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Entrepreneurial behaviour of onion seed producers in Akola district

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Abstract

The present research was undertaken on topic "Entrepreneurial Behaviour of Onion Seed Producers" in Akola district of Vidarbha region of Maharashtra state' purposively on the basis of major area under Onion seed production. An exploratory design of social research was used for present study aims at assessing the entrepreneurial behaviour of Onion seed producers. Two talukas namely Akola and Patur of Akola district was selected for the study as they are having major area under Onion seed production and based on highest cultivable area. From each of the selected taluka's five villages was selected purposively based on highest area under Onion seed production. Thus, total ten villages were selected for the study, total 120 Onion seed producers constitute the sample size for the study. 60 respondents were selected from Akola and Patur talukas each.

The findings of the research study revealed that Most of the constraints faced by Onion seed producers were high incidence of pest and diseases (63.33%), followed by 57.50 per cent of the respondents expressed that they have unknown about how to remove off type plants and 53.33 per cent of the respondents expressed that they were not getting proper knowledge about seed treatment. Further 49.17 per cent respondents facing problems of lack of availability of labour in time. Rest 45.00 per cent of the respondents expressed that insurance is not availed for Onion seed production.

Keywords: Entrepreneurial behaviour, onion seed producer, onion

Introduction

Onion is one of the major bulb crops of the world and also an important commercial vegetable crop. Among the commercially grown bulbous vegetable crops in India, Onion occupies predominant place. Onion (*Allium sepa* L.), Alliaceae family and the synonymous are Kanda, Earulli, Ullagaddi, Piyaz, Pallando in various regional languages. In India, total production of Onion in year 2016-2017 was about 22427 thousand million tonnes, cultivated in 1306 thousand hectares. Whereas, in Maharashtra, total production of Onion was about 6773.08 thousand million tonnes, cultivated in 471.66 thousand hectares of area. Particularly in Western Maharashtra, Nashik is the leading district in area and production of Onion followed by Ahmednagar and Pune. (Handbook of Horticulture statistics, Ministry of Agriculture, Gov. of India 2018) [18]. In Vidarbha region of Maharashtra, Buldhana and Akola district possess the largest area and production of Onion. In Akola district 2982 ha. Area is under Onion production. (DSAO Akola, Annual Report, 2018) [11]. In India, the short day types of Onion is cultivated on large scale in the northern plains. Central and southern parts of the country except higher hills, where the long day types Onion varieties like Brown Spanish and Yellow Spanish etc. are grown over a limited area. Therefore, the seed production of the short day types of Onion is done in central parts of the country particularly in Mandarin and Khandwa region of Madhya Pradesh, Nashik, Pune, Buldhana and Akola districts of Maharashtra and Rajkot district of Gujrat. However, Northern states like Punjab, Haryana and Rajasthan are not preferred by the seed industry due to the severe attack of stem phylum and purple blotch and lower seed yield but there is a potential for seed production in north under delayed planting. Seed is the basic and most critical input for sustainable agriculture. The response of all other inputs depends on quality of seed to a larger extent. The Indian seed programme largely adheres to the limited generation system for seed multiplication in a phased manner. The system recognizes three generations namely breeder, foundation and certified seeds which provides adequate safeguards for quality assurance in the seed multiplication chain to maintain the purity of the variety as it flows from the breeder to the farmer. With recent technological development in agriculture, seed production has become more complex

business and requires careful planning for successful operations.

The seed production is systematically organized, carefully planned based on the best information available and aimed to achieve higher yields and best quality of seed out of their resources. It is the deliberate and conscious effort on the part of the seed grower to think about the seed programme in advance and adjust them according to new knowledge on technological changes in physical and economic situation, price structures etc.

Material and Methods

Locale of the study

The present study was carried out in Akola district of Vidarbha region of Maharashtra state. The above district was selected purposively on the basis of major area under Onion seed production. Two talukas namely Akola and Patur of Akola district was selected for the study as they are having major area under Onion seed production and based on highest cultivable area

Selection of respondents

The list of Onion seed producers was obtained from TAO, Department of Agriculture. From each taluka five villages was selected in respect of Onion seed producers and from each village, twelve Onion seed producers were selected randomly. Thus, total 120 Onion seed producers were the sample size for the study. 60 respondents were selected from Akola and Patur talukas each. The whole sample was considered as respondents and they were interviewed for collection of data. Data was collected with the help of interview schedule.

