Contents available at http://epubs.icar.org.in, www.kiran.nic.in; ISSN: 0970-6429

Indian Journal of Hill Farming

June 2015, Volume 28, Issue 1, Page 19-22

Level of Adoption and Perceived Constraints in Scientific Rabbit Farming Practices in Darjeeling Himalayas

Rakesh Roy

Darjeeling Krishi Vigyan Kendra, UBKV, Kalimpong- 734301, Darjeeling, West Bengal

ARTICLE INFO

Article history:
Received 27 May 2015
Received Revised 15 June 2015
Accepted 16 June 2015

Key words:
Adoption,
Constraints,
Darjeeling Himalayas,
Garretranking,
Rabbit farmers

ABSTRACT

The study deals with the adoption level and perceived constraints associated with scientific rabbit farming practices in Darjeeling Himalayas. In all, 50 respondents were randomly selected for the study. The study shows that majority of the respondents had partially adopted scientific breeding, feeding and management practices but were non adopter in healthcare practices. Overall level of adoption was also partial in scientific rabbit farming. The study also shows that highest ranked production constraints as perceived by rabbit farmers were veterinary aid not available when required, medicine not available at right time and lack of technical knowledge. The study further shows that highest ranked marketing constraints as perceived by rabbit farmers were low price of the live animals, lack of regular markets for farm product and negative attitude to consume rabbit meat.

1. Introduction

Rabbits have high reproductive potentials and fast growth rate (Hassan et al., 2012), utilize low grain and high roughage diets and breed all year-round (Irlbeck, 2001). Other attributes are short gestation period, early sexual maturity, ability to rebreed shortly after kindling and short generation interval (Hassan et al., 2012). These qualities confer on rabbits a potential to bridge the shortage of animal protein in developing countries, where grain can only be justified for human use (Irlbeck, 2001; Hassan et al., 2012). The rabbit when raised with appropriate technologies can contribute virtually to improve the diet of large numbers of both rural and urban families, particularly landless and low-income ones, eventually providing such families with employment and a source of regular income (Onuekwus and Okezie, 2007). The adoption of available technologies has been a problem although they have been introduced to farmers (Onuekwus and Okezie, 2007; Madubuike, 2004). The farmers face with lots of problems hindering their desire to adopt these technologies. It is established that many farmers are still exposed to the traditional ways of raising rabbits resulting in low performance and profitability (Frimpong, 2009). Therefore, this study has been taken up with the objectives to access the level of adoption in scientific rabbit farming practices and the constraints perceived in production and marketing of rabbit.

Corresponding author: rakeshvetext@gmail.com

2. Methodology

The study was purposively conducted in Darjeeling Himalayas of West Bengal. A total of 50 respondents were considered for the study. Data were collected through structured interview schedule. The extent of adoption of improved technology i.e., breeding, feeding, healthcare and management were measure by score assign in three continuum such as high adopter = 2, partial adopter =1 and non-adopter= 0. The adoption index was measured using the following formula, *Adoption index = (Respondent's total score / Total possible score) X 100.*

Constraints perceived in scientific rabbit farming were assessed by Garret ranking technique (Garret, 1981). The respondents were asked to rank the factors given. The order of merit, assigned by the respondents was converted into ranks by using the following formula, *Percent position of each rank = 100 (R_{ij}-0.05)/N_j,* where R_{ij} = Rank given for the i^{th} factors for the j^{th} respondent. Nj= Number of factors ranked by the j^{th} respondent

The percentage position of each rank obtained is converted into scores by referring to the table given by Henry Garret. Then for each factors the scores of individual respondents were added together and divided by the total number of the respondents for whom the score were added. These mean scores (MS) for all the factors were arranged in order of merit and inference drawn.

