
TRADITIONAL TRANS NOMADIC DUCK FARMING IN KUTTANAD- SOCIAL PERSPECTIVES FOR SUSTAINABILITY

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ABSTRACT

The present study aimed at assessing the social forces that drive the sustainability of traditional duck farming system in Kuttanad. A qualitative methodology, where the stakeholders were approached individually and unanimously, was adopted for identifying the constraints and to arrive at solutions. The traditional significance of duck farming in kuttanad agrarian system and its contribution to gainful family employment as well as to nutritional security of farm families were the strong social forces assistive in sustainability of the system. The lack of scientific knowledge, dependence on traditional wisdom, inadequate activities of farmer associations, labour intensive nature of production system leading to inefficient social participation and training participation were identified as major constraints. The poor social status of nomadic duck farmers, was holding back

the youth to take up it as a livelihood. Addressing the constraints need to focus on restructuring the duck farmer association in APCOS model to solve the competition among farmers and to meet training and extension contact requirements. Rehabilitating the nomadic farmers and attracting younger generation by structuring policies helpful in improving income as well as availability of credit facility for duck farming might assist in sustaining duck farming.

Keywords: Duck farming, Trans-nomadic farming, Social participation, Kuttanad wetland ecosystem

INTRODUCTION

Duck - rice integrated farming system has been closely interwoven with the traditional agrarian pattern of Kuttanad Wetland Eco System. Duck farming contributes significantly to the ecological, economic and social arena of Kuttanad. As

in many Asian countries, duck farming here still follows the primitive practice of trans-human nomadic pastoralism even though more structured and commercial rearing systems has evolved overtime. However, this no/low cost rearing system is facing serious sustainability issues on different facets, the major being social credence. Changing agricultural pattern, man made changes to ecology, climate change and resource exhaustion has adversely affected the farming system in general and duck farming in particular. Keeping this in mind, a study was conducted with the objective to assess the social aspects of duck production system in Kuttanad and to find strategies towards it's social sustainability.

MATERIALS AND METHODS

Even though, Kuttanad Wet Land Eco System (KWLES) is spread over three districts Alappuzha , Pathanamthitta and Kottayam, Alppuzha district was purposefully selected. Seventy five per cent of the duck farming carried out in and around Vembanadu Lake, is mainly propagated in Alappuzha district .(Livestock census, 2019). Multistage non proportionate random sampling was employed for selection of respondents. Three panchayaths each were selected at random from both Upper and Lower Kuttanad regions (stage I). From each panchayath 25 duck farmers were selected at random (stage II) so that farmers engaged in all different systems of

duck rearing were sufficiently represented. Thus the sample comprised of a total of 150 duck farmers for studying the general profile.

A qualitative data collection method was employed for assessing various issues faced by farmers of kuttanad giving a special emphasis on the social aspects. A preliminary interaction with the opinion leaders and key informants was carried out and an open ended schedule was developed for data collection. Individual interactions with all the 150 farmers followed to identify the constraints. After consolidating constraints stake holders were approached for identifying the solutions for those lacunae.

RESULTS AND DISCUSSION

Four different rearing systems namely Backyard rearing, Nursery rearing, Semi-intensive duck rearing and Trans-human Nomadic Duck farming were identified in KWLES area. Of these, the most followed system of rearing was Trans- human nomadic duck farming. This is the system in which seasonal migration of people with their duck flocks, beyond the boundaries of district and state, in search of foraging land and feed resources happens. The flocksize of nomadic rearing system ranged from 5000 to 30000 ducks. Attributed to its inbuilt dynamic nature, the system faces more than few social

hurdles. The major constraints faced by duck farming and its feasible solutions were assessed as given in Table. 1. It is of no doubt the continuity of duck farming as a livelihood occupation is much dependent on the willingness of the descendant younger generation in the families to take up this vocation. But the present study revealed that there is no descendant younger generation willing to take up this vocation especially the trans – human nomadic duck rearing despite it being the most lucrative and rewarding among the various duck rearing systems. Similar findings of lack of inheritance to younger generation impeding the duck farming system was reported by Sankaralingam and Mahantha(2022). In addition to this, the present day farmers were unwilling to bring their children to this vocation. The poor social status of duck farmers were another important social threat reported. This along with inconsistent income may be the reasons for low participation of young generation in duck farming. It is worth mentioning here that FAO (2010) reported that the socio economic change in China had adversely affected the involvement of young generation in traditional farming practices like duck farming. Likewise Rahman *et al.* (2009) reported that the farmers of Bangladesh had the opinion that duck farming was not an honorable occupation.

