

**RESEARCH ARTICLE :**

# Factors affecting entrepreneurial behaviour of dairy farmers

■ **K.K. CHAURASIYA, PRASHANT MARATHA AND S.K. BADODIYA**

**ARTICLE CHRONICLE :**

**Received :**

17.11.2016;

**Revised :**

07.12.2016;

**Accepted :**

15.12.2016

**SUMMARY :** Entrepreneurial behaviour of a farmer is influenced by several factors. This study was conducted in Gwalior district of Madhya Pradesh. A list of farmers who were practicing dairy and possessing minimum 5 dairy animals was prepared and 200 dairy farmers were selected by random sampling method. The majority 65.5 per cent respondents had medium level of entrepreneurial behaviour about dairy management practices. The entrepreneurial behaviour of respondents was found to have positive and significant relation with the factors *i.e.* education, dairy experience, land holding, livestock possession, occupation, annual income, material possession, extension contact, economic motivation, market orientation, scientific orientation, attitude of dairy farmers towards dairy farming and knowledge of improved dairy management practices. The co-efficient of determination ( $R^2$ ) was 0.977 which indicates that 97.00 per cent variation in the entrepreneurial behaviour by all the variables together. The major constraints expressed by dairy farmers were lack of veterinary facilities in the village (68.75%). The majority 67.50 per cent respondents said storing milk in summer season was very difficult and high cost of cross breed cow/buffalo was reported by 60.00 per cent respondents.

**KEY WORDS :**

Factors, Entrepreneurial behaviour, Dairy farmers, Planning ability, Co-ordinating ability, Self confidence

**How to cite this article :** Chaurasiya, K.K., Maratha, Prashant and Badodiya, S.K. (2017). Factors affecting entrepreneurial behaviour of dairy farmers. *Agric. Update*, 12(1): 23-30; DOI : 10.15740/HAS/AU/12.1/23-30.

## **BACKGROUND AND OBJECTIVES**

Dairy farming is a class of agriculture for long-term production of milk, which is processed for eventual sale of a dairy product. Dairy farming from being traditional family run businesses, today has grown hugely to an organized dairy industry with technological specializations in every part of the process. We have seen tremendous growth in dairy farming equipment that help modern dairy farms to manage thousands of dairy cows and buffaloes. This huge boost in

the industry has created a lot of farming jobs for the people. But many of the dairy farms still manage and run organic dairy farms mostly in villages and supply the milk to get processed by large companies and finally sell to the retail outlets. According to ASSOCHAM report milk production in India is likely to reach 190 million tones by 2015 and the annual turnover Rs. 5 Lakh Cr. With planning commission targeting 4.5 to 5 per cent growth for Animal husbandry in the 12<sup>th</sup> plan and the world bank funded 1584 cr National Dairy

Author for correspondence :

**PRASHANT MARATHA**  
Career Point University,  
KOTA (RAJASTHAN) INDIA  
Email:prashantmaratha@gmail.com

See end of the article for authors' affiliations

plan in few months the sector is expected to witness a healthy growth in the years to come. 17,300 cr National Dairy Plan by NDDDB for the next 15 years – first phase with 2000 cr investment to be launched soon.

Development of economy of any nation depends primarily on the important role played by entrepreneurs. The role played by such entrepreneurs is of vital importance in developing country like India, where there are ample opportunities for using innovations to exploit the available resources, particularly in the field of agriculture. Thus, in all economic development activities more and more focus is being centred on entrepreneurship of the people. Entrepreneurship has been now recognized as a concept, not only vital for starting industries but also in the development of agriculture.

Dairy farming is a capital intensive and risky, a vegetable grower needs to possess the ability to take risk, innovativeness, imitative and capacity to marshal resources in order to run the enterprise successfully. These characteristics enable them to decide and accept to adopt appropriate scientific farming methods. Entrepreneurial behaviour is influenced by individual, situational, psychological, social and experiential factors.

