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Constraints and their suggestions faced by dairy farmers in adoption of scientific dairy management practices

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Abstract

The study was carried out in Uttar Pradesh's Kanpur region. For the study, 200 dairy farmers were chosen as a sample. The majority of dairy farmers had a medium degree of acceptance of scientific dairy technologies, followed by high and low, according to the extent of farmer adoption. The expense of crossbred cows and enhanced buffaloes, the high cost of private practitioners' consulting services, the challenge of storing milk during the summer, and a lack of expertise in silage preparation were found to be the primary obstacles encountered by dairy farmers. Dairy farmers made several important recommendations, including the following: concentrates should be made available at the lowest possible price at the village level; marketing facilities for milk and milk products should be established; sufficient AI infrastructure should be ensured at the village level; a planned and consistent supply of vaccines should be available; scientific knowledge for managing the dairy business should be provided; and the loan amount for purchasing dairy animals should be increased.

Keywords: Constraints, suggestions, dairy farmers, adoption behavior

Introduction

In India, dairy farming has developed into a professionally run sector from merely an agricultural way of life. The production of dairy products is a significant source of supplementary income for many rural communities in India. Raw milk has a sizable market in India and is often regarded as fresh by customers. About 60% of milk consumed in India is in liquid form due to traditional eating practices; the remainder is consumed as ghee, cheese, curd, paneer, ice cream, dairy whiteners, and traditional sweets. Dairy farming is a comparatively low-risk daily revenue source.

The majority of dairy producers in India use conventional methods to rear cows on a small scale. By conducting their operations in a systematic way, these farmers may increase their production. The majority of these farmers are ignorant of contemporary dairy farming practices. As a result, rather of turning a profit, some farmers lose their investment. These producers must implement sound business planning and dairy management techniques in order to guarantee optimal output and financial gains from dairy farming. About 26% of Indian farmers are agricultural laborers with one or two milch animals, and about 43% are small-scale farmers (Planning Commission, GOI, 2009). This suggests that the dairy industry offers small farmers, landless individuals, and agricultural laborers with a minimum standard of living, particularly for those residing in draught-affected areas of Gujarat and Rajasthan.

It's noteworthy to note that, in addition to giving the entrepreneur self-employment, entrepreneurship plays a significant role in creating and growing prospects for the other two economic activities, namely employment and profession. (Can you imagine how and why?) Additionally, every company creates new companies, such as suppliers of components and raw materials, service providers (such as couriers, transport, telecom, distributor middlemen, advertising firms, accounting firms, and advocates, etc.), and in the process, entrepreneurship becomes essential to a country's overall economic growth. It's fascinating to observe that not many people choose to pursue careers in entrepreneurship, despite its significant importance in the larger scheme of economic growth.

It was formerly thought that entrepreneurs were born. No society can postpone its developmental goals until the opportunity for entrepreneurs to "birth" presents itself. genuinely, unless entrepreneurship development is seen as a purposeful process of educating people about entrepreneurship as a vocation at a young age and establishing circumstances where they may genuinely choose to become entrepreneurs, plans for economic development would not yield much. Along with a number of other monetary and emotional benefits, this decision turns you from a job-seeker into a job-provider. Being an entrepreneur is undoubtedly more about wanting to be one than it is about being born that way.

One definition of entrepreneurship is an inventive and creative reaction to the surroundings. These reactions can occur in a number of domains, including social work, business, industry, agriculture, education, and the like. Entrepreneurial conduct is simply defined as doing new things or doing things that are already being done in a

different way. A penchant for innovation and a change in the status quo and current institutions are characteristics of entrepreneurial behavior. It might be as straightforward as being willing to purchase a new technology device or as complex as overthrowing the current political system and founding a new country. It manifests as an entrepreneur taking on the risk of planning production and starting a new company.

It is now recognized that entrepreneurship contributes to a nation's development in a number of ways, including assembling and utilizing different inputs, assuming risks, developing and copying production methods to lower costs and improve quality and quantity, broadening the market, and organizing and overseeing the manufacturing facility at different phases. In actuality, the quantity of entrepreneurial skills is a critical factor in a nation's quick economic development.

Materials and Methods

The current study was conducted in Uttar Pradesh's Kanpur district. Kanpur district was purposively chosen for the research out of Uttar Pradesh's 78 districts. There are ten blocks in the Kanpur district of Uttar Pradesh. Two villages were chosen from each block based on the size of the area used for dairy farming. The 20 villages were chosen for the study. With the support of RAEOs and other extension workers, a list of dairy farmers was compiled from the chosen villages. Using random sampling technique, 10 dairy farmers were selected from each selected villages for the study thus the total sample size is 200 for the study.

Results and Discussion

1.1 The extent of adoption of scientific dairy management practices of dairy farmers

A review of the data shows that the dairy farmers have adopted improved dairy management practices, as shown in table 1.1.

