

## Research Article

### Entrepreneurial behaviour of dairy farmers in Surat district of South Gujarat

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#### Abstract

#### Keywords

Dairy farmers,  
Entrepreneurial behaviour,  
Animal husbandry

A study was conducted in Surat district of south Gujarat to know the level of entrepreneurial behaviour of dairy farmers. A sample of 120 dairy farmers was selected for the study. Majority of the respondents had medium level of innovativeness, achievement motivation and decision making ability. About 68 per cent dairy farmers had medium risk orientation, with moderate coordinating and planning ability. While 62 per cent of the respondents had medium information seeking behaviour, 81 per cent had medium level of cosmopolitanism and 76 per cent possessed medium level of self-confidence. This study revealed that the dairy farmers had medium level of entrepreneurial behaviour. It could be observed that age, family type, family size and occupation did not show any significant relationship with entrepreneurial behaviour of dairy farmers. Whereas, education, dairy farming experience, annual income from dairy farming, organisational participation, economic motivation, scientific orientation and market orientation showed positive and significant relationship at 0.05 level of probability. However, land holding, livestock possession and extension participation showed positive and significant relation at 0.01 level of probability with entrepreneurial behaviour. The coefficient of determination ( $R^2$ ) of the independent variables was 0.5500 in the present study. The 'F' value was found to be significant at 0.01 level of probability due to significant relationship between the independent variables and entrepreneurial behaviour of dairy farmers.

#### Introduction

Agriculture and animal husbandry in Indian context is considered as a family tradition and majority of the farmers continue to practice what their forefathers did or their neighbours do. Rearing farm animals besides agriculture is routine activity of farming community in India and a large number of farmers depend on animal husbandry for their livelihood.

The word ‘entrepreneur’ is derived from the French verb ‘entreprendre’ which means, “To undertake”. In the present era, it is increasingly being realized that entrepreneurship contributes to development of a country in several ways, viz. assembling and harnessing the various inputs, bearing the risks, innovating and imitating the techniques of production to reduce the cost and increase quality and quantity, expanding the horizons of the market and coordinating and managing the

manufacturing unit at various levels. The development of entrepreneurship is directly related to the socio-economic development of the society.

Dairy as an enterprise is increasingly being recognized could play a more constructive role in promoting rural welfare and reducing poverty by generating employment at farm level. A sustainable and financially viable dairy farming, which will generate income and self employment through entrepreneurship, is the need of the day. Considering these facts, the present study was designed to analyze the entrepreneurial behaviour of dairy farmers in Surat district of South Gujarat with the following specific objectives:

1. To study the entrepreneurial behaviour of dairy farmers

2.To know the relationship between entrepreneurial behaviour and personal, socio-economic and psychological characteristics of dairy farmers

## **Materials and Methods**

Surat district was selected for the study since it is having the highest livestock population in south Gujarat region as per 2012 livestock census. Among 9 talukas of Surat district 2 talukas namely, Mahuva and Mandvi were randomly selected and from each selected taluka 6 villages were selected at random. From each selected village 10 dairy farmers were randomly selected to form a total of 120 respondents. Data was collected with the help of a well structured pretested interview schedule incorporating all the items pertaining to the specific objectives of the study.

Entrepreneurial behaviour of dairy farmers was measured with the help of scale developed by Chaudhari *et al.* (2007). Pearson's product moment correlation co-efficient was used to calculate 'r' value, which determined the relationship between dependent and independent variables. Simple linear regression was used to find out the amount of contribution made by the independent variables in explaining the variation in the dependent variable.

## **Results and Discussion**

### **Entrepreneurial behaviour of dairy farmers**

Nine components of entrepreneurial behaviour of dairy farmers were measured and the result is presented in Table 1.

