ENTREPRENEURIAL BEHAVIOUR OF POMEGRANATE GROWERS

By
Mr. HIPPARKAR BALAJI GOVIND
B.Sc. (Agri.)

MASTER OF SCIENCE
(AGRICULTURE)
IN
EXTENSION EDUCATION

DEPARTMENT OF EXTENSION EDUCATION
COLLEGE OF AGRICULTURE, LATUR
VASANTRAO NAIK MARATHWADA KRISHI VIDYAPEETH,
PARBHANI-431402 (M.S.), INDIA.

2015

ENTREPRENEURIAL BEHAVIOUR OF POMEGRANATE GROWERS

By
Mr. HIPPARKAR BALAJI GOVIND
B.Sc. (Agri.)

DISSERTATION
Submitted to the
Vasantrao Naik Marathwada Krishi
Vidyapeeth, Parbhani
In partial fulfilment of the
requirement for the Degree of

MASTER OF SCIENCE
(Agriculture)
IN
EXTENSION EDUCATION

DEPARTMENT OF EXTENSION EDUCATION
COLLEGE OF AGRICULTURE, LATUR
VASANTRAO NAIK MARATHWADA KRISHI VIDYAPEETH,
PARBHANI-431402 (M.S.), INDIA.

2015

CANDIDATE'S DECLARATION

I hereby declare that the dissertation

or part thereof has not been

previously submitted by me

for a degree of any

University or

Institute

Place : LATUR
Date : 31 / 08/ 2015

(Mr. HIPPARKAR B. G.)

Dr. D.D. Suradkar,
M.Sc. (Agri.), Ph.D.,NET.
Assistant Professor (E.T.O.),
Department of Extension Education,
College of Agriculture,
Latur-413512 (M.S.).

CERTIFICATE- I

This is to certify that **Mr. HIPPARKAR BALAJI GOVIND** has satisfactorily prosecuted his course of research for a period of not less than four semesters and that the dissertation entitled, "**ENTREPRENEURIAL BEHAVIOUR OF POMEGRANATE GROWERS**" submitted by him is the result of the original research work and is of sufficiently high standard to warrant its presentation to the examination.

I also certify that he has not previously submitted the dissertation or part thereof for a degree of any other University.

Place : LATUR
Date : 31 / 08 /2015

(D. D. Suradkar)
Research Guide

CERTIFICATE- II

This is to certify that the dissertation entitled, **"ENTREPRENEURIAL BEHAVIOUR OF POMEGRANATE GROWERS"** submitted by **Mr. HIPPARKAR BALAJI GOVIND Reg. No. 2013A/71ML** to the Vasantrao Naik Marathwada Krishi Vidyapeeth, Parbhani in the partial fulfilment of the requirement for the degree of **MASTER OF SCIENCE (Agriculture)** in subject of **EXTENSION EDUCATION** has been approved by the Student's Advisory Committee after oral examination in the collaboration with the External Examiner.

27.8.15

External Examiner
(Dr. P. R. Deshmukh)

(Dr. D. D. Suradkar)
Research Guide
Assistant Professor (E.T.O.),
Department of Extension Education,
College of Agriculture, Latur.

Advisory Committee Members

(Dr. J. M. Deshmukh)
Assistant Professor,
Department of Extension Education,
College of Agriculture, Latur.

(Dr. R. B. Changule)
Junior scientist,
Integrated farming system scheme,
VNMKV, Parbhani.

Associate Dean (P.G.)
College of Agriculture,
V.N.M.K.V., Parbhani- 431402

31.08.2015

Associate Dean and Principal
College of Agriculture, Latur.

ACKNOWLEDGEMENT

"Let us together serve the nation,
If each citizen takes over one step forward,
The country takes 125 corrore steps forward."

- Narendra Modi.

I think it is a matter of pleasure to glance back and recall the path one travels the days of hard work and perseverance. It is still great at the juncture to recall all the faces and spirit in the form teachers, friends, near and dear ones.

It is my proud privilege to express my heartfelt indebtedness and deepest sense of gratitude to Chairman of my advisory committee Dr. D. D. Suradkar, Assistant Professor, Department of Extension Education, College of Agriculture, Latur, whose unquestioned mastery on thesis subject, talented and versatile advice, scholastic guidance, profound interest in research, constructive criticism and inspiring discussion throughout the course of post graduate study gave me this unique experience of planning, concluding and presenting research.

Members of my advisory committee Dr. V. B. Kamble, Professor Dept. of Extension Education, College of Agriculture, Latur, Dr. R. B. Changule, Junior scientist Integrated farming system scheme, VNMKV, Parbhani, Dr. J. M. Deshmukh, Asstt. Professor, Dept. of Extension Education, College of Agriculture, Latur may be regarded as a lighthouse of the ocean liners who have been kindly navigating my ship of academic pursuit and I would like to mention my gratitude to them.

I shall fail in my duties if I do not place on record my heartfelt thanks to the respondent farmers of the selected villages of Aurangabad, Vaijapur and Paithan tahsils of Aurangabad district for co-operation in providing information regarding research.

I am grateful to Vice-Chanceller Dr. B. Venkateshwaralu, Vasantrao Naik Marathwada Krishi Vidyapeeth, Parbhani, Dr. A. S. Dhavan, Director of Instruction and

Dean, Faculty of Agriculture, VNMKV, Parbhani, Dr. B. B. Bhosale, Director of Extension Education, VNMKV, Parbhani, Dr. D. P. Waskar, Director of Research, VNMKV, Parbhani, Dr. D. N. Gokhale, Associate Dean (P.G.) College of Agriculture, Vasantrao Naik Marathwada Krishi Vidyapeeth, Parbhani a and Dr. S. S. Shetgar, Associate Dean and Principal, College of Agriculture, Latur for providing necessary facilities for conducting the research.

Today, here is smile on tips and light of hope in my eyes, because my fortune has changed for better. Behind this picture of prosperity lies the hard work, bondless love and firmlesss sacrifice of my respectful father Mr. Govind Nivrutti Hipparkar and mother Aai Nanda Govind Hipparkar who educated me, keeping in all comforts without which this work could not have seen the light of this day at all. Life in general and my research in particular would have remained a cipher space if not the tremendous encouragement, genuine faith and love bestowed on me by my sister Trupti, Prajkta, Sayli, Nivedita, Adveeta, Brothers Pradip, Pravin, Kalpesh, my Bhauji Abhijit Godase, Dipak Godase, Rohan Narle.

I am very lucky to have friendly advice and encouragement from my senior friends Sandip Golwad, Amol Dhepe, Sandip Bhagwat, Sagar Jadhav, and Santosh Suryawanshi.

I also owe my special regards to my friends Pravin Sarde, Laximan Gopatwad, Govardhan Temak, Raju Londhe, Rahul Dhake, Sachin Jadhav, Shailesh Bhosale, Ram Kapre, Sagar Mhaske, Pankaj Patil, Sachin Rathod, Prasad Shinde, Abhiman Rathod, Baban Haral, Sudhir Shinde, Probhod Pate, S Lokesh , K Venktesh, Nitin Patil, Mahesh Sable, Kishor Sonune, Prakash Gulgi, Pooja Devmare, Suvita Salunkhe, Megha Mane, Maina Jamdade, Kalpana Jamadar and my juniors Yogesh Ekhande, Gajanan Whayekar, Pradeep Pujari, Sidram Khobare, Shashikant Nishane, Shriram Surana, Sandip Zadke, Smita Gambhire, Sachin Kinge, Vijay Dulgad, Shivshankar Wnole, pavan and Zisahan Ali for their good will and moral support.

Possibly words may limit my expression in whose company, I never felt the burden because I could see the every helping hands in the dark of amalgam of tension and anxiety from my special friends ***Ganesh Keche, Pravin Dethe, Lahu Damale, Amol Rede, Dhanaji Lokre, Amar Gaikwad, Sachin Sarode, Sunny Chavan, Sushant Dhavre, Dipali Bhosale, Dhanshree Nigde, Shila Bhoire, Shital Wagh, Akshata Bhor, Prajakta pawar, Ruchita Pharande, Priyanka Dalvi, Kunal Vibhandik, Tanaji Shinde and Rahul Ingole.***

Place : Latur

Date : 31 / 08 /2015

(Hipparkar Balaji Govind.)

CONTENTS

Chapter No.	Title	Page No.
I	INTRODUCTION	1-5
II	REVIEW OF LITERATURE	6-27
III	METHODOLOGY	28-43
IV	RESULTS	44-56
V	DISCUSSION	57-67
VI	SUMMARY AND CONCLUSIONS	68-71
VII	IMPLICATIONS	72-73
	LITERATURE CITED	i - xiii
	THESIS ABSTRACT	a - b
	APPENDIX	I - VIII

LIST OF TABLES

Table No.	Title	Page No.
1.	Variables and their empirical measurements	31
2.	Scale values of components of entrepreneurial behaviour	42
3.	Distribution of respondents according to their farming experience	44
4.	Distribution of respondents according to their education	45
5.	Distribution of respondents according to their family size	45
6.	Distribution of respondents according to their occupation	46
7.	Distribution of respondents according to their land holding	46
8.	Distribution of respondents according to their annual income	47
9.	Distribution of respondents according to their social participation	47
10.	Distribution of respondents according to their mass media use	47
11.	Distribution of respondents according to their economic motivation	48
12.	Distribution of respondents according to their market orientation	48
13.	Distribution of respondents according to their innovativeness	49
14.	Distribution of respondents according to their farm decision making	49
15.	Distribution of respondents according to their achievement motivation	49
16.	Distribution of respondents according to their risk taking ability	50
17.	Distribution of respondents according to their information seeking behaviour	50
18.	Distribution of respondents according to their leadership ability	51
19.	Distribution of respondents according to their cosmopoliteness	51
20.	Distribution of respondents according to their entrepreneurial behaviour	52
21.	Distribution of respondents according to their entrepreneurial behaviour index	52
22.	Relationship between profile of pomegranate grower and entrepreneurial behaviour	53
23.	Coefficient of correlation between components of entrepreneurial behaviour of farmers with their entrepreneurial behaviour.	54

24.	Constraints faced by farmers in maintaining their enterprise	55
25.	Distribution of respondents according to their suggestions offered by farmers for taking up entrepreneurial activities	55

LIST OF FIGURES

Fig. No.	Title	Between Page No.
1.	Map of Aurangabad district	28-29
2.	Distribution of respondents according to farming experience	44-45
3.	Distribution of respondents according to education	44-45
4.	Distribution of respondents according to family size	45-46
5.	Distribution of respondents according to occupation	45-46
6.	Distribution of respondents according to land holding	46-47
7.	Distribution of respondents according to annual income	46-47
8.	Distribution of respondents according to social participation	47-48
9.	Distribution of respondents according to mass media use	47-48
10.	Distribution of respondents according to economic motivation	48-49
11.	Distribution of respondents according to market orientation	48-49
12.	Distribution of respondents according to innovativeness	49-50
13.	Distribution of respondents according to farm decision making	49-50
14.	Distribution of respondents according to achievement motivation	50-51
15.	Distribution of respondents according to risk taking ability	50-51
16.	Distribution of respondents according to information seeking behaviour	51-52
17.	Distribution of respondents according to leadership ability	51-52
18.	Distribution of respondents according to cosmopoliteness	52-53
19.	Distribution of respondents according to overall entrepreneurial behaviour	52-53
20.	Distribution of respondents according to entrepreneurial behaviour index	52-53

INTRODUCTION

Chapter I

INTRODUCTION

In an agrarian country like India national economy is born by agricultural industries. Agriculture enterprise is the way of life in India. The present agricultural enterprises are entering in to an era of science and technology. In this era, commercial farming is a rule rather than traditional subsistence farming. The farmers of today need innovative knowledge, skills and more modern technology than his fore father. Indeed, he gas to be an innovative to make a living in this competitive world.

Horticulture occupies an important place in the agricultural economy of India. The contribution of horticulture is estimated to about 10 per cent of the total value of agriculture in the country. Pomegranate (*Punica granatum*) is the most important fruit crop grown in tropical, subtropical and temperate regions of the world. It is a non-climacteric fruit and one of the drought resistant horticultural crops, has proved to be the best profitable crop under dry land conditions.

The total area under cultivation of pomegranate in India is 126.27 thousand ha and production is around 822.80 thousand tons. (Annual report- 2013-14, NRC Solapur).

	Area (000ha)	**Production (000 Mt)**	**Productivity (Mt/ha)**	**Rank**
India	126.27	822.80	6.51	6th in world
Maharashtra	90	477.0	5.3	1st in India

(Source- Annual report- 2013-14, NRC Solapur)

India is one of the leading country in pomegranate acreage and production worldwide. The area under cultivation of Pomegranate in India has grown by 10.73 per cent during last seven years from 96.9 thousand hectare to 126.27 thousand hectare. Maharashtra experienced a very rapid growth in Pomegranate area during the last 20 years from 4.6 thousand ha to 90 thousand ha and accounts for 76.40 per cent of the total cultivated area under pomegranate in the country.

Other major pomegranate growing states are Karnataka (15.5 thousand ha), Andhra Pradesh (6.4 thousand ha) and Gujarat (7.4 thousand ha). In recent years, pomegranate cultivation has also been started in Rajasthan, Orissa, Chhattisgarh, Uttarakhand and Madhya Pradesh. Although India is the largest producer of pomegranate in the world, its productivity (6.5 t/ha) is far below to Turkey (27.25 t/ha), Spain (20.00 t/ha), USA (16.7 t/ha), Israel (12.5 t/ha) and Iran (10.8 Mt/ha). During the year 2013-14. India exported 30,000 Mt of Pomegranate to the global market as compared to 86,000 Mt by Turkey and 60,000 Mt by Iran. Therefore, India has a tremendous potentiality to bridge this huge yield and export gaps (NRCP Annual report, 2013-14)

Pomegranate (*Punica granatum* L.) commonly known as Anar, Dalim, Matulum is an important fruit of tropical and subtropical regions of India. The wide adaptability, hardy nature, low maintenance cost, steady and high yields, fine table purpose and better keeping quality and possibilities to throw the plants into rest period when there is scarcity of irrigation water are some of the qualities which make this fruit crop ideally suitable for semiarid and arid regions. However, performance of the plant will be excellent, if maintained with protective irrigation. A number of varieties of pomegranate are cultivated and are distinguished by shape of the fruit, colour and thickness of the rind, taste and colour of the aril. In India pomegranate was previously grown in kitchen gardens and commercial plantations have come up in recent years with the introduction of some improved cultivars like Bhagwa, Ganesh, Araktha, Sindhur and Jyoti. With the recent developments in dryland horticulture, the production of this fruit has increased with increased demand in internal trade and export market. Although, the fruit is grown all over India, it is commercially exploited only in Maharashtra and Karnataka. (National Horticulture Board)

Maharashtra is the leading producer of pomegranate followed by Karnataka, Andhra Pradesh, Gujarat and Tamil Nadu. Ganesh, Bhagwa, Ruby, Arakta and Mridula are the different varieties of pomegranates produced in Maharashtra. In Maharashtra, pomegranate is commercially cultivated in Solapur, Sangli, Nasik, Ahmednagar, Pune, Dhule, Aurangabad, Satara, Osmanabad and Latur districts.

Entrepreneurial behaviour

The development of any nation depends primarily on the important role played by entrepreneurs. Hence, the part played by entrepreneurs is of vital importance in a

developing country like India. Thus in all economic development activities more attention is being given to entrepreneurship development. An entrepreneur is primarily concerned with changes in the formula of production over which he has full control. Further, it is commonly believed that an entrepreneur is basically an intelligent person and has a definite ability to create something new to prove its worthiness.

The entrepreneurial behaviour is not necessarily doing new things but also doing things in a different way that already have been done. The entrepreneur is essentially an economic man, who strives to maximize his profits by adoption of innovations. However, entrepreneurs are not simply innovators, they are men with a will to act, to resume risk and to bring about changes through organization of human efforts (Dannof, 1949). Now, it is increasingly being felt that, the economic growth and development of the advanced countries is largely due to entrepreneurship quality among their community rather than to capital.

A considerable amount of research about the personal traits and behaviour of entrepreneurs has been conducted in recent years. But, the precise identification of entrepreneurial talent remains elusive. Intensive research is needed in this new field of entrepreneurship to yield further insights into our growing body of knowledge about psychological tests and related methods which still remain more of an art than a science. Though numerous studies have yielded important quantities into entrepreneurship, it is important to recognize that the available knowledge represents only the tip of the iceberg, with areas of agreement, as well as continuing debate (Anonymous, 1996a).

Further progress of farming profession in the country depends mainly on the entrepreneurial behaviour of farmers. Human development report says that globally the gap between the rich and the poor is widening every day (Anonymous, 1996b). It is more pertinent to India where about 500 million people are dependent on agriculture. The world wide bibliography on entrepreneurial research prepared by East West centre Hawaii reports that, studies on behaviour of entrepreneurs in agriculture are very limited. As indicated by world development report there is no linkage between the goals of developmental policies and appropriate environmental protection. Both must be designed in combination to improve welfare of humans (Anonymous, 1992).

The studies on entrepreneurial behaviour of farmers have not been conducted in a systematic way especially those involving pomegranate growers. Even though number of studies have been conducted in India to find out differential characteristics of farmers in adopting farm practices, most of these studies have tried to find out association between knowledge and adoption, attitude, personal and socio-psychological characteristics. But, these studies have not tried to investigate on the role of entrepreneurial behaviour. However, only few research studies have been conducted in India on entrepreneurial behaviour of farmers.

In a heterogeneous and stratified society like India, it is not adequately realized that, the characteristics which distinguish entrepreneurship may not be only because of its different strata. Therefore, the entrepreneurial activity in a particular section of the population based on preset objective has to be considered. Presently, development of pomegranate producing farmers has become the primary concern in the area of horticulture. In this regard, the role played by entrepreneurs also assumes greater importance. This necessitates conducting studies on the entrepreneurial behaviour of pomegranate growers. Hence, the present study has been undertaken with an objective to assess entrepreneurial behaviour of pomegranate growing farmers and the relationship of their personal attributes with entrepreneurial behaviour.

OBJECTIVE OF STUDY

1.1. To study the profile of pomegranate growers.

1.2. To know the entrepreneurial behaviour of pomegranate growers.

1.3. To delineate the relationship between profile of pomegranate growers with their entrepreneurial behaviour.

1.4. To identify the constraints in pomegranate cultivation as perceived by the respondents and to invite their suggestions to overcome the constraints.

SCOPE OF THE STUDY

During 1970's entrepreneurship was recognized as a vehicle for economic growth and industrial development and a potential solution to problems of underemployment and unemployment (Anitha Dahiya *et al.*; 1999). However, in today's changing scenario, skills in entrepreneurial development have transformed and have become important. Many entrepreneurial opportunities are emerging in various fields such as computers, electronics, medicine, agriculture, food technology, fashion designing etc. It also assumes greater significance in the field of fruit production.

Entrepreneurship is the central force driving economic activity and prime catalyst in development. Hence, it forms an essential component in the development. The findings of this study may help the administrators and policy makers to know the entrepreneurial behaviour of farmers, the relationship between socio-economic characteristics with entrepreneurial behaviour and reasons for cultivating pomegranate and may help them to come out with the suitable policies and programmes. The study may also help in further investigations on entrepreneurial behaviour of pomegranate growing farmers.

LIMITATION OF THE STUDY

Due to limitations of time and other resources, the study was confined only to three talukas of Aurangabad district. Further, the expressed opinion of respondents with regard to the various issues of the study may not be totally free from personal bias and prejudice. Hence, the results of the study can not be generalized beyond the limits of the study area.

REVIEW OF LITERATURE

CHAPTER - II

REVIEW OF LITERATURE

The review of past literature makes the researcher aware about the methods, procedures and techniques available and used as well as the outcomes and conclusions of the past studies. It provides clues and guidance throughout the research process. The aspect under study being new, a scanty literature about it was available. Attempts were made to gather findings having relevance with the topic under study. The reviews pertaining to the objectives of this thesis entitled "Entrepreneurial Behaviour of Pomegranate growers In Aurangabad District". As been collected, complied and presented under the following subheads

2.1. Study the profile of pomegranate growers.

2.2. Know the entrepreneurial behaviour of pomegranate growers.

2.3. Delineate the relationship between profile of pomegranate growers with their entrepreneurial behaviour.

2.4. Identify the constraints in pomegranate cultivation as perceived by the respondents and to invite their suggestions to overcome the constraints.

2.1 TO STUDY THE PROFILE OF POMEGRANATE GROWERS

2.1.1. Farming experience

Chaudhari (2006) found that majority of trained (81.00%) and only 11.00 per cent of untrained dairy farmers had low (up to 10 years) experience in dairying. Whereas, 19.00 per cent of trained and 68.00 per cent of untrained dairy farmers had medium (11 to 20 years) experience in dairying, and near about one fourth of untrained dairy farmers (21.00%) had high (above 20 years) experience in dairying.

Waghmare (2010) reported that most of the respondents (63.34 per cent) had medium farming experience while, 22.50 per cent of the respondents had high farming experience and14.16 per cent of them were found in low farming experience category.

Pisure (2012) reported that majority of dairy farmers (65.00%) had medium dairy farming experience whereas, 20.83 per cent of dairy farmers had low dairy farming experience. Thus, only 14.17 per cent dairy farmers had high dairy farming experience.

Sable (2013) reported that majority of farmers 64.80 per cent had medium farming experience whereas, 20.00 per cent of farmers had low farming experience and only 15.20 per cent farmers had high farming experience.

2.1.2. Education

Mohapatra and Sahu (2012) reported that 20.00 per cent of the tribal entrepreneurs were educated up to primary school whereas, 15.00 per cent of them had middle school education. Thus, 11.25 per cent of the tribal entrepreneurs had education up to high school level, while 10.00 per cent of them had college level education. Thus, near about half of the respondents (43.75%) were illiterates.

Pisure (2012) indicated that only 9.16 per cent of dairy farmers had educated up to graduate level whereas, 14.17 per cent of dairy farmers had educated up to higher secondary school level and 38.33 per cent of dairy farmers had educated up to secondary school level, while 20.84 per cent of dairy farmers had middle school level education. Thus, 9.17 per cent of dairy farmers were illiterate and 8.33 per cent of dairy farmers were educated up to primary school level.

Sable (2013) reported that only 1.6 per cent of farmers had educated up to post graduate level whereas, 9.6 per cent of farmers had educated up to graduate level and 16.8 per cent of farmers had educated up to higher secondary school level, while 34.4 per cent of farmers had high school level education and 20 per cent farmers had middle school level education. However equal percentages i.e. 8.8 per cent of farmers were illiterate and educated up to primary school level.

Dhepe (2014) reported that 8.33 per cent of the black gram farmers were non educated, 10.83 per cent of them were educated up to primary school level and 14.17 per cent of them have secondary school level of education, 39.17 and 27.50 per cent of the chickpea farmers were educated up to higher secondary school Graduate and Post Graduate and above level, respectively.

Meena (2014) revealed that 31.67 per cent of the Pigeon pea growers were educated up to higher secondary school level, 28.33 per cent of them were having secondary school level education while, 20.00 per cent were educated up to graduate/post graduate level and 17.50 per cent of them have primary school education, respectively, only 02.50 per cent of the Pigeon pea growers were illiterate.

2.1.3. Family size

Wadear *et al.* (2003) found that small dairy farmers had large family size (7 members), followed by medium farmers (6 members) and large farmers (5 members).

Khattra *et al.* (2004) revealed that average family size of landless dairy farmers was 6 and land holder dairy farmers were 7.

