

SHORT RESEARCH ARTICLE

CONSTRAINTS IN LIVESTOCK REARING AMONG RESOURCE POOR FARMERS IN RURAL TAMIL NADU

ABSTRACT

The present study was undertaken in rural Tamil Nadu to explore various constraints in livestock rearing in rural Tamil Nadu using randomly selected 100 dairy farmers and 113 sheep and goat farmers from six sample districts. The data pertaining to the objectives of the study were collected through personal interview. Most of the poor livestock farmers expressed fodder shortage, water scarcity, labour problems as their major constraints irrespective of the species. However, priority of the constraints varied with respect to the livestock species reared.

Key words: Constraints, Livestock, Cattle, Buffalo, Sheep and Goat

INTRODUCTION

Livestock rearing is critical for many of the poor in the developing world, often contributing to multiple livelihood objectives and offering pathways to come out of poverty. Livestock rearing also acts as an indispensable asset to the poor, their human capital, through its impact on their own nutrition and health (Randolph *et al.*, 2007). Livestock also serves as the key risk mitigation tool especially for the poorest cultivators in rain-fed regions as they face uncertain and erratic weather conditions. With this background, the present study was conducted to explore various impediments in livestock rearing in rural Tamil Nadu.

MATERIALS AND METHODS

A Composite Index (CI) was constructed through factor analysis based on secondary data related to livelihood in order to select six sample districts of Tamil Nadu *viz.*, Thiruvannamalai, Villupuram, Dharmapuri, Pudukottai, Ariyalur and Ramanathapuram. A total sample of 100 dairy farmers were selected randomly from Thiruvannamalai, Villupuram and Dharmapuri districts and 113 sheep and goat farmers were randomly selected from the rest of the sample districts. The data pertaining to the objectives of the study were collected through personal interview using structured pre-tested interview schedule. The period of data

collection was from August 2013 to October 2014. The constraints which were encountered in various livestock farming activities were listed and the sample respondents were asked to rank those constraints. The data so obtained were quantified by calculating Rank Based Quotient (RBQ) as used by Sabarathnam (1998) and Mukherjee (2015).

$$RBQ = \frac{\sum f_i (n+1-i)}{N n} \times 100$$

where,

- f_i : Frequency of farmers for the i^{th} rank of the attribute
- N : Number of farmers contacted for factor identification
- n : Maximum number of ranks given for various factors
- i : Rank of the attributes

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39 RESULTS

40 The constraints which were encountered in various livestock farming activities were
41 enlisted along with the calculated RBQ scores for various livestock enterprises is shown in
42 Table 1 and Table 2.

43 DISCUSSION

44 *Dairy cattle farming*

45 Among various impediments dairy cattle farmers perceived, high feed cost (RBQ –
46 65.00) was their prime constraint followed by unremunerative price for milk (RBQ – 59.17),
47 inadequate labour and high wage rate (RBQ – 58.75) and non-availability of paddy straw
48 (RBQ – 53.13). The moderately felt constraints in dairy cattle farming were observed to be
49 disease outbreak and parasitic infestations, non-availability of pasture land / fodder, breeding
50 problems and water scarcity with the RBQ values ranging between 49.58 and 46.25. Better
51 service delivery by the field veterinarians might have reduced the severity of constraint
52 namely disease outbreak and parasitic infestation to moderate level. The results were in
53 accordance with the previous studies of Roy *et al.* (2002). Lack of marketing facility was
54 identified to be the least severe constraint (RBQ – 22.08), as the dairy cattle farmers had
55 immediate access to milk co-operative societies and private dairies.

56 *Dairy buffalo farming*

Non-availability of pasture land / fodder was perceived to be the foremost constraint in buffalo farming with the highest RBQ of 68.75, followed by inadequate labour and high wage rate (RBQ – 62.08), inadequate rainfall and water scarcity (RBQ – 59.58). The reduction / shrinkage of common property resources of grazing land and water resources intensified the pressure among the buffalo farmers, who were highly dependent on these resources. High feed cost (RBQ – 62.08) and non-availability of paddy straw (RBQ – 56.25) were observed to be the next level constraints among buffalo farmers as the feed and fodder occupied major share in cost of production. Timely and superior service provided by the veterinarians reduced the breeding problems and disease incidence among the buffalo population.