Entrepreneurial behaviour is a preference for innovation and a change in existing institutions and the status quo. It can be as simple as the willingness to buy a new electronic gadget or as involved as rebelling against the existing political regime and starting a new nation. It often surfaces in the form of an entrepreneur undertaking the risk of organizing production and launching a new business venture. Keeping the above facts in view, the present study has been designed to analyze the entrepreneurial behaviour of dairy farmers. The following specific objectives have been formulated for the study.

- To study the profile and entrepreneurial behaviour of dairy farmers.
- To explore the relationship between entrepreneurial behaviour with profile of the dairy farmers.
- To find out the constraints faced by dairy farmers in management of dairy enterprise.

## **RESOURCES AND METHODS**

The present study was conducted in Gwalior district of M.P. In this regards surrounding area Gwalior city was purposively taken for the study due to the maximum number of dairy farmers engaged in dairy farming. A list

of farmers who are practicing dairy and possessing minimum 5 dairy animals was prepared. From this list 200 dairy farmers were selected by random sampling method. The primary data were collected from the respondents by using a semi-structured interview schedule, which was pre-tested before actual application. The respondents were interviewed individually by the investigator. Secondary data were collected from records and statistical office. Statistical tools like- mean, SD, percentage and Karl Pearson's coefficient of correlation and multiple regression analysis were used for analysis of data.

## **OBSERVATIONS AND ANALYSIS**

The results obtained from the present study as well as discussions have been summarized under following heads:

### **Profile and entrepreneurial behaviour of dairy farmers :**

The data in Table 1 show that most of the respondents (46%) belonged to middle age group and higher percentage (28.00%) of dairy farmers educated upto primary level followed by 21.50 per cent of the respondents had education at high school level. Majority of the beneficiary respondents (52.50%) belonged to other backward caste (OBC), followed by general caste category (26.00%) and more than half of dairy farmers (42.50%) had high level of experience (above 10 years) in dairying. The data in Table 1 indicates that less than half of (45.00%) the dairy farmers possessed low level of livestock possession and maximum (42.50%) dairy farmers possessed upto 1 ha of land. The data exhibit the distribution of dairy farmers according to their occupation. The data show that most of the 41.50 per cent of the respondents engaged in farming+agriculture followed dairy farming. Majority (53.50%) of the dairy farmers had low level of annual income. It is apparent that majority (61.50%) of the dairy farmers possessed medium level of material possession. The perusal of data indicate that majority (53.50%) of the respondents had medium level of mass media participation and the majority 59.00 per cent of respondents was from medium category of extension contact. The majority 59.00 per cent of the dairy farmers had medium attitude towards dairy farming and majority of dairy farmers (71.00%) had medium level of scientific orientation. Majority 64.00 per cent of the dairy farmers had medium knowledge level about dairy

farming while 23.00 per cent had low knowledge level. Almost similar findings were reported by Chaudhari (2006); Badodiya *et al.* (2010); Shah *et al.* (2010) and Patel *et al.* (2014).

#### **Entrepreneurial characteristics of dairy farmers:**

The entrepreneurial behaviour of dairy farmers comprised of nine components, such as, innovativeness, achievement motivation, decision making ability, risk orientation, co-ordinating ability, planning ability, information seeking, cosmopolitaness and self confidence. Data collected in this regard have been furnished in Table 2.

#### **Innovativeness:**

It could be observed from the Table 2 that, majority of (66.00%) dairy farmers had medium level of innovativeness, whereas 11.00 per cent of dairy farmers belonged to high innovativeness and 23.00 per cent of dairy farmers belonged to low innovativeness category.

#### **Achievement motivation :**

It is apparent from the Table 2 that majority (68.00%) of the dairy farmers had medium achievement motivation, whereas 16.00 per cent the dairy farmers belonged to low as well as high achievement motivation category, respectively.

#### **Decision making ability:**

The data show that majority (65.00%) of the dairy farmers had medium decision making ability, whereas 22.50 per cent of dairy farmers had both the low and high decision making ability.

#### **Risk orientation:**

It is evident from table that majority (62.00%) of the dairy farmers had medium risk orientation, whereas, one fourth (21.00%) had low and only 17.00 per cent of dairy farmers had high risk orientation.

