ENTREPRENEURIAL TRAITS OF DAIRY FARMERS IN PALGHAR DISTRICT OF KONKAN REGION

T H E S I S

Submitted

In partial fulfillment of the requirements for the Degree of

MASTER OF VETERINARY SCIENCE

IN

VETERINARY AND ANIMAL HUSBANDRY EXTENSION

BY

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(INDIA)

2021

DECLARATION OF THE STUDENT

I hereby declare that the experimental research work and interpretation of the thesis entitled **"ENTREPRENEURIAL TRAITS OF DAIRY FARMERS IN PALGHAR DISTRICT OF KONKAN REGION"** or part thereof has not been submitted for any of the other degree or diploma of any university, nor the data has been derived from any thesis or publications of any university or scientific organization. The sources of material used and all assistance received during the course of investigation have been duly acknowledged.

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Raut Satish Gajanan has satisfactorily prosecuted his course of research work for a period of not less than one semester and that the thesis entitled **"Entrepreneurial traits of dairy farmers in Palghar district of Konkan region"** submitted by him is the result of research work is sufficient to warrant its presentation to the examination in subject of Veterinary & Animal Husbandry Extension for the award of **Master of Veterinary Science (M.V.Sc.)** degree by the Maharashtra Animal and Fishery Sciences University, Nagpur.

We also certify that the thesis or part thereof has not been previously submitted by him for a degree of any other university.

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CERTIFICATE

This is to certify that the thesis entitled **"Entrepreneurial traits of dairy farmers in Palghar district of Konkan region"** submitted by **Raut Satish Gajanan** to the Maharashtra Animal and Fisheries Sciences University, Nagpur, in partial fulfillment of the requirement for the degree of Master of Veterinary Science (M.V.Sc.) has been approved by the Student's Advisory Committee after examination in collaboration with the External Examiner.

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TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF PLATES

LIST OF ABBREVIATIONS

SR NO.	ABBREVATIONS		NAME
1.	SHG'S	:	Self Help Groups
2.	VDO	:	Village Development Officer
3.	LDO	:	Livestock Development Officer
4.	KVK	:	Krishi Vigyan Kendra
5.	NGO	:	Non- government Organization
6.	LSS	:	Livestock Supervisor
7.	BDO	:	Block Development Officer
8.	TV	:	Television
9.	GOI		Government of India

Dedicated to My Beloved Family

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Introduction

1. INTRODUCTION

The livestock sector plays pivotal role in the Indian economy. The importance of livestock in Indian agricultural economy has been well recognized and next to land and irrigation, dairy is the single largest asset in rural India. Given India's agro climatic diversity, a large variety of livestock are available for draught power, milk, meat, eggs, wool etc. and thus ensuring additional income to the livestock farmers. Agriculture still happens to be the backbone of Indian economy, as a majority of population directly or indirectly depends on it (Ministry of Agriculture, 2013). Dairy farming is one of the important activities of the rural population of our country. Dairy farming in India has been an age old business. Dairy industry in India is considered as the most successful developmental programme after independence. India has the largest livestock as it contains 50 per cent of the buffaloes and 36 per cent of the cattle out of total population (Livestock census, 2019). India ranks first in Milk Production, Cattle and Buffalo Population in the world (Livestock Production Statistics of India - 2018 - Vet Extension). India owns the largest livestock population in the world, accounting for nearly 57.10 per cent of the world buffalo, 16.50 per cent of cattle, 16.20 per cent goat and 5.70 per cent sheep population. India happens to be the largest producer of milk in the world and milk production in the country is estimated to have increased to 125.34 million tons during 2018-19.The Indian dairy acquired substantial growth from 8th plan onwards, after the production increased, the Per capita availability of milk in country has increased from 307 grams per day in 2013-14 to 394 grams per day in 2018-19 (Department of animal husbandry, dairying & fisheries govt. of India).

Total livestock population in India is 535.78 million out of this total bovine population is 302.79 million. Out of total bovine population, buffalo population is 21.56 per cent and cattle population is 36.01per cent. Therefore, livestock production improvement is an important pathway for increasing the income of marginal and small farmers and landless laborers, given the uncertainties of crop production.

Animals are important for the economy from employment and income – security points of view too. Dairy farming is an all season business. National commission on Agriculture (1976) has been stated that Dairy as an important subsidiary industry to agriculture. Dairying is a potential source of creating employment, creating additional income to rural people particularly landless, marginal and small farmers, farm labourers.

Meaning of Entrepreneurship:

Entrepreneurship is neither a science nor an art, it is training. Information in business is the unfortunate obligation. It is anything but a ‘flash of genius’ nevertheless intentional errand that can be coordinated in to efficient work. It might likewise characterized as that business venture is a psychological inclination to face a challenge in face of vulnerabilities, instinct and limit of anticipating things which may end up being valid. For healthy, improvement of agribusiness, industry or any circle of an economy, there should be men or ladies who have drive, desire, foreknowledge and creative mind to get through customary hindrances and change in this manner into practices. People playing out this capacity are the 'entrepreneurs', and their ambitious capacity and ability is known as 'entrepreneurship’.

Attributes of entrepreneurs are not acquired however can be created through orderly persuasive preparing. High requirement for accomplishment, getting things done in a superior way, moderate or determined danger taking, evaluation of market, data looking for conduct, understanding inner and outer asset, stepping up, trust for progress, drive, persistence and pioneering administrative capabilities are a portion of these qualities. These can be learned and guzzled to turn into a rancher to dairy entrepreneur. Consequently changing over a little dairy farm into a productive undertaking is conceivable via preparing ranchers to become fruitful entrepreneur.

The study was mainly confined to dairy farmers who have undertaken dairying as one of the subsidiary enterprises, which is providing additional income,

apart from employment to the rural people, while playing a vital role in improving their socio-economic conditions and providing ample opportunities to improve their standard of living. The present study was an attempt in this direction, which could generate information and sufficient avenues to integrate the dairy farmers with mainstream of development. It could throw light on socio-personal and socio-economic characteristics of dairy farmers. So, the study may be considered as an innovative effort to explore the various dimensions of entrepreneurship among dairy farmers.

The outcomes will be helpful for each one of those concerned for developing strategies to expand animals ownership, benefit and encourage for better social effect of dairying on the concerned dairy ranchers. Animal husbandry improvement in India has expected a lot more extensive job in the general economy than so far conceived as a vital piece of growing and differentiating agribusiness. Additionally, expanding populace, urbanization and supported ascent in per capita income are fuelling fast development sought after for animal food items in India (Srichand, 1995). All-round improvement of dairy area requests solid infrastructural uphold for setting out new business open doors and business venture in the zones of creation, acquirement, transportation, preparing, esteem expansion lastly the showcasing of dairy and other domesticated animals items. The advantages of business advancement in domesticated animals and dairy area ought to in a perfect world be with the dairy ranchers; and, to do as such, the enabling cycle must be set up. In like manner human asset advancement in this area ought to be the focal point of the dairy augmentation framework. Without the information and ability, nobody can ready to embrace most recent innovations for dairy improvement. (Birthal *et. al.*, 2006)

Importance of entrepreneurship:

Business improvement is a methodology of creating human resources. It is worried about the development and improvement of individuals towards undeniable

degree of competency, inventiveness and satisfaction. This methodology causes individuals to fill regarding discretion, obligation and different capacities; and afterward attempts to establish an environment, in which all the demographic may add to the furthest reaches of their improved capacities. It is expected that extended abilities and openings for individuals will lead straightforwardly to progress in working viability. Consequently, business venture advancement is a methodology which doesn't keep itself in setting up endeavors however outperforms this breaking point in establishing favorable environment for ideal usage of restricted and dispersed assets and making individuals practical taking all things together different backgrounds. The rise of a business person in a general public relies on intently between connected financial, social, cultural, religious and mental factors. (Leung *et al.*, 2005).

Entrepreneurship is affected either by different financial and individual elements, separately or by a blend with the supporting arrangement of social climate. Exact investigations have worked out some significant qualities, which can give a working profile of business visionary. Rundown of these attributes include: Innovativeness, achievement motivation, decision-making ability, self confidence, information seeking behaviour, management-orientation (Kumar and Vasanthakumar 2003). Business isn't just natural, inherited, bound to a couple of class or sex, yet it very well may be created also. It is conceivable to recognize people in dairying area who have the business venture ability, persuade them and train through appropriately coordinated projects for undertaking hazard bearing exercises and for being progressively confident.

Entrepreneurship development in India has enormous potential in terms of diversity of rural occupations. Dairy farming is not an indispensable component of agriculture, but also the most suitable production system that can be the act as tool for improving the socioeconomic status of the rural population. Thus, entrepreneurial development is one of the ways to make rural people more competent in dairying as well as youth can be engaged in the agriculture by generating employment. In the

present era, it is being realized that entrepreneurship contributes to development of country in several ways, viz. assembling and harnessing the various inputs bearing the risk, innovating and limiting the technique of production to reduce the cost and increase its quality and quantity, expanding the horizons of market, and coordinating and managing the manufacturing unit at various levels. In fact, the rapid economic development of the country crucially depends upon the number of abilities of entrepreneurs.

"ENTREPRENEURIAL TRAITS OF DAIRY FARMERS IN PALGHAR DISTRICT OF KONKAN REGION" will be undertaken with following objectives.

Objectives:

1. To study the socio-economic characteristics of dairy farmers.

2. To study the entrepreneurial traits of dairy farmers.

3. To study the relationship between entrepreneurial traits and socio-economic characteristics of dairy farmers.

4. To study the constraints faced by farmers in management of dairy enterprise.

Review of Literature

2. REVIEW OF LITERATURE

The review of literature is one of the important aspects in the research process. It helps the researcher to keep his work going in the right and appropriate direction. Hence, an attempt has been made to review the researches and the same have been presented in the following sequence. Similarly, the hypotheses framed and conceptual model developed have also been delineated as below.

1. To study the socio-economic characteristics of dairy farmers.
2. To study the entrepreneurial traits of dairy farmers.
3. To study the relationship between entrepreneurial traits and socio-economic characteristics of dairy farmers.
4. To study the constraints faced by farmers in management of dairy enterprise.

1. Socio-economic characteristics of dairy farmers:-

1.1Age:

Suresh (2004) conducted study on entrepreneurial behaviour of milk producers and revealed that 64.58 per cent of the entrepreneurs were of middle age, whereas 17.92 per cent of them belonged to young age followed by old age (17.50 per cent).

Khin Mar Oo (2005) revealed that majority of women dairy farmers (59.17%) belonged to mid age group, whereas 22.50 per cent of them were younger, followed by old age (18.33%) category.

Muriithi *et al.,* (2014) indicated that majority of respondents (32.60%) were between 31-40 years ,whereas 36 per cent respondents were below 40 years, 59.90 per cent were below 50 years and 70.30 per cent were below 60 years.

Pal (2006) revealed that 59 per cent of the women respondents belonged to young age (20-35 years) followed by 34 per cent respondents belonged to middle age (30-50 years) and remaining (7.00%) were in old age group.

Islam *et al.,* (2018) stated that a large number of respondent goat rearing farmers were middle- aged (56.67%).

Dhara *et al*., (2019) observed that 16.60 per cent were above 60 yrs. age group

and up to 30 yrs. age group were 30.60 per cent least interested in goat farming.

Sorathiya *et al.,* (2020) revealed that only 25 per cent of the respondents were young (50 years) and were slightly higher in the south than north Gujarat.

1.2 Education:

Bordoloi *et al.,* (2005) found that only 13.11 per cent of dairy farmers were educated above 10^{th} standard and 42.33 per cent of them were educated up to 10^{th} standard, where as 44.57 per cent of dairy farmers were illiterate.

Khin Mar Oo (2005) observed that majority of the dairy women (60.83%) were illiterate, while 22.50 per cent of the them were educated up to primary level, followed by middle school (10.33%). Thus, 4.17 per cent of dairy women were educated up to high school level and only 1.67 per cent of them were studied up to college level.

Muriithi *et al.,* (2014) reported that most of dairy farmers (43.60 per cent) were up to secondary education level whereas 39.50 per cent were primary level, 14.50 per cent were college level and remaining 2.30 per cent had gone up to university level education.

Singh and Singh (2014) found that majority of the respondents were having high school and secondary level of education to the extent of 23.58 per cent and 22.85 per cent respectively, followed by middle school (19.29 %) and primary school (17.14%).

Tudu and Roy (2015) indicated that 42.40 per cent dairy farmers were illiterate, out of which 15.60 per cent were male and 26.80 per cent were female.

Dhara *et al.,* (2019) revealed that their educational status was not good i.e. most of the farmers were illiterate (44%) and primary (30.60%) and middle school (19.30%), where as only (6%) farmers were graduate.

1.3 Family type:

Dhara *et al*., (2019) revealed that majority of joint family (95.08%) was engaged in goat & sheep farming while only (4.20%) nuclear family was involved in sheep and goat rearing.

Singh *et al*., (2017) revealed that majority of the respondents (57.78%) belonged to nuclear type of family, 42.22 per cent of the respondents were from joint type of family and majority of the respondents (54.44%) of Lohardaga KVKs belonged to nuclear type of family and 45.56 per cent of the respondents were from joint type of family.

1.4 Family size:

Parmar and Sharma (2014) revealed that majority (80.00 %) of the farm women belonged to the large sized families i.e 4-7 members ,while 14.00 per cent had up to 4 members and 6.00 per cent had large family size with 7 members.

Byaruhanga *et al.,* (2015) elucidated that most households had 6-9 members (43%) or more than 9 members (44.7%) compared to households with 1-5 members (12.3%).

Singh *et al*., (2017) stated that majority of the respondents (42.22%) of Ranchi KVKs had upto 6 to 9 family members and fell in the category of medium size of family and 40 per cent respondents had small size of family and 17.78 per cent respondents had large size of family.

1.5 Occupation:

Khadda *et al.,* (2012) revealed that agriculture and animal husbandry was the main occupation of 68.33 per cent goat rearers followed by agriculture (19%), animal husbandry (17%) and service (10.83 %).

Tudu and Roy (2015) indicated that dairy farming was much popular amongs the landless, small and marginal farmers (49.20%) followed by the agricultural labourers (38.80 %), small business holders (8.40 %) and service men (3.60 %).

Singh *et al.,* (2019) stated that main occupation of majority (78.32%) of farmers was goat farming.

1.6 Land holding:

Patel (2005) revealed that slightly more than half of the respondents (52%) were found to have small size of land holding (1.1 to 2.0 ha. of land), followed by marginal (40%) size of land holding (up to 1.0 ha. of land). Only 8.00 per cent of the respondents fell in the category of medium size of land

holding (2.0 ha of land).

Thombre *et al.,* (2010) reported that majority of the goat farmers were small farmers and marginal farmers with 1-5 acres of land followed by landless farmers.

Muriithi *et.al.,* (2014) elucidated that majority of respondents had less (94.2 per cent) than 2 acres of land and 5.8 per cent of respondents had more than five acres of land.

Byaruhanga *et al*., (2015) reported that more households (63.2%) owned ≤5 acres of land than those who owned 6-10 acres (25.4%), and >10 acres (11.4%).

Sabapara (2016) elucidated that majority of the respondents were landless and agricultural laborers and had goat rearing as their subsidiary occupation as a source of income.

Islam *et al.,* (2018) stated that two third of the farmers were in the landless group having maximum 0.02 acre land and normally started their goat- rearing business by taking a loan from NGOs (48%) or invested their own money (49.33%).

Dhara *et al.,* (2019) elucidated that average size of land owned was 2.24 per cent. 71.00 per cent belonged to marginal (0.1-1 ha) land while 13.7 per cent belonged to small (1.1-2 ha), 3.5 per cent belonged had above 2 ha land.

Sorathiya *et al.,* (2020) indicated that the majority of dairy farms (80%) possessed land between 5 and 8 acres.

1.7 Annual income:

Shinde *et al.,* (1998) found that nearly two-third of dairy farmers (65.83 %) had low income i.e. up to Rs. 5,000, followed by high income i.e. Rs.10,000 to 15,000 (20%) and medium income group i.e. Rs.5001 to 10,000 (14.17%).

Vijaykumar *et al.,* (2003) reported that 45.84 per cent of entrepreneurs were under medium income group, followed by 27.50 per cent and 26.66 per cent of them who had low and medium income group, respectively.

Suresh (2004) reported that majority of milk producers were in medium income group (80.33%), followed by high and low income groups that is 15.50 per cent and 4.17 per cent, respectively.

Khin Mar Oo (2005) found that 45.50 per cent of dairy women had medium annual income i.e. Rs. 30,001 to 50,000, followed by low i.e. up to Rs. 30,000 (29.16%) and high annual income i.e. above Rs. 50,000 (25.34%).

Sathyanarayan *et al.,* (2010) observed that majority (96.92%) of the respondents belonged to low family income and an equal percentage of respondents belonged to medium (1.54%) and high (1.54%) family income categories.

Rathod *et al.,* (2011) revealed that majority of dairy farmers (61 %) had low income followed by medium (36 %) and high income groups (3 %).

Mohan *et al.,* (2016) reported that majority of goat farmers (34 %) had an annual income between Rs 10001-20000 followed by 25 per cent goat farmers in the range of Rs 20001-30000, 19 per cent in the range of Rs. 30001-40000, 10 per cent in the range of Rs 40001-50000, 6 per cent had .above Rs 50000. About of goat farmers were having low annual income (less than10000).

Tudu and Roy (2015) observed that annual income of most of the dairy farmers (56.4%) was less than Rs. 15000, and 32.4 per cent farmers had medium annual income (Rs. 15000-25000), and only 11.2 per cent farmers with more than Rs. 25000 annual income.

Mahesh *et al.,* (2020) elucidated that majority of dairy farmers (53.00%) had low dairy annual income (<25000 Rs) 26 per cent of them had high income (> 60000 Rs).

