



ISSN (E): 2277- 7695
ISSN (P): 2349-8242
NAAS Rating: 5.23
TPI 2021; SP-10(11): 2806-2809
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www.thepharmajournal.com
Received: 15-09-2021
Accepted: 19-10-2021

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Impact of KVK trainings on promotion of scientific dairy farming in Bidar district

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Abstract

The Farm Science Center, Bidar popularly known as ICAR- Krishi Vigyan Kendra, conducting various training programmes to farmers, farm women and rural youth on various agricultural activities. Gain in knowledge level about dairy farming and the technologies in scientific methods were recorded before and after trainings for knowing the impact of training by the dairy farmers participated in training programme. There were 30 respondents selected for the purpose of study. Among the participants regarding breeding practices, 93.33 per cent farmers expressed their willingness to go for artificial insemination, 100 per cent farmers expressed that they will be feeding green and dry fodder. However, 86.67 percent farmers will feed their cattle's with concentrates. 100 per cent farmers expressed practicing of Deworming as a result of training majority of the farmers expressed their readiness for personal hygiene, providing clean and potable drinking water, cleaning of sheds regularly and vermicomposting method very few expressed self packing and marketing of milk. Whereas 96.67 per cent farmers marketing their milk through co operative milk society.

Keywords: Scientific dairy farming, KVK, small and marginal farmers

Introduction

In India, the livestock sector is one of the most rapidly increasing agricultural sub-sectors. It's a rich source of high-quality products including milk, meat, and eggs, as well as a source of income and work for millions of rural farmers, especially women. According to the Central Statistics Office, the value of livestock sector outputs at current prices was roughly 811,847 crores in 2015-16, accounting for around 28.6% of the value of agricultural and allied sector outputs. Dairying is a source of income for many rural poor people in India, particularly landless, marginal, and small farmers. It is a powerful tool for rural development, employment, and long-term income, as well as a hedge against a variety of risks.

In India an agrarian country with 68.84% of her population living in rural areas (Chandramouli, 2011) [2]. More than half of the Indian population (52%) is engaged in agriculture for livelihood (SIA, 2011-12) [14]. However, the contribution of agriculture to the Gross Domestic Product (GDP) of the nation is continually shrinking. It has declined from 36.4% in 1982-83 (NKC, 2009) [9] to 13.7% in 2012-13 (Economic Times, 2013) [3]. In addition to the exponential growth of industrial and service sector, lack of an adequate information system for farmers can be attributed as one of the reasons for this.

India has a geographic disadvantage as it is already in the warmer part of the world. Climate change is also likely to impact negatively on livestock production and health. Increase in physiological reactions at high temperatures elevates heat loads of animals resulting into a declined productivity of meat, wool, milk and draught power (Upadhyay *et al.*, 2008) [17]. Jodha (1992) [4] suggested introduction of technological investments and creation of economic incentives to conserve common property resources while raising their productivity. He also suggested for regulation of common resource use with the involvement of user groups and a community strategy that complements state interventions with the essential participation of people. Climate change is an emerging environmental and developmental challenge faced by humanity today, and Karnataka is likely to be one of the much vulnerable states (Radhika, 2017) [10]. Further, in terms of areas prone to drought, Karnataka is next only to Rajasthan.

Dairy development in developing nations has played a significant role in raising milk output, raising rural income levels, creating jobs, and improving people's nutritional standards, particularly for small and marginal farmers.

Cash crop revenue is low and unreliable, implying that alternate farming activities should be created. This is despite evidence that there is potential for dairy development and that dairy can help to alleviate poverty. Smallholder dairy production, on the other hand, is growing increasingly essential, and it makes a significant contribution to improving rural people's livelihoods. Better milk yield is linked to higher levels of technological adoption, and enhanced dairying has a direct impact on income generation, poverty reduction, and animal protein availability. As a result, existing dairy technology should be utilized in small domestic dairy farms to boost milk production.

Crossbred animals, superior feed technology, and better management are all part of the dairy technologies (Mohamed *et al.*, 2004) [8]. The impact of a variety of technological (breeds, artificial insemination, immunization, etc.) and socio-demographic factors on dairy output might be useful. Understanding the factors that influence farmers' adoption of dairy technology is crucial to the creation and execution of dairy sector policies and programs.