#### **Co-ordinating ability:**

It could be inferred that majority of the (61.50%) dairy farmers had medium co-ordinating ability whereas, 20.00 per cent had low and only 18.00 per cent of dairy farmers had low co-ordinating ability.

#### **Planning ability:**

It could be seen from Table 2 that majority (72.00%)

of dairy farmers had medium planning ability followed by high (16.50%) and low (11.50%).

#### **Information seeking behaviour:**

Majority (67.00%) of the dairy farmers had medium information seeking behaviour whereas, 18.00 per cent had high and only 15.00 per cent of the dairy farmers had low information seeking behaviour.

#### **Cosmopolitaness:**

It is evident from Table 2 that majority of (66.00%) dairy farmers had medium level of cosmopolitaness, Whereas, 20.00 per cent of dairy farmers had high and only 14.00 per cent of dairy farmers had low level of cosmopolitaness.

#### **Self-confidence:**

Majority (62.00%) of dairy farmers had medium self confidence whereas, 23.00 per cent of dairy farmers had high self confidence and only 15.00 per cent of dairy farmers had low level of self confidence.

#### **Overall entrepreneurial behaviour of dairy farmers:**

Entrepreneurial behaviour was operationally defined as a process of action an entrepreneur under taken to establish his enterprise. It is a composite skill, the resultant of mix of many qualities and traits. On the basis of entrepreneurial score obtained by dairy farmers were grouped in three categories *i.e.* low, medium and, high and their frequency distribution is given in Table 3.

Among the sample of respondents the mean score entrepreneurial behaviour was 76.09. The measure of standard deviation was 15.59 indicating lower dispersion among score.

The frequency distribution of respondents on entrepreneurial behaviour appeared to fell in normal distribution with nearly 65.5 per cent respondents had medium level of entrepreneurial behaviour, whereas, 18.00 per cent respondents had high level of entrepreneurial behaviour and 16.50 per cent respondents had low level of entrepreneurial behaviour. Similar findings were also reported by Nishi *et al.* (2010); Badodiya *et al.* (2010), Shah *et al.* (2010) and Patel *et al.* (2014).

#### **Correlation and regression analysis :**

The co-efficient of correlation of each of the socio personal characteristics with their entrepreneurial

**Table 1 : Profile of the dairy farmers**

Sr. No.	Traits	Category	Frequency	Percentage	Mean	SD
1.	Age	Young (below 35 yrs)	51	25.50	2.03	0.73
		Middle (35-55 yrs)	92	46.00		
		Old (above 55 yrs)	57	28.50		
2.	Education	Illiterate	40	20.00	1.74	1.28
		Upto primary	56	28.00		
		Upto middle	40	20.00		
		High School	43	21.50		
		Higher sec. and above	21	10.50		
3.	Caste	General	52	26.00	1.95	0.68
		OBC	105	52.50		
		SC/ST	43	21.50		
4.	Farming experience	Low (below 5 yrs)	51	25.50	2.17	0.81
		Medium (5-10 yrs)	64	32.00		
		High (above 10 yrs)	85	42.50		
5.	Livestock possession	Low (<0.99)	90	45.00	1.84	0.85
		Medium (0.99-2.69)	51	25.50		
		High(>2.69)	59	29.50		
6.	Land holding	Marginal (upto 1 ha.)	85	42.50	2.09	1.40
		Small (1.1 to 2 ha.)	32	16.00		
		Medium (2.1 to 5 ha.)	37	18.50		
		Large (above 5.1 ha.)	46	23.00		
7.	Occupation	Dairy farming	73	36.50	1.85	0.75
		Dairy farming + Agriculture	83	41.50		
		Dairy farming + Agriculture + Other	44	22.00		
8.	Annual income	Low (<0.87)	107	53.50	1.70	0.82
		Medium (0.87-2.53)	45	22.50		
		High (>2.53)	48	24.00		
9.	Material Possession	Low (<15.52)	49	24.50	24.87	9.31
		Medium (15.52-34.14)	123	61.50		
		High (>34.14)	28	14.00		
10.	Mass media participation	Low (<2.74)	65	32.50	4.79	2.06
		Medium (2.74-6.86)	107	53.50		
		High (>6.86)	28	14.00		
11.	Extension contact	Low (<7.65)	46	23.00	11.0	3.35
		Medium (7.65-14.0)	118	59.00		
		High (>14.0)	36	18.00		
12.	Attitude towards agriculture	Low (<29.44)	45	22.50	51.18	21.74
		Medium (29.44-72.92)	118	59.00		
		High (>72.92)	37	18.50		
13.	Scientific orientation	Low (<4.94)	42	21.00	7.37	2.43
		Medium (4.94-9.8)	142	71.00		
		High (>9.8)	16	08.00		
14.	Knowledge about improved dairy practices	Low (<17.62)	46	23.00	24.95	7.32
		Medium (17.62-32.28)	128	64.00		
		High (>32.28)	26	13.00		

