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Knowledge level of rural farm women about various scientific dairy management practices in Dhemaji district of Assam

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Abstract

Dairy industry has been an imperative fraction of the agricultural set-up for thousands of years. In India, about 70 percent of its population living in villages and mainly depends on agriculture where livestock plays a vital role in the socio-economic life. Livestock farming is the most proficient livelihood in India and women play a very important responsibility in livestock farming practices in the country. A study was conducted on 60 rural women dairy farmers of Dhemaji districts of Assam to find out their knowledge level about various practices related to dairy farming. A planned interview schedule comprising questions on feeding practices, breeding practices, health care, general management and clean milk production were developed and same was filled during the personal interview with women farmers. The data revealed that majority (56.67%) of the respondents had medium level knowledge on various recommended dairy farming practices, 26.67% has low and only 16.66% has high knowledge level. With respect to breeding practices, 83.33 percent of the respondents had knowledge on sign and symptoms of heat and detection of heat followed by importance of artificial insemination (71.67%) and the correct time of AI /service (68.33%). Almost all (98.33%) of respondents possessed complete knowledge about importance of colostrums feeding to new born calf, followed by feeding of additional concentrate to pregnant cow/buffalo in the last stage of pregnancy (73.33%), daily requirement of green fodder to dairy animal daily (66.67%). A majority of the respondents (91.66%) had knowledge about the symptoms of foot and mouth disease followed by knowledge on vaccination schedule for dairy animals (70.00%). In the general management practices 83.33 percent of the respondents had knowledge on control of ectoparasites as this was the great bother for both the animal as well as the farmers. In clean milk production practices, most of the respondents (91.67%) had knowledge on importance of washing the udder before milking. The study concluded that dairy farmers had medium level of knowledge regarding recommended management practices. There is massive chance for the improvement in the knowledge of the dairy farmers. By organizing scientific training programmes, awareness camp, exhibitions, method demonstrations, vaccination camp, radio/TV talks, and message through social media can help to increase the knowledge level of the farmers.

Keywords: Knowledge, dairy management practices, farm women

Introduction

In India, dairy farming plays an important role for the upliftment of rural economy in the country. In milk production, India ranks first in the world contribute 14.6 percent of the world production. According to the national accounts and central statistical organization, the livestock segment gives nearly 3.92 percent of the total GDP of the country, which is nearly 25.8 percent of entire agricultural GDP contributions. It has recorded that milk production of India increases fifty-one percent during the last eight years and increased to twenty-two crore tonne in the year 2021-22. One of the most unique characteristic of Indian dairy industry scattered all over the country is that the bulk of milk production is handled by small milk producers who are illiterate and unaware of commercial and cost-effective features of milk production. This may be due to a range of reasons like poor adoption and diffusion of new technologies (Rathod *et al.*, 2014) [6]. Adoption of modern scientific dairy farming practices is very much essential for increasing productivity and production. It involves scientific feeding, breeding, health care, and management of dairy animals and clean milk production. Implementations of scientific management in dairy also make this industry more lucrative. For this, knowledge and information about scientific dairy farming practices is pre-requisite for adoption of it which in due course improves the dairy production. Hence, it becomes urgent to congregate information from the farmers about knowledge on scientific dairy farming

practices from the field level, which could facilitate in preparing action plan as per need of rural farmer women's.

Materials and Methods

The present study was conducted in Dhemaji district of Assam. The study was designed to analyze the knowledge of the rural farm women about scientific dairy management practices. From this district, Dhemaji and Machkhowa blocks have been selected randomly as locale of the study. Three villages were selected randomly from each blocks and from each selected village, ten respondents having more than two dairy animals (cattle/buffalo/both) were chosen randomly with the help of local Veterinarian / village head, which constituted a total of 60 respondents for the study. An interview schedule was developed in discussion with experts and literatures review to measure the knowledge level of rural women about improved dairy practices. The interview schedule consists of six questions in each of the five domains viz., breeding, feeding, health management, general management and clean milk production, hence totally thirty questions.

Data were tabulated and analyzed using appropriate statistical tools and accordingly interpreted to get results and logical conclusion of the study.

Result and Discussion

General Knowledge level of farm women on scientific dairy management practices

Table 1: General knowledge level of farm women on scientific dairy management practices

N=60			
Knowledge types	Level of Knowledge assortment	Frequency	Percentage (%)
Low	<40.28	16	26.67
Medium	40.28-43.58	34	56.67
High	>43.58	10	16.66

It could be observed from Table 1 that, majority (56.67%) of the dairy farmer women's studied had medium knowledge level on scientific dairy management practices, followed by low (26.67%) and high (16.66%) knowledge level on scientific dairy farming practices. This is may be due to the fact that, majority of farm women involved as a ancestral venture without having any proper training on dairying in the study area. In the earlier studies, similar observations were reported by Sharma *et al.*, (2007) ^[7].