1.8 Dairy experience:

Shaik *et al.,* (2017) stated the study indicated that 62.22 per cent of the shepherds had medium experience in sheep farming and they might be continuing it being their traditional caste occupation and also they had experienced it as a remunerative livelihood.

Singh *et al.,* (2017) stated that nearly 2/3rd (65.68%) of farmers were actively involved in the occupation of dairy farming for more than 20 years, while, 15.68 per

cent got involved during the last five years. The dairy farming experience of remaining 18.63 per cent respondents varied from 06 to 20 years.

1.9 Herd size:

Temkar (2000) conducted study in Anand district of Gujarat State, emphasized that 43.33 per cent of respondents had medium level herd size, followed by 40.00 per cent with low and 16.67 per cent with large herd size. Further he reported that majority of respondents (83.30%) had medium to small herd size.

Gour (2002) revealed that two fifth (40.76 per cent) of the dairy farmers had low level herd size, followed by 32.50 with high and 26.74 with medium herd size.

Wadear *et al.*, (2003) revealed that average herd size of milch animals possessed by small dairy farmers was 3.58, medium dairy farmers (3.83) and large dairy farmers (4.20).

Khin Mar Oo (2005) found that 7.50 per cent of dairy women possessed 1 cross bred cow, followed by 2 crossbred cows (4.16%) and 3 and above cross bred cows (0.83%), whereas 1 local cow (19.16%) and 2 and above (9.16%). While up to 1 buffaloes (32.50%), 2 buffaloes (34.16%) and 3 and above (5.83 %), respectively.

Shinde (2011) reported that more than half of the selected household had 1-3 milk animals and less than 10 per cent kept more than 15 milch animals.

Meshram *et al.,* (2020) stated that majority of the respondents (84.80%) had medium animal possession followed by, 8.00 per cent with low animal possession and 7.20 per cent with high animal possession.

1.10 Milk production:

Radhakrishnan *et al.,* (2018), it is less than 5 litres for Lanja and Ratnagiri regions comprising mainly non descript cattle, and for Dapoli, it is approximately 10 litres per animal with Holstein Friesian, non descript and Jersey breeds.

Girish *et al.,* (2020) stated that 53.88 per cent of the farmers had medium category of milk production (5.47 to 12.26 liters/day) followed by 28.35 per cent as low milk yielders with less than 7 liters/day.

Kumar *et al.,*(2020) stated that majority (80.83%) of dairy farmers had medium level of milk production i.e. 32 to 93 litre milk/day, while 10.00 and 9.17 per cent of the dairy farmers had high and low level of milk production, respectively.

1.11 Milk consumption

Nishi *et al.* (2011) observed 62.50 per cent consume medium quantity of milk i.e. 1.48 to 3.65 litres per day followed by 21.25 and 16.25 were in high and low level of milk consumption.

Sawant (2018) in Haryana indicated that more than half i.e. 53.89 per cent of farmers used 2 to 3 liters of milk per day for their home consumption whereas 28.89 per cent and 17.22 per cent of farmers used 2 liters and 3 liters milk per day.

1.12 Milk sale:

Meena (2000) concluded that majority of dairy farmers had large level of milk sale.

Pal (2006) found that majority (72.22%) of respondents had medium level of medium level of milk sale.

Nishi *et al.* (2011) stated that more than half (51.25%) sold more than 10 litres per day to the societies followed by 36.25 per cent under medium level of milk sale (5 to 10 litres per day) and 12.50 per cent had low level of milk sale (less than 5 litres per day)

1.13 Social participation:

Singh and Singh (2014) studied critical analysis of mobile based agro-advisory services and observed that 61.70 per cent member farmers were member of co-operative society and 28.30 percent member farmers also had gram panchayat membership.

Singh and Rampal (2016) revealed that 13.72 per cent farmers had the membership of organizations related to dairy farming.

Kumar *et al.*,(2020) elucidated that majority (60%) of respondents had no membership in any social organization while 31.67 and 8.33 per cent farmers were members in informal and formal organization, respectively.

1.14 Extension agency contact:

Kabir and Roy (2015) conducted a study in Bangladesh and found that 88.90 per cent of the respondents participated in training program on ICTs and they had medium contact (58.90) with different information sources followed by 40.00 per cent had low contact and only 1.10 per cent had high contact with different sources of extension.

Belakeri *et al.,* (2017) observed that good number of respondents from block of Mysuru (43.34%), Belagavi (56.66%) and Kalburgi (56.66%) had medium level of extension contact whereas in Bengaluru division, majority (46.66%) had low extension contact. In case of overall study area, majority (46.66%) had medium level of extension contact.

Kumar *et al.,* (2020) stated that majority of the respondents (64.17%) had medium level of extension contacts, followed by high (27.5%) and low (8.33%) level of extension contacts.

1.15 Mass media exposure:

Mavi *et al*., (2006) in their study concluded that 61 per cent of the dairy farmers had medium level of mass media exposure, followed by low level (28.57 per cent) and high level (10 %) of mass media exposure.

Tochhawng *et al.*, (2013) stated that more than one-third of the farmers (44.89 %) had low level of mass media exposure, while the remaining 31.11per cent and 20.00 per cent of the respondents had high and medium level of mass media exposure respectively.

Shubeena *et al*., (2018) reported that the livestock farmers considered radio as the most important and effective source of communication followed by kisan melas, cattle show, television, film shows, non-projected visual aids and extension literature.

2. Entrepreneurial traits of dairy farmers:-

2.1 Innovativeness:

Bhagyalaxmi *et al.*, (2003) observed that majority (69.44%) of the entrepreneurs had medium level of innovativeness, followed by 15.56 and 15.00 per cent of respondents had high and low level of innovativeness, respectively.

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 (2005) reported that majority (63.30%) of the respondents had medium innovativeness and an almost equal per cent (18.30%) of the respondents were categorized as having low and high innovativeness.

Kumar (2008) indicated that 39.17 per cent respondents were having medium level of innovativeness, followed by 32.91 and 27.92 per cent of them who were having high and low level of innovativeness respectively.

Vidya *et al.*, (2009) reported that majority (63.33%) exhibited medium innovation proneness while 21.67 and 15.00 per cent had high and low innovation 777proneness respectively.

Lawrence and Ganguli (2012) noticed that nearly half of the respondents had medium level of innovativeness, whereas more than one-third had high level of

innovativeness and the rest had low level of innovativeness. Low level of literacy, lack of awareness and low level of social participation might be the reasons for low innovativeness among the respondents.

Patel *et al.,* (2014) revealed that majority (61.25 %) of dairy farmers had medium level of innovativeness; whereas 23.75 per cent of them had high and 15 per cent had low level of innovativeness.

Mudoi *et al.,* (2020) reveals that majority (71.88 %) of the respondents had medium level of innovation followed by 16.25 per cent of high level of innovativeness.

Seth *et al.,* (2020) stated that more than sixty percent (64.16%) of the respondents were in medium degree of innovativeness.

2.2 Achievement motivation:

Vijaykumar (2001) reported that 44.16 per cent of respondents had medium achievement-motivation, followed by 28.34 and 27.50 per cent of entrepreneurs having low and high achievement-motivation, respectively.

Suresh (2004) indicated that 61.25 per cent of the dairy entrepreneurs had medium achievement motivation, followed by 20.42 and 18.33 per cent of them having low and high level of achievement-motivation.

Nagesha (2005) elucidated that majority 71.70 per cent of the respondents had medium achievement-motivation, followed by 15.00 and 13.30 per cent of respondents having low and high achievement-motivation, respectively.

Pal (2006) found that majority of respondents (60 per cent) were having medium level of achievement motivation.

Gautam *et al.,* (2008) showed that in economic motives high percentage milk producer in medium categories groups than low categories , low ,medium and high groups was 32.1, 37.0, and 30.8 per cent respectively .But scientific motives were

70.8 per cent in medium groups 12.1 and 17.1 per cent in low and high groups, respectively .

Lawrence and Ganguli (2012) stated that more than half of the respondents had medium level of achievement motivation followed by 20 and 28 per cent had high level and low level of achievement motivation.

Seemaprakalpa and Arora (2012) reported that among the total sample of 60 women entrepreneurs 51.7 per cent posses moderate achievement motivation fallowed by 31.7 per cent had low and 16.6 per cent posses high achievement motivation.

Patel *et al.,* (2014) revealed that near about half (48.75%) of the dairy farmers had medium level of achievement motivation, whereas more than one fourth of (27.5 %) dairy farmers had low level of achievement motivation.

Seth *et al.,* (2020) stated that 43.33 per cent of the respondents had medium level of achievement motivation.

2.3 Risk-orientation:

Vijaykumar (2001) indicated that 38.34, 35.00 and 26.66 per cent of entrepreneurs had low, medium and high risk-taking ability, respectively.

Subramanyam (2002) revealed that 75.00 per cent of the trained farmers had medium risk preference, followed by those having high (13.34%) and low (11.66%) levels of risk preference.

Bhagyalaxmi *et al., (2003)* revealed that majority of the entrepreneurs (75.56 %) had medium risk-orientation, followed by those having low (15.56%) and high (13.33%) risk-orientation categories.

Suresh (2004) indicated that majority of dairy entrepreneurs had medium (62.02 %) level of risk taking ability, followed by those having low (24.58%) and high (13.34%) level respectively.

Kumar (2008) found that 39.17 per cent dairy farmers were moderate risk-takers, where as 34.16 per cent were high risk takers and 26.67 per cent were low risk-takers.

Lawrence and Ganguli (2012) reported that majority of the respondents (58 per cent) had medium level of risk orientation and remaining 28 and 14 per cent had low level and high level of risk orientation, respectively.

Seth *et al.,* (2020) Majority of the respondents (52.50%) falls in medium risk orientation.

2.4 Manageability:

Kumar *et al.,* (2012) observed that low level of this category was possessed by 42.08 per cent of the respondents. Also 31.67 per cent in medium level and more than (26.25%) were in poor category.

Raut and Sankhala (2014) stated that majority of the respondents (70.83 percent) were found to have medium level of manageability, and rest of the respondents were nearly equally distributed between low and high level of this trait.

2.5 Feedback usage:

Kumar *et al.,* (2012**)** stated that 37.50 percent of the respondents were under high level of feedback usage; rest of them 37.08 and 25.42 percent had medium and low level of trait, respectively.

Raut and Sankhala (2014) observed that most of the medium and large farmers were found in medium to high level of feedback usage. This shows that those individual who are fairly good at receiving and use feedback to take appropriate corrective measures are more likely to improve upon their performance, productivity, and better management of available resources and making their enterprise a profitable venture.

Godara and rajput (2018) medium level of adoption was found in terms of feeding, breeding, and management and health care practices.

3. Relationship between entrepreneurial traits and socio-economic characteristics of dairy farmers:-

3.1 Age:-

Mundhwa and Padheria (1998) found that there was no significant relationship between age and entrepreneurial behaviour of dairy women.

Patil *et al.,* (1999) observed that the relationship between age and entrepreneurial behaviour of farmers was negatively significant.

Nomeshkumar and Narayanswamy (2000) found that there was a significant difference in the entrepreneurial behaviour of farmers practicing sustainable agriculture under different age groups**.**

Umarani (2002) revealed that age of dairy women did not have any significant relationship with their technological need in dairy enterprise.

Murali and Anita Jhamtani (2003) reported negatively significant relationship between age and entrepreneurial characteristics.

Anitha (2004) stated that there was positive significant relationship between age and entrepreneurial behaviour of respondents.

Jaiswal and Patel (2012) elucidated that relationship between age and entrepreneurial behaviour was found to be negative and significant.

Singh *et al.,* (2019) elucidated that positive and significant relationship between age and entrepreneurial behaviour of respondent.

Seth *et al.,* (2020) elucidated that age had a negative but non-significant relation with entrepreneurial behavior of farmers.

Singh *et al.,* (2020) indicated that age, education, main occupation, family size, family type and land holding are significantly correlated.

3.2 Education:

Mundhwa and Padheria (1998) indicated that education of dairy women had positive and highly significant relationship with their entrepreneurial behaviour.

Murali and Jhamtani (2003) reported that entrepreneurial characteristics were positively and significantly related with education of respondents.

Subramanyeswari and Veeraraghavareddy (2003) reported that education was found to have significant relationship with entrepreneurial behaviour of rural dairy women.

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

Khode *et al.,* (2009) observed that education was significantly correlated with adoption of improved dairy practices.

Singh (2019) elucidated that positive and significant relationship between education and entrepreneurial behavior of respondent.

Chauhan *et al.,* (2004) revealed that majority of dairy farmers were educated up to high school levels (30 %) followed by primary school levels (27.5 %), middle school levels (19 %), college lewis (13.5 %), whereas 10 per cent dairy farmers were illiterate.

3.3 Family type

Sathyanarayanan *et al.,* (2010) reported that more than half (63.08 %) of the livestock farmers lived in nuclear type family followed by joint family (36.92 %).

Khadda *et al.,* (2012) studied about the family types of goat rearers and

revealed that 62.50 per cent belonged to joint family whereas 37.50 per cent were from nuclear family.

3.4 Family size

Chaudhary *et al.,* (2017) observed that family size of dairy farmers was found to be a negatively and non-significantly correlated to entrepreneurial behavior.

Singh *et al.,* (2019) stated that family size did not show any significant relationship with entrepreneurial behavior of dairy farmer.

3.5 Occupation

Singh *et al.,* (2019) stated that had positive and significant relationship with dairy farmer.

Mooventhan (2015) stated that occupation had no relation with knowledge gain.

3.6 Land holding:

Patil *et al.,* (1999) observed that size of the land holding was non-significantly related with entrepreneurial behaviour of the little gourd growers.

Nomeshkumar and Narayanaswamy (2000) indicated that there were significant differences in the entrepreneurial behaviour of farmers having different sizes of land holding.

Subramanyeswari and Veeraraghavareddy (2003) reported that land holding was found to have significant relationship with entrepreneurial behaviour of dairy women.

Khode *et al.,* (2009) stated that land holding size was significantly correlated with adoption of improved dairy management practices under VDPP.

Singh *et al.,* (2019) elucidated that land holding and entrepreneurial behaviour does not show any significant relationship.

3.7 Annual income

Pandya (1996) found that there was a positive and highly significant association between entrepreneurial behaviour and their annual income of entrepreneurs.

Mundhwa and Padheria (1998) revealed that the income from dairy farming was positively and significantly associated with entrepreneurial behaviour of dairy women.

Patil *et al.,* (1999) reported that annual income of farmers was not significant with their entrepreneurial behaviour.

Subramanyeswari and Veeraraghavareddy (2003) reported that there was a significant relationship between entrepreneurial behaviour of dairywomen and their 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 was seen in case of medium farmers.

Jaiswal and Patel (2012) reported that there was significant relationship between family income and entrepreneurial behaviour of rural women.

Singh *et al.,* (2019) elucidated that positive and significant relationship between annual income and entrepreneurial behaviour of respondent.

3.8 Dairy experience:

Gamit *et al.,* (2020) stated that majority of goat keepers had more than 2 years experience (88.33 %), followed (11.67 %) which were new in goat keeping.

Singh *et al.,* (2019) elucidated that positive and significant relationship between experience and entrepreneurial behaviour of dairy farmers.

3.9 Herd size:

Mundhwa and Padheria (1998) identified positive and highly significant relationship between herd size and entrepreneurial behaviour of dairy women.

Manivannanan and Tripathi (2007) found that herd size had positive and highly significant ($p<0.01$) relationship with management efficiency among overall sample of respondent.

Gautam *et al.*, (2007) revealed that herd size was highly significantly correlated with decision making at the rate 0.01 per cent level of probability.

Letha Devi *et al*., (2014) identified herd size had positive and highly significant relationship with management efficiency.

Singh *et al*.,(2019) elucidated that positive and significant relationship between livestock possession and entrepreneurial behaviour of respondent.

3.10 Milk production

Nishi *et al.*, (2011) stated that milk production had positive influence on satisfaction level of respondent.

Kumar and Kumar (2018) elucidated that cows with 4.0 to 6.0 liter milk per day and (27.14 %) had animals up to 4 liter milk per day.

3.11 Milk consumption

Nishi *et al.*, (2011) stated that milk consumption had negative and non-significant relation with satisfaction level of respondent.

Sawant (2018) in Haryana indicated that more than half i.e. 53.89 per cent of farmers used 2 to 3 liters of milk per day for their home consumption whereas 28.89 per cent and 17.22 per cent of farmers used 2 liters and 3 liters milk per day.

3.12 Milk sale

Nishi *et al.,* (2011) stated that milk sale had negative and non-significant relation with satisfaction level of respondent.

Khode *et al.,* (2009) reported that 60.47 per cent respondent was having medium level of milk sale.

3.13 Social participation:

Lahoti and Chole (2010) reported that majority of goat keepers had low level of social participation.

Sabapara (2014) reported that majority that is 92.34 percent respondents had membership in one organization while, two percent respondent had membership in more than one organization, 1.33 percent respondent had membership with holding position in organization and 4.33 percent respondents had no participation in any organization.

Nipane *et al.,* (2016) reported that majority of the respondents (91.14 per cent) had no social participation. This might be due to lack of awareness and lack of interest about social participation. Only 6 per cent of the respondents were involved in the social institutions like co- operative society and whereas, few of them were the office bearer or the members of Gram panchayat or dairy co-operative society.

Gopi *et al.,* (2017) noted that social participation had positive and significant relationship at 1% level with information input pattern.

Pandey *et al.,* (2020) stated that maximum no (45%) of the respondents had low social participation. The percentages of participation regarding to medium and high level were observed 41.67 and 13.33 per cent respectively.

