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RESEARCH PAPER

Adoption Feasibility of dairy products by SC women

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ABSTRACT

Investigations were carried out to explore the adoption feasibility of milk products like; khoa, paneer, chhana, flavored milk, cream and sweet lassi. Study was conducted in Hisar district of Haryana state by selecting 2 villages randomly. Results revealed that khoa, paneer, cream and chhana. were found to be economical profitable and simple to use. Majority perceived flavoured milk and sweet lassi as simple to use and physical compatible but not profitable. On the whole, adoption feasibility and overall acceptability of processing of milk and milk products technology was of medium level.

Key words : Perceived adoption feasibility, Feasibility index, Dairy products

Agriculturists and nutritionists have generally agreed that developing the processing of milk and milk products is the fastest means of bridging the protein deficiency gap presently prevailing in the country. It is also a promising source of additional income and quick returns from investment. The FICCI survey identified the sectors that have recorded a high growth rate between 10 per cent to 20 per cent that include milk products (10%), traditional/ unorganized milk products (10%), organized branded milk products(15%), khoa/chhana based sweets (10%), butter (10%) and 12 per cent for curd and curd products (FICCI ' Food and Beverages Survey' 2006). Size of India's dairy sector in 2005 was placed at Rs. 227,340 crore (valued at consumer prices). The largest contributor to this is liquid milk (at Rs. 82,835 crore), followed by ghee (Rs. 22,980 crore), Khoa/ chhana/paneer (Rs. 24,100 crore), milk powder (Rs. 4,680 crore), table butter (Rs. 770 crore), cheese/edible casein (Rs. 975 crore) and other products such as ethnic sweets, ice-cream, etc. (Rs. 9,100 crore) (Anonymous, 2007).

A number of projects, especially directed at families below the poverty line (BPL) are in various stages of implementation. Processing of various dairy products with just peripheral institutional support has the potential to supplement the income of poor rural households, especially those of landless labourers and marginal farmers. Processing of various dairy products model empowers women, gives a semblance of financial security to famished households and, in many instances, has also proven to be the financial mainstay of the family. Present study is an attempt to explore the perceived adoption feasibility of various milk products by rural scheduled caste families.

MATERIALS AND METHODS

The study was conducted in Hisar district, Haryana state. From Hisar district, two villages *viz.*, Dhana Khurd and Balawas were selected randomly. A list of all the scheduled caste families from both the villages was prepared with the help of Sarpanch. Out of that list, only 20 interested women per village having milch animals were selected purposively to form group for organizing the trainings. Thus there were total 40 women into 2 groups. 6 days training for the respondents of both the villages on the processing of 6 dairy products namely; khoa, paneer, chhana, flavoured milk, cream and sweet lassi were organized separately.

Perceived adoption feasibility of the technology

Perceived feasibility of various dairy products technology was assessed in terms of five attributes of the technology like : relative advantage (profitability), physical compatibility, cultural compatibility, simplicity complexity and triability attributed of innovation on five rating scale.

Perceived feasibility Index:-

Perceived feasibility Index of the technology was calculated on basis of following formula:

$$PFI = \frac{PFO}{PFM} X100$$

where,
PFI = Perceived Feasibility Index
PFO = Obtained Perceived Feasibility score
PFM = Maximum obtainable Perceived Feasibility score

Data were collected personally by the respondents with the help of structured interview schedule.

RESULTS AND DISCUSSION

The results obtained from the present investigation are summarized below :

Availability and utilization of spared milk

Table 1 contained the information related to the availability and utilization of spared milk by the respondents of both the villages.

In general, irrespective of village, maximum number of respondents (42.50%) had 3-4 litre spared milk per day followed by 5-6 litre by 30.00 per cent respondents and only 1-2 litre by 27.50 per cent respondents. The data further indicted that out of total respondents, maximum number of the respondents (55.00%) irrespective of village, utilized the spared milk for ghee preparation followed by sale of milk in open market (45.00%). None of the respondents was selling the milk to co-operative societies.

As regards awareness about various milk products, out of total samples, majority of the respondents (72.50%) had heard about milk products like paneer, khoa, cream and chhana but none of them was found to be aware about flavoured milk and sweet lassi prepared commercially. In respect to knowledge about preparation of various milk products, majority of the respondents (85.00%), irrespective of village, had knowledge about preparation of paneer followed by cream (30.00%). Only 20.00 and 5.00 per cent of the respondents were knowing preparation of burfi and chhana, respectively in a traditional method. None of the respondents had knowledge about preparation of sweet lassi and flavoured milk. Out of total sample, cent per cent respondents never

