SCENARIO ANALYSIS OF AGRO-ECOTOURISM IN KERALA

By

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THESIS

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DECLARATION

I, hereby declare that this thesis entitled **"Scenario analysis of agro-ecotourism in Kerala"** is a bonafide record of research work done by me during the course of research and that the thesis has not previously formed the basis of the award to me any of degree, diploma, associateship, fellowship or any other similar title, of any other university of society.

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CERTIFICATE

Certified that this thesis entitled **"Scenario analysis of agro-ecotourism in Kerala"** is a record of research work done independently by Ms. Sreelekshmy Sadanand, under my guidance and supervision and that it has not been previously formed the basis for the award of any degree, diploma, fellowship or associateship to her.

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LIST OF ABBREVIATIONS

%	:	Percentage
et al.	:	and co-workers /co authors
f	:	Frequency
Fig.	:	Figure
GoK	:	Government of Kerala
i.e.,	:	That is
KAU	:	Kerala Agricultural University
S.D.	:	Standard deviation
viz.	:	Like
vs.	:	versus
Max	:	Maximum
Min	:	Minimum
VFR	:	Visiting Friends and Relatives
FAO	:	Food and Agriculture Organization
FBI	:	Future Business Insight

INTRODUCTION

1. INTRODUCTION

Leisure and tourism emerged as a new dimension of human life in the 19th and 20th century. Law *et al*. (2011) mentioned tourism as one among the service sectors which contributed immensely to the global economy over the 21st century. Simultaneously, farmers as well as the consumers seeks changes and new trends in agriculture and its allied activities. One of the major advancement in the area of both agriculture and tourism is agritourism or agro-ecotourism. Agro-ecotourism is an outbranch of rural tourism where the hosting house is associated to a farm or agricultural estate and the agricultural activities are exhibited to visitors, allowing them to participate in the activities (Marques, 2006). Tourism is categorized into two types: mass tourism, and alternative tourism. Alternative tourism refers to those tourism practices which are intertwined with natural, social and community values and permits both providers and visitors to relish the benefits derived. Natural tourism, cultural tourism, event tourism etc. are various forms of alternative tourism (Newsome *et al*., 2002). Agro-ecotourism, as said, is a form of natural tourism.

Agro-ecotourism has emerged as a result of the idea of taking urban population to rural destinations for relaxation, travel and vacation. In the current global scenario, where the mechanization has prolonged on a large scale, people appear to be least interested on agriculture and its aspects. Agro-ecotourism bridges the gap between people and farming by providing a realistic experience with the farming practices. Agro-ecotourism integrates a wide variety of activities, such as sowing seeds, harvesting, milking cows, feeding the farm animals, tending the bees and many other amusing and outdoor events along with educating the tourists about agriculture and rural livelihood.

Contempt the sturdy decline in the contribution of agriculture on India's Gross Domestic Product in 2017-18, farming community still remains as a significant sector of the country and contributes in its socio-economic growth (FAO, 2018). As a result of global trends, advancement of technologies, low commodity prices, and increasing input charges, Indian agriculture sector is dealingwith severe competition. Along with

this, destabilized crop growth due to ambiguous climatic conditions and catastrophic events has also emerged as a serious issue which hinders the progress of agricultural sector.

These changes have reformed the framework of various farming operations and farmers are now diversifying their farm activities past traditional farming (Karjigi, 2019). Agro-ecotourism is one among those numerous activities on which farmers can depend.

1.1. AGRO-ECOTOURISM

Pinky and Kaur (2014) refers agro-ecotourism as a group of events, amenities and services offered by farmers and people related to the agro- ecotourism unit to attract tourists in order to create additional income from the business. Agro- ecotourism is mainly considered as a small-scale, low-impacttourism product which is majorly education orientated. Interest on farm activities and curiosity about rural life could be the major reasons for an individual to get involved in agro-ecotourism (Wicks and Merrett, 2003). Agro-ecotourism is proposed to be more affordable to a wide tourist population when compared toother types of tourism as it provides a way to enjoy social life, which is more affordable.