3.14 Extension agency contact:

Kavithaa *et al.,* (2014) stated that 44.29% of dairy farmers indicated extension agent contact as their source of income which was positively correlated with information seeking behavior.

Gopi *et al.,* (2017) noted that extension participation had positive and significant relationship at 1% level with information input pattern.

Singh *et al*., (2019) elucidated that extension participation and entrepreneurial behaviour did not show significant relationship.

3.15 Mass media exposure:

Tochhawng *et al*., (2013) stated that more than one-third of the farmers (44.89 per cent) had low level of mass media exposure, while the remaining 31.11per cent and 20.00 per cent of the respondents had high and medium level of mass media exposure respectively.

Kavithaa *et al.,* (2014) stated that 14.29% of dairy farmers indicated mass media as their source of income which was positively correlated with information seeking behavior.

Sabapara (2014) reported that majority (82.33%) of the respondents had medium level of mass media exposure followed by 11.33 per cent and 6.33 per cent of the respondents with low and high level of mass media exposure, respectively. Further it was observed that majority (93.66%) of the dairy animal owners possessed low to medium exposure to mass media.

4. The constraints faced by farmers in management of dairy enterprise:-

Chaudhary and Intodia (2000) lack of skills in full-hand milking, knowledge of weaning newborn calves, poor irrigation facilities for growing green fodder, high cost of concentrate, transportation of feed and fodder and non-availability of improved fodder seeds was realized as the most serious constraints.

Kumar *et al.,* (2002) reported that majority of dairy farmers faced moderate constraints under different categories of constraints, such as management (80.47 per cent), breeding (66.41%), health-care (55.47 %) and feeding constraints (53.12%).

Kumar and Vasanthakumar (2003) observed that the major constraints faced by small and marginal farmers in dairy farming were low price of milk (96.67% and 100.00%), followed by high cost of feeds and fodder (93.33 per cent and 100.00%), non-availability of land for fodder cultivation (86.67% and 96.67%), less fat contenting crossbred cow milk (70.00% and 96.67%), and non-availability of loans and lengthy procedure to get the loan (66.67and 83.33%), respectively.

Manoharan *et al., (*2003) observed that the major constraints faced by farmers in dairy farming were higher feed cost, low price for milk, high investment, infertility problem, low productivity, higher rate of calf mortality, inadequate availability of grazing lands, health-care related issues, and costly veterinary treatment.

Reddy *et al.,* (2003) reported that non-availability of good dairy animals, non-remunerative price for milk, high cost of concentrates, non-availability of green fodder, high cost of dairy animals, irregular payment for milk by procuring agencies, low water availability and lack of irrigation facilities, and non-availability of good breeding bulls were the major constraints in dairy farming.

Singh *et al.,* (2004) reported that the major constraints in rural livestock rearing were shortage of feeds and fodder, poor animal productivity, poor breeding facilities, poor veterinary services, poor livestock extension services and poor credit and marketing facilities.

Patil *et al.,* (2009) revealed that majority (72.44 %) of the respondents stated their constraint as low milk production from the local breeds, 45.33 per cent as shortage of green fodder and 41.33 per cent as lack of clean water while 25.33 per cent stated lack of preservation facility as their constraint. Referring to the financial constraints, 78.22 per cent respondents stated their constraint as delay in milk payment, 63.11 per cent as inadequate money and lack of loan facility whereas high cost of concentrates as the constraint by 56.44 per cent of the respondents. As regards technical constraints, majority of the respondents (68.00 per cent) have stated their

constraint as inadequate knowledge of diseases, their prevention and control while 56.89 per cent have referred their constraint as non-availability of veterinary services.

Rathod *et al.,* (2011) revealed that majority (82 %) of farmers complained about low price of milk, where as 60 per cent were unable to maintain farm and dairy records and 61 per cent farmers pointed high cost of medicine and veterinary services.

Jaiswal and Patel (2012) revealed that dual responsibility was ranked first among rural women entrepreneurs (96.66%). Lack of resources was ranked second. Poor family support was next in order of importance. Lack of awareness (78.33%) was ranked fourth followed by late payment by clients (75 per cent), mobility constraints (70%), marketing constraints (65%), non payment by clients (62%), and non availability of funds from institutional sources (53.33%). Finally, the non availability of guarantor (41.66%) was ranked last.

Vani (2013) observed that majority of the women entrepreneurs (80 per cent) expressed bad marketing facilities as major problem followed by lack of consultancy and counselling services (67.50%) and competition with other micro enterprises for limited local markets (66.66%) and inadequate training skills (45.83%) Besides these, low knowledge regarding the disease control comes in the fourth place with 36.66 per cent ages. 25 per cent of the respondents expressed the constraints of high cost of pre-mixed cattle feed and 19.16 per cent poor conception rate in buffaloes. Also noted that lack of awareness of different funding schemes and procedures of financial institutes (5.83%) and high rate of interest (54.16%). The remaining 41.66 per cent expressed their problem as lack of surety for getting loans.

Rathore *et al.,*(2019) stated that high cost of concentrate and lack of grazing land has been found major constraints faced by 69.17 per cent and 68.33 per cent of farmers and poor irrigation facility, high cost of mineral mixture consider as moderate constraints.

Chaurasiya *et al*., (2016) elucidated that the major economic constraint expressed by dairy farmers was high cost of cross breed cow/buffalo (60.00%) followed by difficult loan procedure (51.25%), high cost of veterinary medicines (41.25%), inadequate finance by bank for purchasing milch animals (36.25%), high cost of concentrate (25.00%) and high investment (23.75%).

Sharma *et al.,* (2018) The most important constraints were reported unawareness of improved dairy practices, incidence of reproduction disorders in the milch animals, lack of market access for input, inadequate knowledge about balanced feeding, worm infestation, lack of transport facility and road, attacked by wild animal, use and role of mineral mixture, ineffectiveness of indigenous strategies.

Maske *et al*., (2020) elucidated that most of the dairy respondents (51.5%) farmers have reported unavailability of veterinary hospitals in nearby is the most relevant technical constraint. Unavailability of A. I. services (22%) was ranked 2nd technical constraint. Similarly, unavailability of veterinarians in emergency (12.5%), poor knowledge of farmers regarding signs and symptoms of reproductive disorders (5.5%), lack of farmers' knowledge regarding identification of heat signs in cattle or buffaloes (2%).

Adhikari (2020) elucidated that three major constraints were unavailability of green fodder round the year (100%), low productivity of animal (70%), non remunerative prices of milk (55%). Other constraints reported were high cost of concentrate mixture (50%), unavailability of resource person especially veterinary doctor in nearby area (50%), lack information about government schemes (45%), unavailability of concentrate mixture (36.67%), improper disposal animal waste (35.83%), occurrence of diseases among animal (34.17%), unavailability of drinking water (30%) and poor conception rate in artificial Insemination (15%).

Materials & Methods

3. MATERIALS AND METHODS

This chapter deals with materials and methods followed in conducting the present study have given under the following headings.

3.1 Locale of the study

3.2 Sampling plan for the study

3.3 Variables and their measurement

3.4 Preparation of interview schedule

3.5 Procedure followed in data collection

3.6 Statistical tools used in the study

3.1 Locale of the study

The present study was conducted in the selected Palghar district in Konkan region of Maharashtra.

3.2 Sampling plan for the study

3.2.1. Selection of District:

There are six districts in Konkan region namely Mumbai, Thane, Palghar, Raigad, Ratnagiri and Sindhudurg. Among these Palghar district was selected for this study.

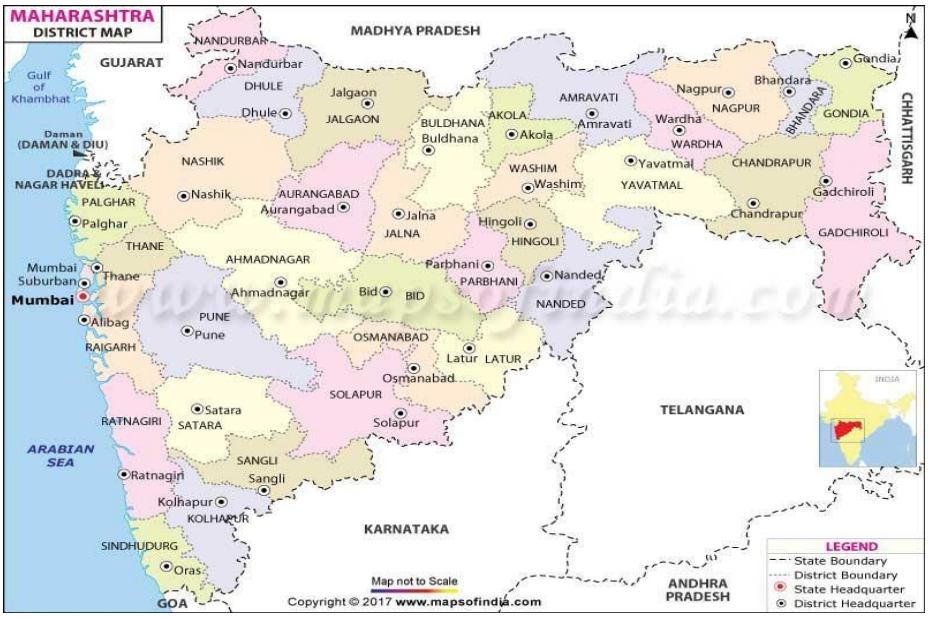


Fig- 3.1 Map of Maharashtra

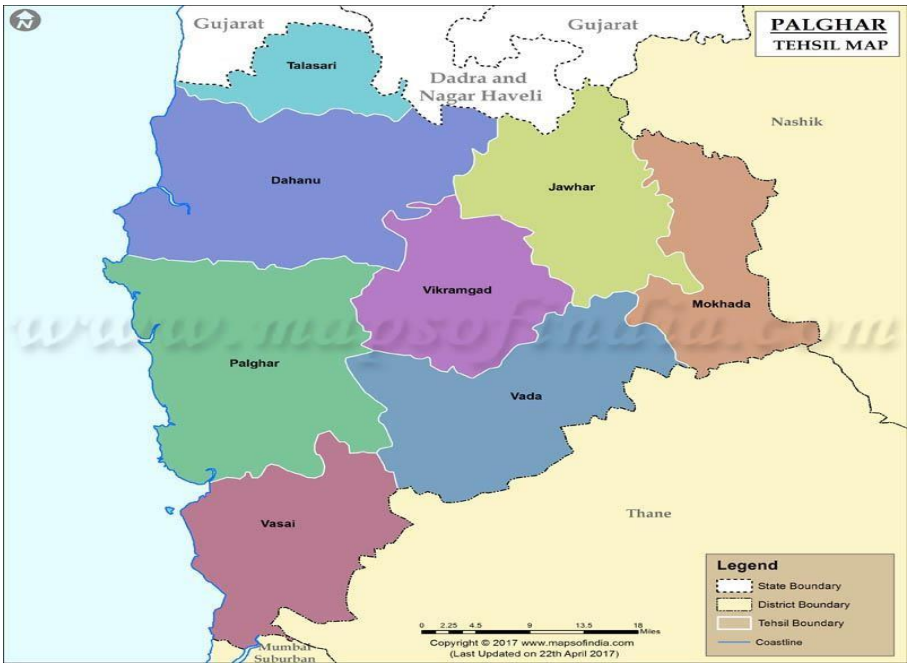


Fig no. 3.2. Map of Palghar District

3.2.2. Selection of Blocks:

There are 8 blocks in Palghar district, namely Talasari, Dahanu, Palghar, Vasai, Jawahar, Vikramgad, Wada, and Mokhada From these blocks namely wada, Jawahar, Vikramgad, Talasari and Dahanu were selected randomly. Thus the present study was confined to five blocks.

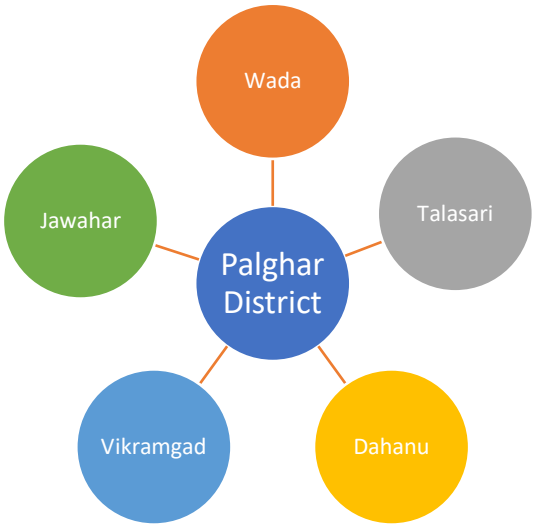


Fig- 3.3 Sampling plan

3.2.3. Selection of Village:

From each block five villages were selected randomly. Block wise villages are presented in Table 3.1

Table 3.1: District,Block and Village wise distribution of respondents

District	Block	Village
Palghar	**Wada**	Kudus
		Mandva
		Manivali
		Pali
		Sonale
	Jawahar	Kirmira
		Nyahale
		Pimpalshet
		Kaulale
		Winval
	Vikramgad	Talwada
		Vikramgad
		Dadade
		Kurze
		Malwada
	Dahanu	Gholvad
		Saivan
		Vangao
		Bapugao
		Dapchari

	Talasari	Vevji
		Girgaon
		Udhwa
		Uplat
		Talasari

From each selected village, 5 dairy entrepreneurs were selected randomly. Thus a total 125 dairy entrepreneurs were covered under the present study.

3.2.4. Selection of Respondents:

Dairy entrepreneur was operationalized as,

1. He/she should have more than 5 milch animals.
2. He/she should have at least an experience of 3 years in dairy farming.

3.3 Variables and their measurement

Considering the objectives in view, the dependent and independent variables have been selected for the present study after extensive review of literature. The empirical measures have given in below. Independent variables to be related with the dependent variable were identified by review of relevant literatures and discussions with social scientists and veterinary experts. Based on this, dependent variables were identified under five heads for the study. The variables selected and the tools of measurement used are presented in Table 3.2.
The dependent variable i.e. entrepreneurial traits of dairy farmers were measured in terms of five dimensions namely, innovativeness, achievement motivation, risk-orientation, manageability and feedback usage.

Table 3.2 Independent variables and their measurement

Sr. No.	Variables	Measurements
1.	Age	Direct questioning
2.	Education	Direct questioning

3.	Family type	Direct questioning
4.	Family size	Direct questioning
5.	Occupation	Schedule was developed
6.	Land holding (hectare)	Schedule was developed
7.	Annual income	Schedule was developed
8.	Farming experience	Schedule was developed
9.	Herd size	Schedule was developed
10.	Milk production	Schedule was developed
11.	Milk consumption	Schedule was developed
12.	Milk sale	Schedule was developed
13.	Social participation	Schedule was developed
14.	Extension agency contact	Schedule was developed
15.	Mass-media exposure	Schedule was developed

Table 3.3 Dependent variable and their measurement

Sr. No.	**Dependent Variable**	**Measurement**
	Entrepreneurial traits	
1	Innovativeness	To measure entrepreneurial traits statements of Raut (2009) were used with slight modifications.
2	Achievement Motivation	
3	Risk Orientation	
4	Manageability	
5	Feedback usage	

3.3.1.1 Operationalization of Independent variables

1. Age:

It refers to the chronological age of the respondents at the time of investigation. The respondents were classified in the following three categories

Sr. No.	Category	Years
1	Young	Upto 35 years
2	Middle	36-51 years
3	Old	Above 51 years

2. Education:

Education was conceptualized for the present study as the number of years the respondent attended teaching institutions from elementary school to college level. Schedule was developed to measure the education level of the respondents. Respondents were put into four categories as follows.

Sr. No.	Category	Level
1	Middle	Up to 4 th class
2	Secondary	Up to 10 th class
3	Higher Secondary	Up to 12 th class
4	Up to Graduate & above	Above 12 th class

3. Family type:

The present survey categorized families of the dairy farmers into two as below on the basis of mean and standard deviation.

Family	Score
Joint	1
Nuclear	2

4. Family size: The size of family refers to the numbers of individuals of both the sexes including their children living together in a household. The farm families were categorized into three as below on the basis of mean and standard deviation.

Household	Score
Small	Up to 4
Medium	5
Large	6 & above

5. Occupation: Occupation was the means of livelihood of a person or a family. Operationally, it was defined in terms of the farmer's source of earning viz., Dairying, Agriculture, Services, Business, etc. For this, schedule was developed and respondents were asked to indicate their source of livelihood. Frequency distribution was used to classify the respondents.

Sr. No.	Category	Income
1	Animal Husbandry	
2	Agriculture	
3	Business	
4	Other (job)	

6. Land Holding:

Category	Land Holding in acres
Landless	0 Acres
Marginal	Upto 2.5 Acres
Small	2.5 to 5 Acres
Medium	5 to 10 Acres
Large	More than 10 Acres

This was operationally defined as the details of land under cultivation owned by the respondents. Direct questioning method was followed to work out total land holding of the respondents. It was measured with help of a structured schedule and respondents were categorized as small, medium, and large size on the basis of mean and standard deviation.

7. Annual income:

It was operationalised as total income earned by the respondent from dairy and others sources. It was measured by direct questioning and respondents were categorized into small, medium and large group on the basis of mean and standard deviation.

Annual Income	Annual income (in Rs.)
Low	Less than 1024764
Medium	1024765 to 1855232
High	More than 1855233

8. Dairy experience

It referred to the actual complete years of experience in dairy farming by the respondents one score of each year of experience is given to quantify the dairy farming experience.

Experience in dairy farming	Range
Low	Up to 5 years
Medium	5 to 10 years
High	Above 10 years

9. Herd size:

This refers to the number of milch animals maintained by a dairy farmer. One score was assigned for each dairy animal possessed by the dairy farmer and this has been categorized as follows.