Table1 : Availability and utilization of spared milk

Sr. No.	Attributes		Village-wise respondents		Total n=40
			Dhana (n=20)	Balawas (n=20)	
1.	Availability of spared milk/day				
	1-2 litre		6(30.00)	5(25.00)	11(27.50)
	3-4 litre		9(45.00)	8(40.00)	17(42.50)
	5-6 litre		5(25.00)	7(35.00)	12(30.00)
2.	Utilization of spared milk				
	Sale to co-operatives		-	-	-
	Sale to open market		10(50.00)	8(40.00)	18(45.00)
	Ghee preparation		10(50.00)	12(60.00)	22(55.00)
3.	Ever heard about processing of milk and milk products				
	Yes		14(70.00)	15(75.00)	29(72.50)
	No		6(30.00)	5(25.00)	11(27.50)
4.	Knowledge about preparation of milk products				
	Paneer	Yes	16(80.00)	18(90.00)	34(85.00)
		No	4(20.00)	2(10.00)	6(15.00)
	Sweet Lassi	Yes	-	-	-
		No	20(100.00)	20(100.00)	40(100.00)
	Burfi	Yes	5(25.00)	3(15.00)	8(20.00)
		No	15(75.00)	17(85.00)	32(80.00)
	Chhana	Yes	-	2(10.00)	2(5.00)
		No	20(100.00)	18(90.00)	38(95.00)
	Flavoured milk	Yes	-	-	-
		No	20(100.00)	20(100.00)	40(100.00)
	Cream	Yes	5(25.00)	7(35.00)	12(30.00)
		No	15(75.00)	13(65.00)	28(70.00)
5.	Ever attended any training on processing of milk and milk products				
	Yes		-	-	-
	No		20(100.00)	20(100.00)	40(100.00)

Figures in parentheses indicate percentages

attended any training on processing of milk and milk products.

Perceived adoption feasibility of the technology:

Khoa technology :

Fig. 1 indicates that maximum number of respondents of village Dhana found the technology profitable (mean score 3.05, Ist rank), triable (mean score 3.00, IInd rank), simple to use (mean score 2.85, IIIrd rank), physical compatibility (mean score 2.65, IVth rank), culture compatibility (mean score 2.30, Vth rank) in order to sequence. Whereas the respondents of village Balawas found the technology easy to try on small scale (mean score 3.05, Ist rank), simple to use (mean score 3.00, IInd rank), profitable (mean score 2.80, IIIrd rank). The results further showed that equal number of respondents considered this technology as physical and cultural compatible (2.65, IVth rank each).

Paneer technology :

Irrespective of villages, majority of the respondents perceived the paneer making technology as profitable, simple to use and physical compatible and raked Ist, IInd and IIIrd respectively (Fig.1). Further exhibited that majority of the respondents of Dhana village found the technology easy to use (mean score 2.65, IVth rank) and cultural compatible (2.10, Vth rank). Whereas village Balawas respondents rated the technology cultural compatibility easy to try on small scale at IVth and Vth place with mean score 2.40 and 2.25, respectively.

Chhana technology :

Fig. 1 exhibited the perceived feasibility of chhana technology in Dhana village. The technology was found to be profitable (mean score 2.40, Ist rank), simple to use (2.35, IInd rank), cultural compatible (2.00, IIIrd rank) and easy to try on small scale (1.95, IVth rank), physical compatible (1.75, Vth rank) by majority of the respondents. Whereas, the respondents of village Balawas rated the chhana technology as profitable with highest (mean score 2.50, Ist rank) followed by cultural compatible (mean socre 2.05, IInd rank), physical compatible (1.95, IIIrd rank) and simple to use (1.85, IV rank) and easy to try (1.75, Vth rank).

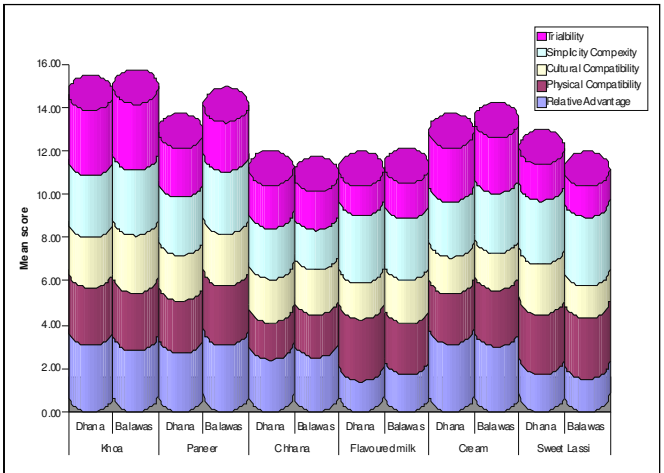

Fig. 1 : Village-wise perceived feasibility of various dairy products technology

Flavoured milk technology :

Out of the total sample, maximum number of the respondents found the technology of flavoured milk as easy to use, physical compatible, cultural compatible, profitable and simple to try by giving Ist, IInd, IIIrd, IVth and Vth rank, respectively (Fig. 1).

