

## ECONOMICS OF PIG REARING UNDER TRADITIONAL SYSTEM IN ARUNACHAL PRADESH\*

D. PAIT, J. SAHARIA<sup>1</sup>, N. K. SARMA<sup>2</sup>

Department of Livestock Production and Management,  
College of Veterinary Science, Assam Agricultural University  
Khanapara, Guwahati-781022.

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### ABSTRACT

The study was conducted in East Siang district of Arunachal Pradesh to know the economics of pig rearing in various systems of management. One hundred pig farmers having minimum of two pigs each which were selected from five blocks within the district. The result revealed that 70% of the farmers were agri-farmer and animal raiser. 75% of the farmers fed their pigs twice a day. All the farmers reared pig because there were no any religious taboos. All the farmers used family labours to look after the pigs. Average annual family income from piggery, other source and total income were found to be Rs. 19085.00±0.62, 85059.00±6.24 and 105044.00±6.15 respectively. 65.00% of pigs were reared in scavenging system and net return per pig was highest in scavenging system of rearing (Rs.12056.9).

**Key words :** Economics, agri-farmers, pigsty, piggery, scavenging system.

Pig husbandry is an integral part of tribal communities of East Siang district in Arunachal Pradesh and is being reared by the tribal community since decades. In the recent past there has been introduction of improved cross breed pigs like Hampshire. Large Black pigs etc. Demand of pork has been increased in huge amount along with employment opportunity and improved living standard. However, most of the farmers have inadequate knowledge about scientific feeding, health care, breeding and management and pigs are still being reared in old traditional manner. The farmers did not go for scientific rearing of pigs rather preferred old traditional way of rearing pigs. Therefore, the present study was conducted in the area to know the economy of pig rearing in various systems.

### MATERIALS AND METHODS

The study was conducted in East Siang district of Arunachal Pradesh to know the economy of rearing pigs in various systems. The study was undertaken in five blocks of the district namely Ruksin, Ramelo Bango, Pasighat, Pangin and Mebo. 20 farmers from each block having minimum two numbers of pigs were selected making a total of hundred farmers. The data was collected personally from door to door survey with the help of reliable and valid interview schedule specially prepared for it. The survey was done from the month of June 2011 to August 2012. The data collected were compiled and properly tabulated and analyzed using statistical methods viz. frequency, percentage, means, standard error and range.

### RESULTS AND DISCUSSION

**Piggery as occupation:** The result revealed that 41% farmers took the piggery as full time occupation against 59% farmers as subsidiary

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\*Part of MVSc. Thesis of first author.

<sup>1</sup>Professor

<sup>2</sup>Associate Professor,

occupation. This might be because of the reason that though there was a high demand of pork/pig in the society, there was high cost involvement in feeding of animals and high mortality due to diseases, peoples were scared of going in full time occupation.

**Annual income of farmers from various sources:** Annual income from pig farming: The overall average annual income of the farmers from was Rs. 19,850 ±0.62 with minimum and maximum of Rs. 10,000.00 to 30,000.00. This was might be because of the reason that there is no any well established marketing channel or it might be also because the farmers reared only for domestic consumptions and social occasions. They sold or bought a pig when felt necessary like shortage of money for school fees, buying medicines etc. The earlier worker<sup>1</sup> found that 80.67% of the farmer's family income from piggery ranged between Rs. 9,768.00 to Rs. 18,605.00.

**Income from other sources :** Total income from other sources excluding piggery was Rs. 85590.00±6.24 with minimum and maximum of Rs. 10000.00 and Rs. 290000.00.

Total annual family income: Average total family income from all possible sources was Rs. 105440.00±6.15 with minimum and maximum of Rs. 30500.00 and Rs. 300000.00. It might be because of the reason that irrespective of type of occupation most of the farmers reared pigs in their house. An previous researcher<sup>4</sup> found that majority (81.17%) pig farmers of Assam had total annual between Rs 50,000.00 to Rs 1 70000.00. However, the present findings contradict with findings of a other study<sup>1</sup> in Kohima district of Nagaland and found that 78.67% of the pig farmer's family income ranged between Rs 69,223.00 and Rs 1, 25,350.00.

Share of piggery to the total family income: Share of income from piggery to the total family income was 18.88%. It might be because of the reason that pigs were not reared mainly for

commercial purpose but, more priority was given in social occasions and functions.

**Economic analysis of various rearing systems :** The study revealed that the labour and transportation cost was nil as they used family labour and there was no transportation charge. Interest charges were also excluded as no loan was taken from any kind of source. There was no need of hired labour as farmers never reared in large scale, so family labour or the particular owner was enough to look after the pigs. Transportation charge was also not included because the pigs/pork was easily available in the local market.

