

Marketing Pattern and Constraint Analysis of Swine Farming in Telangana State of India

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Abstract

An investigation was undertaken to study marketing pattern and constraints faced by swine farmers, covering 48 respondents from 12 urban areas and 96 respondents from 24 rural areas from six different districts of Telangana state in India, as appropriate knowledge base on difficulties encountered in swine rearing is not available even though piggyery play a significant role in rural and urban communities for substantial income in this country. A pretested semi-structured questionnaire in precise language was employed for collecting data through interview and face to face discussion with the pig farmers duly avoiding ambiguous, dichotomous and non-variant items for proper interpretation. Majority of the farmers (80.56%) reported a market weight of <50 kg recorded around 5-7 months of age and 99.31% respondents marketed hogs through middlemen with a sale price of less than Rs.100/- per kg live weight. The constraint analysis revealed that, absence of guard rail in farrowing pens was ranked first under housing and lack of knowledge on offering balanced ration was the prominent constraint in feeding piggyery. Among breeding constraints, non-availability of improved pedigree boar for natural service and improved breed were ranked first. Exploitation by middlemen and lack of organized markets were recorded under marketing constraints. Mortality of pigs due to unidentified diseases and lack of knowledge of vaccines against most harmful diseases of pigs are main health care constraints. In the study area, piggyery sector has not come up well despite of advantages, benefits and huge demand for pork in the country. Hence, suitable policies and capacity building of stake holders are to be framed and conducted to educate and create awareness, in order to double the income for swine farmers.

Keywords: Constraints, Marketing Pattern, Swine Farming, Telangana

Introduction

Swine farming has a great potential to contribute to faster economic returns to the farmers when compared to other livestock species because of certain inherent traits like high fecundity, better-feed conversion efficiency, early maturity and short generation interval. It has immense potential to ensure nutritional and economic security for the weaker sections of the society. India's pig population is 9.06 million (1.7 % of country's livestock) and it is 1.77 lakh in Telangana state as reported (Anonymous, 2019). It was reported by Thakur *et al.* (2019) that, the majority of pig population in India is of indigenous breeds only and the pig production in this developing country is characterized by traditional small scale production system as they are predominantly in low-input system (Rahman, 2007), which provide value addition for farmers by consuming feed that would otherwise be wasted. Pig production in particular, promoting greater self-sufficiency and providing food security to rural as well as urban households. The domestic pig is an animal which has been very much neglected by the scientific community in India and no systematic study has been conducted on swine marketing practices and constraints in Telangana state also. Constraints in pig rearing are the one which refers to the difficulties encountered by pig farmers in their adoption of recommended scientific technologies. Chauhan *et al.* (2016) reported that, indigenous pigs population in rural areas was 7.099 million, while it was 0.737 million, in urban areas. Therefore, the present investigation was undertaken both in rural as well as urban areas on existing marketing pattern and constraints faced by swine farmers to suggest suitable remedial measures for their economic upliftment.

Materials and Methods

A field investigation was undertaken in six selected districts of Telangana state of India i.e., Jagithyal, Warangal Urban, Kamareddy, Siddipet, Narayanpet and Nalgonda during the year 2019. The selection of districts was done purposively, as they have highest pig population in Telangana state (Anonymous, 2012). The study area was categorized into urban and rural areas (mandal headquarters/towns treated as urban and remaining villages as rural areas) and carried out in 12 urban areas with 48 respondents and 24 rural areas with 96 respondents. Two mandals/towns from each district (according to available pig population) and three villages from each mandal were selected making up a total of 36 villages with four pig farmers randomly selected from each village, thus making 144 respondents. A pretested semi-structured questionnaire in precise language was employed for collecting data through interview and face to face discussion with the pig farmers duly avoiding ambiguous, dichotomous and non-variant items for proper interpretation. The researcher visited the villages of the respondents and they were interviewed one at a time by the researcher himself. Before collecting the data, the objectives of the study were lucidly explained and careful attempt was made to develop rapport with them. The questions in the schedule were presented to them in precise language to ensure that they perceived the questions correctly, so as to avoid any interpretational variation of the questions among the respondents and answers obtained were recorded instantly along with personal observations.

The constraints as supposed by the pig farmers were unveiled by interview schedule under different categories such as housing constraints, feeding constraints, breeding constraints, health care constraints, marketing constraints and miscellaneous constraints. The marketing pattern of pigs was also recorded under different variables like selling weight, selling age, sale price, middle men role, transportation type and marketing area. The interview schedules were checked, verified and numbered after getting the responses from the respondents. The data were scored, compiled and tabulated according to the standard procedures keeping in view the objectives of the study and calculations were expressed in per cent.

