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TANUVAS KPM gold pig: A source of livelihood and nutritional security to farmers of North Eastern part of Tamil Nadu

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Abstract

A study was undertaken with the objective to popularize TANUVAS KPM Gold pig among rural farmers for their nutritional security and livelihood status improvement in North Eastern parts of Tamil Nadu. A total number of 30 pigs were distributed to five Scheduled Caste farmers along with feed. The findings of the study revealed that the average body weight at 6 months, 8 months, feed conversion ratio, benefit cost ratio were 55.5 kg, 72.4 kg, 3.61 and 1.72 respectively when compared to the desi pig parameters of 35.2 kg, 56.8 kg, 5.42 and 1.23 respectively. The improved gross income of 27.64% positively impacted the farmers livelihood status and pork obtained assured their nutritional security. The benefit cost ratio obtained as a result of TANUVAS KPM Gold pig rearing was 39.83% more than the desi rearing.

Keywords: TANUVAS KPM gold pig, marketing weight, livelihood, nutritional security

Introduction

Pig farming is one of the component of livestock farming in India which is contributing to the protein demand of increasing population as well as improving the livelihood of rural population (Thomas *et al.*, 2021) ^[10]. As per 20th Livestock census pig population in India was 1.69% of the whole livestock population. In Tamil Nadu the pig population as per 20th livestock census was 66772 when compared to 19th census with 183983 population (Statistical Hand Book of Tamil Nadu-2021-22) ^[9]. This decline in pig population owes to many factors including lack of quality germplasm, proper training regarding scientific pig farming, marketing issues among many. In the era of ever growing demand for sustainable nutrition globally the improved pork production will play an important role in ensuring a continuous supply of protein. TANUVAS KPM Gold pig is a crossbred variety developed (AICRP on Pig) at PGRIAS, TANUVAS by crossing Large White Yorkshire (75%) with desi pig (25%) of Tamil Nadu (Srikanth *et al.* 2023) ^[8]. The rural farmers could have an increase in their income by 2.8 times by using this improved variety instead of the local variety breed (AICRP on Pig). Keeping these things in mind this study was done to popularize quality germplasm of TANUVAS KPM Gold pig among the farmers of North Eastern part of Tamil Nadu to find out the impact the pig farming has on their livelihood.

Methodology

The constraints faced by the pig farmers in Chengalpattu and Kancheepuram districts of Tamil Nadu were collected during on-campus and off-campus training programmes conducted at Krishi Vigyan Kendra (KVK) Kattupakkam and also during farm and field visit to pig farms. Some of the main constraints identified were lack of good quality germplasm, improper feeding management, mortality due to diseases, lack of training and best farming practices in pig farming. To overcome these constraints it was proposed to distribute TANUVAS KPM Gold pigs to Scheduled caste farmers under SCSP plan 2023-24. Five farmers who rear only desi pigs belonging to Chengalpattu and Kancheepuram districts of North Eastern Tamil Nadu were randomly selected from the list of famers collected during training programmes.

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Each farmer was provided with 6 pigs (3 male and 3 female) and also supplied with 60 kg of pig grower feed free of cost. The pigs of 4 months age were purchased from Post Graduate Research Institute in Animal Sciences, Kattupakkam and pig grower feed was purchased from Central Feed Technology Unit, Kattupakkam. The farmers were trained on housing, disease and feeding management. The data were collected periodically to record the body weight at 6 months, 8 months, mortality if any, feed efficiency for both TANUVAS KPM Gold pigs and desi pigs. The data were collected from the beneficiaries using semi structured interview schedule and analyzed statistically (Snedecor and Cochran, 1994)^[7].

Results and Discussion

The production parameters of TANUVAS KPM Gold pigs by selected beneficiaries are given in Table 1. Comparison of economic parameters between Desi pig and TANUVAS KPM Gold pigs is given in Table 2.