Incorporation of tourism in agriculture also enhances the value of agricultural production significantly. When compared to traditional farming practices, agro-ecotourism offers more employment opportunities and thusenhances the income of workers to a level that is three times higher than that offered by traditional agriculture. Agro-ecotourism unites the urban and rural economies to a great extent. Local culture, especially rural and agricultural traditions are promoted while considering modern lifestyle elements that are accepted and appreciated by citizens with a wide range of identities. Agro- ecotourism contributes in the improvement of rural and agricultural landscape, helps in reducing environmental contamination caused by various agricultural practices and promotes water and waste recycling in the farm. From the perspective of urban development, such agro-tourism parks act as green spaces which

provide both open spaces and entertainment places for a variety of citizens. In terms of this, the economic, social and ecological functions are combined and strengthened in a sustainable way.

Agro-ecotourism is promoted globally as a way to increase the revenue from both agriculture and tourism industry. As a result agro-ecotourism market is escalating rapidly at the global level. The growing consumer demand for economical, nature based, and sustainable tourism among tourists is acting as a crucial driving force for the market. Besides, collective functioning of governments, various private organizations, administrations and associations inframing strategies and schemes for the development of agro-ecotourism on a large scale will further enhance the growth of agro-ecotourism market (FBI, 2020).

Success of agro-ecotourism ventures are influenced by various aspects like good road connectivity, transportation facility, electricity and water supply. Providing the guests with homely atmosphere, maintaining hygiene and cleanliness of the surroundings, providing proper guidance about various farming practices and implementing efficient security measures would propel the inflow of more visitors into the agro-ecotourism unit.

1.2. Agro-ecotourism in India

India is one among the top tourist destinations around the world. More than 57% of the tourists who are visiting India demands relaxation and recreation. Agro-ecotourism is still a small scale tourism product and has a little influence on the macro economy of India (Deepika and Sharayu, 2012). The state of Maharashtra became the forerunner in developing and encouraging agro- ecotourism in India by launching Agri Tourism Development Corporation (ATDC)in 2005. ATDC was established by Mr. Pandurang Taware who started agro-ecotourism as an experimental venture with the support of Agriculture Development Trust on 110 acres of farm area utilizing special irrigation methods to run projects of tourist interest like crop production, horticulture, floriculture, sericulture, animal husbandry, jaggery processing unit and

dairy farming. Farmers were provided with training to expand the scope of the agro-ecotourism in Maharashtra and also mechanism was set up to develop agro-ecotourism as a commercial industry in the future years.

States namely Uttarakhand (Chattergee and Prasad, 2019), Karnataka (Hamilpurkar, 2012), Haryana (Kumar et al., 2010), Punjab (Pinky and Kaur,2014), Kerala (Deepthi and Davy, 2017) and Rajasthan (Mehta, 2011) have alreadyinitiated agro-ecotourism, to acquaint agriculture and rural life to urbanities, to bring improvement in the earnings of farmers and to enhance the economy. Agro- ecotourism holds a varied range of possibility for its growth and expansion in all agricultural states of India as a potential tourism market, as many of the states like Uttar Pradesh, Bihar and Andhra Pradesh are majorly agri- driven.

Being a state of varied topography with network of azure backwaters, rivers and streams, there is ample scope for agriculture based tourism in Kerala. Though agro-ecotourism is a new tourism product in Kerala, it has a tremendous potential market for international tourists considering the affordable cost of food, accommodation, recreation and travel. Agro-ecotourism has immense potential to widen the tourist base in Kerala. Major agro- ecotourism destinations includes, Idukki, Wayanad, Kuttanadu, Palakkad, Kottayam and Pathanamthitta regions (Venugopal and Babu, 2020).

Majority of the farmers in Kerala are aware of the concept of agro-ecotourism, but issues such as lack of expert assistance and proper business model for the promotion is severely impeding the progress and expansion of agro- ecotourism in Kerala. Expert guidance in promoting agro-ecotourism, provision of effective trainingprogrammes, financial assistance through financial institutions and public-privatepartnership helps in overcoming these issues (Deepthi and Davy, 2017). Developmentof agro-ecotourism perceives its profit. Information about the positive economic benefits of agro-ecotourism needs to be delivered to the farmers, entrepreneurs and public. Implementation of suitable strategies, schemes and policies for overcoming various challenges existing could guarantee the achievement of full growth of agro- ecotourism (Chande, 2016).