Herd size	Number of dairy animals
Small	Up to 8
Medium	9 to14
Large	Above 14

10. Milk production (liters/day/household)

It was defined as total quantity of milk produced in a household by all the milch animals, one day prior to investigation. It was determined by developing a schedule for the same. The respondents were classified into low, medium and high milk production on the basis of mean and standard deviation method.

Milk production (litres/day)	Score
Low	Upto 81
Medium	81 to 150
High	Above 150

11. Milk consumption (liters/day/household)

It was operationalized as the total quantity of milk consumed (in liters) by the family members, one day prior to investigation. It was determined by developing a schedule for the same. The respondents were classified into low,

medium and high on the basis of mean and standard deviation method.

Milk consumption(liters/Day)	Score
Low	Up to 1.5
Medium	1.5 to 3
High	Above 3

12. Milk sale (litres/day/household)

It refers to the total quantity of milk sold (in litres) by the household, one day prior to investigation. It was determined by developing a schedule for the same. The respondents were classified into low, medium and high on the basis of mean and standard deviation method.

Milk sale (litres/day)	Score
Low	Up to 80
Medium	80 to 150
High	Above 150

13. Social participation:

It is the involvement of respondent in organizations like gram panchayat, panchyayat samiti, zilla parishad and dairy Co-operative society etc. it was measured by using structured schedule and were assigned the response involvement of respondent in organization the obtained score of respondents were calculated and categorized by using mean and standard deviation.

Sr. No.	Organization	Member
1	Gram Panchayat	
2	Panchayat Samiti	
3	Zilla Parishad	
4	Farmer club	
5	Educational organization	
6	Dairy Co-operative society	
7	SHG'S	

14. Extension agency contact:

It is the degree of utilization of different extension agencies such as Village development officer, Livestock development officer, KVK scientist, NGO, LSS and Block development officer etc. by the respondents it was measured by using structured schedule and score of 2, 1 and 0 were assigned to the response of Always, Sometime and Never. The obtained score of the respondents were calculated and categorized by using mean and standard deviation.

Sr. No	Extension agencies	Degree of Contact		
		Always(2)	Sometime (1)	Never(0)
1	Village development officer			
2	Livestock Development Officer			
3	KVK Scientist			
4	NGO			
5	LSS			
6	BDO			

15. Mass media exposure:

It is the degree of utilization of different mass media such as Radio, TV. And Social media such as whats app, Facebook, you tube and Instagram. And printed media like news paper and leaflet, folder etc. by the respondents. It was measured by using a structured schedule and a score of 2, 1 and 0 were assigned to the response of regularly, temporary and not use respectively. The obtained scores of the respondents were calculated and categorized by using mean and standard deviation.

Sr. No	Source	Regularly use	Temporary use	Not use
A	**Electronic media**			
1	Radio			
2	T.V.			
B	**Printed media**			
1	News paper			
2	Leaflet/Folder			
C	**Social media**			
1	What's app			
2	You tube			
3	Facebook			
4	Instagram			

3.3.1.2 Operationalization of Entrepreneurial Traits

There were five components included to measure entrepreneurial traits of dairy farmers. To measure entrepreneurial behaviour statements of Raut (2009) were used with slight modifications. The method used to measure each of these components in an objective way is given below.

1. Innovativeness:

It is the degree to which an individual adopts new ideas relatively earlier than others in his/her social system. It is operationally defined as the degree to which a dairy farmer adopts new ideas relatively earlier than other dairy farmers in his/her social system.. The instrument innovativeness consisted of six statements and responses obtained on three-point continuum viz., 'agree', 'undecided', and disagree'. A weightage of 2, 1, and 0, respectively assigned to the response categories in case of positive statement and scoring was reversed for negative statements.

2. Achievement Motivation:

Achievement motivation is a social value that emphasizes a desire for the excellence in order for an individual to attain a sense of personal accomplishment. It is operationally defined as the desire for excellence of dairy farmers to attain a sense of his personal accomplishment. The instrument consisted of five statements and responses obtained on three-point continuum viz., 'agree', 'undecided', and

disagree'. A weightage of 2, 1, and 0, respectively assigned to the response categories in case of positive statement and scoring was reversed for negative statements.

3. Risk-Orientation:

It was operationalized as the degree to which the dairy farmer is oriented towards risk and uncertainty in facing problems in dairy enterprise. 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 assigned to the response categories in case of positive statement and scoring was reversed for negative statements.

4. Manageability:

It is the degree to which an entrepreneur perceives himself to be capable of planning, organizing, leading and controlling the efforts of members employed in his/her dairy enterprise. The instrument consisted of six statements and responses obtained on three-point continuum viz., 'agree', 'undecided', and disagree' with score of 2, 1, and 0 respectively in case of positive statements and scoring was reversed for negative statements.

5. Feedback back usage:

It is the degree to which an entrepreneur uses the information on his/her dairy enterprise to manage his/her resources better and achieve higher profit. The instrument consisted of four statements and responses obtained on three-point continuum viz., 'agree', 'undecided', and disagree'. A weightage of 2, 1, and 0, respectively assigned to the response categories in case of positive statement and scoring was reversed for negative statements

3.3.1.3. Constraints faced by farmers in management of dairy enterprise:

It is operationally defined as the long term persistent obstacles faced by dairy farmers in running their dairy enterprise. The Schedule was developed which includes physical, technical, economical and operational constraints. Constraints were ranked according to Garrett ranking method.

Garrett's ranking technique:-

By using this technique, the order of the merits given by the respondents will be change into ranks by using the formula (Garrette *et al.,* 1966)

Per cent position =100 (Rj - 0.5) /Nj where,

Rj = rank given for ith factor by jth individual.

Nj = number of factors ranked by jth individual.

The per cent position of each rank will be converted into scores by referring table given by Garrett.

Then for each factor, the scores of individual respondents will be added together and divided by the total number of respondents for whom scores were added. These mean scores for all the factors will be arranged in descending order and the constraints will be ranked.

3.4 Preparation of interview schedule

Interview schedule was developed for eliciting desired information. Before starting the final data collection, the entire schedule was pre-tested for elimination, alteration and modification, if any. The respondents were interviewed personally at their location. The interview schedule was prepared in local language i.e. Marathi for easy and accurate collection of responses from dairy farmers.

3.5 Procedure followed in data collection

Data were collected from dairy farmers through personal interview. Each question was made clear during the personal interview and the same emphasis was made in explaining the question to the entire dairy farmer's interview. The filled in interview schedules were scrutinized and tested immediately after the interview for their completeness in all respects.

3.6 Statistical tools used in the study

The collected data from the dairy farmers were scored, tabulated and analyzed in the light of the objectives set forth for the present study. Statistical measures used in this study include mean, standard deviation, frequency and percentage.

3.6.1 Frequency and percentage:

Frequency and percentage were calculated for making the simple comparison and to interpret the socio-economic characteristics and entrepreneurial traits of dairy farmers.

Sr. No.	Categories	Score
1.	Low	Mean – 1SD
2.	Medium	Mean $\pm$ 1SD
3.	High	Mean + 1SD

3.6.2 Correlation:

A Pearson's product moment correlation co-efficient was used to calculate 'r' value, which facilitated the relationship between dependent and independent variables.

$$r = N\sum XY - \sqrt{(\sum X)\ (\sum Y)\ \{N\sum(X \times X) - (\sum X \times \sum X)\ \}\{N\sum(Y \times Y) - (\sum Y \times \sum Y)\ \}}$$

Where, r = Coefficient of correlation

$\sum XY$ = Sum of cross product of series X and Y

$(\sum X)\ (\sum Y)$ = Product of sum of series X and Y

$\sum(X \times X)$ = Sum of cross product of series X

$(\sum X \times \sum X)$ = Product of sum of series X

$\sum(Y \times Y)$ = Sum of cross product of series Y

$(\sum Y \times \sum Y)$ = Product of sum of series Y

N= Number of pairs of observations (sample size)

Results &Discussions

4. RESULT AND DISCUSSION

According to the methodology mentioned above, the obtained data were exposed to statistical analysis as per the objective of the study. The results received from the data have been introduced in this section under accompanying heads:

4.1 To study socio-economic characteristics of dairy farmers.

4.2 To study entrepreneurial traits of dairy farmers.

4.3 To study the relationship between entrepreneurial traits and socio economic characteristics of dairy farmers.

4.4 To study the constraints faced by farmers in management of dairy enterprise.

4.1 Socio-economic characteristics of dairy farmers

Table No. 4.1 Socio-economic characteristics of dairy farmers

Sr. No.	Variables	Respondents (n=125)	
		Frequency	**Percentage**
1.	**Age**		
	Low (upto 35 years)	24	19.20
	Medium (36 to 51 years)	75	60.00
	High (Above 51 years)	26	20.80
	Total	**125**	**100.00**
2.	**Education**		
	Middle	27	21.60
	Secondary	40	32.00
	Higher secondary	45	36.00
	Up to graduate & above	13	10.40
	Total	**125**	**100.00**
3.	**Family type**		
	Joint	57	45.60
	Nuclear	68	54.40
	Total	**125**	**100.00**
4.	**Family size**		

	Small (up to 4 members)	32	25.60
	Medium (5 members)	48	38.40
	Large (above 5 members)	45	36.00
	Total	**125**	**100.00**
5.	**Occupation**		
	Dairy	26	20.80
	Dairy + crop farming	85	68.00
	Dairy + business	04	3.20
	Dairy + service	10	8.00
	Total	**125**	**100.00**
6.	**Land holding**		
	Marginal (up to 2.5 acres)	10	8.00
	Small (2.5 to 5 acres)	14	11.20
	Medium (5 to 10 acres)	90	72.00
	Large (>10 acres)	11	8.80
	Total	**125**	**100.00**
7.	**Annual income**		
	Low (up to 1024764 ₹.)	14	11.20
	Medium (1024765 to 1855232 ₹)	104	83.20
	High (above 1855233 ₹)	7	5.60
	Total	**125**	**100.00**
8.	**Dairy Experience**		
	Low (upto 6 years)	18	15.00
	Medium (6 to 10 years)	81	67.50
	High (above 10 years)	21	17.50
	Total	**125**	**100.00**
9.	**Herd size**		
	Small (up to 8 animals)	15	12.00
	Medium (9 to 14 animals)	92	73.60
	Large (above 14 animals)	18	14.40
	Total	**125**	**100.00**
10.	**Milk production**		
	Low (up to 80 liters)	16	12.80
	Medium (81 to 150	88	70.40

	liters)		
	High (above 150 liters)	21	16.80
	Total	**125**	**100.00**
11.	**Milk consumption**		
	Low (Up to 1.5 liters)	50	40.00
	Medium (1.5 to 3 liters)	38	30.40
	High (above 3 liters)	37	29.60
	Total	**125**	**100.00**
12.	**Milk sale**		
	Low (up to 78 liters)	17	13.60
	Medium (79 to 147 liters)	85	68.00
	High (above 147 liters)	23	18.40
	Total	**125**	**100.00**

4.1.1 Age

From the above data it is revealed that 60 percent of the dairy farmers belonged to the middle age group, 19.20 percent were under young age group and 20. 80 percent dairy farmers were in adult age group. It was seen that most young respondent was of 25 years age and most old respondent was of 64 years age.

The findings were correlated with Kumar *et al*., (2020) and Kumar and Kumar (2018). The purpose behind the above outcome might be because of reality that dairying is an intermittent pay creating endeavor. It adds essentially to the family pay. The pay from dairy is a guaranteed source not at all like agriculture entrepreneurship, which is questionable one. Thus, a greater amount of middle age dairy farmers are taking up dairying as auxiliary occupation.

4.1.2 Education

It is observed from Table 4.1 that more than one third (36%) of respondents were educated up to higher secondary level, less than one third of respondents (32%) were under secondary level, 10.40 per cent were educated up to graduate and remaining 21.60 per cent belonged to middle level of education.

The explanation behind this could be that more significant level of formal

tutoring and non-accessibility of government occupations may have inspired them to do dairy as business. The formal schooling encourages the dairy farmers to assemble new data needed for dairy endeavor which thus may make inspirational standpoint to deal with the dairy undertaking. Joshi *et al.,* (2017) reported the same findings.

4.1.3 Family type

From the Table 4.1 it was observed that 45.60 per cent respondents belong to joint family type and 54.40 per cent respondents belong to nuclear family type and these findings were in consonance with Singh *et al*.,(2016).

4.1.4 Family size

It is elucidated from the Table 4.1 that 38.40 per cent of respondents were of medium sized (5 members) family, 25.60 per cent of respondents were of small sized (up to 4 members) family and remaining 36 per cent of respondents belonged to large size (6 members & above) family. These results are in match with Belakeri *et al.*, (2017) and Chandrasekar *et al.,* (2017).

4.1.5 Occupation

From study it is observed that (68%) respondents had dairying and crop farming as their main occupation whereas 20.80 per cent had dairying as occupation. Dairying and business were occupation of 3.20 per cent respondents and 8 per cent had dairying and service as occupation. Kumar and Kumar (2018) also found similar results which showed that respondents with crop farming and dairying were more than other categories.

4.1.6 Land holding

The study revealed that 72 per cent respondents were under medium category (5 to 10 acres) and 11.20 per cent were under small category (2.5 to 5 acres) of land holding. A small proportion (8.8 and 8.00 per cent) belonged to large (10 acres and above) and marginal (up to 2.5 acres) category respectively. The explanation behind

less ownership of land holding could be because of subdivision of land because of partition of families. Medium entrepreneur typically need auxiliary occupation for their better living; since vulnerability and danger are there in cultivating and along these lines it has been considered as betting. To support the misfortunes happened to the little and medium farmers because of ideas of nature, dairying matching suits most and thus they may go for dairying in the study area**.** It is seen that landless farmers in study area had not embraced dairy business in exploration region. Results are slightly contraindicated with Patel (2005) uncovered that marginally the greater part of the respondents (52%) were found to have little size of land holding (1.1 to 2.0 ha. of land), trailed by peripheral (40%) size of land holding (up to 1.0 ha. of land).

4.1.7 Annual income

It is observed from Table 4.1 that (83.20%) of respondents had annual income of medium category that is there annual income is between 1024765 ₹ to 1855232 ₹, 5.60 per cent belonged to high category (above 1855233 ₹) of annual income and 11.20 per cent were under low category (up to 1024764 ₹).

Girish *et al.,* (2020) and Rathod *et al.,* (2012) also observed in their findings that respondents with annual income of medium category were more than high category and low category.

4.1.8 Dairy experience

It is revealed from the study that little more than two third of respondents i.e. 67.50 were in medium category (6 to 10 years) of experience whereas 15.00 per cent were of low (upto 6 years) category and remaining 17.50 per cent of respondents belonged to high (10 years & above) category of experience. Findings are not in line with Belakeri *et al.,* (2017) and Aparna *et al*., (2018).

4.1.9 Herd Size

The investigation revealed that less than three forth (73.60%) of the dairy

farmers had medium (9 to 14 animals) category of herd size though 14.40 and 12 per cent had large (above 15 animals) and small (up to 8 animals) category of herd size respectively. Correlated findings were observed by Rathod *et al*., (2012) and Subramanian (1992).

4.1.10 Milk production

It is noticed from Table 4.1 that 70.40 per cent of respondents were under medium category of milk production (81 to 150 liters). 16.80 per cent of respondents were under milk production of high category (151 liters and above) and remaining 12.80 per cent of respondents were of low (up to 80 liters) category of milk production. The results are in consonance with Nishi *et al.,* (2011).

4.1.11 Milk consumption

From study it is noted that 40.00 per cent of respondents were in low (upto 1.5 liters) category of milk consumption whereas in medium (1.5 to 3 liters) 30. 40 per cent respondents were there and in high (3 liters) category 29.60 per cent respondents were there. Nishi *et al.,* (2011) also observed the similar results.

4.1.12 Milk sale

It is observed from the study that 68.00 were in medium category (79 to 147 liters) of milk sale whereas 13.60 per cent of respondents belonged to low (up to 78 liters) category and remaining 18.40 per cent were of high (148 liters & above) category of milk sale. Nishi *et al.,* (2011) also reported the same results.

4.1.13 Social Participation

Table no. 4.2 revealed that more than one fourth i.e. (28%) of respondents participated in gram panchayat, less than one fourth (24%) of respondents participated in dairy Co-operative society were 14.40 per cent and 12 per cent of respondents participated in Zilla Parishad and Panchayat Samiti respectively.

Table no. 4.2 Social participation

Sr. No.	Organization	Member	Percentage
1	Gram Panchayat	35	28.00
2	Panchayat Samiti	15	12.00
3	Zilla Parishad	18	14.40
4	Farmer club	10	8.00
5	Educational organization	13	10.40
6	Dairy Co-operative society	30	24.00
7	SHG'S	4	3.20

About 8.00 per cent of respondents participated in farmers club where as meagre (3.20%) respondents participated in SHG'S. The result are slightly in line with Raut (2009) and Girish *et al.,* (2020).

4.1.14 Extension Agency Contact

From Table 4.3 it is revealed that 33.60 per cent of respondents had contacted LSS for information regarding dairy practices and LDO was contacted by 31.20 per cent of respondents. The result slightly in line with Raut (2009).

VDO was contacted by 28 per cent of respondents. VDO and LDO were sometimes contacted by 64 per cent and 62.40 per cent of respondents respectively. About 57.60 per cent of respondents contacted sometimes to NGO nearby working in area and 59.20 of respondents contacted sometimes to LSS About 78.40 per cent of respondent had never contacted KVK scientists of Palghar district and 60.80 per cent of respondents had never contacted to BDO. Results are in line with Avhad *et al*., (2014).

