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RESEARCH ARTICLE

Entrepreneurial behaviour of dairy farmers under Dairy Business School model

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Abstract: Entrepreneurship has become the need of the hour with good potential to improve livelihood and generate employment. Most of the small and marginal farmers are dependent on dairy farming and there is a need to enhance the income of the farmers as per government priority to double their income. Hence entrepreneurship development in production, processing, and marketing is essential. So with the aim to inculcate entrepreneurial behaviour among dairy farmers, the Dairy Business School (DBS) was set up on an experimental basis at NDRI, Karnal a premier institute working on Dairy. The present study was conducted in 12 villages in six adjoining districts of NDRI, Karnal. An action research design was used with a sample size of 180 farmers during 2021-22. The data were collected through a pre-tested interview schedule by holding the personal interview. The results of the study revealed that the majority (61.11 %) of the farmers had a medium level of entrepreneurial behaviour. All the thirteen components of entrepreneurial behaviour like risk taking, hope of success, persistence, feedback usage, self confidence, knowledgeability, persuasability, manageability, innovativeness, achievement motivation, decision making ability, cosmopoliteness and profit orientation were at a medium level among dairy farmers. Knowledgeability was ranked first which contributed most to the entrepreneurial behavior of farmers while decision making ability at last.

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Introduction

In 2022, India is accelerating its road to progress and emerge as the world's strongest economy. India has become third largest ecosystem with home for startups and entrepreneurship development with improved Global Innovation Index from 81st place to 46th place (www.economictimes.com). Entrepreneurship plays a pivotal role in the economic development and effective tool to fight against unemployment and poverty. Entrepreneurship development in Agriculture and Dairy is an important way out to bring a transformation in our rural areas.

The agriculture sector has showed growth rate of 3.6 per cent in 2020-21 and 3.9 per cent in 2021-22. The major drivers of overall growth are contributed by high growth in allied sectors including livestock, dairying and fisheries. The livestock sector has grown at a CAGR (compound annual growth rates) of 8.15 per cent over the last five years ending 2019-20. As per latest SAS, the sector has been stable source of 15 per cent of their average monthly income groups of agricultural households. The Committee on Doubling Farmers' Income (DFI, 2018) recognized the increasing importance of allied sectors including dairying, livestock, poultry, fisheries and horticulture considered as engines of high growth. Development of livestock sector has led to improvement in per capita availability of milk (gram per day) from 319 in 2014-15 to 427 in 2020-21, eggs (number per annum) from 62 in 2014-15 to 91 in 2020-21 and meat (kg per year) from 5.32 in 2014-15 to 6.52 in 2020-21 (Economic Survey, 2020-21).

The single largest agricultural commodity contributing 5 per cent of the national economy and employing more than 8 crore farmers directly is Dairy. India is ranked number one in milk production in world contributing 23 per cent of global milk production. Milk production in the country has grown at a compound annual growth rate of about 6.2 per cent to reach 209.96 million tonnes in 2020-21(Economic Survey, 2020-21). In rural areas, Dairy farming has the highest potential of generating income and employment through improved productivity of milch animals, animal trading, processing and marketing of milk and milk products. It is one of

the promising sectors for entrepreneurship development in India for small and marginal farmers.

Entrepreneurship development of dairy farmers ensures optimal utilization of available resources and facilitates value addition of milk to products and services. A sustainable and financially viable dairy farming which generate income and self employment through entrepreneurship is the need of the day (Gamit *et al*, 2015).For developing an entrepreneurship and to help the dairy farmer to start a dairy business enterprise, National Dairy Research Institute (NDRI), Karnal being Expert Institute has conducted Dairy Business School (DBS) with financial support from CCS NIAM, Jaipur.

DBS aims to inculcate the entrepreneurial behavior among the dairy farmers. DBS involves the capacity building of the farmers with respect to production, processing and marketing aspects and linking to the value chains. The farmers who were interested in starting dairy enterprise and dairy business were selected as participants. To select the participant farmers for DBS who were interested in starting dairy enterprise and dairy business, the study was conducted to know the entrepreneurial behavior of dairy farmers in the adjoining districts of locale of NDRI, Expert Institute in Haryana.

