CHARACTERISTICS AND CONSTRAINTS OF PIG PRODUCTION UNDER RURAL CONDITION IN SIKKIM

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ABSTRACT: The present study was undertaken to know the production and management practices followed by the farmers and the common constraint of pig production in rural area of Sikkim. The data were collected from 100 respondents through personal interview with the help of questionnaire on different aspects namely housing, breeding, feeding, health care, management practices, economics and the common problems for pig production. In the present study it was observed that 95% farmers constructed their pigsty with locally available wood/bamboo with traditional system. Majority (60%) of the farmers reared cross-bred pigs and offered kitchen waste to their pigs while only 5% of them offered concentrate feeds. Vaccination and deworming was followed by 30 per cent and 35 per cent of farmers respectively. Daily cleaning of pigsty was followed by 50 percent of the farmers and castration and weaning was to be practiced by majority of farmers. Special attention to the pregnant sows and care after farrowing was followed by 69 and 75 per cent respectively. Farmers market their pigs at the age of 1 year or above when they attained the body weight of 85-90 kg or more. Lack of adequate credit facilities, inadequate scientific knowledge on pig farming, lack of veterinary facility, lack of breeding and lack of marketing facilities were observed to be the major constraints perceived by the farmers. The study revealed that the development of pig production is necessary in this area as it will not only fulfill the demand but also help to uplift the economic status of farmers.

Key words: Production, Constraint, Pig, Breeding, Economic, Feeding, Health, Housing, Sikkim

INTRODUCTION

Sikkim with its small total geographic area of 7096 km², lying within 270 04' to 280 07' 48" N latitude and 880 00' 58" to 880 55' 25" E longitudes, is administratively divided in to four districts viz. North, East, West and South. Due to increase in population and the limited availability of land in the state there is already great pressure on the cultivable land, forest and on the environment as well. Livestock farming which requires minimal use of land, labour and capital would be ideal sustainable model for development in such difficult mountainous terrain. The development of livestock would not only provide supplementary source of income but would provide high protein rich food items such as milk, eggs, meat and organic manure for crop production.

Amongst the livestock, pig is most important and every family rear pig as backyard venture in rural area of Sikkim. There is huge demand of pig as people of the state prefer pork than that of other meat. In order to fill the gap of demand and supply of pork, piggy may be encouraged in rural areas. The requirement of piglets under various programmes in the tribal rural area of Sikkim is substantial. In the past piggy had gained momentum as an important economic activity in the state but because of problems related to diseases, and transportation the pace gained has subsided to some extent. Therefore, the present study was undertaken to understand the prevailing production and management practices followed by the farmers and the common problem during pig production in rural tribal area of Sikkim.

MATERIALS AND METHODS

The study area Dzongu, is one of the remotest area of the state lies in the North District is reserved for only Lepcha (Tribal) people. A total of five villages of Dzongu area viz. Gor, Hee-Gyathang, Lingdong, Passingdang and Tingvong were selected for the study. Selection of farmers/respondents was done on the basis of Simple Random Technique. In this way 20 farmers from each village were selected so that the total study sample consisted of 100
respondents from the entire five selected villages. The data were collected from each respondent through personal interview with the help of pre tested questionnaire and self-observation methods were employed. The production and management practices were studied in respect of housing system, breeding, feeding, health care, management and economics and the common problems faced by the farmers during pig production was also studied. The data collected were compiled, tabulated and analyzed to draw meaningful conclusion.

RESULTS AND DISCUSSION

Production and management practices

The production and management practices followed by the farmers of Dzongu area, North Sikkim are presented in Table 1. In housing practices, it was observed that 95% of the pig farmers constructed their pig sty with locally available wood/bamboo with tin roofing and wooden flooring above 2-3 feet from the ground. The floor space per adult was found to be inadequate (average 3x4 sq.ft) in majority (95%) of the farms. The raising of floor is above ground level to prevent entering of rats, mice and other small wild predators. Besides these, all farmers have their opinion that raising the floor above ground level helps for easy to clean and prevented dampening of floor due to rain. The farm equipments included mainly cut piece of woods as feeding and water trough. Farmers depend on pipe line water for supplying water and no electricity facility is used in the farms.

Breeding is important to improve the productivity of the animals. The majority (60%) farmers were reared cross-bred pigs in their farm. Farmers preferred to rear cross-bred pigs as crossbred pigs have better growth performance and larger litter size. The farmers preferred Hampshire, Large Black, Saddle Back and White York Shire breed of pig. No artificial insemination practice for breeding is found in this area. Only 20 percent farmers were reared breeding boars. The average litter size at birth was 7 while that for weaning was 6. Kumar et al. (2002) and Rahman et al. (2008) reported that the average litter size at birth was 6-8.