Understanding the perceived benefits and practicability of agro- ecotourism in Kerala is necessary, a state which is agriculturally dominant with diversified tourism destinations. Agro-ecotourism is proposed to be beneficial tothe farm, communities related, and to the society overall. At the time of economic agony, such as poor harvest or depressed prices, hosting visitors for agro- ecotourism activities creates an avenue for generating alternative or supplementary income (McGehee, 2007). Those agro-ecotourism operators who are only partially engaged in farming activities could utilize agro-ecotourism as a substitute for off- farm employment to generate income until the agricultural production recovers. Agro-ecotourism can be considered as an expedient diversification approach as it does not demand excessive funds for farm infrastructure, labour or equipment. Agro-ecotourism operators tend to provide activities considering their existing farm procedures; hence they does not have to vividly modify or change their farm production and may take benefit of the flexibility of their individual schedules and understandings.

1.3. Objectives

The present study entitled "Scenario analysis of agro-ecotourism in Kerala" was undertaken with the following specific objectives:

i. To analyze the perception of agro-ecotourism operatorsabout theutility of agro-ecotourism.
ii. To analyze the perception of agro-ecotourism stakeholdersabout thefeasibility of agro-ecotourism.
iii. To identify the gender roles in agro-ecotourism.
iv. To assess the prospects of agro-ecotourism.
v. To assess the problems in agro-ecotourism.
vi. To assess the challenges in agro-ecotourism as perceived bystakeholders.
vii. To identify social/ecological, economic and other external factorsleading to agro-ecotourism.

1.4. Scope and importance

This research study will help in understanding the utility of agro- ecotourism and the feasibility of practicing agro-ecotourism in Kerala as perceived by the agro-ecotourism operators. The study also will help to identify various challenges and problems faced by the agro-ecotourism operators, to explore prospects of agro-ecotourism and to understand the gender roles in agro- ecotourism.

The result obtained through this study might be helpful for tourismorganizations, tourism departments, training institutions, educational institutions, extension personnels, research scholars, emerging entrepreneurs and active agro- ecotourism operators in framing rules, policies and schemes needed for the development of agro-ecotourism in Kerala as a major tourism product and to understandand explore the potential of agro-ecotourism in improving the economy. The study might be helpful in conveying information to public and farmers about various benefitsof agro-ecotourism and measures to be taken while starting an agro- ecotourismventure.

1.5. Limitations of the study

The present study focuses on the agro-ecotourism operators, employees and tourism officials. The major problem faced during the study was the difficulty in gathering respondents, as agro-ecotourism is still an emerging sectorin Kerala. The study is based on the expressed views of the respondents, hence some degree of discrepancy between the actual information and the expressed responses cannot be ruled out. However, maximum effort was made to collect information about various agro-ecotourism units in Alappuzha, Idukki and Wayanad districts of Kerala. Contempt the limitations, research was conducted very carefully to make study as objective and systematic as possible.

1.6. Presentation of the study

The report of the study is presented as five chapters. Introduction chapter consist of brief description of the topic, statement of the problem, objective of thestudy, scope and limitations faced by the researcher. Review of literature chapter consist of

comprehensive reviewing of the past related works to the objective andthe variable selected. Third chapter is the methodology which gives an idea aboutthe process and procedure of carrying out the research. Result and discussion dealswith the description of the result along with their interpretation. Summary concludes with salient findings and future area of research. The reference, appendices and abstract of the thesis are provided at the end.

REVIEW OF LITERATURE

2. REVIEW OF LITERATURE

Review of literature is the scholarly articles which provide knowledge about the known facts and ideas about the area of the study. The collected review about the study is presented below in the following titles.

