

**ENTREPRENEURIAL BEHAVIOUR OF AGRIPRENEURS OF  
KAU TECHNOLOGY**

Thesis

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in partial fulfilment of the requirements for the award of the  
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By

**RAJU PARASHURAM NAIK**

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**DEPARTMENT OF AGRICULTURAL EXTENSION  
COLLEGE OF HORTICULTURE  
KERALA AGRICULTURAL UNIVERSITY  
VELLANIKKARA, THRISSUR - 680 656.**


**2017**

## DECLARATION

I, hereby declare that this thesis entitled “**Entrepreneurial behaviour of agripreneurs of KAU technology**” is a bonafide record of research done by me during the course of research and the thesis has not previously formed the basis for the award of any degree, diploma, fellowship or other similar title, of any other University or Society.

Place: Vellanikkara

Date: 28-10-2017

  
Raju Parashuram Naik  
(2015-11-096)

## CERTIFICATE

Certified that the thesis entitled “**Entrepreneurial behaviour of agripreneurs of KAU technology**” is a record of research work done independently by **Raju Parashuram Naik (2015-11-096)** under my guidance and supervision and that it has not previously formed the basis for the award of any degree, diploma, fellowship or associateship to him.

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Date: 28-10-2017



Dr. S. Helen


(Chairperson, Advisory Committee)

Professor


Communication Centre, Mannuthy

## CERTIFICATE

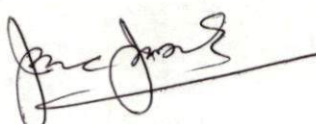
We, the undersigned members of the advisory committee of **Mr. Raju Parashuram Naik (2015-11-096)**, a candidate for the degree of **Master of Science in Agriculture** with major field in **Agricultural Extension**, agree that this thesis entitled "**Entrepreneurial behaviour of agripreneurs of KAU technology**" may be submitted by Mr. Raju Parashuram Naik in partial fulfillment of the requirement for the degree.




**Dr. S. Helen**  
(Chairman, Advisory Committee)  
Professor  
Communication Centre  
Mannuthy



**Dr. Alexander George**  
(Member, Advisory Committee)  
Professor & Head  
Central Training Institute  
Mannuthy



**Dr. Jose Joseph**  
(Member, Advisory Committee)  
Professor & Head  
Dept. of Agrl. Extension  
College of Horticulture  
Vellanikkara



**Dr. S. Krishnan**  
(Member, Advisory Committee)  
Professor & Head  
Dept. of Agrl. Statistics  
College of Horticulture  
Vellanikkara



(External Examiner)



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# INTRODUCTION

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# 1. INTRODUCTION

*"The power of entrepreneurship lies in achieving extraordinary results through ordinary efforts. This is the Magic of Life"*

*Handa (2010)*

After independence, the focus of the Government of India was to frame the major policies based on equity along with growth in the agriculture sector. Being an agrarian country, many efforts have been made towards economic and social stabilization over the past decades, but not much progress has been achieved in the growth of the agro industrial sector. Farmers lack access to adequate agricultural technology inputs and funding and have commercial farming skills have put the quality under the threat. With the increase in agricultural production, there is a need to have the proportionate growth in the agro-processing industry. In the recent past most of the farmers are becoming real estate owners by giving their fertile land to edifice industry, because they are unable to meet the expenditure spent on cultivation, high rates of interests taken from landlords, commission agents, banks and financial institutions (Nagalakshmi and Sudhakar, 2013). This situation can be changed by generating employment opportunities for them in rural areas itself. Agro entrepreneurship can be used as paramount medicine for the solution of this complexity. Developing entrepreneurs in agriculture will solve most of the problems by trimming down the burden of agriculture, creating employment opportunities for rural youth, controlling migration from rural to urban areas, increasing national income, sustaining industrial development in rural areas and cutting down the pressure on urban areas (Uplaonkar and Biradar, 2015).

A shift from farming to agribusiness is an important pathway to rejuvenate Indian agriculture and to make more appealing and profitable venture. Agripreneurship has the potential to add to the scope of social and economic advancement, for example, employment creation, income generation, poverty reduction and development in health, nutrition and overall food security in the national economy. Agripreneurship has also got the potential to create development opportunities, diversifying income, providing extensive employment and entrepreneurial opportunities in rural areas. If the right environment was created and farmers were provided with good infrastructure, technological support, and

timely availability of credit it could enhance food production and ensure food security as well as increase in income of the farmers and quality of life. Even less educated small farmers of old age could also become an agripreneur provided they were clearly informed about the right type of technologies and knowledge about their use. Hence, technology dissemination system was equally important than technology generation (Singh, 2013).

### **Agripreneurship**

Agripreneurship is defined as “generally, sustainable, community-oriented, directly-marketed agriculture. Sustainable agriculture denotes a holistic, system oriented approach to farming that focuses on the interrelationships of social, economic, and environmental processes” (Nagalakshmi and Sudhakar, 2013).

Agricultural businesses are always coupled with inherent ambiguity associated with agricultural production. Some significant sources of uncertainty in agribusiness include production risk, price risk, financial risk and changes in government programs. In India, 52% of the total land is cultivable as against 11% in the world (Uplaonkar and Biradar, 2015). Large population of India is dependent on agriculture for their source of revenue. But Indian agriculture is low in productivity with large number of disguised unemployment. But it is clear that there is a great scope for entrepreneurship in agriculture and this potential can be tapped only by effective management of different components by an individual with risk bearing capacity and a quest for latest knowledge in agriculture sector to prove as right agripreneurs. (Uplaonkar and Biradar, 2015).

An agripreneur may start a new agribusiness, change a business direction, acquire a business or may be involved in creating innovations in value addition. Explicit an agripreneur is a risk-taker, opportunist, initiator which deals with the uncertain agricultural business environment of the firm. Entrepreneurs are often discussed in terms of starting a business. The poor farmers have failed in agriculture but agripreneurs are becoming very successful by doing business in Agri Export Zones. (Tripathi and Agarwal, 2015):



## **Role of agripreneurship in national economy**

Agripreneurship plays various roles in the growth and development of national economy through entrepreneurship development which increases the income level and employment opportunities in rural as well as urban areas (Bairwa and Kushwaha, 2012). Agripreneurship also plays following role in the economic system (Sah *et al.*, 2009).

- ✓ It helps in inducing productivity gains by smallholder farmers and integrating them into local, national and international markets.
- ✓ It helps in reducing food costs, supply uncertainties and improving the diets of the rural and urban poor in the country.
- ✓ It also generates growth, increases and diversifies income and provides entrepreneurial opportunities in both rural and urban areas.

Kerala has attained worldwide acclaim for its achievements in the social sector, particularly in the health and education system. But the performance in the industrial sector has not been keeping pace with the potential of the State. Government of Kerala has recognized this factor and has instituted bold and forward looking measures to tap the unique strengths of the State aimed at providing a sustainable stimulus for industrial growth. Kerala is the first and only state in the country to have 1 per cent of the state's annual budget ear-marked for entrepreneurship development activities (GOK, 2014).

Kerala has a high per capita rate of consumption, but it imports a major share of its requirements including food. The educated and technically qualified youth are migrating for want of jobs and sufficient employment opportunities. The abundance of capital and manpower are not being tapped adequately. Keralites are reluctant to invest in economically productive activities even though there is a surfeit of techno-economic talent. The factors contributing to this state of affairs may range from labour market rigidities to the absence of a favourable investment climate and has to lead to a generation of entrepreneurship been lost.

Kerala's GDP per capita is about average, but its economic growth rate has been considerably slower. Unemployment rate in Kerala is: 11.6 per cent (rural), 12.2 per cent (urban) as against India: 2.3 per cent (rural), 5.7 per cent (urban).

This has forced many Keralites to leave and look greener pastures in India or abroad (Chandrasekar, 2006).

Kerala Agricultural University has been transferring agricultural technology to the benefit of farming community right from its inception. Several recommended agricultural technologies were utilized by the stakeholders for enhancing their income for their livelihood. Recently, promotion of agripreneurship is realized as inevitable for the revitalization of agriculture sector. Agripreneurship has potential to generate growth, diversifying income, providing widespread employment and entrepreneurial opportunities in rural areas. Hence, it was felt as appropriate to study the entrepreneurial behaviour of agripreneurs of KAU technology with the following objectives:

### **Objectives**

1. To assess the entrepreneurial behaviour of aspiring agripreneurs of KAU technology.
2. The factors influencing aspiring agripreneurs in adopting KAU technology.
3. To identify the constraints faced by aspiring agripreneurs in adopting KAU technology.
4. To propose measures to overcome the constraints faced by them.

### **Scope of the study**

Kerala Agricultural University had taken earnest and concerted effort to consolidate, showcase and disseminate the various technology generated suitable for entrepreneurship and skill development. Apart from showcasing the technology in various fairs, seminars and workshops were organised to transfer the technology to the ultimate users. Therefore, findings of the study may useful in highlighting the interventions required by the agripreneurs to strengthen their agribusinesses. It may also be useful for the researchers for developing new technology or further refinement of KAU technology if necessary.

Understanding entrepreneurial behaviour of agripreneurs is essential to improve the quality of extension services offered by Kerala Agricultural



University. The results can be utilized by the development departments to plan and execute the programmes for offering the required support and services to the agripreneurs.

### **Limitations**

Though, all possible efforts were made to make the study objective and precise, certain limitations did remain. The present study, being part of the Master's programme, has the normal limitations of time, funds and other facilities commonly faced by single student researcher. These limitations led to the selection of agripreneurs of KAU technology as the sample of the study. Generalizations made based on the findings of the study may not be directly applicable to other areas and need to be substantiated with other studies. Since, the study has adopted the ex-post facto design the memory bias on the part of the respondents cannot be ruled out. However earnest efforts were taken by the researcher to make it free from all sorts of biases and prejudices.

### **Presentation of the study**

The report of the study is presented in five chapters. The first chapter outlines a brief introduction, objectives, scope and limitation of the study. The review of literature relevant to the problem is cited in the second chapter. The third chapter describes material and methods which have a bearing on measurement of variables, with statistical procedures used, while the forth chapter deals with the results and discussion based on the obtained results. Finally, the fifth chapter put forth summary and conclusions of the thesis followed by bibliography. The appendices and the abstract of the study are given at the end.

# REVIEW OF LITERATURE

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## 2. REVIEW OF LITERATURE

A comprehensive review of literature structures an integral part of scientific investigation. It is important for the scientists to familiarize themselves with the work done in the past to outline the critical issues related to the study. For supporting the findings of the present investigation all accessible journals, books, periodicals and reports were referred by the researcher. Endeavours have been made to gather most important review on entrepreneurial behaviour of agripreneurs but as limited research has been done in past, it had not been conceivable by the researcher to find out review related straightforwardly to the entrepreneurial behaviour of agripreneurs.

On account of these understanding, the available literature appropriate to the issue has been explored in light of the objectives of the study. It has been displayed under the following sub heads:

2. 1 Concept related to entrepreneur, agripreneur, entrepreneurship and entrepreneurial behaviour
2. 2 Socio-economic characteristics of agripreneurs
2. 3 Dimensions of entrepreneurial behaviour
2. 4 Entrepreneurial behaviour of agripreneurs
2. 5 Factors affecting entrepreneurial behaviour of agripreneurs
2. 6 Constraints experienced by the agripreneurs

### **2. 1 Concepts related to entrepreneur, agripreneur, entrepreneurship and entrepreneurial behaviour**

#### **2. 1. 1 Entrepreneur**

Drucker (1985) defined an entrepreneur as 'one who always searches for change, responds to it and exploit it as an opportunity. Entrepreneurs innovate. Innovation is a specific instrument of entrepreneurship'.

Porchezian (1991) defined farm entrepreneur as one who kept at least one undertakings like poultry, dairy and sericulture separated from the primary occupation of crop husbandry.

Chatterjee (1992) defined an entrepreneur as one who made something new, embraced chance, arranged creation and handled the monetary vulnerability. He termed entrepreneurship as the mission and entrepreneur as the missionary.

Harold (1994) indicated that an entrepreneur took risk in initiating change, hoped to be remunerated and required some level of flexibility to seek after their thoughts; this thus required adequate expert be designated.

Sarmah and Singh (1994) expressed that an entrepreneur was one who could change crude materials into products and enterprises, who could viably use physical and money related assets for creating wealth, income and employment, who could advance new items, institutionalize or update existing items for making new markets and new clients.

According to Desai (1995) an entrepreneur was one who could see possible action in given situation, where others saw none and had the patience to study out the idea into scheme to which financial support could be provided.

Ramana (1999) characterized entrepreneurs as those individuals who worked for themselves.

Rao (2008) characterized an entrepreneur is a person who has the ability to identify a real market for a product or service idea, can price it economically and make the whole venture sustainable.

Badi and Badi (2007) defined an entrepreneur as a person with vision, original idea, decision making and daring to try; one who acts as the leader and the boss of the show, one who decides how business has to be done, who co-ordinates and arranges all the factors of production, one who has expertise in the field, who anticipates the market trends demand patterns and prices.



Haugen and Vik (2008) suggests that, among farmers, entrepreneurs are distinct types of farmers characterized by a strategic interest in the creation of addition activities on the farm that cannot be described as traditional farming.

### **2. 1. 2 Agripreneur**

Macher (1999) considered agripreneurship as the beneficial marriage of agriculture and enterprise; all the more evidently, transforming the farm into a business. Agripreneurship was a mental state of mind that could give the quality and inspiration to break from convention.

Jhamtani (1996) opined that agripreneur was a man who sorted out, supervised and accepted the risk of an agro-venture. Entrepreneurs were independently employed and salary creating people.

Agripreneurs were job-producers, not job-consumers. They transformed agriculture into agri-business. (Goel, 2002)

Uplaonkar and Biradar (2015) defined agripreneur as “entrepreneur whose main business is agriculture or agriculture-related”.

Tripathi and Agarwal (2015) defined agripreneur as someone who undertakes a variety of activities in agriculture and its allied sectors to be agripreneur.

In this way, an agripreneur is a man or a group of persons who take personal risk and see the conceivable outcomes in a given circumstance, change crude materials into products and ventures, composes generation and handles the financial vulnerability lastly expects remuneration for his work.

### **2. 1. 3 Entrepreneurship**

The idea of entrepreneur and entrepreneurship consolidates essential characteristics of innovation, leadership, hard work, enterprise, vision and maximisation of profits. All the financial, authoritative and administrative quality of an entrepreneur were constantly coordinated towards the prosperity of the general public and the group. (Desai, 1997)

As indicated by the Harvard School entrepreneurship included any intentional action that started, maintained or built up a benefit situated business in association with the interim circumstance of the business or with the monetary, political and social conditions encompassing the business. (Kanungo, 1998)

Entrepreneurship the way toward making something new with incentive by giving the essential time and exertion, accepting the going with monetary, psychic, and social dangers, what's more, accepting the subsequent prizes of financial and personal satisfaction and autonomy. (Peters, 1998)

Ganeshan (2001) expressed that entrepreneurship the limit with respect to development and gauge to present imaginative strategies in the business operations.

Bheemappa (2003) portrayed entrepreneurship as the imaginative and innovative reaction to the earth, which can happen in assortment of fields of social attempt business, industry, agribusiness, instruction, social work and it is the intense constraining variable in economic development.

As indicated by Reddy (2004) entrepreneurship a composite ability, the resultant of a blend of numerous qualities and attributes – these incorporate substantial variables as creative ability, readiness to take risks, capacity to unite and put to utilize factor of production, capital, labour, land and further more impalpable variables, for example, the capacity to activate logical and mechanical propels.

#### **2. 1. 4 Entrepreneurial behaviour**

Nomeshkumar and Narayanaswamy (2000) characterized entrepreneurial behaviour as a blend of seven components viz., creativity, achievement motivation, decision making capacity, risk taking capacity, information seeking capacity, co-ordinating capacity and leadership capacity.

Vijaykumar (2001) operationalized entrepreneurial behaviour as the combined result of information seeking ability, risk orientation, decision making ability, achievement motivation, leadership capacity, initiative and market perception of farmers.



Narmatha *et al.* (2002) expressed that creativity, achievement motivation and risk taking ability were the most imperative segments. Additional, decision making ability, inventiveness, administrative orientation, economic inspiration, level of desire and risk taking ability were observed to be essential in influencing the entrepreneurial behaviour.

Subramanyeswari and Reddy (2003) operationalized entrepreneurial behaviour as the fluctuations in information, ability and attitude of livestock farmers towards dairy ventures.

Mertiya (2017) characterized entrepreneurial behaviour is the cumulative outcome of knowledge of the enterprise, information seeking behaviour, risk taking ability, decision making ability, coordination ability, leadership ability, innovativeness, achievement motivation, cosmopolitness and management orientation.

From the above descriptions, it could be derived that entrepreneurial behaviour is the capacity of an entrepreneur to take risk, co-ordinate exercises, make clever decision and apply inventive thoughts towards expanding the benefit of the undertaking.

## **2. 2 Socio-economic characteristics of agripreneurs**

### **2. 2. 1 Age**

Ramlakshmidivi *et al.* (2013) found that more than half (57.50%) of the sugarcane growers belonged to middle age group accompanied by young (31.66%) and old age (10.83%) group.

Raghunath (2014) reported that 51.67 per cent of the respondents belonged to middle age group, whereas 16.67 and 31.66 per cent belonged to young and old age group, respectively.

Shivacharan (2014) stated that 38.33 per cent of the respondents belonged to late young age group followed by 26.67 per cent belonged to young, 23.33 per

cent belonged to moderately young and rest of them (11.67%) were very young age group.

Nargave (2016) revealed that majority (55.84%) of the respondents had a place with young age group whereas 27.50 and 16.66 per cent of respondents belonged to middle age group and old age group, respectively.

Krishnan (2017) found that majority (71.66%) of the respondents belonged to middle age group followed by 15.00 per cent found to be in old age group and 13.34 per cent belonged to young age group.

Kumar (2017) reported that 66.67 per cent of the dairy entrepreneurs had a place with middle age group, followed by old age (17.50%) and young age (16.25%).

### **2. 2. 2 Educational status**

Yadav (2012) indicated that 31.66 per cent of the sugarcane farmers were educated upto primary level, followed by 29 per cent educated upto middle school, 21.67 per cent educated upto higher school and 17.50 per cent of them were illiterates.

Chouhan *et al.* (2013) revealed that 28.33 per cent of the sugarcane cultivators were educated upto middle school group, followed by 22.5 per cent were upto higher secondary, 18.33 per cent upto middle school, 15.84 per cent upto high school, 9.16 per cent upto college level and remaining 5.84 per cent were illiterate.

Shivacharan (2014) reported that 65.84 per cent of the respondents were educated upto college level and above and rest of them 34.16 per cent had education upto high school level.

Nargave (2016) observed that 45.84 per cent of the respondents were educated upto middle school level, followed by 22.50 per cent of the respondents upto primary level, 16.67 per cent of them had higher secondary school education, 8.33 per cent were educated upto college level and remaining 6.66 per cent were illiterate.

Krishnan (2017) reported that more than 50 per cent of the respondents had educated upto PUC, accompanied by 23.00 per cent upto high school, 18.00 per cent had attained degree and remaining 3.00 per cent had primary level of education.

Kumar (2017) revealed that 32.50 per cent of the respondents were illiterate, 22.50 per cent had primary school level, 18.75 per cent finished upto middle school level, 11.25 per cent upto matriculate, 7.50 per cent upto higher secondary level, 5.00 per cent were graduate and only 2.50 per cent respondents had finished post graduate degree.

### **2. 2. 3 Occupational status**

Rathod *et al.* (2011) reported that majority of the respondents had agriculture as major occupation (52.50 %) accompanied by labour (28.33 %). The remaining respondents were home makers (15.00 %) and government job holders (04.17 %).

Kale (2012) revealed that 90.00 per cent of dairy women farmers had agriculture and dairy occupation, while 05.00 per cent of them belonged to agriculture, dairy and labour as occupation accompanied by 40.00 per cent of dairy women entrepreneurs had agriculture, dairy and other business as their occupation.

Kumar (2012) observed that majority of the respondents (68.33%) had agriculture as main occupation, though 22.50 per cent were engaged in agriculture with subsidiary enterprise and staying 9.17 per cent occupied with agriculture, subsidiary with other activities.

Kumar (2017) observed that 50.00 per cent of the dairy entrepreneurs had agriculture as well as dairy as their occupation, 36.25 per cent of the dairy entrepreneurs had agriculture + dairy + labour as their occupation and 8.75 per cent had agriculture + dairy + caste as their occupation.



#### **2. 2. 4 Annual income**

Giridhara (2013) observed that more than half of the respondents (57.5%) had medium annual income, followed by low (32.5) and high (10%) level of annual income.

Raghunath (2014) revealed that 66.66 per cent of the respondents belonged to medium level of annual income, followed by high and low level of annual income with 16.67 per cent each.

Sundaran (2016) reported that 46.67 per cent of the men respondents received an annual income in the range of Rs. 75,000 – 1,00,000 and in case of women SHG members, 51.12 per cent of them received an annual income between Rs. 50,000 – 75,000.

#### **2. 2. 5 Social participation**

Singh *et al.* (2012) reported that 36.67 per cent of the respondents had both medium and high level of social participation and 26.66 per cent respondents had low level of social participation.

Ramlakshmidevi *et al.* (2013) mentioned that higher percentage (67.50%) of the respondents had medium social participation accompanied by high (20.83%) and low (11.67%) levels of social participation.

Raghunath (2014) reported that majority (43.33 per cent) of the respondents had medium level of social participation, followed by 41.67 per cent of them belonged to low social participation and rest of them (15.00%) belonged to high level of social participation.

Shivacharan (2014) detailed that 40.84 per cent of the respondents belonged to non-official position in socio political organization, 40.00 per cent of the respondents belonged to official position in one or more organization, 10 per cent of the respondents belonged to official position in social/ political/ formal committees and 9.16 per cent belonged to involvement in community work as a member.

Nargave (2016) observed that 51.67 per cent of the sugarcane farmers belonged to medium social participation, followed by low (41.67%) and high (8.66%) level of social participation.

Krishnan (2017) revealed that majority (61.66%) of the respondents had membership in 2 organizations, followed by 33.33 per cent of them had membership in only one organization and 5 per cent of the respondents had membership in 3 organizations.

Kumar (2017) showed that 58.75 per cent of dairy entrepreneurs belonged to medium social participation, followed by low (21.25%) and high (20.00%) social participation, respectively.

### **2. 2. 6 Economic motivation**

Itawdiya (2012) revealed that majority (41.11%) of respondents belonged to medium economic motivation.

Singh *et al.* (2012) showed that 41.11 per cent of the respondents belonged to average economic motivation, accompanied by 33.33 per cent had high and 25.56 per cent had low economic motivation respectively.

Archana (2013) reported that 36.67 per cent of the respondents had higher economic motivation, followed by 32.22 per cent and 31.11 per cent belonged to medium and low level of economic motivation, respectively.

Shivacharan (2014) reported that majority (43.33%) of the respondents belonged to high level of economic motivation, followed by 32.50 per cent belonged to medium, 20.00 per cent low and 4.17 per cent of them belonged to very low level of economic motivation.

Nargave (2016) reported that majority (54.17%) of the respondents belonged to medium economic motivation, followed by low (31.67%) and high (11.16%) level of economic motivation.

Kumar (2017) 55.00 per cent of dairy entrepreneurs belonged to medium level of economic motivation, followed by 23.75 per cent of them belonged to high

level of economic motivation and remaining 21.25 per cent respondents belonged to low level of economic motivation.

Sadashive *et al.* (2017) observed that 45.83 per cent of the respondents had high level of economic motivation, whereas 32.50 per cent of them had medium level of economic motivation followed by 21.67 per cent of the respondents had low level of economic motivation.

### **2. 2. 7 Mass media contact**

Kamaraddi (2011) revealed that 64.17 per cent of the respondents belonged to medium level of mass media contact though 20.00 per cent of the respondents belonged to low and 15.83 per cent of the respondents with high level of mass media contact.

