Research Paper

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Information Technology for Promoting the Adoption of Animal Husbandry Practices Among Farm Women

Veterinary Science

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ABSTRACT

Adoption of recommended practices has been cited as an important factor affecting the viability of animal husbandry enterprises. An effective and efficient communication tool to disseminate farm information is a pre-requisite for promoting adoption of dairy innovations and practices. The study was conducted to promote transfer of information and communication through farm women involved in livestock rearing. The farmers were familiarized with information and communication technologies like internet, video conferencing and touch screen information kiosk for gaining knowledge about animal husbandry practices. On completion of the training programme feedback analysis were tabulated and interpreted. Adoption level of scientific dairy farming practices were identified and analyzed using simple percentage method. The significant difference between the knowledge level of the respondents in pre and post-exposure stages indicated that the ICTs were effective in achieving knowledge gain among the These results can be used as constructive feedback for designing successful information and extension delivery models for strengthening livestock sector growth. It could be concluded from the study that there is a need for conducting more number of ICT based and well-tailored training programmes suited to farm women which would in turn help them to improve for promoting the adoption of scientific animal husbandry practices.

Introduction

In India, livestock production is predominantly a small-scale rural livelihood activity, and forms an integral part of mixed farming systems. Livestock sector plays a significant role in the economy and welfare of the rural population of Kerala.Kerala's strength in the field of livestock rearing include homestead settlement pattern, relatively high level of education among the members of a family, highly favorable agro-climatic conditions conducive for biomass production with a long tradition in livestock rearing. Smallholder crop-livestock mixed farming will continue to be the dominant livestock production system in Kerala. The government of Kerala is making efforts to improve the productivity of dairy cattle by encouraging better health management practices, maintenance of hygiene, prevention and control of diseases and calf health management. The goal also includes educating dairy farmers about scientific dairy health management practices including hygienic housing conditions. This study illustrates the experiences and of animal husbandry farmers in small holder production system and adoption level of various scientific practices use of various approaches in selecting and applying suitable technologies for livestock development through information and communication to farm women.

Materials and methods

Women Self Help Groups involving 100 farmers from Mannarkkad Block Panchayat were selected. The data pertaining to the Socio-Economic and Livestock aspects of Small Holder Production Systems was categorized with the help of a schedule. Data were collected by personal interviews using a pre-tested structured schedule. The data pertaining to the Socio-Economic and Livestock aspects of Small Holder Production Systems were categorized. The different socio-economic characteristics such as age, occupation, education, family size, farm holding, income from different sources and other aspects such as number and type of different animals, milk production, breeding, feeding aspects were studied with the help of a pre - tested schedule developed for the purpose .The training need for each of the major farm operation was identified from the farmers Durgga Rani et al (2009). The training included interactive sessions on scientific practices for livestock development with audiovisual aids and video sessions. Scientific information regarding dairy health management practices, hygiene for dairy health and clean milk, identification of sick animals, disease prevention and control, calf health management, deworming the calf and vaccination schedule also included in the topic. The farmers were familiarized with information and communication technologies like internet, video conferencing and touch screen information kiosk for gaining knowledge about animal husbandry practices (Fig: 1-3). On completion of the training programme feedback analysis were tabulated and interpreted. The impact of the training programme was assessed for the extent of skill transfer among the respondents, by evaluating adoption of Scientific Animal Husbandry practices at its pre- and post- exposure stages. Adoption level of scientific dairy farming practices were also identified and analyzed using simple percentage method.

Results

Socio-economic characteristics of Respondents

The different socio-economic and personal characteristics such as age, socio-economic status , occupation, education, family type and size, land holding, income from animal husbandry and livestock aspects like number of cows kept, combinations of livestock reared, farming experience,breeding aspect , feeding aspect, production average and condition of the animal houses were assessed. Analysis of data revealed the average age of the respondents was 42 years. More than half (72 per cent) of the respondents were in the age group 31 – 55 years, while 8 per cent were in the group below 30 years and 10per cent were in the group above 55 years .This in contrast to the findings made by Ajithkumar and Sreekumar (1996). This finding points to the fact that there is a tendency for younger women to engage in animal husbandry and allied activities. This could be because they have recognized animal husbandry as a suitable means of overcoming their present financial crisis. Animal husbandry has been documented time and again as a suitable venture as it provides both income as well as employment on the homestead. 76 per cent of respondents indicated that their primary occupation was animal husbandry component while just below thirty eight per cent indicated that animal husbandry along with agriculture as a minor component was their primary occupation. The average annual income of the families from animal husbandry was Rs 8000-10,000 which is much higher than that reported in past studies.

Farming Experience

Of these participants, 76 % belonged either to primary level of education group, whereas 20% possessed higher secondary level of education. With regard to dairy farming experience, 56 % respondents had more than 12 years of experience in dairy farming, 26% possessed 6 to 12 years experience and the rest had less than six years of farm experience.

Mass Media Exposure and Extension Agency Contact

41 % respondents possessed a medium level of exposure to mass media, rest of them had low exposure respectively. Contact with extension agency was medium with over one-half (57 %) of the respondents, whereas one–fourth (25%) had low contact and

the rest had high level of contact with extension agency. (Fig 4). With regard to the training need (Fig: 5) , health care ranked first for both knowledge and skill oriented training needs. The farmers might have perceived, health care and management were the primary factors in achieving productivity in dairy animals.