Khin Mar Oo (2005) found that 70.00 per cent of the dairy women had medium size of family. Whereas, 20.00 per cent of them had big size family, followed by small size family (10.00%).

Chaudhari (2006) found that more than half of the trained and untrained dairy farmers (62.00 % and 59.00 %, respectively) had medium family size whereas, 22.00 per cent of trained and 18.00 per cent of untrained dairy farmers belonged to small family size. Thus, 16.00 per cent of trained and 23.00 per cent of untrained dairy farmers belonged to large family size.

Pisure (2012) found that 36.66 per cent of dairy farmers had small family size whereas, 35.84 per cent of dairy farmers belonged to medium family size and 27.50 per cent of dairy farmers belonged to large family size.

Bhagwat (2014) explored that nearly half of the goat keepers (47.5 per cent) belonged to the category of .small size of family and 32.5 per cent belonged to the category of medium size family. Remaining 20 per cent were belonged to the category of large size family.

2.1.4. Occupation

Jhamtani *et al.* (2003) revealed that more than half of the respondents (52.82%) were engaged in farming as their main occupation, whereas 20.44 per cent of them were engaged in service, followed by 12.00 per cent were engaged in more than one occupation while 11.55 per cent of the respondents were engaged in labour work and only 3.11 percent of the respondents were engaged in business.

Anitha (2004) observed that 3.33 per cent of farm women were practicing agricultural and subsidiary enterprises in addition to other sources of income. Great majority (92.50%) of farm women were practicing agricultural and subsidiary enterprises while 4.17 per cent of farm women were dependent only on agriculture.

Pandeti (2005) indicated that majority (71.67%) of the respondents were dependent only on agriculture. Whereas, 25.83 per cent of respondents were practicing agricultural and subsidiary enterprises and only 2.50 per cent of respondents were practicing agricultural and subsidiary enterprises in addition to other sources of income.

Ravi (2007) reported that majority of respondents (91.87%) were engaged in farming alone, whereas 5.11 per cent of respondents were engaged in farming and agro based subsidiary enterprises and only 3.12 per cent of them were practicing farming and agro based subsidiary enterprises in addition to other sources of income.

Akinbami *et al.* (2012) revealed that about 37 per cent of respondents fall in the category of garri making, while 41 per cent are into palm oil processing. Only 22 per cent indicated that they were engaged in the processing of both products.

Pisure (2012) revealed that majority of dairy farmers (79.16%) were engaged in dairy and agriculture enterprises whereas, 14.17 per cent of dairy farmers engaged in business along with agriculture and dairy enterprises. A meager percentage of dairy farmers (6.67%) were doing service along with agriculture and dairy enterprises.

Sable (2013) indicated that majority of farmers (65.60 per cent) were engaged in farming whereas, 25.60 per cent of farmers engaged in farming with subsidiary enterprises. A meager percentage of farmers 8.80 per cent were doing farming along with subsidiary and in addition to other sources of income.

2.1.5. Land holding

Nagesha (2005) observed that majority (76.60%) of respondents belonged to medium farmers category followed by equal per cent of the respondents falling under semi medium and big farmers' category (Each accounted for 11.00%) and small farmers (1.60%) category.

Patel (2005) revealed that slightly more than half of the respondents (52.00%) were found to have small size of land holding (1.1 to 2.0 ha of land), followed by marginal (40.00%) size of land holding (up to 1.0 ha. of land). Only 8.00 per cent of the respondents found in the category of medium size of land holding (2.0 ha of land).

Chaudhari (2006) reported that more than half of trained dairy farmers (54.00%) possessed semi medium land holding, followed by medium land holding (21.00%) and small land holding (19.00%)whereas, only 6.00 per cent of trained dairy farmers had

marginal land holding. In case of untrained dairy farmers, more than one third of respondents (37.00%) had semi medium land holding, followed by small (35.50%), marginal (19.00%) and medium (19.00%) land holding. Whereas, no trained and untrained dairy farmers could be observed under big land holding category.

Nagesh (2006) found that highest percentage (66.66%) of respondents belonged to medium farmers category whereas, 24.17 per cent and 9.17 per cent of the respondents were found under semi-medium and big farmers category, respectively.

Sonali Hajare (2010) observed that majority of the respondents (75.00 per cent) were landless while, 20.00 per cent of them were having marginal land holding, and only 5.00 per cent of them were having small land holding. No body was found from semi-medium holding and medium holding.

Pisure (2012) reported that equal percentage (44.17%) of the dairy farmers possessed semi-medium and medium land holding, followed by 11.66 per cent dairy farmers possessed small land holding whereas, there were no any single dairy farmer fell under landless, marginal land holding and big land holding categories of land holding.

Sable (2013) observed that 42.40 per cent of the farmers possessed medium land holding and 40.80 per cent farmers possessed big land holding, followed by 16.80 per cent farmers possessed small land holding.

2.1.6. Annual income

Ravi (2007) revealed that around 35.62 per cent of the SC and ST farmers belong to low level of annual income category whereas, 30.63 per cent of them belong to semi-medium income category while, 21.25 and 12.50 per cent of them belong to medium and high income category respectively.

Daya Ram *et al.* (2008) observed that more than half (62.00%) of respondents belong to medium level of annual income category while, (29.30%) belong to low level of annual income category and only (8.67%) of them belong to high income level category.

Pisure (2012) reported that 60.83 per cent dairy farmers had medium level of annual income followed by 22.50 per cent of dairy farmers categorized under low level of annual income whereas, 16.67 per cent of dairy farmers had high level of annual income.

Sable (2013) indicated that 65.60 per cent farmers had medium level of annual income followed by 19.20 per cent of farmers categorized under low level of annual income and 15.20 per cent of farmers had high level of annual income.

Dhepe (2014) shows that that 64.17 per cent of black gram farmers had medium annual income followed by 20.00 and 15.83 per cent had low and high annual income, respectively.

Mina (2014) reported that that majority 75.00 per cent of the respondents had medium annual income However, 20.00 per cent of respondents had high annual income While 05.00 per cent of the respondents were from low annual income category respectively.

2.1.7. Social participation

Vijay Kumar (2001) reported that near to half (45.84%) of the respondents fell under category of medium social participation followed by 41.66 and 12.50 per cent of low and high social participation, respectively.

Anitha (2004) in her study on entrepreneurial behaviour and market participation of farm women in rural district, Banglore in Karnataka reported that 17.50 per cent of respondents had high participation in extension activities, 44.20 per cent had medium and 38.30 per cent had low extension participation.

Ravikumar *et al.* (2013) concluded that majority of respondents (60.00%) had medium extension participation.

Pisure (2012) reported that 8.33 per cent respondents had low social participation while, 77.50 per cent of the respondents having medium social participation and 14.17 per cent of the respondents were found in high category of social participation.

Sable (2013) indicated that 24.80 per cent respondents had low social participation while, 56.00 per cent of the respondents having medium social participation and 19.20 per cent of the respondents were found in high category of social participation.

2.1.8. Mass media use

Neelaveni *et al.* (2002) revealed that half of the respondents belonged to medium mass media consumption category followed by low (32.50%) and high (14.16%) category.

Anitha (2004) reported that one-fifth (20.00%) of farm women had high level of mass media exposure. More than half (52.50%) of farm women were having medium level of mass media exposure and 27.50 per cent had low level of mass media use.

Suresh (2004) reported that 64.17 per cent of respondents were exposed to mass media to a moderate extent followed by 21.25 per cent to low extent and 14.58 per cent to high extent.

Sable (2013) reported that majority (43.20 per cent) of the respondents belonged to medium mass media use. Whereas, 24.00 per cent and 32.80 per cent of farmers belonged to low and high mass media use categories, respectively.

2.1.9. Economic motivation

Khin Mar Oo. (2005) observed that majority of dairy women (67.50%) had medium level of economic motivation, followed by high economic motivation (24.16%), whereas only 8.33 per cent of the dairywomen had low economic motivation.

Katke (2011) it is observed that majority 67.50 per cent of respondents had medium level of economic motivation and 17.50 per cent of the respondents had low economic motivation and 15.00 percent of the respondents had high economic motivation.

Chahande (2012) it was noticed that majority 46.66 per cent of the respondents had medium economic motivation followed by high 33.34 per cent and low 20.00 per cent economic motivation.

Mandlik (2012) it is observed that majority of respondents 74.17 per cent had medium level of economic motivation, where 11.67 and 14.16 per cent of the respondents had low level and high level of economic motivation respectively.

Mane (2012) indicates that a majority 60.00 per cent of the respondents were having medium economic motivation, while 12.50 per cent of them had low economic motivation. Further it was found that 27.50 per cent of the respondents had high economic motivation.

2.1.10. Market orientation

Chauhan and Patel (2003) observed that more than half of respondents (60.00%) had medium market orientation whereas, 21.25 per cent of respondents had high market orientation, followed by low market orientation (18.75%).

Chaudhari (2006) indicated that more than half of trained and untrained dairy farmers (59.00 % and 54.00%, respectively) had medium level of market orientation whereas, 38.00 per cent of trained and only 19.00 per cent of untrained dairy farmers had high market orientation. It was interesting to note that only 3.00 per cent of trained dairy farmers and more than one fourth of untrained dairy farmers (27.00%) had low market orientation.

Sasane (2010) found that most of the pomegranate growers i.e., 72.50 per cent had medium level of market orientation followed by 15.00 per cent of the pomegranate growers had low level of market orientation and remaining 12.50 per cent of the pomegranate growers had high level of market orientation.

Sawale (2011) manifested that majority (68.75 %) of the pomegranate growers had medium market orientation followed by 22.50 per cent and 8.75 per cent of the pomegranate growers had low and high market orientation, respectively.

Atar (2012) observed that majority 73.34 per cent of the grape growers had medium market orientation followed by 20.00 per cent and 6.66 per cent of the grape growers had low and high market orientation, respectively.

Pisure (2012) indicated that, more than half of dairy farmers i.e., 60.83 per cent of dairy farmers had medium level of market orientation, whereas 21.67 per cent of dairy farmers had high market orientation and 17.50 per cent of dairy farmers were categorized under low market orientation category.

2.2 ENTREPRENEURIAL BEHAVIOUR OF POMEGRANATE GROWERS

Rao and Dipak De (2003) conducted a study on entrepreneurial behaviour of vegetable growers in Varanasi which revealed that majority (60.00%) of the respondents had medium entrepreneurial behaviour score, while 16.00 and 23:30 per cent respondents had low and high entrepreneurial behaviour scores, respectively.

Subramanyeswari and Veeraraghava Reddy (2003) in their study on entrepreneurial behaviour of rural dairy women operationalised entrepreneurial behaviour as the changes in the knowledge, skill and attitude of women livestock farmers towards dairy enterprises.

Vijay Kumar *et al.* (2003) in their study on entrepreneurial behaviour of floriculture farmers of Hyderabad operationalised entrepreneurial behaviour as the

cumulative outcome of information seeking behaviour, farm decision making, leadership ability, risk orientation, innovativeness, achievement motivation and market orientation of respondent farmers.

Nagesha (2006) found that majority (68.30%) of respondents belonged to medium entrepreneurial behaviour, whereas 17.50 per cent were in low entrepreneurial behaviour and 14.10 per cent of respondents were in high entrepreneurial behaviour category.

Ravi (2007) reported that, 41.87 per cent of the respondents belonged to low entrepreneurial behaviour category. Whereas 33.75 per cent of them belonged to medium entrepreneurial behaviour category and rest of them (24.38%) belonged to high entrepreneurial behaviour category.

Ashokkumar (2011) indicated that majority (68.30%) of the respondents belonged to medium entrepreneurial qualities category. Whereas, 17.50 per cent were in low entrepreneurial qualities category and 14.20 per cent were in high entrepreneurial qualities category.

Mehta and Sonawane (2012) observed that majority (73%) of respondents had medium entrepreneurial behaviour level, 17 per cent of respondents had high entrepreneurial behaviour level and only 10 per cent of respondents had low entrepreneurial behaviour level.

2.2.1 COMPONENTS OF ENTREPRENEURIAL BEHAVIOUR

2.2.1.1 Innovativeness

Suresh (2004) indicated that the milk producers in the district had medium, high and low innovativeness in the order of 55.00, 24.58 and 20.42 per cent, respectively.

Nagesha (2006) noticed that majority (63.30) of the respondents had medium innovativeness and equal per cent (18.30%) of the respondents were categorized as having low and high innovativeness.

Ravi (2007) observed that majority (41.87%) of the respondents belonged to low entrepreneurial behaviour category. Whereas, 33.75 per cent of them were in medium entrepreneurial behaviour category and remaining 24.38 per cent of the respondents were in high entrepreneurial behaviour category.

Ashokkumar (2011) concluded that majority (68.30%) of the respondents belonged to medium entrepreneurial qualities category whereas, 17.50 per cent were in

low entrepreneurial qualities category and 14.20 per cent were in high entrepreneurial qualities category.

Mohapatra and Sahu (2012) observed that, 38.75 per cent of the respondents belong to low innovativeness, 36.25 per cent of the respondents belong to medium innovativeness and 25.00 per cent belong to high innovativeness categories.

Sable (2013) indicates that majority (51.20 per cent) of the respondents had medium innovativeness, followed by high (24.80 per cent) and low (24.00 per cent) innovativeness, respectively.

2.2.1.2. Farm decision making

Vijay Kumar (2001) found that near to half (46.66%) of the respondents had medium decision making ability followed by low (27.50%) and high (25.84%) decision making categories.

Suresh (2004) observed that majority of milk producers had medium level of decision making ability (65.83%) followed by low and high with 21.67 and 12.50 per cent of respondents, respectively.

Nagesha (2006) pointed out that near to three fourth (74.20%) of the respondents belonged to intermediate decision making ability followed by 13.30 and 12.50 per cent, having less rational and rational decision making abilities, respectively.

Kaushal Kumar (2008) observed that majority (53.33%) of the pineapple growers had medium level of farm decision making ability followed by 27.78 percent of them having high level and 18.89 percent of them having low level of farm decision making ability.

Mehta and Sonawane (2012) noticed that majority (76.00%) of mango grower had medium decision making ability followed by 15 percent had high level and 9 percent had low level of decision making ability.

Sable (2013) shows that, majority of farmer (63.20 per cent) belonged to medium farm decision making category followed by high (20.80 per cent) and low (16.00 per cent) farm decision making categories, respectively.

2.2.1.3. Achievement motivation

Vijay Kumar (2001) reported that 44.16 per cent of respondents had medium achievement motivation followed by 28.34 and 27.50 per cent of respondents with low and high achievement motivation, respectively.

Suresh (2004) indicated that 61.25 per cent of the respondents had medium achievement motivation followed by 20.42 per cent and 18.33 per cent with low and high achievement motivation.

Nagesha (2006) found that majority (71.70%) of the respondents had medium achievement motivation followed by 15.00 per cent and 13.30 per cent of respondents having low and high achievement motivation, respectively.

Daya Ram, *et al.* (2008) concluded that majority of the respondents (86.67 %) were in medium category of achievement motivation followed by low category (16 %) and high category (15.33%).

Mehta and Sonawane (2012) observed that more than three fourth (90.00%) of respondents had medium achievement motivation followed by 6.00 per cent had high achievement motivation and 4.00 per cent had low achievement motivation.

Pisure (2012) reported that near about one third (33.33%) dairy farmers had low achievement motivation, whereas 26.67 per cent of dairy farmers belonged to medium achievement motivation category and 40.00 per cent of them were categorized under high achievement motivation category.

Ravikumar *et al.* (2013) reported that majority of respondents (64.16%) belonged to medium level of achievement motivation followed by low (19.17%) and high (16.67%) level of achievement motivation.

Sable (2013) indicated that majority (58.40 per cent) of the farmers had medium achievement motivation followed by low (22.40 per cent) and high (19.20 per cent) achievement motivation of farmers, respectively.

2.2.1.4. Risk taking ability

Suresh (2004) indicated that majority of dairy entrepreneurs had medium level of risk taking ability followed by low and high level with 62.02 per cent, 24.58 per cent and 13.34 per cent of them, respectively.

Nagesha (2005) observed that majority (56.70%) of the respondents had medium risk orientation followed by 22.50 per cent and 20.80 per cent of the respondents had low and high risk orientation, respectively.

Chaudhari (2006) reported that more than half of the both trained (58.00%) and untrained (53.00%) dairy farmers had medium risk orientation however, 33.00 per cent of trained and only 10.00 per cent of untrained dairy farmers had high risk orientation whereas, meager percentage (09.00%) of trained and more than one third (37.00%) of untrained dairy farmers had low risk orientation.

Nagesh (2006) found that most (85.84%) of the respondents had medium risk orientation followed by 10.00 per cent and 4.16 per cent of the respondents having low and high risk orientation, respectively.

Prakash kumar rathod *et al.* (2012) observed that majority (58.00%) of farmers had medium risk taking ability followed by 9.34 and 32.66 per cent of farmers were low and high risk taking ability.

Sable (2013) reported that 14.40 per cent of farmers had low risk taking ability however, 71.20 per cent farmers had medium risk taking ability whereas, 14.40 per cent of farmers belonged to high category of risk taking ability.

2.2.1.5. Information seeking behaviour

Vijay Kumar (2001) reported that 41.66 per cent of respondents fell under low information seeking category followed by 33.34 and 25.00 per cent of respondents fell under medium and high information seeking categories, respectively.

Suresh (2004) reported that majority of the respondents had medium level of information seeking behaviour followed by high and low level with 68.75, 17.08 and 14.17 per cent, respectively.

Chaudhari (2006) reported that majority of trained (61.00%) dairy farmers had high information seeking behaviour followed by medium (29.00%) and low (10.00%) information seeking behaviour. However, nearly half of untrained (49.00%) dairy farmers had medium information seeking behaviour followed by low (28.00%) and high (23.00%) information seeking behaviour.

Prakash kumar rathod *et al.* (2012) reported that 56.67 per cent of the respondents had medium level of information seeking behaviour followed by 23.33 and 20.00 per cent low and high level of information seeking behaviour, respectively.

Pisure (2012) that majority of dairy farmers i.e., 62.50 per cent of dairy farmers had medium information seeking behaviour, followed by 11.67 per cent of dairy farmers had high information seeking behaviour. However, 25.83 per cent of them had low information seeking behaviour.

Sable (2013) that majority of farmers i.e, 63.20 per cent of farmers had medium information seeking behaviour, followed by 15.20 per cent of farmers had high information seeking behaviour. However, 21.60 per cent of them had low information seeking behaviour.

2.2.1.6. Leadership ability

Chandra Paul (1998) reported that 37.50 per cent of total respondents fell in low leadership ability category followed by medium (32.50%) and high (30.00%) leadership ability categories.

Vijay Kumar (2001) reported that 36.66, 32.60 and 30.84 per cent of total respondents fell under low, medium and high leadership ability categories, respectively.

Suresh (2004) reported that among the respondents, 67.92 per cent had medium level of leadership ability, 16.25 per cent had low and remaining 15.83 per cent had high level of leadership ability.

Sable (2013) reported that two fifth of farmers (40.00 per cent) had low level of leadership ability followed by medium (31.20 per cent) and high (28.80 per cent) level of leadership ability, respectively.

2.2.1.7. Cosmopoliteness

Anitha (2004) indicated that more than one-fourth (28.30%) of entrepreneurs had high cosmopoliteness followed by medium (44.20%) and low (27.50%) category of cosmopoliteness.

Suresh (2004) reported that 45.00 per cent of entrepreneurs had low level of cosmopoliteness, 44.17 per cent of them had medium level and 10.83 per cent had high level of cosmopoliteness.

Nagesha (2005) observed that maximum number (36.70%) of the respondents had medium level of cosmopoliteness followed by 34.20 per cent and 29.10 per cent of respondents had low and high level of cosmopoliteness, respectively.

Chaudhari (2006) reported that more than half of trained (55.00%) dairy farmers had medium level of cosmopoliteness followed by high (31.00%) and low (14.00%) level of cosmopoliteness. Whereas, 57.00 per cent of untrained dairy farmers had low cosmopoliteness followed by medium (32.00%) and high (11.00%) level of cosmopoliteness.

Rathod *et al.* (2012) observed that majority (55.34%) of the respondents had medium level of cosmopoliteness followed by 14.66 and 30 per cent of respondents had low and high level of cosmopoliteness, respectively.

Pisure (2012) indicates that 17.50 per cent of dairy farmers belonged low entrepreneurial behaviour and 67.50 percent dairy farmers had medium, followed by 15.00 per cent of dairy farmers had high entrepreneurial behaviour.

Sable (2013) that 24.00 per cent of farmers belonged to low level category of cosmopoliteness followed by 19.20 per cent of respondents had high level of cosmopoliteness. Whereas, 56.80 per cent farmers categorized under medium level of cosmopoliteness.

2.3 TO DELINEATE THE RELATIONSHIP BETWEEN PROFILE OF POMEGRANATE GROWERS WITH THEIR ENTREPRENEURIAL BEHAVIOUR.

2.3.1. Farming experience and entrepreneurial behaviour

Patil *et al.* (1999) found that farming experience of entrepreneurs did not have any significant relationship with their entrepreneurial behaviour.

Reddy and Reddi (2005) observed that experience in dairy farming had positive and significant relationship with farming performance in case of small dairy farmers whereas, non significant relationship was observed between experience in dairy farming and their farming performance in case of medium and large farmers.

Chaudhari (2006) found that experience in dairying had positively significant relationship with entrepreneurial behaviour of trained dairy farmers.

Pisure (2012) reported that dairy farming experience found to have positive and highly significant relationship with entrepreneurial behaviour of the dairy farmers.

Sable (2013) found that farming experience found to have positive and significant relationship with entrepreneurial behaviour of the farmers.

2.3.2. Education and entrepreneurial behaviour

Murali and Anita Jhamtani (2003) reported that education of respondents was positively and significantly related with their entrepreneurial behaviour.

Subramanyeswari and Veeraraghava Reddy (2003) reported that education was found to have significant relationship with entrepreneurial behaviour.

Anitha (2004) reported that education had negatively significant relationship with entrepreneurial behaviour of farm women.

Nagesha (2005) observed that education was found to be established positive and significant relationship with entrepreneurial behavior of the respondents.

Chaudhari (2006) found that education had positive and highly significant relationship with entrepreneurial behaviour of trained dairy farmers.

Pisure (2012) found that education of dairy farmers had positive and highly significant relationship with their entrepreneurial behaviour.

Sable (2013) found that education of farmers, there was positive and significant relationship with their entrepreneurial behaviour

2.3.3. Family size and entrepreneurial behaviour

Mundhwa and Padheriaa (1998) found that family size was positively and significantly related with entrepreneurial behaviour of dairywomen.

Anitha (2004) stated that family size of farmwomen did not show any significant relationship with their entrepreneurial behaviour.

Chaudhari (2006) found that family size did not establish any significant relationship with entrepreneurial behaviour.

Pisur (2012) Family size of the dairy farmers had shown highly significant correlation with entrepreneurial behaviour.

2.3.4. Occupation and entrepreneurial behaviour.

Anitha (2004) reported that occupation of respondents did not show significant relationship with their entrepreneurial behaviour.

Pandeti (2005) revealed that there was no significant relationship between occupation and entrepreneurial behaviour of farmers.

Nagesha (2005) observed that the occupation had not shown any significant relationship with entrepreneurial behavior.

Nagesh (2006) found that the occupation did not show any significant relationship with entrepreneurial behaviour.

Chaudhari (2006) reported that occupation did not establish any significant relationship with entrepreneurial behaviour.