Measurement of Entrepreneurial behavior of Onion seed producer

Entrepreneurial behaviour

For the present study, entrepreneurial behaviour of Onion seed producers is operationally defined as cumulative outcome of seven selected components of entrepreneurial behaviour viz., innovativeness, achievement motivation decision making ability, economic motivation, risk orientation, leadership ability and management orientation was measured by using the following methods:-

1. Innovativeness

This refers to the behavior pattern of an individual who has interest and desire to seek changes in farming techniques and is prepared to introduce such changes into his operations wherever practical and feasible. For quantifying the innovativeness characters of the respondents Moulik (1965) self-rating innovativeness scale was followed. The original scale consists of three sets of statements. Each set of statements contains three statement with weightages 2, 1 and 0 indicating high, medium and low degree of innovativeness. After obtaining the responses as "most like" and "least like" choices as in original scale for each of the three sets of statements the scoring was done by assigning score "2" to "most like" and score "1" to "least like". The final scoring was achieved by summing up the scores of the weightages of the "most like" statements and the weightages of the "least like" statements. As there was three sets of statements for innovativeness scale, the sum of scores for the three sets was considered for each respondent. Later, the Onion seed

producers was grouped into following three categories on the basis of mean and standard deviation.

Sl. No.	Category	Range
1.	Low	Up to 11.94
2.	Medium	11.95 to 15.38
3.	High	Above 15.38
	Mean = 13.66	SD = 01.72

2. Achievement motivation

It is operationally defined as the desire for excellence to attain a sense of personal accomplishment. It was measure with the help of procedure adopted by Chandrapaul (1998). The scale consist of five statements and responses was obtained on two point continuum. A weightage of 2 and 1 respectively was assigned to the response categories in the case of positive statements and the scoring was reversed for negative statements. The total score of the respondents on their achievement motivation was arrived by sum up the weightages of responses for each statement. Later, the Onion seed producers was grouped into following three categories on the basis of mean and standard deviation.

Sl. No.	Category	Range
1.	Low	Up to 5.69
2.	Medium	5.70 to 7.67
3.	High	Above 7.67
	Mean = 06.68	SD = 0.99

3. Decision making ability

The decision making ability of a farmer is operationally defined as the degree of weighing the available alternatives in terms of their desirability and their like hoods and choosing the most appropriate one for achieving maximum profit on his farming. The scale developed by Supe (1969), with due modification was used to measure decision making ability of farmers. The original scale modified into seven sentences for measuring the decision making in choosing the different alternatives of package of practices in Onion seed production. The weightage of 3, 2 and 1 as suggested by Supe (1969) were assigned to the three rationality levels namely 'rational', 'intermediate' and 'less rational', respectively. Later, Onion seed producers were grouped into following three categories on the basis of mean and standard deviation.

Sl. No.	Category	Range
1.	Low	Up to 13.04
2.	Medium	13.05 to 18.50
3.	High	Above 18.50
	Mean = 15.77	SD = 02.73

4. Economic motivation

It refers to the values or attitudes which attach greater importance to profit maximization with the ends and means. This variable was measured with the scale developed by Supe (1969). It consists of six statements of which first five statements are positive and last one is negative. The responses for each statements were rated on a five point continuum namely strongly agree, agree, undecided, disagree and strongly agree. With the scores of 5,4,3,2, and 1 for positive statements and 1,2,3,4, and 5 for the negative statements, respectively. Later, the Onion seed producers were grouped into following three categories on the basis of mean and standard deviation.

Sl. No.	Category	Range
1.	Low	Up to 15.01
2.	Medium	15.02 to 22.87
3.	High	Above 22.87
	Mean = 18.94	SD = 03.93

Sl. No.	Category	Range
1.	Low	Up to 46.17
2.	Medium	46.18 to 62.27
3.	High	Above 62.27
	Mean = 54.22	SD = 08.05

5. Risk orientation

Risk orientation is operationally defined as the degree to which the Onion seed producer is oriented towards risk and uncertainty in facing problems in Onion seed production. Risk orientation was measured with the help of scale developed by Supe (1969), with due modifications. Modifications in the scoring procedure was made by giving a weightage of 3 for the 'agree' response, 2 for 'undecided' and 1 for 'disagree' response in case of positive statements. These was reversed in case of negative statements. The aggregate of weightages over five statements were the total score of a respondent on this variable. Later, the Onion seed producers were grouped into following three categories on the basis of mean and standard deviation

Sl. No.	Category	Range
1.	Low	Up to 08.47
2.	Medium	08.48 to 12.29
3.	High	Above 12.29
	Mean = 10.38	SD = 01.91

6. Leadership ability

Leadership ability is operationally defined as the degree to which an individual Onion seed producer initiates or motivates the action of others. Scale developed by Nandapurkar (1980) with due modification was used to measure leadership ability. Leadership ability was measured along the three point rating scale "always", "sometimes" and "never" with decreasing score from 2, 1, and 0 respectively. The total score was computed for each respondent by summing up the scores record. Later, the Onion seed producers were grouped into following three categories on the basis of mean and standard deviation.