Table no 4.3 Extension agency contact

Sr. No	Extension agencies	Degree of contact					
		Always	Per cent	Sometimes	Per cent	Never	Per cent
1	VDO	35	28.00	80	64.00	10	8.00
2	LDO	39	31.20	78	62.40	8	6.40
3	KVK Scientists	4	3.20	23	18.40	98	78.40
4	NGO	25	20.00	72	57.60	28	22.40
5	LSS	42	33.60	74	59.20	9	7.20
6	BDO	9	7.20	40	32.00	76	60.80

4.1. 15 Mass Media Exposure

From Table 4.4 it is revealed that 72.80 per cent and 68.80 per cent of respondents were utilizing electronic media tool i.e. Radio and T.V. for updating information regarding dairy management practices. These results are supported by Kumar and Kumar (2018), Raut (2009) and Avhad *et al*., (2014). Less than one third (32%) of respondent were using local news paper and 7.20 per cent were using leaflet and folder prepared by various institutions and organization. Regarding social media more than half (52%) of the respondents were utilizing what's app as social media tool for getting information about latest techniques in dairy farming where as 21.60 per cent of respondents were utilizing facebook as social media tool to get information about dairy farming.

Table no 4.4 Mass media exposure

Sr. No	Source	Regularly use	%	Temporary use	%	Not use	%
A	**Electronic media**						
1	Radio	91	72.80	28	22.40	6	4.80
2	T.V.	86	68.80	34	27.20	5	4.00
B	**Printed media**						
1	News paper	40	32	55	44	30	24
2	Leaflet / Folder	9	7.20	42	33.60	74	59.20
C	**Social media**						
1	What's app	65	52	45	36	15	12
2	You tube	22	17.60	60	48	43	34.40
3	Facebook	27	21.60	37	29.60	61	48.80
4	Instagram	9	7.20	17	13.60	99	79.20

About 44 per cent and 33.60 per cent of respondents were temporarily using news paper and leaflet respectively for getting information about dairy practices. When social media was considered 36 per cent and 48 per cent of respondents were temporarily using what's app and you tube respectively to get information regarding dairy practices. About 59.20 per cent of respondents had never used leaflet and folder as information tool and less than half (48.80%) of the respondents had never used facebook as an information tool.

4.2 To study entrepreneurial traits of dairy farmers:-

4.2.1 <u>Innovativeness</u>

It may be very well seen from the Table 4.5 that 55.20 percent dairy farmers had a place with medium innovativeness classification. Though 25.60 percent dairy farmers had a place with high ingenuity and 19.20 percent dairy farmers had low degree of innovativeness.

An extensive level of dairy farmers was found in medium class of innovativeness. The potential reasons may be because of center level training, little and negligible land holding and medium data looking for conduct of dairy farmers. These variables may have encouraged the dairy entrepreneur to incorporate the new dairy innovation.

These outcomes are as per the discoveries of Lawrence and Ganguli (2012) saw that almost 50% of the respondents had medium degree of innovativeness, while more than 33% had undeniable degree of creativity and the rest had low degree of innovativeness. Another comparable finding announced by Patel *et al.*, (2014) uncovered that lion's share (61.25%) of dairy farmers had medium degree of innovativeness; while 23.75 per cent of them had high and 15 percent had low degree of innovativeness. Rathod *et al.*, (2012) and Jagadeeswary (2003) reported that majority of the dairy farmers belonged to medium level of innovativeness.

4.2.2 Achievement Motivation

It is obvious from the Table 4.5 that 12 per cent dairy farmers had a place with low achievement motivation whereas 4.80 per cent were in high achievement motivation category. 83.20 per cent, the maximum farmers had medium achievement motivation.

The medium degree of achievement motivation among dairy farmers may be because of their eagerness to turn out to be financially stable. It is accepted that achievement motivation powers the person towards arriving at the objectives, which one has set for oneself. The centre level schooling, little land holding and financial inspiration may have urged them to set the more significant standards.

The result are in lined with Vijaykumar (2001) and Suresh (2004) who stated that around half of dairy entrepreneurs had medium achievement motivation.

According to Patel *et al.,* (2014) about half (48.75%) of the dairy farmers had medium degree of achievement motivation class. Reshma *et al.,* (2014) also reported same findings.

4.2.3 Manageability

The data from Table 4.5 revealed that 75.20 per cent respondents had medium manageability while 16 per cent respondents had low manageability and 8.80 per cent respondents had high manageability. These findings are contraindicated with the findings of Kumar *et al.,* (2012) which revealed that the respondents with low manageability were more in number. As per as planning ability is concerned, respondents with medium planning ability were more according to Chaurasiya *et al.,* (2016).

4.2.4 Risk-orientation

From the Table 4.5 revealed that more than one third of the dairy farmers that is 67.20 per cent were having medium risk orientation while 19.20 percent were having high risk orientation and 13.60 per cent dairy farmers were having low risk orientation. It is because of the fact that some farmers are having minimum land, absence of water supply and also they are not financially stable as farmers with maximum land.

Lawrence and Ganguli (2012) found that majority of the dairy farmers (58 per cent) had medium level of risk orientation and remaining 28 and 14 per cent had low level and high level of risk orientation, respectively. These findings are in consonance with the data mentioned above. Reshma *et al.,* (2014) also reported in their study that respondents with medium risk orientation ability were more than other low and high categories of risk orientation. These findings are in accordance with the findings of Bhagyalaxmi *et al.,* (2003) and Suresh (2004).

Table no 4.5 Distribution of respondents according to Entrepreneurial Traits

Sr. No.	Variables	Categories	Frequency	Percent
1.	Innovativeness	Low	24	19.20
		Medium	69	55.20
		High	32	25.60
Total			125	100
2.	Achievement Motivation	Low	15	12.00
		Medium	104	83.20
		High	06	4.80
Total			125	100
3.	Risk Orientation	Low	17	13.60
		Medium	84	67.20
		High	23	19.20
Total			125	100
4.	Manageability	Low	20	16.00
		Medium	94	75.20
		High	11	8.80
Total			125	100
5.	Feedback usage	Low	24	19.20
		Medium	71	56.80
		High	30	24.00
Total			125	100

4.2.5 <u>Feedback usage</u>

The data from Table 4.5 showed that more than one third dairy farmers had 56.80 per cent feedback usage whereas 24.00 per cent dairy farmers had high feedback usage and remaining 19.20 per cent dairy farmers had low feedback usage. The investigation findings of Raut and Sankhala (2014) showed that majority of the respondents were in medium category that is 53.75 per cent. This shows that those people who are genuinely great at getting and use criticism to take proper restorative measures are bound to enhance their execution, efficiency and better administration of accessible assets and making their dairy enterprise a productive adventure.

Table no 4.6 Distribution of Respondents according to their Overall Entrepreneurial Traits

(n=125)

Sr. no.	Category	Frequency	Percent
1	Low	29	23.20
2	Medium	80	64.00
3	High	16	12.80
Total		125	100.00

From the above results it is stated that majority of farmers i.e. (64.00 %) had medium overall entrepreneurial traits, (23.20 %) of farmers had low entrepreneurial traits and (12.80 per cent) of farmers had high entrepreneurial traits. The results are in line with Chaudhary *et al*., (2017) and Lawrence and Ganguli (2012).

4.3 To study the relationship between entrepreneurial traits and socio economic characteristics of dairy farmers.

Table no 4.7 Relationship of the independent variables towards entrepreneurial traits

(n=125)

Variable No.	Variables	'r' value
X1	Age	0.00^{NS}
X2	Education	-0.397^{*}
X3	Family type	-0.00^{NS}
X4	Family size	0.073^{NS}
X5	Land holding	-0.129^{NS}
X6	Milk sale	-0.392^{*}
X7	Farming experience	-0.323^{*}
X8	Mass media	0.427^{*}
X9	Milk production	-0.347^{*}
X10	Extension agency contact	0.374^{*}

NS - Non Significant, * Significant at 0.05 level

From Table 4.7 it shows that variables with positive and significant

relationship with mass media and extension agency contact. And the variables with negative and significant relationship were education, milk sale, experience in dairy farming and milk production whereas age, family size, family type and land holding were showed non-significant relationship. The result are in line with Raina *et al*., (2016) stated that education of entrepreneurs was significant and positive relationship with behaviour of dairy farmers.

Chaudhary *et al.,* (2017) observed non-significant relationship among entrepreneurial behaviour and variables of respondents like age and family size.

Seth *et al*., (2020) reported same finding age had negative and non significant relationship with entrepreneurial behaviour.

4.4 To study constraints faced by farmers in management of dairy enterprise.

Table no 4.8 Constraints faced by farmers in management of dairy enterprise

Sr. no.	Constraints	Garrett Mean Score	Rank
1	High cost of cross breed cow	76	I
2	Irregularity of milk sale	70	II
3	High cost of concentrate mixture	60	III
4	Poor conception rate in Artificial Insemination	55	IV
5	Low social and economic status	51	V
6	Lack of coordination among members	48	VI
7	Lack of knowledge of market policy	43	VII
8	Longer distance of market	40	VIII
9	Inadequate attachment to extension system	38	IX
10	Inadequate information about government schemes pertaining to dairy enterprise	35	X

The outcomes introduced in Table 4.8 to focus on the constraints, positioning has been utilized. In the wake of computing the percent position of positions of the all around recognized constraints, change of requests of legitimacy was finished. The last positioning of the constraints to fix their overall need was done

based on their mean scores. The main constraint faced by dairy farmers was high cost of cross breed cows which include 76 per cent respondents out of total respondents and ranked in the first position. Irregularity of milk sale is also important constraint with the 70 per cent respondents and second rank. After this, high cost of concentrate mixture was ranked on third position with 60 per cent dairy farmers. Poor conception rate in artificial insemination was observed due to lack of technical knowledge of artificial insemination. This constraint was ranked on forth position along with 55 per cent respondents. Low social and economic status can also affect on the progression of a dairy enterprise. In this study low social and economic status was observed in 51 per cent participants with the fifth rank. Lack of coordination was observed in 48 per cent respondents with the sixth rank. Due to lack of coordination, information exchange can be hampered. Lack of knowledge of market policy was found in 43 per cent dairy farmers with seventh rank and due to this farmer cannot get proper outcome from their enterprise. Another constraint faced by dairy farmers is longer distance of market and this was found in 40 per cent respondents holding eighth rank. Inadequate attachment to extension system was observed in 38 per cent of dairy farmers holding ninth rank. Inadequate attachment with extension system causes loss of farmers in many ways like the different schemes of extension department are unknown to us. Lastly, inadequate information about government schemes pertaining to dairy enterprise is also one of the important constraints with the 35 per cent respondents and with the tenth rank.

From the above findings it is revealed that, high cost of cross breeds was the most important constraint with high percentage of respondents. This might be due the farmers with low income are there in the research area and lack of knowledge of purchase policies of the government.

Irregularity of milk sale is also important constraint faced by dairy entrepreneurs. It is possible because of longer distance of market which causes discontinuation of milk sale. Continuous demand of the market should be there for

regular milk sale. Due to presence of diseased animals, milk cannot be sold to the people thus continuous milk sale is not possible.

For the healthy condition of an animal balanced nutrition is important and for that mineral requirement should be fulfilled. If the cost of mineral mixture is more farmers with low annual income can't afford it and thus nutritional requirement cannot be fulfilled and some diseased conditions may occur in the animals. This will affect on the income of the farmers.

Poor conception rate in artificial insemination may be due to lack of technical knowledge of artificial insemination, diseased condition of animals, and hormonal imbalance in the animal body etc. To combat this, proper nutritional diet is required.

Another constraint faced by the dairy farmers is low social and economic status. Due to low economic status they cannot invest in the dairy enterprise, they cannot buy crossbreed cows etc. Likewise, lack of coordination among members also responsible for the less growth of dairy enterprise.

Lack of knowledge of market policy causes loss of dairy farmers as they are not aware about the current schemes in the market. Longer distance of market is also important constraint due to which dairy farmers cannot get access of the market to sale the milk and milk products.

Inadequate attachment to extension system and inadequate information about government schemes causes economical loss of dairy farmers as they invest more money without getting any government discounts and schemes.

Vani (2013) saw that larger part of the women business visionaries (80%) communicated bad marketing facilities as serious issue and absence of attention to various subsidizing plans and techniques of monetary establishments (5.83 percent). Adhikari *et al.,* (2020) observed that dairy farmers in the hill region also faced problem of high cost of concentrate mixture, lack of information about governmental

schemes and poor conception rate in artificial insemination. Sharma *et al.,* (2018) also reported similar results regarding high cost of concentrate mixtures.