Pisure (2012) show that occupation of the dairy farmers had positive and highly significant correlation with entrepreneurial behaviour of the dairy farmers.

Sable (2013) reported that occupation of the farmers had showed non significant correlation with entrepreneurial behaviour of the farmers.

2.3.5. Land holding and entrepreneurial behaviour.

Nomesh kumar *et al.,* (2000) indicated that there were significant differences in the entrepreneurial behaviour of farmers having different sizes of land holding.

Subramanyeswari *et al.,* (2003) reported that land holding was found to have significant relationship with entrepreneurial behaviour of dairy women.

Nagesha (2005) observed that land holding was found to be positive and significant relationship with entrepreneurial behavior of the respondents.

Nagesh (2006) reported that land holding was found to be having positive and significant relationship with entrepreneurial behavior of respondents.

Chaudhari (2006) reported that land holding was found to be positive and significant relationship with entrepreneurial behavior of respondents.

Pisure (2012) indicated that land holding of the respondents had shown positive and highly significant relationship with entrepreneurial behaviour of dairy farmers.

Sable (2013) reported that land holding of the respondents had shown positive and significant relationship with entrepreneurial behaviour of farmers.

2.3.6. Annual income and entrepreneurial behaviour

Patil *et al.* (1999) reported that annual income of farmers and their entrepreneurial behaviour are non-significantly related.

Subramanyeswari and Veeraraghava Reddy (2003) reported that there was a significant relationship between entrepreneurial behaviour of dairy women and dairy income.

Vijaykumar *et al.* (2003) reported that annual income of small and big farmers had positively and significant relationship with their entrepreneurial behaviour whereas, non significant relationship between them was seen in case of medium farmers.

Nagesha (2005) observed that annual income was found to be positive and significant relationship with entrepreneurial behavior of the respondents.

Nagesh (2006) found that annual family income was found to be have positive and significant relationship with entrepreneurial behavior of the respondents.

Pisure (2012) reported that annual income of the respondents had shown positive and highly significant relationship with entrepreneurial behaviour of dairy farmers.

Sable (2013) reported that annual income of the respondents had shown positive and significant relationship with entrepreneurial behaviour of farmers.

2.3.7. Social Participation and entrepreneurial behaviour

Pandeti (2005) found that social participation of the respondents had positive and significant relationship with their entrepreneurial behaviour.

Hajare Sonali (2010) observed that there was positive and highly significant relation between social participation and training needs about dairy enterprise.

Pisure (2012) reported that social participation of the respondents had showed positive and highly significant relationship with entrepreneurial behaviour of dairy farmers.

Sable (2013) found that social participation of the respondents had showed non significant relationship with entrepreneurial behaviour of farmers.

2.3.8. Mass media use and entrepreneurial behaviour

Patil *et al.* (1999) observed that mass media exposure of farmers was positively and significantly related with their entrepreneurial behaviour.

Patel *et al.* (2003) reported a positive association between mass media exposure of farmers with their entrepreneurial behaviour.

Sable (2013) found that mass media use of the respondents had showed non significant relationship with entrepreneurial behaviour.

2.3.9. Economic motivation and entrepreneurial behaviour

Narmatha *et. al.,* (2002) observed that economic motivation of livestock farmwomen was found to have positive and significant contribution for their entrepreneurial behaviour.

Reddy and Reddi (2005) revealed that economic orientation of small, medium and large dairy farmers was positively and significantly associated with their farming performance.

2.3.10. Market orientation and entrepreneurial behaviour

Patil *et al.* (1999) observed that market orientation of entrepreneurs was found to have positive and highly significant relationship with their entrepreneurial behaviour.

Chaudhari (2006) reported that market orientation of the respondents had showed positive and significant relationship with entrepreneurial behaviour.

Pisure (2012) reported that Market orientation of the respondents had shown positive and highly significant relationship with entrepreneurial behaviour of dairy farmers.

2.4 CONSTRAINS FACED BY POMEGRANATE GROWER

Anilkumar and Arora (1999) in their study on post-harvest management of vegetables in Uttar Pradesh hills found that non availability of cold storage, highly perishable nature of the vegetables, low market demand at the time of storage, and hence non-profitability of vegetable storage are the major problems perceived by farmers related to vegetable storage.

Vasudev and Chowdhary (1999) identified problems of production and marketing of tomato in three regions of Andhra Pradesh. Major ones were lack of grading facilities, absence of market information, spoilage and malpractices. They concluded that providing these facilities can improve the marketing efficiency and would help the farmers in realizing better prices.

Achuta and Radhakrishnamurthy (2000) conducted a study on Betel vine growers of Puttur district of Andhra Pradesh and noticed the problems like high incidence of pests and diseases (100%) and non-availability of plant protection chemicals in time (58.33%).

Amudha and Veerabhadraiah (2000) reported that major problems experienced by farm women in poultry framing were lack of knowledge about improved practices and disease control measures, higher feed cost and low egg prices, lack of storage facilities for eggs, low egg consumption, lack of export facilities and their dependency on middle men to get poultry feed and marketing their eggs.

Ravi Shankar and Katteppa (2000) conducted a study on potato growers in Chikmagalore district of Karnataka state. They reported that 94.16 per cent respondents lacked technical guidance. More pests, more diseases, high cost of fertilizers, high cost of plant protection chemicals and non-availability of fertilizers in time were the other problems faced by 90.00, 83.33, 85.00, 81.00 and 68.33 per cent of the respondents, respectively.

Waman and Patil (2000) conducted a study on onion growers in Nasik district of Maharashtra and revealed that difficulty in identifying pests and diseases (54.66%) and non curable nature of onion diseases even with pesticides (42.00%) were the major problems.

Seema and Indu (2001) listed major constraints experienced under sphere category as excessive burden of household work, lack of leisure time and insufficient

money in hand, incomplete knowledge regarding loan schemes and procedures and lack of information on education and training under resources sphere, major constraints were inadequate amount advanced, difficulty in justifying claim and lack of collateral support, while the major support sphere system constraints were complicated loan procedures frequent visit of various officials in search of free gifts and inadequate incentives offered by the government.

Sunil Kumar (2004) in his study on tomato growers in Belgaum district of Karnataka reported that majority (75.83%) of the farmers faced the problem of lack of technical knowledge and guidance about improved cultivation practices as well as post-harvest technology. Whereas, 65.00 per cent of the respondents faced the problem of high fluctuation in market price. Other problems like high transportation cost (62.53%), labour shortage and high wages (55.83%) and lack of irrigation facilities and power shortage (46.66%) were also noticed.

Thiranjana Gowda (2005) reported that 90 per cent of the respondents faced the problem of price fluctuation followed by problem of pest and diseases (65.00%).

In a study conducted by Nagesha (2005) majority of the respondents (100%) faced problem of high incidence of pests and diseases followed by other problems such as

1. High cost for fertilizers, chemicals and insecticides
2. High wages of labour and non-availability of skilled labour
3. Lack of transportation and storage facilities were faced by 87.5, 80.8 and 61.6 percent of respondents, respectively.

Ravi (2007) revealed that, majority of the respondents expressed that finance problems, lack of knowledge level and low level of education (78.75%), (77.50%) and (75.62%) respectively followed by marketing problem (66.25%) as the major problems in undertaking entrepreneurial activities.

Sable (2013) reveled that, majority of the farmers expressed that financial problem, lack of exposure to mass media and information and marketing problem as reported by 76.00, 64.80 and 60.80 per cent respectively followed by lack of knowledge (55.20 per cent), lack of food grain storage facility (52.00 per cent), labour problem (46.40 per cent) and lack of transportation facilities (44.80 per cent), respectively.

It is evident from the above reviews that major problems faced by the respondents were lack of technical guidance, lack of transport facilities and wide price fluctuations.

SUGGESTION FOR BETTER PERFORMANCE OF ENTREPRENEURIAL ACTIVITIES BY THE POMEGRANATE GROWER.

Chelladurai (2000) listed the suggestions of respondent's education as important at all levels, proper exposure and knowledge are imparted to them in order to over come the family restrictions, family counseling must also form part of entrepreneurial programmes for women, governmental and non-governmental organizations must arrange the entrepreneurship development programmes according to the local needs, extending financial support and training programmes for entrepreneurship development should be organized by government and non-government organizations.

Pandey (2001) suggested strategy for increasing onion productivity and minimizing post-harvest losses in onion in Andhra Pradesh. The need to increase production by increasing productivity as also increasing availability of onions for meeting domestic and export requirement exists. For this, he recommended that seed producing agencies and state department of Horticulture should make sure that sufficient quantity of quality seeds of improved varieties are produced every year and made available to farmers at an affordable price to enable them to use the same for increasing productivity. Extension education of farmers with available new pre and post-harvest technologies should be continued or taken up regularly.

Sumangala (2003) suggested that programmes for development of women entrepreneurship can encompass increased of opportunities for women education, financial assistance, availability of practical knowledge, increase in market facilities, development of infrastructure, development of self employment programmes and training availability of information and more and more research and survey programmes.

Ravi (2007) indicated that, suggestions made by SC and ST farmers for taking entrepreneurial activities were: compulsory education upto 10^{th} standard, easy availability of finance, policy support for entrepreneurs, organizing effective training programmes, promoting cooperatives and improving marketing system.

Pisure (2012) indicated that, majority of respondents suggested easy availability of finance (72.80 per cent) be made followed by giving policy support for entrepreneurs

(71.20 per cent), organizing effective training programmes (58.40 per cent), promoting co-operatives (55.20 per cent) and improving marketing system (50.40 per cent), respectively for taking up entrepreneurial activities.

METHODOLOGY

Chapter-III

METHODOLOGY

This chapter deals with the description pertaining to the selection of the research site and sampling, research design, data collection techniques and tools, meaning of terms and concepts and statistical methods used in concluding the present study. The research study on entrepreneurial behaviour of Pomegranate growers in Aurangabad district of Marathwada region was conducted during 2014-2015 in Aurangabad district of Maharashtra State. This chapter also incorporates the process for measurement of independent and dependent variables under study. Thus, methodology adopted is described under the following heads

3.1 Location of the study

3.2 Method of sampling

3.3 Research design

3.4 Tools and techniques used in the data collection

3.5 Variables and their measurement

3.6 Statistical methods used for analysis of data

3.1 Location of the study

The present study was conducted in Aurangabad district of Marathwada Region of Maharashtra state.

3.1.1 Salient features of the district

3.1.1.1 Physiography

The geographical area of the district is 123 km^2. Aurangabad district situated 300 to 900 meters, above mean sea level, between 19^0C to 20^0C latitude and longitude of 74^0C to 76^0C. The soil of the district is deep black to calcareous type having different depth and profiles. Suitable for growing kharif and rabi crops. Most of the area comes under assured rainfall zone.

3.1.1.2 Climate

The climate is characterized by warm and humid climate from June to September and later on there is a gradual decline in the temperature from October to February with dry and wet weather.

In the month of October the maximum minimum temperatures range between 28^0C-30^0C to 12^0C-15^0C. The November and January are the months having cold wave. The average rainfall of the district is 718 mm spread over average 52 rainy days. March

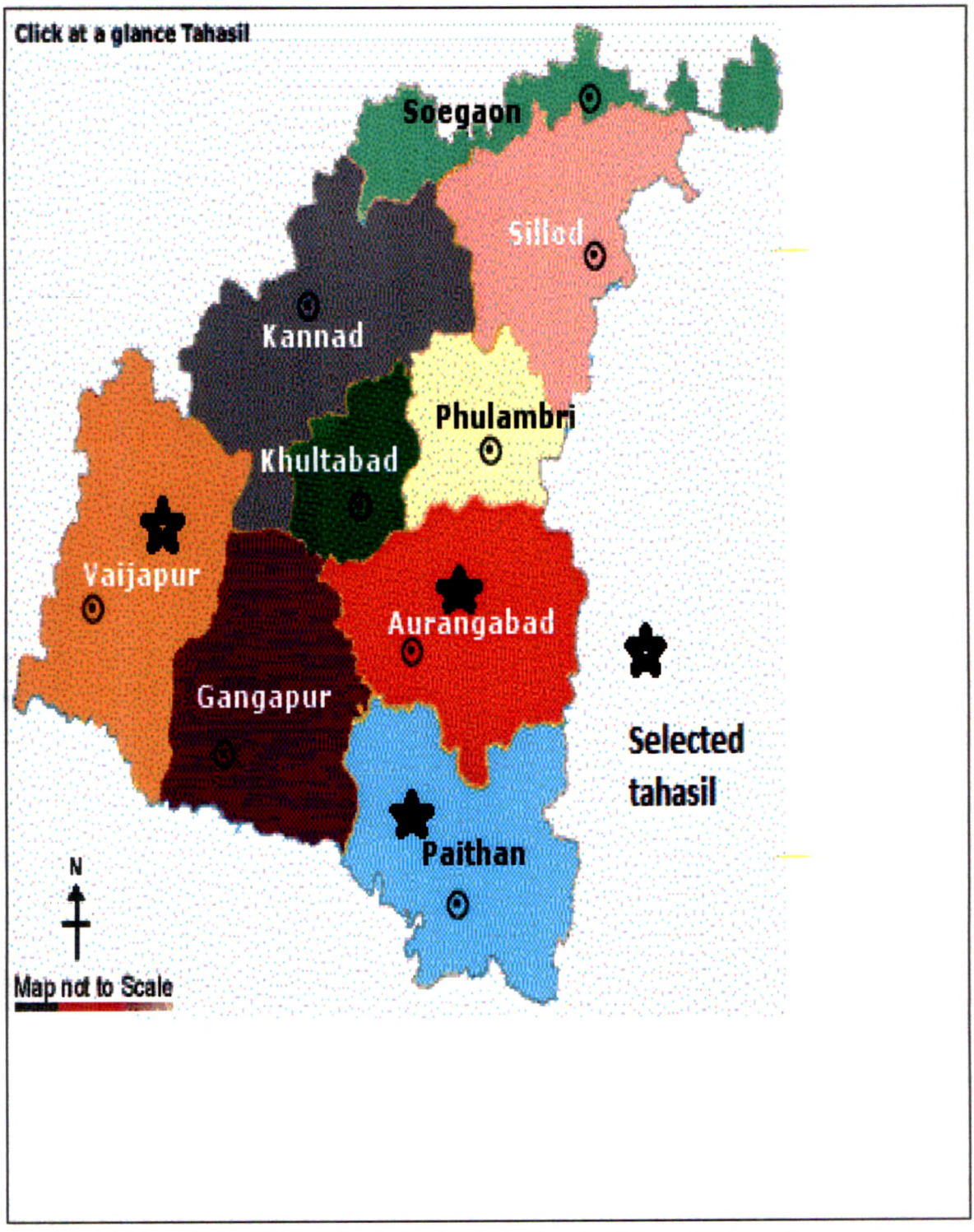

FIG: 1 MAP OF AURANGABAD DISTRICT OF MAHARASHTRA STATE

to May are the hot and dry month. The average maximum minimum temperature of the district is 39.8^{0}C to 10.5^{0}C, respectively.

3.1.1.3 Cropping pattern

In *Kharif* season the crops grown are cotton, jowar, bajra, pigeon pea, black gram, and groundnut while in *Rabi* season the crops grown are jowar, wheat, gram, etc. In annual pattern crop are sunflower and summer groundnuts. Fruits and vegetables are grown as per water resources.

3.1.1.4 Cultural activities

The Hindus observe a variety of fasts, feasts and festivals throughout the year. The most important festivals common to all castes and sects in this district are Hanuman Jayanti, Ram Navami, Gudi Padva, Rakhi Pornima, Pola, Ganesh Chaturthi, Holi, Diwali, etc.

Amongst Muslim, different Eids are celebrated which includes Ramzan Eid, Bakri Eid, etc. and amongst Buddhas, Jayanties of Gautam Buddha and Dr. Babasaheb Ambedkar are celebrated.

3.2 Method of sampling

3.2.1 Selection of district

The study was conducted in purposively selected Aurangabad district of Marathwada region of Maharashtra state, as it is largest pomegranate growing district in Marathwada region. (Anonymous 2014)

3.2.2 Selections of tahsil

There are nine tahsils in Aurangabad district, out of which three tahsils namely Aurangabad, Vaijapur, Paithan were selected purposively on the basis of maximum area under pomegranate cultivation

3.2.3 Selection of villages

For the purpose of the study, four villages from each selected tahsil were randomly selected by nth number method of random sampling. Thus, total twelve villages were selected from three tahsils.

3.2.4 Selection of respondent

From each village ten pomegranate growers were selected randomly by lottery method thus the total sample comprised of 120 respondents for the study.

3.3. Research design

Ex-Post-Facto research design method was used.

3.4. Tools and techniques used in the data collection

3.4.1 Designing of interview schedule

The interview schedule based on the objectives of the study was prepared for collecting data from the respondents. The schedule consisted of the background information of the respondent along with the components of the entrepreneurial behaviour. The schedule was formulated in consultation with the experts in the field of extension education and by reviewing the relevant literature.

While preparing the interview schedule a care was taken to avoid dual meaning questions and contradictory statements. The language of the questions was kept simple for easy understanding. The questions on the various personal characteristics of the farmers having possible correlation with their entrepreneurial behaviour and also the constraints faced by the farmer in maintaining their enterprise and their suggestions were included in the schedule.

3.4.2 Pre-testing of schedule

The schedule was pre-tested by interviewing the 10 farmers in a non-sampled area against ambiguity and redundancy. In the light of the pretest experience, the interview schedule was modified and used for the data collection after preparing number of requisite copies. The same schedule is enclosed at the end of this dissertation.

3.4.3 Method of Collection of data

The data were collected with the help of pre-designed interview schedule by contacting the sample farmers personally. The help of local Leaders, Gramsevaks, Talathies, Agricultural Assistants from State Department of Agriculture and Revenue were taken while approaching the farmers with a view to develop rapport with them in order to get more reliable information. The interviews were conducted during the month of December 2014 and January 2015. On an average the interview of single farmer lasted for about half an hour. The interview schedules were filled in and checked on the same day.

3.4.4 Processing of data

The information collected from the farmers with the help of the personal interview schedule was processed by making primary and secondary tables. The data of qualitative nature were converted into quantitative form and computation of score was done for each of the independent and dependent variables.

3. 5 Variables and their measurement

Considering the objectives in view, the dependent and independent variables have been selected for the present study. The empirical measures are given below.

Independent variables were supposed to be related with the dependent variable were identified by review of relevant literatures and discussions with social scientists and experts. Based on this, 10 independent variables and a dependent variable viz, entrepreneurial behaviour of farmers were identified for the study. The variables selected and the tools of measurement used are presented in summary form.

Table 1: Variables and their empirical measurements

Sr.No.	Variables	Empirical Measurement
A.	**Independent variables**	
1.	Farming experience	Number of years spent in actual farming by respondent.
2.	Education	Formal education sought by respondent.
3.	Family size	Total number of members in respondent family.
4.	Occupation	Refers to the profession which an individual and his/her family belongs for earning livelihood.
5.	Land holding	Total area of land in hector possessed by the respondent.
6.	Annual income	Total earned income in rupees from all the sources by respondent family members.
7.	Social participation	Scale developed by Nirban (2004) was used for the study with some modification.
8.	Mass media use	Scale developed by Meti (1998) was used for the study with some modification
9.	Economic motivation	Schedule was developed for the study
10.	Market orientation	Schedule was developed for the study
B	**Dependent variable**	
	Entrepreneurial behaviour	Scale developed by Chaudhari *et al.* (2007) was used for the study with some modification.

3.5.1 Methods used for measurement of independent variables

3.5.1.1 Farming Experience

It refers to the number of years of experience in farming possessed by a farmer. The experience of farmers in completed years at the time of investigation was considered. It was classified into three categories on the basis of Mean ± Standard Deviation.

Categories	Farming experience (yrs.)
Low	Up to 12
Medium	12 to 26
High	Above 27
Mean = 19.15 **SD = 6.73**	

3.5.1.2 Education

It refers to the formal education acquired by the farmers. The respondents were categorized into seven categories. Scoring pattern according to Trivedi (1963) with slight modification was followed as below.

Categories	Score
Illiterate (No education)	0
Primary School (1^{st} - 4^{th}Stds.)	1
Middle School (5^{th} - 7^{th}Stds.)	2
High School (8^{th} - 10^{th}Stds.)	3
Higher Secondary School (11^{th} and 12^{th}Stds.)	4
Graduate (more than 12^{th}Stds.)	5
Post Graduate (Above Graduation)	6

3.5.1.3 Family size

It refers as the total number of members consisting of men, women and children living together in a family. The procedure followed by Narayanswami and Jalihal (1990) was used as follows

Categories	Farming experience (yrs.)
Small	Up to 8.58
Medium	8.59 to 12.24
Large	Above 12.25
Mean = 10.41	**SD = 1.83**

3.5.1.4 Occupation

It is operationalized as the activities in which the farmer is regularly engaged and gets major income out of it. The farmers were categorized in to three categories and the scoring procedure was given as below.

Categories	Score
Farming	1
Subsidiary enterprises	1
Others	1
Mean = 1.39	**SD = 0.61**

3.5.1.4 Land Holding

In the present study, land holding was defined as the number of hectares of land possessed by the farmer. The farmers were categorized into small, marginal, medium and big farmers as per following criteria.

Categories	Land holding (hectares)
Small farmers	Below 1.00 ha
Marginal	1.01 – 2.00 ha
Medium farmers	2.01 – 4.00 ha
Big farmers	Above 4.01 ha
Mean = 19.89	**SD = 7.05**

3.5.1.5 Annual Income

Annual income was operationally defined as total income earned by the respondent from agriculture and other sources in the previous year as expressed by them in rupees. Based on the total annual family income, the respondents were categorized into the following three groups on the basis of Mean ± Standard Deviation.

Categories	Annual income score (in lakh)
Low	Up to Rs.4.23
Medium	Rs.4.23 to 7.83
High	Above Rs. 7.84

Mean = 6.03 lakh SD = 1.80

3.5.1.7 Social Participation

Social participation is the degree of involvement of the farmer from mere membership to organizational position and his active participation in the meetings of local formal organizations like gram panchayat, co-operatives, youth clubs and other unregistered organizations. The data is presented in frequency and percentage. The variable was quantified on the basis of procedure followed by Saravanakumar (1996). The scoring pattern followed was as under

Categories	Score
Regular	2
Occasional	1
Never	0

Based on the total score obtained by the respondents they were grouped in to three categories by using Mean ±Standard Deviation formula as below.

Categories	Social participation score
Low	Up to 3.24
Medium	3.25 to 8.66
High	Above 8.67

Mean =5.95 SD=2.71

3.5.1.8 Mass media use

It refers to the frequency of using mass media such as radio, television, newspaper sand farm magazine by the respondents. The variable was quantified on the basis of procedure followed by Meti (1998) with slight modification.

Habit of listening/reading/seeing	Score
Regular	2
Occasional	1
Never	0

Based on the total score obtained by the respondents was calculated and they were grouped in to three categories using Mean $\pm$ Standard Deviation formula as below.

Categories	Mass media score
Low	Up to 3.56
Medium	3.57 to 7.70
High	Above 7.71

Mean= 5.63 SD = 2.07

3.5.1.9 Economic motivation

It refers to the values or attitudes which attach greater importance to profit maximization as the ends and means.

This variable was measured with the help of scale developed by Supe (1969). It consists of six statements of which first five statements were positive and last one was negative. The responses for each statement were rated on a five point continuum namely strongly agree, agree, undecided, disagree and strongly disagree. With the scores of 7, 5, 4, 3 and 1 for positive statements and 1, 3, 4, 5 and 7 for negative statements, respectively.

