








The Kerala floods of 2018 – exploring the socio-economic characteristics of flood affected dairy farmers in Ernakulam and Thrissur districts[#]

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Abstract

An ex post facto investigation into the socio-economic characteristics of the flood affected dairy farmers of Ernakulam and Thrissur districts was carried out during the months of October to December in 2020. Ten villages each were selected at random from Ernakulam and Thrissur districts and 75 livestock farmers each from the selected villages were studied. A cross sectional survey design was employed for the study in which data were collected using pretested structured interview schedules. Analysis of data on the socio-economic characteristics of the affected farmers revealed that 79.3 per cent were members of nuclear families and that 60 per cent of them fell in the age group 40-59 years. It was also evident that 56.7 per cent of the affected farmers were women. The educational status of most of the respondents ranged from middle school (25.3 %) to Secondary School (24.7%). Dairying as a primary occupation was reported by 79.3 per cent of the respondents and this was not a new venture for the vast majority of respondents as evidenced by the fact that 86.7 per cent of the them had been engaged in this activity for over 30 years. The annual income from animal husbandry for 48.7 per cent of respondents was between Rupees 30,000 and Rupees 60,000. Majority of the respondents were small land holders (86%) reporting low levels of material possession (69.3%). Many respondents gone through the serious hardship at their relief along with psychologically depressed, so that the intervention of government during post flood is at most important.

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Some of the highest levels of rainfall seen in India during the monsoon seasons are quite commonly witnessed in Kerala. The floods of 2018 reported from the state of Kerala were however unprecedented as indicated by data from the India Meteorological Department that predicted a higher rainfall to the extent of 42 per cent more than usual on account of a spell of low pressure over the region. This spate of events began from the second week of August, 2018 and made its presence felt in almost all the districts of the state. In the melee that followed, the state witnessed a loss of 400 human lives along with the loss of nearly 12,000 dairy animals and the destruction of about 57,000 hectares of cultivated land. The Government of Kerala estimated that one-sixth of the total population of Kerala had been directly affected by the floods and flood related incidents. This phenomenon resulted in heavy losses for the livestock sector, especially the dairy sector. It was against this background that the present study was undertaken to assess the socio-economic characteristics of dairy farmers in Ernakulam and Thrissur districts who had been affected by the flood.

Materials and methods

From the thirteen districts that were reported to be affected in the state, Ernakulam and Thrissur districts were selected for the study on account of the severity of the flood in these two districts as indicted by the fact that all the villages in both districts had been notified by the Government of Kerala as flood affected (Disaster Management Department, 2018). From the list of 127 and 255 affected villages in Ernakulam and Thrissur districts respectively, a total of ten villages each were selected at random. The list of livestock farmers affected by the floods in the selected villages of both districts were prepared using the data available with the Department of Animal Husbandry, Kerala and the Department of Dairy Development, Kerala from which a total of 75 farmers from Ernakulam district and 75 farmers from Thrissur district were selected for the study. Data were collected using pretested

structured interview schedules during October-December in 2020.

Results and discussion

Age of the affected farmers

It was found that 60 per cent of the dairy farmers studied in the dairy sector belonged to the age group of 40-59 years. This finding was in consonance with those of Verma (2012), and Norsida *et al.* (2017) where the majority of the livestock farmers were reported to be in the ages between 36 and 60 years in Kelantan, Malaysia. However, the findings of the present study are contrary to that observed by Awopetu *et al.* (2016) who reported that most of the dairy farmers studied were below 40 years in the flood areas of Wadata and Gado-villa communities in Nigeria.

Family type

Perusal of data on the family type revealed that 79.3 per cent of respondents in the present study were members of nuclear families whereas 20.7 per cent were from joint families. The present study was in consonance with the findings of Chandrashekar *et al.* (2017) who reported that 77 per cent of livestock farmers were from nuclear family in rural Karnataka.

Gender

It was evident from the results, that most of the livestock owners in the present study were women. This finding was in agreement with those of Maingi and Njoroge (2010) who reported similar finding among the farmers of Swaziland's Mbabane sub-region. However, the findings of this study were in contrast to that of Norsida *et al.* (2017) who reported that the majority of the respondents in a study on a flood disaster in Kelantan, Malaysia were male.

Educational status

Perusal of data pertaining to the educational levels of the respondents revealed that nearly half of them had educational levels ranging from middle school (25.3 %) to secondary school (24.7%). None of the respondents interviewed were postgraduates

and just over two per cent (2.7%) were graduates. Sachan (2013) also reported a higher number of farmers with educational status of an intermediate level in Unnao district of Uttar Pradesh, whereas Chauhan *et al.* (2004) and Raut (2010) reported that most of the dairy farmers studied in Maharashtra had high school level education. Norsida *et al.* (2017) reported lower education up to primary level (37.2%) among the flood affected respondents in Kelantan state of Malaysia.