**Table 1: Distribution of dairy farmers based on components of entrepreneurial behavior**

<b>Sr. No.</b>	<b>Category</b>	<b>Dairy farmers</b>	
		<b>Frequency</b>	<b>Percentage</b>
<b>1</b>	<b>Innovativeness</b>		
I	Low	<b>22</b>	<b>18</b>
Ii	Medium	<b>88</b>	<b>73</b>
Iii	High	<b>10</b>	<b>9</b>
	Mean		<b>14.50</b>
	S.D.		<b>7.51</b>
<b>2</b>	<b>Achievement motivation</b>		
I	Low	<b>24</b>	<b>20</b>
Ii	Medium	<b>96</b>	<b>80</b>
Iii	High	<b>0</b>	<b>0</b>
	Mean		<b>4.34</b>
	S.D.		<b>0.98</b>
<b>3</b>	<b>Decision making ability</b>		
I	Low	<b>39</b>	<b>32</b>
Ii	Medium	<b>72</b>	<b>60</b>
Iii	High	<b>9</b>	<b>8</b>
	Mean		<b>11.95</b>
	S.D.		<b>1.30</b>
<b>4</b>	<b>Risk orientation</b>		
I	Low	<b>23</b>	<b>19</b>
Ii	Medium	<b>82</b>	<b>68</b>
Iii	High	<b>15</b>	<b>13</b>
	Mean		<b>8.68</b>
	S.D.		<b>1.72</b>
<b>5</b>	<b>Co-ordinating ability</b>		
I	Low	<b>7</b>	<b>6</b>
Ii	Medium	<b>104</b>	<b>86</b>
Iii	High	<b>9</b>	<b>8</b>
	Mean		<b>6.65</b>
	S.D.		<b>1.15</b>
<b>6</b>	<b>Planning ability</b>		
I	Low	<b>22</b>	<b>18</b>
Ii	Medium	<b>96</b>	<b>80</b>
Iii	High	<b>2</b>	<b>2</b>

	Mean		<b>2.42</b>
	S.D.		<b>1.15</b>
<b>7</b>	<b>Information seeking behaviour</b>		
I	Low	<b>32</b>	<b>27</b>
Ii	Medium	<b>75</b>	<b>62</b>
Iii	High	<b>13</b>	<b>11</b>
	Mean		<b>8.35</b>
	S.D.		<b>3.58</b>
<b>8</b>	<b>Cosmopoliteness</b>		
I	Low	<b>14</b>	<b>11</b>
Ii	Medium	<b>97</b>	<b>81</b>
Iii	High	<b>9</b>	<b>8</b>
	Mean		<b>9.73</b>
	S.D.		<b>1.33</b>
<b>9</b>	<b>Self-confidence</b>		
I	Low	<b>28</b>	<b>23</b>
Ii	Medium	<b>91</b>	<b>76</b>
Iii	High	<b>1</b>	<b>1</b>
	Mean		<b>4.52</b>
	S.D.		<b>1.25</b>

### Innovativeness

The result revealed that majority of the respondents (91 per cent) possessed low to medium level of innovativeness. Innovativeness motivates the dairy farmers to adopt new technologies. This observation might be because the respondents were getting some reward from the resources on hand that is land holding and livestock possession and therefore they were inclined to adopt new technologies and practices for further improvement of available resources. This finding is in accordance with that of Rathod *et al.* (2012) and Bairdha *et al.* (2014)

### Achievement motivation

It can be observed from table 1, that 80 per cent of the respondents had medium level of achievement motivation followed by 20 per cent with low level of achievement motivation. None of the dairy farmers had high level of achievement motivation. This finding is in agreement with the finding of Bairdha *et al.* (2014). Medium herd size, annual income and economic motivation of majority of the respondents might be the reason why they had medium level of achievement motivation.

### Decision making ability

Most of the respondents showed medium decision making ability. This finding is in conformity with that of Tekale *et al.* (2013) and Patel *et al.* (2014).

### Risk orientation

Majority of the dairy farmers (87 per cent) showed medium to low level of risk orientation. Medium innovativeness, livestock possession, land holding and annual income might

have prevented the respondents from taking high risk decisions related to dairy farming. Similar findings were reported by Lawrence and Ganguli (2012), Bairdha *et al.* (2014) and Reshma *et al.* (2014).