Maximum and minimum scores of individual obtained on this scale were 42 and 8 respectively. Higher score reveals that the respondents motivated towards profit maximization to a greater degree. Based on the total score obtained by respondents on economic motivation, they were grouped into following three categories, keeping the mean and standard deviation as check.

Categories	Mass media score
Low	Up to 26.06
Medium	26.06 to 33.69
High	Above 33.70

Mean= 29.87 SD = 3.82

3.5.1.10 Market orientation

It was measured with the help of procedure followed by Tripathy (1977) with slight modification Six simple objective type statements were framed. The score of 1 to 4 was assigned for the first statement whereas, other five statements were measured on the bipolar responses of 'yes' and 'no' by assigning the scores of 2 and 1, respectively, while it was reversed for negative statement. The fourth statement was negative and others were positive statements.

The scores obtained on each statement were summed up to obtain the total score ofa respondent on the variable. The score ranged between 6 to 14. The respondents were grouped into three categories based on mean and standard deviation of the total score.

Categories	Mass media score
Low	Up to 9.56
Medium	9.57 to 12.32
High	Above 12.33

Mean= 10.94 SD = 1.38

3.5.2 Measurement of dependent variable Entrepreneurial Behaviour

The dependent variable i.e. entrepreneurial behaviour of farmers was measured in terms of seven dimensions namely, innovativeness, farm decision making, achievement motivation, risk taking ability, information seeking behavior, leadership ability, cosmopoliteness. These seven selected components of entrepreneurial behaviour were measured by using the following methods.

3.5.2.1 Methods used to measure the components of Entrepreneurial Behaviour of Pomegranate grower

There were seven components included in the scale to measure entrepreneurial behaviour Pomegranate grower. The method used to measure each of these components in an objective way is given below.

3.5.2.1.1 Innovativeness

This refers to the behaviour pattern of an industrial who has interest and desire to seek changes in farming techniques and ready to introduce such changes into his operations when practical and feasible.

For quantifying the innovativeness characters of the respondents Moulik's (1965) self rating innovativeness scale as used by Sakharkar (1995) was followed. The original scale consists of three sets of statements. Each set of statements contained three statements with weightages 3, 2 and 1 indicating high, medium and low degree of innovativeness. After obtaining the respondents "most like" and "least like" choices as in original scale, responses for each of the three sets of statements. The scoring was done by assigning "3" score to "most like" and score "1" for "least like".

The final scoring was arrived by summing up the scores of the weightage of the "most like" statements and the weightage of the "least like" statements. As there will be three sets of statements for innovativeness scale. The sum of scores for the three sets were considered as respondents. Self rating score for innovativeness the score ranges from 18 to 54. Then the respondents were categorized into three categories based on mean and standard deviations the measure of check. High score of the respondent reveals his more innovative nature.

Categories	Mass media score
Low	Up to 30.77
Medium	30.78 to 42.78
High	Above 42.79

Mean = 36.78 **S.D. = 6.00**

3.5.2.1.2 Farm decision making

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 likelihoods and choosing the most appropriate one for achieving maximum profit on his farming.

The scale developed by Supe (1969), which was also adopted by Rao (1985) with modifications. These items were modified for measuring the decision making in choosing the different alternatives of package of practices in general.The weightages of 3, 2 and 1 as suggested by Supe (1969) were assigned to the three rationality levels namely 'rational', 'inter mediate' and 'less rational', respectively. Thus, the possible score for each farmer on his decision making ability ranged from 0 to 18. Based on the total score obtained by respondents on decision making, they were grouped into following three categories, keeping the mean and standard deviation as check.

Categories	Farm decision making score
Low	Up to 10.68
Medium	10.69 to 14.56
High	Above 14.57
Mean= 12.62 **SD= 1.94**	

3.5.2.1.3 Achievement motivation

It was operationalized as the desire for excellence to attain a sense of personal accomplishment.

It was measured with the help of procedure adopted by Chandrapaul (1998).The instrument consisted of six statements and responses obtained on three point continuum namely 'agree', 'undecided' and 'disagree'. A weightage of 3, 2 and 1, respectively were 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 summing up the weightages of responses for each statement. Thus, the total score for each farmer on his achievement motivation ranged from 6 to 18.

Thus, total scores for all the statements were obtained by adding all scores and then the farmers were classified in to three categories on the basis of Mean $\pm$ Standard Deviation as shown under.

Categories	Achievement motivationscore
Low	Up to 10.31
Medium	10.32 to 14.27
High	Above 14.28
Mean= 12.29 **SD= 1.98**	

3.5.2.1.5 Risk taking ability

Risk taking ability was operationalized as the degree to which the farmer is oriented towards risk and uncertainty in facing problems in farming.

The instrument consisted of six statements and responses obtained on three-point continuum viz., 'agree', 'undecided', and 'disagree'. A weightage of 2, 1 and 0, respectively was assigned to the response categories for positive statements and scoring was reversed for negative statements. The total score range was 0 to 12.

Thus, total scores for all the statements were obtained by adding all scores and then the farmers were classified in to three categories on the basis of Mean ± Standard Deviation as below.

Categories	Risk taking abilityscore
Low	Up to 4.87
Medium	4.88 to 9.01
High	Above 9.02
Mean= 6.94 SD= 2.07	

3.5.2.1.6 Information seeking behaviour

It was operationally defined as the degree of frequency of contacts by a farmer with various information sources.

In the present study, the degree of frequency of contacts with information sources of farmer was measured on three point continuum viz., 'regularly', 'occasionally' and 'never' by assigning the scores of 2, 1, and 0, respectively. The total score was computed for each respondent by summing the scores recorded. The score range was 0 to 26.

Thus, total scores for all the statements were obtained by adding all scores and then the farmers were classified in to three categories on the basis of Mean ± Standard Deviation as shown under.

Categories	Information seeking behaviour score
Low	Up to 9.04
Medium	9.05 to 15.74
High	Above 15.75
Mean= 12.39 SD= 3.35	

3.5.2.1.7 Leadership ability

Leadership ability was operationalized as the degree to which an individual initiates or motivates the action of others.

Scale developed by Nandapurkar (1980) with suitable modifications was used to measure leadership ability. In the present study, leadership ability was measured along a three point rating scale'Always', 'Some times' and 'never' with decreasing score from 2, 1 and 0, respectively. The total score was computed for each respondent by summing up the scores recorded. Based on the total scores obtained, the respondents were classified into 3 categories, keeping theme and standard deviation as check.

Categories	Leadership ability Score
Low	Up to 3.86
Medium	3.87 to 7.66
High	Above 7.67
Mean= 5.76 **SD= 1.90**	

3.5.2.1.8 Cosmopoliteness

It is operationally defined as the degree to which a farmer is oriented towards outside of his social system.

The instrument consisted of six statements and responses were obtained on three point continuum viz., 'agree', 'undecided' and 'disagree' by assigning a weightage of 2, 1 and 0, respectively for positive statements while, it was reversed for negative statements. There were six statements out of which, the statement number as 1, 3 and 5 were negative statements, whereas, 2, 4 and 6 were the positive statements. The score range was 0 to 12. Then the farmers were classified in to three categories on the basis of Mean $\pm$ Standard Deviation shown as below.

Categories	Cosmopoliteness score
Low	Up to 4.59
Medium	4.60 to 7.95
High	Above 7.96
Mean= 6.27 **SD= 1.68**	

3.5.2.2 Overall Entrepreneurial behaviour

On the basis of summing up the scores of all the seven components of the entrepreneurial behaviour of the farmers they were categorized into three categories namely low, medium and high overall entrepreneurial behaviour as below.

Categories	Overall entrepreneurial behaviourScore
Low	Up to 80.15
Medium	80.16 to 105.95
High	Above 105.96
Mean= 93.05 SD= 12.90	

3.5.2.3 Measurement of dependent variable i.e. entrepreneurial behaviour pomegranate grower.

For measurement of Entrepreneurial Behaviour pomegranate grower, the scale developed by Chaudhari *et al.* (2007) was used with slight modification. He has given the formula for calculation of Entrepreneurial Behaviour Index (EBI) of the respondents.

$$\text{Entrepreneurial Behaviour Index (EBI)} = \frac{\sum_{n=1}^{7} \frac{Tn}{Mn} \times Rcn}{\sum_{n=1}^{7} Rcn} \times 100$$

Where,

Tn = Total obtained score of the component "n"

Mn = Maximum obtainable score of the component "n"

Rcn = Scale value of the component "n"

n = Number of components which are eight in this context

n1 = Innovativeness

n2 = Farm decision making

n3 = Achievement motivation

n4 = Risk taking ability

n5 = Information seeking behaviour

n6= Leadership ability

n7 = Cosmopoliteness

The scale values of each component of the entrepreneurial behaviour was given by Chaudhari *et al.* (2007) after calculation are as follows,

Table 2: Scale values of components of entrepreneurial behaviour

Components	Scale values
• Innovativeness	9.82
• Farm decision making	6.60
• Achievement motivation	3.93
• Risk taking ability	8.01
• Information seeking behaviour	5.22
• Leadership ability	2.13
• Cosmopoliteness	1.65

Based on this index, the respondents were classified in to three categories as given below by the Chaudhari *et al.* (2007) viz, Low, Medium and High category

Categories	Score
Low	Up to 52.73
Medium	52.74 to 69.69
High	Above 69.70

Mean= 61.21 SD= 8.48

3.5.2.4 Constraints faced by the pomegranate grower

The meaning of the term Constraints according to Oxford English dictionary is confinement, restriction of liberty or compulsion of circumstances or compulsion put up on the behaviour. Constraints are therefore, identified with seven statements. The responses were recorded on two continuum namely, Yes and No and suggestions obtained from farmers for taking up entrepreneurial activities.

The frequency and percentage of each constraint and suggestions was worked out to measure the constraint perceived by the respondents.

3.6 Suggestions

Suggestions are the psychological process by which one person guides the thoughts, feelings or behaviour of another.

3.7 Statistical methods used for analysis of data

The statistical tests used in the present study for analysis of data are given below.

3.7.1 Frequency and percentage

Frequency and percentage were used for making simple comparisons. The frequency of the particular category was multiplied by hundred and divided by total number of farmers in that particular category to get percentage.

3.7.2 Mean

Mean of sample was calculated by summing all the individual score and dividing it by number of cases. The formula is

$$\bar{X} = \frac{\sum X}{N}$$

Where,

$\bar{X}$ = Arithmetic mean

$\sum X$ = Sum of respondent's score

N = Number of cases

3.7.3 Standard deviation

Standard deviation is a measure of variability calculated around mean. It was denoted by Greek letter δ (sigma) and calculated with the following formula.

$$\delta = (S.D.) = \sqrt{\frac{N\sum X^2 - (\sum X)^2}{N}}$$

Where,

δ = (S.D.) = Standard deviation

$\sum X^2$ = Sum of square of 'X' series

$(\sum X)^2$ = Square of summation 'X' series

N = Number of farmers

3.7.4 Karl Pearson's coefficient of correlation

This technique was used to find out the relationship between two variables. Following formula was used for computation of 'r' value.

$$r = \frac{\sum XY - \frac{(\sum X) - (\sum Y)}{n}}{\sqrt{\frac{[(\sum X^2 - (\sum X)^2]}{n} \times \frac{[(\sum Y^2 - (\sum Y)^2]}{n}}}$$

Where,

n = Number of observations.

r = Coefficient of correlation

X = Score of independent variables

Y = Score of dependent variable.

RESULTS

Chapter- IV

RESULTS

The data collected by adopting the procedure presented earlier in methodology, were subjected to statistical analysis in accordance with the objectives of the study. The results so obtained from analysis of data have been presented in this chapter under the following heads.

4.1. Profile of Pomegranate grower

4.2. Entrepreneurial behaviour of Pomegranate grower

4.3. Relationship between Profile of Pomegranate grower and entrepreneurial behavior of Pomegranate grower

4.4 Constraints faced by Pomegranate grower and their suggestion

4.1. Profile of Pomegranate grower

The study of Profile of Pomegranate grower was made with reference to farming experience, education, family size, occupation, land holding, annual income, social participation, mass media use, economic motivation and market orientation.

4.1.1 Farming experience

Table 3 : Distribution of the respondents according to their farming experience.

Categories	Frequency n=120	Percentage
Low (Up to 12 years)	28	23.33
Medium (13 to 26 years)	74	61.67
High (Above 27 years)	18	15.00
	120	**100.00**

A glance at Table 3 revealed that maximum of the respondents 61.67 per cent had medium farming experience whereas, 23.33 per cent of respondents had low farming experience and only 15.00 per cent farmers had high farming experience.

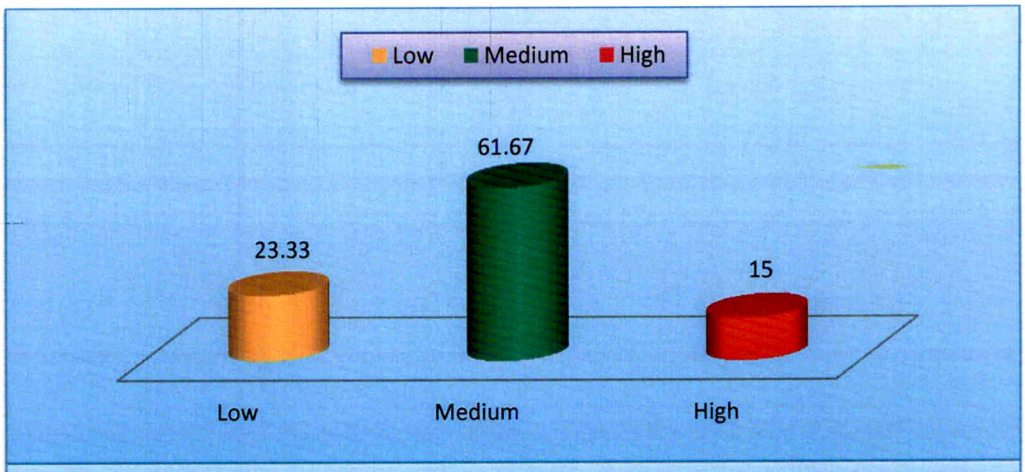

Fig. 2. Distribution of respondents according to their farming experience

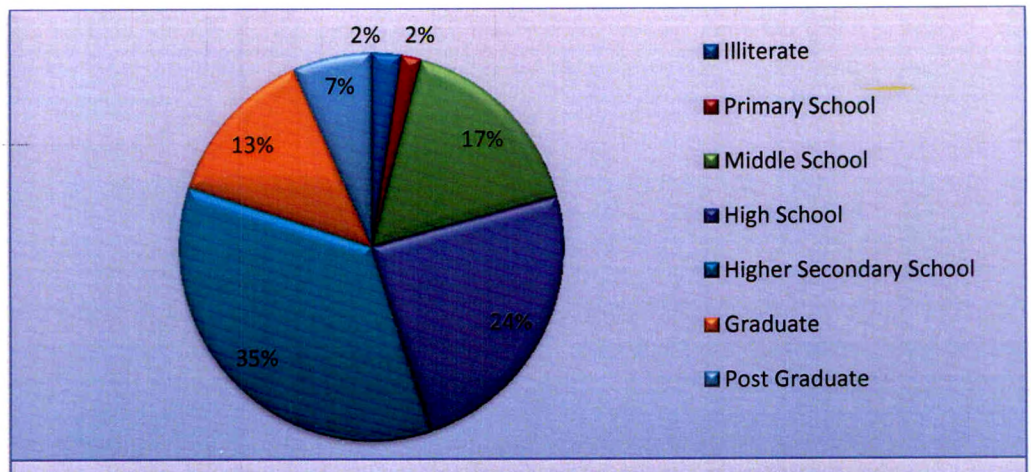

Fig.3. Distribution of respondents according to their education

4.1.2 Education

Table 4 : Distribution of the respondents according to their education.

Categories	Frequency n=120	Percentage
Illiterate (no education)	03	02.50
Primary School (1^{st} - 4^{th}Std.)	02	01.67
Middle School (5^{th} - 7^{th}Std.)	20	16.67
High School (8^{th} - 10^{th}Std.)	29	24.17
Higher Secondary School (11^{th} and 12^{th}Std.)	42	35.00
Graduate (more than 12^{th}Std.)	16	13.33
Post Graduate(Above Graduation)	08	06.66
	120	**100.00**

It was seen from Table 4 that only 6.66 per cent of respondent were educated up to post graduate level whereas, 13.33 per cent of farmers were educated up to graduate level and 35.00 per cent of farmers were educated up to higher secondary school level, while 24.17 per cent of farmers were high school level education and 16.67 per cent farmers up to middle school level education. While 01.67 per cent farmer were educated up to primary school and 02.50 per cent farmers were illiterate.

4.1.3 Family size

Table 5 : Distribution of respondents according to their family size

Categories	Frequency n=120	Percentage
Small (Up to 8.58)	35	29.17
Medium (8.59 to 12.24)	70	58.33
Large (Above 12.25)	15	12.50
	120	**100.00**

The data furnished in Table 5 indicated that more than half of the pomegranate grower (58.33%) had medium family size whereas, 29.17 per cent of pomegranate grower belonged to small family size and 12.50 per cent of pomegranate growers belonged to large family size.

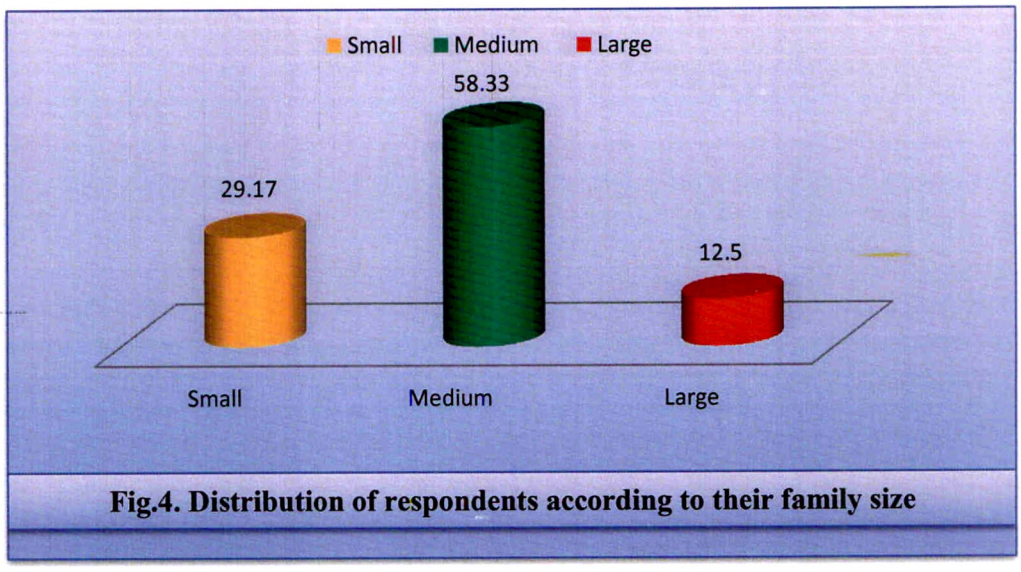

Fig.4. Distribution of respondents according to their family size

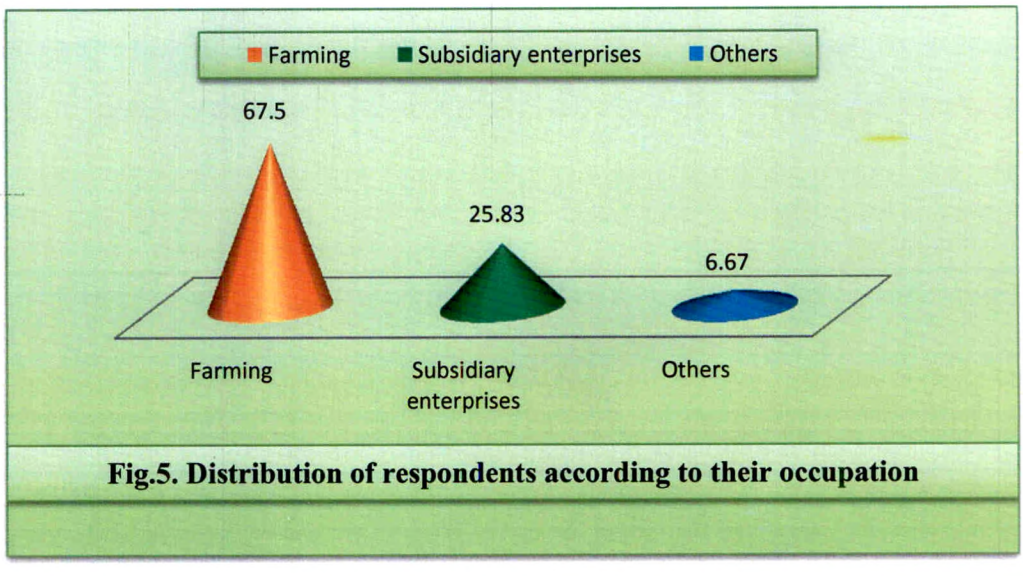

Fig.5. Distribution of respondents according to their occupation

4.1.4 Occupation

Table 6 : Distribution of the respondents according to their occupation.

Categories	Frequency n=120	Percentage
Farming	81	67.50
Farming +Subsidiary	31	25.83
Farming +Subsidiary+ Others(service)	08	06.67
	120	**100.00**

A glance at Table 6, revealed that more than two third of respondent (67.50 per cent) were engaged in farming whereas, 25.83 per cent of farmers engaged in farming with subsidiary enterprises. A meager percentage of farmers 6.67 per cent were doing farming along with subsidiary and in addition to other sources of income.

4.1.5 Land Holding

Table 7 : Distribution of the respondents according to their land holding.

Categories	Frequency n=120	Percentage
Small Farmers	4	3.34
Marginal Farmers	9	7.5
Medium Farmers	20	16.66
Big Farmer	87	72.5
	120	**100.00**

It was observed from Table 7 that 72.5 per cent of the farmers possessed big land holding and 16.66 per cent farmers possessed medium land holding, followed by 7.5 per cent and 3.34 per cent farmers possessed marginal and small land holding respectively.