Methodology

The present study was conducted in Haryana in 2021-22. Haryana has been purposively selected based on the presence of Expert Institute (NDRI) in the field of dairy production and processing. The six peripheral districts of Expert Institute, namely Panipat, Kurukshetra, Jind, Kaithal, Karnal and Yamunanagar were selected for study. From each district, two villages were randomly selected. From each village, 15 respondents were selected based on the criteria's like having more than two milch animals, interested in dairy business and age less than 50 years which leads to sample size of 180. The data was collected with the help of a pre-tested structured interview schedule through personally interviewing the respondents by incorporating all the items pertaining to the specific objectives of the study. The collected data was scored, tabulated and analyzed by using frequency, percentage, mean and standard deviation.

The entrepreneurial behaviour of dairy farmers was measured by developing Entrepreneurial behaviour index (EBI). The entrepreneurial behaviour of dairy farmers was operationally defined as cumulative outcome of thirteen components namely, Risk Taking, Hope of success, Persistence, Feedback usage, Self confidence, Knowledgeability, Persuasability, Manageability, Innovativeness, Achievement Motivation, Decision making ability, Cosmopoliteness and Profit Orientation. Entrepreneurial behaviour index (EBI) was also calculated by using formula:

Entrepreneurial Behaviour Index (EBI) = Obtained mean score/ Maximum obtainable score x100

Result and Discussion

Entrepreneurial behaviour of dairy farmers:

The data in Table 1 depicted that entrepreneurial behaviour of dairy farmers comprised thirteen components such as Risk Taking, Hope of success, Persistence, Feedback usage, Self confidence, Knowledgeability, Persuasability, Manageability, Innovativeness, Achievement Motivation, Decision making ability, Cosmopoliteness and Profit Orientation.

Risk taking

Risk taking was the ability of the farmers to handle risk and uncertainty in facing problems in dairy enterprise. The majority (62.78 %) of dairy farmers belonged to medium level of risk taking followed by high (22.22 %) and low (15.00 %) levels. This might be due to the reason that dairy enterprise being the major source of income for livelihood and value addition of milk will improve the profit levels, the dairy farmers might take risk and face uncertainties. These findings are in accordance with Porchezhiyan et al. (2016), Raina et al. (2016) and Chaurasiya (2015).

Hope of success

The degree to which an individual is prepared to face the consequences of his/her dairy enterprise/venture includes hope of success and fear of failure. In the present study, majority of the farmers (60.56%) had medium level of this particular attribute. Nearly one-fifth were found having high level and remaining 19.44 per cent been having low level of hope of success. The result confirms that most of the respondents have prepared themselves to face the consequences raised in their dairy enterprise. The good number of farmers possessed this attribute indicating high level success in their dairy enterprise. These findings are in line with Palmurugan et al. (2008) and Sah (2005).

Persistence

Persistence is to take repeated or different actions to overcome obstacles in enterprise. It is evident from Table 1 that 60 per cent of respondent farmers belong to medium level of persistence followed by high (20.56 %) and low (19.44%) levels. This shows that most of the farmers were able to take alternative options or different actions to solve the difficulties faced by them in dairy enterprise. The past studies guide that obstacles does not easily demotivate farmers; rather they carry on with more hope of success and self confidence. These findings are being supported by Palmurugan et al. (2008).

Feedback usage

Feedback usage is the ability of farmer to seek and use information/feedback on his dairy enterprise to manage his resources efficiently to earn higher profits. The findings of study revealed that nearly half (53.89 %) of the respondent farmers belong to medium level of feedback usage followed by high (25.56 %) and low (20.56 %) levels. This clearly indicate that most of the farmers who are good at using feedback for improving decision making , performance and management of dairy enterprise, can be more successful. The studies done by Palmurugan et al. (2008) and Sah (2005) have also found the same results.

