Housing practices for small scale pig production in rural communities of Assam

K Ahmed, N Ahmed, D Kalita and D Barman

Abstract
The objective of the study to assess different housing practices for small scale pig production in rural areas of Kamrup and Darrang districts of Assam. A total of 300 households rearing pigs were visited and interviewed during the study. Free range system of pig rearing was almost absent. In these areas, the floors of pig sties/houses were normally made of either concrete (36.5%) or katcha (63.5%). The walls of pig sties/houses were made of bamboo (42.2%), wood (29.5%) or concrete (28.3%). During the study, it was revealed that the roof of pig sties was made up of thatch (49.3%), plastic cover (28.6%) or CGI sheet (22.1%). Most of the people who rear pigs were not aware about scientific methods of pig rearing. But in survey it was focused that they were interested to get training about pig rearing and management. Considering high demand of pork in the region, immense opportunities prevail in improvement of pig husbandry through adopting scientific interventions in routine management and health care services.

Keywords: Pig production, housing practices, rural area; Assam

1. Introduction
Pig husbandry is an important component of farming system practiced in north eastern region of India including Assam. Pig farming has a special significance as it can play an important role in improving the socio-economic status for small scale farmers in terms of generating income in developing countries [1]. Hence, pig is the most popular and valued livestock species in the rural areas of Assam. Rural households rear 1 to 2 pigs in their backyard [2]. The small scale pig sector has seemingly greater potential to reduce poverty [3]. The typical smallholder low input pig production system is characterized by simple pig sty/housing with locally available materials as well as purchased. Therefore a survey was taken up to study the existing housing practices followed by the farmers for rearing pigs under field conditions so that resulting information would help to identify the pig farmers problems and to draw a road map to improve the profitability in pig farming which in turn benefit the pig farmers.

2. Materials and Methods
The study was carried out during September, 2015 to June, 2016 in random villages of Kamrup and Darrang districts of Assam. Villages were selected according to pig population. A questionnaire was prepared before conduction of the study. Later on, the questionnaire was validated in field condition. A total of 300 households rearing pigs were visited and interviewed in aforementioned sites. Data regarding different housing practices for small scale pig production were collected, compiled and analyzed by using Microsoft excel 2010.

3. Results and discussion
A total of 300 pig holding households were interviewed in the present study belonged to rural communities of Kamrup and Darrang districts of Assam. The data gathered are presented in Table 1.

In this study, free range system of pig rearing was almost absent. This was in collaboration with the findings of other [4], which was due to taboos related to pig rearing like religious as well as pig rearing is restricted to lower section or tribes of people. In traditional farming practices, farmers mostly followed the intensive housing system with temporary pig sties/houses built with locally available resources made of wood or bamboo and the roof material is made of CGI sheet, plastic cover and thatch (Fig. 1), which is quite similar with the housing pattern observed in other parts of North Eastern Region [5]. Most of the farmers used complete housing system without any run area.
In the present study, farmers also reared pregnant sows along with other pigs. No special attention was catered to any animals in these areas of Assam. However, Birhan et al. [6] reported separation of pigs by age and/or physical stage (25%), the other 50% was only practiced as separation of piglets and rest 25% did not separate by age and physical stage of pigs. The separation of various age and sex groups and classes of pigs had great advantage in feeding and management which helped in improve growth because it reduced competition among animals [7].

3.1 Pig sty floor
In this study, most of the farmers had experienced on pig husbandry. However, they were unaware of scientific pig rearing. In these areas, the floors of pig sties/houses were normally made of either concrete (36.5%) or katcha (63.5%). This study was supported by other research [2] as floors of pig sties were made of wood, bamboo, concrete or katcha among tribal livelihood of Nagaland. In the study floor made of bamboo and wood was nil. In these areas, the reason behind the farmers proffered katcha flooring was poor financial condition of farmers and other followed as a traditional farming system. Most of farmers constructed their own pig sties flooring with locally available sand and stones which made it cheaper construction.

3.2 Pig sty wall
The walls of pig sties/ houses were made of bamboo (42.2%), wood (29.5%) or concrete (28.3%). Patr et al. [2] also reported that pig sties wall were made of bamboo, wood or concrete in tribal households of Nagaland. In the present study, majority of pig farmers utilized locally available materials like bamboo and wood. Most of the farmers were below poverty line (BPL) and they could not afford to buy stuff for concrete construction. Rest of farmers mostly constructed their own pig sties/houses wall with locally available sand and stones. No labourers were hired for construction of pig sties.

3.3 Pig sty roof
In this study, it was revealed that the roof of pig sties was made up of thatch (49.3%), plastic cover (28.6%) or CGI sheet (22.1%). However, Mekuriaw and Asmare [1] observed the types of houses used by pig keepers were corrugated iron roof (80%), bamboo roof (13.3%), and thatched roof (6.7%) in Northwest Ethiopia. Farmers used thatch roofing with locally available straw and coconut leaf etc. Other used plastic materials cover as roof to their pig sties. However 22.2% farmers used CGI sheet as roof material as it lasts long. Most of the people who rear pigs were not aware about scientific methods of pig rearing. But in survey it was focused that they were interested to get training about pig rearing and management. The facilities regarding veterinary and extension service were not efficient. Also during key informant discussion it was reported that because of religious taboos for pork consumption in the country, producers have fear of poor domestic marketing potential.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Components</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Floor</td>
<td>Concrete</td>
<td>36.5</td>
</tr>
<tr>
<td></td>
<td>Katcha</td>
<td>63.5</td>
</tr>
<tr>
<td>Wall</td>
<td>Bamboo</td>
<td>42.2</td>
</tr>
<tr>
<td></td>
<td>Wood</td>
<td>29.5</td>
</tr>
<tr>
<td></td>
<td>Concrete</td>
<td>28.3</td>
</tr>
<tr>
<td>Roof</td>
<td>Thatch</td>
<td>49.3</td>
</tr>
<tr>
<td></td>
<td>Plastic cover</td>
<td>28.6</td>
</tr>
<tr>
<td></td>
<td>CGI Sheet</td>
<td>22.1</td>
</tr>
</tbody>
</table>

Fig 1: Different housing practices for small scale pig production.

4. Conclusion
Pig husbandry is still solely depending on small scale production system in rural areas of Assam. Traditional pig husbandry is associated with zero to minimum involvement. Scientific intervention in operational techniques through proper capacity building program with the help from Government the problems of the farmers can be minimized. Considering high demand of pork in the region, immense opportunities prevail in improvement of pig husbandry through adopting scientific interventions in routine management and health care services.

5. Acknowledgements
Authors are grateful to DBT (DBT Sanction No. BT/PR8818/SPD/24/694/2013 dated 27/03/2015) for providing financial support to carry out the present study. We are also thankful to Director of Research (Veterinary), Assam Agricultural University for his unconditional help rendered during the study.

6. References