behaviour of dairy farmers has been furnished in Table 4.

It could be revealed from Table 4 that socio- personal variables *viz.*, education and dairy experience, showed positive and significant relationship at 0.01 level of probability, whereas remaining two variables namely age and caste did not establish any significant relationship with adoption behaviour.

The co-efficient of correlation of each of the socio-economic characteristics with their adoption behaviour of dairy farmers has been furnished.

It could be revealed that among five independent variables *viz.*, land holding, livestock possession, occupation, annual income and material possession showed positive and significant relationship with adoption behaviour at 0.01 level of probability.

The correlation co-efficient of each of the communicational characteristics of dairy farmers with their adoption behaviour has been furnished in.

It could be revealed that among two independent variables, *viz.*, extension contact showed positive and significant relationship with adoption behaviour at 0.01 level of probability whereas mass media participation had no significant relation with adoption behaviour.

The correlation co-efficient of each of the psychological characteristics of dairy farmers with their adoption behaviour has been furnished.

It could be revealed from Table 4 that among five independent variables of all variables namely economic motivation, market orientation, scientific orientation, attitude towards dairy farming and knowledge of improved dairy management practices showed positive and significant relationship with adoption behaviour at 0.01 level of probability. The result is in conformity with the findings of Badodiya *et al.* (2010); Tekale *et al.* (2013) and Patel *et al.* (2014).

#### Multiple regression analysis of predictor variables with their entrepreneurial behaviour :

The multiple regression analysis was carried out to find out the extent of influence of each variable towards the entrepreneurial behaviour of dairy farmers and the data are presented in Table 5. The perusal of data revealed that out of fifteen variables taken for analysis of regression, six variables namely age, occupation, annual income, mass media participation, extension contact and attitude of dairy farmers towards dairy farming were found to have significant contribution to the entrepreneurial behaviour of dairy farmers.

Table 5 also shows that the co-efficient of determination  $R^2$  was 0.977 which indicates that 97.00 per cent variation in the entrepreneurial behaviour of dairy farmers was explained by sixteen independent variables which were selected for study.

**Table 2 : Distribution of dairy farmers based on components of entrepreneurial behaviour of dairy farmers**

Sr. No.	Components	Category		
		Low	Medium	High
1.	Innovativeness	46(23.00)	132(66.00)	22(11.00)
2.	Achievement motivation	32(16.00)	136(68.00)	32(16.00)
3.	Decision making ability	25(22.50)	130(65.00)	45(22.50)
4.	Risk orientation	42(21.00)	124(62.00)	34(17.00)
5.	Co-ordinating ability	41(20.50)	123(61.50)	36(18.00)
6.	Planning ability	23(11.50)	144(72.00)	33(16.50)
7.	Information seeking behaviour	30(15.00)	134(67.00)	36(18.00)
8.	Cosmopolitaness	28(14.00)	132(66.00)	40(20.00)
9.	Self confidence	30(15.00)	124(62.00)	46(23.00)

**Table 3 : Distribution of the respondents according to their entrepreneurial behaviour**

Sr. No.	Category	Frequency	Percentage
1.	Low(<60.49)	33	16.50
2.	Medium (60.49-91.69)	131	65.50
3.	High(>91.69)	36	18.00
	Total	200	100.00
	Mean		76.09
	SD		15.59