Self confidence

It is one of the important attribute should be possessed by every individual but especially here farmers and entrepreneurs who wish to run enterprise. The data on this attribute shows that almost cent farmers belonged to medium (82.22 %) and high (16.11 %) level of self confidence. Very few respondent farmers (1.67 %) belonged to low level of self confidence. The probable reason for such findings may be respondent farmers experience in dairy farming, knowledge levels, their ability to complete the different tasks and challenges in dairy enterprise. The findings are supported by Porchezhiyan et al. (2016), Gamit et al. (2015) and Raut and Sankhala (2014) who found majority of the respondents belonged to medium level of self confidence.

Table 1 Entrepreneurial behaviour of dairy farmers (n=180)

Sl. No	Components	Category	Mean	SD	Frequency	Percentage
1	Risk Taking	Low	8.68	3.00	27	15.00
		Medium			113	62.78
		High			40	22.22
2	Hope of success	Low	8.23	3.14	35	19.44
		Medium			109	60.56
		High			36	20.00
3	Persistence	Low	8.98	2.62	35	19.44
		Medium			108	60.00
		High			37	20.56
4	Feedback usage	Low	8.72	3.23	37	20.56
		Medium			97	53.89
		High			46	25.56
5	Self confidence	Low	7.28	2.30	3	1.67
		Medium			148	82.22
		High			29	16.11
6	Knowledgeability	Low	9.48	3.38	25	13.89
		Medium			128	71.11
		High			27	15.00
7	Persuasability	Low	6.58	3.21	39	21.67
		Medium			109	60.56
		High			32	17.78
8	Manageability	Poor	8.51	4.27	56	31.11
		Moderate			88	48.89
		Good			36	20.00
9	Innovativeness	Low	3.86	1.34	26	14.44
		Medium			129	71.67
		High			25	13.89
10	Achievement Motivation	Low	7.51	3.34	56	31.11
		Medium			84	46.67
		High			40	22.22
11	Decision making ability	Poor	3.17	1.82	49	27.22
		Moderate			91	50.56
		Good			40	22.22
12	Cosmopoliteness	Low	6.93	3.52	48	26.67
		Medium			102	56.67
		High			30	16.67
13	Profit Orientation	Low	8.18	4.18	42	23.33
		Medium			106	58.89
		High			32	17.78

Knowledgeability

Knowledgeability is the degree to which a farmer/entrepreneur perceives himself to be competent in the production, processing and marketing aspects of dairy to run and manage a dairy enterprise. More than two-third i.e., 71.11 per cent of dairy farmers had medium level of knowledgeability, followed by high (15.00 %) and low (13.89 %) levels. This shows that farmers were having strong technical base and experience to run a dairy enterprise. The respondents have also expressed the strong desire to gain knowledge on value addition, milk processing and marketing aspects.

Persuasability

The ability of entrepreneur/ dairy farmer to perceive himself to capable of convincing others to accept their own ideas, thoughts and information overtly or covertly**.** The data concluded that majority (60. 56 %) had medium level of persuasability, followed by 21. 67 per cent with low level and 17.78 per cent with high level of persuasability. The data on this parameter conclude that most of them were good at convincing others due to their good knowledgeability and self-confidence. The results are in similarity with Sah (2005) who observed that majority of respondents had medium level of persuasability.

Manageability

The results on this attribute showed in Table 1 indicate that nearly less than half of the respondent farmers (48.89 %) had moderate level of manageability. Whereas more than one fourth (31.11 %) of farmers had poor level of manageability and only 20.00 per cent farmers had good manageability. Most of the farmers had moderate manageability which can be improved through Dairy Business School with different interventions. The results are in line with Jhamtani et al. (2003).

Innovativeness

The important attribute which distinguish entrepreneurs or progressive farmer is innovativeness. Innovativeness is to explore for new technologies developed from time to time in new areas, products and services. The pooled analysis of data on this attribute reveals that 71.67, 14.44 and 13.89 per cent of farmers belonged to medium, low and high level of innovativeness respectively. The results concluded that most of the respondent farmers were innovative and satisfied with new technologies developed in dairy sector at study area. This may be due to presence of Expert Institute in study area i.e., NDRI, Karnal which is the premier institute to develop and communicate innovative technologies in to target group in dairy sector. The role of mass media and social media has also made farmer respondent to access the new technologies at their door steps. The findings are supported by Porchezhiyan et al. (2016), Chaurasiya et al. (2015), Gamit et al. (2015) who reported medium level of innovativeness in majority of the respondents.

