



A Comparative Study on Productive and Reproductive Performance of Crossbred Cows and Buffalos of KVK Trainee and Non-Trainee Dairy Farmers

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ABSTRACT

Study was conducted in purposively selected KVK Satna in Madhya Pradesh. Selection of six villages was done randomly from the thirty villages having more than 15 trainees. From each selected villages 10 trainees and 10 non-trainees i.e. 60 trainees and 60 non-trainees were selected randomly. From the selected respondents it was found that 19 trainees and 14 non-trainees were rearing crossbred cow and 38 trainees and 30 trainees were rearing buffalo. A structured interview schedule was developed for the collection of primary data from respondents. The findings of the study showed significant improvement in the productive and reproductive performance of both the cross bred cows as well as buffalos of trainee dairy farmers as compared to non-trainee dairy farmers. From the findings it was concluded that training had incorporated its part in trained dairy farmers which was felt lacunae in non-trained dairy farmers.

KEYWORDS : Training, Dairy Farmers, KVK, Performance of crossbred cows and buffalos

Introduction

Dairying sector has enormous potential to reduce poverty. The poorest of the poor often do not have dairy animal, but if they can acquire their dairy animals, which can help start them along a pathway out of poverty. It contributes in food and nutritional security, generates income and is an important mobile means of storing wealth; they provide subsidiary occupation, offer gainful employment at the location itself and make better utilization of female and child labour leading to women and child empowerment. The major factors responsible for making dairying a profitable industry was found the productive and reproductive performance of the animals. With the view Krishi Vigyan Kendra, Satna started training programmes for the farmers.

Training and development programmes help in removing performance deficiencies in dairy farmers. It is indispensable tool for human resource development and cannot be ignored at any step. This is particularly true when the deficiency is caused by a lack of ability rather than a lack of motivation to perform, the individual (s) involved have the aptitude and motivation needed to learn to do the job better, and dairy farmers are supportive of the desired behaviours. Stability, flexibility, and capacity are required for growth of dairy farming. Training contributes to farmers' stability in at least two ways as farmers become efficient after undergoing training and efficient farmers contribute to the growth of the dairying sector. Further, trained farmers tend to stay with the dairy farming, they seldom leave dairying. Training makes the farmers versatile in operations and all-rounders can be transferred to any job. Flexibility is, therefore, ensured. Growth indicates prosperity which is reflected in increased profits from year to year. Who else but well-trained farmer can contribute to the prosperity of dairy enterprise? Dissatisfaction and complaints can be reduced if dairy farmers are trained well. This equally holds well in agriculture, particularly for farmers and extension personal for their capacity building in their endeavours. Raab *et al.* (1987) defined training evaluation as "a systematic process of collecting information for and about a training activity which can then be used for guiding decision making and for assessing the relevance and effectiveness of various training components". Taylor (1961) defined training is the means to bring about a continuous improvement in the quality of work performed by the staff and the individual. It should equip the leader with necessary knowledge, skills or abilities and attribute to perform his job. Lynton and Pareek (1967) described training as aiming at a lasting improvement on the job. The model of training given by them, based on dynamic development process, contains three phases viz., unfreezing, moving and refreezing. Rao (1969) defined farmers training as an intensive learning activity for a group of selected farmers, assisted by competent trainers to understand and practice the skills required in adoption of new technology, at a place where appropriate facilities exist and at a time and duration considered suitable by the farmers. Dahama and Bhatnagar (1980) opined that training is

meant to educate a person so as to be fitted, qualified in doing some specific job. Singh (1990) defined training as a process by which an individual efficiency and effectiveness in the given context of a job can be maximized.

But such training programs are of limited use if proper evaluation is not carried out and impact in terms of performance of dairy animals is not studied. Therefore it was felt paramount important to examine systematically and scientifically the impact of this training program on the trainees as compared to non-trainees. To measure the impact productive i.e. average daily milk yield, lactation length, lactation milk yield, peak yield and reproductive performance parameters i.e. dry period, age at first calving, service period, service per conception and calving interval were supposed to fix.

Research methodology:

Study was conducted in purposively selected KVK Satna in Madhya Pradesh as KVK Satna was the leading training provider in dairy and animal husbandry practices since 2005. Selection of six villages was done randomly from the thirty villages having more than 15 trainees. From each selected villages 10 trainees and 10 non-trainees i.e. 60 trainees and 60 non-trainees were selected randomly. Fractioning of the respondents was done on the basis of types of animals reared by the dairy farmers for more in-depth study and to avoid dilution of performance of crossbred cows and buffalos from other animal performance. From the selected respondents it was found that 19 trainees and 14 non-trainees were rearing crossbred cow and 38 trainees and 30 trainees were rearing buffalo. A structured interview schedule was developed for the collection of primary data. Before starting the final data collection, the entire schedule was pre-tested for elimination, alteration and modification. The data were collected by personal contact at the place of respondent for a period of 45 days. Data were analyzed using appropriate statistical tools and accordingly interpreted to get fruitful results and logical conclusion of the study.

