

Pig Feeding Practices of Backyard Pig Farmers in Imphal, Manipur

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Abstract

A study was conducted to assess the feeding management of pigs practiced by backyard pig farmers in Imphal region of Manipur. A total of 150 pig farmers were selected as respondents. It was found that all the pigs in the region were stall fed with locally available feed ingredients which were mostly home grown. A few of the respondents provided calcium, vitamins and mineral supplements to the pigs. Pigs were fed in groups and feeding was done twice a day. No respondents provided separate drinking water; the feed was mixed with water and fed.

Key words: Imphal region, backyard pig rearing, feeding of pigs, feed ingredients

Backyard pig farming system is an important component of livelihood of the people of North Eastern Region of India (NER). About 50 per cent of pork consumption in the country is from the NER. The system of pig production in the region is unique and different from the standard system (Haldar *et al.*, 2017). The increasing demand for pork in the state is met from procurement of live pigs from other states as well as production within the state. In order to fill up the wide gap between the demand and availability of pork, the quantity and quality of pork need to be increased through improved pig production practices.

Materials and Methods

A survey was conducted among 150 respondents; 90 in Imphal East and 60 in Imphal West districts of Manipur as per the distribution of pig population in these districts which is in the ratio of 60:40 (BAHS, 2019). The data on variables

such as feed ingredients, types of feeding, creep feeding, supplementary feeding, time and frequency of feeding and procurement of feed were collected personally through a structured, pre-tested interview schedule and observations were made at the farmers' premises. The data was statistically analyzed using chi-square test to compare the feeding practices between the two districts.

Results and Discussion

Feed ingredients

The common feed ingredients used as pig feed in Imphal region are rice (whole and broken), rice bran, kitchen/ hotel waste, *okchak/yupang*, vegetable scraps, commercial pig feed and various locally available non-conventional ingredients such as cassava leaves, water hyacinth, banana stem and taro leaves (*Alocasia indica* (roxb) Schott, *Colocasia esculents*). *Okchak/yupang* is the byproduct obtained from the distillation of alcoholic rice beverage locally known as 'yu' in Manipur. *Okchak/yupang* and rice are mostly fed by mixing with water and rice bran. None of the respondents provided separate drinking water; the feed was mixed with water and fed. The result of the study suggested that majority of the respondents in the study area used home grown feed (64%) followed by procurement from market (18%) and a combination of both (18%).

Similar finding was observed by Sharma *et al.* (2015) and Haldar *et al.* (2017) in Tripura where taro and cassava leaves and tuber roots along with homemade rice beer waste called 'ghora' or 'choak' in local language was used as a major ingredient in pig feed. In Assam, kitchen waste along with locally available plants was

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Fig. 1 Common feed ingredients

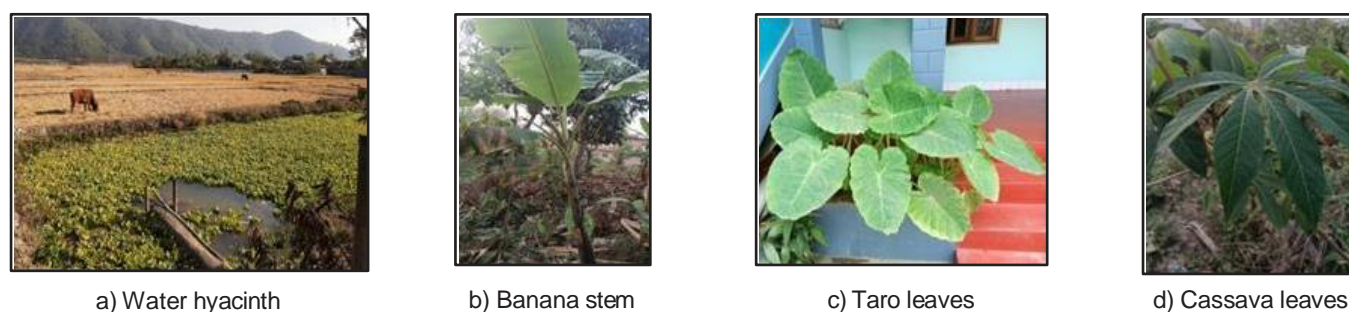


Fig. 2 Non-conventional fodder

used as pig feed (Shyam *et al.*, 2016). However, in Sikkim, cooked mixture of maize bhusa, mustard oil cake, banana stem, tubers, leaves and stem of *Canna indica* along with hotel waste was used as pig feed. It was also found that concentrate feed was given only after mixing with kitchen waste (Nath *et al.*, 2012).