Inefficient farmers' unions and poor social participation was ranked second in constraint analysis. Majority of the farmers were common members of duck farmer unions and the key positions were handled by local leaders. This have resulted in vested interest of unions leaders, inequitable distribution of benefits and unhealthy competition among duck farmers. Similar findings were observed by Sarmila *et al.* (2024) among farmers of Tamilnadu, where the membership in farmer organization were meager besides the low extension contacts. Establishing APCOS model societies for duck farmer kuttanad region was suggested as a solution for these problems.

Labour intensive nature of duck farming and transnomadic farming pattern limited farmer's access to media, extension agency and other technology dissemination programmes as trainings. This may have impacted their knowledge and trust in scientific farming practices, which are also pointed out as the constraints in duck farming. Abraham and Raveendran, (2009) reported that training was very crucial to improve the knowledge base of farmers in improving the productivity of the duck farming system in the Aroor region of Kuttanad. Farmers' lack of belief in scientific management practices and relying largely on traditional management might have lead to low profit levels besides

Table 1. Social hurdles and their feasible solutions for sustainable duck production

Constraint identified	Solution for sustainability
Lack of inheritance of duck farming by younger generation Present day farmer do not want their children in duck farming due to poor social status	Productive employment and consistent income from duck farming has to be guaranteed by organizing need based training and financial support to the farmers in the form of subsidies, interest free loans, insurance and pension schemes.
Vested interests of local leaders is a hindrance to achieve the actual objectives of farmers' associations and Unhealthy competition among duck farmers	Societies of duck farmers are to be formed in APCOS model, so that actual objectives are addressed and benefits are equitably distributed
Difficulties in maintaining extension agency contact due to nomadic nature	Mobile based information dissemination
Farmers are unable to attend the training programmes since they cannot leave behind the flock unattended	Trainings should be arranged at accessible points and convenient time preferably during off season. Trainings through local organizations and farmers unions
Lack of proper information dissemination and support from government resulting in depriving the benefits to the poorly informed farmers	APCOS model societies are to be formed Periodic meetings of duck farmers should be organized so that there can be timely exchange of information
Preoccupation in duck farming affecting younger generation s' formal education	Implementing 'earn while you learn' programmes to encourage young adults to take up farming while not hampering their formal education
In a changing social system farmers do not want leave their families behind.	Rehabilitating nomadic farmers in backyard farming and semi-intensive farming Insurance benefits for nomadic rearing has to be assured

affecting the environmental, economic and marketing prospects. These are in line with the findings of Gbotosho and Burt (2013) has reported that the environmental issue of improper disposal of poultry waste in Ohayo state of Nigeria was due to farmers' lack of knowledge. Trainings arranged

at accessible points and convenient time preferably during off season besides the periodic meetings of duck farmers should be organized for timely exchange of information. However, using mobile based information dissemination systems might surpass most of these constraints

to an extent. Sheheli *et al.* (2023) has also presented the social mobility and information source contacts as a powerful tool to counteract problems in duck farming.

The nomadic farming system was largely depended on family labour and this has contributed to production cost. This contribution to gainful family employment highlights the socio-economic significance of duck farming. This observation nonetheless differed from that of AVF (2006) reporting that in Vietnam, in the households rearing ducks, hired labourers were engaged in only two per cent of the houses. It is worth mentioning here that FAO (2010) reported that the hired labour utilization in the duck farming households varied with scale of operation. However, this preoccupation in duck farming has caused the inconvenience of attending schools as well as colleges and adversely affect the formal education of children and young adults hence has been raised as a serious concern. This along with foraging flocks travelling long distance keep the accompanying labourers and farmers away from natives was also a factor discouraging farmers. Hastang *et al* (2020) has also reported the lack of formal education among the nomadic duck farmers and has opined that this has seriously affecting their decision making abilities. The suggestions

came up in the present study for filling up this social lacunae were rehabilitating farmers in the same vocation but on a different scale of production and rearing system. The programmes to involve in farming without compromising on formal education might help in developing affinity towards duck farming entrepreneurship among younger generation.