Plate No. 1 Traditional housing of the dairy animals

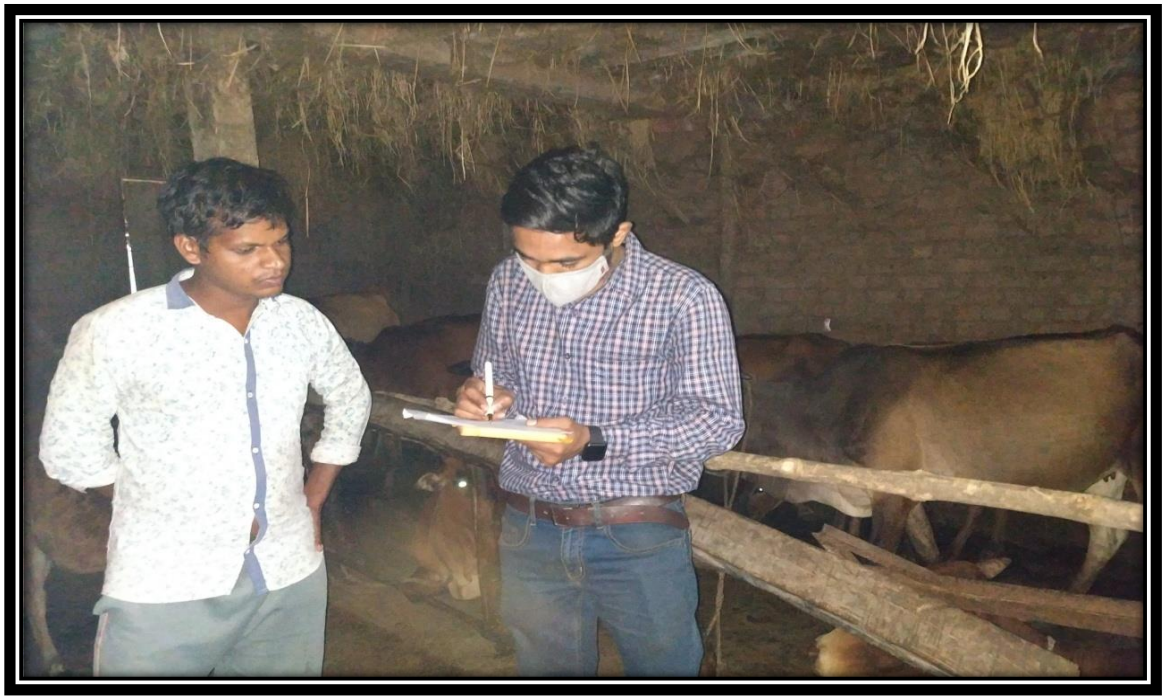


Plate No. 2 Collection of the data from the dairy farmer

Plate No. 3 Collection of the data from the young entrepreneur

Plate No. 4 Housing of the dairy animals

Plate No. 5 Tail to tail housing system

Plate No. 6 Collection of the data from the dairy farmer

Plate No. 7 Collection of the data from the dairy farmer

Plate No. 8 Collection of the data from women dairy entrepreneur

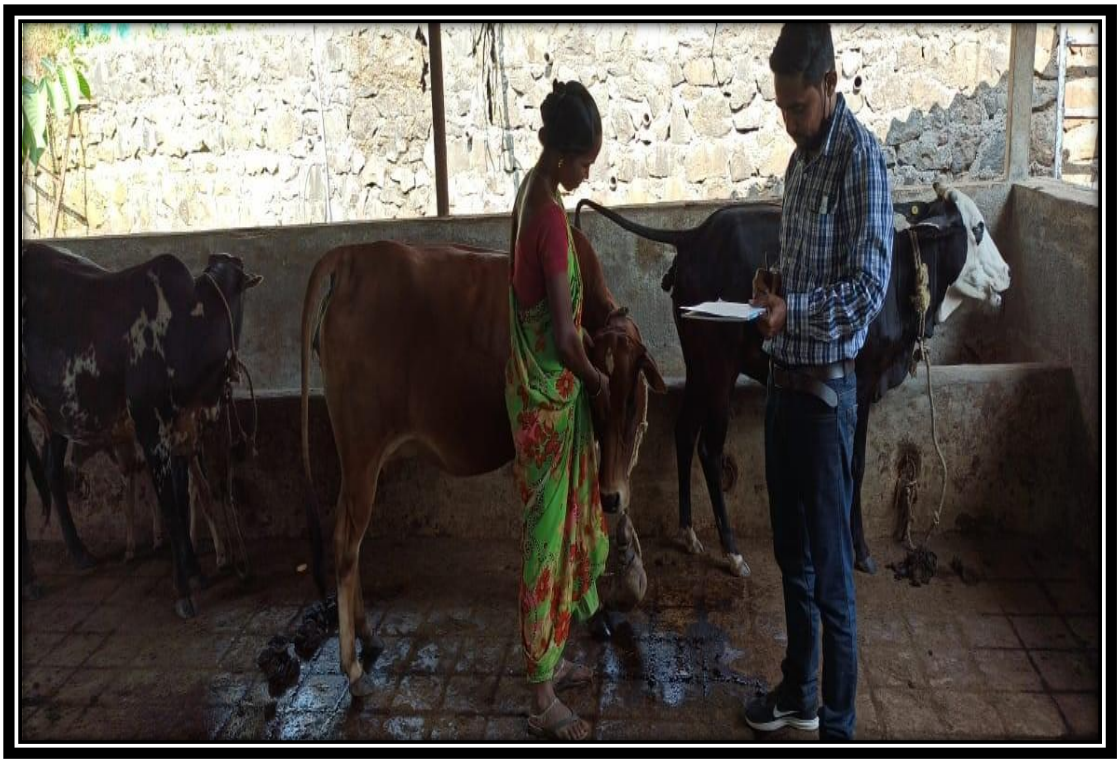


Plate No. 9 Collection of the data from dairy entrepreneur

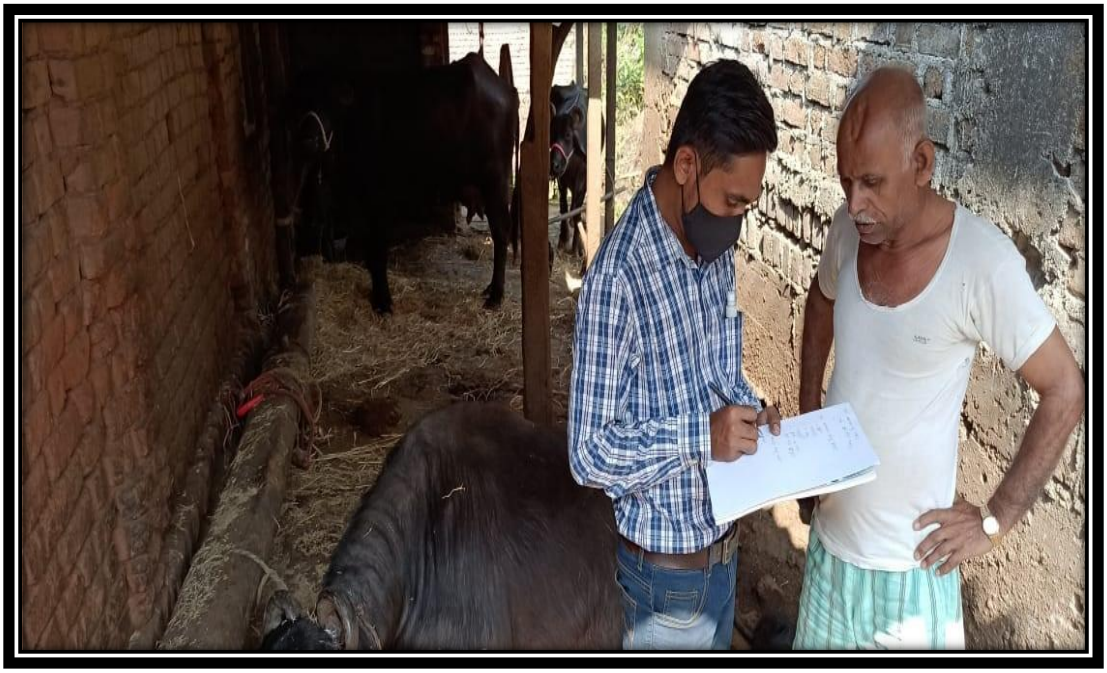


Plate No. 10 Storage of paddy straw by the dairy farmer

Fig. 4.1 Distribution of respondents according to their age

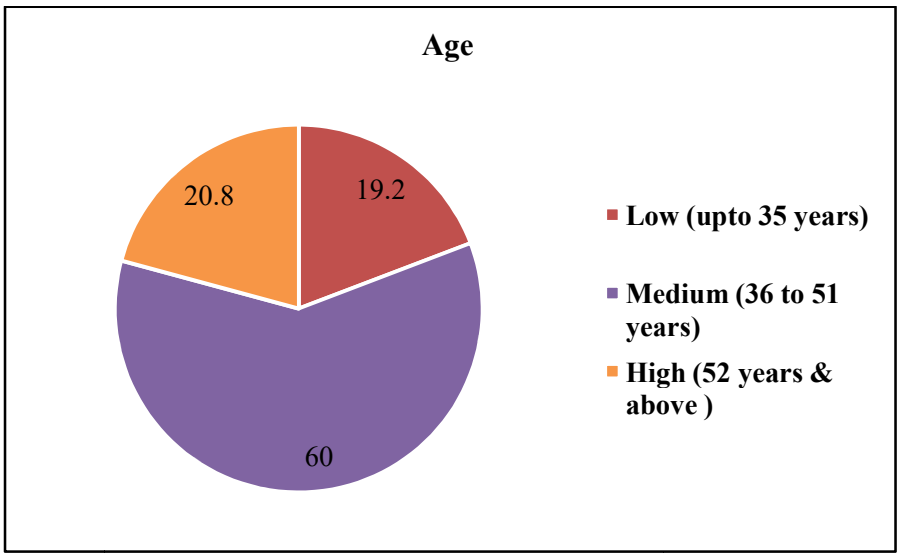


Fig. 4.2 Distribution of respondents according to their education

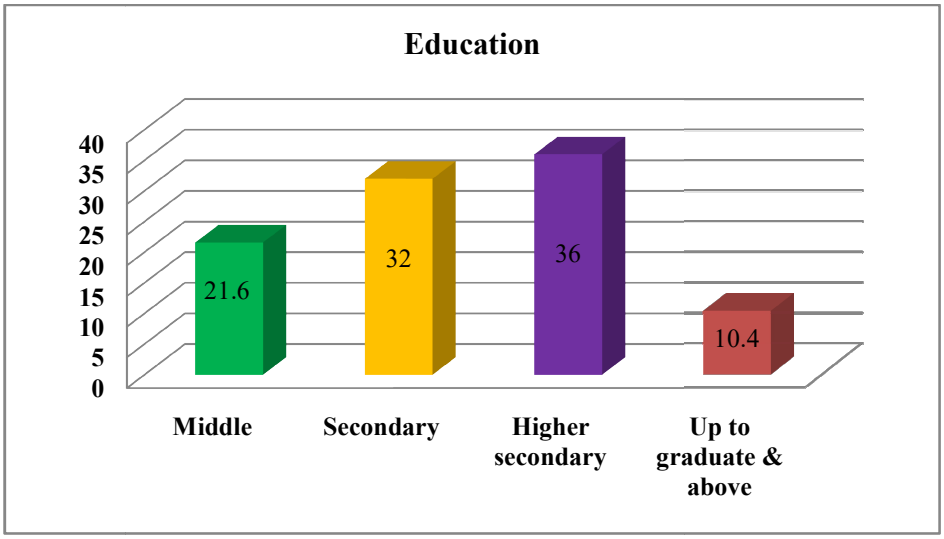


Fig. 4.3 Distribution of respondents according to their family size

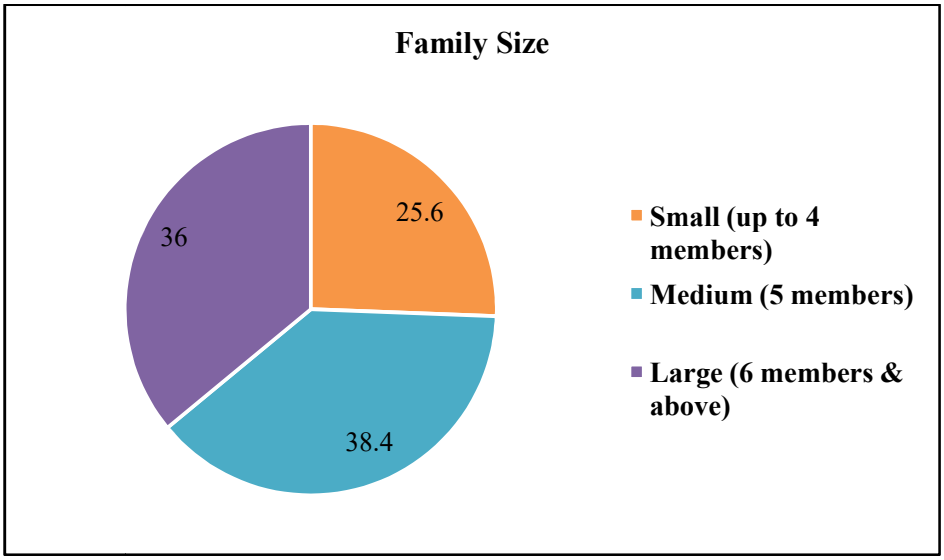


Fig. 4.4 Distribution of respondents according to their family type

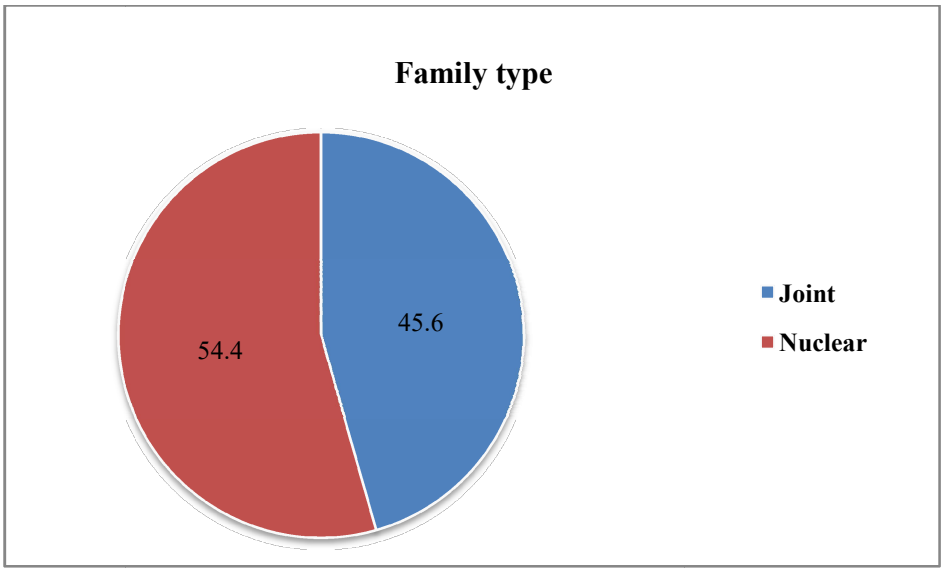


Fig. 4.5 Distribution of respondents according to their occupation

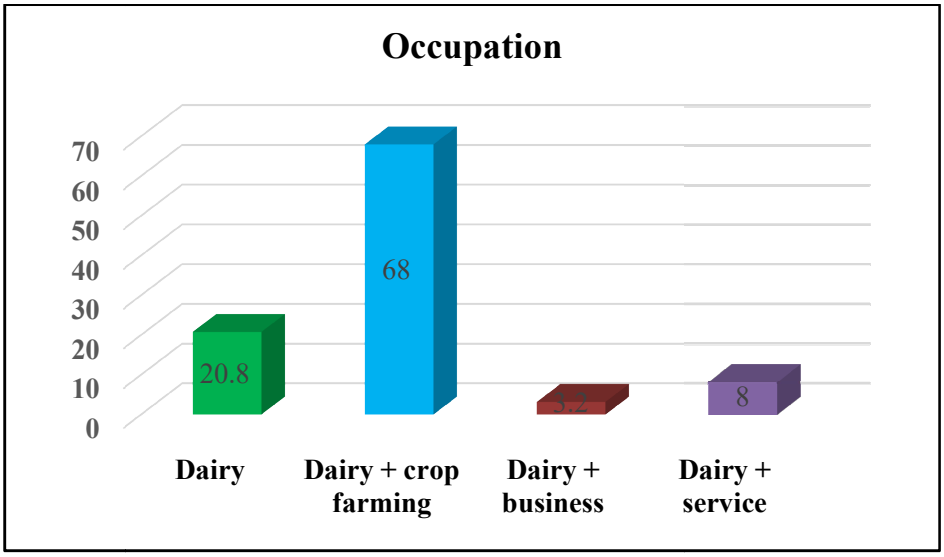


Fig. 4.6 Distribution of respondents according to their land holding

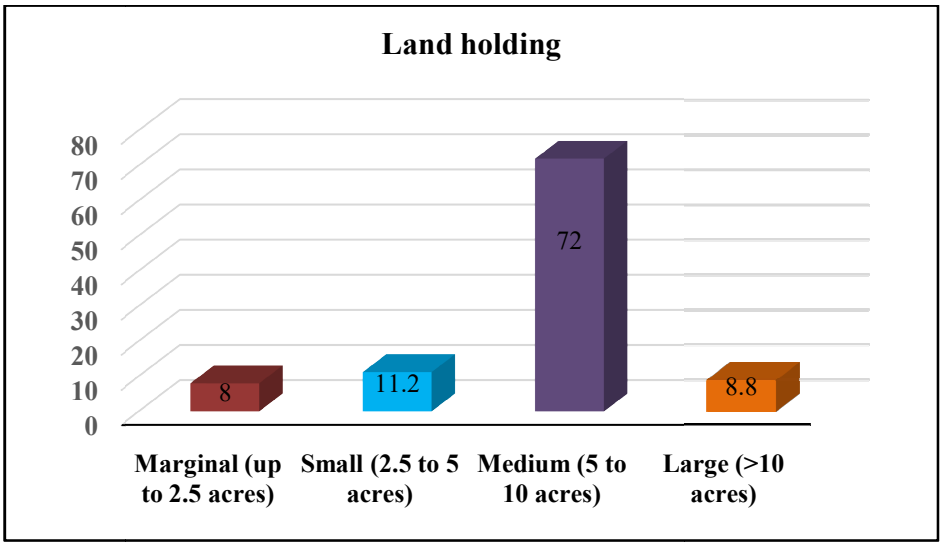


Fig. 4.7 Distribution of respondents according to their annual income

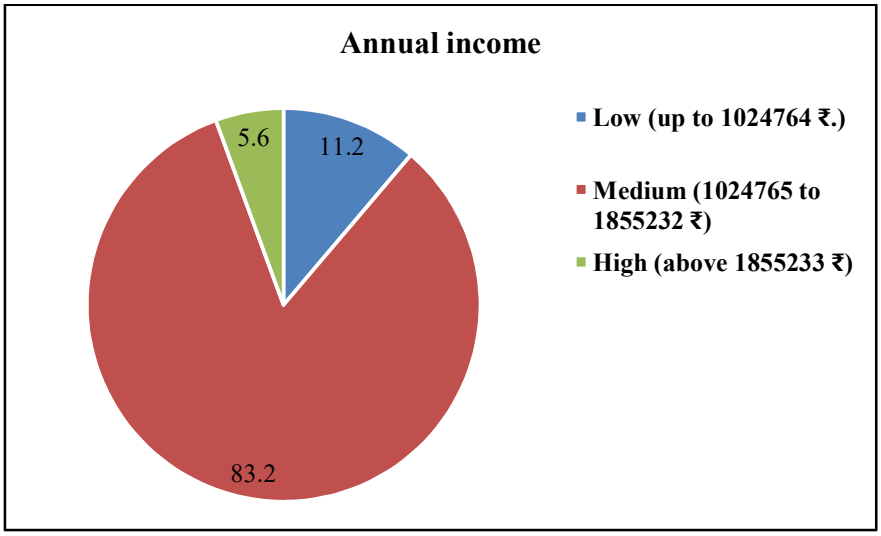


Fig. 4.8 Distribution of respondents according to their herd size

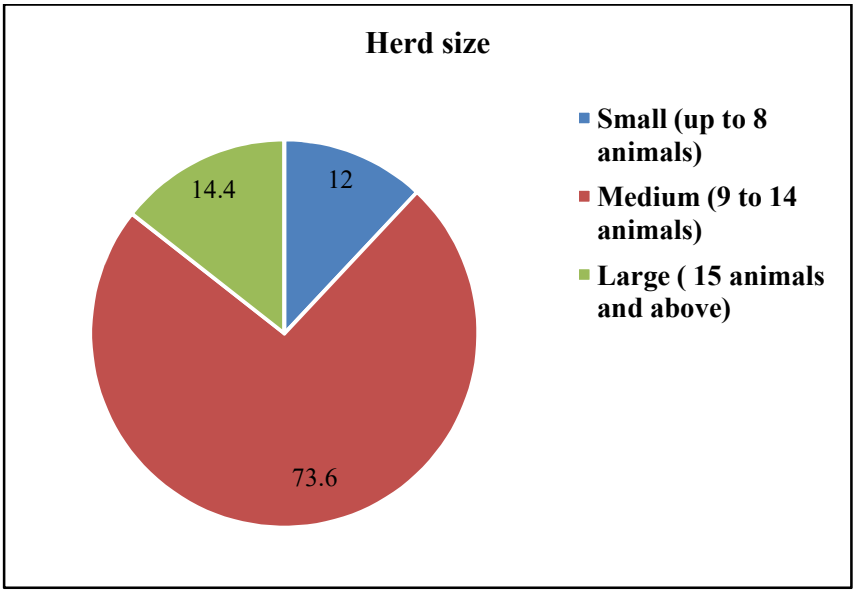


Fig. 4.9 Distribution of respondents according to their milk production

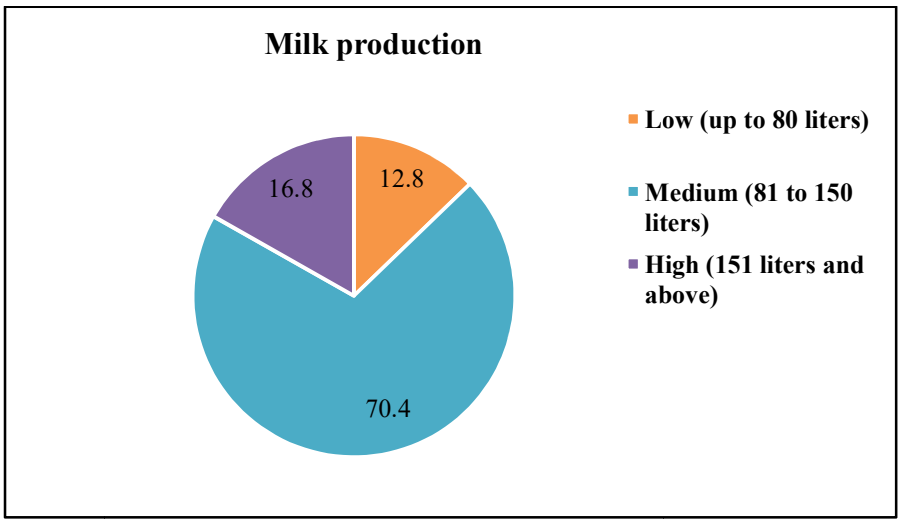


Fig. 4.10 Distribution of respondents according to their milk consumption

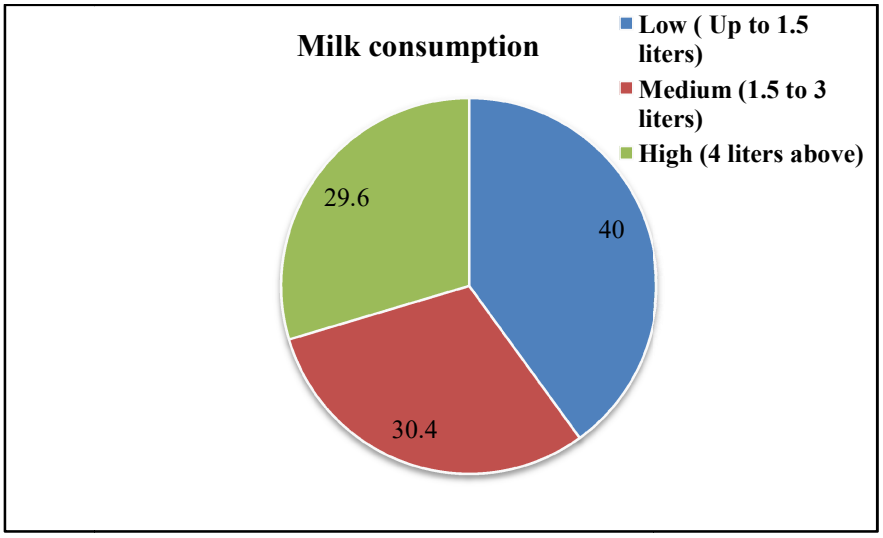


Fig. 4.11 Distribution of respondents according to their milk sale

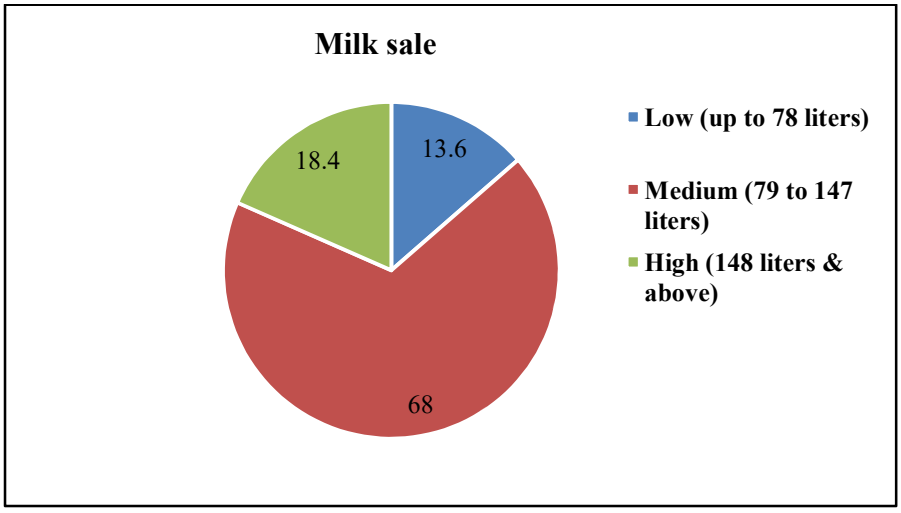


Fig. 4.12 Distribution of respondents according to their Dairy experience

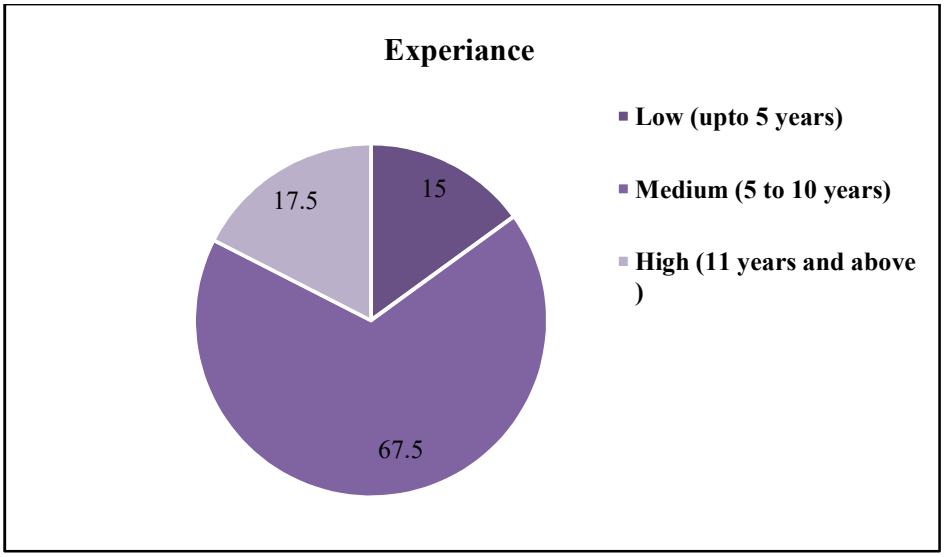


Fig. 4.13 Distribution of respondents according to innovativeness

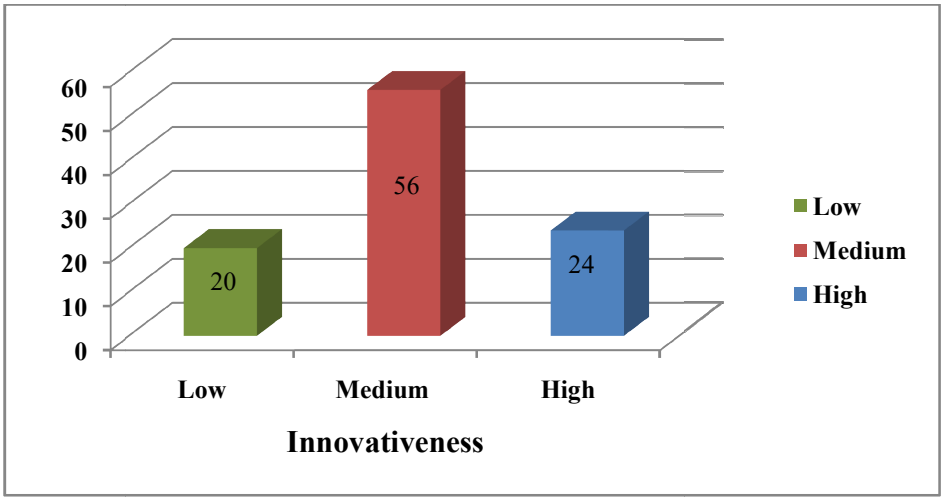


Fig. 4.14 Distribution of respondents according to achievement motivation

