



Knowledge level of women dairy entrepreneurs about improved dairy management practices

P. ARUN KUMAR AND S. K. METI

ABSTRACT : The study was conducted on Knowledge level of women dairy entrepreneurs about improved dairy management practices of Nagamangala and Krishna Rajpet of Mandya district in Karnataka during 2010-2011 to ascertain knowledge about improved dairy management practices for which 120 women dairy entrepreneurs selected from 12 villages. The study indicated that medium level of knowledge was found among women dairy entrepreneurs. 100 per cent of knowledge was recorded in case of improved dairy management practices in regular cleaning of cattle shed and drainage system, providing sufficient water for drinking to animals (thrice a day), fixed time for milking at regular intervals, wash udder and utensils before milking, sell the milk in cooperative societies and milk yield record keeping. Correlation analysis revealed that education, income, livestock possession, decision making ability, mass media participation, social participation, extension participation, risk orientation and economic motivation showed positive and significant relationship with knowledge about independent variables. Regression analysis revealed that education, mass media participation, extension participation, risk orientation, economic motivation showed positive and significant relation. The remaining five variables age, family, land holding, live stock possession and social participation did not show any significant relationship with their knowledge of women dairy entrepreneurs.

KEY WORDS : Knowledge, Dairy management practices, Women dairy entrepreneurs, Correlation analysis

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INTRODUCTION

In India, about 88 per cent of rural women engaged in agriculture and allied activities, predominantly in animal husbandry and dairy besides performing household work. It is a proven fact that, the role of farm women is worthy enough in comparison with their male counterparts. Women actively participate in the management of dairy animals, production and other aspects of dairying, caring of animals is considered as domestic activities. This includes activities like bringing fodder from field, chaffing the fodder, preparing feed for animals, offering water to animals, protection of animals from ectoparasites, cleaning of animals and sheds, preparation of dung cakes, milking making a milk product and marketing of

produce are performed and decided upon by women. Rural women play a significant and crucial role in agricultural and allied activities including livestock production (Sreedhar and Ranganadhan, 2010).

Dairying is the single largest contributor of agricultural sector to India's GDP, contributing about 27 per cent to GDP from agriculture. Milk production in India has increased five folds in the last fifty years. India has the largest cattle and buffaloes population in the world. It has 218.80 millions of world cattle and 93.77 millions of the world buffaloes. India is the largest milk producing country in the world having 112 million tonnes of milk production in the year 2009-10. Milk production grew by 3.3 per cent to achieve 112 million tonnes in the year 2009-10 as compared to 108.4 million tonnes in the year 2008-09. In India, per capita availability of milk is 258 g/day in the year 2008-09 which is still less compared to the world average of 265 g/day (Makwana *et al.* 2011).

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MATERIAL AND METHODS

The study was conducted in Mandya district of

Karnataka during 2010-11. Mandya was purposively selected for the study as it is the one of the best milk procuring union of Karnataka. In Mandya district comprises of seven talukas. Out of seven talukas, Nagamangala and Krishna Rajpet talukas have been selected for the study as they were having highest women dairy co-operative societies. Since these societies have made a successful story of dairy development and are becoming popular day-by-day. A list of women dairy co-operative societies was prepared in each talukas separately. Keeping the maximum women dairy entrepreneurs, top six villages in each taluk selected as study villages. From each selected study village, a list of dairy women entrepreneurs was prepared. From each village, 10 dairy women entrepreneurs were selected by following simple random sampling procedures. Thus, 120 dairywomen entrepreneurs spread over 12 villages of Nagamangala and K.R.Pet taluks (six each) constituted the sample for the study. Knowledge is operationalized as the amount of information understood by dairy women entrepreneurs about improved dairy management practices. The 'teacher made test' was used to measure the knowledge level of dairy women entrepreneurs about improved dairy management practices, which constituted of 30 statements under eight dairy management practices *i.e.*, selection of milch animals, cattle shed management, feeding and watering, milking, health care, artificial insemination, marketing and record keeping. The question and answers were carefully framed in consultation with dairy specialists of the UAS, Raichur and Department of Animal Husbandry and Veterinary Sciences, KMF, Mandya. The answer elicited from the dairy women entrepreneurs by assigning one score to correct answer and zero to wrong one. Based on the total scores, the respondents were classified into three categories. Low, medium and high by using mean and standard deviation as measures of check. The data were collected for the study by interviewing the head of the household, with the help of a comprehensive well structured interview schedule developed for the purpose.

