RESEARCH NOTE

Constraint Analysis of Backyard Pig Farming in Tribal Areas of Mizoram

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ABSTRACT

The present study was undertaken to critically analyse the constraints of backyard pig farming amongst the tribal pig farmers in Aizawl district of Mizoram. Data were collected from 90 pig farmers through a structured interview schedule developed for the purpose. Managemental constraints with a mean score of 2.82 were reckoned as the most serious constraint by the pig farmers followed by socio-economic (2.64), institutional (2.82), technological (2.32) and marketing constraints (2.2) in that order. Difficulty in obtaining semen for artificial insemination (52.22%), difficulty in following correct vaccination schedule (56.67%), high cost of feeds (84.44%), non availability of timely medical care (64.44%) and problem in transportation of live pigs (26.67%) were perceived as the most serious constraints among technological, managemental, socio-economic, institutional and marketing constraints respectively.

Key words: *Constraints; Mizoram; Backyard pig farming; Tribal;*

Among the livestock farming enterprises, pig farming plays a significant role in improving the socio-economic status of sizeable sections of weaker and tribal population. In the last few decades, pig farming has assumed great importance in meeting the protein demand. Piggery rearing occupies a unique place in Mizoram since it is socio-culturally intermingled with the livelihood of tribal people of the state. Pigs are reared by almost every family in Mizoram as a backyard venture. The backyard production of pigs in the state is characterized by low input and traditional management system suited to the local conditions (*Rahman, 2007*).

Several piggery development programmes have been implemented in the state, and yet the results are limited due to many constraints like low productivity of the indigenous pigs, poor managemental practices, acute shortage of nutritive feeds, lack of subsidies etc. Majority of the farmers encounter problems in the purchase of quality feed due to poor socio-economic status and hence depend on locally available feeds. In the light of the aforesaid facts, the present study was undertaken to critically analyse the constraints perceived by the tribal pig farmers of Mizoram in piggery farming.

METHODOLOGY

Two blocks namely Darlawn and Tlangnuam were purposively selected from Aizawl district of Mizoram based on the highest pig population. From each block three villages namely Khawruhlian, Pehlawn, Darlawn, Muthi, Durtlang and Bawngkawn were randomly selected. Fifteen pig farmers were selected from each of the six selected villages by simple random sampling technique, thus constituting a total sample size of 90 from the study area. Data were collected personally through a structured interview schedule which consisted of thirty five possible constraints in pig farming enumerated after reviewing related literature, consultation with subject matter specialists and field veterinarians. The perceived constraints were categorized under five different categories such as technological, managemental, socio-economic, institutional and marketing constraints. The identified constraints were measured on a four point continuum in which scores 4, 3, 2 and 1 were allotted based on the severity of constraints as perceived by the pig farmers. The maximum and minimum obtainable scores were 140 and 35 respectively. The scores for each constraint

were added and the mean constraint score was obtained. The relationship between the socio-economic characteristics of the selected pig farmers and the constraints in pig farming was assessed using zero order correlation and multiple regression analysis.

RESULTS AND DISCUSSION

Profile of pig farmers: The results in Table 1 revealed that majority of the pig farmers (54.44%) belonged to middle age group of 36-45 years and more than one-third of the pig farmers were educated upto primary level. Majority of the pig farmers had piggery as secondary occupation (86.67%) with small herd size of 1-3 pigs (47.78%) and had low annual income of less than Rs 31,000 (53.33%). Nearly half of the respondents had marginal land holding with a farming experience of above 10 years. More than one-third of the pig farmers had low extension contact and mass media exposure, while nearly half of the respondents had high social participation. More than one-half of the pig farmers had low level of innovativeness and scientific orientation while 44.44 per cent had high level of economic motivation.

Table 2. Constraints perceived by pig farmers

Area of constraint	Mean score	Position
Technological constraints	2.32	IV
Managemental constraints	2.82	I
Socio economic constraints	2.64	II
Institutional constraints	2.51	III
Marketing constraints	2.20	5V

Constraints in pig farming: From Table 2, it could be observed that with regard to several constraints faced by the farmers, the managemental constraints was perceived as most serious with a mean score of 2.82 followed by socio-economic (2.64), institutional (2.51), technological (2.32) and marketing constraints (2.20) in that order.

Relationship between socio-economic characteristics of pig farmers and constraints: From the Table 3, it could be seen that out of the fourteen variables seven variables namely educational status, income, extension agency contact, social participation, mass media exposure, innovativeness and scientific orientation had significant relationship with the constraints. The variable education had negative and highly significant relationship with the constraints which implies that when education increases the constraint decreases which is attributed to acquiring of more knowledge.

