help of pre-tested questionnaire during the year 2013-2014. The results show that, the analysis of socio-economic profile showed that 13.30 percent were illiterates. 40.00 percent were landless and 68.88 percent were from middle age group and only 6.64 percent were females. About 78 percent farmers had an experience less than 5 years. Further, the study also revealed that, the housing pattern of swine farms in the study area revealed that among the sample farms, 68.89 percent had thatched type housing and 4.44 percent the farms were under concrete roof. The study concludes that, the swine farming is observed as major livelihood activities especially in study area among the sample respondents and also providing employment opportunity for the sample farmers. Hence, these kinds of attributes related to enhancing socio-economic conditions can boost the standard of living of the farmers who have engaged in swine farming in rainfed areas.

Keywords: Swine farming, Socioeconomic Study, Rural livelihood, Income

Citation: Boopathy Raja M., *et al.*, (2019) Study on Socio-Economic Profile of Swine Farmers in The Tamil Nadu: A Case of North Eastern Agro-Climatic Zones of Tamil Nadu. International Journal of Agriculture Sciences, ISSN: 0975-3710 & E-ISSN: 0975-9107, Volume 11, Issue 20, pp.- 9142-9144.

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Academic Editor / Reviewer: P S Chintkuntalawar, Dr Sanjiv Kumar, Dr Payal Jain

Introduction

Livestock sector is one among significant sector which contributes nearly 25.8 percent of the total value of agricultural GDP and accounts for about 4 percent of the total GDP at current prices [1]. India is rich in livestock genetic resources. As per the livestock census (2013) [2], India possesses 512.06 million livestock and 720.20 million poultry birds. Pigs are prolific breeders with short generation interval. A sow can be bred as early as 8-9 months of age and can farrow twice a year. They produce 6-12 piglets in each farrowing. Pig farming requires less investment on building and equipment's. It is rich in vitamins like thiamin, niacin and riboflavin. Pig manure is widely used as fertilizer for crop farms and fish ponds. Pigs are widely distributed in all ecological regions of the country and are an important occupation of rural society especially the tribal masses. As per the food and agriculture organization (FAO) records, India's pig population is 9.4 million [3] which constitute 0.97 percent of world pig population (966.17 million) and the piggery sector is gaining slow but steady momentum during the past years. According to ICMR recommendation, out of 60 gram daily protein requirement, 20 gram should from animal protein source, considering modest figure of 20 percent of total population consuming pork in the country today, and out of 20 gram daily animal protein, assuming 10 gram from pork source, the total pork requirement is around 0.88 million tonne as against the production of 0.48 million tonne in the year 2009 with a shortfall of 0.40 million tonne or 45.45 percent. If the deficiency is not met through appropriate technological support, the gap would be widened to such an extent that they might be forced to import pork by the year 2030 [4]. This study aims to recognise the importance, advantages of pig production and its contribution to food security and nutritional security the study was conducted with an aim of measuring the socio-economic profile of swine farmers in north-eastern districts which caters the pork meat requirement for nearby cities especially Chennai and acts as livelihood options for swine farmers in their upliftment of improving standard of living in the society.

Material and Methods

The study was conducted in Tamil Nadu State with the objective of studying socio-economic profile of the swine farming during 2013-2014. Among the seven agro-climatic zones of Tamil Nadu, as per the Integrated sample survey report (2012-13) [5], north-eastern zone of Tamil Nadu has contributed 29.57 percent (84,094 heads) of pig population to the overall state population (2,84,324 heads) in 2012-13. Apart from this, rapid urbanization of this zone makes changes in the consumption pattern of the people, which leads to increase in pork consumption. This changing pattern leads to increase in demand for pork consumption in this zone. Hence, the people adopted a greater number of pig farming activities in this zone than the other zones of Tamil Nadu. Due to the above reasons, north-eastern zone of Tamil Nadu was selected for this study Chennai, Thiruvallur, Kancheepuram, Thiruvannamalai, Vellore, Villupuram and Cuddalore. A sample of 45 swine farms were selected from the study area by simple random sampling procedure, which were post stratified into small (1-8 sows), medium (9-16 sows) and large farms (above 16 sows) based on the number of sows maintained in the farms based on the study of [6] and [7]. The data were collected by personal interview method with the help of pre-tested questionnaire and the data pertained to the year 2013-2014. Tabular analysis such as simple averages and percentages were done to derive the inferences.