Table 1.1: Distribution of respondents according to their adoption behavior about improved dairy management practices- (n=200)

S.N.	Adoption of scientific dairy technologies	Complete Adoption		Partial Adoption		No Adoption	
		Freq.	%	Freq.	%	Freq.	%
1.	**Breeding Practices**						
	a) Monitoring the cow or buffalo's estrous cycle and heat symptoms	165	82.50	25	12.50	10	5.00
	b) A.I. practice during the appropriate heat	140	70.00	40	20.00	20	10.00
	c) Pregnancy diagnosis practice	130	65.00	48	24.00	22	11.00
2.	**Feeding Practices**						
	a) Colostrum should be given to a newborn calf within 30 minutes of birth	145	72.50	40	20.00	15	7.50
	b) feeding a concoction combination according to the amount of milk produced	150	75.00	35	17.50	15	7.50
	c) Growing green feed	160	80.00	30	15.00	10	5.00
3.	**Health care Practices**						
	a) Getting vaccinated against infectious illnesses including HS, BQ, and FMD on a timely and consistent basis	122	61.00	62	31.00	16	8.00
	b) Keeping sick animals who have infectious illnesses apart	118	59.00	56	28.00	26	13.00
	c) Using deworming techniques on calves to reduce parasite diseases	95	47.50	73	36.50	32	16.00
4.	**Miscellaneous Management**						
	a) Supplying the animals with fresh, clean drinking water	174	87.00	16	8.00	10	5.00
	b) Practicing full hand method of milking	144	72.00	41	20.50	15	7.50
	c) Maintaining the cleanliness of animal shed	152	76.00	30	15.00	18	9.00
5.	**Record maintaining**						
	a) Income record	115	57.50	69	34.50	16	8.00
	b) Milk production record	117	58.50	69	34.50	14	7.00
	c) Animal health record	112	56.00	78	39.00	10	5.00
	d) Expenditure record	115	57.50	70	35.00	15	7.50

The degree of implementation of scientific dairy technology was examined in this study. Regarding the breeding practice of monitoring the estrous cycle and heat symptoms of cows and buffalo, the majority of dairy producers (82.50%) had full adoption, 12.50 percent had partial adoption, and only 5% had no adoption. About 70% of dairy producers that used AI during the appropriate heat had full adoption, 20% had partial adoption, and 10% had no adoption. Pregnancy diagnosis was fully adopted by 65.00 percent of respondents, somewhat adopted by 24.0 percent, and not practiced by 11.0 percent of dairy producers.

According to feeding habits, colostrum was routinely given to newborn calves by 72.50 percent of dairy producers for up to five days after the calves were born. Twenty percent of dairy producers partially adopted the practice of giving colostrum to newborn calves within 30 minutes of their birth, whereas seven and a half percent did not. According to milk production, the majority of respondents (75.00%) fed concentration mixture on a regular basis, while 17.50% of dairy producers occasionally followed the practice and 7.50% never did. Eighty percent of dairy producers were fully embracing the idea of cultivating green fodder, fifteen percent were only partially adopting it, and just five percent were planting green fodder more recently.

It has been shown that 61% of dairy producers fully adopted the practice of timely and routine immunization against infectious illnesses such as HS, BQ, and FMD, whereas 31% partially adopted it and 8% did not. 13.00% of dairy farmers did not follow the protocol, 28.00% partially did so, and 59.00% of dairy producers routinely separated the sick animals with infectious illnesses. Therefore, 36.00% of dairy farmers occasionally performed deworming calves,

whereas 47.00% of dairy farmers did so routinely. Of those surveyed, sixteen percent did adhere to the practice.

Under miscellaneous management, it could be seen from Table 1.1that most of dairy farmers regularly provided 'clean and fresh drinking water to the animals' and 'maintained' the cleanliness of animal shed. About 72.0 percent of dairy farmers fully adopted the full hand method of milking, 20.50 percent partially adopted it, and 7.5 percent did not adopt it at all.

Accordingly, when it came to record keeping, 57.50 percent of dairy farmers kept their revenue records on a regular basis, 34.50% did so somewhat, and 8.00% did not. Of the dairy producers, 58.50 percent keep track of their milk output, compared to 34.50 percent who partially adopted this practice and just 7.0 percent who did not. Dairy producers had full adoption of animal health records in 56.00% of cases, partial adoption in 39.00% of cases, and no adoption in 5.00% of cases. While 57.50 percent of farmers consistently keep track of their expenses, 35.00 percent somewhat and 7.50% of dairy producers did not.

Overall adoption behavior of dairy farmers

Table 1.2 shows the extent to which farmers have used scientific dairy technology. It shows that the majority of dairy farmers (61.50%) had a medium degree of acceptance of scientific dairy technology, while 22.50% had a high level of adoption. Just sixteen percent of those surveyed have adopted scientific dairy technology to a limited degree. The technical assistance offered by several organizations promoting dairy in the region, including KVK scientists, government representatives, and other private consultancies, may be the cause of the medium to high degree of adoption of scientific dairy techniques.