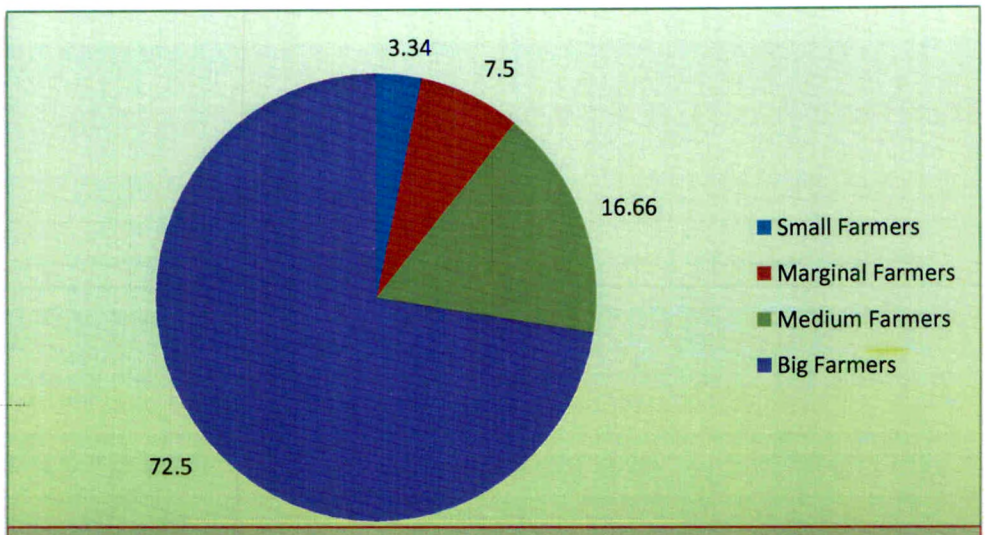

Fig.6. Distribution of respondents according to their land holding

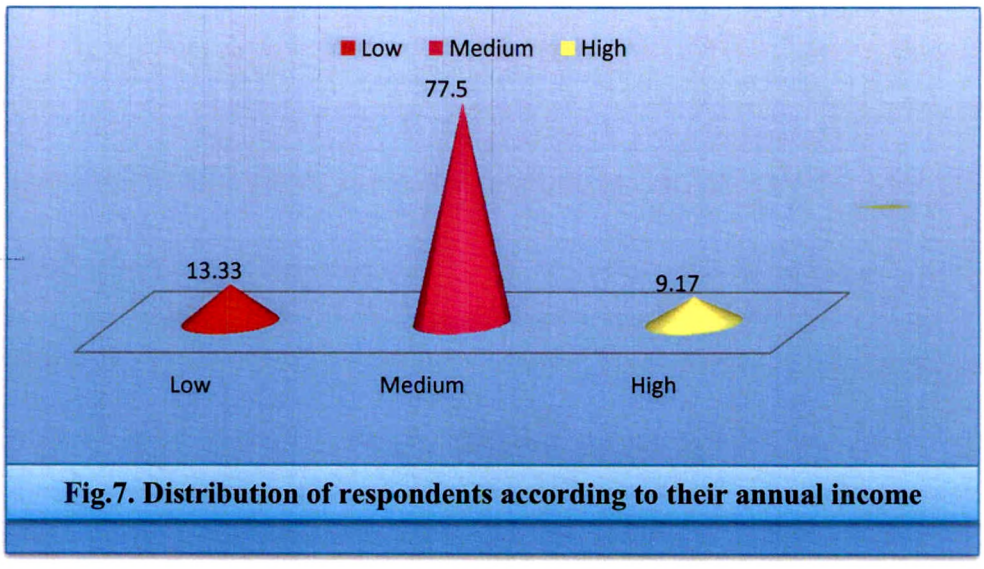

Fig.7. Distribution of respondents according to their annual income

4.1.6 Annual Income

Table 8 : Distribution of the respondents according to their annual income.

Categories	Frequency n=120	Percentage
Low (Up to Rs. 4.23 lakh /yr.)	16	13.33
Medium (Rs. 4.24 lakh to7.83 /yr.)	93	77.50
High (Rs.7.84 and above /yr.)	11	09.17
	120	**100.00**

It was observed from Table 8 that 77.50 per cent respondent had medium level of annual income followed by 13.33 per cent of farmers categorized under low level of annual income and 09.17 per cent of farmers had high level of annual income.

4.1.7 Social Participation

Table 9 : Distribution of respondents according to their social participation.

Categories	Frequency n=120	Percentage
Low (Up to 3.24)	15	12.50
Medium (3.25 to 8.66)	93	77.50
High (Above 8.67)	12	10.00
	120	**100.00**

It is elucidated from Table 9 that 77.50 per cent respondents had medium social participation while, 12.50 per cent of the respondents having low social participation and 10.00 per cent of the respondents were found in high category of social participation.

4.1.8 Mass Media Use

Table 10: Distribution of respondents according to their mass media use

Categories	Frequency n=120	Percentage
Low (Up to 3.56)	17	14.17
Medium (3.57 to 7.70)	87	72.50
High (Above 7.71)	16	13.33
	120	**100.00**

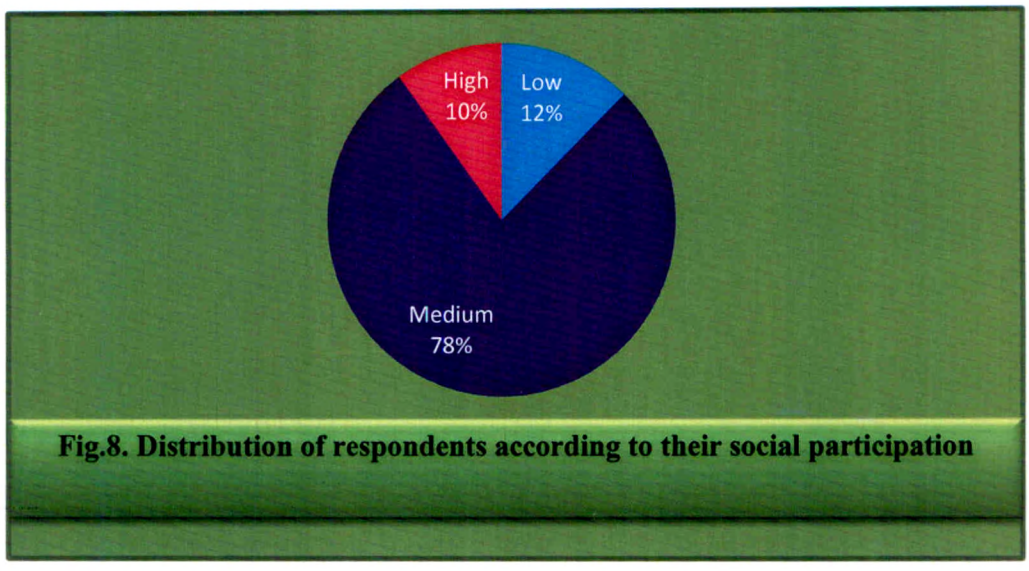

Fig.8. Distribution of respondents according to their social participation

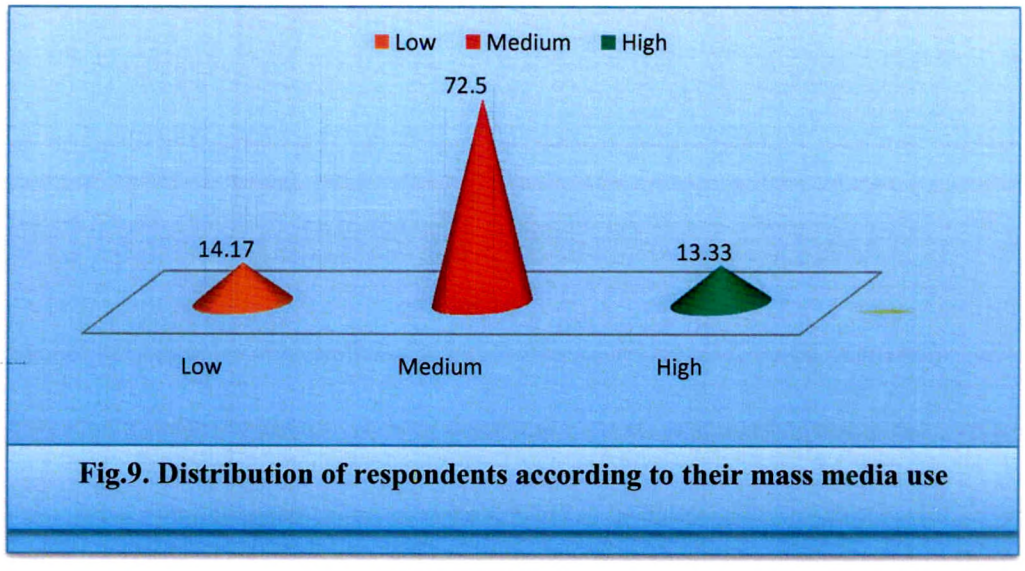

Fig.9. Distribution of respondents according to their mass media use

It is observed from Table 10 that majority (72.50 per cent) of the respondents belonged to medium mass media use. Whereas, 14.17 per cent and 13.33 per cent of farmers belonged to low and high mass media use categories, respectively.

4.1.9 Economic motivation

Table 11 : Distribution of respondents according to their economic motivation

Categories	Frequency n=120	Percentage
Low (Up to 26.05)	11	9.17
Medium (26.06 to 33.69)	93	77.50
High (Above 33.70)	16	13.33
	120	**100.00**

The results from the Table 11 show that more than three fourth (77.50) of the respondents had medium level of economic motivation followed by 13.33 and 9.17 per cent of respondents belonging to high and low level of economic motivation categories, respectively.

4.1.10 Market orientation

Table 12: Distribution of respondents according to their market orientation

Categories	Frequency n=120	Percentage
Low (Up to 9.56)	19	15.83
Medium (9.57 to 12.32)	84	70.00
High (Above 12.33)	17	14.67
	120	**100.00**

The data in Table 12 indicated that more than half of respondent 70.00 per cent had medium level of market orientation, whereas 15.83 per cent of respondent had low level of market orientation and 14.67 per cent of the respondent had low market orientation.

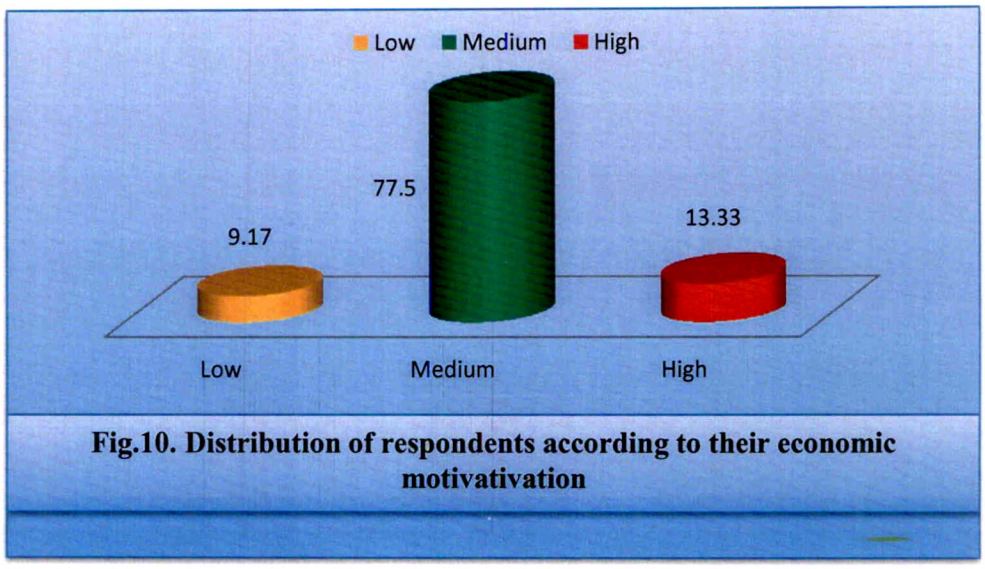

Fig.10. Distribution of respondents according to their economic motivation

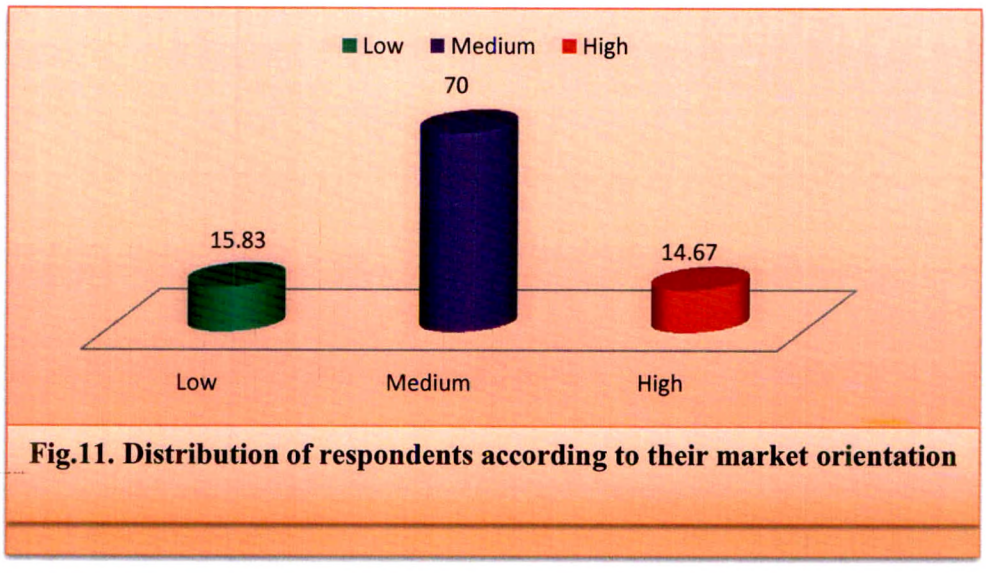

Fig.11. Distribution of respondents according to their market orientation

4.2 ENTREPRENEURIAL BEHAVIOUR OF POMEGRANATE GROWER

4.2.1 Components of entrepreneurial behaviour of pomegranate grower

4.2.1.1 Innovativeness

Table 13 : Distribution of the respondents according to their innovativeness

Categories	Frequency n=120	Percentage
Low innovativeness (Up to 30.78)	24	20.00
Medium innovativeness (30.79 to 42.78)	76	63.33
High innovativeness (Above 42.79)	20	16.66
	120	**100.00**

Table 13 clearly indicates that less than two third (63.33per cent) of the respondents had medium innovativeness, followed by low (20.00 per cent) and high (16.66 per cent) level of innovativeness, respectively.

4.2.1.2 Farm Decision Making

Table 14 : Distribution of respondents according to their farm decision making

Categories	Frequency n=120	Percentage
Low (Up to 10.68)	17	14.17
Medium (10.69to 14.56)	83	69.17
High (Above 14.57)	20	26.66
	120	**100.00**

The data from Table 14 shows that, (69.17 per cent) of the respondents belonged to medium level of farm decision making category, followed by high (26.66 per cent) and low (14.17 per cent) level of farm decision making categories, respectively.

4.2.1.3 Achievement motivation

Table 15 : Distribution of the respondents according to their achievement motivation

Categories	Frequency n=120	Percentage
Low (Up to 10.31)	22	18.33
Medium (10.32 to 14.27)	81	67.50
High (Above 14.28)	17	14.17
	120	**100.00**

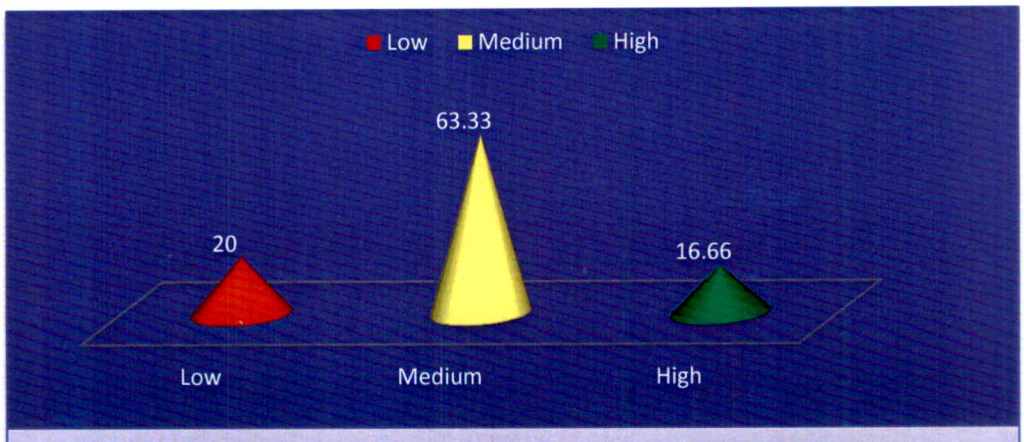

Fig.12. Distribution of respondents according to their innovativeness

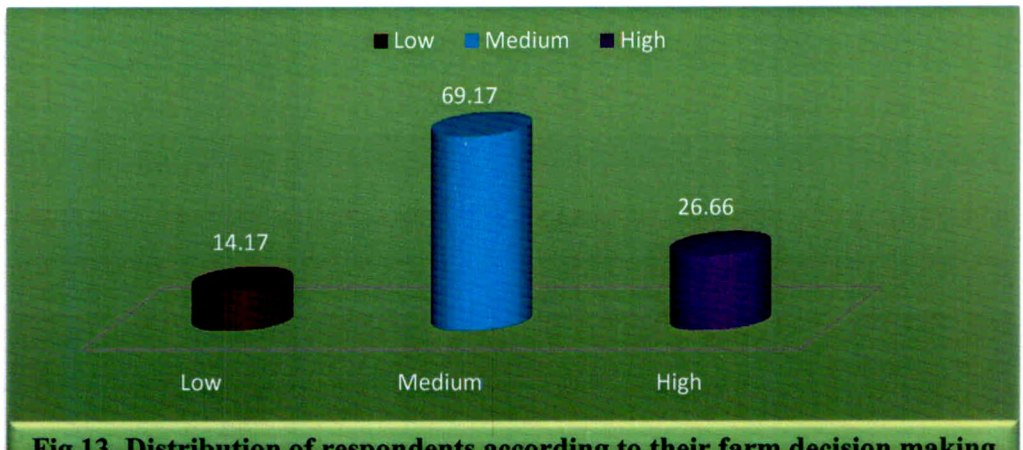

Fig.13. Distribution of respondents according to their farm decision making

The result from table 15 indicated that two third (67.50 per cent) of the respondent had medium level of achievement motivation followed by low (18.33 per cent)level of and high (14.17 per cent) level of achievement motivation of farmers, respectively.

4.2.1.4 Risk taking ability

Table 16 : Distribution of respondents according to their risk taking ability

Categories	Frequency n=120	Percentage
Low (Up to 4.87)	17	14.17
Medium (4.88 to 9.01)	86	71.67
High (Above 9.02)	17	14.16
	120	**100.00**

It was observed from table 16 that 71.67 per cent of the respondents had medium level of risk taking ability, followed by 14.17 per cent and 14.16 per cent with low and high level of risk taking ability respectively.

4.2.1.5 Information seeking behaviour

Table 17 : Distribution of the respondents according to their information seeking behaviour

Categories	Frequency n=120	Percentage
Low (Up to 9.04)	31	25.83
Medium (9.05 to 15.74)	60	50.00
High (Above 15.75)	29	24.17
	120	**100.00**

It was noticed from Table 17 that half of the respondent i.e., 50.00 per cent had medium information seeking behaviour, followed by 25.83 per cent and 24.17 per cent of farmers had low and high information seeking behaviour respectively.

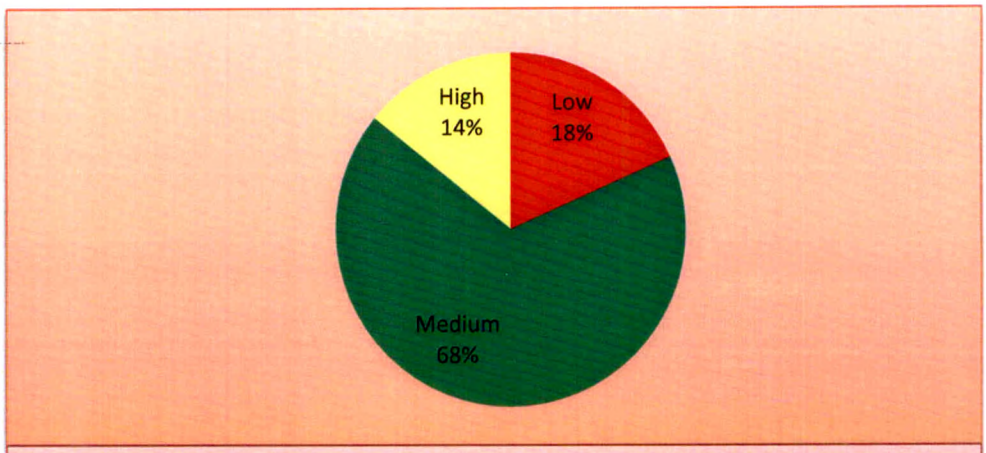

Fig.14. Distribution of respondents according to their achivement motivation

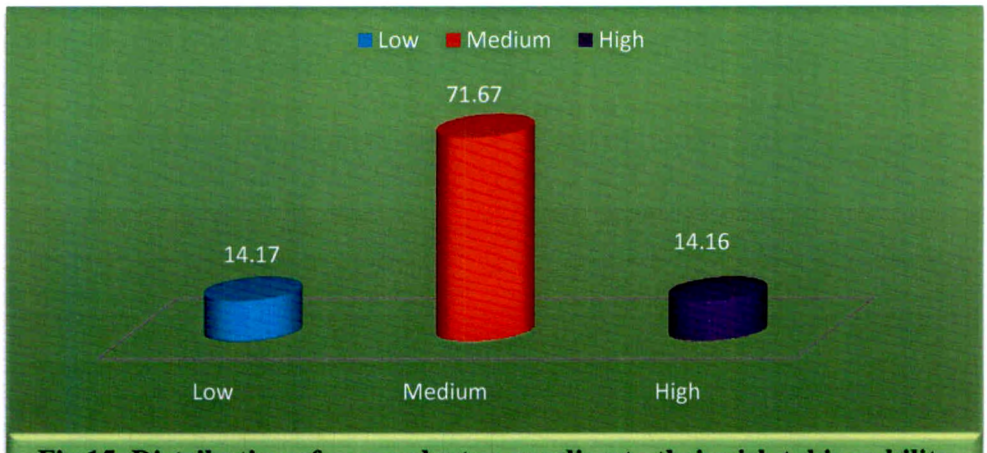

Fig.15. Distribution of respondents according to their risk taking ability

4.2.1.6 Leadership Ability

Table 18 : Distribution of the respondents according to their leadership ability

Categories	Frequency n=120	Percentage
Low (Up to 3.86)	14	11.67
Medium (3.87 to 7.66)	88	73.33
High (Above 7.67)	18	15.00
	120	**100.00**

It was observed from Table 18 that 73.33 per cent of respondent had medium level of leadership ability, followed by 15.00 per cent of the respondents had high level of leadership ability. while, 11.67 per cent of them had low level leadership ability.

4.2.1.7 Cosmopoliteness

Table 19 : Distribution of the respondents according to their cosmopoliteness

Categories	Frequency n=120	Percentage
Low (Up to 4.59)	18	15.00
Medium (4.60 to 7.95)	62	61.67
High (Above 7.96)	40	33.33
	120	**100.00**

It is evident from Table 19 that 61.67 per cent of farmers belonged to medium level category of cosmopoliteness followed by 33.33 per cent of respondents had high level of cosmopoliteness. Whereas, 15.00 per cent farmers categorized under low level of cosmopoliteness.

