



Adoption Behaviour of Donkey Rearers on Various Donkey Management Practices

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ABSTRACT

Donkeys are agile, firm and resilient animals with a great deal of tolerance. Donkeys are most predominantly used for transporting salt, farm manure and agricultural commodities in hilly areas not accessible by road transport. A total of 160 donkey rearers were selected as beneficiaries from eight districts of Tamil Nadu for the project on conservation of donkeys through empowerment of donkey rearers in Tamil Nadu. The adoption behaviour of donkey rearers on various donkey management practices was elicited through a pre-tested structured interview schedule before the implementation of the project. With regard to housing, majority of the donkey rearers (66 %) did not provide shelter for donkeys and were dwelling in open places. Only 33 per cent of donkey farmers provided some form of shelter for donkeys in the form of thatched roof sheds, asbestos sheds to protect the donkeys from extreme weather conditions. With regard to feeding management, more than half of the respondents were feeding bran and ragi and oilcakes to their donkeys. It was observed that cent per cent of the respondents were allowing their donkeys for grazing for roughage intake and none of the donkey rearers fed mineral mixture to the donkeys. With regard to health management, majority of the donkey owners (58.75 %) preferred traditional practices for treating donkeys and only sixteen per cent of the respondents preferred allopathic treatment by veterinarians for their donkeys. It was reported that incidence of Tetanus was high leading to considerable mortality in donkeys. The reason attributed was due to harness, saddle and other wounds leading to infection. It was observed that more than three fourth of donkey rearers were not vaccinating the donkeys against tetanus and rabies. It was clearly evident that donkey rearers in Tamil Nadu were not provided any training on various managerial practices Hence, knowledge and skill empowerment of donkey rearers is the need of the hour to reduce disease incidence and thereby in-situ conservation of donkeys.

Key Words: Adoption Behaviour, Donkeys, Feeding, Housing, Health Management

INTRODUCTION

Donkey which is popularly called as beast of burden plays a major role in the livelihood of poorest of poor. The total donkey population in the country which was 0.32 million in 2012 has decreased considerably to 0.12 million during 2019. Likewise, in Tamil Nadu, there were 9183 number of donkeys during 2012 which has drastically reduced to 1428 as per 2019 livestock census. Donkeys are reared both for draught purpose as well as milk. Donkey's milk contains less fat, protein and inorganic salts

but more lactose, with a concentration close to that of human milk. It has been observed that donkey milk has tremendous medicinal value as curative agent for metabolic and allergic diseases along with its use in cosmetics (Anuradha *et al* 2020). Donkeys are predominantly used for carrying loads like sand bags, bricks, clothes and other household items. An average donkey of approximately 100 kg can carry up to 30 - 40kg on its back or can pull up to twice its bodyweight on level ground. Working donkeys, horses and mules generate direct

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Table 1. Housing management and feeding management adopted. N=160

Sr. No.	Parameter	Adopters		Non-Adopters	
		Frequency	Percent	Frequency	Percent
A	Housing facilities				
1.	Provision of pucca sheds/thatched houses	54	33.75	106	66.25
2.	Construction of cement floors in sheds	22	13.75	138	86.25
3.	Provision of adequate floor space	16	10.00	144	90.00
4.	Provision of feeding/watering troughs/bowls	128	80.00	32	20.00
B	Feeding management				
5.	Provision of Concentrates -Bran, Ragi, oilcakes	124	77.50	36	22.50
6.	Provision of green fodder	08	5.00	152	95.00
7.	Free grazing	160	100.00	0	0
8.	Mineral mixture supplementation	0	0	160	100.00

income in a number of industries in both urban and rural settings (Delphine, 2015). Donkeys are very friendly in nature, patient and intelligent and enjoy the company of humans. Unlike food animals which are provided minimum care, owing to its production performance, the donkeys are neglected in all aspects in the society. In welfare and ethical points of view, the donkeys are the animals in which least importance is given. In India the donkeys are mostly used for transport of goods and farming purposes. They are also used to carry sand from the river beds to load vehicles and to transport to other places. Many owners felt that donkeys increased their social status but aspired to stop owning donkeys and own machinery instead in recent years (Tamlin *et al*, 2020). Since majority of the donkey rearers have low level of education and economic status, scientific rearing of donkeys is not practiced. Hence, to ascertain the present status of adoption behaviour of the donkey rearers on various donkey management practices in Tamil Nadu this study was conducted.

MATERIALS AND METHODS

The study was conducted in eight districts of Tamil Nadu namely Vellore, Krishnagiri, Tirupathur, Thoothukkudi, Dindigul, Theni, Tiruvallur, Tiruchirappalli which were having

highest donkey population as per 19th livestock census. A sample size of 20 donkey farmers were selected from each district by simple random sampling and thus a total of 160 beneficiaries were selected for the project. An ex post facto research design was adopted with an objective to ascertain the various donkey management practices adopted by the donkey rearers in Tamil Nadu. This scientific study was carried out during 2021. A pre - tested well-structured interview schedule was utilized to collect the data from the donkey rearers. The data collected were analysed and presented.

RESULTS AND DISCUSSION

Adoption of various donkey managerial practices by donkey rearers

The shelter/housing management adopted by donkey rearers are presented in Table 1.