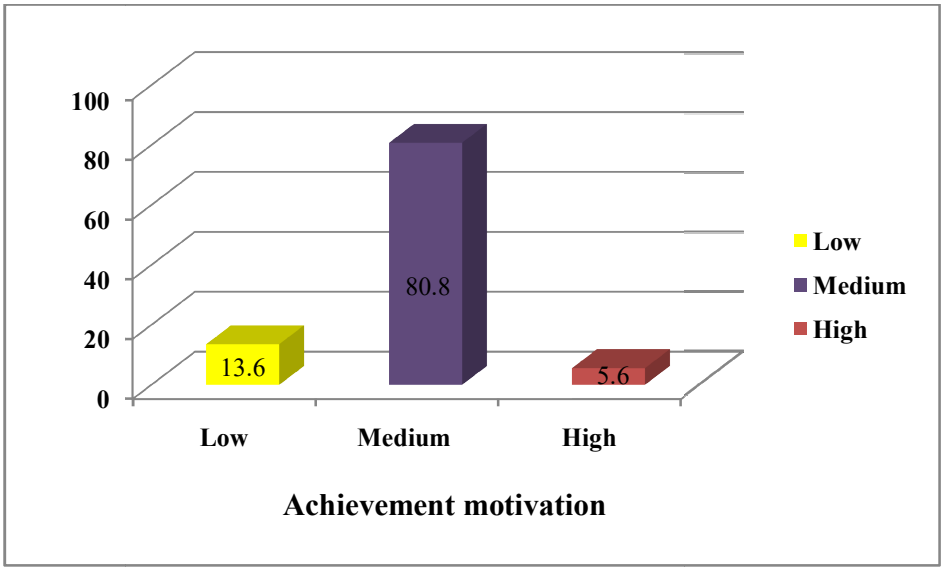


Fig. 4.15 Distribution of respondents according to manageability

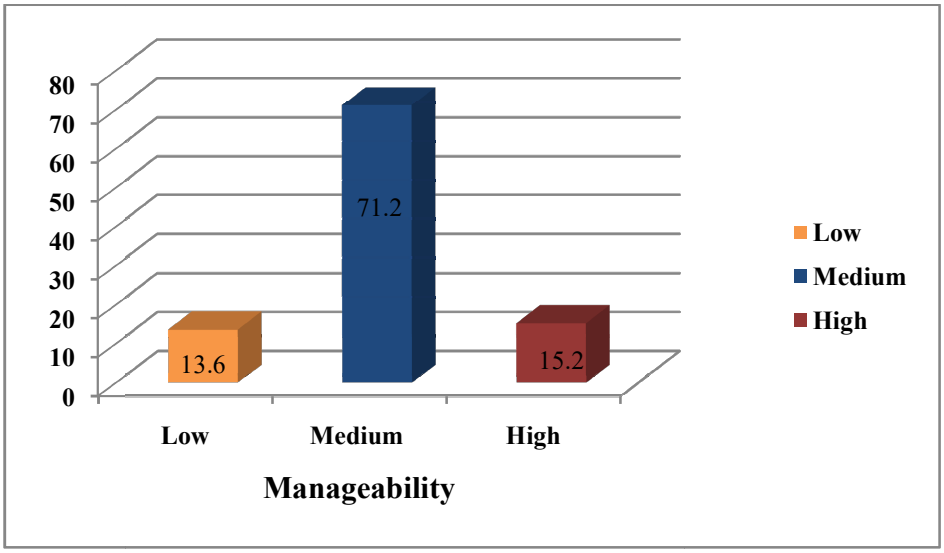


Fig. 4.16 Distribution of respondents according to risk orientation

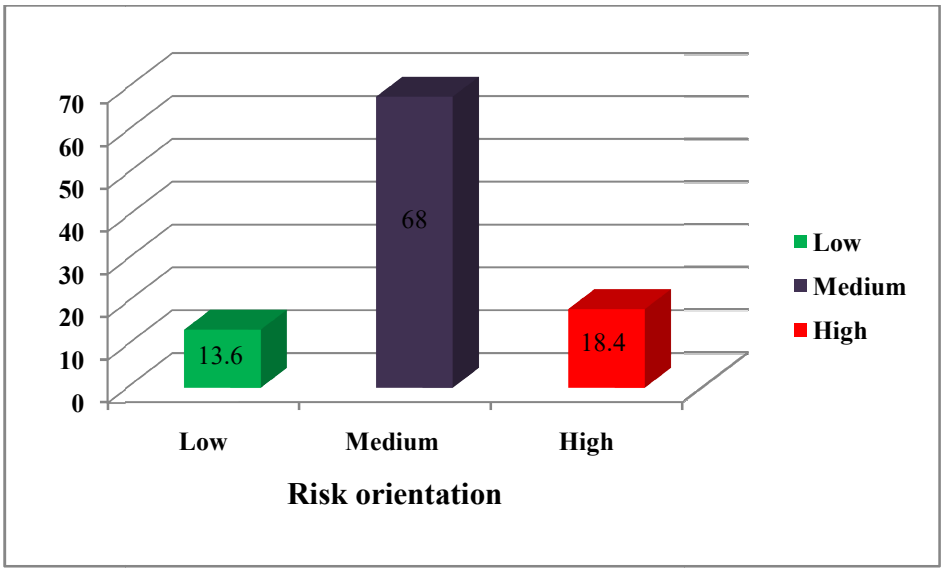


Fig. 4.17 Distribution of respondents according to feedback usage

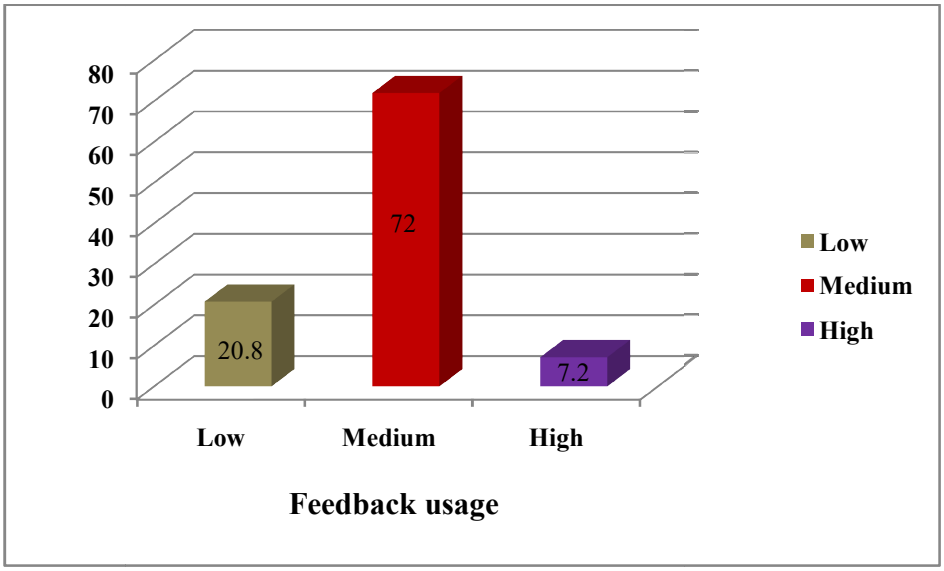
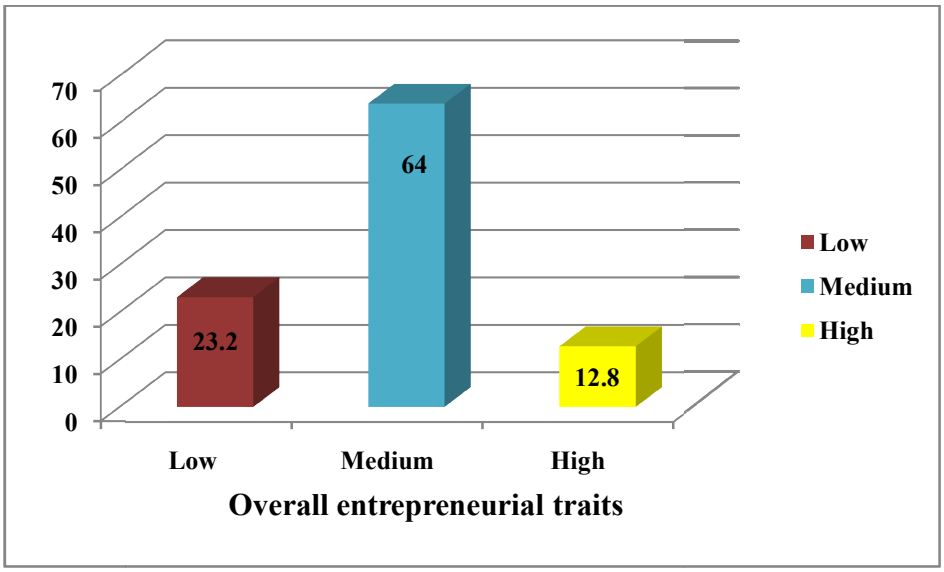


Fig 4.18 Distribution of respondents according to their overall entrepreneurial traits



Summary & Conclusions

5. SUMMARY AND CONCLUSIONS

The investigation was predominantly limited to dairy farmers who have attempted dairying as one of the auxiliary business, which is giving extra pay, aside from work to the rustic individuals, while assuming an essential part in improving their financial conditions and giving sufficient freedoms to improve their way of life. Keeping in view the present study entitled **"ENTREPRENEURIAL TRAITS OF DAIRY FARMERS IN PALGHAR DISTRICT OF KONKAN REGION"** was performed to study socio economic characteristics of dairy farmers, also studied relationship between entrepreneurial traits and socio personal and economical characteristics of dairy farmers and constraints perceived by dairy farmers in management of dairy enterprise. The present study was undertaken in Palghar district of Konkan region in Maharashtra. From Palghar district five blocks were selected, from each block five villages were selected randomly from each village five dairy farmers were selected who possessed at least 5 milch animals and 3 years of experience in dairy farming. For the study Interview schedule was developed for eliciting desired information. Before starting the final data collection, the entire schedule was pre-tested for elimination, alteration and modification, if any. The respondents were interviewed personally at their location. Data were collected from dairy farmers through personal interview. The collected data from the dairy farmers were scored, tabulated and analyzed in the light of the objectives set forth for the present study. Statistical measures used in this study include mean, standard deviation, frequency and percentage.