As we all know, India produces the most milk in the world. In India, animal output and milk quality are both low. Millions of small farmers supply the country's milk supply, which is dispersed throughout rural areas (Singh *et al.*, 2013) [14]. The lack of access to mass media and illiteracy among our farmers are the primary causes of ignorance about quality standards and the benefits of producing high-quality milk. As a result, the Indian dairy industry is severely handicapped in the milk market. To increase the quality of milk and milk products, millions of milk producers must be educated (Sunilkumar *et al.*, 2020) [16]. Number of improved technologies have been developed in the previous years in the field of Agriculture and allied sector; however, these have not been successful in changing the socio-economic condition of farmers to desired level. This failure may be attributed to lack of intensive efforts to transfer the technologies from the scientific institution to the grass root level. Krishi Vigyan Kendra (KVK) is an innovative institution of ICAR under TOT programme which pay an important role for transfer of all feasible technologies in the field of agriculture and allied field from scientific institution to farmer's field level through various means like training to farmer, rural youth, farm women and extension functionary. Frontline demonstration, on farm trial, animal health camps, field days, farmers mela, technical week, farm advisory service other extension activities organized by KVK in the operational area/ adopted villages (Kumar *et al.*, 2011) [5]. Sah *et al.* (2002) [11], while analyzing the linkages in agricultural and dairy extension have rightly emphasized the need of appropriate linkage mechanism between the subsystems, Knowledge, transfer and utilization. They also endorsed for consideration of socio-economic issue, human resource and environment protection as an important contents of extension activities in agriculture and its allied enterprises. Under such context, providing right opportunity to farmers for their opinion on various viable and alternative solutions to the problems perceived improved dairy farming practices may be right approach for strengthening human resource base in dairy farming vis-à-vis in facilitating two-way linkages between sub-systems.

To upgrade the productivity of animals, improvement of breeds the farmer need to have good and updated knowledge of dairy management practices. For educating and up scaling the dairy farmers knowledge and also to develop entrepreneurship amongst the farmers, farmwomen and rural

youth in dairying for productivity enhancement of dairy animals, increasing income and employment generation. ICAR-Krishi Vigyan Kendra, Bidar conducted skill teaching and need based training programme for needy farmers group by Learning by Doing" approach. After completion of the training Proper follow up activities are undertaken. Specialized training courses in dairy farming are proving to be beneficial to the dairy farmers by enhancing their socio-economic status (Sharma *et al.*, 2014) and Proper guidance of trainees in adopting learnt knowledge and skill is also as important as training itself (Keshava, 2002). A study was conducted to know the overall impact of training programmes conducted by ICAR-Krishi Vigyan Kendra, Bidar on Scientific dairy Farming with an objective to know the changes in knowledge of the participant trainees, to record the changes in dairy management practices adopted by them.

Materials and Methods

The study was carried out at ICAR-Krishi Vigyan Kendra, Bidar, Karnataka, the dairy farmers from different villages of Bidar district viz., Othagi, Maskal, Godampalli, Chikpet, Chitta, Bemalkheda and Basavakalyan of Karnataka. The on-campus training programmes was conducted to 30 beneficiary farmers on feeding, breeding, health and management under scientific dairy farming at ICAR-KVK, Bidar. Participants took interest and eagerly participated in training programme. Pre-determined questionnaire supplied to trainees (rural youth farmers and farm women) participated in trainings organized at KVK to know and record their experiences. To confirm their adoption regarding scientific method of dairy farming at farm level the data were collected through

Pre and post experimental design, which was used to ascertain the knowledge gained by the trainees (rural youth farmers and farm women) in different aspects of scientific dairy farming. Gain in knowledge was measured by a knowledge score developed (Anilkumar *et al.*, 1994) [1] for this purpose. Questionnaires, containing 10 knowledge items about scientific dairy farming, were given to the trainees before the start of the training program and were collected back. Another set of questionnaires, containing the same questions, was given to the same trainees after the training program. The score '0' and '1' were given to each incorrect and correct answers respectively. A knowledge score of the respondents is the summation of correctly answered items out of 10 knowledge test items which could result '0' as minimum and '10' as maximum score. The data collected were processed, tabulated, classified and analyzed in terms of percentage in the light of objectives of the study. Total practices were selected to find out the extent of knowledge and adoption of scientific dairy farming practices.

Results and Discussion

Better performance of any dairy unit is judged by the best scientific practices adopted by the dairy farmers, to upgrade the knowledge of the farmers and also the animal productivity and to have improved breeds so that the farmer was more benefitted. Farmers in Bidar district are facing many constraints while practicing dairy farming. Farmers are expressing that the price they get for the sale of milk was too low and mastitis and other outbreak was occurring frequently which is decreasing the production and productivity ability of the dairy animals. This is mainly due to many of the farmers while milking did not adopt teat dipping before and after milking the animals. Most of farmers did not vaccinate to

their animals as some of them live in remote places and another major constraint faced by the farmers was frequent disease outbreak and this is probably due to timely non availability of veterinary aid facility in their locations. Even though the farmers are satisfied with the present farming practices.

Extent of Gain in Knowledge about scientific dairy farming

The gain in knowledge by the respondents about scientific dairy farming was measured in terms of percentage. The data regarding gain in knowledge about scientific dairy farming were recorded under two heads i.e. knowledge before training and after training.