### Constraints faced by dairy farmers with regards to dairy management:

It is detected from the data presented in Table 6 that the major economic constraint expressed by dairy

farmers was high cost of cross breed cow/buffalo (60.00%) followed by difficult loan procedure (51.25%), high cost of veterinary medicines (41.25%), inadequate finance by bank for purchasing milch animals (36.25%),

**Table 4 : Relationship between entrepreneurial behaviour of dairy farmers with their characteristics**

Sr. No.	Variable	Correlation co-efficient (r)	t value
<b>Independent variables</b>			
Socio - personal variables			
1.	Age	0.131 <sup>NS</sup>	1.859
2.	Education	0.333**	4.969
3.	Caste	-0.080 <sup>NS</sup>	1.129
4.	Experience in dairy farming	0.264*	3.851
<b>Socio - economic variables</b>			
5.	Livestock possession	0.338*	5.053
6.	Land holding	0.322*	4.785
7.	Occupation	0.343*	5.138
8.	Annual income	0.276*	4.040
9.	Material possession	0.241*	3.494
<b>Communication variables</b>			
10.	Mass media participation	0.017 <sup>NS</sup>	0.239
11.	Extension Contact	0.220*	3.173
<b>Psychological variables</b>			
12.	Economic motivation	0.227*	3.279
13.	Marketing orientation	0.216*	3.112
14.	Scientific orientation	0.213*	3.067
15.	Attitude of dairy farmers towards dairy farming	0.278*	4.072
16.	Knowledge about improved dairy practices	0.670**	12.699

\* and \*\* indicate significance of values at P=0.05 and 0.01, respectively

NS=Non-significant

**Table 5 : Optimum model of multiple regression analysis between profile of dairy farmers and their entrepreneurial behaviour**

Sr. No.	Characteristics	Co-efficients	Std error	t stat
1.	Age	2.751	1.248	2.203*
2.	Education	1.038	0.787	1.319
3.	Caste	2.239	1.216	1.840
4.	Experience in dairy farming	0.440	1.228	0.358
5.	Livestock possession	1.171	1.111	1.053
6.	Land holding	0.2566	0.695	0.368*
7.	Occupation	3.261	1.2166	2.680
8.	Grass annual income	3.970	1.182	3.356*
9.	Material possession	0.191	0.1061	1.805
10.	Mass media participation	1.523	0.465	3.269*
11.	Extension contact	1.201	0.3012	3.988*
12.	Economic motivation	0.1362	0.159	0.854
13.	Marketing orientation	0.354	0.3902	0.907
14.	Scientific orientation	0.645	0.367	1.759
15.	Attitude of dairy farmers towards dairy farming	0.103	0.0496	2.080*
16.	Knowledge about improved dairy practices	0.258	0.139	1.850

R<sup>2</sup>=0.977 F value=490.19 with 16 and 184 DFS \* indicates significance of value at P=0.05

**Table 6 : Distribution of respondents according to the constraints faced in dairy management**

Sr. No.	Constraints	Respondents	
		Freq.	%
<b>Economic constraints</b>			
1.	High cost of concentrate	50	25.00
2.	High cost of crossbreed cow/ improved buffalo	120	60.00
3.	High cost of veterinary medicines	82	41.25
4.	High investment	48	23.75
5.	Difficult loan procedure	101	51.25
6.	Inadequate finance by bank for purchasing milch animals	130	36.25
<b>Technical constraints</b>			
1.	Lack of veterinary facilities in the village	125	68.75
2.	Highly expensive consultancy service of private practitioners	115	56.25
3.	Lack of availability of veterinary literature in the village	60	28.75
4.	Lack of technical knowledge to manage the dairy enterprise	110	58.75
5.	Poor conception rate in dairy animals	114	61.25
<b>Marketing constraints</b>			
1.	Non-remunerative price for milk	95	47.50
2.	Poor marketing outlet of milk	20	10.00
3.	Difficulty to store milk in summer season	110	67.50
4.	Competition from established and large units	90	58.75
<b>General constraints</b>			
1.	Poor irrigation facilities for growing fodder crops	24	2.50
2.	Lack of knowledge about silage preparation	130	65.00
3.	Non-availability of improved fodder seeds	107	53.75
4.	Susceptibility of animals to diseases	88	43.75
Multiple responses possible			

high cost of concentrate (25.00%) and high investment (23.75%).

