



## Purposes, Problems and Prospects of Piggery Development in West Jaintia Hills District of Meghalaya, India

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### ABSTRACT

Pigs are prolific and fast growing livestock that are early converter of feed and food waste to valuable products and its rearing among the tribes of the North-East Region (NER) is prevailing since time immemorial. A study was taken up in the West Jaintia Hills District, Meghalaya to understand the purposes, problems and prospects of Piggery Development in the state of Meghalaya where pork is one of the best preferred meats for all sections of the population. A structured, pre-tested, reliable and valid interview schedule was used to interview 100 randomly selected pig farmers from two Development Blocks namely, Laskein and Thadlaskein blocks where pig farming was in higher concentration. Areas such as recycling waste food (100.00%), additional income (99.00%), mark of insurance (97.00%), profit in short time (96.00%) and primary income (50.00%) were identified as the purposes of pig rearing. Problems of concentrate feed (99.00%), medicines and vaccines (97.00%), input supply (95.00%), economic problem (94.00%), non-availability of feed and fodder (93.00%), transportation (93.00%), access to market (88.00%), absence of cooperatives/self-help groups (SHGs) (85.00%), market place (76.00%) and bank linkages (58.00%) were the major concerns. Making provisions of feed, water, treatment, linkages and marketing could be able to make the piggery sector prosper in the state. The results issued that interdisciplinary approaches could do well with farming, marketing, linkage, convergence and other related issues.

**Keywords:** Piggery, Meghalaya, problems, purposes, prospects

The eight sister states in North-East India (Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura) resemble ethnically, economically, aesthetically, traditionally and culturally. Wright *et al.* (2010) observed in one of his studies that in spite of being one of the richest regions at the time of independence of the country, they are amongst the poorest in India today where a higher proportion of the population lives below the poverty line (35%) than the national average (26%).

Agriculture, in fact, is the major source of employment and livelihood for around 60% of the population in the NER against the national average of 52% (ILO, 2014). Livestock is an important component of mixed farming systems due to preference of meat by large majority of people in their diets on one hand and the difficult terrain

for large scale crop production on the other. There are few or no social taboos against taking any type of meat but the most preferred meat is pork, followed by beef, chicken and others (Feroze *et al.*, 2010).

As per Basic Animal Husbandry Statistics (2014), the total pig population in the country stands at 10.29 million, which accounts for 2.01% of the total livestock population. Livestock population in Meghalaya has increased substantially (7.41%) which is in contrast to the overall national population which has seen a decrease of 3.33% from 2007 to 2012. The increase in the livestock population in the state was largely due to a substantial 3.6% increase in the pig population during the same period. The region in general and the state of Meghalaya in particular draws upon supplies from outside the state regularly to meet its growing demand (Mandal, 2011).



It is pivotal to converge social concerns in the design of new farming systems in order to justify pig production as a tool to improve livelihoods. Long-term strategies for improvement schemes in livestock production systems should focus on the use of indigenous populations, in purebred or in crossbreeding systems with improved breeds (Stern, 2005). Keeping these ideas in mind, a study was taken up in the West Jaintia Hills District of Meghalaya to know the purposes, problems and prospects of piggery development.

### MATERIALS AND METHODS

The research work was carried out in West Jaintia Hills District of state of Meghalaya in India. Two development blocks of the district, viz. Laskein block and Thadlaskein block, were selected for the study where pig population was in higher concentration. The respondents were divided into beneficiaries and non-beneficiaries of Government grant/aid/subsidy. From the list of beneficiaries, 5 (five) respondents each from 5 (five) clusters of villages from both blocks were selected randomly keeping in view the objectives of the study. Thus, 50 (fifty) respondents were selected randomly from these five selected clusters of villages on the basis of proportionate random sampling to constitute the total population of pig farmers. Further, 5 (five) respondents each from 5 (five) villages of the two blocks under study were selected making a total of 50 (fifty) non-beneficiary respondents as well. Thus, the total number of respondents for this study comprised of 50 (fifty) beneficiaries and 50 (fifty) non-beneficiaries, making the total sample size 100 (hundred). Data were collected through a pre-tested, dependable and valid objective interview schedule by personally meeting the respondents at their available convenient time. The data thus collected were scored, aggregated, organized and subjected to appropriate statistical analysis in order to arrive at a conclusion in respect of set objectives. Major statistical tools used for analyzing data were mean, standard deviation, frequency distribution, percentage, range, correlation, regression and t-test.

### RESULTS AND DISCUSSION

#### Purposes of pig rearing

All livestock farmers certainly carry some idea about

the purpose for which they reared the animals. A glance at Table 1 revealed varied degree of agreement on the different purposes for which the respondents reared their pigs.