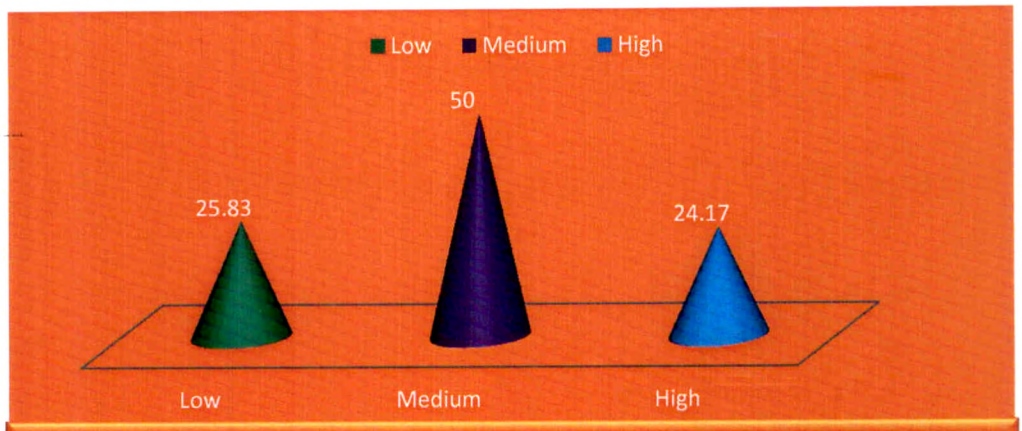

Fig.16. Distribution of respondents according to their information seeking behaviour

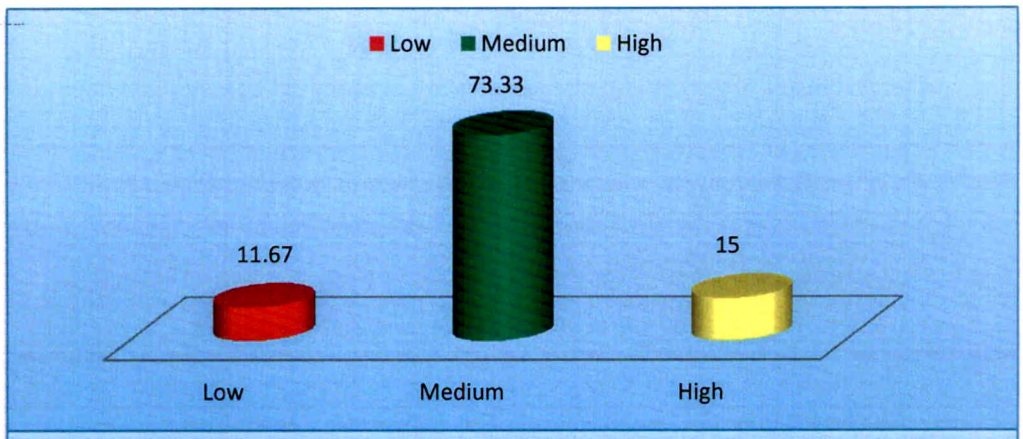

Fig.17. Distribution of respondents according to their leadership abilty

4.2.2. Overall Entrepreneurial Behaviour

Table 20: Distribution of respondents according to their overall entrepreneurial behaviour

Categories	Frequency n=120	Percentage
Low (Up to 80.15)	19	15.83
Medium (80.16 to 105.95)	82	68.33
High (Above 105.96)	19	15.84
	120	**100.00**

It could be seen from Table 20 that 68.33 per cent of farmers belonged to medium entrepreneurial behaviour and 15.84 percent of farmers had big entrepreneurial behaviour, followed by 15.83 per cent of farmers had low entrepreneurial behaviour.

4.2.3 Entrepreneurial behaviour index of farmers

According to Entrepreneurial Behaviour Index (EBI) of the farmers they were categorized as Low, Medium and High EBI.

Table 21 : Distribution of respondents according to their Entrepreneurial Behaviour Index (EBI)

Categories	Frequency n=120	Percentage
Low (Up to 52.73)	16	13.33
Medium (52.73 to 69.69)	85	70.83
High (Above 69.70)	19	15.84
	120	**100.00**

It was evident from Table 21, that 70.83 per cent of farmers belonged to medium level category of entrepreneurial behaviour followed 15.84 per cent respondents had high level of entrepreneurial behaviour. Whereas, 13.33 per cent farmers categorized under low level category of entrepreneurial behaviour.

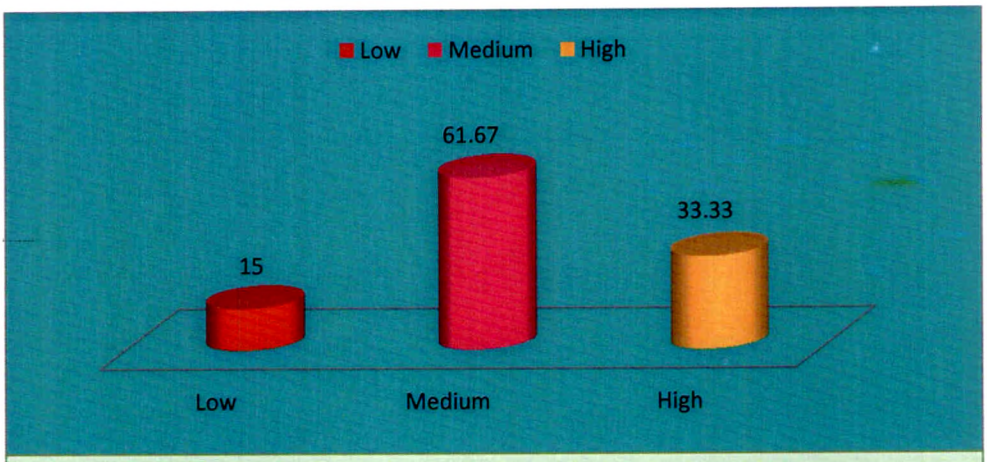

Fig.18. Distribution of respondents according to their cosmopoliteness

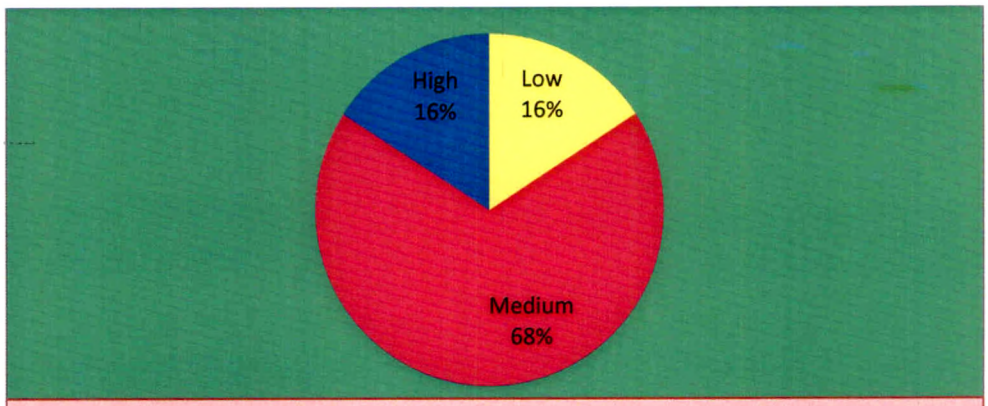

Fig.19. Distribution of respondents according to their entrepreneurial behaviour

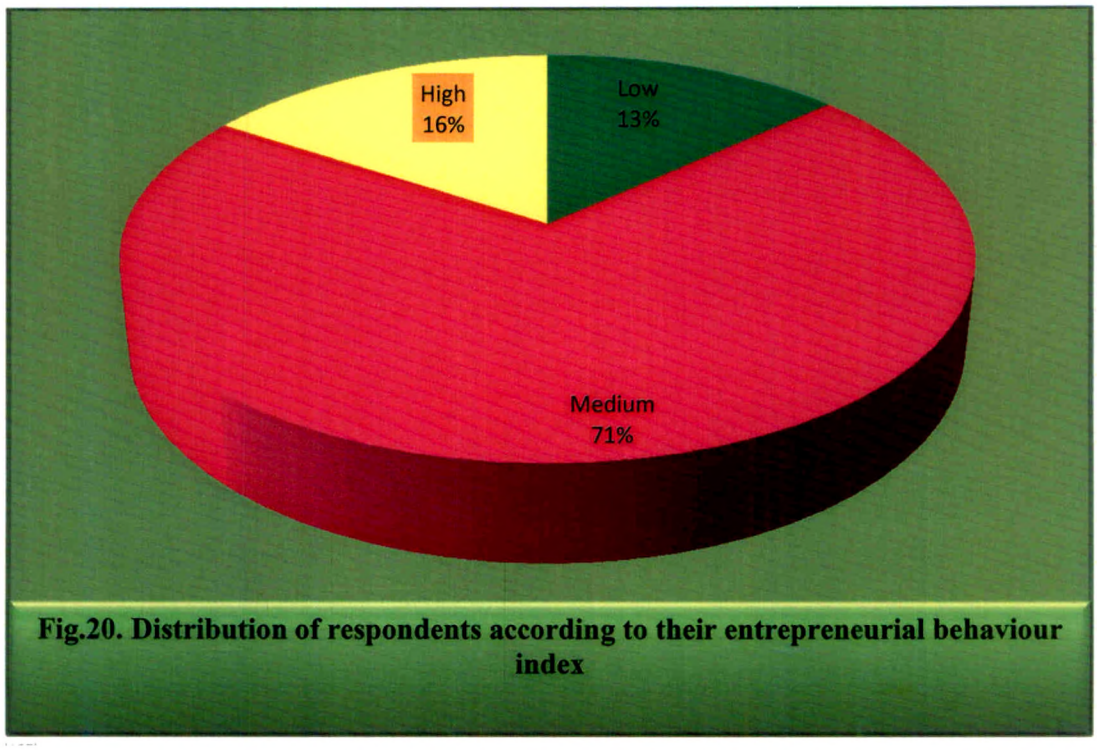

Fig.20. Distribution of respondents according to their entrepreneurial behaviour index

4.3 Relational analysis

4.3.1 Relationship between profile of pomegranate grower and entrepreneurial behaviour

The coefficient of correlation of each of the profile of pomegranate growers with entrepreneurial behaviour of farmers has been furnished in Table 22.

Table 22 : Relationship between profile of pomegranate grower and entrepreneurial behaviour.

No.	Variables	Correlation Coefficient (r)
1.	Farming Experience	0.200^{*}
2.	Education	0.248^{*}
3.	Family size	0.305^{**}
4.	Occupation	0.276^{**}
5.	Land holding	0.213^{*}
6.	Annual Income	0.273^{**}
7.	Social Participation	0.256^{**}
8.	Mass Media Use	0.184^{NS}
9.	Economic motivation	0.163^{NS}
10.	Market orientation	0.458^{**}

* Significant at 0.05 level of probability.

** Significant at 0.01 level of probability.

NS- Non significant

It could be observed from Table 22 that amongst independent variables of farmers, seven variables *viz.*, farming experience, education, family size, occupation, land holding, annual income, social participation, and market orientation had positive and significant relationship with their entrepreneurial behaviour, while mass media use and economic motivation had non significant relationship with their entrepreneurial behaviour.

4.3.2 Relationship between components of entrepreneurial behaviour pomegranate grower with their entrepreneurial behaviour

The coefficient of correlation of each of the component of entrepreneurial behaviour pomegranate grower with their entrepreneurial behaviour has been furnished in Table 23.

Table 23 : Coefficient of correlation between components of entrepreneurial behaviour of farmers with their entrepreneurial behaviour

Sl. No.	Components	Correlation Coefficient (r)
1.	Innovativeness	0.7714**
2.	Farm decision making	0.6706**
3.	Achievement motivation	0.6921**
4.	Risk taking ability	0.5429**
5.	Information seeking behaviour	0.7389**
6.	Leadership ability	0.5853**
7.	Cosmopoliteness	0.5338**

* Significant at 0.05 level of probability.

** Significant at 0.01 level of probability.

It is evident from Table 24, that all the components of entrepreneurial behaviour *viz.,* innovativeness, farm decision making, achievement motivation, risk taking ability, information seeking behaviour, leadership ability and cosmopoliteness of farmers were positively and highly significantly related with their entrepreneurial behaviour.

4.4.1. Constraints faced by pomegranate growers.

Table 24 : Constraints faced by pomegranate growers.

n=120

Sl. No.	Constraints	Frequency n=120	Percentage	Rank
1.	Lack of knowledge	68	56.67	IV
2.	Financial problem	94	78.33	I
3.	Marketing problem	75	62.50	III
4.	Lack of exposure to mass media and information	80	66.67	II
5.	Lack of transportation facilities	54	45.00	VII
6.	Lack of food grain storage facility	63	52.50	V
7.	Labour problem	56	46.66	VI

Careful examination of the results presented in Table 24 revealed that majority of the farmers expressed that financial problem, lack of exposure to mass media and information and marketing problem as reported by 78.33, 66.67 and 62.50 per cent respectively followed by lack of knowledge (56.67 per cent), lack of food grain storage facility (52.50 per cent), labour problem (46.66 per cent) and lack of transportation facilities (45.00 per cent), respectively.

4.4.2. Suggestions offered by pomegranate growers for taking up entrepreneurial activities

Table 25 : Distribution of respondents according to their suggestions for taking up entrepreneurial activities

n=120

Sl. No.	Suggestions	Frequency (F)	Percentage (%)	Rank
1.	Easy availability of finance be made	85	70.83	I
2.	Policy support for entrepreneursbe made	79	65.83	II
3.	Organize effective training programmes	71	59.17	III
4.	Promote co-operatives	64	53.33	IV
5.	Improve marketing system	58	48.33	V

The result presented in Table 25 revealed that majority of respondents suggested easy availability of finance (70.83 per cent), followed by policy support for entrepreneurs be made (65.83 per cent), organizing effective training programmes (59.17

per cent), promoting co-operatives (53.33 per cent) and improving marketing system (48.33 per cent), respectively for taking up entrepreneurial activities.

DISCUSSION

Chapter- V

DISCUSSION

The results presented in the previous chapter in relation to the present study on entrepreneurial behaviour of pomegranate grower are elaborately discussed in this chapter with possible reasons and explanations have been given to interpret the observed phenomena. With the help of findings of the research studies conducted earlier in the field also been taken in to account to defend the interpretation given here.

For the sake of convenience and easy interpretation of results of the study, the discussion is made under the following suitable sub-headings.

5.1 Profile of pomegranate grower

5.2 Entrepreneurial behaviour of pomegranate grower

5.3 Relational analysis

5.4 Constraints faced by pomegranate grower and their suggestions

5.1 PROFILE OF POMEGRANATE GROWER

5.1.1 Farming experience

A glance at Table 3 revealed that maximum of the respondents 61.67 per cent had medium farming experience whereas, 23.33 per cent of respondents had low farming experience and only 15.00 per cent farmers had high farming experience.

The probable reason for medium experience in farming, it might be due to that the majority of the respondents entering in farming now a days, might bedue to unemployment problem for educated youths. Since they are newly entering in to this profession, they might have less experience as compared to traditional profession of farming.

The findings of this study are in the line with the studies of Bhagyalaxmi *et al.* (2003), Pisure (2012) and Sable (2013).

5.1.2 Education

It was seen from Table 4 that only 6.66 per cent of respondent were educated up to post graduate level whereas, 13.33 per cent of farmers were educated up to graduate level and 35.00 per cent of farmers were educated up to higher secondary school level, while 24.17 per cent of farmers were high school level education and 16.67 per cent farmers up to middle school level education. While 01.67 per cent farmer were educated up to primary school and 02.50 per cent farmers were illiterate.

The probable reason for majority of farmers educated up to higher secondary school education that may be lack of facilities in their village for graduate level education facilities. For graduate level education they have to travel for district or tahsil headquarters resulting to increase the economical burden on family.

Similar results found by Pandeti (2005) and Pisure (2012).

5.1.3 Family size

The data furnished in Table 5 indicated that more than half of the pomegranate grower (58.33%) had medium family size whereas, 29.17 per cent of pomegranate grower belonged to small family size and 12.50 per cent of pomegranate growers belonged to large family size.

The probable reason may be, pomegranate generate employment to many members of the family and keeps them engaged in various activities of pomegranate and therefore pomegranate growing / profession prevents the adolescent had small and medium size family.

Similar result found by Chauhan *et al.* (2004), Nagesha (2005) and Pandeti (2005)

5.1.4 Occupation

A glance at Table 6, revealed that more than two third of respondent (67.50 per cent) were engaged in farming whereas, 25.83 per cent of farmers engaged in farming with subsidiary enterprises. A meager percentage of farmers 6.67 per cent were doing farming along with subsidiary and in addition to other sources of income.

The majority of farmers practicing agriculture alone might be due to the continuation of ancestral traditional occupation of agriculture. Other factor could also be the limited scope of employment in non-agricultural sector as their education level is not high to get employment and for having medium land holding the nature of farming should be intensiveand remunerative.

The findings reported by Nagesha (2005), Pandeti (2005), Nagesh (2006) and Sable (2013) are in line with this findings.

5.1.5 Land Holding

It was observed from Table 7 that 72.5 per cent of the farmers possessed big land holding and 16.66 per cent farmers possessed medium land holding, followed by 7.5 per cent and 3.34 per cent farmers possessed marginal and small land holding respectively.

The possible reason could be that the main occupation of the respondents is only agriculture and they must have inherited this land holding from their ancestors. Moreover, itmight be easier to employ latest technology in big farms rather than small farms.

The similar findings reported by Pandya (1996), Nagesha (2005) and Sable (2013).

5.1.6 Annual income

It was observed from Table 8 that 77.50 per cent respondent had medium level of annual income followed by 13.33 per cent of farmers categorized under low level of annual income and 09.17 per cent of farmers had high level of annual income.

The probable reason, which could be attributed for varied income categories of respondents, might be due to the size of the land holding and practicing of subsidiary occupations by the respondents.

The finding reported by Manjula (1995), Suresh (2004), Nagesha (2005), Chaudhari (2006), Pisure (2012) and Sable (2013)

5.1.7 Social participation

It is elucidated from Table 9 that 77.50 per cent respondents had medium social participation while, 12.50 per cent of the respondents having low social participation and 10.00 per cent of the respondents were found in high category of social participation.

The possible reason for medium social participation may be that they are hesitating to participate in the formal and non formal organization due to the dominance of higher caste, higher income groups and higher socio-economic status, people and non availability of time to participate in the different organizations.

The results of study are in accordance with the findings of Vijaykumar (2001), Pandeti (2005) and Sable (2013).

5.1.8 Mass media use

It is observed from Table 10 that majority (72.50 per cent) of the respondents belonged to medium mass media use. Whereas, 14.17 per cent and 13.33 per cent of farmers belonged to low and high mass media use categories, respectively.

Mass media are the proven channels for quick dissemination of information to a widely dispersed and large number of people in a shorter period. Mass media contact enhances the ability of farmers to get more information about current affairs as well as information on recent agricultural technology or innovation and in turn widens the

mental horizon of the farmers to accept and adopt the practices. Mass media also provides information on experiences of successful farmers through various channels like television, radio, newspaper *etc.*, which reinforces confidence in other farmers to take up similar activities or try out new innovations.

The similar finding reported by Gattu (2001), Neelaveni *et al.* (2002) and Sable (2013).

5.1.9 Economic motivation

The results from the Table 11 show that more than three fourth (77.50) of the respondents had medium level of economic motivation followed by 13.33 and 9.17 per cent of respondents belonging to high and low level of economic motivation categories, respectively.

The probable reason for majority of respondents belonging to medium economic motivation might be because they had better exposure with various private companies and close interaction with extension personnel. Other reason might be due to surrounding Environment like neighbours, relatives, friends who were having medium standard of living and in addition low annual family income might be responsible for moderate economic motivation.

The results are in accordance with the findings of Chauhan and Patel (2003).

5.1.10 Market orientation

The data in Table 12 indicated that more than half of respondent 70.00 per cent had medium level of market orientation, whereas 15.83 per cent of respondent had low level of market orientation and 14.67 per cent of the respondent had low market orientation.

The reason behind such findings may be the pomegranate grower were having medium farming experience and having education level up to higher secondary school and medium cosmopoliteness.

These results are in conformity with Siddharth (2001), Chauhan, patel (2003), Chaudhari (2006) and Pisure (2012).

5.2 ENTREPRENEURIAL BEHAVIOUR OF FARMERS

5.2.1 Components of entrepreneurial behaviour of farmers

5.2.1.1 Innovativeness

Table 13 clearly indicates that less than two third (63.33per cent) of the respondents had medium innovativeness, followed by low (20.00 per cent) and high (16.66 per cent) level of innovativeness, respectively.

The medium innovativeness of farmers might be due to their majority of the farmers belonged to medium land holding category (64.17%) and majority level of education of farmers was only up to higher secondary school. Also majority of them had medium annual income, extension contact and social participation. All these factors might have contributed for their medium level of innovativeness.

The results are in accordance with the findings of Bhagyalaxmi *et al.* (2003), Pandeti (2005), Nagesh (2006) and Sable (2013).

5.2.1.2 Farm decision making

The data from Table 14 shows that, (69.17 per cent) of the respondents belonged to medium level of farm decision making category, followed by high (26.66 per cent) and low (14.17 per cent) level of farm decision making categories, respectively.

This might be due to their medium annual family income and medium size of land holding. The other possible reason might be that decision making in farming, especially under Indian conditions is very difficult due to ever changing agro-climatic conditions and lack of stabilized price policy.

The results of study are in the line with the findings of Chandrapaul (1998), Suresh (2004), Nagesha (2005), Nagesh (2006) and Sable (2013).

5.2.1.3 Achievement motivation

The result from table 15 indicated that two third (67.50 per cent) of the respondent had medium level of achievement motivation followed by low (18.33 per cent)level of and high (14.17 per cent) level of achievement motivation of farmers, respectively.

Achievement motivation is more of a psychological variable which differs from individual to individual. It is assumed that achievement motivation forces the individual towards reaching some goals, which he has set for himself. Higher the association with the individual, higher will be his efforts. This can be attributed to the social status of a respondent, who feels to keep greater goals.

The similar findings reported by Vijay Kumar (2001), Suresh (2004), Nagesha (2005), Pandeti (2005), Nagesh (2006) and Sable (2013).

5.2.1.4 Risk taking ability

It was observed from table 16 that 71.67 per cent of the respondents had medium level of risk taking ability, followed by 14.17 per cent and 14.16 per cent with low and high level of risk taking ability respectively.

The risk taking ability of individuals depends upon the personal, psychological, socio economic characteristics. The individuals were with more farming experience, large size land holding, and higher income and medium risk taking ability. This is evident from the results which might be because of contact with extension personnel by the respondents, which increased the perception and confidence in respondents about new technologies and to gain more income by taking risk. All these factors might have resulted in the respondents belonging to medium risk orientation.

The similar findings are reported by Bhagyalaxmi *et al.* (2003), Suresh (2004), Nagesh (2006) and Sable (2013).

5.2.1.5 Information seeking behaviour

It was noticed from Table 17 that half of the respondent i.e., 50.00 per cent had medium information seeking behaviour, followed by 25.83 per cent and 24.17 per cent of farmers had low and high information seeking behaviour respectively.

The possible reason for majority of farmers to fall in medium information seeking behaviour category might be due to their medium education and average financial conditions.

The findings of Suresh (2004), Pandeti (2005) and Sable (2013) are in the line of this result.

5.2.1.6 Leadership ability

It was observed from Table 18 that 73.33 per cent of respondent had medium level of leadership ability, followed by 15.00 per cent of the respondents had high level of leadership ability. while, 11.67 per cent of them had low level leadership ability.

The results indicate that ability to lead a group can be seen more in big farmers followed by medium farmers because of their positionin society. With respect to small farmers they had low leadership ability as they had low education, low knowledge, low income and lower social participation, which made them followers to a leader but not as a leader.

The findings of Chandrapaul (1998), Pandeti (2005) and Sable (2013) are in the line of this result.

5.2.1.7 Cosmopoliteness

It is evident from Table 19 that 61.67 per cent of farmers belonged to medium level category of cosmopoliteness followed by 33.33 per cent of respondents had high level of cosmopoliteness. Whereas, 15.00 per cent farmers categorized under low level of cosmopoliteness.

Majority of the respondents were having medium cosmopoliteness as they were having medium annual income, size of land holding and locally unavailability of extension workers of public and private organizations. Low level of education may be the other reason behind such results.

The findings of study are in the line with the findings of Patel *et al.*(2003), Suresh (2004), Chaudhari (2006) and Sable (2013).