Impact of the information and communication technologies on adoption of dairy health management practices.

The adopters (a) and non-adopters (b) in the pre - exposure stage with regard to each of the 14 practices Vidya *et al.* (2010) listed- Table 1 were initially found and recorded. Among the pre - exposure non-adopters, the respondents willing to adopt (c) and not willing to adopt (d) a practice after their exposure to information and communication technologies like internet, video conferencing and touch screen information kiosk were identified. Finally, the total of pre - exposure adopters and post-exposure symbolic adopters (a + c) were obtained.

Table 1. Distribution of respondents according to their pre - exposure adoption and post-exposure symbolic adoption (n=100).

Practice	Pre - exposure adoption		Post-exposure symbolic adoption among pre - exposure non-adopters		Extent of adoption %
	Adopters	Non-adopters	Willing to adopt	Not willing to adopt	
A) Breeding practices					
1 Own cross bred cows	84	16	16	0	100
2 Follow artificial insemination	100	0	0	0	100
B) Feeding practices					
1 Recommended quantity of concentrates	64	32	32	4	96
2 Green fodder cultivation	28	72	56	16	84
3 Mineral and vitamin supplementation	44	56	48	8	92
C) Disease control practices					
1 Regular cleaning / grooming	70	30	24	6	94
2 Vaccination against contagious diseases	52	48	40	8	94
3 Hygienic milking	24	76	76	0	100
4 Deworming of calves	76	24	24	0	100
5 Mastitis prevention measures	44	56	48	8	92
D) Management practices					
1 Maintenance of Dairy management records	16	84	44	40	60
2 Follow cattle insurance practices	52	48	44	4	96
3 Feed colostrums to newly born calves	96	4	4	0	100
4 *Pucca* cattle sheds	56	44	44	0	100

Discussion

Majority of the rural women participants were middle age group with primary level of education, had agriculture as their main occupation with animal husbandry as their subsidiary occupation and maximum number of trainees were interested to start small scale backyard poultry, dairy, sheep and goat farming, respectively. This study evaluated the utility of information and communication technologies to educate farmers on dairy health management practices at their household. The findings of the study revealed that the respondents who had low knowledge regarding various livestock diseases and their causes, symptoms, prevention and control gained considerable knowledge on exposure to the information and communication technologies like internet, video conferencing and touch screen information kiosk. The respondents who possessed significant knowledge on hygienic and other general dairy health management aspects at the pre-exposure stage itself were able to further strengthen and refine their knowledge in these aspects more scientifically. Findings of this study clearly indicate that ICT based information delivery help the livestock farmers to make significantly better quality decisions on various livestock practices as compared to non-ICT users. The results have far reaching implications for designing information and knowledge dissemination systems on livestock activities. The study also provides practical insights into effectiveness of various sources of information and suggests areas of improvement in the information delivery processes. These results can be used as constructive feedback for designing successful information and extension delivery models for strengthening livestock sector growth.

The present study could be concluded that the training has made tremendous change and interest among the trainees to gain more knowledge probably due to usage of information and communication technologies like internet, video conferencing and touch screen information kiosk and audio visual aids and also they own different livestock species such as dairy, sheep, goat and poultry, they could easily understand and remember the technologies taught in the training. Further, this training if conducted frequently would increase the level of knowledge, which in turn reflects into better livestock farming and management and ultimately increases livestock production.

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Fig: 1 Farm Women Gainig Knowledge through Kiosk

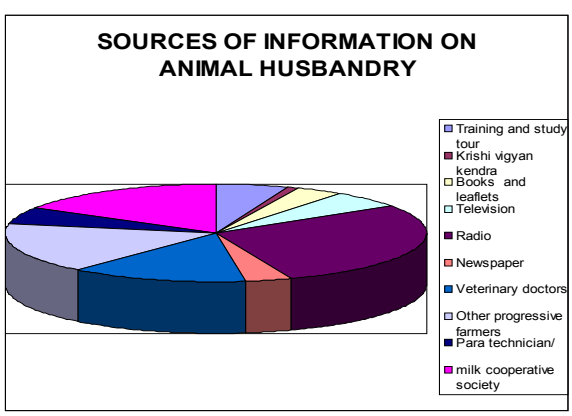
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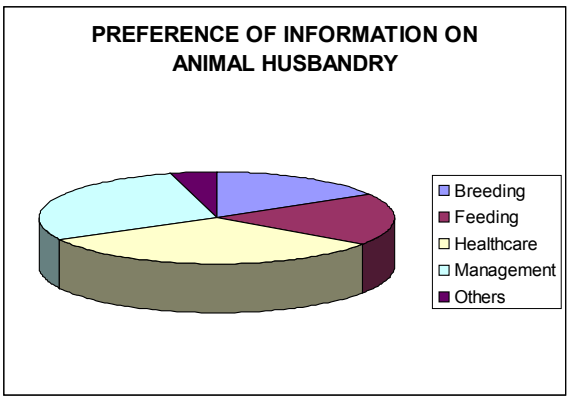
Fig: 2 Classes utilizing Internet Videos



Fig: 3 Women Participating In Video Conferencing utilizing Skype



(Fig.4) Sources of information on Animal Husbandry



(Fig.5) Training needs of farm women

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