Primary occupation

Dairying was the primary occupation of 79.3 per cent of respondents in the present study while for 18.7 per cent and 2 per cent of respondents; agriculture and business were cited to be the primary occupation, respectively. The findings of this study were in consonance with that of Gautam *et al.* (2007) who observed that majority of the respondents practiced dairying as their primary occupation. However, the findings differed from those of Kannan (2002) who observed that dairying was a subsidiary occupation for most of the respondents studied in Nagapattinam district of Tamil Nadu. Meena (2003) and Rathod *et al.* (2009) also reported contrary findings from those of the present study and reported that majority of the respondents (83.75 %) studied, had agriculture as main occupation whereas dairying was subsidiary livelihood.

Activity experience

Higher years of experience of more than ten years in dairying was observed among a sizeable majority of 86.7 per cent of the farmers. The findings were in consonance with those of Gaikwad (2010), Rambhau (2011) and Vekariya *et al.* (2016) who also reported that all the farmers they studied had more than ten years of experience in dairying.

Annual income from animal husbandry

Data from this study indicated that a majority of the respondents reported annual incomes between Rs. 30,000 to Rs. 60,000 from animal husbandry. Studies by Suresh (2004), Garai (2007) and Rajput (2010) also reported that a majority of the farmers studied derived a medium range of income from dairying as per

their categorisation. Higher return from animal husbandry has been reported by Singh (2013) where the farmers from eastern Uttar Pradesh had annual incomes from Rs.75,658.50 to Rs1,46,743.60.

Land owned

Majority the respondents studied (86 %) had a land holding of between 0 to 50 cents, whereas 10.7 per cent of the respondents had land between 50 to 100 cents. But only 3.3 per cent of respondents had a land holding of over 100 cents. This finding is however in contrast to those of Varaprasad *et al.* (2013) in Chittoor district of Andhra Pradesh and that of Rupeshkumar and Chandawat (2011) who reported that the majority of farmers studied had land of over 100 cents in Kheda, Gujarat.

Material possession

The results of the present study indicated that majority of the respondents (69.3 %) had low levels of material possession which is in agreement with the findings of Harisha *et al.* (2015) among dairy farmers of Kolar and Chikkaballapur districts of Karnataka.

Conclusion

Age, gender, marital status, family type, educational attainment, primary occupation, activity experience, annual income from animal husbandry, land owned and material possession were used in the study for the evaluation of the socio-economic characteristics of livestock farmers affected by 2018 flood disaster in Ernakulam and Thrissur districts. The surveyed flood affected dairy farmers belonged to medium age category with majority of them belonging to nuclear type of family. Higher involvement of women in dairying was seen. Nearly half of the respondents were educated up to intermediate school with medium income from animal husbandry. Majority of the respondents had low land holding with low material possession and most of them reported dairying as their primary occupation with more than ten years of experience. Along with post flood impact study, efforts should be made by the government to create awareness among people and rescue them from poverty trap.

Table 1. Socio-economic characteristics of dairy farmers in Kerala flood 2018

n=150

Parameters	f	%
Age		
1-19 years	0	0
20-39 years	3	2
40-59 years	90	60
60-79 years	57	38
>80 years	0	0
Family type		
Nuclear	119	79.3
Joint	31	20.7
Gender		
Male	65	43.3
Female	85	56.7
Educational status		
Illiterate	6	4
Primary school	19	12.7
Middle school	38	25.3
Secondary school	37	24.7
Higher secondary	27	18
Primary occupation		
Dairying	119	79.3
Agriculture	28	18.7
Business	3	2
Private job	0	0
Others	0	0
Activity Experience		
0-5 years	3	2
5-10 years	17	11.3
Above 10 years	130	86.7
Annual income from animal husbandry (Rs)		
4,000 to 30,000	44	29.3
30,000 to 60,000	73	48.7
Above 60,000	33	22.0
Land owned		
No land	0	0
0 to 50 cents	129	86
50 to 100 cents	16	10.7
Above 100 cents	5	3.3
Material possession		
Low	104	69.3
Medium	42	28
High	4	2.7

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Conflict of interest

The authors declare that they have no conflict of interest.

References

- Awopetu, R.G., Awopetu, S.O. and Awopetu, M.S. 2016. The impact of flood on the socio-economic status of residents of Wadata and Gado-villa communities in the Makurdi metropolitan area of Benue State, Nigeria. *Management of Natural Disasters*, 191p.