5.2.2 Overall entrepreneurial behaviour

It could be seen from Table 20 that 68.33 per cent of farmers belonged to medium entrepreneurial behaviour and 15.84 percent of farmers had hig entrepreneurial behaviour, followed by 15.83 per cent of farmers had low entrepreneurial behaviour.

The possible reason for majority of respondents having medium entrepreneurial behaviour might be due to their medium financial condition, medium size of land holding to take risk and late adoption of new technologies besides medium in innovativeness and medium information seeking behaviour.

These are in the line with the results of Patil *et al.* (1999), Nagesha (2005), Pandeti (2005), Nagesh (2006) and Sable (2013).

5.2.3 Entrepreneurial behaviour of the respondents on the basis of Entrepreneurial Behaviour Index (EBI)

It was evident from Table 21, that 70.83 per cent of farmers belonged to medium level category of entrepreneurial behaviour, followed 15.84 per cent respondents had high level of entrepreneurial behaviour. Whereas, 13.33 per cent farmers categorized under low level category of entrepreneurial behaviour.

The possible reason might be due to medium innovativeness, farm decision making, achievement motivation, risk taking ability, information seeking behaviour, and cosmopoliteness of the respondents.

The findings of present study are in the line with the studies of Chaudhari (2006) and Sable (2013)

5.3 RELATIONAL ANALYSIS

5.3.1 Relationship between selected independent variables of farmers and their entrepreneurial behaviour

The results presented in last chapter are discussed in following order.

5.3.1.1 Farming experience with entrepreneurial behaviour

It was observed from table 23 that farming experience found to have positive and significant relationship with entrepreneurial behaviour of the farmers. Longer experience allows to efficient management under differing and different situations or contexts. Increase in experience of an individual would help in minimizing the expenditure required to manage the enterprise and ultimately resulting in increase in income level.

The above finding is supported by Mundhwa and Padheria (1998), Reddy and Reddi (2005), Chaudhari (2006) and Sable (2013).

5.3.1.2 Education with entrepreneurial behaviour

With respect to education of farmers, there was positive and significant relationship with their entrepreneurial behaviour. Education broadens the vision of an individual. The educated persons develop more access to extension agencies, mass media, farm decision making, cosmopoliteness, and inclined to use innovations by taking the high risk. Thus, these factors help an individual to manage his enterprise. Hence, education was the influencing factor for entrepreneurial behaviour of farmers.

These findings are in accordance with the findings of Murali and Anita Jhamtani (2003), Subramanyeswari and Veerraghava Reddy (2003), Chaudhari (2006) and Sable (2013).

5.3.1.3 Family size with entrepreneurial behaviour

Family size of farmer had shown highly significant correlation with entrepreneurial behaviour. The size of family plays an important role for taking a rational decision regarding adoption of innovation. In present study it was found family size had highly significant relation this might be due to more interest of the family members in the pomegranate growing.

Above finding is supported by Mundhwa and padheriaa (1998), Chaudhari (2006) and Pisure (2012)

5.3.1.4 Occupation with entrepreneurial behaviour

Occupation of the farmers had showed positive and highly significant correlation with entrepreneurial behaviour of the farmers.

Majority of respondents were engaged in agriculture. Hence, less variation in their occupation might be the reason for significant relationship.

The similar findings were reported by Anitha (2004), and Pisure (2012)

5.3.1.5 Land holding with entrepreneurial behaviour

Land holding of the respondents had shown positive and significant relationship with entrepreneurial behaviour of farmers. Land holding provides the economic base for the farmer to practice new agricultural technologies. Land holding also provides regulated impetus to make optimum utilization of resources on farm through efficient decision making to apply new ideas for achieving maximum profits. Further, it helps the farmer to bear risk and uncertainty as they cannot cause much damage to him.

The similar findings were reported by Subramanyeswari *et al.* (2003), Nagesha (2005), Nagesh (2006) and Sable (2013).

5.3.1.6 Annual income with entrepreneurial behaviour

Annual income of the respondents had shown positive and highly significant relationship with entrepreneurial behaviour of farmers. Annual income provides the economic base for the farmer; this was due to positive and good risk taking ability, decision making ability, leadership ability and achievement motivation.

The similar findings were reported by Pandya (1996), Nagesha (2005), Chaudhari (2006) and Pisure (2012).

5.3.1.7 Social participation with entrepreneurial behaviour

Social participation of the respondents had showed positive and highly significant relationship with entrepreneurial behaviour of farmers. Better social participation of respondent would have enabled them to contact various sources of information for increasing the knowledge about management of their pomegranate growing.

These findings are in accordance with the findings of Pandeti (2005), Hajare (2010) and Pisure (2012).

5.3.1.8 Mass media use with entrepreneurial behaviour

Mass media use of the respondents had showed non-significant relationship with entrepreneurial behaviour. It can be said respondents from any mass media category over more or less similarly distributed in entrepreneurial behaviour categories.

These findings are in accordance with the findings of Ravi (2007) and Sabale (2013).

5.3.1.9 Economic motivation with entrepreneurial behaviour

Economic motivation of the respondent had non-significant relationship with entrepreneurial behaviour. It can be said respondent from any category over more or less similarly distributed in entrepreneurial behaviour categories.

The similar findings were reported by Pandya (1996) and Nagesha (2005).

5.3.1.10 Market orientation with entrepreneurial behaviour

Market orientation of the respondent had shown positive and highly significant relationship with entrepreneurial behaviour of pomegranate grower. Probable reason might be that pomegranate grower were medium cosmopolite as aresult they were more interested to know current market information, market trend, demand and supply of pomegranate. hence better market orientation was the influencing factor for entrepreneurial behaviour as compared to lower market orientation of pomegranate grower.

The above result is in accordance with the findings of patil *et al.* (1999), Chaudhari (2006) and Pisure (2012).

5.3.2 Relationship between components of entrepreneurial behaviour of farmer with theirentrepreneurial behaviour

It is evident from Table 24 that all components of entrepreneurial behaviour *viz,* innovativeness, farm decision making, achievement motivation, risk taking ability, information seeking behaviour, leadership ability and cosmopoliteness of farmer are positively and highly significantly related with their entrepreneurial behaviour.

This may be due to that all these components individually and in combination greatly contribute for the entrepreneurial behaviour of farmers.

The above result is in congruence with the findings of Chaudhari (2006) and Sable (2013).

5.4. CONSTRAINTS FACED BY POMEGRANATE GROWER AND THEIR SUGGESTIONS

5.4.1 Constraints faced by pomegranate grower

Careful examination of the results presented in Table 25 revealed that, majority of the farmers expressed that financial problem, lack of exposure to mass media and information and marketing problem as reported by 78.33, 66.67 and 62.50 per cent respectively, followed by lack of knowledge (56.67 per cent), lack of food grain storage

facility (52.50 per cent), labour problem (46.66 per cent) and lack of transportation facilities (45.00 per cent), respectively.

Farmers faced a lot of problems towards their fullest participation in agricultural and allied activities. The government policies, non-government and voluntary organizations and other agencies should work together to achieve these objectives. To encourage entrepreneurs, the government, banks and financial institutions will have to offer various concessions, incentives and subsidies, however in the market places they will have to survive and grow. Farmers faced the problems of transportation and storage facility. This is due to problem of roads and problems of birds, rats, rodents. Another problem is high wages of labour. Several field operation require more labour. If sufficient labors are not available in the locality, they have to bring the labours from other villagers and hence the labourers might demand higher wages.

These findings are inaccordance with the earlier findings of Chelladurai (2000) and Sumangala (2003), Nagesha (2005),Ravi (2007) and Sable (2013).

5.4.2 Suggestions offered by pomegranate grower for taking up entrepreneurial activities

The result presented in Table 26 revealed that majority of respondents suggested easy availability of finance (70.83 per cent) followed by policy support for entrepreneurs be made (65.83 per cent), organizing effective training programmes (59.17 per cent), promoting co-operatives (53.33 per cent) and improving marketing system (48.33 per cent), respectively for taking up entrepreneurial activities.

These findings are accordance with the earlier findings of Ravi (2007) and Sable (2013).

SUMMERY AND CONCLUSIONS

Chapter- VI

SUMMARY AND CONCLUSIONS

All round development of agriculture is possible with the effective exploitation of human as well as material resources. In our country, where human resources are found to be plenty, we can identify individuals in all segments of population who have the requisite entrepreneurial skills. To all these groups, however, entrepreneurship stands as a vehicle to improve the quality of life for individuals, families and communities and to sustain a healthy economy and environment. Entrepreneurship is the capacity for innovation and caliber to introduce innovative techniques in business operations. Entrepreneurs are the agents who provide economic leadership that distributes the initial conditions of the economy and causes dynamic changes. It is only the innovative entrepreneur, who has the power to dream, to transform new situations into thoughts and resolve them into action. Thus, entrepreneurs can play an important role in increasing agricultural production and in turn contribute for economic development of the country.

Keeping the above facts in view, the present study was designed to analyze the entrepreneurial behaviour of farmers. The following specific objectives were formulated for the study.

6.1. To study the profile of pomegranate growers

6.2. To know the entrepreneurial behaviour of pomegranate growers

6.3. To delineate the relationship between profile of pomegranate growers with their entrepreneurial behaviour

6.4. To identify the constraints in pomegranate cultivation as perceived by the respondents and to invite their suggestions to overcome the constraints

In view with above objectives the study were conducted in purposively selected Aurangabad district of Marathwada region of Maharashtra state, as the first largest pomegranate growing district in Marathwada region. There are nine tahsils in Aurangabad district out of which three tahsils namely Aurangabad, Vaijapur, Paithan were selected purposively on the basis of maximum area under pomegranate cultivation. Four villages from each selected tahsil were selected randomly i.e. total twelve villages were selected. Ten pomegranate growers were selected from each village to comprise a sample of 120 respondents.

The respondents were personally interviewed and the data collected were processed and statistically analyzed by using statistical techniques like frequency, percentage, mean, standard deviation, coefficient of correlation and multiple regression. The summary of research finding is presented below.

6. SUMMARY

6.1. PROFILE OF POMEGRANATE GROWER

It was noticed that, majority of farmers (61.67 per cent) had medium farming experience whereas, 23.33 per cent of farmers had low farming experience. Thus, only 15.00 per cent farmers had high farming experience. As regards to education, 35.00 per cent of farmers were educated up to higher secondary school level and 02.50 per cent of farmers were illiterate. As regards to family size majority of the farmer (58.33 per cent) were medium family size and (29.17 per cent) were small family size. As regards to occupation, majority of the respondents (67.50 per cent) were engaged in farming alone.

It was also observed during study that, maximum number of farmers (64.17 per cent) of the farmers possessed medium land holding and 11.66 per cent farmer possessed big land holding, followed by 24.17 per cent farmers possessed small land holding. As regards to annual income, 77.50 per cent farmers had medium level of annual income, followed by 13.33 per cent of farmers categorized under low level of annual income whereas, 09.17 per cent of farmers had high level of annual income. It was also found in research that, 77.50 per cent and 12.50 per cent farmers had medium and low social participation, respectively. As regards to mass media use, that maximum number (72.50 per cent) of the respondents belonged to medium mass media use. Whereas, 14.17 and 13.33 per cent of farmers belonged to low and high mass media use categories, respectively.

It was noticed that 77.50 per cent of the respondents had medium economic motivation and 09.17 per cent of the respondents were found in low category of economic motivation. As regards to market orientation, majority of the farmers *i.e.,* 70.00 per cent of the respondents were having medium level of market orientation followed by 15.83 and 14.67 per cent of respondents having low and high level of market orientation, respectively.

6.2 ENTREPRENEURIAL BEHAVIOUR OF POMEGRANATE GROWER

Major findings related to entrepreneurial behaviour and their components are as follows,

As regards to innovativeness, majority (63.33 per cent) of the respondents had medium innovativeness, followed by low (20.00 per cent) and high (16.66 per cent) innovativeness, respectively. From all the respondents, 69.17 per cent of the farmers had medium farm decision making whereas, 14.17 per cent of farmers belonged to low farm decision making. As regards to achievement motivation, 67.50 per cent of farmers were categorized under medium achievement motivation category and followed by low (18.33 per cent) and high (14.17 percent), respectively.

In relation to the risk taking ability, 71.67 per cent farmers had medium risk taking ability and equal percentage of farmers i.e. 14.17 per cent had low and high risk taking ability. It was also observed that, 50.00 per cent of farmers had medium information seeking behaviour, followed by 25.83 per cent in low and 24.17 per cent in high information seeking behaviour.

As regards to leadership ability, 40.00 per cent of farmers belonged to low level of leadership ability, followed by 31.20 per cent in medium and 28.80 per cent in high level of leadership ability. As regards to cosmopoliteness, 56.80 per cent of farmers belonged to medium level of cosmopoliteness, followed by 24.00 and 19.20 per cent had low and high level of cosmopoliteness.

From all the respondents 73.33 per cent of farmers belonged to medium entrepreneurial behaviour whereas, 11.67 and 15.00 per cent farmers had low and high entrepreneurial behaviour.

On the calculation of Entrepreneurial Behaviour Index (EBI) of the farmers, 13.33 per cent of farmers belonged to low level category of entrepreneurial behaviour, followed 70.83 per cent respondents had medium level of entrepreneurial behaviour. Whereas, 15.84 per cent farmers categorized under high level category of entrepreneurial behaviour.

6.3 RELATIONSHIP BETWEEN PROFILE OF POMEGRANATE GROWER AND THEIR ENTREPRENEURIAL BEHAVIOUR

The findings pertaining to the entrepreneurial behaviour revealed that amongst independent variables of farmers, seven variables *viz.*, farming experience, education, family size, occupation, land holding, annual income, social participation, and market orientation had positive and significant relationship with their entrepreneurial behaviour, while mass media use and economic motivation had non significant relationship with their entrepreneurial behaviour.

6.4 CONSTRAINTS FACED BY POMEGRANATE GROWER

6.4.1 Constraints faced by pomegranate grower

During research it was found that majority of the farmers expressed that financial problem, lack of exposure to mass media and information and marketing problem as reported by 78.33, 66.67 and 62.50 per cent, respectively, followed by lack of knowledge (56.67 per cent), lack of food grain storage facility (52.50 per cent), labour problem (46.66 per cent) and lack of transportation facilities (45.00 per cent), respectively.

6.4.2 Suggestions offered by farmers for taking up entrepreneurial activities

Majority of respondents suggested easy availability of finance (70.83 per cent) followed by policy support for entrepreneurs be made (65.83 per cent), organizing effective training programmes (59.17 per cent), promoting co-operatives (53.33 per cent) and improving marketing system (48.33 per cent), respectively for taking up entrepreneurial activities.

6.2 CONCLUSIONS

1. Majority of the farmers under study were from medium farming experience and higher secondary school level of education along with having farming as their occupation and most of the farmers possessed medium land holding. Majority of the respondents had medium level of annual income, social participation, mass media use, economic motivation and market orientation. Majority of the respondents were under medium level of entrepreneurial behaviour.

2. It is also concluded that variables *viz.*, farming experience, education, family size, occupation, land holding, annual income, social participation, and market orientation had positive and significant relationship with their entrepreneurial behaviour, while mass media use and economic motivation had non significant relationship with their entrepreneurial behaviour.

3. During research it was found that majority of the farmers expressed that financial problem, lack of exposure to mass media and information and marketing problem then another important constraint was lack of knowledge, lack of food grain storage facility, labour problem and lack of transportation facilities, respectively.

4. Majority of respondents suggested easy availability of finance followed by policy support for entrepreneurs, organizing effective training programmes, promoting co-operatives and improving marketing system, respectively for taking up entrepreneurial activities.

IMPLICATIONS

Chapter -VII

IMPLICATIONS

Findings of one study are not adequate for generalization but may serve as a guideline for the policy makers, executors and the extension agents associated with the entrepreneurship development, for promoting future activities and bringing out desirable changes in the entrepreneurship development and different planning programmes. The researcher hopes that this research study would helpful for understanding of personal characteristics of entrepreneurs, their entrepreneurial behaviour and constraints faced in maintaining their farm enterprise and their suggestions. These research findings will also helpful in solving the different constraints and problems faced by the farmers in enterprise management.

In the light of findings of the study and from the personal experiences of researcher at the time personally interviewing respondents, following implications are emerged out for the effective improvement of entrepreneurial behaviour of farmers, to the concerned extension workers and field level personnel and policy makers.

1. As it was revealed from the results that most of the farmers had medium level of social participation, economic motivation and marketing orientation. So it is necessary to rise up their participation and other characteristics from medium to high. For this purpose extension functionaries should take the lead to improve their standard.
2. Majority of the farmers were having medium mass media use. Therefore, it is implied to provide exposure to the farmers by visiting the successful entrepreneurs and their enterprise plants it is necessary to organize interaction meeting with them, which will motivate and promote development of entrepreneurial qualities of farmers.
3. As most of the farmers had medium innovativeness, still there is a need to expose the farmers to new developments in agricultural technologies, and motivate them to adopt the new technologies by organizing group discussions, meetings, study tours and field trips.
4. The fact that majority of the farmers had medium entrepreneurial behaviour. Therefore, it is necessary to intensify educational efforts and policy support to the farmers by the field extension workers of the development departments, NGOs and private organizations to push them in higher category of entrepreneurial behaviour.

5. The major constraint expressed by pomegranate grower was financial problem. So it is necessary to arrange the financial support through subsides, bank loans by government to make them efficient in pomegranate cultivation.

6. The next major constraint was marketing of produce for this purpose, government, NGO, Co-operative should arrange the market to get the fair price to produce. Government should declare minimum support price to pomegranate.

7. Intensive training programmes need to be conducted by government and nongovernment agencies for awareness about entrepreneurial opportunities, decision making, innovations, participation in implementation of government schemes, time and financial management, which would enable for efficient utilization of their potentials followed by vigorous follow-up, guidance, counseling for sustainability of the entrepreneurial activity.

Research implications

The present study being of exploratory type, the findings will have to be tested to a greater depth in other parts of states to judge its validity on large scale. The characteristics included in the study are not sufficient for generalization or to come at any recommendation about entrepreneurial behaviour development of farmers. So, other variables apart from those that are studied in the present investigation may be identified and their influence on entrepreneurial behaviour may also be studied. Therefore, the study should be conducted at greater depth. However this will be useful as bench mark to investigate deeply the studies of similar type in future.

LITERATURE CITED

LITERATURE CITED

Achuta, R. K. and Radhakrishnamurthy, 2000. Constraints faced by farmers in betelvine cultivation. *Maharashtra Journal of Extension Education*, **19** : 308-311

Akinbami, C.A.O, Aluko, M.A.O, Momodu, A.S., 2012. Technology adoption and women entrepreneurial behaviour. *International Journal of Science and Technology, 1(10).*

Amudha, S. and Veerabhadraiah, V., 2000, Women in commercial poultry. *Kuruk.*, 5(7): 37-40.

Anil Kumar and Arora, V. P. S., 1999. Post-harvest management of vegetables in Uttar Pradesh hills. *Indian Journal of Agricultural Marketing*, 13(2): 6-14.

Anitha Dhayia, Indu Grover and Deepak Grover, *1999.* Entrepreneurial attributes among undergraduates in an agricultural university. *Maharashtra Journal of Extension Education, 18 : 166-171.*

Anitha, B. 2004. A study on entrepreneurial behaviour and market participation of farm women in Bangalore rural district of Karnataka. M.Sc. (Agri.) Thesis, University of Agricultural Sciences, Bangalore.

Anonymous, 1992. Development and the environment: world development report, world development indicators, published for the world bank, *Oxford University Press*, USA, pp. 27-29.

Anonymous, 1996a. Manual of orientation course on entrepreneurship development in agriculture held from December. 17-31, 1996 organized by entrepreneurship development cell, IARI, New Delhi, pp. 138-140.

Anonymous, 1996b. Rich poor gap widening every day, the Indian express. *Daily Newspaper,* July 18, 1996.

Anonymous, 2005. *Annual Report for 2004-2005.* Economic survey of India.

Anonymous, 2014, Annual report 2013-2014. National Research Center on Pomegranate, Solapur.

Arunkumar, T. D., 2004. Profile of SHGs and their contribution for livestock development in Karnataka. *M.Sc. (Agri.) Thesis*, University of Agricultural Sciences, Dharwad.

Ashokkumar Bennur, 2011. a study on entrepreneurial qualities and adoption behaviour of banana growers, *M. Sc. (Agri) Thesis*, University of Agricultural Sciences, Dharwad.

Atar, R.S., 2012. Study on knowledge and adoption of recommended grape cultivation practices by the grape growers, *M.Sc. (Agri.), Thesis*, submitted to MKV, Parbhani.

Bhagwat S. C., 2014. Knowledge and adoption of osmanabadi goat management practices by goat keepers. M.Sc. (Agri.) Thesis college of Agriculture Latur, V.N.M.K.V.Parbhani.

Bhagyalaxmi, K., Gopalakrishna Rao, V. and Sudarshan Reddy, M., 2003. Profile of the rural women micro-entrepreneurs. *Journal of Research, Acharya N. G. Ranga Agricultural University, Hyderabad,* 31(4) : 51-54.

Chahande, A. B. 2012. Knowledge and adoption of recommended Pigeonpea package of practices by the growers *M.Sc. (Agri.) Thesis*, MKV, Parbhani.

Chandrakala, H.T. 1999. Extent of knowledge, adoption and time utilization pattern of farm women labours in dairy management - An analysis. *M.Sc. (Agri.) Thesis,* University of Agricultural Sciences, Bangalore (Unpublished).

Chandrapaul, K., 1998. A study on entrepreneurial behaviour of vegetable growers in Krishna district of Andhra Pradesh. *M. Sc. (Agri.) Thesis,* Acharya N. G. Ranga Agricultural University, Hyderabad.

Chandrapaul, K., 1998. A study on entrepreneurial behaviour of vegetable growers in Krishna district of Andhra Pradesh. *M. Sc. (Agri.) Thesis,* Acharya N. G. Ranga Agricultural University, Hyderabad.

Chaudhari Ratan Ranuji. 2006. A study on entrepreneurial behaviour of dairy farmers. *Ph.D Thesis* (Unpub.), University of Agriculture Sciences, Dharwad (unpublished).

Chauhan, N. B. and Patel, R. C., 2003. Entrepreneurial uniqueness of poultry entrepreneurs. *Rural India*, 66 (12) : 236-239.

Chelladurai, G., 2000. Women entrepreneurship. *Third Concept*, 14(165): 55-58.

Dannof, C. H., 1949. Observations at entrepreneurship in agriculture change and the entrepreneur. *Harvard University Press*, Cambridge, pp. 13-18.

Daya Ram, A. Prasad, and S. S. Singh, 2008. comparative profile of entrepreneurial behaviour of vegetable growers in bishnupur district of Manipur, *A Journal of Multidisciplinary Advance Research* ,Technofame, 65-71.

Devalatha, C.M., 2005, Profile study of women SHgs in Gadag district on northern Karnataka *M.Sc.(Agri.) Thesis*, University of Agricultural Sciences, Dharwad.

Dhepe, A.R., 2014. Knowledge and adoption of improved black gram production practices by the farmers M.Sc. (Agri.) Thesis college of Agriculture Latur, V.N.M.K.V.Parbhani.

Gattu, K.C. 2001. Production constraints of turmeric cultivation in Karimnagar district of Andhra Pradesh. *M. Sc. (Agri.) Thesis*, Acharya N. G. Ranga Agricultural University, Hyderabad (unpublished).