Result and Discussion:

A) Productive and reproductive performances of the crossbred cows of trainee and non-trainee dairy farmers:

Average daily milk yield of crossbred cows kept by trainees was 5.61 ± 1.15 litres/day as compared to crossbred cows of non-trainees i.e. 4.77 ± 0.66 litres/day. Lactation length of crossbred cows of trainees was 274.63 ± 14.84 days as compared to non-trainees i.e. 259.71 ± 13.11 days. Lactation milk yield of crossbred cows of trainees was found 1542.80 ± 326.61 lit./lactation and non-trainees was 1239.05 ± 190.31 lit./lactation. Peak milk yield of crossbred cows of trainees was 7.27 ± 1.49 l/day and non-trainees were 5.48 ± 0.80 l/day. Dry period of crossbred cow of trainees was 119.94 ± 20.85 days non-trainees was 167.07 ± 16.48 days. Age at first calving of crossbred cows of trainees' was 38.00 ± 1.95 months and that of non-trainees

was 40.30±1.85 months. Service period of crossbred cows of trainees was 124.57±12.01 days and that of non-trainees was 151.78±14.22 days. Service per conception through artificial insemination of crossbred cows of trainees was 1.84±0.24 times and non-trainees were 1.51±0.57 times. Service per conception through natural services of crossbred cows of trainees was 0.24±0.42 times and non-trainees were 0.49±0.36 times. Service per conception through summation of artificial insemination and natural service of crossbred cows of trainees was 2.04±0.34 times and non-trainees were 2.00±0.62 times. Calving interval of crossbred cows of trainees was 394.57±12.01 days and non-trainees were 426.78±14.22 days (Table No. 1).

Table No. 1 Productive and reproductive performances of the crossbred cows of trainee and non-trainee dairy farmers:

S. No	Variables	Trainees (19) 27 animals		Non-trainees (14) 17 animals		Mean difference	t-value	
		Mean	S.D.	Mean	S.D.			
1	Average daily milk yield (l/day)	5.61	1.15	4.77	0.66	0.85	2.68**	
2	Lactation length (days)	274.63	14.84	259.71	13.11	14.91	3.05**	
3	Lactation milk yield (l/lactation)	1542.80	326.61	1239.05	190.31	303.77	3.35**	
4	Peak yield (l/day)	7.27	1.49	5.48	0.80	1.79	4.43**	
5	Dry period (days)	119.94	20.85	167.07	16.48	(-) 47.12	-7.25**	
6	Age at first calving (months)	38.00	1.95	40.30	1.85	(-) 2.27	-3.41**	
7	Service period (days)	124.57	12.01	151.78	14.22	(-) 27.20	-5.79**	
8	Service per Conception (times)	AI	1.84	0.24	1.51	0.57	0.33	1.89*
		NI	0.24	0.42	0.49	0.36	(-) 0.25	-1.70*
		Total	2.04	0.34	2.00	0.62	0.04	0.43
9	Calving interval (days)	394.57	12.01	426.78	14.22	(-) 32.21	6.85**	

**Significant at 1% level
*Significant at 5 % level

B) Productive and reproductive performances of the buffalo of trainee and non-trainee dairy farmers: Average daily milk yield amongst buffalos of trainees was found 4.48±0.97 liters/day as compared to non-trainees 3.40±0.88 liters/day. Lactation length of buffaloes of trainees was 268.85±12.40 days as compared to non-trainees 254.10±13.51 days. Lactation milk yield of buffaloes of trainees was found 1205.85±266.64 liters/lactation and non-trainees were 861.06±220.00 liters/lactation. Peak milk yield of buffaloes of trainees was 5.65±1.34 liters/day and non-trainees was 4.21±0.73 litres/day. Dry period of buffalos of trainees was 184.95±18.87 days and non-trainees were 216.56±15.28 days. Age at first calving of buffaloes of trainees' was 43.55±2.31 months and that of non-trainees was 46.82±2.09 months. Service period of buffaloes of trainees was 143.79±12.36 days and that of non-trainees was 160.67±9.44 days. Service per conception through artificial insemination of buffaloes of trainees was 1.09±0.48 times and non-trainees were 0.63±0.51 times. Service per conception through natural service of buffaloes of trainees was 0.86±0.51 times and non-trainees were 0.53±0.54 times. Service per conception through summation of artificial insemination and natural service of buffalos of trainees was 1.61±0.63 times and

non-trainees were 2.17±0.69 times. Calving interval of buffaloes of trainees was 453.79±12.37 and non-trainees were 470.67±9.45 days/animals (Table No.2).

Table No.2 Comparison of productive and reproductive performances of the buffalo of trainee and non-trainee dairy farmers

S. No	Variables	Trainees (38) 62 animals		Non-trainees (30) 40 animals		Mean difference	z-value	
		Mean	S.D.	Mean	S.D.			
1	Average daily milk yield (l/day)	4.48	0.97	3.40	0.88	1.08	4.81**	
2	Lactation length (days)	268.85	12.40	254.1	13.51	14.74	4.63**	
3	Lactation milk yield (l/lactation)	1205.85	266.64	861.06	220.00	344.8	5.84**	
4	Peak yield (l/day)	5.65	1.34	4.21	0.73	1.44	5.64**	
5	Dry period (days)	184.95	18.87	216.56	15.28	(-) 31.61	7.63**	
6	Age at first calving (months)	43.55	2.31	46.82	2.09	(-) 3.26	6.10**	
7	Service period (days)	143.79	12.36	160.67	9.44	(-) 16.87	6.38**	
8	Service per Conception (times)	AI	1.09	0.48	0.63	0.51	0.46	3.80**
		NI	0.86	0.51	1.53	0.54	(-) 0.67	5.19**
		Total	1.61	0.63	2.17	0.69	(-) 0.55	3.43**
9	Calving interval (days)	453.79	12.37	470.67	9.45	(-) 16.88	6.38**	

Conclusion

It is concluded from the above discussion that the average daily milk yield, lactation length, lactation milk yield, peak yield of crossbred cows and buffalos was significantly increased amongst trainee dairy farmers as compared to non-trainee dairy farmers. Dry period, age at first calving, service period, service per conception and calving interval of crossbred cows and buffalos was significantly reduced amongst trainee dairy farmers as compared to non-trainee dairy farmers.

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