Results and Discussion

Marketing Pattern of Piggery

It was observed that the selling weight of the pig was below 50 kg by 68.75% of urban respondents and 86.46% of rural respondents (Table 1). About 31.25% of urban farmers and 13.54% of rural respondents sell their pigs at 50-60 kg body weight. Grossly, 80.56% of piggery farmers sell their pigs having less than 50 kg body weight and 19.44% with 50-60 kg body weight, according to their need. The marketing age of pig in urban area was 5-7 months and 1.04% of the rural respondents were selling their pig at 8-9 months of age with an overall of 99.31% and 0.69% of farmers sell their pigs at 5-7 months age and 8-9 months age, respectively. These findings are in accordance with Rahman *et al.* (2008). The sale price of the animal at market age was decided by their body weight and was less

than Rs.100/- per kg live weight and it was found that crossbred pig had lower price than indigenous pig breed.

Table 1: Marketing pattern of pigs in the study area

Variables		Respondents (Per cent)		
		Urban (n=48)	Rural (n=96)	Overall (n=144)
Selling weight (Kg)	<50 kg	68.75	86.46	80.56
	50-60	31.25	13.54	19.44
	100	0	0	0
	120	0	0	0
Selling age (Months)	5-7	100	98.96	99.31
	8-9	0	1.04	0.69
	10-12	0	0	0
Sale price (Rs.)	Up to100	100	100	100
	>100	0	0	0
Presence of middlemen	Yes	100	100	100
	No	0	0	0
Transportation of animals	By Train	0	0	0
	By Truck	100	100	100
Marketing area	Kerala	6.25	0	2.08
	Bengaluru	100	100	100
	North-east states of India	8.33	5.21	6.25
	Local Market	16.67	13.54	14.58

The number of pigs sold per batch in urban farms was varied according to the herd size and middlemen involvement is 100% in both areas. Similar to the reports of Deka *et al.* (2007), the present study also revealed with regards to marketing place, some pigs were slaughtered and meat sold in the local market as shown in the Fig. 1 & 2, whereas, in contrast, most of the pigs were marketed to the Bengaluru/Karnataka, Kerala and North eastern states of India, where demand for pork is high and pig transportation is only by road using trucks (100%) in both areas.



Figure 1: Pig slaughtering



Figure 2: Fresh pork sale at local market

Constraints Perceived by Pig Farmers

Housing Constraints

The result findings related to housing practice constraints presented in Table 2, revealed that, inadequate space requirement was perceived by 37.50% respondents, absence of guard rail by 65.97%, variation in floor slope by 13.19% and inadequate ventilation by 16.67% respondents. These findings are corroborating with Vikram Kumar

et al. (2017), who also reported farmers are facing major constraint in management of large herds under improper housing.

Feeding Constraints

Lack of knowledge of feeding balanced ration (Table 1) was the most important constraint perceived by 97.92% of respondents, non-availability of balanced commercial pig feed by 61.11%, lack of knowledge about preparation of concentrate feed by 86.11%, lack of knowledge of age/group wise feeding by 90.97%, lack of knowledge of offering mineral mixture by 95.14%, respondents. These observations are in agreement with the reports of Lavanya *et al.* (2013), Patr *et al.* (2014) and Talukdar *et al.* (2018). Similar feeding constraints were also observed by Islam *et al.* (2016) in their studies. Even lack of knowledge of feeding green forages was also observed in 48.61%, respondents, might be due to improper traditional pig rearing and lack of cultivable land in their possession.

Breeding Constraints

The Table 2, indicating that the major constraints in breeding practices was non-availability of improved pedigree boar for natural service (97.22%), non-availability of improved breed (90.97%) and lower productivity of indigenous animals (25%). Similar to the present findings, non-availability of improved pedigree boar for natural service and non-availability of improved breed are the major breeding constraints observed by Lavanya *et al.* (2013), Patr *et al.* (2014), Ahmed *et al.* (2016), Islam *et al.* (2016) and Talukdar *et al.* (2018) in their studies.

Health Care Constraints

The results in Table 2, revealed that the mortality of pigs due to unidentified contagious diseases was the major health care constraint perceived by 98.61% pig farmers followed by non-availability of vaccines against harmful diseases (97.92%), lack of knowledge about emerging diseases of pigs (93.06%), lack of knowledge on bio-security measures (81.25%), inadequate knowledge about deworming (78.47%), lack of veterinary facilities (34.03%) and mortality of piglets prior to weaning (24.31%), while these findings were concurrent with the findings of Midau *et al.* (2011), Patr *et al.* (2014), Ahmed *et al.* (2016), Vikram Kumar *et al.* (2017) and Talukdar *et al.* (2018). Similar to the findings of present study, Islam *et al.* (2016) also reported, higher mortality of pigs due to unidentified contagious diseases was the most serious constraint faced by small scale pig farmers.