Giridhara (2013) indicated that 41.25 per cent of the women entrepreneurs belonged to medium level of mass media exposure whereas 30.00 and 28.75 per cent of the farmers belonged to high and low level of mass media exposure, respectively.

Sreeram (2013) found that 73.34 per cent of the women entrepreneurs had medium level of mass media participation whereas 16.66 per cent of them had high level of mass media participation and 10.00 per cent of the women entrepreneurs had low level of mass media participation.

### **2. 2. 8 Training received**

Kamaraddi (2011) reported that 51.67 per cent of the respondents belonged to medium level of training received, followed by 42.50 per cent and 5.83 per cent belonged to low and high categories of training received.

Giridhara (2013) indicated that 41.25 per cent of the entrepreneurs had received medium level of training and remaining 30.00 per cent of the entrepreneurs had received high level of training on profit making activities.



Sreeram (2013) revealed that half (50.00%) of the respondents had medium level of training, followed by low (28.33%) and high (21.67%) level of training, respectively.

Shivacharan (2014) revealed that 78.33 per cent of the respondents were untrained and remaining 21.67 per cent had undergone training.

## **2. 2. 9 Attitude towards self-employment**

Parimaladevi *et al.* (2006) found the most important factor influencing the establishment of agri-business units by the trainees under the 'Agri-clinics and Agri-business Scheme' in Kerala as the attitude towards self-employment, followed by their entrepreneurial ability and self-confidence. Hence focus on promoting a positive attitude towards self-employment, development of entrepreneurial ability and enhancement of the self-confidence of the trainees acquire importance in promotion of agri-business.

Gurubalan (2007) reported that 54.67 per cent of respondents belonged to medium level of attitude towards self-employment, followed by 25.33 per cent high and 20.00 per cent had low level of attitude towards self-employment.

Somanath (2009) revealed that 37.22 per cent of agripreneurs had high level of attitude towards self-employment, followed by 35.56 per cent had medium and 27.22 per cent had low level of attitude towards self-employment.

## **2. 3 Dimensions of entrepreneurial behaviour**

### **2. 3. 1 Decision making ability**

Kamaraddi (2011) found that 70.83 per cent of the respondents had moderate decision making ability, while 15.00 per cent of the respondents had high level of decision making ability and remaining 14.17 per cent of them had poor decision making ability.

Lawrence and Ganguli (2012) revealed that 42.00 per cent of the respondents had medium level of decision making ability, though almost 17.00 per cent had high level and the 31.00 per cent had low level of decision making ability.

Archana (2013) uncovered that the greater part of the beneficiaries (46.67%) fell into medium category of decision making ability, followed by 27.78 per cent of the respondents fell into high category and 25.55 per cent of the respondents fell into low category of decision-making ability.

Patel *et al.* (2014) observed that more than half (55.00%) of the milk producer had medium level of decision making ability, followed by low (26.25%) and high (18.75%) decision making ability.

Avhad *et al.* (2015) watched that 73.33 per cent of the respondents had adequate decision making ability, while 12.50 per cent belonged to fair decision making ability and 14.17 per cent belonged to poor decision making ability.

Mertiya (2017) reported that 51.00 per cent of the rural women in Udaipur district of Rajashtan had high level of decision-making ability trailed by medium and low with 40.00 and 9.00 per cent, respectively.

### **2. 3. 2 Achievement motivation**

Archana (2013) uncovered that 41.11 per cent of the respondents had high level of achievement motivation, followed by 38.89 and 31.11 per cent of them had medium and low level of achievement motivation, respectively.

Patel *et al.* (2014) found that 48.75 per cent of the dairy farmers had medium level of achievement motivation, followed by 23.75 per cent had high level of achievement motivation. While, 27.50 per cent of them had low level of achievement motivation.

Raut and Sankhala (2014) viewed that greater part of the respondents (73.75%) were observed to have moderate level achievement motivation. Though, almost one-fifth were observed to have high classification of this attribute and rest were under low class of achievement motivation.

Avhad *et al.* (2015) watched that majority (81.67%) of the respondents had medium achievement motivation, while 15.00 per cent of the respondents belonged

to low achievement motivation category, trailed by high achievement motivation category (3.33%).

Chandran (2015) revealed that 72.00 per cent of the respondents had medium achievement motivation and remaining 28 per cent had high level of achievement motivation.

Porchezhiyan *et al.* (2016) revealed that 60.80 per cent of the women entrepreneurs had high achievement motivation, followed by 21.70 per cent of the respondents had medium level of achievement motivation and 17.50 per cent of them had low level of achievement motivation.

Mertiya (2017) reported that majority of the respondents (83.00%) had high achievement motivation, 9.00 per cent with low level of achievement motivation and 8.00 per cent of them had medium level of achievement motivation.

### **2. 3. 3 Risk taking ability**

Raghunath (2014) found out that half of the respondents (50.00%) had medium level of risk orientation, followed by 33.33 per cent of the respondents had low risk orientation while, 16.67 per cent of the respondents had low level of risk orientation.

Raut and Sankhala (2014) located that majority of the respondents (54.58 %) were discovered to be mild chance takers. However, maximum of the large farmers (42.30 %) had high risk taking ability.

Avhad *et al.* (2015) found that greater part (89.17%) of the respondents had medium risk orientation, however 5.83 per cent of the respondents had high risk orientation, though meager per cent of the respondents (5.00%) had low risk orientation.

Gamit *et al.* (2015) reported that 68.00 per cent of the respondents had medium degree of risk orientation, while 19.00 per cent respondents had low degree and 13.00 per cent respondents had high degree of risk orientation.



Rubeena (2015) indicated that the greater part of the respondents (63.30%) had medium risk taking ability, 20.00 per cent of the respondents had high risk taking ability and rest of them (16.67%) had low risk taking ability.

Mertiya (2017) showed that 39.00 per cent of the respondents had high level of risk taking ability, followed by low and medium with 31.00 and 30.00 per cent, respectively.

#### **2. 3. 4 Self confidence**

Lawrence and Ganguli (2012) revealed that more than half of the respondents (57.00%) had high level of self confidence, accompanied by medium (23%) and low (20%) level of self confidence, respectively.

Raut and Sankhala (2014) found that majority (71.25%) of the respondents had medium state of self confidence, though large farmers were having medium to high state of self confidence, which demonstrated their capacity to finish distinctive undertakings and address difficulties in their dairy venture in effective way.

Avhad *et al.* (2015) revealed that majority (56.67%) of the respondents had medium self confidence, trailed by low (3.33%) and high (40.00%) self-confidence. It implied that they were more sure about their capacities to enhance their dairy venture. This confidence might be expected their accomplishment in dairy undertaking with getting higher income.

Porchezhiyan *et al.* (2016) reported that 77.50 per cent of the entrepreneurs had high degree self confidence, followed by 15.80 per cent low and 6.70 per cent had medium degree self confidence.

Sadashive *et al.* (2017) reported that the majority (59.17%) of the respondents had medium level of self-confidence, followed by 22.50 per cent of the respondents had low level of self-confidence and 18.33 per cent of the respondents had high level of self-confidence.



### 2. 3. 5 Innovativeness

Archana (2013) observed that 40.00 per cent of the respondents had a place with high innovativeness whereas, 36.67 and 23.33 per cent of them had a place with medium and low innovativeness, respectively.

Tekale *et al.* (2013) uncovered that 50.00 per cent of the respondents had medium level of innovativeness taken after by 32.00 per cent of the respondents, who had high level of innovativeness and just 18.00 per cent of the respondents had low level of innovativeness.

Patel *et al.* (2014) reported that majority of the entrepreneur (61.25%) had medium level of innovativeness, followed by 23.75 per cent of the respondent had high level of innovativeness and 15.00 per cent had low level of innovativeness.

Raut and Sankhala (2014) noted that majority of the respondents (79.58 %) were found in the medium class of innovativeness. Notwithstanding, most of the large farmers were found in medium and high classification of innovativeness. This plainly demonstrated the dominant part of the respondents were interested in adoption of the new technologies and practices in the administration of dairy enterprise.

Avhad *et al.* (2015) noted that 82.50 per cent of the respondents had medium degree of innovativeness, though 10.83 per cent of the respondents belonged to high innovativeness and only 6.67 per cent of the respondents belonged to low innovativeness group.

Gamit *et al.* (2015) uncovered that larger part of the respondents 73.00 per cent had medium level of innovativeness, trailed by 18.00 per cent of them had low level of innovativeness. It was watched that 09.00 per cent of the respondents had high level of innovativeness.

Rubeena (2015) reported that 56.67 per cent of the respondents were found in medium innovativeness category followed by 23.33 per cent of respondents belonged to low innovativeness category and 20.00 per cent of respondents belonged to high innovativeness category.

Porchezhiyan *et al.* (2016) revealed that majority of the respondents (71.60%) were found in medium innovativeness category, while 14.20 per cent of the respondents belonged to medium and low innovativeness category each.

Mertiya (2017) noted that 38 per cent of the rural women in Udaipur district had high innovativeness, trailed by 35.00 per cent and 27.00 per cent of the respondents had medium and low innovativeness, respectively.

### **2. 3. 6 Leadership ability**

Kumar (2012) detailed that 50.00 per cent of respondents fell under medium level of leadership ability category, followed by 30.83 and 19.17 per cent of respondents fell under high and low level of leadership ability categories, respectively.

Archana (2013) reported that among the respondents, 45.55 per cent had high level of leadership ability, 27.78 per cent had low and remaining 26.67 per cent had medium level of leadership ability.

Anthony *et al.* (2014) revealed that 73.00, 14.00 and 13.00 per cent of total respondents had high, low and medium level of leadership ability categories, respectively.

Mertiya (2017) found that 68.00 per cent of rural women of Udaipur district of Rajasthan had medium leadership ability whereas 19.00 per cent and 13.00 per cent of respondents had low and high leadership ability, respectively.

### **2. 3. 7 Information seeking behaviour**

Lawrence and Ganguli (2012) observed that 56.00 per cent of the respondents belonged to medium level of information seeking behaviour, followed by low (26.00%) and high (18.00%) level of information seeking behaviour, respectively.

Tekale *et al.* (2013) revealed that more than three fourth of the dairy entrepreneurs (76.00 %) had medium level of information seeking behaviour, taken after by 20.00 per cent of respondents had high state of information seeking

behaviour. Only a few (04.00 %) respondents had low level of information seeking behaviour.

Patel *et al.* (2014) reported that greater part of (73.75 %) dairy entrepreneurs had medium information seeking conduct, accompanied by 13.75 per cent low and 12.50 per cent high information seeking behaviour.

Mertiya (2017) revealed that 63.00 per cent of the rural women in Udaipur district of Rajasthan had medium level of information seeking behaviour and rest of them (37%) had low level of information seeking behaviour.

Sadashive *et al.* (2015) observed that 49.17 per cent of the dairy entrepreneurs had medium level of information seeking behaviour, accompanied by 31.67 per cent of dairy entrepreneurs had low level of information seeking behaviour and 19.16 per cent of the respondents had high level of information seeking behaviour.

### **2. 3. 8 Coordination ability**

Lawrence and Ganguli (2012) reported that dominant part of the respondents (53.00%) had high level coordinating ability, followed by 25.00 per cent medium and 22.00 per cent low coordinating ability, respectively.

Patel *et al.* (2014) found out that majority of the respondents (68.75%) belonged to medium level coordination ability, accompanied by 16.25 per cent of respondents belonged to high level of coordination ability. Whereas remaining 15.00 per cent of the respondents belonged to low level of coordinating ability.

Avhad *et al.* (2015) revealed that 71.67 per cent of the beneficiaries had adequate coordinating ability followed by 15.83 per cent and 12.50 per cent observed in poor and good class of coordinating ability, respectively.

Gamit *et al.* (2015) indicated that majority (86.00%) of dairy entrepreneurs had medium level of coordinating ability, followed by 08.00 and 06.00 per cent had high and low level of coordinating ability respectively.



Mertiya (2017) observed that half (50.00%) of respondents had medium coordinating ability followed by low (28%) and high (22%) level of coordination ability.

### **2. 3. 9 Management orientation**

Kumar (2012) reported that 46.67 per cent of the respondents had a place with medium category of management orientation, followed by 30.00 and 23.33 per cent of the respondents had high and low level of management orientation, respectively.

Archana (2013) indicated that greater part (44.44%) of the respondents had high level of management orientation, accompanied by 28.89 per cent of the respondents had medium level of management orientation and 26.67 per cent of the respondents had low level management orientation.

Giridhara (2013) detailed that 57.50 per cent of the respondents had a place with the high management orientation category, while 22.50 per cent with low and 20.00 per cent with medium level of management orientation categories.

Shivacharan (2014) showed that 39.17 per cent of the respondents had medium management orientation classification followed by 34.70 and 12.50 per cent of respondents had high and low level of management orientation, respectively.

Sadashive *et al.* (2017) revealed that 45.50 per cent of the dairy entrepreneurs of Marathwada region of Maharashtra had a place with low management orientation category, accompanied by medium (38.33%) and high (19.17%) level of management orientation categories, respectively.

### **2. 3. 10 Market orientation**

Kamaraddi (2011) revealed that more than half (66.67%) of the pomegranate growers in Koppal district of Karnataka belonged to medium level of market orientation, followed by 22.50 per cent and 10.83 per cent belonged to high and low level of market orientation, respectively.



Giridhara (2013) reported that 58.75 per cent of women entrepreneurs in Mandya district belonged to high level of market orientation, whereas 25.00 per cent of women entrepreneurs belonged to low level of market orientation and 16.25 per cent belonged to medium level of market orientation.

Sreeram (2013) observed that 64.17 per cent of the members of kudumbashree non-government organizations in Palakkad district of Kerala belonged to medium marketing orientation, followed by low (25.00%) and high (10.83%) marketing orientation, respectively.

#### **2. 4 Level of entrepreneurial behaviour of agripreneurs**

Kumar (2012) found that 39.17 per cent of the respondents had medium level of entrepreneurial behaviour, followed by high (35.00%) and low (25.83%) level of entrepreneurial behaviour, respectively.

Tekale *et al.* (2013) indicated that majority (66.00 %) of the milk producers had medium level of entrepreneurial behaviour, whereas 26.00 and 08.00 per cent of milk producers had high and low level of entrepreneurial behaviour, respectively.

Bhosale *et al.* (2014) observed that majority of the entrepreneurs belonged to middle aged group, medium innovativeness, average level of annual income, high level of extension participation and high level of risk orientation. Greater part (70.00%) of entrepreneurs belonged to medium level of entrepreneurial behaviour.

Patel *et al.* (2014) reported that 72.50 per cent of entrepreneurs belonged to medium level of entrepreneurial behaviour, followed by 15.00 and 12.50 per cent of entrepreneurs belonged to high and low level of entrepreneurial behaviour, respectively.

Avhad *et al.* (2015) shown that majority (72.50%) of respondents had medium level of entrepreneurial behaviour whereas 13.33 and 14.17 per cent of respondents had low and high level of entrepreneurial behaviour, respectively.

Sreeram *et al.* (2015) revealed that majority (70.00%) of the Kudumbashree neighbourhood group members in Kerala belonged to medium level of

entrepreneurial behaviour category, whereas 15.83 and 14.17 per cent of the respondents belonged to high and low level of entrepreneurial behaviour category.

Sundaran and Sreedaya (2016) conducted a study on Performance Analysis of Self Help Groups on Farm Entrepreneurship in Thiruvananthapuram District of Kerala reported that majority of the men (60.00%) and women (53.34%) respondents had medium level of entrepreneurial behaviour, followed by 24.45 per cent of men had high, 35.55 per cent of women had low and remaining 15.55 per cent of men had low and 11.11 per cent of women had high level of entrepreneurial behaviour.

Mertiya (2017) reported that majority (63.00%) of the respondents belonged to medium level of entrepreneurial behaviour and remaining 37 per cent of them belonged to low level of entrepreneurial behaviour.

Sadashive *et al.* (2017) conducted study on entrepreneurial behaviour of dairy entrepreneurs in Marathwada region in Maharashtra observed that majority (68.33%) of the respondents had medium entrepreneurial behaviour, followed by low (17.50%) and high (14.17%) level of entrepreneurial behaviour, respectively.

## **2. 5 Factors affecting entrepreneurial behaviour of agripreneurs**

### **2. 5. 1 Age**

Sreeram (2013) revealed that there was negative and non significant relationship between age and entrepreneurial behaviour of Kudumbashree neighbourhood group members.

Raghunath (2014) reported that there was a positive and significant relationship found between age and entrepreneurial behaviour of the nursery entrepreneurs.

Shivacharan (2014) found that there was positive and significant relationship between age and entrepreneurial behaviour of the respondents.

Somvanshi *et al.* (2016) observed that age had non significant association with entrepreneurial behaviour of the respondents.

### **2. 5. 2 Educational status**

Savitha (2007) revealed that education was found to have positive and significant relation with entrepreneurial behaviour of rural and urban women entrepreneur.

Sreeram (2013) reported that education had positive significant relationship with entrepreneurial behaviour of the respondents.

Raghunath (2014) found that education had a positive significant correlation with entrepreneurial behaviour of nursery entrepreneurs.

Shivacharan (2014) reported that there was positive and significant relationship between education and entrepreneurial behaviour of the rural youth.

Somvanshi *et al.* (2016) observed that education had positive and significant influence on entrepreneurial behaviour of the vegetable growers.

### **2. 5. 3 Occupational status**

Ranuji (2006) found a positive and significant relationship between occupation and entrepreneurial behaviour of the dairy farmers.

Lawrence and Ganguli (2012) observed that occupational status of dairy farmers had positive and non-significant association with their entrepreneurial behaviour.

Kumar (2017) reported that there was a positive and significant correlation between occupation and entrepreneurial behaviour of the men entrepreneurs and in case of women entrepreneurs it was observed a negative and non-significant association.

### **2. 5. 4 Annual income**

Patel *et al.* (2013) found that there was no correlation between annual income and entrepreneurial behaviour of the respondents.

Patel *et al.* (2014) observed that annual income of dairy entrepreneurs had positive and significant relationship with their entrepreneurial behaviour.



Pisure *et al.* (2015) shown that annual income of the dairy entrepreneurs had positive and highly significant with their entrepreneurial behaviour.

Sreeram *et al.* (2015) revealed that annual income of Kudumbashree neighbourhood group members in Kerala had positive and significant association with their entrepreneurial behaviour.

### **2. 5. 5 Social participation**

Raghunath (2014) observed that entrepreneurial behaviour of nursery grower had positively and significantly relationship with their socio-political participation.

Shivacharan (2014) indicated that entrepreneurial behaviour of the rural youth had positive and significant association with their social participation.

Sreeram *et al.* (2015) reported that social participation had positive and significant relationship with entrepreneurial behaviour of the respondents.

### **2. 5. 6 Economic motivation**

Lawrence and Ganguli (2012) observed that economic motivation of dairy farmers had positive and significant association with their entrepreneurial behaviour.

Shivacharan (2014) reported that entrepreneurial behaviour of the respondents had positive and significant association with their economic motivation.

Kumar (2017) reported that there was a positive and significant correlation between economic motivation and entrepreneurial behaviour of the men entrepreneurs and in case of women entrepreneurs it was observed a negative and non-significant association.



### **2. 5. 7 Mass media participation**

Lawrence and Ganguli (2012) observed that mass media participation of dairy farmers had positive and significant association with their entrepreneurial behaviour.

Giridhara (2013) revealed that mass media participation of women entrepreneurs had positive and significant relationship with their entrepreneurial behaviour.

Sreeram *et al.* (2015) reported that mass media exposure of respondents had positive and significant association with their entrepreneurial behaviour.

### **2. 5. 8 Trainings received**

Giridhara (2013) revealed that training received of women entrepreneurs had non-significant relationship with their entrepreneurial behaviour.

Raghunath (2014) revealed that training received had positive and significant association with entrepreneurial behaviour of the nursery entrepreneurs.

Shivacharan (2014) reported that entrepreneurial behaviour in case of rural youth had positive and significant relationship with training undergone.

### **2. 6 Constraints experienced by the agripreneurs**

Somanath (2009) conducted a study on entrepreneurial effectiveness of agripreneurs in Kerala shown that high input cost was the most serious constraints, followed by difficulty in securing credit, labour shortage and high wage rate and lack of storage facilities were the constraints faced by the agripreneurs.

Singh (2011) conducted a study of profile and problems of agripreneurs in Punjab found that 38.46 per cent of the respondents faced lack of skilled labours as the major constraints, followed by lack of knowledge about particular enterprise (30.76%), input non availability (23.07%), high cost of production (15.38%) and non availability of credit (11.53%).

Giridhara (2013) revealed that 32.5 per cent of the respondents perceived securing working capital as the most serious constraint while, 72.5 per cent of them perceived entire loan amount was given as the serious constraint in finance, whereas in marketing 48.75 per cent of the respondents perceived long distance of the market as most serious constraints and in production, high labour cost was the most serious constraint faced by the women entrepreneurs in Mandya district of Karnataka.

Sreeram (2013) conducted a study on entrepreneurial behaviour of members of kudumbashree non-government organizations in Palakkad district of Kerala reported that problems related to marketing like, problems due to delay payment and prejudices among the consumers about quality of the produce were the major constraints, followed by competition from other enterprises and non-availability of input at nearby market for wholesale purchase were also the major constraints faced by respondents.

Raghunath (2014) led a study on entrepreneurial behaviour of nursery owner in Kolhapur city of Maharashtra uncovered that marketing (35.00%) and access to needed information time (33.33%) were the sever constraints faced by the respondents.

Bairwa *et al.* (2014) found that the more competition in existing market was the main problem confronted by the 53 agripreneurs (91.37%) followed by marketing and infrastructural issues by 50 agripreneurs (86.20%), perishability and seasonability of products by 45 agripreneurs (77.58%), instability in demand and prices of produces by 41 agripreneurs (70.68%), illiteracy and absence of knowledge of the farmers by 39 agripreneurs (67.24%) and inadequate cash in hand to run the enterprise by 36 agripreneurs (62.06).

Nargave (2016) led a review on entrepreneurial behaviour of sugarcane growers in block Shahpur district Jabalpur of Madhya Pradesh reported that high labour cost was the major production constraint followed by high charges of middlemen brokers commission was the major marketing constraints faced by the respondents.

Chourasiya *et al.* (2017) reported that the major constraints faced by respondents were technical constraints (54%) followed by marketing constraints (45.81%) and financial constraints (39%) respectively.