### Co-ordinating ability

A perusal of data in table 1 reveals that great majority (86 per cent) of the respondents fell in the category of moderate co-ordinating ability. However 8 per cent of the respondents had high and rest 6 per cent had poor coordinating ability. Most of the respondents were educated up to secondary level, possessed medium herd size and had medium level of experience in dairy farming, which might have restricted their co-ordinating ability to a medium level. This finding is in concurrence with the finding reported by Rathod *et al.* (2012) and Patel *et al.* (2014).

### Planning ability

Majority of the dairy farmers had medium planning ability. This might be because most of them gave moderate importance to planning future activities in advance. Lawrence and Ganguli (2012) and Tekale *et al.* (2013) also reported similar findings.

### Information seeking behavior

It can be concluded that 73 per cent of the respondents had medium to high information seeking behaviour which may be due to the handy availability of communication devices like telephone, mobile and internet services which facilitated easy contact with experts, veterinary doctors and extension workers for proper guidance and up to date information to manage their dairy farms efficiently. This finding is in concurrence with the finding reported by Lawrence and Ganguli (2012), Rathod *et al.* (2012) and Patel *et al.* (2014).

### Cosmopoliteness

Majority of the dairy farmers had medium level of cosmopoliteness. This might be because most of them had medium information seeking behaviour, organisational and extension participation which led to moderate level of involvement in activities like, training programmes, field visits, clinical camps, krishimela and krishimohtsav. Similar findings were reported by Baintha *et al.* (2014) and Patel *et al.* (2014).

### Level of entrepreneurial behaviour of dairy farmers

**Table 2: Distribution of respondents according to their level of entrepreneurial behaviour**

Sr. No.	Category	Dairy farmers	
		Frequency	Percentage
I	Low	18	15
II	Medium	81	67.50
III	High	21	17.50
	Mean	63.45	
	S.D.	11.73	

The plausible reason behind medium level entrepreneurial behaviour of most of the dairy farmers might be due their medium financial condition, medium sized land holding, medium economic motivation and scientific orientation. However, the medium level of major components like, innovativeness, achievement motivation, decision making ability, risk orientation, co-ordinating ability, planning ability, information seeking behaviour, cosmopoliteness and self-confidence of the dairy farmers together reflected the reason behind their medium entrepreneurial behaviour. Similar results were obtained by Rathod *et al.* (2012), Tekale *et al.* (2013) and Patel *et al.* (2014).

### Relationship between entrepreneurial behaviour and personal, socio-economic and psychological characteristics of dairy farmers

**Table 3: Relationship between entrepreneurial behaviour and personal, socio-economic and psychological characteristics of dairy farmers**

n = 120

Sr. No.	Characteristics	Entrepreneurial behaviour of dairy farmers
		Coefficient of correlation 'r' value
1	Age	0.0105 <sup>NS</sup>
2	Education	0.3857*
3	Family type	0.1115 <sup>NS</sup>
4	Family size	0.1784 <sup>NS</sup>
5	Occupation	0.1428 <sup>NS</sup>
6	Dairy farming experience	0.1984*
7	Land holding	0.2465**
8	Annual income from dairy farming	0.3864*
9	Livestock possession	0.2524**
10	Extension participation	0.4703**
11	Organisational participation	0.4280*
12	Economic motivation	0.2977*
13	Scientific orientation	0.4591*
14	Market orientation	0.4314*

\* Significant at 0.05 level of probability; \*\* Significant at 0.01 level of probability; NS Non-significant

### Self-confidence

Majority of the respondents belonged to medium self-confidence category. This might be because they were not fully aware and oriented about their abilities to improve dairy enterprise. This finding is in agreement with the findings reported by Tekale *et al.* (2013) and Patel *et al.* (2014).

The data manifested in table 3 revealed that age (0.0105<sup>NS</sup>), family type (0.1115<sup>NS</sup>), family size (0.1784<sup>NS</sup>) and occupation (0.1428<sup>NS</sup>) showed no significant association with entrepreneurial behaviour of dairy farmers.

However, education (0.3857\*), dairy farming experience (0.1984\*), land holding (0.2465\*\*), annual income from dairy farming (0.3864\*), livestock possession (0.2524\*\*), extension participation (0.4703\*\*), organisational participation (0.4280\*), economic motivation (0.2977\*), scientific orientation (0.4591\*) and market orientation (0.4314\*) were found positively and significantly related with entrepreneurial behaviour of dairy farmers.