Cream technology :

It is clear from the results that cream technology was perceived to be profitable with highest mean score 3.10, Ist rank followed by simple to use (mean score 2.55, IInd rank), triable (2.45, IIIrd rank) and physical compatible (2.30, IVth rank) and cultural compatible (1.70, Vth rank) in order to sequence by majority of the respondents of Dhana village (Fig. 1). When responses of village Balawas were taken into consideration, it was observed that among five attributes of the technology, majority rated the cream making technology as most profitable with highest mean score 3.00. It was followed by simple to use (mean score 2.75, IInd), physical compatible (2.60, IIIrd rank), easy to try on small scale (2.55, IVth rank) and cutlrual compatible (1.70, Vth rank).

Sweet lassi technology :

A perusal of data in Fig.1 indicated that maximum number of the respondents of village Dhana found the sweet lassi technology simple to use, physical compatible, cultural compatible, profitable and triable (with mean score 2.95, 2.75, 2.30, 1.70 and 1.65, respectively). In respect to the respondents of village Balawas where most of the respondents perceived this technology as simple to use (mean score 3.20, Ist rank) followed by physical compatible (2.80, IInd rank), profitable (1.50, IIIrd rank), cultural compatible (1.45, IVth rank) and easy to try on small scale (1.40, Vth rank).

A critical examination of the data reflected that khoa making technology was found to economical profitable, simple to use and try on small scale. As regard paneer and cream making, these were found to be relative advantageous, simple and physical compatible

technologies. Further data indicated that out of three profitable technologies *viz.*, cream, khoa, chhana and paneer; cream technology was perceived to be most profitable by majority to the respondents because of availability of fat/cream testing machine in the village. Secondly, it is easy process of making ghee out of cream. Further, majority of the ladies perceived flavoured milk and sweet lassi as simple and physical compatible technologies but not relatively advantageous. As far as chhana making was concerned they rated it as economical profitable and cultural compatible technology. Mittal (1998) also found khoa, paneer, chhana making untis as economical profitable. Dabur and Kapoor (2007) reported that converting milk into khoa based sweet and marketing it into nearby urban markets, could earn a profit margin of Rs. 8.33/litre of milk handled for Rs. 2,500/month.

Perceived feasibility index:

Perceived feasibility index for the technology was calculated on the basis of formula explained in the methodology and results (Fig. 2) revealed that out of total sample adoption, feasibility was medium by 56.68 per cent respondents followed by 24.16 per cent respondents having high perceived feasibility of processing

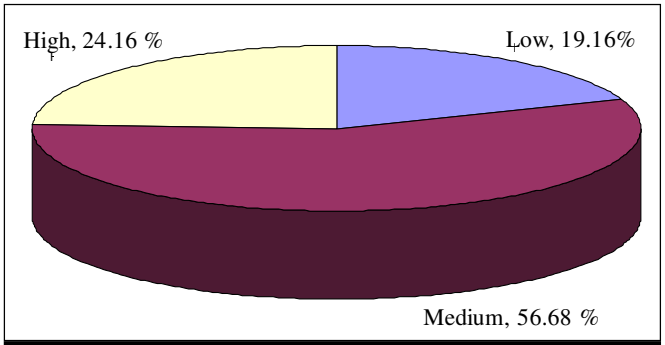

Fig. 2 : Perceived feasibility index of various dairy products

of milk and milk products technology. Only 19.16 per cent respondents had low perceived feasibility.

Thus, it may be concluded that perceived feasibility of processing of milk and milk products technology was found to be medium for scheduled caste rural women. It means there is a need to provide appropriate production and processing technologies and motivation to scheduled caste rural women by organizing training courses and also establishing good marketing network in near by villages. This finding is in tune with the results of Anita (2000), Sunita (2002) and Dabur and Kapoor (2007).

Conclusion :

On the basis of findings, it could be concluded that maximum number of respondents (42.50%) had 3-4 litre spared milk per day. 55.00 per cent respondents were utilizing the spared milk for ghee preparation, 72.50 per cent respondents had heard about milk products like paneer, khoa, cream and cent pre cent respondents never heard about sweet lassi and flavoured milk. Data reflected that khoa making technology was found to be economical, profitable, simple to use and try on small scale. As regard paneer and cream making, these were found to be relative advantageous, simple, physical compatible technologies. As far as chhana making was concerned majority rated it as economical profitable and cultural compatible but not relative advantageous technologies. Cream technology was perceived to be most profitable by majority of the respondents because of availability of fat/cream testing machine in the village. Secondly, easy process making ghee out of cream.

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