# RESEARCH METHODOLOGY

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### 3. RESEARCH METHODOLOGY

Research methodology is a way to systematically solve the research problem. (Kothari and Garg, 2017). It includes the procedure of the conducted study such as sample size, research design, sampling techniques, data collection and analysis. This section briefly describes the methods and techniques followed by the researcher to conduct this study, which are systematically presented under the following sub-heads:

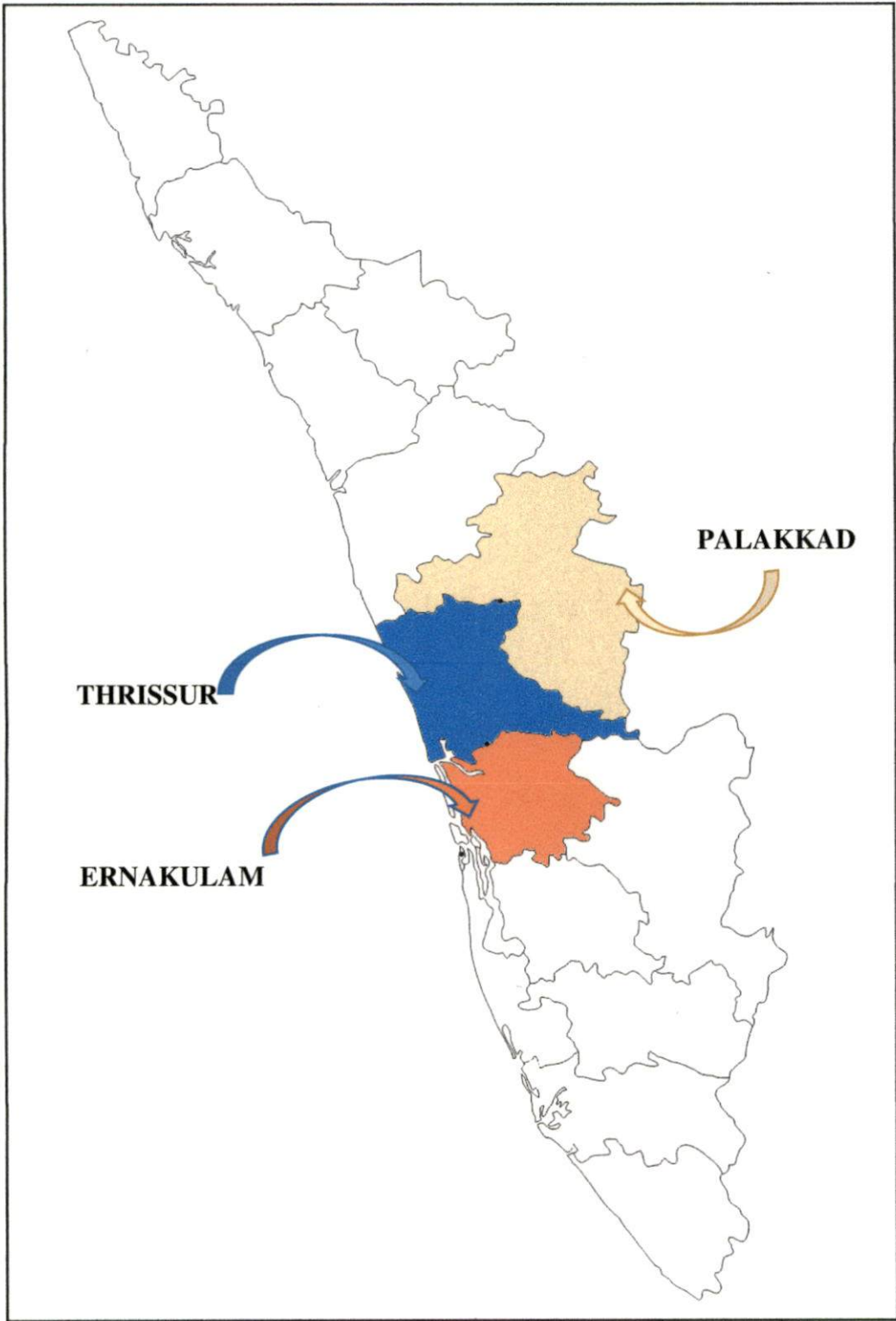
- 3. 1 Research design
- 3. 2 Locale of the study
- 3. 3 Sampling procedure employed
- 3. 4 Variables and their empirical measurement
- 3. 5 Data collection procedure
- 3. 6 Statistical techniques used in the study

#### **3. 1 Research design**

In view of the objectives of the study *ex-post facto* research design was considered as appropriate. As indicated by Kerlinger (1973) *ex-post-facto* research is a systematic exact enquiry in which the researchers did not have direct control of affecting independent variables, since manifestations had already happened. Thus, *ex-post facto* research design was considered fitting to utilize in this study.

#### **3. 2 Locale of the study**

Keeping in view of the fact that majority of the respondents who visited the extension centres of Kerala Agricultural University in Thrissur district for seeking the details of technologies developed by Kerala Agricultural University, belonged to the central zone of Kerala. The zone consists of Thrissur, Palakkad and Ernakulam districts. The map depicting the study area is presented in Fig. 1.



**Fig. 1 Map showing the selected districts of Kerala state for the study**

### 3. 3 Sampling procedure employed

#### 3. 3. 1 Selection of respondents

In this study aspiring entrepreneurs are those who sought KAU technology from the extension centres of KAU in Thrissur Dt for starting an agribusiness during the year 2014 and 2015. The list of clients who had sought for KAU technology from the extension centers of Kerala Agricultural University viz., Krishi Vigyan Kendra, Communication Centre and Central Training Institute, Mannuthy of Thrissur district during 2014 and 2015 were collected. One hundred clients who had sought for KAU technology were selected using simple random sampling technique to form the respondents.

**Table 3. 1 Distribution of respondents according to the technology received from KAU** (n=100)

Sl. No.	Name of enterprises	Percentage of respondents
1	Nursery management	35
2	Mushroom production	30
3	High-tech vegetable cultivation	20
4	Bee keeping	5
5	Mango processing	5
6	Jack fruit processing	5

From the Table 3. 1 it was observed that 35 per cent of the respondents were engaged in nursery management followed by mushroom cultivation (30%), high-tech vegetable cultivation (20%), bee keeping (5%), mango processing (5%) and jack fruit processing (5%). They started the respective enterprise after receiving technical guidance from KAU.

#### 3. 4 Variables and their empirical measurement

##### **Selection of dimensions of entrepreneurial behavior and independents variables**

Through the review of past studies and consultation with experts in the field of agricultural extension, 24 dimensions of entrepreneurial behaviour and 16

independent variables were identified. Along with operational definitions, the identified variables were sent to 50 judges for suggesting their relevancy on a five point continuum ranging from most relevant to least relevant. The judges were drawn from the field of agricultural extension. The responses of 30 judges were considered for working out the relevancy index for each item. The scores were given as follows:

<b>Response</b>	<b>Score</b>
Most relevant	4
More relevant	3
Relevant	2
Less relevant	1
Least relevant	0

The aggregate score received for each variable was worked out. The variables which secured more than relevancy index value of 85 were included for constructing the interview schedule. Details of the variables selected is attached in Appendix I.

### **3. 4. 1 The selected independent variables were**

3. 4. 1. 1 Age
3. 4. 1. 2 Educational status
3. 4. 1. 3 Occupational status
3. 4. 1. 4 Annual income
3. 4. 1. 5 Social participation
3. 4. 1. 6 Economic motivation
3. 4. 1. 7 Mass media contact
3. 4. 1. 8 Trainings received
3. 4. 1. 9 Attitude towards self-employment
3. 4. 1. 10 Self-reliance



### **3. 4. 2 Selected dependent variable was entrepreneurial behaviour**

#### **3. 4. 2. 1 The selected dimensions of entrepreneurial behaviour were**

- 3. 4. 2. 1. 1 Decision making ability
- 3. 4. 2. 1. 2 Achievement motivation
- 3. 4. 2. 1. 3 Risk taking ability
- 3. 4. 2. 1. 4 Self-confidence
- 3. 4. 2. 1. 5 Innovativeness
- 3. 4. 2. 1. 6 Leadership ability
- 3. 4. 2. 1. 7 Information seeking behaviour
- 3. 4. 2. 1. 8 Coordination ability
- 3. 4. 2. 1. 9 Management orientation
- 3. 4. 2. 1. 10 Market perception

#### **3. 4. 1 Independent variables**

##### **3. 4. 1. 1 Age**

It refers to the chronological age of the agripreneurs in completed years at the time of conducting the study. The respondents were additionally classified into three categories based on the method followed by Census of India, (Government of India, 2011).

<b>Sl. No.</b>	<b>Category</b>	<b>Age (years)</b>
1	Young age	Up to 35
2	Middle age	36-50
3	Old age	>50

##### **3. 4. 1. 2 Educational status**

Education was conceptualized for the present study as the number of years the respondent attended teaching institutions from elementary school to college level. Education of the respondent was measured by using Trivedi's (1963) scale with some alterations and as followed by Nargave (2016) was adopted. Respondents were classified into six categories as follows:

Sl. No.	Category	Score
1	Illiterate	1
2	Primary school	2
3	High school	3
4	Intermediate	4
5	Graduate	5
6	Post graduate	6

#### 3. 4. 1. 3 Occupational status

Occupation is operationally defined as, major professions of agripreneurs from which they depend on for their livelihood. Method followed by Kumar (2017) was utilized for this study. The scores were allotted as given below:

Sl. No.	Category	Score
1	Farming	1
2	Allied activities	2
3	Services	3
4	Agribusiness	4
5	Agricultural labourer	5
6	Non-agricultural labourer	6
7	Others	7

#### 3. 4. 1. 4 Annual income

Annual income of the family of the respondent was determined by considering the total income of the family from all the sources during previous year and expressed in terms of rupees. Based on the total annual family income, the respondents were categorized into three groups using mean and standard deviation as a measure of check.

Sl. No.	Category	Range of income (Rs./annum)
1	Low	<1,65,000
2	Medium	1,65,000 – 5,41,000
3	High	>5,41,000

### 3.4.1.5 Social participation

The social participation status of the respondents was analysed by studying their participation in different organizational activities. Based on their type of participation, they were categorized as non-member or member. Their frequency of meeting was also analysed by documenting whether they attended regularly, occasionally or not attended meeting. The variable was evaluated on the premise of method followed by Krishnan (2017) with reasonable alterations. The scoring design was followed as given below:

Member/Non member	Score	Extent of participation	Score
Non-member of an organization	0	Regular	2
Member of an organization	1	Occasional	1
		Never	0

Based on the scores acquired, the respondents were characterized into low, medium and high, keeping the mean and standard deviation as check. The maximum and minimum attainable score was 0 and 18 individually.

### 3.4.1.6 Economic motivation

It refers to the occupational success in terms of profit maximization and the relative values individual place on economic ends.

The scale had five statements in which four were positive and one was negative. It was measured on five-point continuum, such as 'strongly agree', 'agree', 'undecided', 'disagree' and 'strongly disagree' appraised with weightage of 5, 4, 3, 2 and 1 for positive explanations and 1, 2, 3, 4 and 5 for negative



explanations, individually. The variable was evaluated on the premise of method followed by Vijayakumar (2011) with reasonable alterations.

The most extreme and least score extended in the vicinity of 25 and 5, respectively. Based on scores received, the agripreneurs were assembled into three classifications by utilizing the mean and standard deviation scores as measures of check.

Sl. No.	Category	Range of scores
1	Low	<(Mean - 1SD)
2	Medium	(Mean $\pm$ 1SD)
3	High	>(Mean + 1SD)

#### 3. 4. 1. 7 Mass media contact

Mass media contact refers to how much agripreneurs were exposed to different mass media (TV, Radio, Newspapers, and so on). The diverse mass media sources were recorded and the respondents were made a request to respond how regularly they were exposed to these mass media. Method followed by Krishnan (2017) was utilized for this study. The scores were allotted as given below:

Sl. No.	Mass media	Score
1	Regularly	3
2	Occasionally	2
3	Never	1

#### 3. 4. 1. 8 Trainings received

It was operationally defined as intensive learning activity for a group of selected agripreneurs assisted by competent trainers to understand and acquire the skills and abilities required in the management of existing enterprises at a place where appropriate facilities exist and a time and duration considered suitable to rural youth.



A score of 1 was assigned to the agripreneur who had undergone training and score 0 was assigned to the agripreneur who did not receive any training. In the present study training received was measured utilizing the method followed by Shivacharan (2014).

Sl. No.	Category	Score
1	Attended training	1
2	Not attended training	0

#### 3. 4. 1. 9 Attitude towards self-employment

This is characterized as the mental disposition of the agripreneur towards self-employment. In the present review attitude towards self-employment was measured utilizing the Likert scale as followed by Gurubalan (2007). The scale comprises of 10 statements. The respondents were made a request to express their agreement or disagreement to each of the statement and scores of 5, 4, 3, 2 and 1 were allotted individually on account of positive statements and scoring procedure was reversed in case of negative statements. The scores received for every item were summed up to arrive at the individual's score on attitude towards self-employment. The attainable score ranged from 10 to 50.

Sl. No.	Category	Range of scores
1	Low	<(Mean - 1SD)
2	Medium	(Mean $\pm$ 1SD)
3	High	>(Mean + 1SD)

#### 3. 4. 1. 10 Self-reliance

This refers to the degree to which a man depends on self for his future endeavour. This variable was evaluated by utilizing the method followed by Gurubalan (2007). The response was measured in view of the following scoring systems:

Sl. No.	Percentage	Category	Score
1	100	Completely self-reliant	4
2	75-99	More self-reliant	3
3	50-74	Less self-reliant	2
4	25-49	Least self-reliant	1

### 3. 4. 2. 1 Dimensions of entrepreneurial behaviour

The agripreneurs' level of entrepreneurial behavior was analyzed by using 'Entrepreneurial Behavior Index' followed by Aiswarya (2016) with suitable modifications, which included dimensions like decision making ability, achievement motivation, risk taking ability, self confidence, innovativeness, leadership ability, information seeking behavior, coordinating ability, management orientation and market perception.

The agripreneurs were asked to rate the statements representing selected dimensions. The response of the agripreneurs were assigned score of 1, 2, 3, 4, and 5 indicating the most negative to most positive degree of opinion as per Likert scale. The total score of each statement was calculated by summing up the values obtained. The following formula was used for calculating the index of each statement and composite index for all the dimensions:

$$\text{Index of each statement} = \frac{\text{Total score for each statement}}{\text{Maximum score of the statement}} \times 100$$

$$\text{Composite index} = \frac{\sum X}{M \times N \times S} \times 100$$

Where,  $\sum X$  = sum of total scores of all statements (Sum of frequencies multiplied by weight)

M = Maximum score

N = Number of respondents

S = Number of statements

The indices were then classified into three categories as followed by Aiswarya (2016) for interpreting the result as given below:

Range of Index values	Category
0 – 32	Low
33 – 66	Medium
67 – 100	High

#### **3. 4. 2. 1. 1 Decision making ability**

In the present study, decision making ability is operationally characterized as the extent to which an entrepreneur justifies the selection of the best means from among the accessible options on the premise of scientific criteria for accomplishing maximum economic benefit.

The decision making ability of the agripreneurs was measured by obtaining their responses by administering ten identified statements. This dimension was evaluated by utilizing the method followed by Manmohan (2013). The responses of the agripreneurs were assigned score of 0 for 'In consultation with others' and 1 for 'Independently'. Total score of all statements were calculated by summing up the values obtained. The composite index was used for calculating the level of decision making ability of the agripreneurs.

#### **3. 4. 2. 1. 2 Achievement motivation**

It was operationalized as the desire for magnificence to achieve a feeling of individual achievement. This dimension was evaluated by utilizing the method followed by Manmohan (2013). The scale comprises of six statements to be evaluated on a five point continuum specifically, strongly agree, agree, undecided, disagree and strongly disagree with the scores of 5, 4, 3, 2 and 1 respectively. Total score of all statements were calculated by summing up the values obtained. The composite index was used for calculating the level of achievement motivation of the agripreneurs.



### **3. 4. 2. 1. 3 Risk taking ability**

Risk taking ability was operationalized as the level to which the agripreneur is oriented towards risk and uncertainty in facing problems in commercial enterprise.

In the present study, risk taking capacity of agripreneurs was measured with the assistance of a scale followed by Sreeram (2013). The scale consists of six statements to be measured on a five point continuum specifically, strongly agree, agree, undecided, disagree and strongly disagree with the scores of 5, 4, 3, 2 and 1 respectively. In case of negative statements this was reversed. The total score was computed for each statement by summing up the scores received. The composite index was used for calculating the level of risk taking ability of the agripreneurs.

### **3. 4. 2. 1. 4 Self confidence**

It was operationalised as the extent of belief in one's own capacity in accomplishing the things one wishes. The variable was evaluated on the premise of method followed by Aiswarya (2016) with reasonable alterations. It comprised of six statements. The answers were received on dichotomous continuum in 'yes' or 'no' form by assigning the scores of 1 and 0, respectively for positive statements and for negative statements it was reversed. The composite index was used for calculating the level of self confidence of the agripreneurs.

### **3. 4. 2. 1. 5 Innovativeness**

It was characterized as how much an agripreneur is moderately prior in adopting new ideas. The scale followed by Archana (2013) was utilized to evaluate innovativeness. This comprises of five statements of which three of them were negative. The responses were received on a five point continuum specifically, strongly agree, agree, undecided, disagree and strongly disagree with the scores of 5, 4, 3, 2 and 1 respectively. The scoring methodology was reversed for negative statements. The total score was computed for each statement by summing up the scores received. The composite index was used for calculating the level of innovativeness of the agripreneurs.



### **3. 4. 2. 1. 6 Leadership ability**

Leadership ability was operationalized as how much an individual initiates or persuades the activity of others. The scale developed by Sreeram (2013) with reasonable changes was utilized to quantify leadership capacity. In the present study, leadership ability was measured on a three point continuum specifically, "always", "sometimes" and "never" with scores i.e., 3, 2 and 1 respectively.

The aggregate score was computed for each statement by summing up the scores recorded. The composite index was used for calculating the level of leadership ability of the agripreneurs.

### **3. 4. 2. 1. 7 Information seeking behaviour**

It was operationally characterized as the level of frequency of contacts by an agripreneur with different data sources. This is the example by which, an agripreneur gets information either all alone chasing or as an outcome of being a piece of a network. The dimension was evaluated on the premise of method followed by Kumar (2012) with reasonable alterations.

In the present study, the level of frequency of contacts with information sources of agripreneur was arranged on the premise of type of sources, for example, formal, informal and media sources. The contacts with formal, informal and media sources were measured on four point continuum *viz.*, once in a fortnight, once in a month, at whatever point problem emerges and never by allocating scores of 4, 3, 2 and 1, respectively. The aggregate score was computed for each information source by summing the scores recorded. The composite index was used for calculating the level of information seeking behaviour of the agripreneurs.

### **3. 4. 2. 1. 8 Ability to co-ordinate the entrepreneurial activities**

It was characterized as how much an individual co-ordinates activity in a time dimension.

The scale comprises of four statements. The responses were received and the scores were given as

Well in advance	– 3
At the nick of the time	– 2
Never	– 1

The total score was computed for each statement by summing up the scores recorded. The dimension was evaluated based on the method followed by Aiswarya (2016) with reasonable alterations. The composite index was used for calculating the level of coordinating ability of the agripreneurs.

### **3. 4. 2. 1. 9 Management orientation**

It was operationally characterized as the level to which agripreneur were oriented towards dealing with their income generating exercises with regard to planning and production functions.

The scale comprised of nine statements including planning and production related explanations of which eight statements were positive and one statement was negative. The scoring was given for each statement on a five point continuum. The score given for the positive statements were 5, 4, 3, 2 and 1 for strongly agree, agree, undecided, disagree and strongly disagree respectively and the score was reversed for negative statements. The aggregate score was computed for each statement by summing up the scores recorded. The composite index was used for calculating the level of management orientation of the agripreneurs. This dimension was evaluated by utilizing the method followed by Archana (2013).

### **3. 4. 2. 1. 10 Marketing perception**

The scale comprised of five marketing related statements. The scoring was given for each statement on a five point continuum. The scores given were 5, 4, 3, 2 and 1 for strongly agree, agree, undecided, disagree and strongly disagree respectively. This dimension was evaluated by utilizing the method followed by Giridhara (2013). The aggregate score was computed for each statement by summing up the scores recorded. The composite index was used for calculating the level of marketing perception of the agripreneurs.

### **3. 5 Data collection procedure**

#### **3. 5. 1 Instruments used for the study**

The data were collected with an interview schedule, which was developed in consultation with advisory committee and experts in the field of agricultural extension. The interview schedule was subjected to pre-testing before administering to the related respondents. In view of the experience gained during the pre-testing of the interview schedule it was reasonably modified wherever vital. The finalised interview schedule utilized for the study is given in Annexure II.

Interview schedule comprised of four sections. The first section comprised of essential primary information of the respondent i.e., respondent name, address, district and contact number. The second part included socio economic profile of respondents, third part determined dimensions of entrepreneurial behaviour of agripreneurs and fourth part identified the problems faced by the respondents and suggestions offered by the agripreneurs for better management of their ventures.

#### **3. 5. 2 Method of data collection**

Each selected respondent was individually interviewed with a pre-tested interview schedule. It was ensured that the questions were effectively comprehended by the respondent by repeating the questions wherever important. Perception of respondents, experience, conduct, feelings, emotions, thoughts, goals and surroundings were additionally observed during interview.

### **3. 6 Statistical techniques used in the study**

The data collected from the respondents were scored, tabulated and analyzed using the appropriate statistical tools such as arithmetic mean ( $\bar{X}$ ), standard deviation ( $\sigma$ ), percentage and correlation coefficient.

#### **3. 6. 1 Arithmetic Mean (AM)**

It is defined as the sum of all the values of observation divided by the total number of observations. Symbolically it is represented as  $\bar{X}$ .

$$\text{Arithmetic Mean } (\bar{X}) = \frac{X_1 + X_2 + X_3 + \dots + X_n}{n}$$



$$\text{Arithmetic Mean } (\bar{X}) = \frac{\sum_{i=0}^n X_i}{n}$$

Where,

$\bar{X}$  = Arithmetic Mean

$\sum_{i=0}^n X_i$  = Sum of all observations

n = Total number of observations

### 3. 6. 2 Standard Deviation (SD)

It is positive square root of the mean of the squared deviations taken from arithmetic mean. It is represented by the symbol( $\sigma$ )

$$\text{Standard Deviation } (\sigma) = \sqrt{\frac{1}{n} [\sum X_i^2 - \frac{(\sum X_i)^2}{n}]}$$

Where,

$\sum X_i^2$  = Total sum of squares of the observations

$(\sum X_i)^2$  = Square of sum of observations

n = number of observations

### 3. 6. 3 Frequency and percentages

Frequency distribution and percentages were used to know the distribution pattern of respondents according to variables.

Percentages were used for standardization of sample by calculating the number of individuals that would be under the given category.

### 3. 6. 4 Karl Pearson's correlation coefficient (r)

It (r) was used to find out the relationship between socio economic profile and entrepreneurial behavior of the agripreneurs. Following formula was used for calculation of r-value.

$$r = \frac{\frac{\sum x - \sum y}{\sum xy - n}}{\sqrt{\frac{[\sum x^2 - \sum (x)^2]}{n} \cdot \frac{[\sum y^2 - \sum (y)^2]}{n}}}$$



Where,

$r$  = correlation coefficient

$\sum xy$  = sum of the product of both variables  $x$  and  $y$

$\sum x$  = sum of variable  $x$

$\sum y$  = sum of variable  $y$

$\sum x^2$  = sum of square of variable  $x$

$\sum y^2$  = sum of square of variable  $y$

$n$  = number of respondents

### 3. 6. 5 Multiple regression analysis

This was used to find out the relative importance of different dimensions of entrepreneurial behaviour of agripreneurs.

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3$$

$Y$  is the value of the Dependent variable ( $Y$ ), what is being predicted or explained

$a$  ( $\alpha$ ) is the Constant or intercept

$b_1$  is the Slope (Beta coefficient) for  $X_1$

$X_1$  First independent variable that is explaining the variance in  $Y$

$b_2$  is the Slope (Beta coefficient) for  $X_2$

$X_2$  Second independent variable that is explaining the variance in  $Y$

$b_3$  is the Slope (Beta coefficient) for  $X_3$

$X_3$  Third independent variable that is explaining the variance in  $Y$

# RESULTS AND DISCUSSION

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## 4. RESULTS AND DISCUSSION

Based on the objectives of the study, the data were collected and analysed by subjecting to appropriate statistical tools. The results of the present study on the entrepreneurial behaviour of agripreneurs of KAU technology and various possible reasons behind the results and discussions are presented under following subheads:

4. 1 Socio-economic characteristics of agripreneurs
4. 2 Dimensions of entrepreneurial behaviour
4. 3 Entrepreneurial behaviour of agripreneurs
4. 4 Factors affecting entrepreneurial behavior of agripreneurs
4. 5 Constraints experienced by the agripreneurs
4. 6 Suggestions to overcome the constraints faced by agripreneurs

### 4. 1 Socio-economic characteristics of agripreneurs

In this section the study of socio-economic characteristics of agripreneurs was made with reference to age, education, mass media contact, social participation, attitude towards self-employment, economic motivation, self-reliance and trainings received by the respondents. The analysed data are presented in the form of Tables and figures followed by the interpretation of results as given below:

#### 4. 1. 1 Age of agripreneurs

It could be observed from Table 4. 1 that 47.00 per cent of the agripreneurs belonged to the middle age group, followed by 39.00 per cent belonged to old age group and 14.00 per cent belonged to young age group. (Fig.2)

An observation of the above results showed that majority of the respondents were of middle age. The possible explanation behind the above pattern may be that the middle aged agripreneurs could take up decision independently to implement their desires and goals. More over the middle aged agripreneurs were energetic, had physical vigor and efficient in executing the work and relatively had free hand in making expenditure towards their interested areas. This result was in accordance with the findings of Raghunath (2014) and Nargave (2016).