Age did not show any influence on the entrepreneurial behaviour of the respondents. Similar result was reported by Patel *et al.* (2014) who found that age had no relationship with entrepreneurial behaviour.

With respect to education of dairy farmers, there was positive and significant relationship with their entrepreneurial behaviour. This might be because the educated dairy farmers had greater access to different information sources and better capacity to adopt new technologies. These findings are in accordance with the findings of Rathod *et al.* (2012) and Baintha *et al.* (2014). Family type and family size of the dairy farmers did not show any significant relationship with their entrepreneurial behaviour. This might be because the respondents possessed better education among their family members and were dominant in the family. Due to good decision making ability and self confidence of the respondents, the family members might not be interfering in dairy farm management decisions. Similar results were reported by Kiran *et al.* (2012), Rathod *et al.* (2012) and Patel *et al.* (2014).

Occupation of dairy farmers did not show any significant relationship with their entrepreneurial behaviour. Majority of the dairy farmers were engaged in agriculture as their main occupation along with dairy farming which might be the reason for non-significant relationship between occupation and entrepreneurial behaviour of the respondents. Similar results were reported by Anitha (2004), Pandeti (2005) and Rathod *et al.* (2012).

Dairy farming experience showed positive and significant relationship with the entrepreneurial behaviour of the respondents. The increased experience in dairy enterprise helped dairy farmers to attend to different dairy activities more efficiently. Thus, longer experience allowed for efficient management under different situations or contexts. Therefore, it is logical that there was significant relationship between length of experience in dairying and entrepreneurial behaviour of dairy farmers. These findings are in accordance with the findings of Rathod *et al.* (2012), Baintha *et al.* (2014) and Patel *et al.* (2014).

Land holding and annual income from dairy farming had positive and significant relationship with entrepreneurial behaviour. The probable reason for this finding might be that the respondents with larger land holding would have more opportunities and potentialities to try and adopt variety of technological innovations. As a result, it is quite possible that farmers with larger land holding evinced keen interest to know about new practices and be more receptive to such ideas, thus leading to better acquisition of knowledge, economic motivation, achievement motivation, and risk orientation, which in turn reflected on their entrepreneurial behaviour. These results are in congruence with the findings of Subrahmanyam *et al.* (2007), Lawrence and Ganguli (2012) and Senthil Kumar *et al.* (2012).

Livestock possession of dairy farmers had positive and significant relationship with their entrepreneurial behaviour. Similar results were reported by Rathod *et al.* (2012), Senthil Kumar *et al.* (2012) and Patel *et al.* (2014).

With regard to extension participation of dairy farmers, positive and significant relationship was observed. The dairy farmers who actively participated in social and extension activities were bound to have better entrepreneurial behaviour. This finding is in accordance with the finding of Lawrence and Ganguli (2012) and Senthil Kumar *et al.* (2012).

Organisational participation of dairy farmers had positive and significant relationship with their entrepreneurial behaviour. It was found that most of the respondents participated in atleast one organization as a member or office bearer, which might have helped them to enhance their entrepreneurial behaviour. This observation is in line with the finding of Rathod *et al.* (2012), Baintha *et al.* (2014) and Patel *et al.* (2014).

Economic motivation of dairy farmers had positive and significant relationship with their entrepreneurial behaviour. Since dairying is considered to be a remunerative enterprise, farmers had moderate level of economic motivation and they strived hard to manage the enterprise besides aiming for profit maximization. This finding is in line with the finding of Rathod *et al.* (2012), Baintha *et al.* (2014) and Patel *et al.* (2014).

Positive and significant relationship was found between scientific orientation of dairy farmers and their entrepreneurial behaviour. The possible reason might be that the dairy farmers with better scientific orientation could be more receptive to latest technologies and employed scientific methods while making decisions. This result is in congruence with the findings of Rathod *et al.* (2012) and Patel *et al.* (2014).