Respondents knowledge level as per individual dairy management practices

Table 2: Knowledge of respondents as per individual dairy management practices

N=60

Sl.	Knowledge item	Frequency(f)	Percentage (%)
A Breeding management			
1.	Age at first heat	34	56.67
2.	Knowledge on signs & symptoms of heat and detection of heat	50	83.33
3.	Time for insemination after calving	28	46.67
4.	Recognition of reproductive problems & issues	39	65.00
5.	Importance of A.I.	43	71.67
6.	Correct time for A.I.or service	41	68.33
B Feeding management			
1.	Importance of Colostrum feeding to new born calf	59	98.33
2.	Concentrate feeding practices to the new born calf	30	50.00
3.	Utilization of locally available feed ingredients for formulation of concentrate feed	38	63.33
4.	Feeding of additional concentrate to pregnant cow/buffalo in the last stage of pregnancy	44	73.33
5.	Daily requirement of green fodder to dairy animal	40	66.67
6.	Addition of mineral mixture in the ration	32	53.33
C Health management			
1.	Knowledge on vaccination schedule for dairy animals (calf & adult)	42	70.00
2.	Knowledge on deworming schedule for dairy animals (calf & adult)	40	66.67
3.	Symptoms and prevention of calf scour	29	48.33
4.	Symptoms and prevention of metabolic disease like Milk fever, ketosis etc.	35	58.33
5.	Symptoms of foot and mouth disease	55	91.66
6.	Symptoms of mastitis in dairy animals	33	55.00
D General management			
1.	Importance of separation of sick animals	38	63.33
2.	Proper procedure of Umbilical cord ligation	35	58.33
3.	Dehorning of new born calf	17	28.33
4.	Knowledge about high yielding varieties of fodder	41	66.67
5.	Technique of cleaning of cattle shed	45	75.55
6.	Knowledge on control of ectoparasites	50	83.33
E Clean milk production			
1.	Knowledge on shed Cleanliness	51	85.00
2.	Importance of washing the udder before milking	55	91.67
3.	Washing of utensils before milking (boiled water or detergent	43	71.67
4.	Shunning the first few flows of milk from each teat while milking	31	51.67
5.	Correct method of milking	28	46.67
6.	Importance of dry period	40	66.67

From the Table 2 revealed that under breeding practices, 83.33 percent of the respondents had knowledge on signs and symptoms of heat and detection of heat followed by importance of artificial insemination (71.67%) and the correct time of AI /service (68.33%). The knowledge about recognition of reproductive problems & issues, age at first heat and the time for insemination after calving was possessed by 65.00 percent, 56.67 percent and 46.67 percent, respectively. These findings are in line with the findings of Rathod *et al.*, (2014) ^[6] and Sharma *et al.*, (2007) ^[7].

With respect to feeding management, almost all (98.33%) of farm women possessed complete knowledge about importance of colostrums feeding to new born calf, followed by feeding of additional concentrate to pregnant cow/buffalo in the last stage of pregnancy (73.33%), daily requirement of green fodder to dairy animal (66.67%). This may be due to the fact that colostrums feeding, feeding of additional concentrate to pregnant cow/buffalo in the last stage of pregnancy were the well adopted practices in that locality hence the respondents also known about it.

A majority of the respondents (91.66%) had knowledge about the symptoms of foot and mouth disease followed by knowledge on vaccination schedule for dairy animals (70.00%). The knowledge on deworming schedule for dairy animals (calf & adult), symptoms and prevention of metabolic disease like Milk fever, Ketosis etc., and symptoms of mastitis in dairy animals was possessed by 66.67 percent, 58.33 percent and 55.00 percent of the respondents, respectively. Higher level of knowledge were observed regarding foot and mouth diseases, it may be due to study area are most prevalent to this disease. These are similar to the observations Arora *et al.*, (2006) ^[1].

In the general management practices 83.33 percent of the respondents had knowledge on control of ectoparasites as this was the great bother for both the animal as well as the farmers. About 75.55 percent of the respondents know the technique of cleaning their cattle sheds and about 66.67 percent of them possessed the knowledge about high yielding varieties of fodder. Very few (28.33%) of the farm women had knowledge on dehorning of new born calf as this prescribed practice was rarely adopted in field condition.

Table 2 highlighted that in clean milk production practices, most of the respondents i.e., 91.67 percent had knowledge on importance of washing the udder before milking followed by knowledge on shed cleanliness (85.00%). Knowledge on washing of utensils before milking (71.67%) and the importance of dry period for clean milk production (66.67%) were the practices known to the respondents. The knowledge about shunning the first few flows of milk from each teat while milking and correct method of milking was possessed by 51.67 and 46.67 percent of the respondents, respectively. The reasons articulated by dairy farm women for not practicing the correct method of milking i. e. full hand method of milking due to the usual traditional milking method, and they supposed that if they had changed the method of milking, milk yield would trim down. The similar findings were reported by Gour and Patel (2003) ^[2].

Conclusion

The study concluded that respondents had medium level of knowledge regarding scientific dairy management practices. There is immense possibility for the enhancement in the knowledge of the respondents. Among all the animal

products, milk is considered as a very nutritious food because of containing various essential nutrients in appropriate proportions required by human body. By adopting new technologies and scientific rearing practices help in increasing the production performances and productivity. Hence, there is a lot of scope for increasing the existing level of knowledge of respondents about scientific dairy management practices. By organizing scientific training programmes, awareness camp, exhibitions, method demonstrations, vaccination camp, radio/TV talks, and message through social media can help to increase the knowledge level of the farmer womens.

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