**Cost of piglet :** The cost of per piglet varied according to the systems of rearing. It was highest in tether (Rs. 1641.67) followed by separate enclosure (Rs.1507.06), scavenging (Rs.1496.48), 'below the Changghar' (Rs.1491.67) and 'below the separate toilet' (Rs. 1288.33). The reason might be due to that the cost of production was more in separate enclosure so farmers used to sell the piglet in higher prices as compared to other rearing systems.

**Cost of feed :** The Cost of feeding per pig per year was highest in separate enclosure system of rearing (Rs. 4615.82) followed by tethering system (Rs.4750.00), below the 'Changghar' (Rs. 3533.33), below the separate toilet (Rs. 2466.67) and scavenging system (Rs. 246.10). It might be because of the reason that in separate enclosure and tethering systems of rearing pigs had to be fed minimum twice day as they were not allowed to go outside. At the same time farmers gave much importance and interest in feeding male pigs to get more and quick market body weight. Treatment cost was highest in the case of tethering, which might be because of the reason that in tethering system the pigs were tied to a rope and most of the time their movement was restricted with or without proper shed and often exposed to stress. The findings were similar to other worker<sup>3</sup>.

**Treatment cost :** Treatment cost per pig per year was highest in tether system of rearing (Rs. 86.67) followed by separate enclosure system (Rs. 75.29), below the Changghar' (Rs. 58.33), below the separate toilet system (Rs. 45.56) and scavenging system (Rs. 3.43). In tether and separate enclosure system of rearing, the pigs were given more attentions and farmers reared pigs in confinements specially when pigs were used for some specific purpose like festivals and other occasions.

**Miscellaneous cost :** Miscellaneous cost per pig per year was highest separate enclosure system of rearing (Rs. 50.58), followed by tether (Rs. 41.67), below the Changghar (Rs. 45.00), below the separate toilet system (Rs. 28.89) and scavenging (Rs. 4.07). In separate enclosure and tether systems, more attention was given in feeding utensils, construction of pigsty etc. which incurred more cost.

**Cost of production :** The cost of production per pig per year was highest tether system (Rs. 6479.88) followed by separate enclosure (Rs. 6198.78), below the Changghar (Rs. 5,085.13), below the separate toilet system (Rs. 3801.60) and scavenging system (Rs. 1746.22). It might be because of the reason that in scavenging system of rearing there was minimum overall input.

**Sale price :** Sale price per pig was highest in separate enclosure system (Rs. 13837.06) followed by tether (Rs. 13858.33), below the Changghar (Rs. 13765), scavenging system (Rs. 13598.83), and below the separate toilet system (Rs. 9236.26). This might be because of the reason that as in separate enclosure system of rearing the cost of production was higher, the farmers sold their pigs in higher price as compared to other rearing systems

**Net return :** The average net return per pig was highest scavenging system of rearing (Rs. 12056.90) followed by below the Changghar (Rs.8731.86), tether (Rs. 7472.50), separate enclosure (Rs. 7454.13) and below the separate toilet system (Rs. 5252.47).

It was also observed that the farmers preferred to rear animals in the system where they could spend less money with minimum care in feeding and management etc. The findings were supported by the earlier worker<sup>3</sup> that the farmers preferred to rear the animals in traditional way because of the reason that the farmers thought that it was easier and less expensive. Hence, they could devote maximum time in crop cultivation. A previous worker<sup>2</sup> reported that the outdoor pig production operations had lower fixed cost as compared to indoor production.

Table 1: Income of farmers from various sources.

Categories	Annual family income from piggery (Rs.)	Income from other sources (Rs.)	Total family income from all possible sources (Rs.)	Share of piggery to the total family income (%)
Average	19850.00±8.62	85059.08±8.34	105044.00±8.75	18.88
Minimum	18000.00	10000.00	30000.00	
Maximum	30000.00	290000.00	308000.00	

## Economics of pig rearing

**Table 2: Comparative assessment of economic factors in various rearing systems**

Particulars (Rs)	Rearing systems				
	Scavenging	Intensive system			
		Below separate toilet	Below changghar	Separate enclosure	Tether
Cost of piglet	1288.33	1442.67	1396.48	1587.06	1641.67
Cost of feed/pig/year	286.70	2486.67	3833.33	4750.08	4675.62
Cost of treatment/pig/year	3.43	75.29	58.33	45.56	68.67
Miscellaneous/pig/year	4.87	45.56	58.33	75.29	68.67
Cost of production/pig	1541.93	3863.79	5833.14	6362.93	6385.63
Sale price/pig	13698.83	8235.25	13763.08	13837.06	13888.33
Net return/pig	12156.90	5252.47	8731.86	7474.13	7472.53

### CONCLUSION

From the study it can be concluded that the rearing of pig in scavenging system was economic as compared to other systems like below separate

toilet, below changghar, separate enclosure and tethering systems. The farmers preferred rearing of pigs in traditional manner because they wanted to rear pigs with minimum expenses due to high feed cost, medicinal other expenses.

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