Market orientation of dairy farmers showed positive and significant relationship with their entrepreneurial behaviour. Majority of the respondents sold milk to the village dairy cooperative societies rather than in nearby localities. Hence, their better market orientation might have influenced their entrepreneurial behaviour. Similar results were reported by Lawrence and Ganguli (2012), Rathod *et al.* (2012), Baintha *et al.* (2014) and Patel *et al.* (2014).

#### **Multiple regression analysis of independent variables with entrepreneurial behavior**

Multiple regression analysis with entrepreneurial behaviour as the dependent variable and fourteen independent variables was carried out for determining the contribution of independent variables. The results are shown in table 4.

**Table 4: Multiple regression analysis of independent variables with entrepreneurial behaviour**

n = 120

Sr. No.	Characteristics	Regression Coefficient 'b' Value	't' Value
<b>1</b>	Age	<b>0.046</b>	<b>0.466<sup>NS</sup></b>
<b>2</b>	Education	<b>0.141</b>	<b>1.655*</b>
<b>3</b>	Family type	<b>-0.063</b>	<b>-0.633<sup>NS</sup></b>
<b>4</b>	Family size	<b>0.080</b>	<b>0.840*</b>
<b>5</b>	Occupation	<b>0.099</b>	<b>1.425*</b>
<b>6</b>	Dairy farming experience	<b>0.234</b>	<b>2.582**</b>
<b>7</b>	Land holding	<b>-0.012</b>	<b>-0.155<sup>NS</sup></b>
<b>8</b>	Annual income from dairy farming	<b>0.272</b>	<b>2.689**</b>
<b>9</b>	Livestock possession	<b>-0.095</b>	<b>-0.981*</b>
<b>10</b>	Extension participation	<b>0.102</b>	<b>1.145*</b>
<b>11</b>	Organisational participation	<b>0.165</b>	<b>1.987**</b>
<b>12</b>	Economic motivation	<b>0.169</b>	<b>2.301**</b>
<b>13</b>	Scientific orientation	<b>0.245</b>	<b>2.976**</b>
<b>14</b>	Market orientation	<b>0.157</b>	<b>1.870**</b>
		<b>R<sup>2</sup> = 0.550</b>	<b>F = 9.117**</b>

\* Significant at 0.05 level of probability; \*\* Significant at 0.01 level of probability; NS Non-significant

The data in table 4 revealed that age (0.466<sup>NS</sup>), family type (-0.633<sup>NS</sup>) and land holding (-0.155<sup>NS</sup>) were found non significantly associated with entrepreneurial behaviour of dairy farmers.

However, education (1.655\*), family size (0.840\*), occupation (1.425\*), dairy farming experience (2.582\*\*), annual income from dairy farming (2.689\*\*), livestock possession (-0.981\*), extension participation (1.145\*), organisational participation (1.987\*\*), economic motivation (2.301\*\*), scientific orientation (2.976\*\*) and market orientation (1.870\*\*) were found significantly related with entrepreneurial behaviour of dairy farmers.

The co-efficient of determination ( $R^2$ ) of the independent variables was 0.5500. Which means that 55.00 per cent of total variation in entrepreneurial behaviour of dairy farmers was explained by the 14 selected independent variables. The 'F' value was found to be significant at 0.01 level of probability due to significant relationship between the independent variables and entrepreneurial behaviour of dairy farmers.

## Conclusion

The study revealed that majority of the dairy farmers belonged to medium level entrepreneurial behaviour category followed by high and low level. Hence, special consideration is required to enhance entrepreneurship in dairy farmers. Medium level of major components like, innovativeness, achievement motivation, decision making ability, risk orientation, co-ordinating ability, planning ability, information seeking behaviour, cosmopoliteness and self-confidence of the dairy farmers together reflected the reason behind their medium entrepreneurial behaviour.

Therefore, efforts should be made to increase the level of entrepreneurial behaviour through awareness and training programmes, demonstrations, tours, field visits etc., for socio economic upliftment of the dairy farmers. Entrepreneurial behaviour showed non significant relationship with age, family type, family size and occupation of the dairy farmers. However, education, dairy farming experience, land holding, annual income from dairy farming, livestock possession, extension participation, organisational participation, economic motivation, scientific orientation and market orientation were found positively and significantly related with entrepreneurial behaviour of dairy farmers.

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