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Knowledge gain and adoption of clean milk production through training

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Abstract

The rural economy is closely tied up with milch animals and it depends on it for their livelihood. The milching animals has been never a separate occupation from agriculture and livestock enterprise plays a crucial role in improving socio-economic conditions of dairy farm women. There are several aspects of dairy development but one of important aspects is clean milk production. In order to know the adoption level of clean milk production practices by dairy farmer a survey was conducted to know the impact of trainings on clean milk production practices among small and marginal dairy farmers participated in ICAR-KVK Bidar for training programme. The knowledge and adopted level about improved clean milk production practices were recorded before and after trainings. It revealed that the knowledge about 95 per cent farmers had good milking equipments. It was also found that 90 per cent farmers gained knowledge in storage followed by animal's hygiene (87.50%), milking environment (85.00%) and milker's hygiene (70.00%). The current Study showed that very few farmers were known about clean milk production practices before training whereas, after training the level of adoption increases to 60, 50, 25, 32.50 and 25 per cent respectively the animal hygiene, milkers hygiene, milking equipment, milking environment and milk storage.

Keywords: Clean milk production, training, adoption level, and small and marginal farmers

Introduction

India being the highest producer of milk around 187.7 MT and per capita consumption 394g per day in 2019 has great potentiality to tap of the emerging global marketing opportunities (Annon, 2019) there is a lot of potential in India to increase milk production. No doubt, India has made rapid strides in enhancing the quantity of milk produced. But, it is lagging behind with regard to quality.

Major constituents for milk production in dairy industry in India are small, and marginal farmers and small unit of production (Khatkar, 2007) [4]. Further, dairying is considered as a subsidiary occupation to our farmers. Limited access to mass media and illiteracy among our farmers are the main causes of ignorance regarding the quality norms and the advantages in producing quality milk. There by the Indian dairy industry is in a highly disadvantaged position in milk market. There is urgent need to educate millions of milk producers to improve the quality of milk and milk products.

Milk quality is utmost important factor in dairying today due to consumer's awareness regarding "Quality". Thus quality milk production and knowledge of hygiene and sanitation of farmers is crucial in food chain. Quality is a result of totally integrated approach from farm dairy environment to the consumer's door. Although, India ranks first in milk production, quality of milk produced is not satisfactory due to lack of technical knowledge to the farmer (Ogale, 1999) [5]. Dairy innovations are not adopted on mass scale by dairy farmers due to lack of extension services (Rathod *et al.*, 2014) [6].

In this context, clean milk production is one important aspect in enhancing the quality of milk giving awareness of the farmers about adopting animal's hygiene, milker's hygiene, milking equipments, milking environment and milk storage.

Most of the farmers are doing milking practices with lack of scientific knowledge. Therefore, the present study was undertaken with the following specific objective to know the impact of training imparted by ICAR-Krishi Vigyan Kendra, Bidar on clean milk production practices.

Materials and Methods

The study was carried out at ICAR-Krishi Vigyan Kendra, Bidar, Karnataka. An on campus hands on on-campus training programme was conducted and there were 40 small and marginal

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farmers were participated in the training programme on clean milk production includes animals hygiene, milkers hygiene, milking equipments, milking environment and milk storage and a field visit was also conducted to nearby dairy unit for better exposure and participants took interest and eagerly participated in training programme.

Pre and post experimental design was used to ascertain the knowledge gained by the trainees (rural youth farmers and farm women) in different aspects of clean milk production. Gain in knowledge was measured by a knowledge score developed (Anil Kumar *et al*, 1994) [11] for this purpose. Questionnaires, containing 10 knowledge items about clean milk production, were given to the trainees before the start of the training program and were collected back. Another set of questionnaire, 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 clean milk production practices.

Results and Discussion

Extent of Gain in Knowledge about Clean Milk Production Practices in Dairy Farmers

The gain in knowledge by the respondents about clean milk production practices was measured in terms of percentage. The data regarding gain in knowledge about clean milk production practices and milking technologies were recorded under two heads i.e. knowledge before training and after training.

The data presented in the Table 1. With regards to the level of gain in knowledge it revealed that the knowledge about 95 per cent farmers had good milking equipments. It was also found that 90 per cent farmers gained knowledge in milk storage followed by animals hygiene (87.50%), milking environment (85.00%) and milkers hygiene (70.00%) as compared to 70, 65, 27.50, 52.50 and 20 per cent respectively the good milking equipments, milk storage, animals hygiene, milking environment and milkers hygiene knowledge before they took the training.

The findings are in confirmation with Surkar *et al.*, (2014) [7] he 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.

Extent of Adoption of Clean Milk Production Practice

With regards to level of per cent gain in knowledge in adoption of clean milk production know the by the trainees is presented in table no 2. It was observed that there was an increase in knowledge as a result of their exposure to training program. The gain in knowledge as a result of training was found to be highly significant statistically (1% level of probability) indicating that imparting training is one of the powerful means to increase the knowledge level and thereby reduce the knowledge gap and recorded the 60 per cent farmers

expressed that they will adopt animal hygin as first priority, and also expressed 50, 32.50, 25 and 24.50 per cent respectively the milkers hygiene, milking environment, milking equipments and storage of milk. The results are in line with the results of Intodia *et al.*, (1997) [3] who found that women elites have acquired knowledge as a result of their exposure to vocational training on nutrition gardening.

These findings are also in support with Surkar *et al.*, (2014) [7], who concluded that training, had positive impact on the farmer’s perception and performance. The results were in agreement with Gade *et al.*, (2014) [8] who reported that the effect of training on clean milk production practices and indicated that clean milk production training programme had a significant difference in knowledge of respondents in scientific practices like Animal hygiene and milker’s hygiene.

In present study it was concluded that the training program has a tremendous impact on the farmers on adoption of clean milk production practices. It was revealed that clean milk production technologies are much popular among dairy farmers and farmers are gaining knowledge about year-round production of good quality of milk in their own farm itself under natural atmosphere. Dairy unit it not only gives employment to the rural small scale and marginal farmers but also plays an important role in India’s quality milk production.

The overall adoption percentage by the farmers indicated that training had a significant impact in uptake of new technologies thereby increasing their livelihood with renewed income. The training imparted to farmers increased the awareness about new technologies among the beneficiaries and increased their knowledge. As most of the poor and marginal farmers have very limited capital assets and they mostly depend on dairy farming for their livelihoods.

Table 1: Distribution of respondents according to Gain in knowledge about clean milk production technology (n=40)

Sl no	Technologies	Gain in knowledge (no)		Gain in knowledge (%)	
		Before training	After training	Before training	After training
1	Animal hygin	11	35	27.50	87.50
2	Milkers hygin	8	28	20.00	70.00
3	Milking equipment	28	38	70.00	95.00
4	Milking environment	21	34	52.50	85.00
5	Storage	26	36	65.00	90.00

Table 2: Distribution of respondents according to adoption about clean milk production technology (n=40)

Sl no	Technologies	Gain in knowledge (%)	Adoption level increase (%) after training
		Before training	
1	Animal hygin	27.50	60.00
2	Milkers hygin	20.00	50.00
3	Milking equipment	70.00	25.00
4	Milking environment	52.50	32.50
5	Storage	64.00	24.50

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