**Table 4. 1 Distribution of agripreneurs according to their age**

(n=100)

Sl. No.	Category	Frequency	Percentage
1	Young age	14	14.00
2	Middle age	47	47.00
3	Old age	39	39.00
<b>Total</b>		<b>100</b>	<b>100.00</b>

**4. 1. 2 Education level of agripreneurs**

It could be viewed from the Table 4. 2 that 36 per cent of the agripreneurs educated up to high school, followed by graduate (35%), intermediate (25%), post graduate (3%) and primary school (1%), respectively. (Fig.3)

**Table 4. 2 Distribution of agripreneurs according to their education**

(n=100)

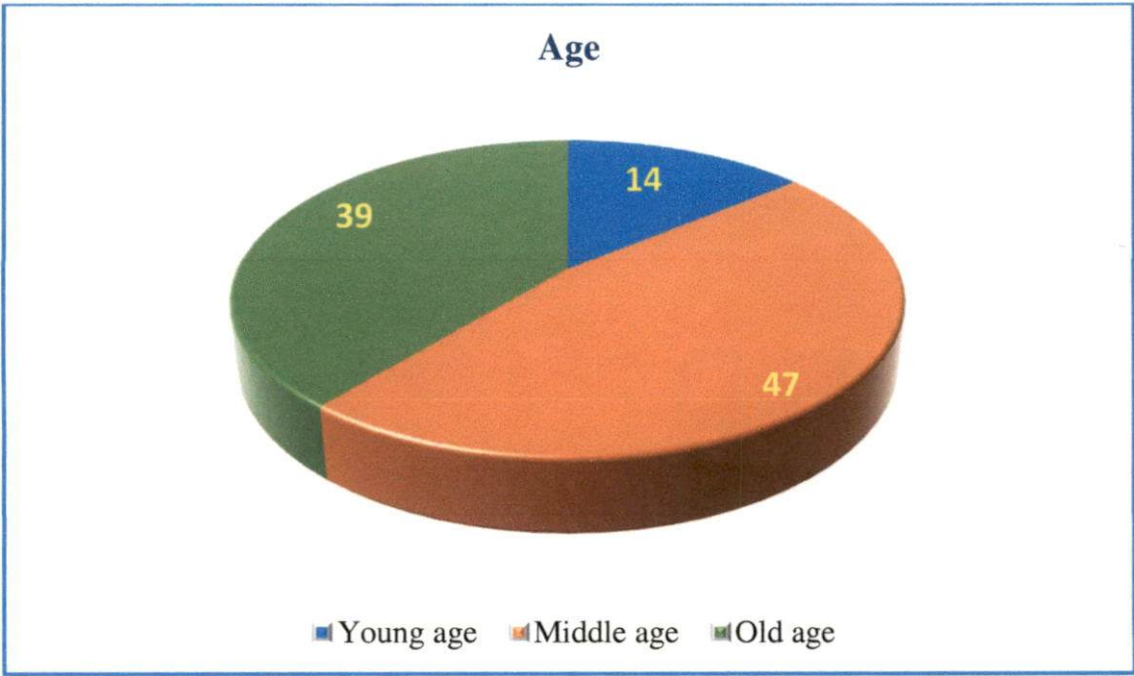
Sl. No.	Category	Frequency	Percentage
1	Primary school	1	1.00
2	High school	36	36.00
3	Intermediate	25	25.00
4	Graduate	35	35.00
5	Post graduate	3	3.00
<b>Total</b>		<b>100</b>	<b>100.00</b>

The result was a reflection of the higher literacy rate of Kerala State. There was no illiterate among the agripreneurs. This indicates that today's agripreneurs are well educated and capable of gaining knowledge on the intended enterprise. A similar finding was reported by the Nargave (2016).

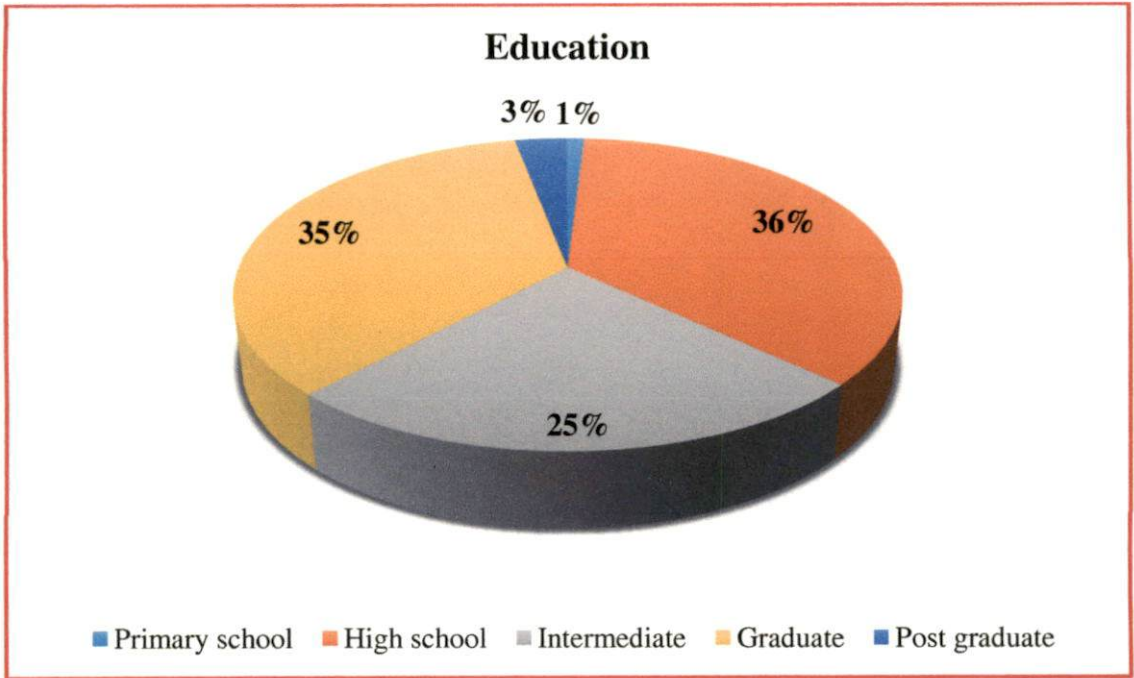
**4. 1. 3 Occupational status**

The data presented in Table 4. 3 revealed that 34 per cent of the agripreneurs had agribusiness as their primary occupation, followed by farming and services (25%) each, agricultural labourer (4%), allied activities (3%), non agricultural labourer (1%) and others (8%), respectively. (Fig.4) As the respondents selected





**Fig. 2 Distribution of agripreneurs according to their age**



**Fig. 3 Distribution of agripreneurs according to their education**



for the study were agripreneurs, majority of them had agribusiness and farming as their main occupation. A similar finding was reported by Kumar (2017).

**Table 4. 3 Distribution of agripreneurs according to their occupational status**

(n=100)

Sl. No.	Category	Percentage
1	Agribusiness	34.00
2	Farming	25.00
3	Services	25.00
4	Others	8.00
5	Agricultural labourer	4.00
6	Allied activities	3.00
7	Non agricultural labourer	1.00
<b>Total</b>		<b>100.00</b>

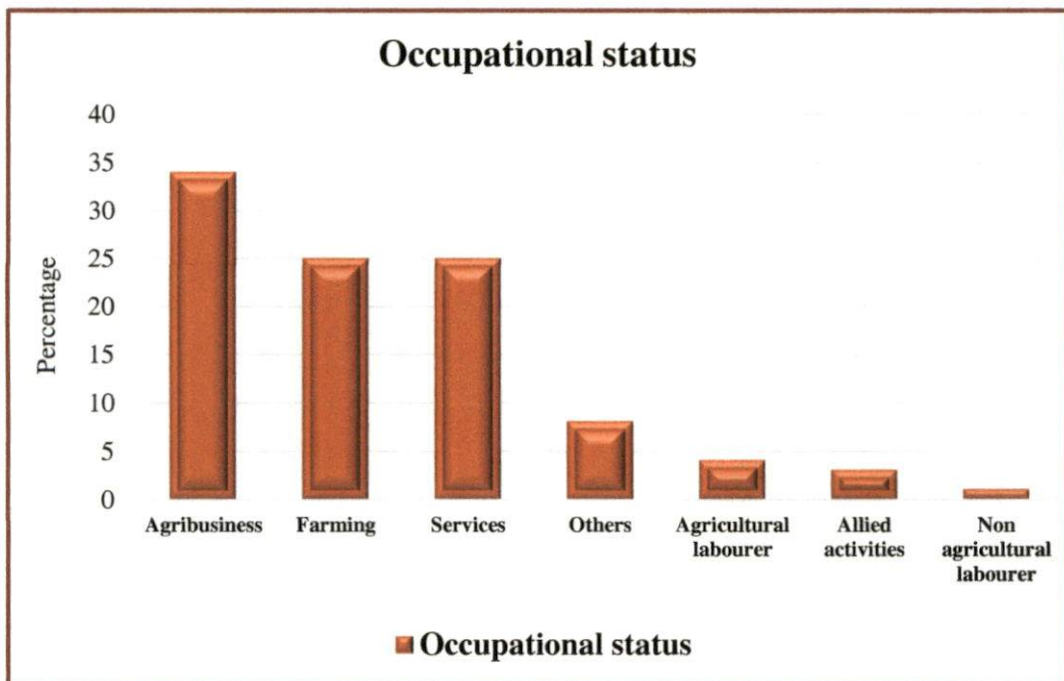
#### 4. 1. 4 Annual income

**Table 4. 4 Distribution of agripreneurs according to their annual income**

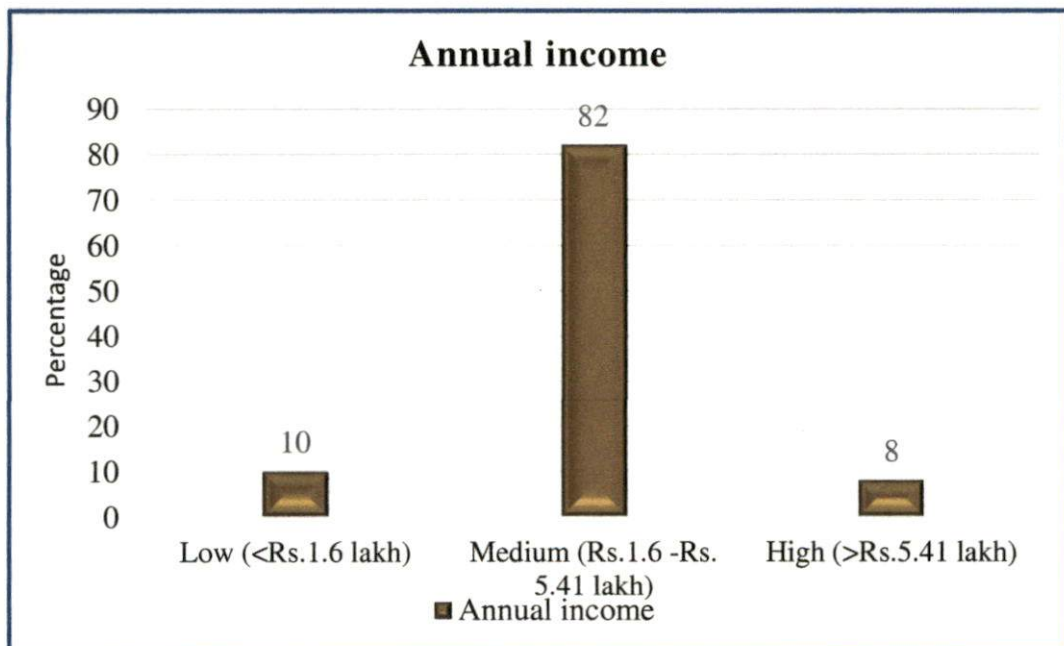
(n=100)

Sl. No.	Category	Range of income (Rs.)	Percentage
1	Low	<1.65 lakh	10.00
2	Medium	1.65 – 5.41 lakh	82.00
3	High	>5.41 lakh	8.00
<b>Mean: 3.53</b>		<b>S. D: 1.88</b>	

The data furnished in the Table 4. 4 indicated that majority (82%) of the agripreneurs belonged to the category of earning medium annual income, followed by low (10%) and high (8%) annual income. (Fig.5) A similar result was observed by Raghunath (2014).



**Fig. 4** Distribution of agripreneurs according to their occupational status



**Fig. 5** Distribution of agripreneurs according to their annual income

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#### 4. 1. 5 Social participation

The data furnished in Table 4. 5 indicated that 73 per cent of the agripreneurs had medium social participation, followed by 16 per cent had low and 11 per cent had high social participation. (Fig.6) Social participation cheers agripreneurs to set up contact with the support system, which can encourage agripreneurs for gaining more support from fellow members.

**Table 4. 5 Distribution of agripreneurs according to their social participation**

(n=100)

Sl. No.	Category	Range of scores	Percentage
1	Low	<0.12	16.00
2	Medium	0.12-5.12	73.00
3	High	>5.12	11.00
<b>Mean: 2.62</b>			<b>S. D: 2.50</b>

For medium social participation the reason could be that the agripreneurs with medium formal education and average economic conditions are keen to take an interest in social participation for getting better social status when compared to agripreneurs having low social participation. While lack of interest and time, lack of perceived benefits and evading local politics could be the major reason for medium social participation. These observations are in line with the findings of Ramlakshmidevi *et al.* (2013) and Krishnan (2017).

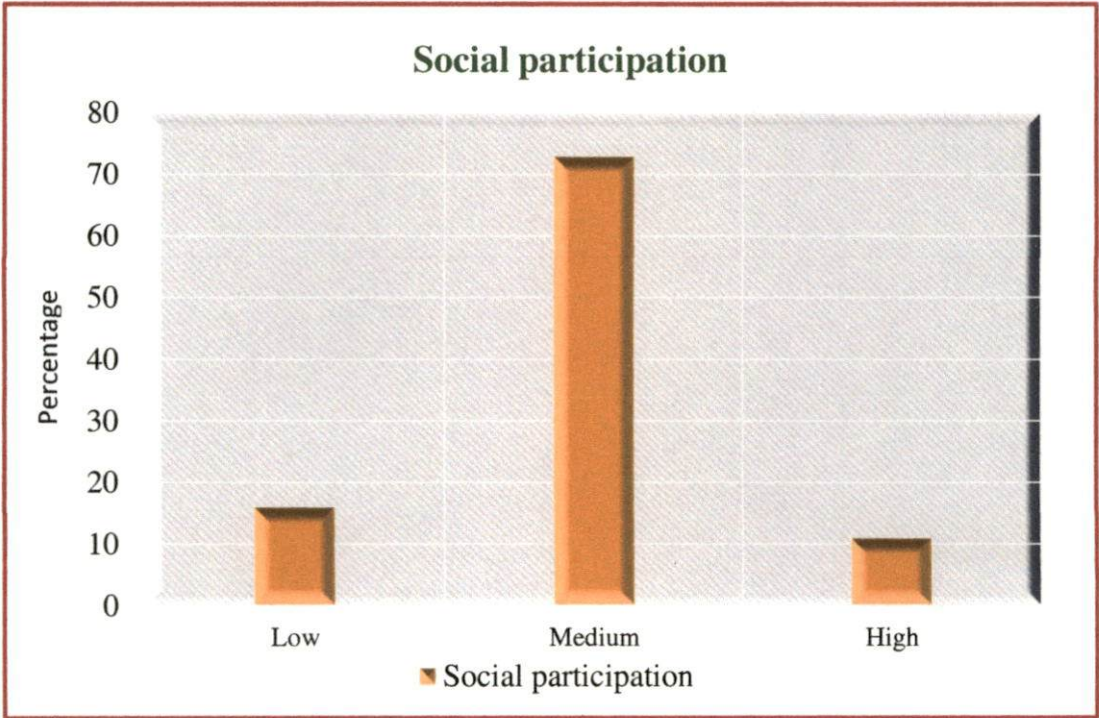
#### 4. 1. 6 Economic motivation

**Table 4. 6 Distribution of agripreneurs according to their economic motivation**

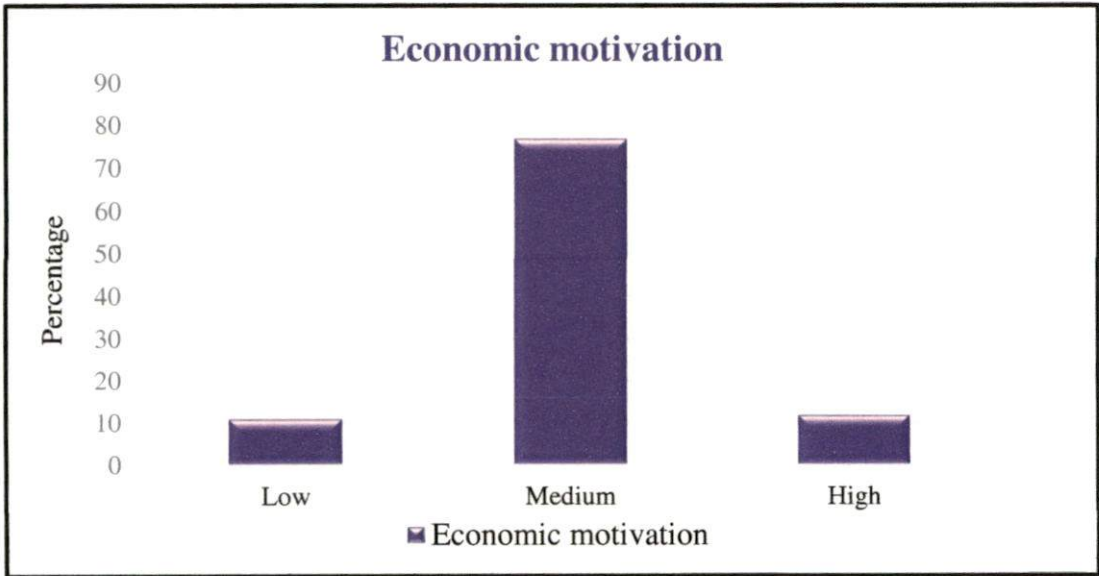
(n=100)

Sl. No.	Category	Range of scores	Percentage
1	Low	<15.88	11.00
2	Medium	15.88-20.30	77.00
3	High	>20.30	12.00
<b>Mean: 18.09</b>			<b>S. D: 2.21</b>





**Fig. 6 Distribution of agripreneurs according to their social participation**



**Fig. 7 Distribution of agripreneurs according to their economic motivation**

The perusal of data in the Table 4. 6 revealed that majority (77%) of the agripreneurs had medium economic motivation, followed by high (12%) and low (11%), respectively. (Fig.7) The main aim of an agripreneur was to effectively utilize the physical and financial resources for making more profit and increasing income. Moreover, economic gains might be the most important goal for starting an enterprise. These observations are in line with the findings of Nargave (2016).

#### 4. 1. 7 Mass media contact

It could be observed from the Table 4. 7 that majority (76%) of the respondents belonged to medium mass media contact category, followed by high (16%) and low (8%), respectively. (Fig.8)

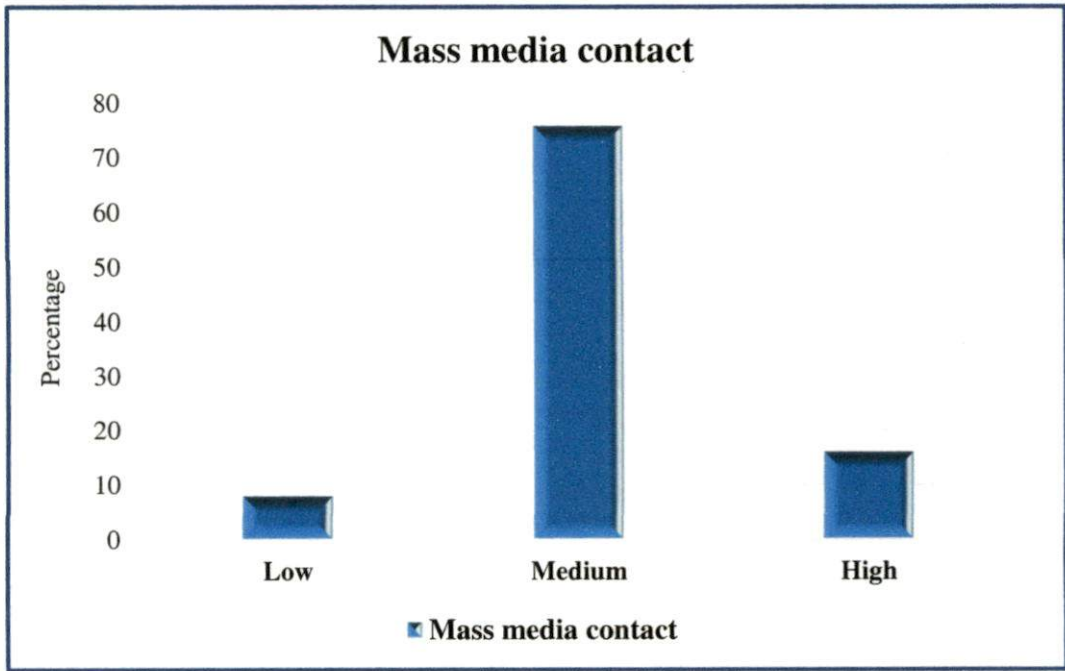
**Table 4. 7 Distribution of agripreneurs according to their mass media contact**  
(n=100)

Sl. No.	Category	Range of scores	Percentage
1	Low	<14.17	8.00
2	Medium	14.17-19.03	76.00
3	High	>19.03	16.00
<b>Mean: 16.6</b>			<b>S. D: 2.43</b>

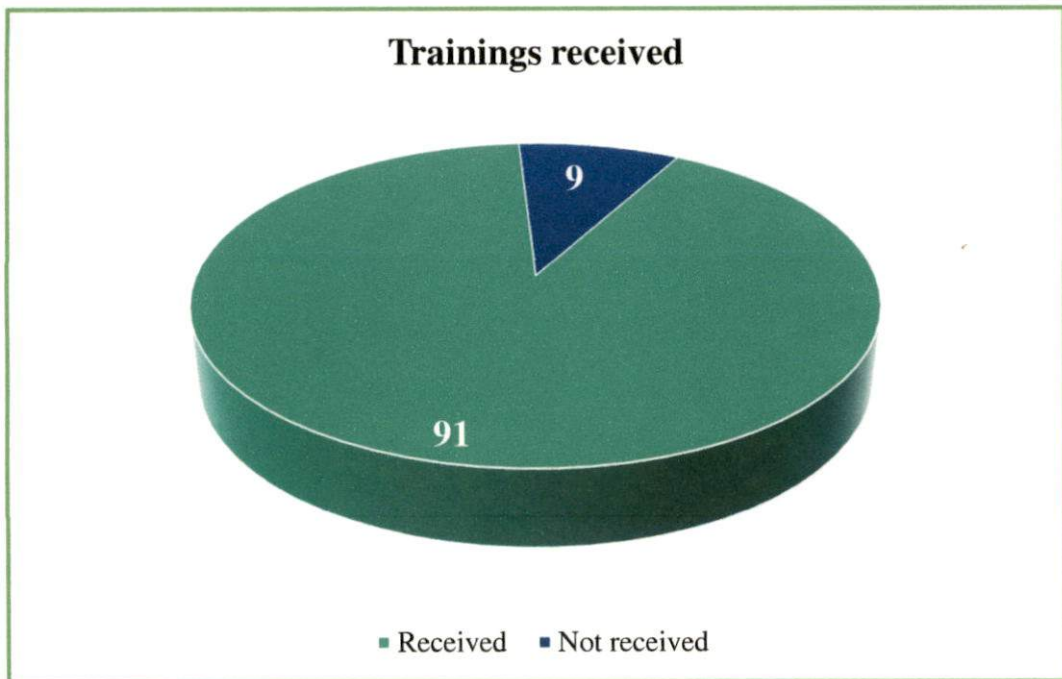
In Kerala, because of the high literacy rate most of the households subscribe at least one newspaper and every family possess radio and television. Hence the respondents had medium to high level of mass media contact. This shows that they were in quest for the latest information which may be useful for updating their business. These observations are in line with the findings of Sreeram (2013).