Socio-economic profile of the pig farmers

An analysis of the socio-economic profile of the pig farmers provides idea regarding the category of the people in the study area in which they are involved in these activities and revealing it's as only means of livelihood or subsidiary occupation. Further, the study also tried to examine the district wise distribution of pig farmers in the study area presented in [Table-1]. The results revealed that, among the seven districts in the study zone, Kancheepuram and Thiruvannamalai are the two districts constituted each 31.11 percent of sample swine farmers.

Vellore district had about 15 percent of the total sample farmers. About seven percent of sample farmers located each in Villuppuram and Thiruvallur districts and 8.88 percent of the swine farmers were located in Cuddalore. More number of sample farmers in Kancheepuram and Thiruvannamalai districts might be due to the fact that they are geographically nearer to Chennai, which is a major consuming centre and the extent urbanization is also high in these districts. On the other hand, the study also conveys that, the land holding pattern of sample farmers [Table-2]. The results show that, among the sample farmers 40 percent of the farmers were landless farmers, 37.78 percent of the farmers were marginal farmers holding the land less than 2.5 acres and 8.89 percent of farmers were holding the land between 2.5 to 5 acres and 13.33 percent of farmers holding the land more than 5 acres. Based on the pig population the sample farms were classified as small (upto 8 sows), medium (9-16 sows) and large (above 16 sows) farms. Among the large farmers 66.70 percent of farmers were holding more than 5 acres. All landless farmers are small farmers (1-8 sows), so it could be inferred that pig production activity is income generating activity for the small pig farmers with land holding constraints. The pig farmers were classified into four groups based on the educational status of the head of the family. The distribution of the different farm size category of farmers based on the educational status was given in [Table-3]. the results revealed that, among the sample farmers, majority of farmers (86.70 percent) were literate and very a smaller number of farmers were illiterate (13.30 percent). The results implied that the entrepreneurial ability of literate people in new ventures, indicating high risk-taking ability of the educated farmers. As the farm size increased, the educational status of the farmers was also found to be increased. Among the medium and large farmers, none of them were illiterate, 50 percent of the medium farmers and 66.66 percent of the large farmers had undergone collegiate education. Among the small farmers, majority (47.79 percent) of farmers had undergone education upto secondary level and 16.70 percent of the farmers were illiterate.

Table-1 Districts wise distribution of pig farmers in study area (in numbers)

SN	Districts	Small	Medium	Large	Overall
1	Kanchipuram	11(30.56)	1(16.67)	2(66.67)	14(31.11)
2	Thiruvannamalai	12(33.33)	2(33.32)	-	14(31.11)
3	Vellore	6(16.67)	1(16.67)	-	7(15.56)
4	Villuppuram	2(5.56)	1(16.67)	-	3(6.67)
5	Cuddalore	3(8.32)	-	1(33.33)	4(8.88)
6	Thiruvallur	2(5.56)	1(16.67)	-	3(6.67)
Total		36(100.00)	6(100.00)	3(100.00)	45(100.00)

Figures in the parentheses are percent to the total

Table-2 Land holding pattern of sample farmers (in numbers)

Category	Landless	Marginal < 2.5 acres	Small 2.5- 5 acres	Large > 5 acres	Total
Small (1-8 sows)	18(50.00)	14(38.88)	2(5.56)	2(5.56)	36(100.00)
Medium (9-16 sows)	-	2(33.33)	2(33.33)	2(33.33)	6(100.00)
Large (>16 sows)	-	1(33.33)	-	2(66.67)	3(100.00)
Total	18(40.00)	17(37.78)	4(8.89)	6(13.33)	45(100.00)