In case of technical constraint, major constrain expressed by respondents was lack of veterinary facilities in the village (68.75%), followed by poor conception rate in dairy animal (61.25%), lack of technology knowledge to manage the dairy enterprise (58.75%), highly expensive consultancy service to private practitioners (56.25%), whereas, only 28.75 per cent of dairy farmers had expressed lack of veterinary literature in the village.

The major marketing constraint expressed by dairy farmers was found in difficulty in storing milk in summer season (67.5%), followed by competition from established and large units (58.75%), non-remunerative price of milk (47.5%) and poor marketing outlet of milk (10%).

The major general constraint expressed by respondents was lack of knowledge about silage preparation (65%), non-availability of improved fodder seeds (53.75%), susceptibility of animals to disease (43.75%) and only poor irrigation facilities for growing

fodder crops (2.5%). Almost similar findings were reported by Patel *et al.* (2014).

### Conclusion :

The study revealed that majority 65.5 per cent respondents had medium level of entrepreneurial behaviour about dairy management practices. The entrepreneurial behaviour was positively and significantly related with education, dairy experience, land holding, livestock possession, occupation, annual income, material possession, extension contact, economic motivation, market orientation, scientific orientation, attitude of dairy farmers towards dairy farming and knowledge of improved dairy management practices found to have positive and significant relationship with entrepreneurial behaviour. Co-efficient of determination  $R^2$  was 0.977 which indicates that 97.00 per cent variation in the entrepreneurial behaviour of dairy farmers was explained by sixteen independent variables which were selected for study. The major constraints expressed by dairy

farmers were lack of veterinary facilities in the village (68.75%). The majority 67.50 per cent respondents said storing milk in summer season was very difficult and high cost of cross breed cow/buffalo was reported by 60.00 per cent respondents. These factors can be taken care of by the implementing agencies in the state while selecting the beneficiaries for entrepreneurship development programmes.

---

Authors' affiliations :

**K.K. CHAURASIYA AND S.K. BADODIYA**, RVS Krishi Vishwa Vidyalyaya, GWALIOR (M.P.) INDIA

---

## REFERENCES

---

Assocham (2015). Report on dairy farming.

**Badodiya, S.K.**, Daipuria, O.P., Rai, D.P. and Shakya, S.K. (2010). Correlates of entrepreneurial behaviour of sugarcane growers with their characteristics. *Internat. Res. J. Res. Analysis*

*& Evalua.*, **1**(5) : 39-43.

**Chaudhari, Ratan Ranuji** (2006). A study on entrepreneurial behaviour of dairy farmers. Ph.D. Thesis, University of Agricultural Sciences, Dharwad, KARNATAKA (INDIA).

**Nishi, A.K.**, Malik, B.S. and Yadav, V.K. (2010). Entrepreneurial behaviour and their correlates among diary entrepreneurs in Northern India. *Indian J. Extn. Edu.*, **46** (3&4) : 53-61.

**Patel, Pooja**, Patel, M.M., Badodiya, S.K. and Sharma, Prabhakar (2014). Entrepreneurial behaviour of dairy farmers. *Indian Res. J. Extn. Edu.*, **14** (2):46-49.

**Shah, Ajay Kumar**, Nishi, Malik, B.S. and Yadav, V.K. (2010). Entrepreneurial behaviour and their correlates among dairy entrepreneurs in Northern India. *Indian J. Extn. Edu.*, **46**(3&4): 53-61.

**Tekale, V.S.**, Bhalekar, D.N. and Shaikh, J.I. (2013). Entrepreneurial behaviour of dairy farmers. *Internat. J. Extn. Edu.*, **9** : 32-36.

★ ★ ★ ★ ★ <sup>12<sup>th</sup></sup> Year of Excellence ★ ★ ★ ★ ★