SUMMARY

The social constraints centered around the poor social status and low income from farming, descendants not taking up this vocation, inadequacy of training, farmer organizations and information dissemination. The farmers being compelled to stay away from native for more and family labour utilization impeding formal educational opportunities was also posing serious social repercussions. However, the traditional significance of this livelihood system and its contributions in employment and income generation for women and youth by utilizing family labour are the prospects that can be relied on for the sustainability of the system. Besides, duck rearing, irrespective of the scale of operation, by a large served to cater the animal protein requirement of the households involved. These socially significant aspects need to be focussed on while formulating policies for uplifting duck farming in Kuttanad.

REFERENCES

- Abraham, J. and Raveendran, R. 2009. Sustainable duck rearing system using fresh prawn waste. Water fowl production for food security. In Jalaludheen A. (ed.), Proceedings of IV world waterfowl conference. Kerala agricultural University. Thrissur, Kerala. Pp 346-350.
- AVF (Agronomeset Vétérinaires sans Frontières). 2006. Review of free-range duck farming systems in Northern Vietnam and assessment of their implication in the spreading of the Highly Pathogenic (H5N1) strain of Avian Influenza (HPAI) FINAL REPORT March 31th, 2006A report from Agronomeset Vétérinaires sans Frontières for the Food and Agriculture Organization of the United Nations 101p.
- FAO (Food and Agricultural Organization). 2010. Distribution and characteristics of duck-fish farming systems in Eastern China. FAO Smallholder Poultry Production Paper No. 2. Rome. Pp 28
- Gbotosho, O. and Burt, P. J. A 2013. Environmental and health impacts of poultry manure disposal methods: A case study of Lagelu and Egbeda local government areas in Oyo State, Nigeria. [Online]. *International J. Agric. Sustainability*. **11**(1):38-51.
- Hastang, Sirajuddin, S.N., Asnawi A., Kadir, S. and Mahyuddin. 2020. Characteristics of duck farmers moving from Pinrang regency to Sidrap regency, Indonesia. The 2nd International Conference of Animal Science and Technology. IOP Conf. Series: Earth and Environmental Science. 492 (2020) 012139. IOP Publishing. doi:10.1088/1755-1315/492/1/012139
- Rahman, M.M., Khan, M.J., Chowdhary, S.D. and Akbar, M.A. 2009. Duck rearing system in Southern coastal regions of Bangladesh. *Bang. J. Anim. Sci.* **3**(1&2):132-141.
- Sankaralingam, S., Mahanta, J.D. (2022). Nomadic (Transhumant) Duck Farming Practices. In: Jalaludeen, A., Churchill, R.R., Baéza, E. (eds) Duck Production and Management Strategies. Springer, Singapore. https://doi.org/10.1007/978-981-16-6100-6_5 (Accessed online)
- Sarmila I, Vimalraj Kumar N, Devaki, K and Veeramani, P. 2024. Socio-economic profile of duck farmers of Tamilnadu. *Indian J. Vet. & Ani. Sci. Res.* **53**(2):29-38.

Sheheli S, Sarkar, A M., Banik, S. 2023. Profitability and problems in duck farming. a study in Haor area of Bangladesh. *Int. J. Agri. Sci. Res. & Tech. In Ext. Edu. Sys.* 13(3) :195-202.

20th Livestock Census (2019). Government of India, Ministry of Agriculture, Department of Animal Husbandry, Dairying and Fisheries, Krishi Bhawan, New Delhi. Available :<http://dadf.gov.in/sites/default/files/20th%20Livestock%20census%2019%20All%20India%20Report.pdf>.