RESULTS AND DISCUSSION

The experimental findings of the present study have been presented in the following sub heads:

Over all knowledge level of improved dairy management practices by wome dairy entrepreneurs:

The data presented in Table 1 indicated that, majority of 64.16 per cent of the respondents belongs to medium level of knowledge about improved dairy management practices followed by 19.17 per cent of them were found to have high knowledge and 16.67 per cent of them were found to have low knowledge level about improved dairy management practices.

Practice wise knowledge of women dairy entrepreneurs about improved dairy management practices:

Selection of milch animals:

The Table 2 reveals that a large majority *i.e.* three fourth of the women dairy entrepreneurs knowledge about the selection of the milch animals. This might due to the young literate have high economic motivation and their orientation towards the scientific dairying. The above findings are in similar with the findings of Ranuji (2006).

Cattle shed management:

The results reveals that (Table 2) three fourth of the women dairy entrepreneurs (large majority) had knowledge about the cattle shed management. This is because of women dairy entrepreneurs were practicing this dairy practices since long time and it is quite and simple practice. They were curious to clean the drainage systems of cattle shed and also aware of effect of the hygienic situation as a result of the various diseases coming to the milch animals.

Feeding and watering:

The results in Table 2 observed that, cent per cent of knowledge of providing sufficient water for drinking to animals. This may be due to the common notion that providing sufficient water lead to higher milk yield and also reduce body temperature of the milch animals especially in summer condition. Majority of the respondents were have knowledge about feeding concentrates 66.66 per cent and green fodder 80.00 per cent .This might be due to the impression that higher concentrates and green fodder gives high milk yield and also a routine practices as that of domestic activities for the women. The above findings are in accordance with the findings of Arora *et. al.* (2006).

Table 1 : Over all knowledge of women dairy entrepreneurs about improved dairy management practices (n=120)

Sr. No.	Knowledge categories	Respondents	
		Frequency	Percentage
1.	Low (upto18.55)	20	16.67
2.	Medium (18.55 to 23.88)	77	64.16
3.	High (above 23.88)	23	19.17
	Total	120	100.00
	Mean		21.21
	S.D.		2.66

Milking:

The results from the Table 2 stated that cent per cent of women dairy entrepreneur practicing the washing of udder and utensils before milking and time for milking at regular intervals (morning and evening). This may be due to the habitual, traditional and simple practice. Further, they perceived that if they had changed time of milking, the yield may reduce considerably.

Sr. No.	Particulars	Extent of knowledge about women entrepreneur in dairy management	
		Frequency	Percentage
Selection of milch animals			
1.	Consider cross breed cows/ improved buffaloes	113	94.16
2.	Consider Age and No. of lactations	112	93.33
3.	Consider the pedigree of the animals	89	74.16
4.	Consider the teeth and udder size	103	85.83
Cattle shed management			
1.	Separate cattle shed for the milch, sick and pregnant animals	87	72.50
2.	Regular cleaning of cattle shed and drainage system	120	100.0
3.	Place required for each individual animal in the cattle shed (4'x8')	91	75.83
4.	Shed should be constructed in East-west direction	65	54.16
Feeding and watering			
1.	Feeding concentrates for the milch animals as per recommended Schedule (1 kg conc./3 L of milk)	80	66.66
2.	Feeding green fodder to pregnant and milch animals(15 to 20 kg)	96	80.00
3.	Providing sufficient water for drinking to animals(thrice a day)	120	100.00
4.	Washing water trough (two days once)	68	56.66
Milking			
1.	Practising full hand method of milking	33	27.50
2.	Fixed time for milking at regular intervals (morning and evening)	120	100.0
3.	Wash udder and utensils before milking	120	100.0
4.	Using oxytoxin of milking animals	9	7.50
Health care			
1.	Keeping the pregnant and sick animals separately from the herd	110	91.66
2.	Deworming the animals (vaccinating after 3 months)	75	62.50
3.	Vaccinating the cow for foot and mouth diseases once in six months	66	55.00
4.	Seal the naval cord after birth	44	36.66
Artificial Insemination			
1.	Artificial insemination for animals	107	89.16
2.	Animal is to be inseminated(with in 12 hours after noticing)	80	66.66
3.	Animal will come for heat (21 days)	92	76.66
4.	Animal is to be examined for pregnancy after insemination (3 months after insemination)	73	60.83
Marketing			
1.	Sell the milk in co-operative societies	120	100.0
2.	Use of lactometer	102	85.00
Record keeping			
1.	Record keeping of feeding, service, milk production, income and expenditure etc. Will improve management and income	92	76.66
2.	milk yield record keeping	120	100.0
3.	Disease and A.I record keeping	37	30.83
4.	Labour record keeping	19	15.83