67

68 *Sheep farming*

Sheep farmers in the study area professed non-availability of pasture land (RBQ – 71.67) as their top-most constraint followed by inadequate rainfall and water scarcity (RBQ – 63.81). The findings were in line with Meganathan *et al.* (2010). The sole dependence of resource poor sheep farmers on natural resources might be the reason for the above results. Inadequate labour and high wage rate (RBQ – 55.71) was felt as the next major constraint as the sheep farming is highly labour intensive due to grazing practice. High mortality rate (RBQ – 49.76) and disease outbreak and parasitic infestation (RBQ – 45.48) were identified to be moderately severe constraints among the sheep farmers. It is peculiar to note that the exploitation by middlemen (RBQ – 43.57) was found to be an important constraint among sheep farmers due to lack of organized marketing facilities. Predators and theft (RBQ – 41.90) was also considered as notable constraint among sheep farmers. The least severe constraint as perceived by the sheep farmers in the study area were breeding problems and high feed cost.

82 *Goat farming*

Similar to sheep, goat farmers also expressed their greater concern over non-availability of pasture land / fodder scarcity, which was reflected by the highest RBQ value of 71.67. Disease outbreak and parasitic infestation (RBQ – 59.40) and predators / thefts (RBQ – 52.24) were considered as next major constraints, which concurred with the findings of Ngambi *et al.* (2013). They might have expressed this constraint, as the goats are docile and prone to be attached by dogs and other animals. Poor productivity of animals and high mortality especially among kids were found to be moderately severe constraints among goat

90 farmers. Lack of finance / support from Government was expressed by the goat farmers as
 91 sixth ranked constraint (RBQ – 39.10), followed by inadequate labour and high wage rate,
 92 exploitation by middlemen and breeding problems. High feed cost and lack of insurance
 93 coverage were felt to be the least severe constraints with the RBQ value of 16.35 and 10.47,
 94 respectively.

95 Most of the poor livestock farmers expressed fodder shortage and water scarcity as
 96 their major constraints in livestock rearing and they depend largely on common property
 97 resources. Hence, necessary steps have to be taken to improve the availability of common
 98 property resources (grazing land and water resources) without causing negative externalities.
 99 Further, fodder development programmes have to be implemented effectively at the grass
 100 root level to overcome fodder shortage. Low cost and area specific nutritive compounded
 101 feed might be produced and distributed at subsidized rate for the livestock farmers to improve
 102 the animal productivity. Further, various livestock development programmes should be
 103 framed and implemented by giving appropriate attention to the species specific constraints.

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TABLES

Table 1

Impediments in cattle and buffalo farming as perceived by the sample respondents

S.No.	Constraints	Cattle		Buffalo	
		RBQ	Rank	RBQ	Rank
1	Non-availability of pasture land / fodder	46.25	VI	68.75	I
2	Non-availability of paddy straw	53.13	IV	56.25	V
3	Inadequate labour and high wage rate	58.75	III	62.08	II
4	Poor productivity of animals	37.50	IX	23.75	X
5	Disease outbreak and parasitic infestation	49.58	V	37.92	IX
6	Breeding problems	43.44	VII	51.67	VIII
7	High feed cost	65.00	I	59.17	IV
8	Unremunerative price for milk	59.17	II	52.50	VII
9	Inadequate Rainfall and water scarcity	38.75	VIII	59.58	III
10	Lack of finance / support from government	32.29	X	52.92	VI
11	Lack of marketing facility	22.08	XII	17.92	XI
12	Predators / thefts	24.90	XI	13.33	XII

RBQ – Rank Based Quotient

Table 2

Impediments in sheep and goat farming as perceived by the sample respondents

S.No.	Constraints	Sheep		Goat	
		RBQ	Rank	RBQ	Rank
1	Non-availability of pasture land / fodder scarcity	71.67	I	61.75	I
2	Inadequate labour and high wage rate	55.71	III	38.89	VII
3	Lack of insurance coverage	19.52	X	10.47	XII
4	Poor productivity of animals	31.43	IX	48.72	IV
5	Disease outbreak and parasitic infestation	45.48	V	59.40	II
6	High mortality rate	49.76	IV	42.20	V
7	Breeding problems	13.57	XI	38.03	IX
8	High feed cost	11.19	XII	16.35	XI
9	Exploitation by middlemen	43.57	VI	38.35	VIII
10	Inadequate rainfall and water scarcity	63.81	II	35.47	X
11	Lack of finance / support from government	39.76	VIII	39.10	VI
12	Predators / thefts	41.90	VII	52.24	III

RBQ – Rank Based Quotient