It could be observed that 33.75 per cent of donkey rearers only were providing pucca sheds / thatched houses as shelter for the donkeys to protect the donkeys from extreme weather conditions. Majority of the respondents (66.25 %) did not provide shelter for donkeys and the donkeys were dwelling in open places. The reason attributed by the donkey rearers is that they are hardy animals and there is no need for providing shelter. Likewise, cement flooring in donkey sheds was adopted by a

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meagre 13.75 per cent of farmers. It was observed that only 10 per cent farmers provided adequate covered floor space of 50 sq.ft per donkey in the sheds. It was observed that 80 per cent of farmers provided some of feeding/watering troughs and bowls either in the sheds or in the open area.

Feeding management

It was evident that more than three-fourth (77.50 %) of the respondents were feeding bran and ragi and oilcakes to their donkeys. It was observed that cent per cent of the respondents were allowing their donkeys for grazing in and around the farm/shed area for roughage intake. Only 5 per cent of the donkey rearers were procuring/cultivating green fodder and feeding to their donkeys. None of the donkey rearers fed mineral mixture to the donkeys. It was observed that donkeys used for loading purpose were fed with bran and oil cake whereas others were maintained only on grazing. Donkeys are natural browsers and will graze up to 16 hours a day on a diet of high fibre plant material.

Health management

It could be seen that majority (85.0 %) of donkey rearers were providing special care to pregnant animals., whereas the remaining 15.0 per cent were of the opinion that the mother donkey will take of its own needs during pregnancy. It was observed that more than three fourth of donkey rearers were not vaccinating the donkeys against Rabies and tetanus

disease. In addition, it was inferred that only 12.50 per cent of donkey rearers were deworming their donkeys with dewormers for round worms. Majority of the donkey owners (58.75%) preferred traditional herbal treatment practices for treating ailment like wounds, respiratory infections etc., in donkeys. Only sixteen per cent of the respondents preferred allopathic treatment by nearby veterinarians for their donkeys. It was of utmost importance to know the constraints which hinder adoption of scientific practices in order to strengthen and follow-up extension activities (Singh *et al*, 2016). It was reported that incidence of Tetanus was high leading to mortality in donkeys. The reason attributed is due to due to harness, saddle and other wounds leading to infection which needs immediate attention.

Utility of donkeys

The Utility of donkeys is very significant and the various purposes for which donkeys are utilized are presented in Table 3. It could be observed that, forty per cent of the donkey rearers were purely owning the donkeys as pack animals for draught purpose to carry load like salt, manure food items etc. The donkeys were used for transporting goods and farm manure in hilly and plain terrain, respectively. Donkey continue to be increasingly important as alternative draught animals in the small holder sector (Hagmann and Prasad, 1995). It was revealed and observed that donkey rearers in nearby big towns and cities namely Thiruvallur

Table 2. Health management practices adopted.

N=160

Sr. No.	Variable	Adopters		Non-Adopters	
		Frequency	Percent	Frequency	Percent
A.	General Health management				
1.	Health care to pregnant animals	136	85.0	24	15.0
2.	Rabies Vaccination	35	21.88	125	78.22
3.	Tetanus Vaccination	0	0	160	100.00
4.	Deworming	20	12.50	140	87.50
5.	Ectoparasitic application	25	15.70	135	84.30
6.	Traditional Herbal treatment practices	94	58.75	66	41.25
7.	Veterinary Consultancy	26	16.25	134	83.75

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Table 3. Utility of donkeys

N=160

Sr. No.	Utility of donkey	Frequency	Percentage
1.	Pack animals for draught purpose	65	40.63
2.	Milch animals for milk	45	28.13
3.	Breeding purpose	17	10.63
4.	Both breeding and milk purpose	33	20.63

and Trichy were rearing donkeys purely for milk purpose. Donkey milk has a long history of medicinal and cosmetic usage and in recent years, young entrepreneurs are venturing into donkey farming with an intention to freeze dry the donkey milk and incorporate in cosmetics like facial creams, lotions, skin creams, shampoo, ointments and market the produce. The fastest rate of adoption of innovation stems from authority decisions (Seth *et al*, 2018) and hence government institutions need to promote the utility value of donkey milk based on their study trials. One tenth of the respondents especially from Krishnagiri district were donkey breeders involved in procuring and selling donkeys all over Tamil Nadu. The remaining 20 per cent of donkey rearers were maintaining the donkeys, for both breeding and milk purpose. It was observed that the donkey rearers were selling donkey milk at the rate of Rs.150 - 200 per 100 ml of milk to nearby households and neighbouring villagers for administration to infants.

CONCLUSION

The donkey population has decreased considerably in Tamil Nadu due to increase in the usage of motor vehicles for transporting goods. In addition, the donkeys succumbed to various diseases like tetanus, rabies and other ailments. The donkeys are reared by donkey rearers in specific pockets as an ancestral practice for draught purpose to transport sand, salt, food items, manure etc. Majority of the donkey rearers did not provide adequate shelter to the donkeys, maintained their animals extensively on grazing. With regard to the health management, the donkey rearers provided special care to pregnant animals.

Majority of the donkey rearers did not vaccinate their donkeys against rabies and tetanus and they adopted traditional practices for treating wounds and other ailments. It was observed that majority of the donkey rearers maintained their animals for draught purpose to transport goods, food items and manure, while the remaining donkey owners reared donkeys for milk and breeding purpose. The donkey rearers need to be imparted knowledge on breeding, feeding, health management and marketing through capacity building programmes.

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