3. Results and Discussion

Table 1 shows that majority (54%) of the respondents had partially adopted scientific breeding practices followed by non-adopter (30%) and high adopter (16) in scientific breeding practices. Scientific feeding practices were partially adopted by majority (44%) of the respondents, followed by high adopter (40%) and non-adopter (16). But, majority (58%) of the respondents was non adopter to scientific healthcare practices followed by partial adopter (24%) and high adopter (18). Scientific management practices were partially adopted by majority (64%) of the respondents followed by non-adopter (28%) and high adopter (8). Das (2012) had nearly similar findings in his study.

Table 1. Distribution of the respondents according to the extent of adoption (N=50)

Sl. No.	Level of adoption	Frequency
A.	*Breeding*	
1.	Non adopter	15 (30)
2.	Partial adopter	27 (54)
3.	High adopter	8(16)
B.	*Feeding*	
1.	Non adopter	8(16)
2.	Partial adopter	22(44)
3.	High adopter	20(40)
C.	*Healthcare*	
1.	Non adopter	29(58)
2.	Partial adopter	12(24)
3.	High adopter	9(18)
D.	*Management*	
1.	Non adopter	14(28)
2.	Partial adopter	32(64)
3.	High adopter	4(8)

Figures in parentheses indicate percentage

Table 2. Overall adoption level of rabbit farmers (N =50)

Sl. No.	Level of adoption	Score index	Frequency
1.	Non adopter	Up to 33%	19 (38)
2.	Partial adopter	34-66%	24 (48)
3.	High adopter	67-100%	7(14)

Figures in parenthesis indicate percentage

The study reveals that majority (48%) of the respondents had partially adopted overall scientific rabbit farming practices whereas 38 percent had not adopted and 14 percent of the respondents had highly adopted scientific rabbit farming practices (Table 2). Das (2012) reported that farmers adopted rabbit production technology at high level followed by partial and low level.

Veterinary aid not available when required was the highest ranked constraints (MS= 59.86) as perceived by rabbit farmers followed by medicine not available at right time (MS= 56.32), lack of technical knowledge (MS= 54.52), inadequate training facilities (MS= 53.54) and high incidence of diseases (MS= 53.48) among production problems in rabbit farming (Table 3). Hungu et al. (2013) had reported that the major constraints of rabbit farming those dealing with production were high incidence of disease (83%), predators like rats (29%), death of rabbits (69%) and unavailability of rabbit feed (19%). Lukefahr (2008) reported although rabbits are often observed to be healthy and productive but there are exceptions: in least developed countries, rabbits are particularly vulnerable. Oseni et al. (2008) reported that lack of access to information on rabbit management under smallholder units is one of the major challenges in rabbit production. Ramodisa (2007) reported that lack of technical knowledge in rabbit production by farmers and advisors is a challenge in many countries.

Low price of live animals was the highest ranked (MS= 60.98) marketing constraints as perceived by rabbit farmers followed by lack of regular markets for farm product (MS= 57.14) and negative attitude to consume rabbit meat (MS= 52.16) (Table 4). Kumar et al. (2013) also reported similar finding in his study in Himachal Pradesh, India. The industry still lagged for several reasons which might include the lack of viable and well established markets, insufficient promotion, erratic product supply, unreasonable prices, and competition from other meats (Mailu et al., 2012).

4. Conclusion

The study has shown that adoption of scientific rabbit farming practices in the study area was partial. Further, constraints perceived in production of rabbit was mainly inadequate healthcare and technical knowledge facilities in rabbit farming. This shows that there is an utmost need to provide them with veterinary inputs and the technical knowledge on scientific rabbit farming practices using different extension methods. The policy makers also need to take proper policies so that rabbit farming can be encourage from just pet animals to a meat industries. The extension agencies working in the study area also need to campaign about the advantages of rabbit farming in relation to other enterprise.