Marketing Constraints

Exploitation of farmers by middlemen (96.53%) is the major marketing constraint followed by lack of organized marketing area nearby or no proper market infrastructure for both inputs and outputs (95.14%) and lack of consumers in the local area (49.31%), which were comparable with the findings of Jain and Pandey (2000). Our findings were also related to the findings of Meganathan *et al.* (2010), Lavanya *et al.* (2013), Islam *et al.* (2016) and Vikram Kumar *et al.* (2017).

Miscellaneous Constraints

In the present study it was observed that, lack of government policies, ignorance among pig farmers, lack of technical hands, less popularity of pork and municipality/agri. farmers restrictions were some of the other constraints. Lack of government policies with 97.92% respondents was ranked first, followed by ignorance among pig farmers (72.22%), lack of technical hands (57.64%), less popularity of pork (39.58%) and municipality/agriculture farmer restrictions for rearing pigs extensively (19.44%) as shown in Table 2. Similar constraints noticed by Kannan *et al.* (2008), Meganathan *et al.* (2010), Lavanya *et al.* (2013) and Vikram Kumar *et al.* (2017).

Table 2: Constraints perceived by the pig farmers

Variables		Respondents (Per cent)		
		Urban (n=48)	Rural(n=96)	Overall (n=144)
Housing Constraints	Inadequate space requirement	41.67	35.42	37.5
	Variation in floor slope	16.67	11.46	13.19
	Absence of guard rail	100	48.96	65.97
	Inadequate ventilation	20.83	14.58	16.67
Feeding constraints	Lack of knowledge of feeding balanced ration	97.92	97.92	97.92
	Lack of knowledge on feeding concentrates	83.33	87.5	86.11
	Inadequate knowledge on feeding of mineral mixture	89.58	97.92	95.14
	Lack of knowledge of group wise feeding	91.67	90.63	90.97
	Non-availability of balanced commercial pig feed	66.67	58.33	61.11
	Lack of knowledge on feeding green forages	56.25	44.79	48.61
Breeding Constraints	Non-availability of improved breed	85.42	93.75	90.97
	Non-availability of improved pedigree boar for natural service	100	95.83	97.22
	Lower productivity of animals	22.92	26.04	25
Health care practice	Mortality of pig due to unidentified diseases	100	97.92	98.61
	Lack of veterinary services	20.83	40.63	34.03
	Mortality of piglets before weaning	27.08	22.92	24.31
	Inadequate knowledge about deworming	70.83	82.29	78.47
	Lack of knowledge about the bio-security of piggery	75	84.38	81.25
	Lack of knowledge on important pig diseases	91.67	93.75	93.06
	Non availability of vaccines against most harmful diseases of pigs	97.92	97.92	97.92
Marketing constraints	Lack of urban marketing	91.67	96.88	95.14
	Lack of consumers in local area	41.67	53.13	49.31
	Exploitation by middlemen	93.75	97.92	96.53
	Lack of marketing area nearby	81.25	76.04	77.78
Miscellaneous Constraints	Lack of government policies	97.92	97.92	97.92
	Ignorance among pig farmers	77.08	69.79	72.22
	Lack of technical hands	45.83	63.54	57.64
	Less popularity of pork	33.33	42.71	39.58
	Municipality and Agri-farmer restrictions	37.5	10.42	19.44

Conclusion

Majority (80.56%) of pig farmers sell their pigs with less than 50 kg body weight and sell at 5-7 months age and the sale price of the animal at market age was decided by the body weight that too at less than Rs.100/- per kg. The number of pigs sold per batch in urban farms was varied according to the herd size and selling of the animal was carried out by the involvement of middlemen in urban and rural areas. It was also found that some pigs were slaughtered and sold in the local market, whereas most of the pigs were marketed to the Bengaluru/Karnataka, Kerala and North-eastern states of India where demand for pork is very high. Transportation of pigs in the study area is only by road using trucks.

The most important constraints perceived by piggery farmers in study area as per the priority are mortality of pigs due to unidentified diseases, lack of knowledge of vaccines against most harmful diseases, lack of knowledge of feeding balanced ration, lack of government policies, non-availability of improved pedigree boar for natural service and non-availability of improved breed and exploitation of farmers by middlemen. Therefore, short term and long

term training programmes (Capacity building) need to be organized for swine farmers, Establishment of mega seed projects at regional/district level from Govt. sector for producing required number of seed stock for supply of superior germplasm of crossbred breeding pigs and encouraging piggery farmers to form co-operative societies, unions and a federation at state level or organized self-help groups to counter exploitation by middlemen in marketing of pigs may help farmers in the long run to mitigate problems in promising meat producing animal like pigs.

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Conflict of Interests

There is no conflict of interest.

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