Scientific dairy farming practices adopted by dairy farmers

Breeding practices

The results presented in Table 1 inferred that among the 30 farmers 73.33 per cent and 46.67 per cent farmers had knowledge of artificial insemination technology and getting calf a year. However, after having taken the training on scientific dairy farming the gain in the knowledge was increased respectively to 93.33 and 83.33 per cent. Savale *et al.* (2017)^[13] reported that 90 percent of the farmers consulted veterinary doctors for artificial insemination (A.I) and 82 per cent of the farmers are getting calf a year through this improved breeding practice with all the animals coming to estrus in time. Whereas Sathiadhas *et al.* (2003)^[12] reported in their study that 83.33% of respondents adopted the improved breeding practices using artificial insemination technology.

The farmers had very good knowledge about feeding practices for farm animals and it was observed that the 60.00, 76.67, 66.67 and 53.33 per cent percent of the farmers possessed respectively the knowledge of fodder cultivation, feeding of green fodder, feeding of dry fodder and feeding of concentrates. However, almost all farmers expressed 100 per cent gain in the knowledge of fodder cultivation, feeding of

green fodder, feeding of dry fodder except feeding of concentrates which is 86.67 per cent after getting the training. Letha (2013)^[6] reported that the adoption of green fodder was to some extent and adoption of concentrate was fully with regards to feeding practices in her study and Savale *et al.* (2017)^[13] opined that cent percent of the farmers possessed cultivated land with crops and fodders grown.

The health care practices by dairy farmers are tabulated in table 4. To overcome the parasitic infestations to the animals cent percent of the dairy farmers expressed doing deworming and vaccination after getting training instead 86.67 and 40 per cent was practiced before training, with regards to the level of gain in knowledge it revealed that the gain in the knowledge about deworming and vaccination adopted 100 and 93.33 percent respectively and the above findings are in line with Mali *et al.* (2014)^[7].

Shreesailaja and Veerabhadraiah (1992) who reported that most of farmers (48%) had medium level of knowledge followed by low (27.50) and high (24.17%) levels. However, these finding are not in consonance with those of Singh *et al.* (1979). The farm management practices include personal hygiene, Housing of animals, cleaning of sheds regularly, providing clean and potable drinking water and vermicomposting. After getting the training with regards to the level of gain in knowledge they expressed as 96.67, 93.33, 96.67 and 93.33 percent respectively the personal hygiene, Housing of animals, cleaning of sheds regularly, providing clean and potable drinking water and vermicomposting. Whatever the milk produced by the farmers 96.67 per cent expressed they will market to the Karnataka Milk Federation (KMF) and only 23.33 per cent farmers are Self packing and marketing the milk.

The findings are in confirmation with Sujeet Sarkar *et al.*, (2014)^[15] opined that training has a definite impact on the knowledge level of the respondents. This might be due to the fact that they were convinced through training programmes about clean milk production practices by KVK, which were designed to import latest knowledge through work experience.

Table 1: Distribution of respondents according to Gain in knowledge about scientific Dairy farming (n=30)

Sl. No.	Technologies	Gain in knowledge (no)		Gain in knowledge (%)	
		Before	After	Before	After
I	Breeding practices				
a	(Artificial insemination (A.I))	22	28	73.33	93.33
b	Getting calf, a year	14	25	46.67	83.33
II	Feeding practices				
a	Fodder Cultivation	18	30	60.00	100.00
b	Feeding of green fodder	23	30	76.67	100.00
c	Feeding of dry fodder	20	30	66.67	100.00
d	Feeding of concentrates	16	26	53.33	86.67
III	Health care for farm animals				
a	Deworming	26	30	86.67	100.00
b	Vaccination	12	28	40.00	93.33
IV	Farm Management practices				
a	Personal hygiene	8	29	26.67	96.67
b	Housing of animals	19	28	63.33	93.33
c	Cleaning of sheds regularly	16	29	53.33	96.67
d	Providing clean and potable drinking water	20	28	66.67	93.33
e	Verma composting	12	25	40.00	83.33
V	Marketing practices adopted by the farmers				
a	Marketing of milk through KMF	21	29	70.00	96.67
b	Self packing and marketing	4	7	13.33	23.33

Conclusion

To improve the yield of the dairy farm more the farmer need to adopt more scientific dairy farming practices and this can be achieved only through by attending trainings, workshops, field demonstrations, study tours etc. The study analyzed that the management practices including waste management adopted by the farmers are very poor when compared to all other practices adopted. So it is recommended to improve and follow the modern practices of feeding, health care, marketing and breeding practices. The knowledge gain was high in Artificial insemination, fodder cultivation, feeding of green fodder, feeding of dry fodder, deworming followed by vaccination, personal hygiene, cleaning of sheds regularly and marketing of milk through Karnataka Milk Federation. The more emphasis is to be given to animal management practices with the help of veterinary doctors, extension person, dairy cooperatives societies working in the locality they may give valuable advise to the farmers on the recent improved dairy management practices that need to be adopted by the dairy farmers for better output

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