Table 3. Perceived production constraints in scientific rabbit farming practices

Sl. No.	Problems	Score	Mean Score	Ranking
1.	Inadequate supply of breeding stock	2563	51.26	VII
2.	Quality feed not available at appropriate time	2667	53.34	VI
3.	Feed prices not reasonable	2523	50.46	VIII
4.	Shortage of fodder	2459	49.18	IX
5.	Inadequate supply of equipment's	2232	44.64	XV
6.	High price of equipment's	2271	45.42	XIII
7.	High incidence of diseases	2674	53.48	V
8.	Veterinary aid not available when required	2993	59.86	I
9.	Medicines not available at right time	2816	56.32	II
10.	Lack of technical knowledge	2726	54.52	III
11.	Lack of access to credit	2349	46.98	X
12.	Lack of government support	2307	46.14	XII
13.	Inadequate training facilities	2677	53.54	IV
14.	Lack of extension facilities	2348	46.96	XI
15.	Lack of package of practices	2245	44.9	XIV

Table 4. Perceived marketing constraints in scientific rabbit farming practices

Problems	Score	Mean Score	Ranking
Low price of live animals	3049	60.98	I
Low price of meat	2506	50.12	IV
Negative attitude to consume rabbit meat	2608	52.16	III
High marketing costs	2320	46.4	V
Lack of regular markets for farm product	2857	57.14	II
Involvement of middleman	2055	41.1	VII
Inadequate transportation facilities	2105	42.1	VI

References

Das SK (2012). Adoption behavior of rabbit production technology in Meghalaya of India. Indian Research Journal of Extension Education. Special Issue. 1: 75-79

Frimpong J (2009). A guide to domestic rabbit breeding in Ghana, The farmer's husbandry manual, Nungua Livestock Breeding Station. Johl SS, Kapur TR (2001). Fundamentals of Farm Business Management, Kalyani Publishers, pp. 253-259.

Garrett HE (1981). Statistics in Psychology and Education. Published by Vakils, Feffer and Simons Ltd., Mumbai.

Hassan HE, Elamin KM, Yousif IA, Musa AM and Elkhairey MA (2012). Evaluation of body weight and some morphometric traits at various ages in local rabbits of Sudan. Journal of Animal Science Advances. 2(4): 407-415

Hungu CW, Gathumbi PK, Maingi N and Ng'ang'a CJ (2013). Production characteristics and constraints of rabbit farming in Central, Nairobi and Rift-valley provinces in Kenya. *Livestock Research for Rural Development. **25(3)*** Retrieved January 8, 2015, from http://www.lrrd.org/lrrd25/1/ hung25003.htm

Irlbeck NA (2001). How to feed the rabbit (*Oryctolagus cuniculus*) gastrointestinal tract. Journal of Animal Science. 79: 343–346.

Kumar A, Dogra A and Guleria JS (2010). Problems and constraints of rabbitry in India: A study of Himachal Pradesh. Global Journal of Science Frontier Research. **10**(8): 40-46

Lukefahr SD (2007). Strategies for the development of small- and medium-scale rabbit farming in South-East Asia. Livestock Research for Rural Development 19(9). Retrieved 12 January 2015 from http://www.lrrd.org/lrrd19/9/luke19138.htm

Madubuike FN (2004). Arresting animal protein insufficiency in Nigeria: A multi-sectional approach. J. Agric. Food Sci. 2: 141-149

Mailu SK, Muhammad L,Wanyoike M and R Mwanza (2012). Rabbit meat consumption in Kenya. MPRA Paper No. 41517. Retrieved January 8, 2015, from http://mpra.ub.uni-muenchen.de/41517/1/Rabbit_meat_consumption24092012.pdf

Onuekwus GC and CA Okezie (2007). Youths' adoption of improved rabbitry technology in Umuahia, Medwell. J. Res. J. Appl. Sci. 2(1):65-69

Oseni S, Ajayi B, Komolafe S, Siyanbola O, Ishola M and G Madamidola (2008). 'Smallholder rabbit production in south western Nigeria: current status, emerging issues and ways forward' Management and Economy presented at the 9th World Rabbit Congress Verona Italy. Pages 1597-1601

Ramodisa J (2007). Rabbit production. Agrinews Magazine. 38(2): 11