#### 4. 1. 8 Trainings received

The distribution of agripreneurs according to the trainings received by them is presented in Table 4. 8 showed that most (91%) of the agripreneurs had received training and only few (9%) of them had not received training in their respective enterprise. (Fig.9)



**Fig. 8 Distribution of agripreneurs according to their mass media contact**



**Fig. 9 Distribution of agripreneurs according to the trainings received by them**

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**Table 4. 8 Distribution of agripreneurs according to the trainings received by them** (n=100)

Category	Frequency	Percentage
Not received trainings	9	9.00
Received trainings	91	91.00
<b>Total</b>	<b>100</b>	<b>100.00</b>

Extension centres of Kerala Agricultural University are providing training to the aspiring agripreneurs and majority of the respondents had participated in such trainings, hence this could be the reason for above findings.

#### 4. 1. 9 Attitude towards self-employment

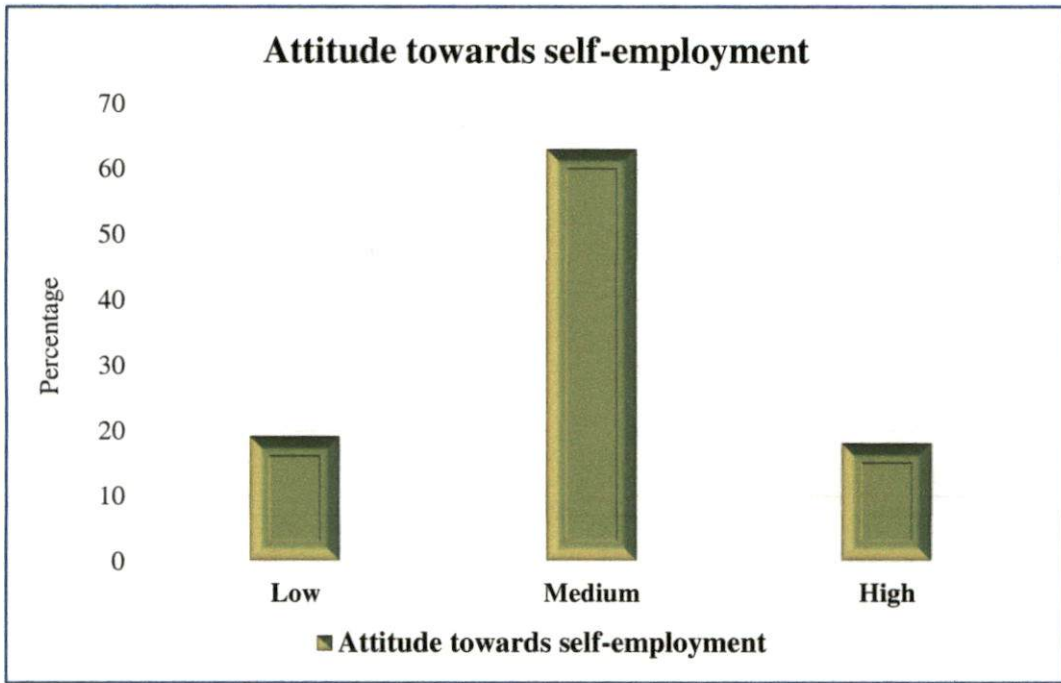
It could be inferred from the data presented in Table 4. 9 that 63 per cent of the agripreneurs had medium attitude towards self-employment, 19 per cent of them had low attitude towards self-employment and 18 per cent of agripreneurs had high attitude towards self-employment. (Fig.10)

Even though Kerala is a state with high literacy rate, the percentage of unemployment is high. The only alternative for income generation is to take up self-employment and that too with the easily available resources. Agri-business provides rich opportunity to start business with less investment using existing facilities. This might be the reason for the medium level of attitude towards self-employment among the agripreneurs.

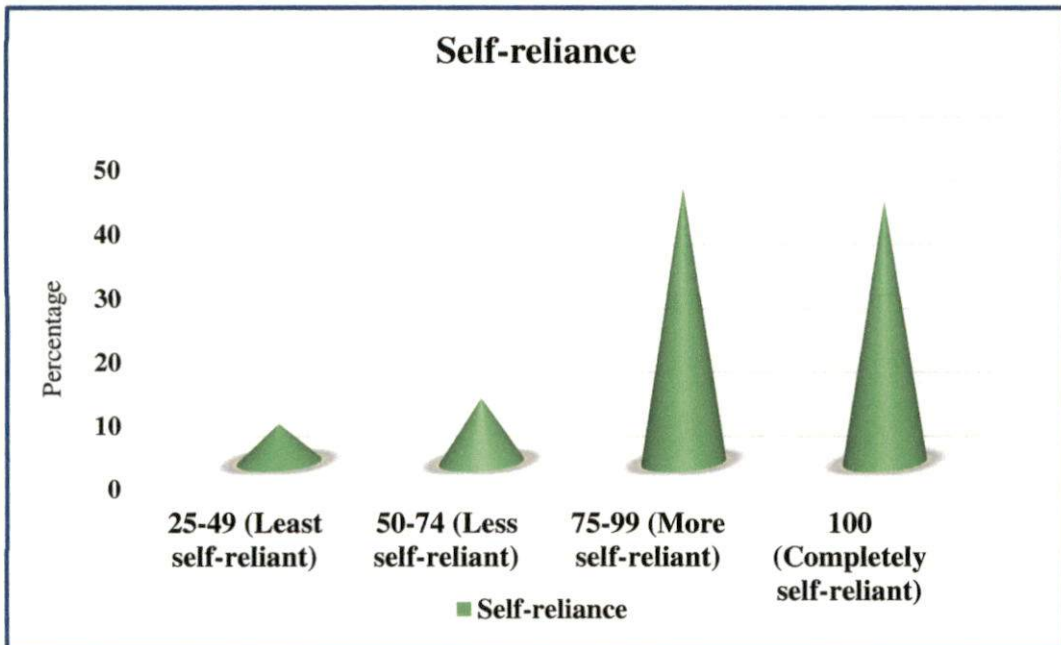
**Table 4. 9 Distribution of agripreneurs according to their attitude towards self-employment** (n=100)

Sl. No.	Category	Range of scores	Percentage
1	Low	<29	19.00
2	Medium	29-41.64	63.00
3	High	>41.61	18.00
<b>Mean: 35.31</b>			<b>S. D: 6.33</b>





**Fig. 10** Distribution of agripreneurs according to their attitude towards self-employment



**Fig. 11** Distribution of agripreneurs according to their self-reliance

#### 4. 1. 10 Self-reliance

It could be concluded from the Table 4. 10 that 43 per cent of the agripreneurs belonged to 75-99 self-reliance category, followed by 100 (41%), 50-74 (10%) and 25-49 (6%), respectively. (Fig.11)

**Table 4. 10 Distribution of agripreneurs according to their self-reliance**

(n=100)

Sl. No.	Range of self-reliance (percentage)	Category	Percentage
1	25-49	Least self-reliant	6.00
2	50-74	Less self-reliant	10.00
3	75-99	More self-reliant	43.00
4	100	Completely self-reliant	41.00
	<b>Total</b>		<b>100.00</b>

An entrepreneur has the urge to capitalize his technical skills himself than working for others. He feels that his destiny is his own making. The pride of being a lord of one's own destiny essentially prompt a prospective entrepreneur to venture into an enterprise and depend on the abilities and resources of self. Therefore, self-reliance is a desirable trait in an entrepreneur.

#### 4. 2 Dimensions of entrepreneurial behaviour of agripreneurs

##### 4. 2. 1 Decision making ability

Table 4. 11 revealed that composite index for decision making ability of the agripreneurs was 'High' with a value of 67.20. Statements (4), (7), (8), (9) and (10) came under the 'High' category with the index values 79.00, 69.00, 90.00, 80.00 and 90.00 respectively. This proved that agripreneurs were well aware about their business activities which promoted them to take almost all decision independently.

Statements (1), (2), (3), (5) and (6) showed that the agripreneurs were in 'Medium' category with index values 61.00, 58.00, 47.00, 53.00 and 45.00 respectively. This indicated that most of the agripreneurs consulted others to take decision regarding to start new enterprise, about availing loans, regarding storage and marketing of produce. The reason might be that they required more information

with regard to starting new enterprise, availing loans, storage of produce and marketing facilities. These findings are in accordance with Mertiya (2017).

#### **4. 2. 2 Achievement motivation**

The Table 4. 12 indicated that composite index for achievement motivation of the agripreneurs was medium with a value of 53.76. Statement (3) indicated that the respondents were in 'High' category of achieving more irrespective of what they have done in the past. Statements (1), (2), (4) and (5) showed that the respondents belonged to 'Medium' category with index value 60.00, 54.60, 59.80 and 50.40 respectively. The agripreneurs were satisfied with the little thing what they had and they took calculated risk, which might be the reasons to categorize them into medium category of achievement motivation.

Statement (6) indicated that the respondents were in 'Low' category with index value of 31.00. This indicate they do give time for their family and other activities along with business. A similar finding was reported by Avhad *et al.* (2015) and Chandran (2015).

Table 4. 11 Distribution of agripreneurs according to their decision making ability

(n=100)

Sl. No.	Statements	No. of respondents		Total score	Index	Category
		Independently	In consultation with others			
1	Decision to start an enterprise	61	39	61	61.00	Medium
2	Decision to avail loans	58	42	58	58.00	Medium
3	Decision to try out subsidiary enterprise	47	53	47	47.00	Medium
4	Decision to hire labourers	79	21	79	79.00	High
5	Decision regarding storage and marketing of produce	53	47	53	53.00	Medium
6	Decision regarding the value addition of the produce	45	55	45	45.00	Medium
7	Decision to sale and/or purchase a machinery and equipment	69	31	69	69.00	High
8	Decision to meet the official in extension or any organization	90	10	90	90.00	High
9	Decision to subscribe for magazines	80	20	80	80.00	High
10	Decision to attend training	90	10	90	90.00	High
<b>Total score</b>				<b>672</b>		
<b>Composite Index</b>					<b>67.20</b>	<b>High</b>



**Table 4. 12 Distribution of agripreneurs according to their achievement motivation**

(n=100)

Sl. No.	Statements	No. of respondents					Total score	Index	Category
		SA	A	UD	D	SD			
1	Work should come first even if one cannot get proper rest in order to achieve ones goals	4	43	3	49	1	300	60.00	Medium
2	It is better to be content with whatever little one has, than to be always struggling for more	3	30	6	59	2	273	54.60	Medium
3	No matter what I have done I always want to do more	13	39	17	31	0	334	66.80	High
4	I would like to try hard at something really difficult even if it proves that I cannot do it	10	28	15	45	2	299	59.80	Medium
5	The way things are now-a-days discourage one to work hard	1	23	5	69	2	252	50.40	Medium
6	One should succeed in occupation even if one has to neglect his family	0	4	0	43	53	155	31.00	Low
<b>Total score</b>							<b>1613</b>		
<b>Composite index</b>								<b>53.76</b>	<b>Medium</b>

#### **4. 2. 3 Risk taking ability**

Table 4. 13 indicated that composite index for risk orientation of the agripreneurs was 'Medium' with index value of 62.40. Here statements (2), (3) and (4) showed that the respondents were in 'High' category with index value of 68.40, 68.00 and 72.00 respectively. These statements showed that the agripreneurs were ready to take greater risk in order to achieve more profit.

Statements (1), (5) and (6) showed that the agripreneurs were in 'Medium' category. These statements indicated that the agripreneurs were not ready to try new ideas unless others had done it with success which means that they took calculated risk, this could be the reason for their medium level of risk orientation. These results are in accordance with the findings of Raghunath (2014), Gamit *et al.* (2015) and Rubeena (2015).

#### **4. 2. 4 Self-confidence**

Table 4. 14 revealed that composite index for self-confidence among the agripreneurs was 'High' with a value of 68.83. All statements showed that respondents were in 'High' category. These statements revealed that the agripreneurs can adjust readily to new situation and they were more confident to make profit in their enterprises with less dependence on others to carry out their business activities.

#### **4. 2. 5 Innovativeness**

Table 4. 15 indicated that composite index for innovativeness among the agripreneurs was 'Medium' with index value of 62.32. The respondents were categorized into 'High' for the statements (2) and (3) with index values 78.00 and 70.40 respectively. These results implied that the agripreneurs were cautious about

Table 4. 13 Distribution of agripreneurs according to their risk taking ability

(n=100)

Sl. No.	Statements	No. of respondents					Total score	Index	Category
		SA	A	UD	D	SD			
1	An entrepreneur should start more enterprise to avoid greater risks involved in a single enterprise	8	40	3	43	6	301	60.20	Medium
2	An entrepreneur should rather take more of a chance in making more profit than to be content with a smaller but less profit	10	47	23	15	5	342	68.40	High
3	An entrepreneur who is willing to take a greater risk than an average one usually do better financially	14	39	20	27	0	340	68.00	High
4	It is good to take risks when one knows that chance of success is fairly high	10	58	14	18	0	360	72.00	High
5	It is better not to try new ideas unless others have done it with success	2	29	4	41	24	244	48.80	Medium
6	Trying an entirely new method involves risk but it is worthy	7	30	11	45	7	285	57.00	Medium
<b>Total score</b>							<b>1872</b>		
<b>Composite Index</b>								<b>62.40</b>	<b>Medium</b>

79

Table 4. 14 Distribution of agripreneurs according to their self-confidence

(n=100)

Sl. No.	Statements	No. of respondents		Total score	Index	Category
		Yes	No			
1	Do you have difficulty in saying the right opinion at the right time?	30	70	70	70.00	High
2	Do you feel worthy?	73	27	73	73.00	High
3	Can you adjust readily new situation?	67	33	67	67.00	High
4	Do you feel it hard to keep your mind on a task/job?	32	68	68	68.00	High
5	Do you have enough faith in yourself to make profit in your enterprise?	67	33	67	67.00	High
6	Do you rely on others to carry out all your business activities?	32	68	68	68.00	High
<b>Total score</b>				<b>413</b>		
<b>Composite Index</b>					<b>68.83</b>	<b>High</b>



**Table 4. 15 Distribution of agripreneurs according to their innovativeness**

(n=100)

Sl. No.	Statements	No. of respondents					Total score	Index	Category
		SA	A	UD	D	SD			
1	I would feel restless unless, I try out an innovative method which I have come across	2	26	11	61	0	269	53.80	Medium
2	I am cautious about trying new practices	40	35	19	3	3	390	78.00	High
3	I like to keep up-to-date information about the subjects of my interest	15	51	5	29	0	352	70.40	High
4	I would prefer to wait for others to try out new practices first	0	30	5	41	24	241	48.20	Medium
5	I opt for the traditional way of doing things than go in for newer methods	3	46	12	32	7	306	61.20	Medium
<b>Total score</b>							<b>1558</b>		
<b>Composite Index</b>								<b>62.32</b>	<b>Medium</b>

trying new practices and they were taking advantage of opportunities by keeping up-to-date information about the subjects of their interest.

The agripreneurs categorized themselves to 'Medium' innovativeness for the statements (1), (4) and (5) with index values 53.80, 48.20 and 61.20 respectively. These statements showed that the agripreneurs prefer traditional way of doing things than newer method and prefer to wait for others to try out new practices. These could be the reasons for categorizing them into medium innovativeness category. The results are in consonance with the finding of Tekale *et al.* (2013) and Gamit *et al.* (2015).

#### **4. 2. 6 Leadership ability**

Table 4. 16 indicated that composite index for the leadership ability of the agripreneurs was 'Medium' with value of 62.26. The respondents came under the category 'High' for the statements (1), (2) and (4) with index values 68.66, 67.00 and 69.66 respectively. This indicated that the leadership skills were more among the agripreneurs. They were able to inspire others to work together towards common goals as well as articulated and arouse enthusiasm for a shared vision and mission to step forward as needed, to guide the performance of others while holding them accountable and lead by example.

Statements (3) and (5) showed that the agripreneurs were in 'Medium' category with index value 58.66 and 47.33 indicating that the agripreneurs offer new approaches to the problems faced by them and village people regard them as good source of information on new farm practices as well. The findings are in agreement with the studies of Kumar (2012) and Mertiya (2017).

#### **4. 2. 7 Information seeking behaviour**

Table 4. 17 revealed that composite index for information seeking behaviour among the agripreneurs was 'Medium' with a value of 64.87. The agripreneurs were in 'High' category for the statements (4), (5), (8), (10) and (11) with index values 93.75, 99.50, 99.00, 91.50 and 71.75 respectively, indicating that informal sources like friends and family members played an important role as

information source along with mass media like newspapers, television and farm literature as perceived by the agripreneurs.

The respondents scored under the category 'Medium' for the statements (1), (3), (6), (7), (9) and (12) with index values 41.00, 46.50, 55.25, 46.50, 61.25 and 45.75 respectively. These results showed that the agripreneurs had less contact with agricultural university, successful agripreneurs and with experts and among all information sources, formal sources of seeking information would be more credible and supposed to be reliable when compared to informal and mass media sources to manage their enterprise. It was observed that formal sources had less influence in seeking information by agripreneurs, which could be the reason to classify them under medium category of information seeking behaviour. The finding was in accordance with Lawrence and Ganguli (2012), Patel *et al.* (2014) and Sadashive *et al.* (2017).

#### **4. 2. 8 Coordination ability**

Table 4. 18 indicated that composite index for coordinating ability of the agripreneurs was 'High' with a value of 66.66. The respondents secured 'High' for the statement (1) and (3) with index values 77.33 and 75.66 respectively. This indicated that the agripreneurs coordinate their business activities like financial aspects according to well-prepared pre-plan. In agri-business, agripreneurs need to harmonize and synchronize different business activities so as to finish the work in stipulated period. It may be because the agripreneurs were efficient in the management of all aspects of the business activities and better oriented to coordinating all the dimensions of business activities. It might be the reason for their high level of coordination ability.

The respondents were categorized into 'Medium' for the statements (2) and (4) showing that they consulted most often to the specialists about the economic activities of the enterprise and they did not maintain the proper record about input/equipment which they had purchased over a period of time. The results are in line of with the findings of Lawrence and Ganguli (2012).



Table 4. 16 Distribution of agripreneurs according to their leadership ability

(n=100)

Sl. No.	Statements	No. of respondents			Total score	Index	Category
		Always	Sometime	Never			
1	Did you participate in group discussions on new farm practice	31	44	25	206	68.66	High
2	Whenever you see/hear a new farm practice did you initiate discussion about it with your colleagues	25	51	24	201	67.00	High
3	Do village people regard you as good source of information on new farm practice	21	34	45	176	58.66	Medium
4	Do you assign the farm work to your family members	26	57	17	209	69.66	High
5	Do you offer new approaches to the problems faced by you in the field	7	28	65	142	47.33	Medium
<b>Total score</b>					<b>934</b>		
<b>Composite Index</b>						<b>62.26</b>	<b>Medium</b>

81



Table 4. 17 Distribution of agripreneurs according to their information seeking behaviour

(n=100)

Sl. No.	Statements	No. of respondents				Total score	Index	Category
		Once in fortnight	Once in month	Occasionally	Never			
<b>I</b>	<b>Formal sources</b>							
1	Scientists from agricultural university	8	5	30	57	164	41.00	Medium
2	Bank officials	0	0	7	93	107	26.75	Low
3	Krishibhavan	17	3	29	51	186	46.50	Medium
<b>II</b>	<b>Informal sources</b>							
4	Family members	85	5	10	0	375	93.75	High
5	Friends	98	2	0	0	398	99.50	High
6	Successful agripreneurs	19	2	60	19	221	55.25	Medium
7	Meeting with experts	7	4	57	32	186	46.50	Medium
<b>III</b>	<b>Mass media</b>							
8	Newspapers	98	0	2	0	396	99.00	High
9	Radio	27	0	64	9	245	61.25	Medium
10	Television	85	0	11	4	366	91.50	High
11	Farm literature	50	6	25	19	287	71.75	High
12	Film shows	4	2	67	27	183	45.75	Medium
<b>Total score</b>						<b>3114</b>		
<b>Composite Index</b>						<b>64.87</b>	<b>Medium</b>	

85

Table 18. Distribution of agripreneurs according to their coordination ability

(n=100)

Sl. No.	Statements	No. of respondents			Total score	Index	Category
		Well in advance	At nick of time	Never			
1	When did you prepare plan for your enterprise	54	24	22	232	77.33	High
2	When did you consult the specialists about the economic activities of the enterprise	21	40	39	182	60.66	Medium
3	When did you estimate the money required for your enterprise	51	25	24	227	75.66	High
4	During last 6 months when did you purchase input/equipment for your enterprise	23	13	64	159	53.00	Medium
<b>Total score</b>					<b>800</b>		
<b>Composite Index</b>					<b>66.66</b>	<b>High</b>	

#### **4. 2. 9 Management orientation**

Table 4.19 showed that composite index for management orientation of the agripreneurs was 'High' with a value of 70.42. The respondents came under the category 'High' based on the all the statements except (4) and (5). This indicated that the agripreneurs were well aware about the importance of production, quality of product and market demand for the product which made them to manage their business efficiently. Agripreneurs had a frequent contact with extension personnel/Krishibhavan official which might have helped them to organize their business activity efficiently.

The respondents were categorized into 'Medium' based on the statements (4) and (5) showing that they were more concerned about the competitor present in market. The findings were in accordance with the results of Archana (2013) and Giridhara (2013).

#### **4. 2. 10 Market perception**

Table 20. indicated that composite index for market perception of the agripreneurs was 'High' with index value of 81.24. Here the respondents were scored under category 'High' based on the statements (1), (2), (3) and (4) with index values 83.40, 86.80, 86.80 and 86.00 respectively. This indicated that the agripreneurs gave much importance to the current market trend, marketing channel, market information and continuous supply of raw materials for the particular enterprise. The results are in line with the findings of Giridhara (2013).

**Table 4. 19 Distribution of agripreneurs according to their management orientation**  
(n=100)

Sl. No.	Statements	No. of respondents					Total score	Index	Category
		SA	A	UD	D	SD			
1	Planning is not essential, as entrepreneur executes production based on his experience	16	43	6	34	1	339	67.80	High
2	Estimating in advance, the capital requirement of an enterprise is essential for effective execution of entrepreneurial activities	30	45	5	8	12	373	74.60	High
3	It is possible to increase the profit through good production plan	29	33	8	23	7	354	70.80	High
4	One should prepare production plan, market plan, manpower plan, financial plan based on the similar product in the market	2	22	6	70	0	256	51.20	Medium
5	Each year one should think a fresh about the production and market strategies to be taken up	3	42	10	45	0	303	60.60	Medium
6	One should use latest production technologies in an enterprise	11	57	7	24	1	353	70.60	High
7	One should maintain the quality of a product to get good price in the market	53	16	14	14	3	402	80.40	High
8	Entrepreneur should balance in production considering the production capacity of the unit and demand in the market	47	11	15	14	13	365	73.00	High
9	Timely production of good is essential	52	12	14	10	12	424	84.80	High
<b>Total score</b>							<b>3169</b>		
<b>Composite Index</b>								<b>70.42</b>	<b>High</b>



Table 20. Distribution of agripreneurs according to their market perception

(n=100)

Sl. No.	Statements	No. of respondents					Total score	Index	Category
		SA	A	UD	D	SD			
1	A good entrepreneur should keep in touch with current market trend	31	59	6	4	0	417	83.40	High
2	One should select proper market channel for selling the product	41	52	7	0	0	434	86.80	High
3	Market information plays an important role for entrepreneur in selling their product	43	48	9	0	0	434	86.80	High
4	Continuous availability of raw material is essential for production of goods and further execution of orders	49	35	13	3	0	430	86.00	High
5	Entrepreneur should keep track of what the competitors are doing in the market	15	28	16	40	1	316	63.20	Medium
<b>Total score</b>							<b>2031</b>		
<b>Composite Index</b>								<b>81.24</b>	<b>High</b>

### 4. 3 Overall entrepreneurial behaviour of agripreneurs

**Table 4. 21 Overall entrepreneurial behaviour of agripreneurs**

(n=100)

Sl. No.	Dimensions	Index	Rank
1	Market perception	81.24	I
2	Management orientation	70.42	II
3	Self-confidence	68.83	III
4	Decision making ability	67.20	IV
5	Coordination ability	66.66	V
6	Information seeking behaviour	64.87	VI
7	Risk orientation	62.40	VII
8	Innovativeness	62.32	VIII
9	Leadership ability	62.26	IX
10	Achievement motivation	53.76	X
<b>Composite Index</b>		<b>65.99</b>	<b>Medium</b>

Table 4. 21 indicates that the entrepreneurial behaviour of agripreneurs of KAU technology was assessed with a composite index of 65.99. It indicated that the agripreneurs had medium level of entrepreneurial behaviour. Among the listed 10 dimensions the composite index for market perception was ranked the highest (81.24). Market perception is a vital component which include, current market trend, marketing channel, market information, continuous supply of raw materials for the particular enterprise and price of the produce. (Fig.12)

It was found that management orientation of the agripreneurs was ranked second. That indicated that the agripreneurs were well aware about the importance of production, quality of product and market demand for the product which made them to manage their business efficiently.