5.1 Major findings of the study

5.1.1 Socio- economic characteristics of dairy farmers:-

Majority of the respondent (60 %) were found to be (36 to 51 years) medium aged, and majority of respondent (36%) had educated up to higher secondary school. As far as land holding was concerned, majority of the dairy farmers had (72%) (5 to 10 acres) medium land possession. Whereas majority of farmers had (38.40%) medium family size (5 to 6 members). Majority of farmers (68%) had dairy and agriculture as

main occupation as well as majority of respondents (73.60%) had medium herd size (9 to 14 animals). Most of the dairy farmers (70.40%) were producing medium amount of milk i.e. 81 to 150 lit of milk per day. And considerable percentages of dairy farmers (68%) were 79 to 147 liters of milk seller per day. Family type of most of dairy farmers was (54.40%) nuclear family but majority of respondent (83.20%) had medium annual income (1024765 to 1855232 ₹). Milk consumption of majority of dairy farmers was (40%) i.e. 1.5 liters of milk per day. Most of farmers (67.50%) had dairy experience of nearly 5 to 10 years while most of the farmers (28 %) participated in gram panchayat but participation in SHG'S was less i.e. (3.20 per cent). Whereas most of farmers contacted 42 per cent and 39 per cent LSS and LDO respectively. In mass media exposure farmers were regularly using radio and T.V. 72.80 per cent and 68.80 per cent respectively.

5.1.2 The entrepreneurial traits of dairy farmers:-

More than half (55.84 per cent) dairy farmers had a place with medium innovativeness classification. Though 25 percent dairy farmers had a place with high ingenuity and staying 19.16 percent dairy farmers had low degree of innovativeness. Around 13.60 per cent dairy farmers had a place with low achievement motivation whereas 5.60 per cent were in high achievement motivation category. 80.80 per cent, the maximum farmers had medium achievement motivation. Most of the respondents for example, 71.20 per cent had medium manageability while 13.60 per cent respondents had low manageability and 18.40 per cent respondents had high manageability.

More than one third of the dairy farmers (68 per cent) were having medium risk orientation while 18.40 per cent were having high risk orientation and 13.60 per cent dairy farmers were having low risk orientation. It is because of the fact that some farmers are having minimum land, absence of water supply and also they are not financially stable as farmers with maximum land. More than one third dairy farmers had 72 per cent feedback usage whereas 7.20 per cent dairy farmers had high feedback usage and remaining 20.80 per cent dairy farmers had low feedback usage.

5.1.3. The relationship between entrepreneurial traits and socio-economic characteristics of dairy farmers:-

Among ten independent variables six showed significant relationship with their entrepreneurial traits and those include education, milk sale, experience in dairy farming, milk production, mass media and extension agency contact etc. while remaining four viz., age, family size, family type and land holding showed non-significant relationship with their entrepreneurial traits.

5.1.4 The constraints faced by dairy farmers in management of dairy enterprise

The main constraint faced by dairy farmers was high cost of cross breed cows which include 76 per cent respondents out of total respondents and ranked in the first position. Irregularity of milk sale is also important constraint with the 70 per cent respondents and second rank. After this, high cost of concentrate mixture was ranked on third position with 60 per cent dairy farmers. Poor conception rate in artificial insemination was observed due to lack of technical knowledge of artificial insemination. This constraint was ranked on forth position along with 55 per cent respondents. Low social and economic status can also affect on the progression of a dairy enterprise.

In this study low social and economic status was observed in 51 per cent participants with the fifth rank. Lack of coordination was observed in 48 per cent respondents with the sixth rank. Due to lack of coordination, information exchange can be hampered. Lack of knowledge of market policy was found in 43 per cent dairy farmers with seventh rank and due to this farmer cannot get proper outcome from their enterprise. Another constraint faced by dairy farmers is longer distance of market and this was found in 40 per cent respondents holding eighth rank. Inadequate attachment to extension system was observed in 38 per cent of dairy farmers holding ninth rank. Inadequate attachment with extension system causes loss of farmers in many ways like the different schemes of extension department are unknown to us. Lastly, inadequate information about government schemes pertaining to dairy

enterprise is also one of the important constraints with the 35 per cent respondents and with the tenth rank.

5.2. Conclusions

Majority of the respondents were of medium age with higher secondary school level of education and possessed 5 to 10 acres of land. Majority had dairy and agriculture as main occupation with an experience of 5 to 10 years and had a herd size of 9 to14 animals. Daily milk production reported was 81 to 150 litres with sale of 79 to 147 litres daily and annual income of Rs 1024765 to 1855232 whereas gram panchayat participation was low. LSS and LDO were contacted for information regarding animal husbandry. Overall medium entrepreneurial behaviour was noticed in the study area. The major constraints faced by the respondents was high cost of cross breed cow and irregularity of milk sale.

5.3. Implications of the study

1. Since the most important constraint was found to be high prices of cross breed cows, people should increase their income by expanding their income sources and also they should be known about the different animal buying policies of government.

2. The examination infers that the milk production might be improved by setting up government dairies, dairy helpful social orders, milk associations and so forth through various plans identified with dairying area.

3. As lion's share of the respondents were showing low degree of information in regards to dairy the executives practices, so mindfulness camps and preparing office in regards to logical dairy the board rehearses should have be orchestrated dairy farmers.

4. To take the issues relating to limitations saw by the dairy farmers of the examination zone different part of dairy cultivating viz. great quality and improve domesticated animals, preparing office, veterinary administrations , green feed accessibility, promoting and so on proper estimates should be created by the

advancement organizations working in the area like create dairy business venture strategy by receiving plans and asset for dairy farmers mindful and assemble the farmers towards embracing dairy as an endeavor.

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Appendix

APPENDIX

Maharashtra Animal and Fishery Sciences University Nagpur.

Mumbai Veterinary College, Parel, Mumbai-12

(Department of Veterinary and Animal Husbandry Extension)

Interview Schedule

INTERVIEW SCHEDULE

ENTREPRENEURIAL TRAITS OF DAIRY FARMERS IN PALGHAR DISTRICT OF KONKAN REGION

Date…….

A. **Socio- economic information**

1. **Name of Respondent** ----------

   Village: ……. Taluka: ……

   District: ……. Mobile No.: …….

2. **Age** (in years): …….

3. **Education:**

Sr. No.	Qualification	
1	Illiterate	
2	Primary (up to 4th std)	
3	Secondary (5th to 10th std)	
4	Higher secondary (11thto12th std)	
5	Higher Education (above 12th std)	

4. **Family size:** a) Male - ……. b) Female - …….

   c) Children - …… d) Total -……

5. **Family type: a**) Nuclear ……. b) Joint…….

6. **Farming experience:…….** yrs.

7. **Total land holding:** ……. Acres.

8. **Occupation:…….**

Sr. No.	Category	Income	Total annual income
1	Animal Husbandry		
2	Agriculture		
3	Business		
4	Other (job)		

9. **Hard size: …….**

Sr. No.	Type of Animal	Indigenous	Cross breed	Total Number
1	Cattle			
2	Buffalo			

10 .Social participation: …….

Sr. No.	Organization	Member
1	Gram Panchayat	
2	Panchayat Samiti	
3	Zilla Parishad	
4	Farmer club	
5	Educational organization	
6	Dairy Co-operative society	
7	SHG'S	

12. Extension agency contact: ……

Sr. No	Extension agencies	Degree of frequency		
		Always(2)	Sometime(1)	Never(0)
1	Village development officer			
2	Livestock Development Officer			
3	KVK Scientist			
4	NGO			
5	LSS			
6	Block development officer			

13. Mass Media exposure: …….

Sr. No	Source	Regularly use	Temporary use	Not use
A	**Electronic media**			
1	Radio			
2	T.V.			
B	**Printed media**			
1	News paper			
2	Leaflet/Folder			
C	**Social media**			
1	What's app			

2	You tube			
3	Facebook			
4	Instagram			

14. Total milk production/day……..

15. Milk consumption/day ……

16. Milk sale/day……..

17. ENTREPRENEURIAL TRAITS OF DAIRY FARMERS

17.1 Innovativeness:

Sr. No	**STATEMENTS**	**A**	**U**	**DA**
1	Likes to discover new market while selling of milk.			
2	I am trying introducing a new product or modification to an existing product.			
3	I feel safe with already tested method of producing and marketing of milk.			
4	I try to keep myself well informed about improved dairy farming practices and try to adopt as soon as possible.			
5	New dairy practices are not easily adoptable and hence I do not adopt.			
6	I have strong desire to adopt new practices of dairy farming.			

17.2 Achivement Motivation:

Sr. No	STATEMENTS	A	U	DA
1	I like to complete my work in time.			
2	It is my nature to earn more from dairy business.			
3	There is no encouraging environment in the dairy business.			
4	I have tendency to have a successful dairy business in the future.			
5	It will work even if the family is neglected, but successful milk production should flow.			

17.3 Risk orientation :

Sr. No	STATEMENTS	A	U	DA
1	A dairy entrepreneur should take greater risk than average farmer.			
2	A dairy entrepreneur should try new practices only after successfully used by other dairy entrepreneur.			
3	Trying an entirely new practice in dairy enterprise involves risk but it is worth.			
4	Dairy entrepreneur sale or cull male calf immediately.			
5	It is good for farmer to take risk when he knows his chance of success is high in adopting new practices.			
6	Dairy entrepreneur should keep improved breed instead of local.			

17.4 Manageability:

Sr. No	STATEMENTS	A	U	DA
1	The dairy business is more profitable and productive in the modern method than in the traditional method.			
2	A successful dairy farmer strives to experiment with new ideas.			
3	Traditional methods must be changed to increase the living standards of dairy farmers.			
4	Although it takes time for dairy farmer to learn new practices, there are advantages to doing so.			
5	The dairy farmer should adopt a modern practices even if he has many years of experience.			
6	I find nothing wrong in consulting expert advice regarding how I must manage my dairy enterprise.			

17.5 Feedback usage:

Sr. No	STATEMENTS	A	U	DA
1	I don’t get upset when given negative feedback about the way I mange my dairy farming.			
2	I try to know more about life stories of successful entrepreneurs in dairy business.			
3	I am unwilling to change my mind, once it is made up even in the face of new development.			
4	I find no reasons to consult other peoples about how to run my business better because I am satisfied with the way I run it.			

18. Constraints:

Sr.no	Statements	Ranking
1	Poor conception rate in Artificial Insemination	
2	High cost of concentrate mixture	
3	Lack of knowledge of market policy	
4	High cost of cross breed cow	
5	Irregularity of milk sale	
6	Longer distance of market	
7	Low social and economic status	
8	Lack of coordination among members	
9	Inadequate attachment to extension system	
10	Inadequate information about government schemes pertaining to dairy enterprise	

Abstract

Appendix – G

THESIS ABSTRACT

a)	Title of the thesis (in Capital letters)	**:**	"ENTREPRENEURIAL TRAITS OF DAIRY FARMERS IN PALGHAR DISTRICT OF KONKAN REGION"
b)	Full name of student	**:**	RAUT SATISH GAJANAN
c)	Name and address of Major Advisor	**:**	Dr. M. N. SAWANT Assistant Professor and I/c, Department of Veterinary and Animal Husbandry Extension, Mumbai Veterinary College, Parel -12
d)	Degree to be awarded	**:**	M.V.Sc
e)	Year of award of degree	**:**	2021
f)	Major subject	**:**	Veterinary and Animal Husbandry Extension
g)	Total number of pages in the thesis	**:**	
h)	Number of words in the abstract	**:**	262
i)	Signature of Student	**:**	
j)	Signature, Name and address of forwarding authority (HOD / SH)	**:**	Dr. M. P. SAWANE Professor, Department of Veterinary and Animal Husbandry Extension
k)	Signature of the Associate Dean		

ABSTRACT

Present study was conducted in purposively selected Palghar district from Konkan region of Maharashtra state to gauge enterprising conduct among dairy farmers. From the selected district, five blocks were selected randomly. Further from each block, five villages and from each village, five dairy farmers were chosen randomly who had dairy experience of atleast three years and had atleast five dairy animals in their farm . Organized pretested interview schedule was set up in local language (Marathi) to gather the data through personal interview strategy. Information was examined by utilizing frequency, percentage and correlation coefficient.

The socio-economical characteristics of dairy farmers concluded that respondents belonged to middle age, educated up to higher secondary school level, medium size of landholding, medium herd size and annual income. Along with these characters farmers belonged to medium family size with nuclear family type, medium level of milk production, low level of milk consumption and medium level of milk sale. Entrepreneurial traits of dairy farmers were measured in five categories namely innovativeness, achievement motivation, risk orientation, manageability and feedback usage. The study reflected that overall entrepreneurial traits were of medium level.

Among ten independent variables studied, six showed significant relationship with their entrepreneurial traits and those include education, milk sale, experience in dairy farming, milk production, mass media and extension agency contact while remaining four viz., age, family size, family type and land holding showed non-significant relationship with their entrepreneurial traits. Major constraints faced by dairy farmers while managing dairy enterprise were high cost of cross breed cows, irregularity of milk sale and high cost of concentrate mixture.

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१.	प्रबंधाचे नाव	:	"कोकण प्रांतातील पालघर जिल्ह्यातील दुग्ध व्यावसायिक शेतकऱ्यांची उद्योजक वैशिष्ट्ये"
२.	विद्यार्थ्याचे नाव	:	सतीश गजानन राऊत
३.	मार्गदर्शकाचे नाव	:	डॉ. मनिष. न. सावंत सहाय्यक प्राध्यापक आणि प्रभारी, पशुवैद्यकीय व पशुसंवर्धन विस्तार विभाग, मुंबई पशुवैद्यकीय महाविद्यालय,मुंबई - १२
४.	पदवी	:	पदव्युत्तर
५.	पदवी प्रदान करण्याचे वर्ष	:	२०२१
६.	मुख्य विषय	:	पशुवैद्यकीय व पशुसंवर्धन विस्तार शिक्षण
७.	प्रबंधाची एकूण पाने	:	
८.	सरांशाचे एकूण शब्द	:	□□□
९.	विद्यार्थ्याची सही	:	
१०.	विभाग प्रमुखाचे नाव] सही आणि पत्ता	:	डॉ. महादेव प. सवाणे, प्राध्यापक पशुवैद्यकीय व पशुसंवर्धन विस्तार विभाग] मुंबई पशुवैद्यकीय महाविद्यालय] मुंबई -□□
११.	सहयोगी अधिष्ठाता सही	:	

प्रबंध सारांश

प्रस्तूत अभ्यास महाराष्ट्र राज्यातील कोकण प्रांतातील पालघर जिल्ह्यातील दुग्धव्यावसायिक शेतकऱ्यांच्या उद्योजक गुणाशी निगडीत आहे. निवडलेल्या जिल्ह्यातुन पाच तालुके निवडले तसेच प्रत्येक तालुक्यातून पाच गावे सहजरीत्या निवडले. दुग्धव्यवयवसायिकाचा अनुभव किमान तीन वर्षाचा आणि किमान पाच जनावरे अशी सहजरीत्या निवडले होते. रचनाबद्ध वैयक्तिक मुलाखत प्रश्नावली तयार करुन स्थानिक मराठी भाषेमध्ये सर्वेक्षण करुन नंतर मुख्य सर्वेक्षण केले आहे. मिळालेल्या माहितीची ताळेबद्ध आखणी करुन सर्व माहितीची प्रमाणबद्ध पद्धतीने निवड करण्यात आली आहे. सदर माहितीचे सखोलपणे वारांवरता, टक्केवारी व परस्पर संबंधाचे विश्लेषण केले आहे.

उद्योजक गुणांचा अभ्यास करताना मध्यम स्वरुपातील वय, मध्यम प्रमाणात व्यवसायिकांचे उच्च माध्यमिक पर्यंत शिक्षण, मध्यम आकारमान असलेली जमीन धारणा, मध्यम समूह आणि मध्यम वार्षिक उत्पन्न आहे. याबरोबरच विभक्त कुटुंब प्रकार, मध्यम कुटुंब आकार, मध्यम दुधाचे उत्पादन, दुधाचा कमी वापर, दूध विक्रीची कमी पातळी असलेले शेतकरी आहेत. शेतकऱ्यांची उद्योजक वैशिष्ट्ये नाविन्यपूर्णता, ध्येयप्राप्ती प्रेरणा, व्यवस्थापनता, जोखीम अभिमुखता आणि अभिप्राय वापर या पाच प्रकारांमध्ये मोजल्या गेल्या. तसेच एकूण उद्योजक वैशिष्टे देखील माध्यम पातळीची होती.

दहा स्वतंत्र घटकांपैकी सहांमध्ये त्यांच्या व्यावसायिक वैशिष्ट्यांशी महत्त्वपूर्ण संबंध दर्शविला आणि त्यामध्ये शिक्षण, दुधाची विक्री, दुग्धौत्पादनाचा अनुभव, दुधाचे उत्पादन, जनसंपर्क आणि विस्तार विभागाशी संपर्क इत्यादींचा समावेश आहे. उर्वरित चार स्वतंत्र घटक जसे की वय, कौटुंबिक आकार, कौटुंबिक प्रकार आणि जमीन धारणाने त्यांच्या व्यावसायिक वैशिष्ट्यांसह महत्त्वपूर्ण नसलेले संबंध दर्शविले. संकरीत गायींची जास्त किंमत, दूध विक्रीची अनियमितता आणि खनिज मिश्रणाचा जास्त खर्च हे दुग्धव्यावसायिक शेतकऱ्यांना भेडसावणाऱ्या मुख्य अडचणी होत्या.

Vita

VITA

The Author of this book **Dr. Raut Satish Gajanan** was born on 13th April 1994 in Akola City, Maharashtra. He finished his education from J.B.V. High School and Agarkar College, Akola. He love for animals since a young age became the motivation to persue veterinary science. In 2018, he completed his graduation (B.V.Sc & A.H.) from Mumbai Veterinary College, Parel, Mumbai. Following which he completed his M.V.Sc. course work in the Department of Veterinary and Animal Husbandry Extension from the same institute in 2021.

As part of the Department of Veterinary and Animal Husbandry Extension he participated in various NSS activities, training programs conducted by the department and several conferences. During the tenure of his post-graduation program he also practiced at a veterinary clinic in Mumbai. He can be contacted satishgraut@gmail.com