The data collected from the farmers showed that the farmers were able to get marketing weight of 72.4 kg at 8 months. This is similar to what Srikanth *et al.*, 2023^[8] found out in their work. The gross income obtained from seeling pigs at market weight was found to be 27.64% more than the desi pigs income. This is 1.28 times more than the farmer's practice. As found out through success stories on improved varieties of pig (AICRP on Pig) it was possible to obtain 75 kg slaughter weight compared to 45 kg from desi pig rearing which contributed to 1.67 times more income than the

farmer's practice. As per Priyanka *et al.*, 2022^[6] the extra income will be helpful in household and farming expenses especially that of women as in most of the rural household the women are taking care of the livestock. The farmers were able to get a better feed conversion ration compared to the desi pig rearing mainly due to the training given to them as found out in their study Haldar *et al.*, 2017^[4], also shown that providing proper training regarding shelter management and veterinary care resulted in improved and better production among small holder pig farmers in North Eastern India. Similar to the present study Haldar *et al.*, 2017^[4], distributed 4 months piglets among tribal farmers resulting in them adopting piglet production farming system. Hence supply of quality germplasm can ensure quality piglets to be supplied to other needy farmers. In the present study the reproduction parameters are yet to be studied for their impact in establishing Pig breeding unit by farmers. Doley *et al.*, 2024^[3] in their study on constraints faced by the rural farmer in pig farming found out that the improper feeding with imbalanced feed was one of the constraints. In this study compared to scavenging technique followed for desi pigs farmers were advised to follow the scientific feeding by providing them with balanced feed. As a result it was found out that the feed conversion ratio was 33.39% more than the farmer's practice. According to Anuj *et al.*, 2016^[2], the pork is of the animal protein which can be a source of both nutritional security and livelihood source for rural farmers which was established through the present study.

Table 1: Production performance of TANUVAS KPM Gold pigs reared by selected beneficiaries in North Eastern part of Tamil Nadu (Mean±SE)

S. No	Details of farmers	Body weight (6 months) (Kg)	Marketing weight (8 months) (Kg)	Feed Conversion Ratio (FCR)	Benefit Cost Ratio (BCR)
1	Farmer-1	55.5±1.52 (n=6)	72.5±1.20	3.53±0.05	1.77±0.03
2	Farmer-2	56.2±2.26 (n=6)	75.2±1.70	3.60±0.14	1.72±0.04
3	Farmer-3	52.2±1.19 (n=6)	67.2±1.45	4.00±0.10	1.53±0.02
4	Farmer-4	55.5±1.38 (n=6)	73.2±0.95	3.42±0.06	1.77±0.03
5	Farmer-5	58.0±1.39 (n=6)	73.0±1.21	3.53±0.11	1.78±0.03
	Overall average	55.5±0.75 (n=30)	72.4±0.70	3.61±0.05	1.72±0.02

Table 2: Comparison of economic parameters between Desi pig and TANUVAS KPM Gold pigs

Parameters	Desi Pig (Farmer's practice)	TANUVAS KPM Gold pig	Percentage over farmer's practice
Body weight (6 months) (Kg)	35.2	55.5	57.67 ↑
Marketing weight (8 months) (Kg)	56.8	72.4	27.64 ↑
Feed Conversion Ratio (FCR)	5.42	3.61	33.39 ↓
Gross Income from sale of pigs (Slaughter purpose at Rs.90/kg live weight/pig) (Rs.)	5112	6525	27.64 ↑
Benefit Cost Ratio (BCR)	1.23	1.72	39.83 ↑

*↑↓ Arrows denote increase and decrease in percentage over farmer's practice

Conclusion

From this study it can be established that the TANUVAS KPM Gold pigs rearing can improve the livelihood of rural families by resulting in a benefit cost ratio of 1.72 which is 39.83 percent more than the farmer's practice of rearing desi pigs and also provide nutritional security through consumption of pork. The additional gross income from a pig upto 27.64% more than the desi pig rearing ensure livelihood enhancement for the beneficiary families.

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