2.1. Profile characteristics of agro-ecotourism stakeholders

2.2. Agro-ecotourism

2.3. Perception of the stakeholders about utility and feasibility of agro-ecotourism

2.3.1. Perception of the stakeholders

2.3.2. Utility of agro-ecotourism

2.3.3. Feasibility of agro-ecotourism

2.4. Gender role in agro-ecotourism

2.5. Prospects of agro-ecotourism

2.6. Problems in agro-ecotourism

2.7. Challenges in agro-ecotourism

2.1. Profile characteristics of agro-ecotourism stakeholders

2.1.1. Age

Lee *et al*. (1997) based on the study 'Farmer perception in reforestation incentive programs in Costa Rica' concluded that farmer's readiness to perform agro- ecotourism and their age were not interrelated.

Mace (2005) in a study 'Factors motivating agritourism entrepreneurs' conducted among agro-ecotourism operators and aspiring entrepreneurs in Kansas region reported that the average age of active agro-ecotourism operators and aspiring agro-ecotourism operators were 52 years and 51 years respectively.

Brown and Reeder (2007) in their study 'Farm-Based Recreation: A Statistical Profile' conducted in United States reported that the average age of agro-ecotourism operators was 60 years.

Barbieri and Mshenga (2008) in their study 'The role of firm owner characteristics on the performance of agritourism farms' mentioned that young farmers were more economically successful in agro-ecotourism when compared to elder farmers.

Barbieri and Tew (2009) in a study 'The Perceived Benefits of Agritourism: The Provider's Perspective' conducted among agro-ecotourism operators in Missouri observed that about half of the agro-ecotourism operators belonged to the age category of below 55 years old.

Byne (2013) based on the study 'The leaders of Georgia agritourism : a qualitative study' pointed out that the average age of agro-ecotourism operators was 46 years. The study also reported that young farmers in Georgia were better at utilizing the potential of agro-ecotourism than farmers of other age groups.

Malkanthi *et al.* (2015) based on their study on willingness of farmers in Sri Lanka to initiate spice tourism concluded that majority of the farmers who were willing to start spice tourism belonged to the age group of 50 years and above.

Nair (2015) based on his study 'Eco-tourism as a viable and supplementary off-farm activity - a case study of Wayanad district' revealed that 45.24 per cent of the owners belonged to the age group of 18-36 years followed by 30.95 per cent in the age group 36-46 years and 23.81 per cent in 47 years and above age group.

As per Babu (2017) based on her study 'Role of alternative tourism in the development of villages in Kerala with special reference to nature-tourism, eco-tourism and endogenous tourism projects' reported that majority of the nature and eco-tourism

providers were middle aged (30-60 years old) and tourism providers under the age category of below 30 years old were minority.

Bhatta *et al*. (2019) in the study 'Determinant factors of farmer's willingness to start agritourism in rural Nepal' noticed that young farmers were more enthusiastic in incorporating agro-ecotourism in their farms than middle aged and old aged farmers.

2.1.2. Educational status

Brown and Reeder (2007) conveyed that those farm operators in United States receiving benefits of agro-ecotourism were highly educated, having 95 per cent of them with at least high school education and 44 per cent with college degree. The study reported a non-significant relationship between the educational qualification of owners and their level of participation in agro-ecotourism.

Malkanthi and Routry (2011) based on the study 'Potential of agritourism development: evidence from Sri Lanka' reported that among the agro-ecotourism operators, those with secondary education were the majority, or at least attainedprimary education and were actively involved in agro-ecotourism training and awareness campaigns and performed better than others.

Bagi and Reeder (2012) in a study 'Factors affecting farmer participation in agritourism' observed that level of education and participation in agro-ecotourism training and awareness campaigns highly influenced the efficiency of farmers in performing agro-ecotourism.

Athira (2017) based on her study 'Scenario analysis of rice farming in Palakkad' reported that majority of the farmers were educated up to high school level (50.83 %) followed by middle school (22.50 %), primary school (15.83 %), collegiate level (10.83 %) and no farmers were observed in the illiterate nor can read and write category.