Health care:

The results in Table 2 observed that majority of respondents (91.66 %) had knowledge about the keeping pregnant and sick animals separate from the herd. This might be due to avoiding spreading of contaminated diseases from sick animals to healthy animals and if they kept pregnant animals in the same herd, due to fighting of animals may lead to damage or miss carriage of pregnancy. Deworming (62.50 %) and vaccinating the animals for foot and mouth diseases were (55.00 %) of knowledge. The above findings are in accordance with the findings of Ranuji (2006).

Artificial insemination:

The results in Table 2 revealed that, more than 89 per cent of the respondents had knowledge about artificial insemination for animals. This might be due to majority of the farmers expressed that artificial insemination is helpful for high milk production. This is a free service from the department of veterinary and animal sciences. Seventy six per cent of the respondents had knowledge about animal will come for heat (21 days). The possible reason is of good experience and keen observation of animals as they have to take animals for insemination.

Marketing:

The results in Table 2 revealed that, cent per cent of the respondents had knowledge of selling milk in the co-operative societies and 85.0 per cent of them had knowledge about purpose of use of lactometer. This might be due to the best educational efforts of the KMF and other field functionaries development department and to find out adulteration in milk. It is interesting to note that government of Karnataka is giving at the rate of Rs.2 per litre as an incentive for the milk producer's members.

Record keeping:

The results in Table 2 revealed that, cent per cent of the respondents were having knowledge of keeping milk yield record. This might due to as mandatory on the part of the producers members to keep the milk yield record on contrary with the KMF societies. The above findings are in past with the findings of Ranuji (2006).

Relationship of socio-personal and economic characteristics with the knowledge:

It could be revealed from Table 3 among thirteen independent variables of knowledge of women dairy entrepreneurs, ten variables namely, education, income, livestock possession, decision making ability, mass media participation, social participation, extension participation, risk orientation and economic motivation showed positive and significant relationship at 0.01 level of probability, where as

Table 3 : Relationship of knowledge with the independent variables (n=120)

Independent variables	Knowledge 'r'	
Age	-0.0058	NS
Education	0.2485	**
Family	-0.0073	NS
Land holding	-0.0436	NS
Income	0.4292	**
Dairy experience	0.2105	*
Live stock possession	0.2470	**
Decision making ability	0.5400	**
Mass media participation	0.3787	**
Social participation	0.3276	**
Extension participation	0.3841	**
Risk orientation	0.4618	**
Economic motivation	0.5104	**

dairy experience showed positive and Significant correlation at 0.05 level of probability with their knowledge of women dairy entrepreneurs. The remaining three variables namely, age, family and land holding did not show any significant relationship with their knowledge of women dairy entrepreneurs.

Association of socio-personal and economic characteristics with the knowledge:

The data observed in Table 4 revealed that the variables namely, income, dairy experience and decision making ability showed positive and significant relationship at 0.01 level of

Table 4 : Multiple regression analysis of knowledge of women dairy entrepreneur with their independent variables (n=120)

Independent variables	Knowledge 'b'	
Age	-0.0306	NS
Education	0.2123	*
Family	-0.1151	NS
Land holding	-0.0377	NS
Income	0.3970	**
Dairy experience	0.4192	**
Live stock possession	0.0635	NS
Decision making ability	0.5150	**
Mass media participation	0.2319	*
Social participation	0.0588	NS
Extension participation	0.2635	*
Risk orientation	0.2197	*
Economic motivation	0.3129	*
Coefficient of determination(R ²)	0.6752	
F value	2.7561**	

r - Correlation Co-efficient
 b - Regression Co-efficient
 * - Significant at 0.05 level of significance
 ** - Significant at 0.01 level of significance
 NS=Non-significant

probability, Where as education, mass media participation, extension participation, risk orientation, economic motivation showed positive and significant relation at 0.05 level of probability with their knowledge of women dairy entrepreneurs. The remaining five variables age, family, land holding, live stock possession and social participation did not establish any significant relationship with their knowledge of women dairy entrepreneurs. Whereas, coefficient of determination (R^2) of the independent variable was 0.6752. It means 67.52 percent of total variation in the knowledge of women dairy entrepreneurs was explained by the 13 related independent variable.

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