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Impact of skill development training on artificial insemination technician in Dharmapuri district

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Abstract

Artificial insemination in livestock is a skill oriented training programme and plays a significant role to alleviate poverty and generate employment opportunities for educated unemployed youth in rural and semi-urban areas. The present study was undertaken with the objectives to assess the impact of training on knowledge gain about artificial insemination technician as a self-employment. The training programme on artificial insemination was focused on youth who have interested in self-employment. Detailed training on different parameters of artificial insemination in context to insemination, pregnancy diagnosis, and selection of healthy animals, vaccination and deworming was imparted to a total number of 20 participants in one batches. The impact of the training was assessed by pre and post evaluation testing in terms of improvement in knowledge for different parameter.

Keywords: Artificial insemination, gain in knowledge and training

Introduction

India is the largest producer of milk in the world but productivity of livestock in India is still dismally low. To enhance the productivity of animals, breed improvement and better management practices are required. Conducting of specialized training courses for the benefit of dairy farmers can enhance the productivity of animals. The farm science centres known as Krishi Vigyan Kendra are functioning in almost all the districts across the country for imparting vocational training to different category of farmers. One of the main aims of KVKs is to develop entrepreneurship amongst the rural people especially the farmers, farmwomen and rural youth in different areas of agriculture, dairying, fisheries, bee keeping and home sciences for enhancing productivity, increasing income and employment for the welfare of human being. KVK Dharmapuri conducts various need-based and skill oriented training programmes for different target groups to enhance production and productivity in their mixed farming systems of crop and dairy husbandry. "Learning by Doing" proper follow up activities are undertaken after these trainings. Proper guidance of trainees in adopting learnt knowledge and skill is also as important as training itself (Keshava, 2002) [3]

Artificial insemination in livestock is the technique in which semen with living sperms is collected from the male and introduced into female reproductive tract at proper time with the help of instruments. It can also play a significant role to alleviate poverty and generate employment opportunity for educated unemployed youth. Extension training has been considered an outlet for exchange of concepts with in a community. Therefore, training has been widely accepted strategy with high returns on investment. There is an urgent need to impart technical knowledge to farm women and youth in order to adopt artificial insemination as an income generating activity for enhancing their income. In this context, ICAR-Krishi Vigyan Kendra, Dharmapuri has conducted one training courses on artificial insemination technician. Artificial insemination is a skill oriented training programme which can provide employment in both the rural areas and semi-urban. Artificial insemination for livestock will improve their socio economic condition of farmers, families and solve employment of both literate and illiterate especially in rural areas. The present study was undertaken with the objective to assess the impact of training on knowledge about artificial insemination as an enterprises/self-employment.

Materials and Methods

Selection of participants

The training programme on artificial insemination technician was focused on farmers, farm women and rural youth for those who have interested in self-employment.

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The study was conducted at ICAR-KVK Dharmapuri, Tamil Nadu funded by the ATARI, Hyderabad. 20 trainees were imparted training on artificial insemination for 25 days in one batch out of which 19 were men and one was women. The trainees were selected based on the written test and interview for the training programmes.

Collection of data

A questionnaire was formulated comprising of general information, background of participants, landholding etc. A pre evaluation test was conducted to know the level of knowledge of participants regarding artificial insemination, pregnancy diagnosis, selection of animal, vaccination, deworming, identification of breeds, handling of animals etc. Thorough training on various aspects of artificial insemination was imparted during the training programme. Similarly after completion of the training course, post evaluation was performed in order to assess the knowledge gained by the trainees and effectiveness of training.

To test the knowledge of trainees, a set of 15 questions related to artificial insemination, nutrition management of livestock and poultry, pregnancy diagnosis, vaccination and deworming etc. were used. Hence Deviation or gain in knowledge was calculated from the difference of scores obtained in pre and post knowledge test of the trainees.

$$\% \text{ of Knowledge gain} = \frac{\text{Post evaluation score} - \text{Pre evaluation score}}{\text{Total score}} \times 100$$

Results and Discussion

Socio-Economic profile

The participants differed in their socio-economic status based on education, occupation, landholding and annual income etc. (Table.1). The results revealed that 5 per cent of the participants were female whereas 95 per cent were male. The age of participants was between 17 to 42 years. Majority of the participants (65%) were in age group of 17-30 whereas 20% are below 40 years of age and 15 per cent were above 40 years. Information with respect to case showed that 95 per cent of the participants belong to backward caste followed by scheduled caste (5%).

Assessment of the trainees with respect to education indicated that 10 per cent studies up to middle level followed by matriculate (30%) followed by senior secondary (20%) followed by diploma (15%) and followed by graduation (25%). Information with respect to occupation background revealed that all the participants were belonged to farming background. It was found that, 90 per cent of the participant was getting low annual income and 10 per cent of them had medium annual income.

It was also inferred (Table 1) that majority of the participants (70%) were having landless whereas few of the participants (25%) were under marginal farmers category, further 5 per cent participants were from small farmer category and thus it was evident that artificial insemination enterprises does not require much land and therefore, landless farmers were found to be interested to adopt this enterprises to supplement their family income. The socio-economic factors impacting the adoption of artificial insemination techniques were not consistent with one another. Age has no significant relationship in adoption of artificial insemination.

Reason of participation

The factors which motivated the participant to undergo the

training were given for ranking in order of importance as perceived by them. As shown (Table. 2), 65 per cent respondents joined training to learn artificial insemination techniques for practice, 25 per cent of the participant interested to adopt artificial insemination techniques, 5 per cent joined the training course just to teach fellow farmers about importance of artificial insemination in dairy cows and 5 per cent wanted to know the techniques of artificial insemination in cows. Similar results were also reported by Kaur (2016) [1]. It was evident that majority of participants joined the training course to adopt mushroom cultivation as an enterprise.