The production of pigs mostly depends on feeding practices in the farm. Majority (95%) of the farmers feed kitchen wastes along with cooked mixture comprising of maize bhusa, mustard oil cake, pseudo-stem of banana, tuber, stem and leaves of Canna indica. Some of the farmers (70%) boiled the feed before given to pig. Pandey (2000) reported that farmers of Haryana supplied hotel wastes to pig for feeding. Kitchen and rice fermented waste increased the growth performance of pigs and reduced the cost of feeding (Kumar et al, 2010). Varma et al. (1982) and Kumar et al. (2002) reported that most of the farmers of North-Eastern region boiled the feeds before giving to pigs. Feed supplement like mineral mixture, vitamins etc were added to the feeds by 5 percent of the farmers. Majority (93%) of the farmers offered feed thrice daily, in morning, noon and evening.

In health care practices, all farmers did not give attention to the health of their pigs. Majority (60%) of the farmers approached local Veterinarian or Para Veterinarian for consultation on treating ailing animals and rest(40%) farmers applied traditional knowledge for treatment of animals. Vaccination and deworming was followed by 30 per cent and 35 per cent of the farmers respectively. Only 2 per cent of the respondents were given iron injection to the piglets to prevent piglet anemia whereas 39 per cent of the farmers used drugs for skin diseases and ectoparasite control.

The management practices like cleaning of pig sty, cutting of needle teeth, castration, weaning, care of pregnant sow, care after farrowing etc are studied and observed in the area. The study revealed that no farmer used to practice cutting of needle teeth of the piglets to prevent infection of wounds from fighting or causing injuries to the teat of the mother. Castration and weaning was to be practiced by 68% and 70% farmers respectively. The farmers had the opinion that growths of the castrated pigs were more than non-castrated ones. Kumar et al. (2002) also found that the practice of castration of pigs was very common.

It was found that 69 per cent of the respondents took proper care of their pregnant sows and 75 per cent of them took special care of their sows after farrowing. Majority of the farmers (85%) never treated the non-conceiving/repeat breeding sows and preferred to slaughter them. The reason cited by the farmers was that the treatment was too costly. Half of the farmers cleaned their pig sty daily and majority (90%) of the farmers used pig wastes in agriculture crops. Economics is important for livestock production. No farmer will take up pig rearing unless it is economically viable (Bujarbaruah, 2005). In the study it was observed that 70% farmers got benefit of Rs 15000-25000/year from pig production. Majority (90%) of the farmers market their pigs at the age of 1 year or above when they reached the body weight of 85 kg or above. In Dzongu, the market price of pork was Rs.100 at the time of study.

Common constraint in pig production:

The common constraints in pig production and their rank in Dzongu, North Sikkim are given in Table 2. The overall analysis of the study area revealed that lack of credit facility as the major constraint during pig production ranked 1st. For this reason, majority of farmers reared pig without properly constructed pig shed. Inadequate knowledge of pig production and management and lack of veterinary facilities were the 2nd and 3rd major constraints respectively. The high cost of balanced concentrate feed as the 4th constraint. A technical constraint reported repeatedly by farmers was the lack of quality breeding stock and the absence of systematic breeding programs.

Singh (2000) identified that the breeding was the foremost constraints for the tribal pig farming. Lack of marketing facilities was a common constraint by the pig farmers in Dzongu, since in hilly region; the road and other marketing facilities were limited.
Table 1 - Production and management practices as followed by respondents