Sl. No.	Category	Range
1.	Low	Up to 05.96
2.	Medium	05.97 to 07.98
3.	High	Above 07.98
	Mean = 06.97	SD = 01.01

7. Management orientation

It is operationally refers to the degree to which a Onion seed producer is oriented towards scientific farm management comprising planning, production and marketing functions on the farm. In order to know the respondents' management orientation, the scale developed by Samanta (1997) was used. The scale consists of the 16 statements representing planning, production and marketing aspects. In each group, positive and negative statements were mixed retaining more or less a psychological order of statements. The positive statements were given scores 5,4,3,2 and 1 for strongly agree, agree, undecided, disagree and strongly disagree, respectively. The scoring was reversed in case of negative statements. Later, the Onion seed producers were grouped into following three categories on the basis of mean and standard deviation.

2. Overall entrepreneurial behaviour

Entrepreneurial behavior of Onion seed producers is operationally defined as cumulative outcome of seven selected components of entrepreneurial behaviour viz., innovativeness, achievement motivation, decision making ability, economic motivation, risk orientation, leadership ability and management orientation was measured. Entrepreneurial behaviour was measured with the help of entrepreneurial behavior index by addition of scores of seven attributes namely innovativeness, achievement motivation, decision making ability, economic motivation, risk orientation, leadership ability and management orientation. The total obtained score was converted into entrepreneurial behavior index. The entrepreneurial behavior index was calculated by the following formula.

$$\text{Entrepreneurial Behaviour Index} = \frac{\text{Sum of obtained score on seven entrepreneurial components}}{\text{Maximum obtainable score on seven entrepreneurial components}} \times 100$$

The Onion seed producers was component wise classified into three categories viz. low, medium, high, respectively on the basis of mean and standard deviation as given below.

Sl. No.	Category	Index Range
1.	Low	Up to 117.20
2.	Medium	117.21 to 137.10
3.	High	Above 137.10
	Mean = 127.15	SD = 09.95

Results and Discussion

Entrepreneurial behaviour of the Onion seed producer

The entrepreneurial behaviour of the Onion seed producer comprised of seven selected components of entrepreneurial behavior such as innovativeness, achievement motivation, decision making ability, economic motivation, risk orientation, leadership ability and Management orientation. In this section with regards to the component wise entrepreneurial behaviour of the Onion seed producer have been interpreted and discussed as follows.

1. Innovativeness

This refers to the behavior pattern of an Onion seed producer who has interest and desire to seek changes in farming techniques and is prepared to introduce such changes into his operations wherever practical and feasible. Innovativeness is the important factor in Onion seed production, as it indicates the willingness of an individual to know about new things, ideas and new practices related to enterprise and up to what extend respondent is going to apply this things in his business. Therefore, the innovativeness of respondents was studied and the results presented in Table 1.

Table 1: Distribution of the respondents according to their innovativeness

Sl. No.	Category	Respondents (n=120)	
		Frequency	Percentage
1.	Low (Up to 11.94)	14	11.67
2.	Medium (11.95 to 15.38)	84	70.00
3.	High (Above 15.38)	22	18.33
Total		120	100.00
Mean = 13.66 SD = 01.72			

It is observed from the Table 1 that, majority (70.00%) of the respondents had medium innovativeness, followed by 18.33 per cent and 11.67 per cent distributed within high and low innovativeness category respectively. A considerable 70.00 per cent of Onion seed producer were found in medium category of innovativeness. The possible reason is that majority of the respondents were higher secondary and above college level education and medium annual income. Apart from this they used medium extension contact and social participation which might be contributed to their medium level of innovativeness. These results are in accordance with the findings of Wadekar (2016) [13], Raut (2018) [10] who reported that majority of the respondents had medium innovativeness.

2. Achievement Motivation

Achievement motivation is the desire for excellence to establish the personal accomplishment. It is the desire of doing difficult things which gives them a satisfaction. This help to increase the work efficiency of the Onion seed producer. The information regarding achievement motivation of the respondents collected, compiled and presented in Table 2.