Leadership ability and achievement motivation were the least ranked dimensions among the agripreneurs. Leadership ability was assessed with the composite index of 62.26 and achievement motivation was 53.76. This indicated

that agripreneurs had low level of leadership ability and achievement motivation among listed 10 dimensions of entrepreneurial behaviour. The traits such as information seeking behaviour, leadership ability, risk orientation, innovativeness, self-confidence and achievement motivation were found to be medium among the agripreneurs. This was reflected in their entrepreneurial behaviour.

**Table 4. 22 Distribution of respondents according to their entrepreneurial behaviour** (n=100)

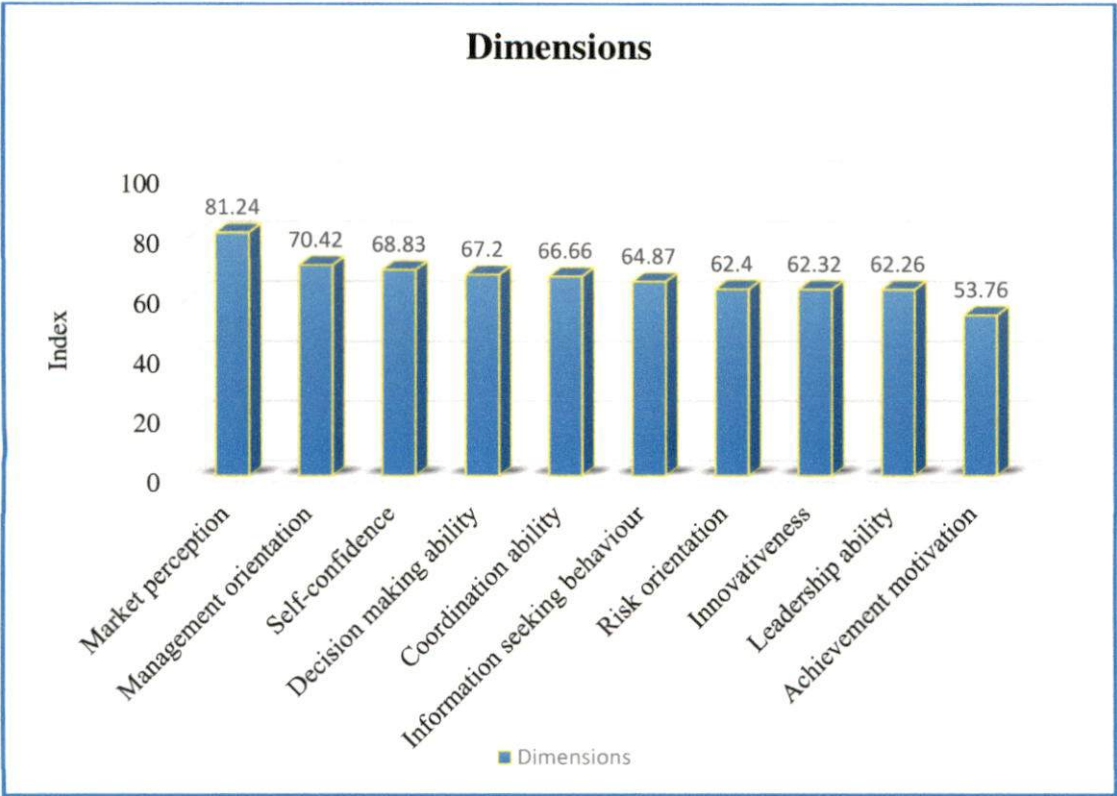
Sl. No.	Category	Range of indices	Percentage
1	Low	<59.26	8.00
2	Medium	59.26 – 72.00	63.00
3	High	>72.00	29.00
<b>Mean: 65.99</b>			<b>S. D: 6.73</b>

Table 4. 22 indicated that majority (63%) of the agripreneurs had medium level of entrepreneurial behaviour followed by 29 per cent of them belonged to high category and only 8 per cent of the respondents had low level of entrepreneurial behaviour. It was observed that achievement motivation, information seeking behaviour, risk orientation, innovativeness and leadership ability were medium among the agripreneurs. These could be the reasons led them to be categorized into medium level of entrepreneurial behaviour. (Fig.13) A similar result was observed by Tekale *et al.* (2013) and Mertiya (2017).

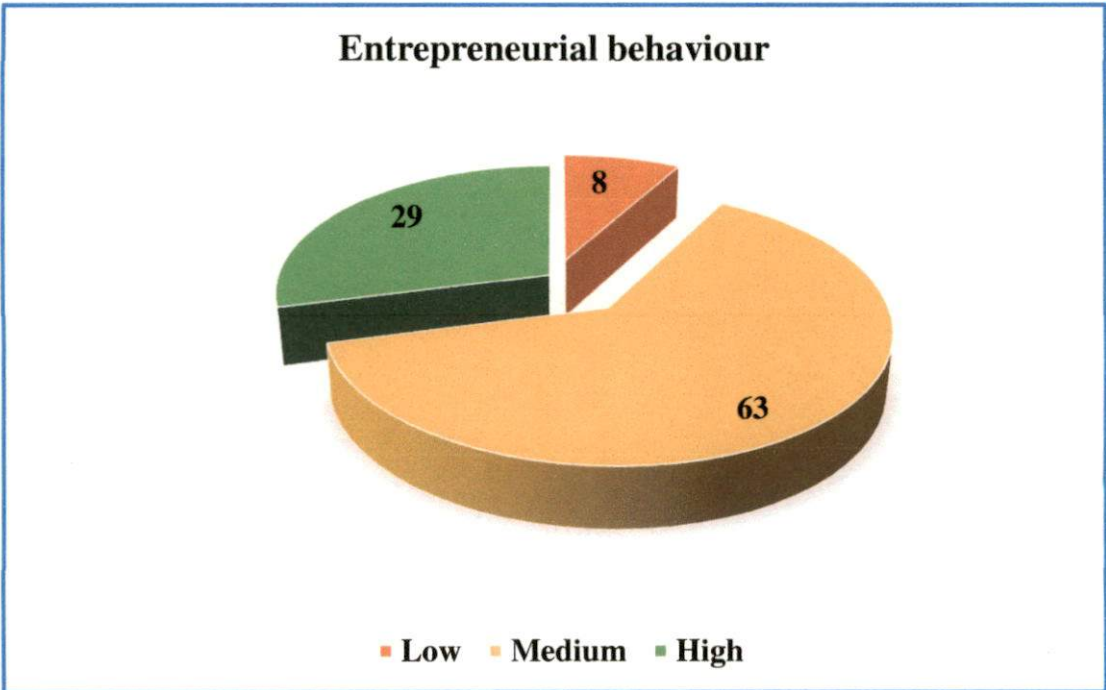
#### **4. 4 Factors affecting entrepreneurial behaviour of agripreneurs**

The relationship between the entrepreneurial behaviour and the profile characteristics of agripreneurs viz. their age, education, annual income, occupation, self-reliance, attitude towards self-employment, mass media contact, social participation, economic motivation and self-reliance were studied using correlation analysis. The results are furnished in Table 4. 23.





**Fig. 12** Distribution of dimensions of entrepreneurial behaviour of agripreneurs



**Fig. 13** Distribution of respondents according to their entrepreneurial behaviour



**Table 4. 23 Factors affecting entrepreneurial behaviour of agripreneurs**

Sl. No.	Variables	Correlation coefficient (r)
1	Age	-0.031NS
2	Educational status	0.204*
3	Occupational status	0.027NS
4	Annual income	0.006NS
5	Trainings received	0.051NS
6	Attitude towards self-employment	0.644**
7	Self-reliance	-0.026
8	Mass media contact	0.589**
9	Social participation	0.254*
10	Economic motivation	0.200*

\*. Correlation is significant at the 0.05 level (2-tailed).

\*\* . Correlation is significant at the 0.01 level (2-tailed).

NS – Non-significant

Out of the ten independent variables, four variables namely education, attitude towards self-employment, mass media contact, social participation and economic motivation were significantly and positively influencing the entrepreneurial behaviour of agripreneurs. Whereas age, annual income, trainings received, self-reliance and occupational status had no significant relationship with entrepreneurial behaviour of agripreneurs.

#### **4. 4. 1 Age**

From the Table 4. 23 it could be concluded that age had no relationship with entrepreneurial behaviour of agripreneurs. The results are in conformity with the findings of Somvanshi *et al.* (2016).

#### **4. 4. 2 Education**

The results from the Table 4. 23 revealed that education had a positive significant correlation with entrepreneurial behaviour of agripreneurs. In Kerala,

up to primary level of education is compulsory and free and dropouts occur only after primary level of education. Majority of the respondents had high school level education. The above fact has sufficient evidence that level of educational background ensures entrepreneurial function and plays a significant role in moulding entrepreneurial behaviour. The results are in conformity with the findings of Somvanshi *et al.* (2016).

#### **4. 4. 3 Occupational status**

It could be inferred from the Table 4. 23 that there was a positive and non-significant relationship between occupation and entrepreneurial behaviour of the agripreneurs. The results are in conformity with the findings of Lawrence and Ganguli (2012).

#### **4. 4. 4 Annual income**

The results from the Table 4. 23 showed that annual income had no relationship with entrepreneurial behaviour of agripreneurs. Farm entrepreneur as a person who organizes and operates the business, is responsible for the results that is, either loss or gain from the business irrespective of his income level. He is a pioneer in organizing and developing the firm. The results are in conformity with the findings of Patel *et al.* (2013).

#### **4. 4. 5 Social participation**

The results from Table 4. 23 revealed that social participation had positive and significant relationship with entrepreneurial behaviour of the agripreneurs. Entrepreneurship being a people intensive activity, without good socialization, it will be very difficult for an entrepreneur to succeed. Running an enterprise necessitates the entrepreneur to contact and maintain relationship with many people and institutions. This might be the probable reason for obtaining such results. The results are in conformity with the findings of Sreeram *et al.* (2015).

#### **4. 4. 6 Economic motivation**

A glance of the Table 4. 23 indicated that economic motivation of the agripreneurs had positive and significant influence on their entrepreneurial behaviour at 1% level. The entrepreneur is an economic man who tries to maximize

his profit by using the available resources. The main aim of an entrepreneur is to effectively utilize the physical and financial resources for making more profit, income, wealth and employment. This might be the probable reason for obtaining such result. The results are in conformity with the findings of Shivacharan (2014).

#### **4. 4. 7 Mass media contact**

It could be inferred from the Table 4. 23 that there was a positive and significant relationship between mass media contact and entrepreneurial behaviour of the agripreneurs. Mass media exposure gives an opportunity for the agripreneur to know about various opportunities existing in the industry and also improves their awareness about the trend in market. Similar results were reported by Giridhara (2013).

#### **4. 4. 8 Trainings received**

From the Table 4. 23 it was clear that entrepreneurial behaviour of the agripreneurs had positive and non-significant relationship with trainings received by them. Only the technical details of the technology are imparted during the training programmes of KAU with less thrust on socio-psychological dimensions, which may be the reason for the positive non significant relationship of the trainings received with the entrepreneurial behaviour of agripreneurs.

#### **4. 4. 9 Attitude towards self-employment**

The findings from the Table 4. 23 indicated that attitude towards self-employment had positive and significant relationship with entrepreneurial behaviour of the agripreneurs. The significant positive relationship obtained is logical because a favourable mental disposition towards self-employment necessarily improves the entrepreneurial behaviour of a person. Unless one has a favourable attitude towards the positive aspects of self-employment, one may not be able to aspire and start an agribusiness.

#### **4. 4. 10 Self-reliance**

The findings from the Table 4. 23 showed that self-reliance had negative and non-significant correlation with entrepreneurial behaviour of agripreneurs. Entrepreneur expects himself to be the master of time and space around him and



feel responsible for his productivity, but running an enterprise necessitates the entrepreneur to depend solely on the resources, knowledge, skill, support and the facilities available with him which had influence in his business. This could be a reason for the above findings.

#### 4. 5 Relative importance of dimensions of entrepreneurial behaviour

**Table 4. 24 Relative importance of dimensions of entrepreneurial behaviour**

Sl. No.	Dimensions of entrepreneurial behaviour	Regression coefficient (B)	Standard error	't' value
1	Decision making ability	1.012	0.030	32.885**
2	Achievement motivation	0.254	0.044	23.293**
3	Risk orientation	0.351	0.039	26.248**
4	Self-confidence	0.226	0.031	15.172**
5	Innovativeness	0.390	0.054	17.958**
6	Leadership ability	0.450	0.055	19.256**
7	Information seeking behavior	0.650	0.021	34.843**
8	Coordinating ability	0.960	0.063	16.157**
9	Management orientation	1.093	0.019	37.084**
10	Market perception	1.065	0.049	21.584**

\*\* : Significant at 1% level of probability

The relative importance of different dimensions of the entrepreneurial behaviour was found out with the help of step-wise regression analysis by treating entrepreneurial behaviour as dependent variable. The results from Table 4. 24 showed that all the dimensions of entrepreneurial behaviour were highly significant. This empirical evidence points out that all the dimensions entered in step-wise regression analysis were important. And it was found that, the most important dimensions of entrepreneurial behaviour were management orientation, market perception, decision making ability and coordinating ability.

Thus, all these four dimensions *viz.*, management orientation, market perception, decision making ability and coordinating ability individually and in combination greatly contribute for the entrepreneurial behaviour of agripreneurs.



#### 4. 6 Constraints experienced by the agripreneurs

Constraints faced by the agripreneurs were classified under financial, marketing, production and labour and personal constraints. It was analysed using the index method followed by Aiswarya (2016) with suitable modifications. Agripreneurs were asked to rate the constraints on three point continuum scale. The response of the agripreneurs were assigned score of 3, 2 and 1 indicating 'More serious', 'Serious' and 'Less serious' respectively. The total score of each constraint was calculated by summing up the values obtained and index was calculated for consolidating and comparing the seriousness of the problems.

**Table 4. 25 Financial constraints faced by agripreneurs**

(n=100)

Sl. No.	Financial constraints	More serious	Serious	Less serious	Total scores	Index
		%	%	%		
1	Lack of adequate money for day to day expenses	5.00	62.00	33.00	172	57.33
2	Insufficient financial assistance by financial institutions	4.00	17.00	79.00	125	41.66
3	Problems of security and margin money	4.00	16.00	80.00	124	41.33
4	Tight repayment schedule	0	3.00	97.00	103	34.33
5	Inadequate loan	0	29.00	71.00	129	43.00
6	Delay in sanction of loan	0	0	100	100	33.33
7	Entire loan is not disbursed at a time	0	4.00	96.00	104	34.66
8	Less subsidy amount	2.00	20.00	78.00	124	41.33
<b>Composite index</b>						<b>40.87</b>

Table 4. 25 showed that lack of adequate money for day to day expenses was the most important constraint faced by the agripreneurs with index value '57.33', followed by insufficient financial assistance by financial institutions (41.66), problems of security and margin money (41.33) and less subsidy amount (41.33) were the constraints perceived by the agripreneurs under financial constraints. The results are in conformity with the findings of Chourasiya *et al.* (2017).

**Table 4. 26 Constraints faced by agripreneurs in marketing**

(n=100)

Sl. No.	Constraints in marketing	More serious	Serious	Less serious	Total score	Index
		%	%	%		
1	Long distance to the market	1.00	1.00	98.00	103	34.33
2	Lack of transportation facilities	0	8.00	92.00	108	36.00
3	Lack of market information	7.00	41.00	52.00	155	51.66
4	Low price for the produce	10.00	26.00	64.00	146	48.66
5	Delay in payments	2.00	7.00	91.00	111	37.00
<b>Composite index</b>						<b>41.53</b>

Table 4. 26 depicts that lack of market information was the more serious constraint in marketing with index value '51.66', followed by low price for the produce (48.66), delay in payments (37.00), lack of transportation facilities (36.00) and long distance to market (34.33) as perceived by the agripreneurs.

As the respondents were not aware of the real time market information available in the related websites, they expressed the constraint on lack of market information as more serious. Exposure on the websites providing market information may overcome this constraint. The results are in conformity with the findings of Chourasiya *et al.* (2017).

**Table 4. 27 Constraints faced by agripreneurs in production and labour management** (n=100)

Sl. No.	Constraints in production and labour	More serious	Serious	Less serious	Total score	Index
		%	%	%		
1	Non availability of input materials	9.00	67.00	24.00	185	61.66
2	High labour cost	9.00	60.00	31.00	178	59.33
3	Non availability of skilled workers	7.00	26.00	67.00	140	46.66
4	High cost of inputs	4.00	11.00	85.00	119	39.66
<b>Composite index</b>						<b>51.82</b>

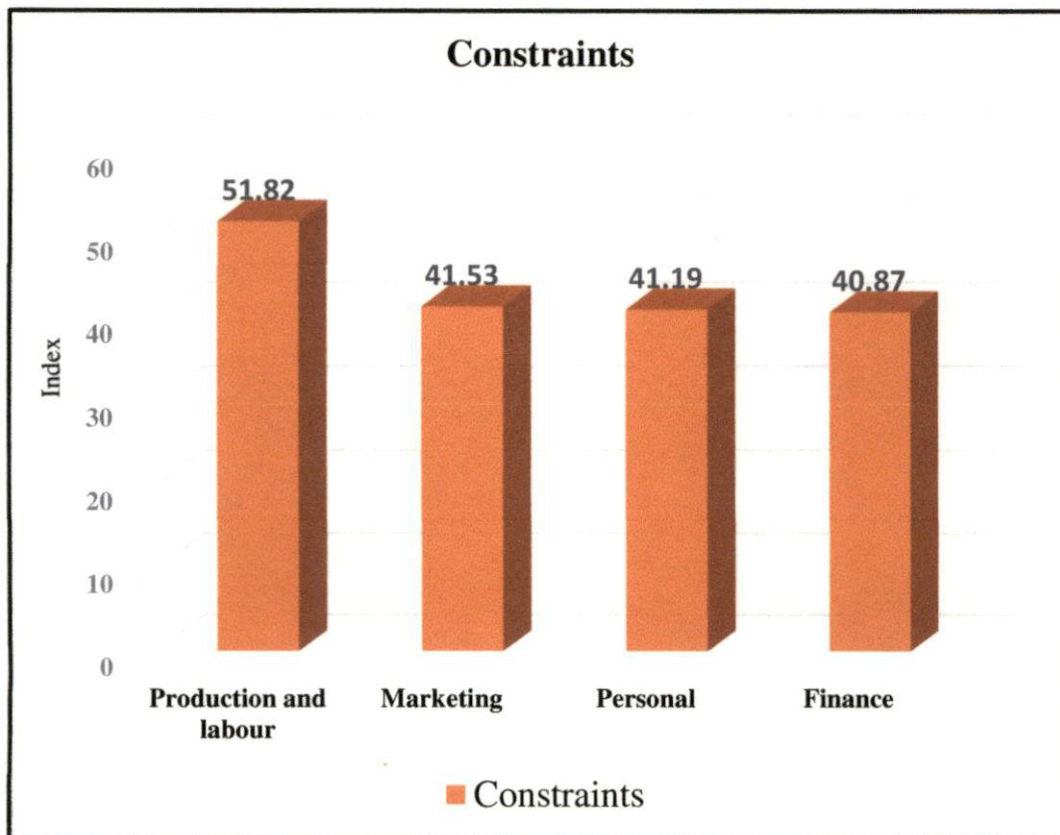
It was seen from Table 4. 27 that non availability of input materials (61.66) and high labour cost (59.33) were the major constraints, followed by non availability of skilled workers (46.66) and high cost of inputs (39.66) were the other constraints perceived by agripreneurs in production and labour management. As the supply of most of the input materials are monopolised by few agencies, the agripreneurs were facing the shortage of supply of inputs during peak seasons and sudden price rise of the input materials.

**Table 28. Personal constraints faced by agripreneurs**

(n=100)

It was observed from Table 4. 28 that multiple roles was the most important constraint faced by agripreneurs. Most of the respondents were engaged in other activities along with agribusiness as their subsidiary occupation. Therefore, they were not able to concentrate in agribusiness alone as they had to satisfy different responsibilities on various capacities.

Production and labour constraint received the highest index value (51.82) among all constraints indicating that production and labour was the major constraint faced by agripreneurs, followed by marketing related constraints (41.53).



**Fig. 14 Constraints faced by agripreneurs**



Non availability of required inputs, skilled labour and high cost of labour were the serious problems faced by agripreneurs.

Sl. No.	Personal constraints	More serious	Serious	Less serious	Total scores	Index
		%	%	%		
1	Health problem	1.00	1.00	98.00	103	34.33
2	Lack of leisure time	15.00	10.00	75.00	140	46.66
3	Multiple roles	13.00	45.00	42.00	171	57.00
4	Low education	0	4.00	96.00	104	34.66
5	Non-cooperation of family members	0	0	100	100	33.33
<b>Composite index</b>						<b>41.19</b>

#### 4. 7 Suggestions to overcome the constraints of agripreneurs

##### 4. 7. 1 Reorientation of capacity building programmes of Kerala Agricultural University for agripreneurs:

The extension centres of Kerala Agricultural University may prepare tailor made syllabus according to the specific demands, interests and requirements of a group of trainees. Training Need Assessment studies may be conducted before organizing the training programmes. Apart from imparting technical skills, the training modules should include the subject areas like:

- Sources of funds available for starting agribusiness
- Services of financial institutions
- Details of government schemes available for agripreneurs
- Pro-active managerial skills and soft skills required for managing agribusiness
- Judicious use of available resources
- Maintenance of records
- Sharing responsibilities with fellow members

- Ways of enhancing entrepreneurial competencies
- Access to real time market information using ICT tools
- Available technologies on mechanizing agri-enterprises

#### **4. 7. 2 Organizing regular awareness programmes:**

Organizing extension programmes such as seminars, workshops and exhibitions at regular interval to create awareness about the available technologies for starting and managing agrienterprises, opportunities, unexploited and under exploited areas of agribusiness, resource support system and market potential may attract more and more younger generation towards agribusiness.

#### **4.7. 3 Strengthening of Agri-business Incubation centres (ABIs):**

As ABIs are gaining foothold in India, the activities of ABIs, in Kerala Agricultural University are also to be strengthened with required infrastructure and staff as a continuous support system to facilitate the agripreneurs as handholding support for meeting the challenges they face during the process of starting as well as managing the agribusinesses. Periodic review of the performance of agribusinesses by ABIs may create a platform for solving most of the constraints faced by the agripreneurs. A separate cell under ABIs may be formed to monitor the performance of the transferred technologies and to give feedback to the research system. The same cell may also serve as a counseling mechanism to support agripreneurs in case of crisis situation.