Achievement Motivation

Achievement motivation is the urge of farmer/entrepreneur to improve oneself and excel to achieve their goals. Less than half (46.67 %) farmers are having medium level of achievement motivation followed by low (31.11 %) and high (22.22 %) levels. The reason for this may be due to selected respondents were small dairy farmers having 2-5 milch animals and were interested in dairy business who wished to become entrepreneur but due to limited resources, they were in confused mind which made them to have medium motivation. The results are in agreement with Baindha et al. (2014).

Decision making ability

It is the ability of the dairy farmer to choose among different alternatives to run and manage his dairy enterprise effectively**.** Maximum number of dairy farmers (50.56 %) had moderate decision making ability. Whereas more than one fourth of farmers had poor and 22. 22 per cent of them had good decision making ability. The probable reason for most farmers to be in medium to low levels is due to less ownership in joint family to take the decisions in the study area. The above findings are in line with Porchezhiyan et al. (2016) and Raina et al. (2016).

Cosmopoliteness

The data on this attribute depicted in Table 1 revealed that half (56.67 %) of the farmers had medium level of cosmopoliteness, followed by more than one fourth of farmers in low level and 16.67 per cent in high levels respectively. This cosmopolitan outlook may be due to moderate resource base, information seeking behaviour and economic conditions of respondents, leading to moderate participation in various organizational, extension and social events like field visits by NDRI scientist in study area, training programmes, demonstrations, clinical camps and dairy mela. Similar results are reported by Patel et al. (2014).

Profit Orientation

The profit orientation is the ability of farmer/entrepreneur to orient towards making good profit out of dairy enterprise in the present study. Majority farmers (58.89 %) had medium level of profit orientation. About 23.33 and 17.78 per cent farmers had low and high level of profit orientation respectively. The results conclude that most of the farmers have still potential to exploit the opportunities in dairy enterprise to earn profit. The Dairy Business School provides an opportunity for farmers to learn about the unexplored areas of dairy and help the farmers to follow the scientific management practices of dairy to obtain maximum benefit.

Table 2 Distribution of respondents according to their overall entrepreneurial behaviour(n=180)

Sl. No	Categories			Frequency	Percentage
1	Low			34	18.89
2	Medium	Mean= 96.12	SD=32.49	110	61.11
3	High			36	20.00

Table 3 Extent of entrepreneurial behavioral attributes possessed by dairy farmer (n=180)

Sl. No	Attributes	EBI	Rank
1	Risk Taking	54.24	IV
2	Hope of success	51.46	VI
3	Persistence	56.15	II
4	Feedback usage	54.51	III
5	Self confidence	45.52	IX
6	Knowledgeability	59.27	I
7	Persuasability	41.15	XII
8	Manageability	53.16	V
9	Innovativeness	44.13	X
10	Achievement Motivation	46.94	VIII
11	Decision making ability	19.79	XIII
12	Cosmopoliteness	43.30	XI
13	Profit Orientation	51.15	VII

Overall entrepreneurial behaviour of dairy farmers:

The data on entrepreneurial behaviour level revealed in Table 2 that majority (61.11%) of dairy farmers had medium level of entrepreneurial behaviour, followed by 20.00 per cent farmers having high level of entrepreneurial behaviour. Whereas, 18.89 per cent of farmers had low level of entrepreneurial behaviour. The reason behind most of the farmers to be in medium to high category of entrepreneurial behaviour is due to medium level of financial condition, medium land holding and medium educational levels. However, the medium level of all the components of entrepreneurial behaviour of dairy farmers led to medium entrepreneurial behaviour. Similar results are obtained by Mariammal and Seethalakshmi (2017), Raina et al. (2016), Porchezhiyan et al. (2016) , Chaurasiya et al. (2015) and Patel et al. (2014).