Babu (2017) in her study on eco-tourism in Kerala noticed that 70 per cent of the tourism service providers in the regions namely, Kumarakom, Njarakkal, Thenmala and Pulpally had only basic educational qualification. The study further claimed that educational qualification is not a barrier for the local people to attain employment in tourism sector.

Balu (2017) in his study 'Socio-economic appraisal of agro-tourism in Maharashtra' observed that all the agro-ecotourism operators were literate.

Ohe (2017) as per the study 'Accessing managerial efficiency of educational tourism in agriculture: case of dairy farms in Japan' concluded that, as the education level of farmers increases, they tend to introduce more diversified activities in the farm, which are beneficial for both the farmer and the community.

Yeboah *et al*. (2017) based on the study "Factors influencing agritourism adoption by small farmers in North Carolina" observed that having at least degree qualification had an inordinate influence on an individual's decision in practicing agro-ecotourism.

2.1.3. Years of operation

Pilar *et al*. (2012) based on their study 'Factors determining the entry of agricultural farms into agritourism' conducted among agro-ecotourism operators in Czech Republic reported that 52.3 per cent of the farmers involved in agro-ecotourism were active for longer than 5 years and 21.3 per cent of the operators had an experience of less than two years.

Byne (2013) based on his study in Georgia reported that the time span the operators were into agro-ecotourism ranged from 2-23 years. He further added that those operators with more experience in agro-ecotourism were able to fetch high gross income than other operators.

Pinky (2014) in her study 'Agritourism in Punjab, a case study' revealed that majority of the agro- ecotourism units in Punjab were active for the previous 5-8 years,

while 20 per cent were active for the last 8-11 years.

In the state of Maharashtra, 46.67 per cent of agro-ecotourism operators had moderate level of experience in agro-ecotourism whereas 33.33 per cent of the operators had an experience of 3-6 years and 20 per cent had high experience of more than 9 years (Karjigi, 2019).

2.1.4. Extension contact

Mishra (2006) based on the study 'Suicide of farmers in Maharashtra: Final report submitted to the Government of Maharashtra' claimed that majority of the farmers were not aware of latest technologies and schemes regarding agriculture and their major source of information was local shops supplying farm inputs.

Kumar (2009) based on his study 'Agri-tourism as enterprise diversification in rural Haryana' concluded that extension contact had a positive relation with the entrepreneurial behaviour of agro-ecotourism operators.

Pinky (2014) revealed that in Punjab 46.67 per cent of the agro-ecotourism operators had low and 26.65per cent had high degree of extension contact

Athira (2017) reported that the rice farmers in high productive blocks of Palakkad district maintained a good contact with extension agencies when compared to farmers in low productive blocks. Further she stated that increased extension agency contact led to the positive and significant correlation between extension contact and perception of farmers on government interventions.

Antony (2020) in her study 'Prospects and problems of agro food parks (AFPs): a multidimensional analysis' noticed a positive and significant correlation between extension orientation and entrepreneurship behaviour which reflected the fact that proper extension contact provided the agripreneurs with various information required for the success of the agri enterprises.

2.1.5. Mass media exposure

Mohammad (2006) reported that majority of the entrepreneurs in Murshidabad had medium level of mass media involvement in their life as per 'Study of perceived training needs of entrepreneurs of Murshidabad district of West Bengal'.

Better access to the effectual and proficient marketing communication media is advantageous for any kind of agro-ecotourism unit (Barbieri and Mshenga, 2008).

Kumar (2009) based on his study on agro-ecotourism as enterprise diversification in Haryana reported that 47.50 per cent of the farmers had medium level of mass media exposure, 36.25 per cent had low level of mass media exposure and 16.25 per cent belonged to the higher category.

Based on the study conducted on agro-ecotourism in Punjab, a major proportion of the agro-ecotourism operators had low level of mass media exposure. It was evident that agro-ecotourism operators depended more on internet and social mediafor collecting information and promotion than other media sources which are used for traditional agriculture (Pinky, 2014).