Table 1. Socio-economic characteristics of pig farmers

Variables	Categories	No.	%
Age	Young (upto 35 years)	5	05.56
	Middle (36-45 years)	49	54.44
	Old (more than 45 years)	36	40.00
Education	Illiterate	0	00.00
	Primary	41	45.56
	Middle School	27	30.00
	High School	20	22.22
	Higher secondary	2	02.22
	Graduate	0	00.00
Occupation	Piggery as main	12	13.33
	Piggery as subsidiary	78	86.67
Annual income	Low	48	53.33
	Medium	15	16.67
	High	27	30.00
Farming experience	Upto 5 years	18	20.00
	5-9 years	33	36.67
	Above 10 years	39	43.33
Land holding	Landless (No land)	8	08.89
	Marginal (0.1-2.5 acres)	44	48.89
	Small (2.6-5.0 acres)	21	23.33
	Medium (5.1-10.0 acres)	14	15.56
	Large (>10.0 acres)	3	03.33
Herd size	Small	43	47.78
	Medium	20	22.22
	Large	27	30.00
Extension contact	Low	38	42.22
	Medium	17	18.89
	High	35	38.89
Social participation	Low	32	35.55
	Medium	26	17.78
	High	42	46.67
Mass media exposure	Low	44	44.89
	Medium	18	20.00
	High	28	31.11
Innovativeness	Low	51	56.67
	Medium	28	31.11
	High	11	12.22
Economic motivation	Low	27	30.00
	Medium	23	25.56
	High	40	44.44
Scientific orientation	Low	39	43.33
	Medium	23	25.56
	High	28	31.33
Risk orientation	Low	42	46.67
	Medium	29	32.22
	High	19	21.11

A negative and significant relationship of income, extension agency contact, social participation, mass media exposure, innovativeness and scientific orientation was observed with regard to the constraints. The reason for the significant relationship might be due to the fact that as income increases there is considerably less risk bearing capacity of the farmers. With regard to

Table 3. Correlation and multiple regression analysis of independent variables and constraints

Variables	Correlation	Regression analysis		
	'r' value	'b' value	S.E (b)	't' value
Age	-0.068NS	-0.094	0.057	-1.664NS
Education	-0.699**	-0.442	0.217	-2.034*
Occupation	-0.100NS	+0.999	1.490	0.670 NS
Income	-0.650**	-0.149	0.029	-5.198*
Farming experience	+0.005NS	+0.131	0.158	0.829 NS
Land holding	-0.047NS	-0.182	0.519	-0.350 NS
Herd size	-0.136NS	+0.212	1.070	0.198 NS
Extension agency contacts	-0.669**	-1.775	0.834	-2.127*
Social participation	-0.613**	-1.069	0.716	-1.492 NS
Mass media exposure	-0.539**	-0.939	0.706	-1.329 NS
Innovativ-eness	-0.695**	-1.898	0.754	-2.516*
Economic motivation	-0.047NS	+0.460	0.556	0.827 NS
Scientific orientation	-0.716**	-1.815	0.834	-2.175*
Risk orientation	-0.188NS	+0.864	0.643	1.344 NS

R^2 = 0.808 NS = Non- significant
F=22.553 *=Significant at 5 per

significant social participation, extension agency contacts and mass media exposure, these factors contribute in the betterment of scientific skills and outlook of the farmers. It is also observed that when farmers are more innovative and adopt better scientific practices, the constraints decreases. This finding is in agreement with *Muruganandam (2003)* and *Thilakar (2003)* who had reported that education, income and extension agency contact exhibited significant relationship with the constraints. It is clearly evident from Table 8 that the multiple regression coefficient R^2 was 0.808 which was significant with the constraints in pig farming. The results revealed that education, income, extension agency contact, innovativeness and scientific orientation were the five significant contributory variables. The selected independent variables accounted for 80.80 per cent of variation towards the dependent variable, constraints in pig farming.

CONCLUSION

Managemental constraints with a mean score of 2.82 was reckoned as most serious constraint while difficulty in obtaining semen for artificial insemination, difficulty in following correct vaccination schedule, high cost of feeds, non availability of timely medical care and problem in transportation of live pigs were perceived as the most serious constraints amongst the individual constraints. The constraints namely non availability of cross bred piglets and difficulty in obtaining semen for artificial insemination perceived by the farmers can be overcome by establishing more breeding farms to supply upgraded piglets in the remote areas. Establishment of feed mill unit and a system to identify non-conventional feed resources for cost effective pig husbandry production is requisite for piggery development in the area. System for strengthening veterinary infrastructure for stock and supply of veterinary medicines and vaccines from dispensaries should be promoted to encounter the difficulties in adequate availabilities of vaccines and veterinary drugs.

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