Increase in level of in knowledge

Pre exposure and post exposure scores were computed for all the sub-components of artificial insemination technician. In pre evaluation test, the knowledge on artificial insemination techniques and pregnancy diagnosis were 0 per cent regarding the value addition of milk was 30 per cent. Post evaluation training score of various aspects ranged from 40 per cent in case of intrauterine therapy to 100 per cent in case of identification of HF cows. It was noticed that pre evaluation knowledge score was not much satisfactory for all the aspects of training programmes. However, the knowledge score gained by participants after training was more satisfactory in all aspects. Sufficient gain in knowledge regarding artificial insemination technician was recorded for sub-components viz., artificial insemination techniques, Pregnancy diagnosis of cattle, Nutrition requirement for cattle, Selection of dairy cattle, Identification of HF cow, mastitis in cow, ethano veterinary medicine for cow, vaccination of cow, deworming of cow, intrauterine therapy, metritis in cow and value addition of milk. It was observed that 55 per cent of the trainees were deviating knowledge on artificial insemination techniques after training. While 85 per cent of the respondent were deviating in knowledge on vaccination of cows after training. It was revealed that 70 per cent of the trainees were deviating knowledge on pregnancy diagnosis after training whereas 70, 75 and 95 per cent of the trainees were deviating knowledge on Nutrition requirement for cattle, Selection of dairy cattle, Identification of HF cow. It may therefore, be concluded that respondent succeeded in acquiring knowledge after exposure of training on artificial insemination technician. The results were similar to the finding reported by Rachana *et al.* (2013) [5], Karur (2016) [1] Nagaraj *et al.* (2017) [4] and Kavitha *et al.* (2019) [2] that exposure to training increased the knowledge of farmers, farm women and youths. Thus it can be inferred that exposure to training had increased the knowledge regarding all the sub components of artificial insemination technician. The reason behind the satisfactory gain in knowledge might be well educational background of participant also having keen interest of participants.

Suggestion given by the trainees in improving artificial insemination practices

The suggestion offered by the trainees for further improvement of the training course was presented in Table.4. Majority of the respondent (90%) suggested that Frozen semen straw to should be supplied by the government on time and Linkage with marketing channels. Besides, 85 per cent of the respondents revealed that need more practical training, 75 per cent respondents need financial assistance by government and 55 per cent expected additional exposure visit to successful entrepreneur farm during training course.

Table 1: Socio- economic profile of trainees undergone artificial insemination training (n=20)

Sr. No	Particular	Trainees attended artificial insemination technician	
		Frequency	Percentage
1	Male	19	95
	Female	1	5
2	Age		
	Up to 30 Yr	13	65
	31-40 Yr	4	20
3	Above 40 Yr	3	15
	Caste		
	Scheduled caste	1	5
4	Backyard caste	19	95
	Education		
	Primary		
	Middle level	2	10
	Matriculate	6	30
	Senior secondary	4	20
	Diploma holder	3	15
5	Graduate	5	25
	Post graduate		
	Occupation		
	Farming	20	100
	Business		
6	Services		
	Housewife		
	Others(Retiree, Student)		
	Annual income		
7	Low	18	90
	Medium	2	10
	High		
7	Landholding		
	Landless(<1 ha)	14	70
	Marginal(1-2 ha)	5	25
	Small(1-2 ha)	1	5
	Semi medium(2-4 ha)		
	Medium(4-10 ha)		
	Large (>10 ha)		

Table 2: Reason of participation in training programme in artificial insemination (n=20)

Sr. No	Reason	Frequency	Percentage	Ranking
1	To adopt artificial insemination	5	25	II
2	To learn about artificial insemination techniques for practice	13	65	I
3	To teach fellow farmers about artificial insemination	1	5	III
4	Just to know about artificial insemination	1	5	III

Table 3: Gain in knowledge after training with respect to different component (n=20)

Sr. No	Parameter	Pre training (%)	Post training (%)	Change in knowledge
1	Artificial insemination techniques	0 (0)	11 (55)	11(55)
2	Pregnancy diagnosis of cattle	0 (0)	14 (70)	14(70)
3	Nutrition requirement for cattle	1 (5)	15 (75)	14(70)
4	Selection of dairy cattle	2 (10)	17 (85)	15(75)
5	Identification of HF cow	1 (5)	20 (100)	19(95)
6	Mastitis in cow	4 (20)	13 (65)	9(45)
7	Ethanoveterinary medicine for cow	2 (10)	12 (60)	10(50)
8	Vaccination of cow	2 (10)	19 (95)	17(85)
9	Deworming of cow	2 (10)	18 (90)	16(80)
10	Intrauterine therapy	0 (0)	8 (40)	8(40)
11	Metritis in cow	1 (5)	16 (80)	15(75)
12	Value addition of milk	6 (30)	17 (85)	11(55)

Table 4: Trainees suggestion for improving artificial insemination enterprises after training (n=20)

Sr. No	Suggestion	Frequency	Percentage	Ranking
1	Frozen semen straw to be supplied on time	18	90	I
2	Need more practical training	17	85	II
3	Help to get financial assistance through banks for purchase of LN2 container	15	75	III
4	Linkage with marketing channels	18	90	I
5	Exposure visit to successful entrepreneurs farm	11	55	IV

Conclusion

The study indicates that systematically planned training programme and proper follow up action not only increased the knowledge and skill of the beneficiary, but their production and profit as well. To be fruitful, the training programmes should be designed based on actual training needs and socio economic profile of potential trainees. The KVKs should plan and organize need based vocational training programmes for entrepreneurship development so that the rural people are benefited. Awareness and training on artificial insemination technician helped in income generation, general dairy husbandry practices and in profitable marketing among the participants.

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