Sushantha (2017) in her study 'Farm diversification and its effects on livelihood security of farmers in Punjab' revealed that for 82.3 per cent of farmers in Punjab, personal localites were the major source for gaining knowledge about farm diversification, whereas 78.7 per cent utilized electronic media and 77 per cent used print media.

Internet accessibility augments the farmer's ability to receive and manage a diversified information associated with agri-enterprises such as prices, demand and weather, and also aids as a platform for marketing a potential agritourism activity (Yeboah *et al*., 2017).

2.1.6. Credit orientation

Esakkimuthu (2012) based on his study 'Innovations in technical backstopping for the Trivandrum district panchayath-a critical appraisal of the Samagra project on banana cultivation' reported that 41.4per cent of the farmers had medium level of credit orientation, while 33.3per cent possessed high degree of credit orientation. The positive and significant correlation between credit orientation and perception of farmers about innovations in banana cultivation revealed theirwillingness in utilizing varied credit resources.

Sreeram (2013) in 'A study on entrepreneurial behaviour of members of Kudumbasree NHGs in Palakkad district of Kerala' pointed out a positive and significant correlation between entrepreneurial behaviour of Kudumbasree members and credit orientation.

Badulescu *et al*. (2015) in their study 'Rural tourism development and financing in Romania: a supply-side analysis' stated that limitations in accessing creditcaused restrictions and uncertainties in the development of rural tourism in Romania.

David (2016) in her study conducted among tourism enterprises in Chennai stated that majority of the entrepreneurs invested from their own reserves or used the retrenchment compensation in order to finance their business as they faced problems in accessing sources of finance.

Athira (2017) based on her study conducted among rice farmers of Palakkad district reported that, majority of the farmers invested less in agriculture and major proportion of loans were used for other activities. This led to reduced profit, and thus the farmers were unable to repay the loan.

Provision of continuous financial support through various funding sources ensures the sustainable development of rural tourism (Kallmuenzer and Peters, 2017).

Hridya (2018) based on her study 'Livelihood security assessment of women agripreneurs of self-help groups (SHGs)in Kerala' stated that 80 per cent of the

respondents in Thiruvananthapuram, 73.33 per cent of the respondents in Palakkad and 66.67 per cent of respondents in Malappuram districts exhibited a medium level of credit orientation.

Raj (2018) based on her study 'Entrepreneurial behaviour of lease land vegetable growers in Thiruvananthapuram district' reported that the farmer's entrepreneurial behaviour was positively and significantly influenced by their credit orientation.

Jose (2020) in her study 'Entrepreneurial behaviour of farmer producer organization (FPO) members for livelihood security' reported that half of the respondents possessed medium level credit orientation and 27.50 per cent and 21.67 per cent of respondents exhibited high and low credit orientation. She further stated the membership in FPOs provided them with a vast opportunity to avail credits.

Welteji and Zerihun (2018) in their study 'Tourism-agricultural nexuses: practices, challenges and opportunities in the case of Bale mountains national park, Southeastern Ethiopia' reported that 56.1 per cent of the respondents faced difficulties in accessing credits for starting both tourism and agri-enterprises, whereas 43.9 per cent of them confirmed the credit accessibility for those entities who wish to invest in these activities.

Kaimal (2020) based on the study 'Multidimensional analysis of apipreneurship prospects in South Kerala' reported that majority of the apipreneurs (68per cent) exhibited medium level of credit orientation and 16 per cent apipreneurs each exhibited high and low level of credit orientation.

2.1.7. Creativity

Simonton (2011) in his study on creativity stated that an individual's ability to cop up with uncertain situations is influenced by his/her creativity to a great extent. Creative individuals performs well in novel circumstances than other people.

Devaarakonda (2015) in 'A study on generation of farmer innovations and re-innovations in Andhra Pradesh' noticed that majority of the farmers, who were middle aged, belonged to high - medium category in case of creativity.

Nagarva (2016) in the study 'Entrepreneurial behaviour of sugarcane farmersof Udaipur district of Jabalpur' reported that creativity and entrepreneurial behaviour were positively and significantly related.