Table 1.2: Distribution of the respondents based on overall adoption of scientific dairy technologies-(n=200)

S. N	Category	Frequency	Percentage
1	Low (Less than 8)	32	16.00
2	Medium (between 8 - 16)	123	61.50
3	High (More than 16)	45	22.50
Total		200	100

1.2 The constraints faced by dairy farmers in adoption of scientific dairy management practices

According to the data in Table 1.3, the dairy farmers' biggest financial obstacles were the high price of crossbred cows and improved buffaloes (82.50%), concentrate (74.00%), veterinary medications (67.00%), and insufficient bank financing for the purchase of milch animals (60.50%).

According to the dairy farmers, the most significant technical limitations were the high cost of private practitioners' consulting services (91.0%), the absence of technical expertise to run the dairy business (78.50%), the absence of veterinary facilities in the village (69.00%), and the low rate of conception in dairy animals (59.0%).

The inability to preserve milk during the summer (70.00%), non-profitable milk prices (62.50%), inadequate milk marketing outlets (56.00%), and rivalry from big and established establishments (54.00%) were therefore the main marketing barriers.

Table 1.3: Distribution of respondents according to constraints faced by dairy farmers in adoption of scientific dairy management practices (n=200)

S.N.	Constraints	Respondents		
		Frequency	Percentage	Rank
Economic constraints				
1.	Expensive concentration	148	74.00	II
2.	The high price of enhanced buffalo and crossbred cows	165	82.50	I
3.	Veterinary medications are expensive.	134	67.00	III
4.	The bank's inadequate funding for the purchase of milch animals	121	60.50	IV
Technical constraints				
1.	The local area lacking veterinary facilities.	138	69.00	III
2.	Insufficient technical expertise to oversee the dairy business	157	78.50	II
3.	High-priced private practitioner consulting services	182	91.00	I
4.	Low incidence of conception in dairy cows	118	59.00	IV
Marketing constraints				
1.	Unprofitable cost of milk	125	62.50	II
2.	Ineffective milk marketing	112	56.00	III
3.	Summertime milk storage challenges	140	70.00	I
4.	Competition from large, widely recognized units	108	54.00	IV
General constraints				
1.	Location of remote A.I. facilities	127	63.50	IV
2.	Inadequate irrigation systems for fodders crops	92	46.00	V
3.	Misunderstanding on how to prepare silage	162	81.00	I
4.	Non-availability of improved fodder seeds	130	65.00	III
5.	Animals' susceptibility to illnesses	156	78.00	II

Lack of expertise about silage preparation (81.00%), animal illness susceptibility (78.00%), the distance of AI centers (63.50%), and inadequate irrigation facilities for fodder crop growth (46.00%) were the most general restraints mentioned by dairy producers.

1.3 Suggestions to overcome the constraints by dairy farmers in adoption of scientific dairy management practices

According to the results shown in Table 1.4, a majority of dairy farmers recommended raising the price of milk for producers (95.00%) and requiring subsidies for some inputs, such as veterinary medications, fodder grains, etc. (87.50%).

Table 1.4: Distribution of respondents according to their suggestion to overcome on constraints-(n=200)

S.N.	Suggestions	Respondents		
		Frequency	Percentage	Rank
1.	At the village level, marketing facilities for milk and milk products needs to be established	138	69.00	IV
2.	Providing scientific knowledge for managing the dairy business	122	61.00	VII
3.	Enhance milk price for the producers	190	95.00	I
4.	Certain inputs, such as veterinary medicines, fodder grains, etc., have to be subsidised	175	87.50	II
5.	A planned and regular supply of vaccines must be available	126	63.00	VI
6.	The loan sanction process must to be simple	118	59.00	IX
7.	An increase in the amount of the loan to be used to buy dairy animals	120	60.00	VIII
8.	Concentrates should be made available at lowest rate	145	72.50	III
9.	Ensuring adequate AI infrastructure at the village level	128	64.00	V
10	Encouragement of small-scale dairy industry at the village level	112	56.00	X

Other significant recommendations made by dairy farmers, however, include the following: concentrates should be made available at the lowest rate (72.50%); marketing facilities for milk and milk products should be established at the village level (69.00%); adequate AI infrastructure should be ensured at the village level (64.0%); a planned and regular supply of vaccines should be available (63.00%); scientific knowledge for managing the dairy business should be provided (61.0%); the loan sanction process should be made simple (59.00%); and small-scale dairy industry should be encouraged at the village level (56.00%).

Conclusion

According to the survey, the majority of dairy producers exhibited a moderate degree of entrepreneurial behavior. The majority of dairy farmers had a medium degree of acceptance of scientific dairy technologies, followed by high and low, according to the extent of farmer adoption.

It was observed that the major constraints faced by the dairy farmers is high cost of crossbred cows/improved buffaloes, highly expensive consultancy service of private practitioners, difficulty to store milk in summer season and lack of knowledge about silage preparation. Dairy farmers made several important recommendations, including the following: concentrates should be made available at the lowest possible price at the village level; marketing facilities for milk and milk products should be established; sufficient AI infrastructure should be ensured at the village level; a planned and consistent supply of vaccines should be available; scientific knowledge for managing the dairy business should be provided; and the loan amount for purchasing dairy animals should be increased.

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