Gour, A. K. 2002 Factors influencing adoption of some improved animal husbandry practices of dairying in Anand and Vadodara districts of Gujarat State. Ph.D. Thesis, Gujarat Agricultural University, S. K. Nagar.

Hajare S. A. 2010. Training needs of SHG members about dairy enterprise in Latur district, *M.Sc. (Agri) Thesis* (Unpub.), Marathwada Agricultural University, Parbhani.

Jhamtani, A., Sharma, J. P., Singh, R., Singh, A.K. and Chhibber, V. 2003. Entrepreneurial orientation of educated unemployed rural youth. *Indian Journal of Extension Education,* **39**(3 & 4): 124-132.

Katke, S. P., 2011. Knowledge and adoption of dry land cotton production technology in Parbhani district. *M.Sc. (Agri.) Thesis,* MKV, Parbhani.

Kaushal Kumar Jha, 2008. Entrepreneurial characterstics and attitude of pineapple growers. *International Journal of Human and Social Sciences*, 4:6, pp.392-396.

Khan, M. A., Sharma, P. C. and Sharma, P. N., 1997. Farmers characteristics of adoption of paddy technology in eastern Madhya Pradesh – A path analysis. *Journal of Extension Education*, **8**(4) : 1800-1807.

Khattra, P.S., Harika, R.S. and Poonam Kataria 2004. Inter-regional disparity in milk production and its determinants in Rural Punjab. *Journal of Research Punjab Agricultural University,* **41**(4): 507-516.

Khin Mar Oo 2005. Knowledge and adoption of improved dairy management practices by women dairy farmers in Dharwad district. M. Sc. Thesis, University of Agricultural Sciences, Dharwad.

Mandlik, S. P., 2012. Knowledge and adoption of integrated pest management technology in pigeon pea M.Sc. *(Agri.) Thesis,* MKV, Parbhani.

Mane, S. S., 2012. Knowledge and adoption of recommended production technology M.Sc. (Agri.) Thesis college of Agriculture Latur, M.K.V.Parbhani.

Manjula, S., 1995. A study of entrepreneurial behaviour of rural women in Ranga Reddy district of Andhra Pradesh. *M. Sc. (H. Sc.) Thesis,* Andhra Pradesh Agricultural University, Hyderabad.

Meena, R. K., 2014. knowledge and adoption of recommended pigeon pea production technology by the farmers M.Sc. (Agri.) Thesis college of Agriculture Latur, V.N.M.K,V.Parbhani.

Mehta B. M. and Madhuri Sonawane, 2012. Entrepreneurial behaviour of mango growers of Valsad district of Gujarat state, *Indian Research Journal of Extn. Edu.* **12** (1).

Meti, S. K., 1998. Technology reach perception, knowledge, adoption and attitude towards improved agriculture technology by small and marginal farmers in Tungabhadra Command Area. *Ph. D. Thesis,* University of Agricultural Sciences, Dharwad.

Mohapatra, A. S., and Sahu, U. N., 2012. Study of socio-economic and entrepreneurial characteristics of tribals of mayurbhanj district in sabai grass enterprise, *International Journal of Management, IT and Engineering,* Vol.2 (5)

Moulik, T. K., 1965. A study on predictive values of some factors of adoption of nitrogen fertilizers and the influence of sources of information on adoption behaviour. *Ph. D. Thesis*, Indian Agricultural Research Institute, New Delhi .

Mundhwa, A. B. and Padheria, M. M. 1998. A study on entrepreneurial behaviour of dairy women among their different variables categories. *Gujarat Agricultural University Research Journal,* 23(2): 72-76.

Murali, K. and Anitha Jhamtani, 2003. Entrepreneurial characteristics of floriculture farmers. *Indian Journal of Extension Education,* 39(1&2) : 19-25.

Nadre, K. R., 2000. A study on constraints in adoption of recommended practices of cotton in Aurangabad and Jalna districts. *MANAGE Extension Research Review*, 1(2): 66-76.

Nagesh, 2006. Study on entrepreneurial behaviour of pomegranate growers in Bangalkot district of Karnataka, *M. Sc. (Agri.) Thesis,* University of Agricultural Sciences, Dharwad (unpublished).

Nagesha, P.N. 2005. Study on entrepreneurial behaviour of vegetable seed producing farmers of Haveri district. *M. Sc. (Agri.) Thesis*, University of Agricultural Sciences, Dharwad (unpublished).

Nandapurkar, C. G., 1980. A study on entrepreneurial behaviour of small farmers. *Ph. D. Thesis,* University of Agricultural Sciences, Bangalore.

Narmatha, N., Krishnaraj, R. and Mohmed Safiullah, A., 2002. Entrepreneurship behaviour of livestock farm women. *Indian Journal of Extn. Edu.*, **13**(4): 3431-3438.

Neelaveni, S., Rambabu and Punna Rao. 2002. Developmental priorities of farm women in agribusiness management – A case of an adopted village K. B. Palm. *MANAGE Extension Research Review*, **6**(3): 74-83

Nomesh Kumar, N. and Narayanaswamy, B. K., 2000, Entrepreneurial behaviour and socio-economic characteristics of farmers who adopted sustainable agriculture in India. *Karnataka Journal of Agricultural Sciences*, **13**(1) : 83-90.

Pandeti, C. M. 2005 A study on entrepreneurial behaviour of farmers in Raichur district of Karnataka. M.Sc.(Agri.) Thesis, University of Agricultural Sciences, Dharwad.

Pandey, U. B., 2001. Strategy for increasing onion productivity and minimizing post-harves losses in onion in Andhra Pradesh. *NHRDF News Letter*, **20** : 1-5.

Pandya, R. D., 1996. Entrepreneurial behaviour of sugarcane growers. *Journal of Extension Education*, **6**(7) : 1299-1301.

Patange, D. D., Wangikar, S. D., Kulkarni, A. N. and Kalyankar, S. D., 2000. Effect of socioeconomic variables on milk production of Marathwadi Buffalo. *Maharashtra J. Extn. Edu.*, **20**: 92-96.

Patel, B. S. 2005. A study of Peasantry Modernization in Integrated Tribal Development Project Area of Dahod district of Gujarat State. *Ph. D. Thesis*, Anand Agricultural University, Anand (unpublished).

Patel, M. M. and Sanoria, Y. C., 1997. Correlates of entrepreneurial behaviour of sugarcane growers. *Maharashtra Journal of Extension Education*, **16** : 344-346.

Patel, M. M., Chatterjee, A. and Khan, M. 2003. Adoption of wheat production technology.*Indian Journal of Extension Education*. **39**(1-2):58-62.

Patil, V. G., Mahadik, R. P. and Patil, A. S., 1999. Entrepreneurial behaviour of littlegourd growers. *Maharashtra Journal of Extension Education*, **18** : 240-243.

Pisure B. L., 2012. Entrepreneurial behaviour of dairy farmers, *M. Sc. (Agri.) Thesis,* V.N.M.K.V. Parbhani.

Rao, M. S. and Dipak De. 2003. Entrepreneurial behaviour of vegetable growers, Department of Exension Education, Institute of Agricultural Science, Banaras Hindu University, Varanasi.

Rathod, P.K., Nikam, T.R., Landge, Sariput and Hatey, Amit. 2012. Entrepreneurial behaviour of dairy farmers in western Maharashtra, India. *Internat. J. Com. and Bus. Manage*, **5** (2):115-121.

Ravi, G. K. 2007. A study on entrepreneurial behavioural characteristics of SC and ST farmers of Gulbarga district. *M. Sc. (Agri.) Thesis*, Univ. Agric. Sci., Dharwad (unpublished).

Ravikumar Modi, Bheemappa A., Manjunath L., Hegde R. V. and Havaldar Y. N., 2013. Entrepreneurial characteristics of mango growers and their constraints in adoption of post-harvest management practices in mango, *Karnataka Journal of. Agricultural Sci., 26 (3) : (384-387)*

Reddy, S.M. and Reddi, M. S. 2005. Relationship between management attributes of dairy farmers and their farming performance. *Indian Veterinary Journal,* **82**(4): 455-456

Sable A. N., 2013 Entrepreneurial behaviour of farmers in Marathwada region. *M. Sc. (Agri.) Thesis,* V.N.M.K.V. Parbhani.

Sakharkar, V. S., 1995. A study on knowledge, fertilizer use pattern and constraints in the cultivation of soybean by farmers of Nagpur district, Maharashtra. *Ph. D. Thesis*, University of Agricultural Sciences, Dharwad.

Saravanakumar, R., 1996. A study on management of mango gardens by farmers in Krishnagiri taluk of Dharmapuri district, Tamil Nadu. M. Sc. (Agri.) Thesis, University of Agricultural Sciences, Dharwad.

Sasane, M.H., 2010. Knowledge and adoption of recommended production technology by Cauliflower growers. M.Sc. (Agri.) Thesis submitted to Marathwada Krishi Vidyapeeth, Parbhani.

Sawale, S. V., 2011. knowledge and adoption of post harvest technology by pomegranate growers. M.Sc. (Agri.) Thesis, Marathwada Krishi Vidyapeeth, Parbhani.

Seema and Indu, G., 2001, Constraints experienced by women entrperneurs. *Haryana University Journal Res.*, 31 (3&4): 135-140.

Siddharth, D. S (2001) A study on personality traits of poultry entrepreneurs in Anand district of Gujarat State. M.Sc.(Agri.) Thesis (Unpub.), Gujarat Agricultural University, S. K. Nagar.

Sivanandan, S., 2002. A study on listening behaviour of the farmers towards selected farm broadcasts in Theni district of Tamil Nadu. *M. Sc. (Agri.) Thesis,* Acharya N. G. Ranga Agricultural University, Hyderabad

Subramanyam, *I., 2002.* A study on the impact of agricultural market yard committee level training programmes in Nellore district of Andhra Pradesh. *M. Sc. (Agri.) thesis, Acharya N. G. Ranga Agricultural University, Hyderabad.*

Subramanyeswari, B. and Veeraraghava Reddy, K., 2003. Entrepreneurial behaviour of rural dairy women. *Madras Agricultural Journal,* 30 (1-3) : 173-175.

Sumangala, N., 2003. The need for developing women entrepreneurs. *Yojana,* 47(7): 36- 39.

Sunil Kumar, G. M., 2004. Study on knowledge and adoption of the production and postharvest technology in tomato crops of

Belgaum district in Karnataka. *M. Sc. (Agri.) Thesis,* University of Agricultural Sciences, Dharwad.

Supe, S. V. and Singh, S. N., 1969. *Dynamics of rational behaviour of Indian farmers.* New Heights Publishers and distributors, New Delhi.

Suresh Reddy, J., 2004. Entrepreneurship : Concept and Development. *Third Concept,* **17** (203) : 39-42.

Thiranjana Gowda B., 2005. Study on cultivation and marketing pattern of selected cut flowers in Belgaum district of Karnataka state. *M. Sc. (Agri.) Thesis*, University of Agricultural Sciences, Dharwad.

Trivedi, G., 1963. Measurement and analysis of socio-economic status of rural families. *Ph. D. Thesis,* Indian Agricultural Research Institute, New Delhi.

Vasudev, N. and Chowdary, K. R., 1999. Marketing of tomato in Andhra Pradesh. *Indian Journal of Agricultural Marketing*, **13**(2) : 53.

Vijay Kumar, K., 2001. Entrepreneurship behaviour of floriculture farmers in Ranga Reddy district of Andhra Pradesh. *M. Sc. (Agri.) Thesis,* Acharya N. G. Ranga Agricultural University, Hyderabad.

Vijay Kumar, K., Pochaiah, M. and Raghupathi Reddy, G. 2003. Correlates of entrepreneurial behaviour of floriculture farmers. *Manage Extension Research Review,* **4** (1):153-164.

Wadear, P. R., Kiresur, V. R. and Gaddi, G.M 2003. Human labour absorption in dairy farming in Karnataka – An economic analysis. *Rural India,* **66** (12): 243-247.

Waghmare, O.R. 2010. Training needs of sweet orange growers. *M.Sc. (Agri) Thesis* M.A.U. Parbhani.

Waman, G. K. and Patil, P. S., 2000. Production, storage and marketing constraints faced by onion growers. *Maharashtra Journal of Extension Education*, **19** : 104-108.

ABSTRACT

Department of Extension Education
College of Agriculture, Latur
Vasantrao Naik Marathwada Krishi Vidyapeeth, Parbhani

THESIS ABSTRACT

Thesis Title

"Entrepreneurial Behaviour of Pomegranate growers "

Name of the student : Mr. Hipparkar B. G. **Research Guide:** Dr. D. D. Suradkar
Reg. No. : 2013A/71ML Assistant Professor
Degree : M.Sc. (Agri.) **Major subject** : Extension Education

The study was conducted in Aurangabad district. Three tahsils and four villages from each tahsil were selected randomly. Ten farmers from each village were selected to comprise a sample of 120 respondents. In view with above objectives the multistage sampling was used to select district, tahsil, village and farmers. Collected data were classified, tabulated and analyzed by using statistical methods like frequency, percentage, mean, standard deviation, correlation coefficient and multiple regressions.

It was noticed that majority of farmers (61.67 per cent) had medium farming experience whereas, 23.33 per cent of farmers had low farming experience. Thus, only 15.00 per cent farmers had high farming experience. As regards to education, 35.00 per cent of farmers were educated up to higher secondary school level and 2.50 per cent of farmers were illiterate. As regards to family size, majority of the respondents 58.33 per cent were engaged in farming alone.

It was also observed during study that majority of farmers 42.40 per cent of the farmers possessed medium land holding and 40.80 per cent farmer possessed big land holding, followed by 16.80 per cent farmers possessed small land holding. As regards to annual income, 65.60 per cent farmers had medium level of annual income followed by 19.20 per cent of farmers categorized under low level of annual income whereas, 15.20 per cent of farmers had high level of annual income. The finding also indicates that, majority 37.60 per cent of the respondents possessed low level of assets. It was also found in research that, 56.00 per cent and 24.80 per cent farmers had medium and low social participation, respectively. As regards to mass media use, that majority 43.20 per cent of the respondents belonged to medium mass media use. Whereas, 24.00 and 32.80 per cent of farmers belonged to low and high mass media use categories, respectively.

It was noticed that 66.40 per cent of the respondents had medium extension contact and 16.00 per cent of the respondents were found in low category of extension

contact. As regards to level of aspiration, majority of the farmers *i.e.,* 49.60 per cent of the respondents are having medium level of aspiration followed by 26.40 and 24.00 per cent of respondents having low and high level of aspiration, respectively.

It was observed that 17.60 per cent of farmers belonged to low level of entrepreneurial behaviour, followed by 68.80 per cent of the respondents had medium level of entrepreneurial behaviour. Whereas, 13.60 per cent farmers categorized under high level of entrepreneurial behaviour and 13.33 per cent of farmers belonged to low Entrepreneurial Behaviour Index, followed 70.83 per cent respondents had medium Entrepreneurial Behaviour Index whereas, 15.84 per cent farmers categorized under high Entrepreneurial Behaviour Index.

The findings pertaining to the entrepreneurial behaviour revealed that amongst independent variables of farmers, variables *viz.*, farming experience, education, family size, occupation, land holding, annual income, social participation, and market orientation had positive and significant relationship with their entrepreneurial behaviour, while mass media use and economic motivation had non significant relationship with their entrepreneurial behaviour.

It was found that financial problem, lack of exposure to mass media and information and marketing problem were three major constraints for the farmers.

APPENDIX

Respondent No: .....

APPENDIX-I

DEPARTMENT OF EXTENSION EDUCATION

COLLEGE OF AGRICULTURE, LATUR

VASANTRAO NAIK MARATHWADA KRISHI VIDYAPEETH, PARBHANI

Research topic : **Entrepreneurial behaviour of Pomegranate growers**

Researcher : **Hipparkar Balaji Govind**

Research Guide : **Dr. D. D.Suradkar.**

Interview Schedule

General information:

Name of farmer: Mr. / Mrs. .....

Contact No.: .....

Village: ..... **Taluka:** ..... **District:**.....

Part-I

I. Profile of pomegranate growers.

1) Farming experience: .....years.

2) Education:

Sl No.	Qualification		Specify
1	Illiterate	0	
2	Primary School (I to IVth stds)	1	
3	Middle School (V to VIIth stds)	2	
4	High School (VIII to Xth stds)	3	
5	Higher Secondary School XI to XIIth stds)	4	
6	Graduate (Above XIIth Stds)	5	
7	Post Graduate (Above Graduation)	6	

3) Family size

Total number of members : .....

4) Occupation:

Farming(1)	Subsidiary(1)	Other(1)

5) Land holding:

Irrigated (acres)	Dry land (acres)	Total (acres)

6) Annual income:

Main source (Rs)	Subsidiary source(Rs)	Other sources (Rs)	Total (Rs)

7) Social participation:

i) Are you member of any of the organizations? Yes/ No

ii) If yes, indicate the following information

Sl. No.	Name of the Organization	Extent of participation		
		Regular (2)	Occasional (1)	Never (0)
1	Gram panchayat			
2	Co-operatives			
3	Youth clubs			
4	Rait Sangh			
5	Self helf group			
6	Krishi vigyan mandal			
7	Mahila Mandal			
8	Others (specify)			

8) Mass media use:

Sl. No.	Mass media Sources	Frequency of use		
		Regular(2)	Occasional(1)	Never(0)
1	Radio			
2	Television			
3	Newspaper			
4	Farm magazine			
5	Cyber media			
6	Other (specify)			

9) Economic motivation:

(SA- Strongly agree, A- Agree, SDA- Strongly Disagree, DA-Disagree and UD-Undecidedness)

Sl. No.	Statement	SA	A	UD	DA	SDA
1	A farmer should work towards larger yields and economic profits					
2	The most successful farmers is one who makes the most profit					
3	A farmer should try any new farming idea which may earn him more money					
4	A farmer should grow cash crops to increase monetary profits in comparison to growing of food crops for home consumption					
5	It is difficult for the farmer's children to make good start unless he provides them with economic assistance					
6	A farmer must earn his living but the most important thing in life cannot be defined in economic terms					

10) Market orientation:

Please give your response on following questions:

Sr.No.	Questions	Score	Response pattern	
			Yes (2)	No (1)
1.	Where do you sell the Pomegranate?			
a)	In Village	1		
b)	In City	2		
c)	In Co-operative society(other state)	3		
d)	Any Other (Export)	4		
2.	Does market information play an important role for pomegranate entrepreneur in selling the pomegranate?			
3.	One should know the demand and supply of pomegranate in the market?			

4.	Pomegranate entrepreneur can get good price by selling the pomegranate village only?			
5.	One should maintain the pomegranate to get good price in the market?			
6.	Do you keep yourself in touch with current market trends?			

Part-II

II) Entrepreneurial Behaviour:

1) Innovativeness:

Please indicate your degree of linking on hearing 3 statements under different items. From among the 3 statements, you here indicate the statement you like most and also indicate statement you like least.

Sl. No.	Statement	Most like	Least like
1.a	I try to keep myself upto date with information on new farm practices in pomegranate production but that does not mean that I try out all new methods on my farm		
b	I feel restless till I try out a new farm practices in pomegranate production, that I have heard about		
c	They talk of many new farm practices in pomegranate production, these days but who knows whether they are better than the old ones		
2.a	From time to time I have heard of several new farm practices in pomegranate production and I have tried out most of them is the last few years		
b	Usually I wait to see that what results my neighbors obtain before I try out the new farm practices in pomegranate production		
c	Some how I believe that the traditional ways of farming are the best		
3.a	I am cautious about trying a new practices in pomegranate production		
b	After all, our fore-fathers were wise in their farming practices and I do not see any reason for changing these old methods		

c	Often new farm practices in pomegranate production are not successful, however, if they are promising I would surely like to adopt them.		

2) Farm decision making:

The following are some of the management decisions which you might have taken while growing the crops. Please indicate the appropriate justification.

Sl. No.	Decision	Justification
1	How did you decide the area for different crops to put under cultivation last year	3 - Market conditions 2 - Ease in supervision and cultivation 1 - Always cultivated the same acreage 0 - Do not know
2	How do you decide on the different species varieties of crops	3 - Market conditions 2 - Experiencing with new variety 1 - Use seeds which are locally available 0 - Do not know
3	How did you decide the quantity of fertilizers used to your crops	3- Soil tests 2 - General experience 1 - Used which was available 0- Do not know
4	How did you decide the various measures of plant protection	3 - Recommendations of extension workers 2 - Careful observation 1 - Used whatever was available 0 - Do not know
5	How did you decide the time of marketing of your produce	3- Consideration of keeping quality of produce 2 - Recommendations of relatives/ neighbours/other farmers

		1 - Always sold at the same time of the year 0- Do not know
6	What type of written records you keep	3- Farm books 2- Records of labourers 1- Used memory 0- Do not know or none

3) Achievement motivation:

Sl. No.	Statements	Agree (3)	Undecided (2)	Disagree (1)
1	Work should come first even if one cannot get proper rest in order to achieve ones goals			
2	It is better to be content with whatever little one has, than to be always struggling for more			
3	No matter what I have done I always want to do more			
4	I would like to try hard at something really difficult even if it provides that I cannot do it			
5	The way things are now-a-days discourage one to work hard			
6	One should succeed in occupation even if one has to neglect his family			

4) Risk taking ability:

Sl. No.	Statement	Response		
		Agree (2)	Undecided (1)	Disagree (0)
1	A farmer should grow large number of crops to avoid greater risks involved in growing one or two crops			

2	A farmer should rather take more of a change in making a big profit than to be content with a smaller but less risky profits			
3	A farmer who is willing to take greater risks than the average farmer usually have better financial condition			
4	It is good for a farmer to take risks when he knows his chance of success is high			
5	It is better for a farmer not to try new farming methods unless most other farmers have used them with success			
6	Trying an entirely new method in farming by a farmer involves risk, but it is worth			

5) <u>Information seeking behavior</u>:

Sl. No.	Information sources	Degree of contact		
		Frequently (2)	Occasionally (1)	Never (0)
1	Family members			
2	Relatives			
3	Friends/ Neighbours			
4	Progressive farmers			
5	Village panchayat member			
6	BDO			
7	AEO			
8	Scientists of SAU			
9	Newspapers			
10	Radio			
11	Television			
12	Farm literature			
13	Internet			
14	Others (specify)			

6) **Leadership ability:**

Sl. No.	Statements	Always (2)	Sometimes (1)	Never (0)
1	Did you participate in group discussions on new farm practice			
2	Whenever you see/hear a new farm practice did you initiate discussion about it with your colleagues			
3	Do village people regard you as good source of information on new farm practice			
4	Do you assign the farm work to your family members			
5	Do you offer new approaches to problems			

7) **Cosmopoliteness:**

Sl. No.	Statements	Response		
		Agree (2)	Undecided (1)	Disagree
1.	There is no need to collect additional information from outside of the village for successful enterprise.			
2.	An entrepreneur should try to get information on farm management practices from outside his village by using mass media facilities.			
3.	An entrepreneur learns many things from the happenings and experiences of his village only.			
4.	Keeping contact with projective entrepreneur is useful for managing the farm enterprise.			
5.	Visiting the SMS is waste of time.			
6.	Agricultural exhibitions help to gather recent information.			

PART-III

III) Constraints faced by the farmer in maintaining their enterprise:

Sl. No.	Constraints	
1	Lack of knowledge	
2	Financial problem	
3	Marketing problem	
4	Lack of exposure to mass media and information *etc.*	
5	Transportation facilities	
6	Food grain storage facilities	
7	Others (specify)	

Suggestions:

1)

2)