- Chandrasekar, G.K., Satyanarayan, K., Jagadeeswary, V. and Shree, J.S. 2017. Relationship between socio-economic and psychological factors of dairy farmers with days open—A study in rural Karnataka. *Int. J. Pure App. Biosci.* **5**: 171-177.
- Chauhan, D. S., Kamble, V. J., Padghan, P. V., Sawant, R. C. and Kamble, R. R. 2004. Impact of farmers status on milk production in tribal area of Kinwat Tahasil (Marathwada Region). *Indian J. of Anim. Res.* **38**: 137-140.
- Gaikwad, A.V. 2010. Dairy animal productivity enhancement programme in Ahmadnagar district of Maharashtra: An exploratory study. *M.Sc. thesis*, NDRI, Karnal, Haryana. 140p.
- Garai, S. 2007. Dairy farming among Santhal tribe women of Burdhan district (West Bengal). *M.Sc. thesis*, National Dairy Research Institute, Karnal, Haryana. 138p.
- Gautam, U. S., Ram chand. and Singh, D. K. 2007. Socio-personal correlation for decision-making and adoption of dairy practices, *Indian Res. J. Ext. Edu.* **7**:122-123.
- Harisha, M., Satyanarayan, K., Jagadeeswary, V., Achoth, L., Rajeshwari, Y.B. and Nagaraj, C.S. 2015. Milk production trends in Kolar and Chikkaballapur districts of Karnataka, India. *Asian J. of Dairy and Food Res.* **34**: 113-115.
- Kannan, M. 2002. Knowledge and attitude of dairy entrepreneurs about improved dairy farming practices in Nagapattinam district of Tamil Nadu. *M.Sc. Thesis*, National Dairy Research Institute, Karnal, Haryana. 94p.
- Maingi. N. and Njoroge. G. K. 2010. Constraints on production, disease perceptions and ticks and helminths control practices on dairy cattle farms in Nyandarua district, Kenya, *Liv.Res. for Rural Dev.* **22**: 8-12.
- Meena, B. S. 2003. Technological gap in relation to feeding practices of dairy animals in Jhansi district of Bundelkhand Region. *Ph.D. thesis*, Dr. Bhim Rao Ambedkar University, Agra, Uttar Pradesh. 112p.
- Norsida, M., Hazran, Z., Nitty Hirawaty, K. and Nollila, M.N. 2017. The post-flood impacts on farmers, agricultural sector and food security in Kelantan. *Int. J. of Academic Res. in Business and Social Sci.* **7**: 175-184.
- Rajput, B. P. 2010. Training needs of dairy farmers for improved dairy farming practices in Bundelkhand Region. *M.V.Sc. thesis*, National Dairy Research Institute, Karnal, Haryana. 122p.
- Rambhau, A. S. 2011. Entrepreneurial behavior among beneficiaries of dairy venture capital fund scheme in Ahmednagar district of Maharashtra. *M.Sc. thesis*, National Dairy Research Institute, Karnal Haryana. 106p.
- Rathod, P., Sariput landge., Nikam, T. R., and Vajreshwari. S. 2009. Socio-personal profile and constraints of dairy farmers, *Karnataka J. Agric. Sci.* **24**:619-621.
- Raut, A. A. 2010. Retrospect and prospect of commercial dairy farming in Maharashtra. *Ph.D. thesis*, National Dairy Research Institute, Karnal, Haryana. 157p.
- Rupeshkumar, J. R. and Chandawat, M. S. 2011. Extent of knowledge of improved animal husbandry practices and socio-economical characteristics of dairy farmers of district Kheda, Gujarat, *Int. J. of Frm Sci.* **1**:129-137.
- Sachan, R. 2013. Buffalo husbandry practices among dairy farmers in Unnao district of Uttar Pradesh. *M.V.Sc. thesis*, National Dairy Research Institute, Karnal, Haryana. 86p.
- Singh, P. K. 2013. Sustainability of Gangatiri breed reared by dairy farmers in Eastern Uttar Pradesh. *M.V.Sc. thesis*, National Dairy Research Institute, Karnal, Haryana. 94p.

- Suresh, 2004. Entrepreneurial behaviour of milk producers in Chittoor district of Andhra Pradesh – A critical study. M.Sc thesis, Acharya N. G. Ranga Agricultural University, Hyderabad. 283p.
- Varaprasad, A.R., Raghunandan, T., Kumar, M.K. and Prakash, M.G. 2013. Studies on the socio-economic profile and constraints faced by farmers rearing Jersey x Sahiwal cows in Chittoor district of Andhra Pradesh. *Int. J. Sci. Environ. Technol.* **2**: 404-409.
- Vekariya, S.J., Kumar., Chaoudhari, G.M., Savasani, H.H and Swaminathan, B. 2016. Factors influencing the adoption of scientific animal husbandry practices: A case of Sourashtra in Gujarat. *Adv. Life Sci.* **5**: 6018-6024.
- Verma, H. C. 2012. Productive and reproductive performances of dairy animals in Faizabad district of Uttar Pradesh. M.V.Sc. thesis, National Dairy Research Institute, Karnal, Haryana. 137p. ■