Table 2: Distribution of the respondents according to their achievement motivation

Sl. No.	Category	Respondents (n=120)	
		Frequency	Percentage
1.	Low (Up to 5.69 score)	12	10.00
2.	Medium (5.70 to 7.67 score)	86	71.67
3.	High (Above 7.87 score)	22	18.33
Total		120	100.00
Mean = 06.68 SD = 00.99			

It is observed from Table 2 that, majority (71.67%) of the respondents had medium achievement motivation followed by 18.33 per cent and 10.00 per cent of respondents who had high and low level of achievement motivation, respectively. It is concluded that majority of Onion seed producers belonged to medium achievement motivation. Achievement motivation is a psychological variable. It differs from individual to individual and it forces the individual towards reaching same goal. The medium level extension contact and social participation may be the possible reason for it. The findings are in line with the findings of Keisham (2016) [6] and Raut (2018) [10] who reported that, majority of respondents had medium level of achievement motivation.

3. Decision making ability

In general, the Onion seed producer have to take many decisions at every step while doing the seed production. This is the important behaviour which many times decide the success of the enterprise. That is why the decision making behaviour was studied and the results are presented in Table 3

Table 3: Distribution of the respondents according to their decision making ability

Sr. No.	Category	Respondents (n=120)	
		Number	Per cent
1.	Low (Up to 13.04 score)	15	12.50
2.	Medium (13.05 to 18.50 score)	86	71.67
3.	High (Above 18.50 score)	19	15.83
Total		120	100.00
Mean = 15.77 SD = 02.73			

It is observed from the Table 3 that, majority (71.67%) of the respondents belonged to medium decision making ability category, followed by 15.83 per cent respondents were in high and 12.50 per cent respondents were in low level of decision making ability respectively. Thus, it can be concluded that majority of respondents had medium level decision making ability. The possible reason might be that majority (71.67%) of the respondents were in medium decision making ability who had higher secondary and above college level of education, medium level of innovativeness and achievement motivation.

The finding is in line with Thakre (2013) [12], Wadekar (2016) [13], Raut (2018) [10] who reported majority of respondents had medium level of decision making ability.

4. Economic motivation

Every Onion seed producer normally tends to possess the basic urge to earn more. In order to understand the level of economic motivation, pertinent data were collected and the details are presented below in Table 4.

It is observed from the Table 4 that, Majority of respondents (61.67%) of the respondents had medium category of economic motivation, followed by 20.00 per cent and 18.33 per cent of respondents had high and low level of economic motivation. Thus, it is concluded that majority (61.67%) of Onion seed producer had medium level of economic motivation.

Table 4: Distribution of the respondents according to their economic motivation

Sl. No.	Category	Respondents (n=120)	
		Frequency	Percentage
1.	Low (Up to 15.01 score)	22	18.33
2.	Medium (15.02 to 22.87 score)	74	61.67
3.	High (Above 22.87 score)	24	20.00
Total		120	100.00
Mean = 18.94 SD = 03.93			

The finding is in line with the findings of Wadekar (2016) and Raut (2018) [10] who reported that majority of respondents had medium level of economic motivation.

5. Risk orientation

In general, farmers are always facing risk and uncertainty in adopting new technology in Onion seed production. Risk orientation behaviour decides individual's innovativeness and influence positively on the entrepreneurial behaviour. The

successful Onion seed producer are the one who readily accepts to face the risk and play with nature. Therefore, the risk orientation nature of the respondents was studied and the results are presented in Table 5

Table 5: Distribution of the respondents according to their risk orientation

Sl. No.	Category	Respondents (n=120)	
		Frequency	Percentage
1.	Low (Up to 08.47)	18	15.00
2.	Medium (08.48 to 12.29)	77	64.17
3.	High (Above 12.29)	25	20.83
Total		120	100.00
Mean = 10.38 SD = 01.91			

It is revealed from the Table 5 that, majority (64.17%) of the respondents had medium risk orientation. Whereas, 20.83 per cent of respondents had high and 15.00 per cent of respondents had low level of risk orientation, respectively. It depends on personal and socio- economic characteristics. The individual with good income possess better risk orientation. Majority of the respondents possess medium level of risk orientation. The result of present study is in accordance with Anita Bare (2017), Sanodiya *et al.* (2019), who observed that majority of the respondents had medium level of risk orientation.