#### **4. 7. 4 Formation of agripreneurs forum:**

Supporting partnerships through networking of agripreneurs and formation of a forum for agripreneurs may create a sense of togetherness for addressing the problems faced by them and may promote the exchange and sharing of available information, resources, inputs and market trend to enjoy the benefits of complimentary and supplementary effects rather than competitiveness in their business, continuous learning from each other will keep them up to date in the business as well as help them to escape from exploitative traders and middlemen.

In the changing scenario of agribusiness environment, agripreneurs need reliable and economical supply of required raw materials, equipment and labour to

ensure that they have sufficient quality products to capture markets for better prices. Agripreneurs often find difficulty in accomplishing and ensuring quality products regularly on their own. Therefore, agripreneurs working together from same area or similar kind of agri-enterprises for group purchasing, transportation and collective marketing will help them to gain the advantages which are not available to individual agripreneurs.

#### **4. 7. 5 Refinement of TOT procedures of Kerala Agricultural University:**

The procedures required for transferring the technologies of Kerala Agricultural University are to be refined, accelerated and simplified for the following components to play the role of catalyst in the process of rural development:

- Providing required and precise information to the technology seekers
- Signing Memorandum Of Understandings (MOUs)
- Fixing nominal price for each technology
- Easy mode of payments
- Handing over the required technologies at the earliest to retain the interest of aspiring agripreneurs
- Training agripreneurs through hands on experience
- Follow up on the performance of transferred technologies.

# SUMMARY AND CONCLUSION

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## 5. SUMMARY AND CONCLUSION

Kerala Agricultural University has been transferring agricultural technology to the benefit of farming community right from its inception. Several recommended agricultural technologies were utilized by the stakeholders for enhancing their income for their livelihood. Recently, promotion of agripreneurship is realized as inevitable for the revitalization of agriculture sector. Agripreneurship has potential to generate growth, diversifying income, providing widespread employment and entrepreneurial opportunities in rural areas.

The list of clients who had sought for KAU technology from the extension centers of Kerala Agricultural University viz., Krishi Vigyan Kendra, Communication Centre and Central Training Institute of Thrissur district during 2014 and 2015 were collected. One hundred clients who had sought for KAU technology were selected using simple random sampling technique to form the respondents belonged to the central zone of Kerala which consists of Thrissur, Palakkad and Ernakulam districts.

Each selected respondent was individually interviewed with a pre-tested interview schedule. It was ensured that the questions were effectively comprehended by the respondent by repeating the questions wherever important. Perception of respondents, experience, conduct, feelings, emotions, thoughts, goals and surroundings were additionally observed during interview.

The data collected from the respondents were scored, tabulated and analyzed using the appropriate statistical tools such as arithmetic mean ( $\bar{X}$ ), standard deviation ( $\sigma$ ), percentage, correlation coefficient, stepwise multiple regression and index method.

It was observed that after receiving technical guidance from KAU more than one-third of the respondents were engaged in nursery management (35%) followed by mushroom cultivation (30%), high-tech vegetable cultivation (20%), bee keeping (5%), mango processing (5%) and jack fruit processing (5%).

**Salient findings of the study are presented below:**

**Socio-economic characteristics of agripreneurs:**

- ❖ Majority (47%) of the agripreneurs belonged to the middle age group, followed by 39.00 per cent belonged to old age group and 14 per cent belonged to young age group.
- ❖ Thirty-six per cent of the agripreneurs educated up to high school, followed by graduate (35%), intermediate (25%), post graduate (3%) and primary school (1%), respectively.
- ❖ Thirty-four per cent of agripreneurs had agribusiness as their primary occupation, followed by farming (25%), services (25%), agricultural labourer (4%), allied activities (3%), non agricultural labourer (1%) and others (8%), respectively. As the respondents selected for the study were agripreneurs, majority of them had agribusiness and farming as their main occupational.
- ❖ Most (82%) of the agripreneurs belonged to medium annual income, followed by low (10%) and high (8%) annual income.
- ❖ Majority (76%) of the respondents belonged to medium mass media contact category, followed by high (16%) and low (8%), respectively.
- ❖ Seventy-three per cent of the agripreneurs had medium social participation, followed by 16 per cent had low and 11 per cent had high social participation. Social participation cheers agripreneurs to set up contact with the support system, which could encourage agripreneurs through supporting behaviour.
- ❖ Sixty-three per cent of the agripreneurs had medium attitude towards self-employment, 19 per cent of them had low attitude towards self-employment and 18 per cent of agripreneurs had high attitude towards self-employment.
- ❖ Majority (77%) of the agripreneurs had medium economic motivation, followed by high (12%) and low (11%), respectively.
- ❖ Forty-three per cent of the agripreneurs belonged to 75-99 self-reliance category, followed by 100 (41%), 50-74 (10%) and 25-49 (6%), respectively.

- ❖ Most (91%) of the agripreneurs had received training and only few (9%) of them had not received training in their respective enterprise.

### **Entrepreneurial behaviour of agripreneurs**

- ❖ Achievement motivation (53.76), risk orientation (62.40), innovativeness (62.32), leadership ability (62.26) and information seeking behaviour (64.87) were found medium among agripreneurs.
- ❖ Decision making ability (67.20), co-ordinating ability (66.66), self-confidence (68.83), management orientation (70.42) and market perception (81.24) were high among agripreneurs.
- ❖ Entrepreneurial behaviour of agripreneurs of KAU technology was assessed using a composite index and it was found that agripreneurs received index value of 65.99. It indicated that the agripreneurs had medium level of entrepreneurial behaviour. Among the listed 10 dimensions the composite index for market perception was ranked the highest (81.24).

### **Factors affecting entrepreneurial behaviour of agripreneurs**

- ❖ The correlation coefficient values indicated that the characteristics such as education, attitude towards self-employment, mass media contact and social participation were significantly and positively influencing with entrepreneurial behaviour of agripreneurs. Whereas age, annual income, trainings received, self-reliance, economic motivation, occupation had no relationship with entrepreneurial behaviour of agripreneurs.

### **Constraints experienced by the agripreneurs**

- ❖ Production and labour management constraint received the highest index value (51.82) among all constraints indicating that production and labour was the major constraint faced by agripreneurs, followed by marketing related constraints (41.53). Non availability of required inputs, skilled labour and high cost of labour were the serious problems faced by agripreneurs.



To conclude, majority of the agripreneurs who sought KAU technology were found to engage in nursery management and mushroom cultivation. The entrepreneurial behaviour of agripreneurs of KAU technology was assessed as medium. Most of the agripreneurs adopted agribusiness in small scale and considered as the subsidiary occupation. There is an immense scope for expanding their agribusiness into a primary occupation by elevating them to high entrepreneurial behaviour and overcoming the constraints faced by them with continuous institutional support mechanism.

### **Implications of the study**

The findings of the study may help the administrators and policy makers to know the entrepreneurial behaviour of agripreneurs, the relationship between socio-economic characteristic with entrepreneurial behaviour.

In the light of findings of the study and from the personal experience of researcher at the time of personally interviewing respondents, following implications are made for the effective improvement of entrepreneurial behaviour of agripreneurs, to the concerned extension and field level personnel, administrators and policy makers.

- ✓ The fact that majority of the agripreneurs had medium entrepreneurial behaviour is a clear indication of the progressiveness of the agripreneurs. Further, it calls for intensification of educational efforts and policy support to the agripreneurs by the development departments to make them more enterprising.
- ✓ As most of the agripreneurs had medium innovativeness, still there is a need to expose the agripreneurs to recent developments in agricultural technologies and motivate them to adopt the new technologies by organizing group discussions, meetings, study tours and field trips.
- ✓ Intensive training programmes need to be conducted to create awareness about entrepreneurial opportunities, decision making, innovativeness, participation in implementation of government schemes, time and financial management, which would enable the agripreneurs for efficient utilization of their potential.



These programmes should be followed by vigorous follow-up, guidance and counselling for sustenance of the entrepreneurial activity.

- ✓ The study revealed that certain variables such as education, attitude towards self-employment, mass media contact, social participation and economic motivation were found to be positively and significantly correlated with entrepreneurial behaviour. The development department should aim at intervening these variables to their advantage for promoting entrepreneurial behaviour among agripreneurs.
- ✓ Production and labour management was the major constraint faced by agripreneurs, followed by marketing related constraints. Non availability of required inputs, skilled labour and high cost of labour were the serious problems faced by agripreneurs. The activities of Technology Incubation Centres are to be strengthened as continuous support system to facilitate the agripreneurs for meeting the challenges they faced during the process of doing the agribusiness.

#### **Future line of work**

- ❖ Similar studies with the same objectives can be replicated in the other areas for drawing valid conclusion
- ❖ A comparative study of entrepreneurial behavior of farmers engaged in different enterprises such as commercial crop production, fisheries, piggery, dairy, poultry *etc.*, may throw new light on farm entrepreneurs
- ❖ To have an in depth analysis of the study, case studies of successful entrepreneurs may be taken up to understand various factors contributing for their success.
- ❖ Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis of specific agro enterprises can be taken up.

# REFERENCES

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## 6. REFERENCES

- Aiswarya, S. 2016. Emotional intelligence among the employees of ESAF microfinance and investment (P) Ltd. MBA(ABM) thesis, Kerala Agricultural University, Thrissur, 88p.
- Anthony, O. I., Ndubuto, N. I., Ogbonnaya, O. U., and Etomchi, N. M. 2014. Analysis of Entrepreneurial Behaviour Among Cassava Farmers in Ebonyi State, Nigeria. *Int. J. Agric. Sci. Res. Technol. Ext. Educ. Syst.* 4(2): 69-74.
- Archana, K. N. 2013. A study on entrepreneurial behaviour of commercial seed growers of Dharwad district. M.Sc.(Ag) thesis, University of Agricultural Science, Dharwad, 98p.
- Avhad, S. R., Kadian, K. S., Verma, A. K., and Kale, R. B. 2015. Entrepreneurial behaviour of dairy farmers in Ahmednagar district of Maharashtra, India. *Agric. Sci. Digest* 35(1): 56-59.
- Badi, R.V. and Badi, N.V. 2007. *Entrepreneurship*. Vrinda Publication (P) Ltd., New Delhi, p.14.
- Bairwa, S. L., and Kushwaha S. 2012. Agro Industry scenario in India. In: Singh, S. P. (ed.) "*Agricultural research and Sustainable development India*" Bharti Publications, New Delhi, pp. 159-182.
- Bairwa, S. L., Kushwaha, S., Meena, L. K., Lakra, K., and Kumar P. 2014. Agribusiness Potential of North Eastern States: A SWOT Analysis. In: Singh *et al.*, "*Agribusiness Potentials in India: experience from hill states*". EBH Publishers Guwahati, New Delhi. pp. 544 – 556.
- Bheemappa, A. 2003. Entrepreneurship development in agriculture. *Yojana* 47(12): 19-20.
- Bhosale, S. R., Deshmukh, A. N., Godse, S. K., and Shelake, P. S. 2014. Entrepreneurial behaviour of dairy farmers. *Adv. Res. J. Soc. Sci.* 5(2): 171-174.
- Chandran, R. 2015. Social capital formation through farm women groups in vegetable production in Kollam district. M.Sc.(Ag) thesis, Kerala Agricultural University, Thrissur, 120p.
- Chandrasekar, K. S. 2006. Entrepreneurship issues and challenges in Kerala and the role of University of Kerala in fostering an entrepreneurial culture and the need for entrepreneurship education [on-line]. Available:

- [http://www.indianmba.com/Faculty\\_Column/FC489/fc489.html](http://www.indianmba.com/Faculty_Column/FC489/fc489.html) [05 march 2017].
- Chatterjee, A. 1992. Entrepreneurship Development Programme and Self-employment. *Yojana* 38(6): 12-15.
- Chaurasiya, K. K., Maratha, P., and Badodiya, S. K. 2016. Factors affecting entrepreneurial behaviour of dairy farmers. *Agric. Update* 12(1): 23-30.
- Chouhan, S., Singh, S. R. K., Pande, A. K., and Gautam, U. S. 2013. Adoption Dynamics of Improved Sugarcane Cultivation in Madhya Pradesh. *Indian Res. J. Ext. Educ.* 13(2): 26-30.
- Desai, V. 1995. *Small Scale Industries and Entrepreneurship*. Himachal Publishing House, Mumbai, 570p.
- Desai, V. 1997. *Dynamics of entrepreneurial development and management*. Himalaya Publishing House, Mumbai, 780p.
- Drucker, P. F. 1985. *Innovation and entrepreneurship*. Harper Business, New York, 288p.
- Gamit, M. P., Durgga Rani, V., Bhabbor, I. N., Tyagi, K. K., and Rathod, A. D. 2015. Entrepreneurial behaviour of dairy farmers in Surat District of South Gujarat. *Int. J. Adv. Multidisciplinary Res.* 2(8): 50-56.
- Ganeshan, G. 2001. Entrepreneurship Development. *Kisan World*. 28(6): 50-51.
- Geol, A. K. 2002. Better farming by every farmer. *Indian Agripreneur*. 1(1): 2.
- Giridhara. 2013. A study on entrepreneurial behaviour of women entrepreneurs in Mandya district. M.Sc.(Ag) thesis, University of Agricultural Science, Bangalore, 95p.
- GOI [Government of Kerala]. 2011. Census of India 2011 [online]. Available: [www.censusindia.gov.in/2011censusPAC/PCA\\_Highlights/pca\\_file/India](http://www.censusindia.gov.in/2011censusPAC/PCA_Highlights/pca_file/India) [19 March 2017]
- GOK [Government of Kerala]. 2014. Kerala Technology Startup Policy 2014 [online]. Available: <https://kerala.gov.in/documents> [04 August 2017].
- Gurubalan, M. 2007. Entrepreneurial behaviour of coconut oil-based unit-owners. M.Sc.(Ag) thesis, Kerala Agricultural University, Thrissur, 84p.
- Handa, S. 2010. Entrepreneurs 10 Forum. Ahmedabad [online]. Available: <http://www.fifthvedaentrepreneurs.com/Fifth-Veda-Gallery.html> [21 April 2017].



- Harold, K. 1994. *Essentials of Management* (1<sup>st</sup> Ed.). McGraw Hill Publishing Company, New York, p.39.
- Haugen, M. S. and Vik, J. 2008. Farmers as entrepreneurs: The case of farm based tourism. *International Journal of Entrepreneurship and Small Business* 6(3): 321-336.
- Itawdiya, K. K. 2011. A study on technological gap in sugarcane production of Sehore block of Sehore district (M.P.) M.Sc. (Ag) thesis, JNKVV, Jabalpur, 89p.
- Jhamtani, A. 1996. *Dynamics of entrepreneurship* [Lecture notes]. IARI, New Delhi, 6p.
- Kale, R. A. 2012. Training needs of farmer women in dairy farming. M.Sc. (Ag) thesis, Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola, 97p.
- Kamaraddi, P. 2011. Entrepreneurial behaviour of pomegranate growers in Koppal district of Karnataka. M.Sc. (Ag) thesis, Acharya N. G. Ranga Agricultural University, Hyderabad, 173p.
- Kanungo, R. N. 1998. *Entrepreneurship and Innovation: Models for development*. Sage Publications, New Delhi, pp. 20-23.
- Kerlinger, F.N. 1973. *Foundations of Behavioral Research*. Surgeeth publications, New Delhi, 1008p.
- Kothari, C. R., and Gaurav, G. 2017. *Research methodology: Methods and Technologies* (3<sup>rd</sup> Ed.). New Age International (P) Limited publishers, New Delhi, pp. 449.
- Krishnan, A. U. 2017. Impact of training programmes on farm mechanisation. M.Sc.(Ag) thesis, Kerala Agricultural University, Thrissur, 135p.
- Kumar, L. 2017. A comparative study on entrepreneurial behaviour of male and female dairy farmers of Jaipur dairy in Jaipur district of Rajasthan. M.Sc.(Ag) thesis, Sri Karan Narendra Agriculture University, Jobner, 202p.
- Kumar, N. P. 2012. Entrepreneurial behaviour of pomegranate farmers in Chitradurga district of Karnataka. M.Sc.(Ag) thesis, University of Agricultural Science, Bangalore, 163p.
- Lawrence, C. and Ganguli, D. 2012. Entrepreneurial behaviour of dairy farmers in Tamil Nadu. *Indian Res. J. Ext. Educ.* 12(1): 66-70.

- Macher, R. 1999. *Making Your Small Farm Profitable*. Pownal: Story Books, New York, 127p.
- Manmohan, S. S. 2013. Entrepreneurial behaviour among dairy farmers in Marathwada region on Maharashtra. M.Sc.(Vet) thesis, National Dairy Research Institute, Karnal, 86p.
- Mertiya, M. S. 2017. Entrepreneurial behaviour of rural women. M.Sc.(Ag) thesis, Maharana Pratap University of Agriculture and Technology, Udaipur, 76p.
- Nagalakshmi, T., and Sudhakar, A. 2013. Agri-preneurs: A Case Study of Dharmapuri Farmers. *Int. J. Sci. Res.* 2(8): 208-214.
- Nargave, R. 2016. Entrepreneurial behaviour of sugarcane growers' in block shahpura district Jabalpur (M.P.). M.Sc.(Ag) thesis, Jawaharlal Nehru Krishi Vishwa Vidyalaya, Jabalpur, 53p.
- Narmatha, N., Krishnaraj, R., and Safiullah, M. A. 2002. Entrepreneurial behaviour of livestock farm women. *J. Ext. Educ.* 13(4): 3431-3438.
- Nomeshkumar, N. and Narayanaswamy, B. K. 2000. Entrepreneurial behaviour and socio-economic characteristics of farmers who adopted sustainable agriculture in India. *Kar. J. Agric. Sci.* 13(1): 83-90.
- Parimaladevi, S., Husain, A. S., and Bhaskaran, S. 2006. Determinants of the Effectiveness of Agriclincs and Agribusiness Centres Scheme in Kerala. *J. Trop. Agric.* 44 (2), 91-93.
- Patel, P., Patel, M. M., Badodia, S. K., and Sharma, P. 2014. Entrepreneurial behaviour of dairy farmers. *Indian Res. J. Ext. Educ.* 14(2): 46-49.
- Patel, T. R., Gulkari, K., and Patel, J. K. 2013. Entrepreneurial behaviour of poultry farmers. *Agric. Update.* 8(4): 586-590.
- Peters, H. 1998. *Entrepreneurship*, International Edition. pp. 9.
- Pisure, B. L., Thombre, B. M., and Jamadar, C. R. 2015. Relationship between personal, socio-economic and psychological characteristics of dairy farmers with their entrepreneurial behaviour. *Res. J. Anim. Husb. Dairy Sci.* 6(1): 1-5.
- Porchezian, M. R. 1991. An analysis of entrepreneurial behaviour of farmers. M.Sc.(Ag) thesis, Tamil Nadu Agricultural University, Coimbatore, 124p.

- Porchezhiyan, S., Sudharshan, A., and Umamageswari, M. 2016. Entrepreneurial behavioural index of dairy farmers in the Northern districts of Tamil Nadu. *Indian J. Econ. Dev.* 4(1): 1-5.
- Raghunath, A. K. 2014. Entrepreneurial behaviour of nursery owners. M.Sc. (Ag) thesis, Mahatma Phule Krishi Vidyapeeth, Rahuri, 81p.
- Ramana, A. V. 1999. Entrepreneurship and economic development. *Kurukshetra* 48(2): 8-10.
- Ramlakshmidivi, S., Gopal, S. P. V., Sailaja, V., and Prasad, S. V. 2013. Profile characteristics of sugarcane farmers in Chittoor district of Andhra Pradesh. *J. Res. ANGRAU.* 41(1): 96-100.
- Ranuji, C. R. 2006. A study on entrepreneurial behaviour of dairy farmers. Ph.D. (Ag) thesis, University of Agricultural Science, Dharwad, 142p.
- Rao, P. 2008. Environmental initiatives taken by entrepreneurs in the Phillipines. *J. Entrepreneurship* 17(1): 73-81.
- Rathod, P. K., Nikam, T. R., Sariput, L., Vajreshwari, S., and Hatey, A. 2011. Participation of Rural Women in Dairy Farming in Karnataka. *Indian Res. J. Ext. Educ.* 11(2): 31-36.
- Raut, A. A. and Sankhala, G. 2014. Entrepreneurship among commercial dairy farmers in Maharashtra. *Indian J. Dairy Sci.* 67(6): 536-540.
- Reddy, S. J. 2004. Entrepreneurship: Concept and Development. Third Concept, 17(203): 39-42.
- Rubeena, A. 2015. Revitalization of Agricultural Technology Management Agency (ATMA): A comparative study in Thiruvananthapuram and Kottayam districts of Kerala. M.Sc.(Ag) thesis, Kerala Agricultural University, Thrissur, 112p.
- Sadashive, S. M., Pathade, S. S., Sawant, M. N., Ramesh, N., and Pordhiya, K. I. 2017. Entrepreneurial behaviour of dairy farmers: a study in Marathwada region of Maharashtra, India. *Int. J. Curr. Microbiol. Appl. Sci.* 6(7): 97-101.
- Sah, P., Sujan, D. K. and Kashyap, S. K. 2009 Role of Agripreneurship in the Development of Rural Area [Abstract]. In: ICARD; 5-6, 2009, Banaras Hindu University, Varanasi, 54p.



- Sarmah, R. C. and Singh, A. K. 1994. Determinants of entrepreneurship in Agriculture. *Agric. Ext. Rev.* 35(3): 538-539.
- Savitha, C. M. 2007. A critical analysis of entrepreneurial behaviour of rural and urban women entrepreneurs. Ph.D.(Ag) thesis, University of Agricultural Science, Bangalore, 183p.
- Shivacharan, G. 2014. A study on entrepreneurial behaviour and attitude of rural youth towards agri entrepreneurship. M.Sc. (Ag) thesis, Acharya N. G. Ranga Agricultural University, Hyderabad, 174p.
- Singh, A. P. 2013. Strategies for Developing Agripreneurship among Farming community in Uttar Pradesh, India, *ACADEMICIA: An Int. Multidisciplinary Res. J.*: 11: 1-12.
- Singh, D. K., Itawadiya, K., and Singh, P. K. 2012. Adoption of Improved Sugarcane Production Technologies. *Indian J. Ext. Educ.* 48 (4): 77-80.
- Singh, R. 2011. A study of profile and problems of agripreneurs in Panjab. M.Sc. (Ag) thesis, Punjab Agricultural University, Ludhiana, 55p.
- Somanath, G. 2009. Entrepreneurial effectiveness of agripreneurs in Kerala. M.Sc. (Ag) thesis, Kerala Agricultural University, Thrissur, 148p.
- Somvanshi, R. M., Deshmukh, A. M., Mokhale, S. U., and Godase, S. K. 2013. Entrepreneurial behaviour of vegetable growers. *Agric. Update* 11(3): 239-241.
- Sreeram, V. 2013. A study on entrepreneurial behaviour of members of "Kudumbashree" NHGs in Palakkad district of Kerala. M.Sc. (Ag) thesis, Acharya N. G. Ranga Agricultural University, Hyderabad, 145p.
- Sreeram, V., Prasad, S. V., and Lakshmi, T. 2015. A study on entrepreneurial behaviour of kudumbashree Neighbourhood Group (NHG) members in Kerala. *Indian Res. J. Extn. Edu.* 15(2): 123-126.
- Subramanyeswari, B. and Reddy, V. K. 2003. Entrepreneurial behaviour of rural dairy women. *Madras Agric. J.* 30(1-3): 173-175.
- Sundaran, S. R. 2016. Performance analysis of self help groups (SHGs) and swasraya karshaka samithis (SKSs) on farm entrepreneurship in Thiruvananthapuram district. M.Sc. (Ag) thesis, Kerala Agricultural University, Thrissur, 82p.