**Table 1: Distribution of respondents on various degrees of purposes of rearing pigs by farmers**

Sl. No.	Settings	Pooled (N=100)		
		Very much	Much	Somewhat
1	Consumption	0 (0.00)	8 (8.00)	92 (92.00)
2	Primary income	50 (50.00)	43 (43.00)	7 (7.00)
3	Fun of accumulation	2 (2.00)	12 (12.00)	86 (86.00)
4	Social achievement	3 (3.00)	70 (70.00)	27 (27.00)
5	Rituals and ceremonies	5 (5.00)	57 (57.00)	38 (38.00)
6	For company	2 (2.00)	9 (9.00)	89 (89.00)
7	As prestige symbol	2 (2.00)	11 (11.00)	87 (87.00)
8	To recycle the waste food	100 (100.00)	0 (0.00)	0 (0.00)
9	To have additional income	99 (99.00)	0 (0.00)	1 (1.00)
10	As a mark of insurance	97 (97.00)	3 (3.00)	0 (0.00)
11	To better utilize leisure time	35 (35.00)	32 (32.00)	23 (23.00)
12	To engage the idle labour force in family	19 (19.00)	26 (26.00)	65 (65.00)
13	To please others in family	6 (6.00)	23 (23.00)	71 (71.00)
14	Mark of family tradition	12 (12.00)	20 (20.00)	68 (0.00)
15	Easy access to loan, subsidy etc.	5 (5.00)	23 (23.00)	72 (72.00)
16	Because of better profit in short time	96 (96.00)	4 (4.00)	0 (0.00)

*Note:* Figures in parentheses ( ) indicate percentage.

Among the prominent ones, it could be observed that majority of the respondents reared pigs for purposes such as ‘to recycle the waste food’ (100.00%), ‘to have additional income’ (99.00%), ‘as a mark of insurance’ (97.00%), ‘because of better profit in short time’ (96.00%) and ‘primary income’ (50.00%). Subsequently, the table also indicated that the respondents had lower degree of

agreement on other listed purposes such as consumption, fun of accumulation, social achievement, rituals and ceremonies, for company, as prestige symbol, to better utilize leisure time, to engage the idle labour force in family, to please others in family, easy access to loan, subsidy, etc. received considerably lower degree of agreement. By and large, the main area received maximum attention in purpose of rearing pigs revolved around economic reasons which was expected among the poor farmers in otherwise economically poor villages. The above findings were in line with the findings of Petrus *et al.* (2011), Biradar *et al.* (2013) and Kambashi *et al.* (2014).

### Problems

Table 2 indicated that 'high cost of concentrate feed' was the main problem encountered by the respondents and was ranked first (99.00%).

**Table 2: Distribution of respondents on different problems of rearing pigs**

Sl. No.	Problems	Frequency (%)	Rank
1	Non-availability of feed & fodder	93.00	V
2	High cost of concentrate feed	99.00	I
3	Shortage of water supply	25.00	XIII
4	Lack of quality breeds	36.00	XI
5	Inadequate input supply from government	95.00	III
6	Economic problem	94.00	IV
7	Absence of cooperatives/SHGs	85.00	VIII
8	Less training on scientific farming	31.00	XII
9	Lack of easy approach to veterinarians	16.00	XV
10	Limited medicines and vaccines	97.00	II
11	Lack of proper market place	76.00	IX
12	Lack of regular market except on weekly market days	88.00	VII
13	Exorbitant transportation charge	93.00	V
14	Profit is less	22.00	XIV
15	Social taboo	3.00	XVI
16	Difficulty in bank linkages	58.00	X

This was closely followed by 'limited medicines and vaccines' (97.00%), 'inadequate input supply from

government' (95.00%), 'economic problem' (94.00%) at second, third and fourth respectively. 'Non-availability of feed and fodder' and 'exorbitant transportation charge' were both ranked at fifth (93.00% each). Similarly, 'lack of regular market except on weekly market days' (88.00%), 'absence of cooperatives/SHGs' (85.00%), 'lack of proper market place' (76.00%), 'difficulty in bank linkages' (58.00%) were ranked seventh, eighth, ninth and tenth respectively. 'Lack of quality breeds' (36.00%), 'less training on scientific farming' (31.00%), 'shortage of water supply' (25.00%), 'profit is less' (22.00%), and 'lack of easy approach to veterinarians' (16.00%) were ranked at eleventh, twelfth, thirteenth, fourteenth and fifteenth respectively. 'Social taboo' was ranked last (3.00%).