In contrast to the above findings, Njuki *et al.* (2010) found that 29.4 per cent of the pig rearers in Nagaland used commercial pig feed and majority of the pig feed was procured from market. Another study conducted in Nagaland revealed that concentrate mixture of maize, broken rice, rice husk, rice brew and wheat bran along with kitchen waste, tuber crops and other non-conventional grasses constituted major feed ingredients (Patra *et al.*, 2014).

Feeding practices

The study revealed that pigs in the region were completely stall fed with easily available feed ingredients. Among them, 24 per cent of the respondents fed their pigs with swill feed and commercial pig feed alone were provided by one respondent while majority of the respondents

used a mixture of various feed ingredients as pig feed. There is significant difference in the type of feeding practiced between Imphal East and Imphal West ($p < 0.05$). Respondents mostly fed their pigs in groups (78%) except for individually housed pigs. Creep feeding of piglets was regularly practiced by majority of the respondents (59.3%). Feed supplements in the form of calcium, vitamins and minerals were provided to the pigs by a few respondents (24%). In contrary to the above result, Shyam *et al.* (2016) in Assam found that supplementing feed additives was not practiced by any of the backyard pig rearers in the region.

The details pertaining to feeding practices of pigs followed by pig rearers in Imphal region of Manipur are summarized in Table I.

In the study region, 84 per cent of the respondents followed twice a day feeding schedule, whereas, 16 per cent of the respondents fed their pigs three times a day. Feeding once a day was not a common practice in the study region. The result conforms to the previous studies in Nagaland (Patra *et al.*, 2014), Mizoram (Kumare-

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Table I. Distribution of respondents based on the feeding practices followed

Feeding practices		Imphal East		Imphal West		Overall	
		%	Freq.	%	Freq.	%	Freq.
Types of feeding	Stall feeding	62	68.9	51	85	113	75.3
	Swill feeding alone	28	31.1	8	13.3	36	24
	Concentrate feeding alone	0	0	1	1.7	1	0.7
	Total	90	100	60	100	150	100
Group/ individual feeding	p=0.024*						
	Group	68	75.6	49	81.7	117	78
	Individual	22	24.4	11	18.3	33	22
	Total	90	100	60	100	150	100
Creep feeding	p=0.135						
	Yes	49	54.4	40	66.7	89	59.3
	No	41	45.6	20	33.3	61	40.7
	Total	90	100	60	100	150	100
Supplementary feeding	p=0.135						
	Yes	22	24.4	14	23.3	36	24
	No	68	75.6	46	76.7	114	76
	Total	90	100	60	100	150	100
Time	p=0.876						
	Morning & evening	78	86.7	48	80	126	84
	Morning, noon & evening	12	13.3	12	20	24	16
	Total	90	100	60	100	150	100
Procurement	p=0.278						
	Market	11	12.2	16	26.7	27	18
	Home grown	63	70	33	55	96	64
	Total	90	100	60	100	150	100
	p=0.066						

*Significant (p<0.05)

san *et al.*, 2007; Vanlalmalsawma and Sharma, 2015), Assam (Shyam *et al.*, 2016; Ahmed *et al.*, 2017a) and Tripura (Sharma *et al.*, 2015; Ahmed *et al.*, 2017b) where majority of the pig rearers fed their pigs twice a day. The finding pattern of the present study is different from that of Nath *et al.* (2012) in Sikkim where feeding of pigs three times a day was most common (93% of the cases).

Major feeding constraints faced by pig rearers in Imphal region of Manipur were high cost of commercial feed and shortage of feed ingredients which was reported by 53.3 and 42 per cent of the respondents, respectively.

Summary

Pig rearers in Imphal region of Manipur stall fed their pigs with home grown and easily available feed ingredients. Cooked rice, kitchen waste, commercial pig feed and *okchak/yupang* (rice beer waste) were the major feed ingredients and other non-conventional feed ingredients were water hyacinth, cassava leaves, banana stem and different types of taro leaves. Separate drinking water was not provided; the water was mixed with feed and fed. Feeding was mostly done twice a day. Feeding practices followed by pig farmers in Imphal East and Imphal West districts of Manipur did not differ significantly

except for the type of feeding.

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