Contribution of entrepreneurial attributes towards Entrepreneurial Behaviour Index:

Appraisal of the data given in Table 3 concluded that 'Knowledgeability' ranked first with EBI-59.27 indicating highest contribution towards entrepreneurial behaviour of dairy farmers. Whereas, 'Decision making ability' has been ranked last with EBI-19.79 indicating lowest contribution towards entrepreneurial behaviour. On the other hand, all other eleven components like Persistence, Feedback usage, Risk Taking, Manageability, Hope of success, Profit Orientation, Achievement Motivation, Self confidence, Innovativeness, Cosmopoliteness, Persuasability ranked II, III, IV, V, VI, VI, VIII, IX, X, XI, XII respectively. The possible reason for knowledgeability and persistence to rank I and II may be due to strong technical knowledge and skills of farmers in dairy and they were able to opt for different options or actions to overcome the obstacles in dairy enterprise. The farmers of study area had constant contact with extension people, KVKs, NDRI which made them to have better knowledge on scientific dairy management practices of dairy. The probable reason for decision making to be at last may be due to joint family and joint ownerships to take decision in enterprise restricted them to take decisions.

Conclusion

The findings of the study concluded that majority of the dairy farmers were having medium level of entrepreneurial behaviour. This gap gave a way to empower the dairy farmers towards entrepreneurship development. Most of the farmers in study area were interested to start a dairy enterprise but lacked the required skills and guidance. So, effective entrepreneurship development programme and model trainings must focus on dairy farmers to help them to take risks and to tackle the uncertainties to improve their livelihood. The medium level of contribution of all the components of entrepreneurial behaviour indicated that these attributes needs to be improved to achieve in dairy entrepreneurship. The findings helped to select the most interested and entrepreneurial farmer for Dairy Business School where they were regularly monitored by Scientist and Experts of NDRI, Karnal by using different teaching methods like classes, field visits, exposure visits, demonstrations, practical classes etc., to impart the knowledge, skill and motivation to start a dairy enterprise i.e., dairy startup.

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References

Baindha A, Sankhala G, Singh AK, Singh M, Argade S, Singh N (2014) Entrepreneurial Behaviour of Milk Processors in Karnal District of Haryana. www.academia.edu

Chaurasiya KK (2015) A study on entrepreneurial behaviour of dairy farmers in Gwalior district of Madhya Pradesh. Ph.D. Thesis. Rajmata Vijayaraje Scindia Krishi Vishwa Vidyalaya, Gwalior, Madhya Pradesh

Economic survey. 2020-21. Ministry of Finance, Government of India, New Delhi

Gamit MP, Rani VD, Bhabhor IN, Tyagi KK, Rathod AD (2015) Entrepreneurial behaviour of dairy farmers in Surat district of South Gujarat. Int J Adv Multidisciplinary Res 2:50-56

Jhamtani A, Sharma JP, Singh R, Singh AK, Chibber V (2003) Entrepreneurial orientation of educated unemployed rural youth. Indian J Ext Educ 39: 123-132

Mariammal R, Seethalakshmi M (2017) Entrepreneurial behavior of dairy farm women in Dindigul district of Tamilnadu. Int J Sci Environ Technol 6: 2539-2547

Palmurugan M, Jhamtani A, Padaria RN (2008). Entrepreneurial behaviour of Vanilla growers of Tamil Nadu and Kerala. Indian J Ext Educ 44: 58-64

Patel P, Patel MM, Badodia SK, Sharma P (2014) Entrepreneurial behaviour of dairy farmers. Indian Res J Ext Educ 14: 46-49

Porchezhiyan S, Sudharshan A, Umamageswari M (2016) Entrepreneurial behavioral index of dairy farmers in the Northern districts of Tamil Nadu. Indian J Econ Dev 4:2320-9828

Raina V, Bhushan B, Bakshi P, Khajuria S (2016) Entrepreneurial behaviour of dairy farmers. J Anim Res 6:947-953

Raut AA, Sankhala G (2014) Entrepreneurship among commercial dairy farmers in Maharashtra. Indian J Dairy Sci 67: 535-540

Kanoi (2011) Role of Government in Developing Entrepreneurship in Assam. Ph.D Thesis. Assam University

Sah AK (2005) Entrepreneurship among milk producers in Northern Region of India. Ph.D. Thesis. NDRI,