- Sundaran, S. R. and Sreedaya, G. S. 2016. Performance analysis of self help group on farm entrepreneurship in Thiruvananthapuram district of Kerala. *J. Ext. Educ.* 28(1): 5598.
- Tekale, V. S., Bhalekar, D. N., and Shaikh, J. I. 2013. Entrepreneurial behaviour of dairy farmers. *Int. J. Ext. Educ.* 9: 32-36.
- Tripathi, R., and Agarwal, S. 2015. Rural development through Agripreneurship: A case study of farmers in Uttar Pradesh. *Glob. J. Adv. Res.* 2(2): 534-542.
- Trivedi, G. 1963. Measurement and analysis of socio-economic status of rural families. Ph.D. (Ag) thesis. Indian Agricultural Research Institute, New Delhi, 82p.
- Uplaonkar, S. S. and Biradar, S. S. 2015. Development of agriculture in India through agripreneurs. *Int. J. Appl. Res.* 1(9): 1063-1066.
- Vijaykumar, K. 2001. Entrepreneurship behaviour of floriculture farmers in Ranga Reddy district of Andhra Pradesh. M.Sc.(Ag) thesis, Acharya N. G. Ranga Agricultural University, Hyderabad, 97p.
- Vijaykumar, K. 2011. Study on entrepreneurial behaviour of silkworm seed producers. M.Sc. (Sericulture) thesis, University of Agricultural Science, Bangalore, 181p.
- Yadav, V. 2012. A study on adoption of improve production technology of sugarcane among the farmers of Amla block of Betul district, Madhya Pradesh. M.Sc.(Ag) thesis, JNKVV, Jabalpur, 142p.

# APPENDICES

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# Kerala Agricultural University

## Communication Centre

Mannuthy P.O., Thrissur, Kerala 680651

Dr. S. Helen  
Professor  
(Major Advisor)  
Email: [helen.s@kau.in](mailto:helen.s@kau.in)  
Mobile no: 9446142552

Dear Sir/Madam,

I would like to bring your kind notice that, Mr. Raju Parashuram Naik (Ad. No. 2015-11-096) is committed to undertake a research study entitled “Entrepreneurial behaviour of agripreneurs of KAU technology” under my guidance. The main objective of his study is to assess the entrepreneurial behavior of aspiring agripreneurs of KAU technology and the factors influencing agripreneurs to adopt KAU technology. The study also aims to identify the constraints faced by aspiring agripreneurs in adopting KAU technology.

In the light of your vast knowledge and experience, we request you to be a judge for rating the relevancy of the variables enlisted in the enclosed appendix. I request you to indicate the appropriate variable to be included in the study by marking (✓) in the relevant column. You can also suggest variables which you feel important for the study and also rate them under the appropriate column.

With utmost concern of your busy schedule, I request you to spare your valuable time for us. Your kind and quick response will help us to complete the study in time.

Thanking you

Yours faithfully,

S. Helen

**Title of the study:** Entrepreneurial behaviour of agripreneurs of KAU technology

**Objectives:**

To assess the entrepreneurial behaviour of aspiring agripreneurs of KAU technology

The factors influencing agripreneurs to adopt KAU technology

To identify the constraints faced by aspiring agripreneurs in adopting KAU technology

To propose measures to overcome the constraints faced by them

**I. Operationalization of independent variables**

Following are the independent variables identified for the study. Please mark ✓ the relevancy of including the variables in terms of MOR- Most Relevant, MR- More Relevant, R- Relevant, LR- Least Relevant and NR- Not Relevant against the appropriate column.

Sl. No.	Variables	MOR	MR	R	LR	NR
1	<b>Age:</b> defined as the number of years completed by an entrepreneur at the time of interview.					
2	<b>Educational status:</b> defined as the level of formal education attained by respondent.					
3	<b>Annual income:</b> defined as the total earning of the family for one year.					
4	<b>Experience:</b> refers to the experience in enterprise in terms of completed years by the respondents.					
5	<b>Size of the enterprise:</b> number of employees working in the enterprise owned by the respondent.					
6	<b>Mass media contact:</b> defined as the extent to which an entrepreneur is exposed to different mass media such as radio, news paper, television.					



7	<b>Social participation:</b> refers to the nature of participation of an entrepreneur in various activities of social organisation.					
8	<b>Level of aspiration:</b> refers to an entrepreneur's overall assessment of his/her concern for wishes and hopes for the future in his/her own reality world					
9	<b>Attitude towards self employment:</b> defined as the degree of positive or negative feeling of an entrepreneur towards self employment.					
10	<b>Thoughtfulness:</b> refers to the extent to which the responses have thinking introversion, reflectiveness and being observant and meditative.					
11	<b>Sociability:</b> the extent to which the individual makes friends, likes social contact and social activity.					
12	<b>Economic motivation:</b> refers to the occupational excellence in terms of profit maximization and relative value placed on economic ends by an entrepreneur.					
13	<b>Self reliance:</b> refers to the extent to which a person relies on himself/herself for his/her future					
14	<b>Extension orientation:</b> refers to the extent of contact of an entrepreneur with different extension agencies and his participation in various extension activities or programmes like group discussion, seminar, meeting etc.					
15	<b>Knowledge about value added products:</b> it is defined as understanding of the entrepreneur about value added products.					
16	<b>Training received:</b> is defined as number of					

	training undergone by the respondent in relation to the enterprise activities.					
17	<b>Other variables</b> , if any please specify and explain.					

## II. Dimensions of entrepreneurial behavior (Dependent variables)

The possible dimensions of entrepreneurial behavior of agripreneurs are listed below. Please mark ✓ the relevancy of including the variables in measuring the entrepreneurial behavior in terms of MOR- Most Relevant, MR- More Relevant, R- Relevant, LR- Least Relevant and NR- Not Relevant against the appropriate column.

Sl. No.	Variables	MOR	MR	R	LR	NR
1	<b>Decision making ability:</b> defined as the degree to which an entrepreneur justifies his/her choice from among the available alternative on the basis of scientific criteria.					
2	<b>Self-confidence:</b> refers to the extent of feeling about her/his lowers, abilities and resourcefulness to reform an activity which she/he desire to undertake					
3	<b>Achievement motivation:</b> refers to the desire for excellence of an entrepreneur to attain a sense of personal accomplishment					
4	<b>Risk taking ability:</b> defined as the degree to which an entrepreneur is oriented towards risk and uncertainty and has courage to face the problems in starting an enterprise.					
5	<b>Credit orientation:</b> defined as the favourable and positive attitude of an individual entrepreneur towards obtaining credit from institutional					

	resources for starting an enterprise.					
6	<b>Management orientation:</b> defined as the degree to which an entrepreneur is oriented towards scientific management comprising of planning, production and marketing of her/his enterprise.					
7	<b>Initiative:</b> defined as the capacity of an entrepreneur to come forward on her/his own to take up some activities.					
8	<b>Assistance of management services:</b> referred the degree to which the individual entrepreneur gets assistance in management services.					
9	<b>Innovativeness:</b> defined as the degree to which an entrepreneur is relatively early in adopting new ideas.					
10	<b>Scientific orientation:</b> defined as the degree to which the respondent is oriented towards the use of scientific methods in decision making on starting and running an enterprise.					
11	<b>Value orientation:</b> defined as those aspects of an entrepreneur which commit him/her to the observance of certain norms/standards, criteria for relation whenever she/he is in contingent situation which allow him/her to make a choice.					
12	<b>Change proneness:</b> referred the degree to which an entrepreneur's behavior pattern who is interested in and desires to seek change into his/her operations when practicable and feasible.					
13	<b>Self concept:</b> refers to the cognition and feelings that the respondent has about himself/herself as an entrepreneur.					



14	<b>Deferred gratification:</b> refers to the postponement of short range rewards in order to secure long range goals.					
15	<b>Commitment:</b> refers to strength of the feeling of responsibility that an entrepreneur has towards the mission of his enterprise.					
16	<b>Information seeking behaviour:</b> refers to the way entrepreneur search for and utilize information.					
17	<b>Leadership ability:</b> degree to which an entrepreneur can influence the action of other individuals.					
18	<b>Coordination ability:</b> refers to the ability to synchronize and integrate activities and responsibilities to ensure that the resources of an enterprise are used most efficiently.					
19	<b>Planning ability:</b> refers to the ability to identify and monitor enterprise's immediate and long term objectives, formulating specific strategies to achieve them.					
20	<b>Cosmopolitaness:</b> referred as the mobility of an entrepreneur outside his/her social system.					
21	<b>Strategic visioning:</b> defined as the future oriented goal setting, based on environmental analysis for determining the content of enterprise action.					
22	<b>Internal locus of control:</b> defined as the belief of the entrepreneur that they can personally control the events, consequences in their lives, business and the amount of personal responsibility they perceive and accept for their actions and results.					
23	<b>Competition orientation:</b> defined as the degree to					



	which an entrepreneur is oriented to place himself/herself in a competitive situation in relation to other individual for projecting his/her excellence in his/her business.					
24	<b>Market perception:</b> referred as the entrepreneur's perception of the existence of market demand for his/her produces, the ease or difficulty in marketing and possibility of securing remunerative prices.					

**Signature:**

**Name:**

**Designation:**

## APPENDIX I

### Relevancy indices of independent variables

Sl. No.	Variables	Relevancy indices
1	Age	89.22*
2	Educational status	85.16*
3	Annual income	85.93*
4	Experience	77.87
5	Size of the enterprise	75.29
6	Mass media contact	86.51*
7	Social participation	85.22*
8	Occupational status	88.38*
9	Attitude towards self-employment	89.67*
10	Thoughtfulness	70.96
11	Sociability	74.19
12	Economic motivation	86.45*
13	Self-reliance	86.58*
14	Extension orientation	76.12
15	Knowledge about value added products	65.80
16	Trainings received	88.22*

\* Variables selected for the study

**Relevancy indices for identified dimensions for measuring the entrepreneurial behaviour of the respondents**

<b>Sl. No.</b>	<b>Identified dimension</b>	<b>Relevancy indices</b>
1	Decision making ability	92.25*
2	Self-confidence	89.03*
3	Achievement motivation	89.03*
4	Risk taking ability	95.48*
5	Credit orientation	78.70
6	Management orientation	87.74*
7	Initiative	55.74
8	Assistance of management services	69.03
9	Innovativeness	95.48*
10	Scientific orientation	75.87
11	Value orientation	78.64
12	Change proneness	74.83
13	Self concept	71.61
14	Deferred gratification	69.03
15	Commitment	79.29
16	Information seeking behaviour	87.74*
17	Leadership ability	86.45*
18	Coordination ability	86.45*
19	Planning ability	79.03
20	Cosmopolitaness	75.48
21	Strategic visioning	71.58
22	Internal locus of control	78.70
23	Competition orientation	68.22
24	Market perception	90.96*

\* Dimensions selected for the study

## APPENDIX II

### KERALA AGRICULTURAL UNIVERSITY COLLEGE OF HORTICULTURE Department of Agri. Extension, Vellanikkara

#### INTERVIEW SCHEDULE

#### Entrepreneurial behavior of agripreneurs of KAU technology

#### I. General information

1. Name of respondent:  
Address :
2. District :
3. Contact no :

#### II. Socio economic profile of respondent

1. Age : Below 30 years , 30-40 years , 40-50 years , above 50 years

#### 2. Education :

Illiterate	Primary school	High school	Intermediate/+2 Level	Graduate	Post graduate

#### 3. Occupational status:

Sl. No.	Occupation	Monthly income (Rs)	
		Primary	Secondary
1	Farming		
2	Allied activities Dairy/Poultry/Goat/..		
3	Services		
4	Agribusiness		
5	Agricultural labourer		
6	Non-agricultural labourer		
7	Others (specify)		

#### 4. Mass media contact :

Sl. No.	Mass media	Frequency of contact		
		Regularly	Occasionally	Never
1	Radio			
2	Newspaper			
3	Television			
4	Farm magazine			
5	Bulletins			
6	Books			
7	Films			
8	Others, specify			



### 5. Social participation :

Sl. No.	Organization	Nature of participation		Frequency of participation in meeting		
		No membership	Membership	Never	Sometime	Regularly
1	Panchayat					
2	Krishibhavan					
3	Co-operative society					
4	Farmer's club					
5	Youth club					
6	Banks					
7	Others, specify					

### 6. Attitude towards self-employment:

Please indicate your response in the appropriate alternative by putting a tick mark (✓)

SA-strongly agree, A-agree, UD-undecided, D-disagree, SD-strongly disagree

Sl. No.	Statements	SA	A	UD	DA	SDA
1	Agriculture is a potential field for self-employment during the present period of extreme unemployment					
2	Self-employment in agriculture is an independent profession as it offers freedom					
3	There is no necessity for an educated unemployment youth to go for self-employment in agriculture as government jobs are meant for him					
4	Self-employment in agriculture is desirable, since one need not expect any sanction from any official					
5	It is unwise to select self-employment in agriculture as it needs more physical and mental efforts					
6	Sound family background in agriculture is a necessity for selecting self-employment in it					
7	Agriculture is the basis for other industries so selecting self-employment in agriculture is always worthy					
8	For an unemployed youth agriculture is a sure profession facing the vagaries of life					
9	Self-employment in agriculture help one to become self-sufficient in life					
10	Since there are ample technologies available in agriculture one can make self-employment in agriculture easily					

**7. Economic motivation :**

Please indicate your response in the appropriate alternative by putting a tick mark (✓)  
SA-strongly agree, A-agree, UD-undecided, D-disagree, SD-strongly disagree

Sl. No.	Statements	SA	A	UD	DA	SDA
1	An entrepreneur should work hard for economic profit					
2	The most successful entrepreneur is one who makes more profit					
3	An entrepreneur should try any new ideas which may earn more money					
4	An entrepreneur must earn his/her living but most important things in life cannot be defined in economic terms					
5	It is difficult for one's children to make good start unless one provide them with economic assistance					

**8. Self-reliance :**

How much of your future depends on your self

Percentage	Score
100	4
75-99	3
50-74	2
25-49	1

**9. Training received :**

Have you attended any training programme?

Yes  No

If yes,

Title of Training	Duration	Name of the agency provided training

**10. Extent of adoption of KAU technologies :**

Please list the KAU technologies sought/received/adopted by you

Sl. No.	KAU technologies	Sought	Received	Year of adoption	adopted	Partial adopted	Not adopted	Adopted & discontinued	reasons

### 11. Details of enterprise started :

Sl. No.	Name of enterprise	Year of start	No. of workers employed	Profit/annum(Rs.)

### III. Dimensions of entrepreneurial behavior

#### 1. Decision making ability:

Please tick (✓) mark whether you have taken decision for each of the following. If yes, is the decision taken on your own or in consultation with others

Sl. No.	Decision making area	Response pattern	
		Independently	In consultation with others
1	Decision to start an enterprise		
2	Decision to avail loans		
3	Decision to try out subsidiary enterprise		
4	Decision to hire labourers		
5	Decision regarding storage and marketing of produce		
6	Decision regarding the value addition of the produce		
7	Decision to sale and/or purchase a machinery and equipments		
8	Decision to meet the extension or any organization		
9	Decision to subscribe for magazines		
10	Decision to attend training		

#### 2. Achievement motivation :

Please give your degree of consensus to each of the following statement.

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



### 3. Risk orientation:

Please indicate your response in the appropriate alternative by putting a tick mark (✓)  
SA-strongly agree, A-agree, UD-undecided, D-disagree, SD-strongly disagree.

Sl. No.	Statements	SA	A	UD	DA	SDA
1	An entrepreneur should start more enterprise to avoid greater risks involved in a single enterprise					
2	An entrepreneur should rather take more of a chance in making more profit than to be content with a smaller but less profit					
3	An entrepreneur who is willing to take a greater risk than an average one usually do better financially					
4	It is good to take risks when one knows that chance of success is fairly high					
5	It is better not to try new ideas unless others have done it with success					
6	Trying an entirely new method involves risk but it is worthy					

### 4. Self-confidence :

Please indicate your response regarding following statements pertaining to self confidence

Sl. No.	Statements	Yes	No
1	Do you have difficulty in saying the right opinion at the right time?		
2	Do you feel worthy?		
3	Can you adjust readily new situation?		
4	Do you feel it hard to keep your mind on a task/job?		
5	Do you have enough faith in yourself to make profit in your enterprise?		
6	Do you rely on others to carry out all your business activities?		

### 5. Innovativeness:

Please indicate your response in the appropriate alternative by putting a tick (✓) mark  
SA-strongly agree, A-agree, UD-undecided, D-disagree, SD-strongly disagree

Sl. No.	Statements	SA	A	UD	DA	SDA
1	I would feel restless unless, I tryout an innovative method which I have come across					
2	I am cautious about trying new practices					
3	I like to keep up-to-date information about the subjects of my interest					
4	I would prefer to wait for others to try out new practices first					
5	I opt for the traditional way of doing things than go in for newer methods					



**6. Leadership ability :**

The statements related to this aspect are given below. Please indicate your response on a three point continuum.

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

**7. Information seeking behavior:**

Please state the frequency of contact with different information sources to get information on various management practices.

Sl. No.	Source	Extent of contact			
		Once in fortnight	Once in month	Occasionally	Never
<b>I</b>	<b>Formal sources</b>				
1	Scientists from agricultural university				
2	Bank officials				
3	Krishibhavan				
<b>II</b>	<b>Informal sources</b>				
1	Family members				
2	Friends				
3	Successful agripreneurs				
4	Meeting with experts				
<b>III</b>	<b>Mass media</b>				
1	Newspapers				
2	Radio				
3	Television				
4	Farm literature				
5	Film shows				

**8. Ability to co-ordinate the enterprise activities :**

Please tick the option applicable to you among the three given under each statement regarding the way you carry out your enterprise

Sl. No.	Statements	Well in advance	At nick of time	Never
		2	1	0
1	When did you prepare plan for your enterprise			
2	When did you consult the specialists about the economic activities of the enterprise			
3	When did you estimate the money required for your enterprise			
4	During last 6 months when did you purchase input/equipment for your enterprise			

**9. Management :**

Following are the statements to measure the degree of management orientation, please indicate your degree of agreement (SA-strongly agree, A-agree, SDA-strongly disagree, DA disagree and UD-undecided) to each of the following statements.

**Planning**

Sl. No.	Statement	Response pattern				
		SA	A	UD	DA	SDA
1	Planning is not essential, as entrepreneur executes production based on his experience					
2	Estimating in advance, the capital requirement of an enterprise is essential for effective execution of entrepreneurial activities					
3	It is possible to increase the profit through good production plan					
4	One should prepare production plan, market plan, manpower plan, financial plan based on the similar product in the market					
5	Each year one should think a fresh about the production and market strategies to be taken up					

**Production**

Sl. No.	Statements	SA	A	UD	DA	SDA
1	One should use latest production technologies in an enterprise					
2	One should maintain the quality of a product to get good price in the market					
3	Entrepreneur should balance in production considering the production capacity of the unit and demand in the market					
4	Timely production of good is essential					

### 10. Market perception :

Sl. No.	Statements	SA	A	UD	DA	SDA
1	A good entrepreneur should keep in touch with current market trend					
2	One should select proper market channel for selling the product					
3	Market information plays an important role for entrepreneur in selling their product					
4	Continuous availability of raw material is essential for production of goods and further execution of orders					
5	Entrepreneur should keep track of what the competitors are doing in the market					

### IV. Constraints faced

Which of the following constraints/problems you face in establishing the enterprise? (MS-More serious, S-Serious, LS-Less serious)

Sl. No.	Constraints	MS	S	LS	Suggestions to overcome the problems
<b>A.</b>	<b>Financial</b>				
1	Lack of adequate money for day to day expenses				
2	Insufficient financial assistance by financial institutions				
3	Problems of security and margin money				
4	Tight repayment schedule				
5	Inadequate loan				
6	Delay in sanction of loan				
7	Entire loan is not given at a time				
8	Subsidy amount is less				
9	Any other (specify)				
<b>B.</b>	<b>Marketing</b>				
1	Long distance of the market				
2	Lack of transportation facilities				
3	Lack of market information				
4	Low price for the produce				
5	Delay in payments				
6	Any other (specify)				
<b>C.</b>	<b>Production and labour</b>				
1	Non-availability of input materials				



2	High labour cost				
3	Non-availability of skilled workers				
4	High cost of inputs				
5	Any other (specify)				
<b>D.</b>	<b>Personal/General</b>				
1	Health problem				
2	Lack of leisure time				
3	Multiple roles				
4	Low education				
5	Non-cooperation of family members				
6	Any others (specify)				



# ABSTRACT

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**ENTREPRENEURIAL BEHAVIOUR OF AGRIPRENEURS OF KAU  
TECHNOLOGY**

Abstract of the thesis

Submitted to the  
Kerala Agricultural University, Thrissur  
in partial fulfilment of the requirements for the award of the  
Degree of

***Master of Science in Agriculture***

Faculty of Agriculture  
Kerala Agricultural University

By  
RAJU PARASHURAM NAIK

2015-11-096



DEPARTMENT OF AGRICULTURAL EXTENSION  
COLLEGE OF HORTICULTURE  
KERALA AGRICULTURAL UNIVERSITY  
VELLANIKKARA, THRISSUR - 680 656.

2017

## ABSTRACT

### **Entrepreneurial behavior of agripreneurs of KAU technology**

Kerala Agricultural University has been transferring agricultural technology to the benefit of farming community right from its inception. Several recommended agricultural technologies were utilized by the stakeholders for enhancing their income for their livelihood. Recently, promotion of agripreneurship has been realized as inevitable for the revitalization of agriculture sector. Kerala Agricultural University has also taken earnest and concerted effort to consolidate, showcase and disseminate the various technology generated suitable for entrepreneurship and skill development. Apart from showcasing the technology in various fairs, seminars, trainings and workshops, KAU Technology Meet-2014 was organised to transfer the technology to the ultimate users. It was felt as appropriate to study the entrepreneurial behavior of agripreneurs of KAU technology with the objectives of assessing the status of the agripreneurs in terms of their entrepreneurial behaviour, factors influencing their entrepreneurial skill and constraints faced by them in utilising the technology.

A total sample size of 100 respondents were selected using simple random sampling technique from the list of trainees who participated in the trainings conducted by the extension centres of Kerala Agricultural University such as Communication Centre, Central Training Institute and Krishi Vigyan Kendra, Thrissur.

The results showed that majority of the respondents were under middle age group of 36 - 55 years. It was observed that 36 per cent of the respondents had an education up to high school level. Majority of the respondents had medium level of mass media contact (76%), social participation (73%), attitude towards self-employment and economic motivation.

Among the 10 dimensions of the entrepreneurial behavior, decision making ability, coordinating ability, management orientation and market perception were high, whereas self-confidence, information seeking behavior, innovativeness, risk orientation, leadership ability and achievement motivation were medium among

the agripreneurs. Further it was also observed that among the listed 10 dimensions the composite index for market perception was ranked the highest (83.12). This indicated that the agripreneurs gave much importance to the current market trend, marketing channel, market information and continuous supply of raw materials for the particular enterprise. The overall entrepreneurial behavior of the respondents was found to be medium.

Study on factors affecting entrepreneurial behavior of agripreneurs showed that social participation, mass media contact, attitude towards self-employment and education had significant positive relationship with entrepreneurial behavior of agripreneurs.

Securing working capital (62.00%) was the serious constraint faced by agripreneurs under financial constraints. Lack of market information (41.00%) was the serious constraint under marketing category, whereas non-availability of input materials (67.00%) and high labour cost (60.00%) were the serious constraints under production category and dual duties (45.00%) was the serious constraint experienced by the agripreneurs under personal constraints.

Apart from imparting technical skills, extension programmes of Kerala Agricultural University may also include the subject areas like linkage with financial institutions, methods of tapping market information through Information Communication Technology (ICT) tools, introduction of mechanization, soft skills on managing dual duties, sharing responsibilities with fellow members etc. The activities of Technology Incubation Centres are to be strengthened as continuous support system to facilitate the agripreneurs for meeting the challenges they face during the process of doing the agribusiness. Periodic review of the performance of agribusiness by the Technology Incubation Centres may create a platform for solving most of the constraints faced by the agripreneurs. Networking of agripreneurs who are involved in similar kind of agribusiness for the exchange of available resources and inputs are to be promoted.

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