There could be various reasons that led to the respondents' perception towards the above mentioned and ranked problems. For instance, high cost of concentrate feed could be due to the absence of feed industries in the region; lack of pharmaceutical laboratories and industries in the whole North-eastern region could be the reason for limited supplies of medicines and vaccines; inadequate input supply from government could be explained due to very few government farms; procurement of inputs from neighbouring state of Assam could explain the high cost and transportation charges; and difficulty in bank linkages could be explained by high interest rates fixed by the banks. Such problems and constraints were commonly encountered by the respondents in their day to day farming activities and therefore proved to be critical factors that hindered the overall piggery development in the state of Meghalaya and the North-East region as a whole.

Other problems included were lack of quality breeds (36.00%), less training on scientific farming (31.00%), shortage of water supply (25.00%), less profit (22.00%), lack of easy approach to veterinarians (16.00%) which were ranked at eleventh, twelfth, thirteenth, fourteenth and fifteenth respectively. The last rank was found to be social taboo (3.00%). Picking up from the last, it could very well be said that there was a huge acceptability for pork in the state. The reason that pig farming in the state still continued to be in practice could be because of the generous attitude of farmers towards pigs. Otherwise with so many problems and bottlenecks around, it would have been next to impossible to run livestock farming especially of pigs. The above findings were also in accordance with those of Zadeng (2012), Bime *et al.* (2014) and Johari (2014).

**Table 3: Frequency distribution of respondents on areas needing intervention for improvement**

Sl. No.	Settings	Pooled (N=100)				
		Always	Almost always	Most frequently	Sometimes	Occasionally
1	More government subsidies	39 (39.00)	42 (42.00)	14 (14.00)	5 (5.00)	0 (0.00)
2	Credit facilities	7 (7.00)	25 (25.00)	28 (28.00)	37 (37.00)	3 (3.00)
3	Marketing system development	12 (12.00)	32 (32.00)	38 (38.00)	17 (17.00)	1 (1.00)
4	Promoting exports	9 (9.00)	32 (32.00)	35 (35.00)	23 (23.00)	1 (1.00)
5	Regular training and demonstration programs	27 (27.00)	32 (32.00)	33 (33.00)	8 (8.00)	0 (0.00)
6	Disease control and free or subsidized veterinary practices	68 (68.00)	21 (21.00)	9 (9.00)	2 (2.00)	0 (0.00)
7	Research and development	12 (12.00)	53 (53.00)	22 (22.00)	12 (12.00)	1 (1.00)
8	Price fixation	34 (34.00)	47 (47.00)	11 (11.00)	8 (8.00)	0 (0.00)
9	Feed availability	86 (86.00)	11 (11.00)	2 (2.00)	1 (1.00)	0 (0.00)
10	Water availability	83 (83.00)	11 (11.00)	2 (2.00)	3 (3.00)	1 (1.00)
11	Cultivable Land availability	31 (31.00)	56 (56.00)	9 (9.00)	4 (4.00)	0 (0.00)

*Note:* Figures in parentheses ( ) indicate percentage.

### Prospects

As per Table 3 it could be seen that among the listed areas needing intervention for improvement, majority of the respondents agreed that 'feed availability' (86.00%), 'water availability' (83.00%), and 'disease control and free or subsidized veterinary practices' (68.00%) were 'always' important for improvement of livestock production, management and marketing. Whereas other areas such as 'cultivable land availability' (56.00%), 'research and development' (53.00%), 'price fixation' (47.00%) and 'more government subsidies' (42.00%) were 'almost always' needed for intervention for improvement of livestock production, management and marketing. The findings revealed that the farmers had good realization of the need of intervention for making the piggery a prosperous sector in Meghalaya. This might have been due to their frequent exposure with the Government officials on one hand and the intensive manner of pig rearing on the other hand. Better understanding of the intervention realization by the pig-rearing farmers in commercial level was also reported by Payeng (2011) and Shyam (2011) in order to bring about better prospect in the sector.

### CONCLUSION

The present study on purposes, problems and prospects of piggery development in West Jaintia Hills district of Meghalaya revealed that recycling waste food, having

additional income, mark of insurance, better profit in short time and primary income were identified as the major purposes of pig rearing. Problems of concentrate feed, medicines and vaccines, input supply, economic problem, non-availability of feed and fodder, lack of transportation facilities, accessibility to market, absence of cooperatives/self-help groups (SHGs) and bank linkages were the major constraints perceived by the respondents. Making provisions of feed, water, treatment, linkages and marketing could facilitate the piggery sector to prosper in the region. The results issued that interdisciplinary approaches could do well with farming, marketing, linkage, convergence and other related issues. As the state has already shown better growth of livestock in the recent past, cooperated, coordinated and convergent efforts in terms of above mentioned areas would definitely yield much faster and positive results.

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