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Production and Management practice</th>
<th>Percentage (N=100)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A)</strong> Housing practices</td>
<td></td>
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</tbody>
</table>
| 1. | Construction of pigsty with  
   i. woods/bamboos  
   ii. Others | 95  
   5 |
| 2. | Feeding/ water trough  
   i. Woods, iron vessels etc  
   ii. Others | 95  
   5 |
| 3. | Water storage facility  
   i. Present  
   ii. Not Present | 90  
   10 |
| **B)** Breeding practices |
| 1. | Types of pig in the farm  
   i. Cross-bred  
   ii. Local | 60  
   40 |
| 2. | Service of sow  
   i. Natural service with boars  
   ii. Artificial insemination | 100  
   0 |
| 3. | Rearing of boars for breeding purpose  
   i. Reared  
   ii. Not reared | 20  
   80 |
| 4. | Litter size at birth and at weaning  
   i. 5 or below and 4 or below  
   ii. 6-8 and 5-7  
   iii. Above 8 and Above 7 | 10  
   60  
   30 |
| **C)** Feeding practices |
| 1. | Types of ration used  
   i. Kitchen waste  
   ii. Concentrated feed only  
   iii. Kitchen waste with concentrated feed | 95  
   0  
   5 |
| 2. | Boiling of feeds  
   i. Boiled  
   ii. Not boiled | 70  
   30 |
| 3. | Time of feeds supplied to pigs  
   i. Once in a day  
   ii. Twice i.e. Morning and Evening  
   iii. Thrice i.e. Morning, Noon and Evening | 2  
   5  
   93 |
| **D)** Health care practices |
| 1. | Use of antibiotic  
   i. Used  
   ii. Not used | 25  
   75 |
| 2. | Iron injection to prevent piglet anaemia  
   i. Practiced  
   ii. Not practiced | 2  
   98 |
| 3. | Vaccine against Swine fever/FMD  
   i. Practiced  
   ii. Not Practiced | 30  
   70 |
| 4. | Deworming of pigs  
   i. Used  
   ii. Not used | 35  
   65 |
| **E)** Management practices |
| 1. | Clean of pigsty  
   i. Daily  
   ii. 2 days interval  
   iii. Once in a week | 50  
   40  
   10 |
| 2. | Castration of Male piglets  
   i. Practiced  
   ii. Not practiced | 68  
   32 |
| 3. | Weaning of piglets within 2 months  
   i. Practiced  
   ii. Not practiced | 70  
   30 |
| 4. | Cutting of needle teeth of piglets  
   i. Practiced  
   ii. Not practiced | 0  
   100 |
| 5. | Treatment of repeat breeding sows  
   i. Treated  
   ii. Not treated | 15  
   85 |
| **F)** Economics |
| 1. | From pig farming get benefit(Rs/year)  
   i. less than 15000  
   ii. 15000-25000  
   iii. above 25000 | 20  
   70  
   10 |
| 2. | Market the pig when they are  
   i. 1 year or below/ 80 kg or below  
   ii. above 1 year /85kg or above 85 kg body weight | 40  
   60 |
Table 2 - Common constraints in pig production and their rank in Dzongu area

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Constraints / Problems</th>
<th>N</th>
<th>Percentage (%)</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Lack of credit facility</td>
<td>90</td>
<td>90</td>
<td>I</td>
</tr>
<tr>
<td>2</td>
<td>Non availability of breeding stock</td>
<td>77</td>
<td>77</td>
<td>V</td>
</tr>
<tr>
<td>3</td>
<td>High cost of balance feed ration</td>
<td>81</td>
<td>81</td>
<td>IV</td>
</tr>
<tr>
<td>4</td>
<td>Lack of breeding program (Artificial insemination)</td>
<td>65</td>
<td>65</td>
<td>VIII</td>
</tr>
<tr>
<td>5</td>
<td>Lack of veterinary facility</td>
<td>83</td>
<td>83</td>
<td>III</td>
</tr>
<tr>
<td>6</td>
<td>Improper knowledge of pig production and management</td>
<td>87</td>
<td>87</td>
<td>II</td>
</tr>
<tr>
<td>7</td>
<td>High medicine/vaccine cost</td>
<td>64</td>
<td>64</td>
<td>IX</td>
</tr>
<tr>
<td>8</td>
<td>High disease susceptibility</td>
<td>63</td>
<td>63</td>
<td>X</td>
</tr>
<tr>
<td>9</td>
<td>Lack of market facility</td>
<td>69</td>
<td>69</td>
<td>VII</td>
</tr>
<tr>
<td>10</td>
<td>High transportation cost for marketing</td>
<td>59</td>
<td>59</td>
<td>XI</td>
</tr>
<tr>
<td>11</td>
<td>Poor Government support</td>
<td>70</td>
<td>70</td>
<td>VI</td>
</tr>
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</table>

CONCLUSIONS

It was concluded from the study that majority of the farmers had medium socio-economic status as well as medium knowledge about the production and management of pig concerned. Most of the farmers faced inputs and technical as a problem during pig production. It is necessary to identify the constraints, evaluating options to resolve the constraints and assessing the benefits increases the capacity of the pig farmers to improve their production. The development of pig production is necessary in this area as it will not only fulfill the demand but also help to uplift the economic status of farmers. The study reveals that there is good scope for improving pig production since farmers are eager to learn and aware of the benefits from pig production and management.

REFERENCES