Figures in the parentheses are percent to the total

Table-3 Educational status of sample pig farmers (in numbers)

SN	Educational Status	Category of the farmers			Total
		Small	Medium	Large	
1	Illiterate	6(16.70)	-	-	6(13.30)
2	Primary	11(30.50)	2(33.40)	-	13(28.90)
3	Secondary	15(41.70)	1(16.60)	1(33.34)	17(37.80)
4	Collegiate	4(11.10)	3(50.00)	2(66.66)	9(20.00)
Total		36(100.00)	6(100.00)	3(100.00)	45(100.00)

Figures in the parentheses are percent to the total

Table-4 Age-wise distribution of the pig farmers in study area (in numbers)

SN	Years	Small	Medium	Large	Total
1	< 30 years	7(19.44)	1(16.66)	-	8(17.78)
2	31-50 years	26(72.22)	2(33.34)	3(100.00)	31(68.88)
3	> 50 years	3(8.34)	3(50.00)	-	6(13.34)
Total		36(100.00)	6(100.00)	3(100.00)	45(100.00)

Figures in the parentheses are percent to the total

The study focused on findings on age-wise distribution of the pig farmers in study area is presented in [Table-4]. It was interesting to know that, within the sample frame among pig farmers, 68.88 percent were from the age group of 31-50 years, following that 17.78 percent were in the group of less than 30 years and 13.34 percent of the sample farmers were in the age group of more than 50 years. The results showed the presence of high entrepreneurial activity in the middle age group (31-50 years) in the study area. Whereas, the gender-wise distribution of the farmers [Table-5] found that, across the swine farmers in the study area, 93.36 percent were male farmers and rest were female farmers. Unlike other livestock and poultry, pig production needs much concentration on management practices like collection of swill feeds and cleaning of sheds, which needs lot of time and energy. Because of the above reasons, involvement of female entrepreneurs in pig production might be very less in the study area. Among the sample farmers, female farmers were seen in small and large farming groups. Female headed small farms were semi-intensive backyard rearing and female headed large farms were managed with male labourers. The efficiency in the pig farming production lies with experience irrespective of their social class, it was fascinating to know that, in the study area [Table-6] The findings related to experience among pig farmers conveyed that, majority of the people (77.77 percent) had less than 5 years of experience in pig farming. About 13 percent of farmers had more than 10 years of experience and only 8.90 percent of farmers possessed the experience between 5-10 years. These results showed that the pig farming activity in this zone had developed significantly over a period of 5 to 10 years. Conversely, the pig farming has been found to be significant type of farm business in the study area which has emerged not only as one factor based on experience but also type of occupation which offers bright gates for especially small- and large-scale farmers engaged in that entrepreneurship [Table-7]. The results show that. The small farmers consisted for about 80.56 percent of pig farming as primary occupation. Whereas in case of the large farmers, 66.67 percent of farmers were running the pig farms along with other businesses. The results indicated that as farm size increases; involvement of farmers in multi-business activity also increased in the study area.

Table-5 Gender-wise distribution of pig farmers (in numbers)

SN	Category	Male	Female	Total
1	Small	34(94.44)	2(5.56)	36(100.00)
2	Medium	6(100)	-	6(100.00)
3	Large	2(66.66)	1(33.34)	3(100.00)
Total		42(93.36)	3(6.64)	45(100.00)

Figures in the parentheses are percent to the total

Table-6 Years of experience of pig farmers in study area (in numbers)

SN	Years	Small	Medium	Large	Total
1	< 5 years	30(83.34)	5(83.34)	-	35(77.77)
2	5-10 years	-	1(16.66)	3(100)	4(8.90)
3	> 10 years	6(16.66)	-	-	6(13.33)
Total		36(100.00)	6(100.00)	3(100.00)	45(100.00)