6. Leadership ability

Leadership is the process of influencing the behavior of the individual in given situation. Thus, leadership is the phenomenon of influencing, guiding and directing the action and thoughts of the people in the intended direction. It is important behaviour in entrepreneurship development among the Onion seed producer. The data collected regarding leadership ability of the respondents is compiled and depicted in Table 6.

Table 6: Distribution of the respondents according to their leadership ability

Sl. No.	Category	Respondents (n=120)	
		Frequency	Percentage
1.	Low (Up to 5.96)	12	10.00
2.	Medium (5.97 to 7.98)	87	72.50
3.	High (Above 7.98)	21	17.50
Total		120	100.00
Mean = 06.97 SD = 01.01			

It is observed from Table 6 that, majority (72.50%) of the respondents were belonged to medium category of leadership ability followed by 17.50 per cent and 10.00 per cent of respondents belonged in high and low leadership ability, respectively. Thus, it can be concluded that, majority (72.50%) of respondents were medium level of leadership ability. The possible reason might be due to their socio-economic status. The other reasons being that they had higher secondary and college level of education. Their extension contact and social participation which help to adopt new agricultural practices prior to others in his social system are also contributing factors. The kind of farmers, who are early adopters were consulted by fellow farmers for information and are readily accepted as leaders. The results are in consonance with the findings of Wadekar (2016) [13] and Raut (2018) [10].

7. Management orientation

Management orientation is a degree to which an Onion seed producer is oriented towards scientific farm management comprising planning, production and marketing functions on the farm. Management orientation was measured using the components like, planning orientation, production orientation and marketing orientation which are given in Table 7.

Table 7: Distribution of the respondents according to their management orientation

Sl. No.	Category	Respondents (n=120)	
		Frequency	Percentage
1.	Low (Up to 46.17)	16	13.33
2.	Medium (46.18 to 62.27)	84	70.00
3.	High (Above 62.27)	20	16.67
Total		120	100.00
Mean = 54.22 SD = 08.05			

It is observed from Table 7 that, majority (70.00%) of the respondents were belonged to medium category of management orientation followed by high 16.67 per cent and low 13.33 per cent of management orientation respectively. Thus, it is concluded that, majority (70.00%) of respondents were belonged in medium level of management orientation. These finding is in line with Thakare (2013) [12] and Wadekar (2016) [13] who reported that, majority of the respondents had medium management orientation.

Table 8: Distribution of Onion seed producer based on components of entrepreneurial behaviour of Onion seed producer

Sl. No.	Components	Categories	Respondents (n=120)	
			Frequency	Per cent
1.	Innovativeness	Low	14	11.67
		Medium	84	70.00
		High	22	18.33
2.	Achievement motivation	Low	12	10.00
		Medium	86	71.67
		High	22	18.33
3.	Decision making ability	Low	15	12.50
		Medium	86	71.67
		High	19	15.83
4.	Economic motivation	Low	22	18.33
		Medium	74	61.67
		High	24	20.00
5.	Risk orientation	Low	18	15.00
		Medium	77	64.17
		High	25	20.83
6.	Leadership ability	Low	21	10.00
		Medium	92	72.50
		High	07	17.50
7.	Management orientation	Low	16	13.33
		Medium	84	70.00
		High	20	16.67

As regards innovativeness component of entrepreneurial behavior of Onion seed producer, majority (70.00%) of the respondents belonged to medium innovativeness category, whereas majority (71.67%) of the respondents belonged to medium achievement motivation category. Further, majority (71.67%) of the respondents belonged to medium category of decision making ability, whereas majority (61.67%) of the respondents belonged to medium category of economic

motivation. Majority (64.17%) of the respondents belonged to medium category of risk orientation, while majority (72.50%) of the respondents belonged to medium category of leadership

ability. Majority (70.00%) of the respondents belonged to medium category of management orientation.

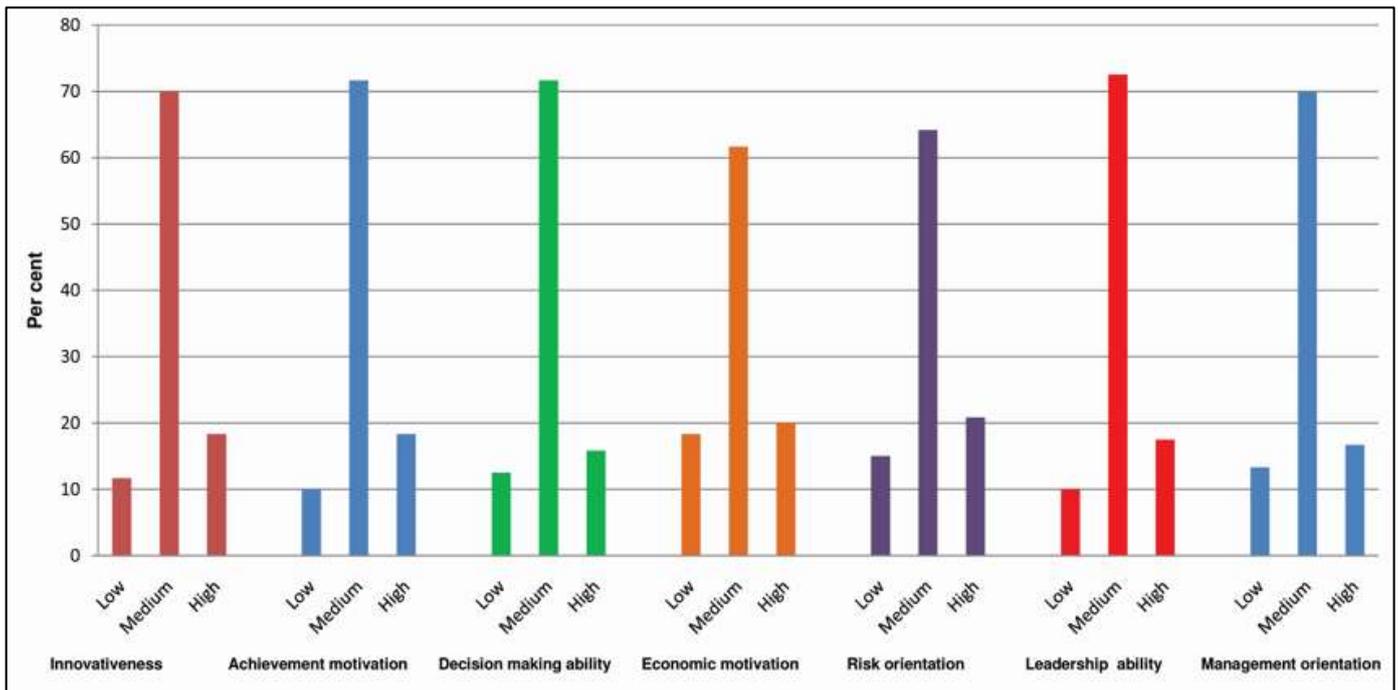


Fig 1: Distribution of onion seed producer based on components of entrepreneurial behavior of onion seed producer

2. Overall Entrepreneurial behaviour

Distribution of the respondents according to their overall entrepreneurial behaviour is presented in Table 9

Table 9: Distribution of the respondents according to their overall entrepreneurial behavior

Sl. No.	Category	Respondents (n=120)	
		Frequency	Percentage
1.	Low (Up to 117.20)	15	12.50
2.	Medium (117.21 to 137.10)	82	68.33
3.	High (Above 137.10)	23	19.17
Total		120	100.00
		Mean = 127.15	SD = 09.95

It is observed from the Table 9 that, majority (66.67%) of the respondents possess medium entrepreneurial behaviour, followed by 19.17 per cent of respondents had high entrepreneurial behavior, where as 12.50 per cent of respondents possess low entrepreneurial behaviour.

The probable reasons of medium entrepreneurial behaviour might be due to their financial condition and higher secondary and college level of education. However, all the major seven components of entrepreneurial behaviour of Onion seed producer together reflect their medium entrepreneurial behaviour. As the respondents possess medium level of innovativeness, achievement motivation, decision making ability, economic motivation, risk orientation, leadership ability and management orientation etc. which lead for medium entrepreneurial behaviour. The findings of present study are in agreement with the findings of Raut (2018) [10] who stated that two third of respondents (68.34%) had medium entrepreneurial attributes, whereas, remaining respondents had high (17.50%), followed by low (14.16%) entrepreneurial behaviour, respectively.

Conclusion

Thus, it is concluded that the fact that majority of the farmers had medium entrepreneurial behavior is a clear indication of the progressiveness of the Onion seed producer. As seed production business is one of the economically viable enterprises in agriculture sector, therefore more number of agriculture graduates should come forward, organize, create a group and tap this opportunity and address the present problem of unemployment in agriculture. As most of the farmers had medium innovativeness, still there is a need to expose the Onion seed producer to recent developments in agricultural technologies and motivate them to adopt the latest and new technologies by organizing group discussions, meetings, study tours and field trips to government seed production units.

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