Figures in the parentheses are percent to the total

Table-7 Distribution of pig farmers based on their occupation (in numbers)

SN	Particulars	Small	Medium	Large	Over all
1	Primary	29(80.56)	3(50.00)	1(33.33)	33(73.34)
2	Secondary	7(19.44)	3(50.00)	2(66.67)	12(26.66)
Total		36(100.00)	6(100.00)	3(100.00)	45(100.00)

Figures in the parentheses are percent to the total

Table-8 Type of farming among the sample farms in study area (in numbers)

SN	Particulars	Small	Medium	Large	Overall
1	Intensive	28(77.78)	6(100.00)	3(100.00)	37(82.23)
2	Semi-intensive	8(22.22)	-	-	8(17.77)
Total		36(100.00)	6(100.00)	3(100.00)	45(100.00)

Figures in the parentheses are percent to the total

The findings on type or system of farming among sample farms are presented in [Table-8]. the results reveal that, among the sample farms 17.77 percent of the farms were following semi-intensive type of rearing, the remaining category of farms are operating under intensive type of rearing.

The results revealed the higher adoption of scientific farming and technology among the pig farmers in the study area. On the other hand, the housing pattern of swine farms in the study area revealed that among the sample farms, 68.89 percent had thatched type housing and 4.44 percent the farms were under concrete roof [Table-9]. However, these farms were not specifically made for pig farming and the buildings constructed for some other purpose had been modified to pig sties. Among the small farms, about 80 percent had thatched roof. In medium sized farms, 50 percent of farmers provided asbestos roof, whereas in large sized farms all the farmers provided asbestos roof. Thus, in the study area, use of asbestos sheets for roofing increased with increase in farm size.

Table-9 Housing pattern among sample farms (in numbers)

SN	Particulars	Small	Medium	Large	Total
1	Thatched	29(80.56)	2(33.33)	-	31(68.89)
2	Asbestos	6(16.66)	3(50.00)	3(100.00)	12(26.67)
3	Concrete	1(2.78)	1(16.67)	-	2(4.44)
	Total	36(100.00)	6(100.00)	3(100.00)	45(100.00)

Figures in the parentheses are percent to the total

Conclusion

The socio-economic profile of the farmers in the study area shows that majority of the farmers (37.80 percent) had educated up to secondary level and 13.30 percent were illiterates. As the farm size increased, the education level of the farmers had shown an increase. Among the total sample farmers, 40 percent were landless and 68.88 percent were from middle age group and only 6.64 percent were females. Majority of the farmers had an experience of below 5 years (77.77). The primary occupation of majority of the farmers (73.34 percent) was pig farming.

Application of research: On analysing the management practices of piggery farms, 82.23 percent were using intensive system of rearing and 68.89 percent were using thatched roof for pig housing. Since, Majority of the pig farmers in the study area are educated, middle age group and landless it seems that pig farming provides livelihood and employment to landless youths and middle age group people in the study area.

Research Category: Veterinary and Animal Sciences

Acknowledgement / Funding: Authors are thankful to Madras Veterinary College, Chennai, 600 007, Tamil Nadu Veterinary and Animal Sciences University, Chennai, 600051, Tamil Nadu, India

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University: Tamil Nadu Veterinary and Animal Sciences University, Chennai, 600051, Tamil Nadu, India

Research project name or number: MVSc Thesis

Author Contributions: All authors equally contributed

Author statement: All authors read, reviewed, agreed and approved the final manuscript. Note-All authors agreed that- Written informed consent was obtained from all participants prior to publish / enrolment

Study area / Sample Collection: Tamil Nadu State

Cultivar / Variety / Breed name: Pig

Conflict of Interest: None declared

Ethical approval: Ethical approval taken from Madras Veterinary College, Chennai, 600 007, Tamil Nadu Veterinary and Animal Sciences University, Chennai, 600051, Tamil Nadu, India.
Ethical Committee Approval Number: Nil

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