Divisekera and Nguyen (2018) based on 'Drivers of innovation in tourism: an econometric study' concluded that visitors gets attracted towards the creativity of recreational tourism enterprises than the luxuries and additional facilities it provides.

Raj (2018) based on her study on entrepreneurial behaviour of lease landfarmers in Thiruvananthapuram district reported that creativity had a positive and significant correlation with entrepreneurial behavior.

Chiodo *et al*. (2019) based on the study 'Agritourism in Mountainous Regions-Insights from an International Perspective' stated that majority of the agro-ecotourism farmers in mountainous regions namely USA, Italy, Brazil and France, were creative and it was their major motivation for investing in agro-ecotourism along with innovativeness.

Jose (2020) based on her study on entrepreneurial behaviour of FPO members stated that creativity played a crucial role in increasing the capability of farmers in generating unique products.

Kaimal (2020) in her study on apipreneurship in South Kerala observed that about half of the apipreneurs belonged to lower category while around 46.37 per cent of apipreneurs belonged to higher category in case of creativity.

Luu (2020) in his study 'Green creative behaviour in the tourism industry: the role of green entrepreneurial orientation and a dual-mediation mechanism' analyzed

the green creativity behaviour of tour operators in Vietnam. The study indicated greater green creativity behaviour among the tour operators.

Green creativity refers to the ability of an individual to create eco-friendly novel concepts which can be transformed into practical green processes, products, or services such as eco-tours or preservation projects at tourism destinations (Li *et al*., 2020).

2.1.8. Communication ability

Sarala (2008) in her study 'Perception of agricultural officers and selected progressive farmers on computer mediated communication: a socio-psychological analysis observed that majority of the officers were good at communication (65.26%), while 21.05 per cent had higher and 13.69 per cent had low communication ability.

Tugade (2020) in a study 'Re-creating farms into agri-tourism: cases of selected micro-enterprises in the Philippines' reported that communication skill of owners and employees are vital for the promotion and success of the venture. The agro-ecotourism stakeholders in Philippines agreed that the farmers associated with agro- ecotourism should have the ability to identify the product they are supposed to exhibit and should be able to communicate this to the customers.

2.1.9. Managerial ability

Taufiq *et al*. (2011) in their study 'Entrepreneurial characteristics of Agripreneurs under the scheme ACABC' reported that nearly 61 per cent (60.83%) of agripreneurs exhibited medium level of managerial ability whereas 21.62 per cent and 17.50 per cent exhibited higher and lower level of managerial ability respectively.

Phelan and Sharpley (2012) in their study 'Exploring entrepreneurial skills and competencies in farm tourism' conducted among farmers in West of England noticed that the farmers appreciated managerial competencies especially customer service, finance management and marketing as important skills which are vital for the success

of farm tourism or any kind of farm diversification

As per Hajong (2014) based on her study on agri-entrepreneurship behaviour of farmers , 51per cent of the farmer entrepreneurs had high level of managerial ability, whereas 60per cent of non-entrepreneurs possessed low to medium level managerial excellence.

Antony (2020) in her study on agro food parks reported that majority (63.75%) of the agripreneurs had medium management orientation, whereas 20 per cent and 16.25 per cent possessed low and high level of management orientation respectively. The positive and significant correlation between management orientation and entrepreneurship behaviour indicated the fact that proper management of agri enterprises results in high profitability.

Burman *et al*. (2020) in the study 'Behavioural pattern of farmer entrepreneurs and success factors for establishment of agribusiness ventures under ACABC scheme' conducted in Uttar Pradesh reported that majority of the farmer entrepreneurs possessed high level of managerial qualities, followed by 20 per cent with medium level of managerial characteristics. The study reported that from the starting of the venture, to the end process including marketing and storage, the sole farmer was only engaged, where it helped them to improve their quality in managing and sustaining the business.

Jose (2020) based on her study among FPO farmers reported that 69.17per cent of farmers had medium level of managerial ability, whereas 18.3per cent and 12.5per cent of farmers showed high and low level of managerial ability respectively.

2.1.10. Innovativeness

Kumar (2009) based on his study on agro-ecotourism in rural Haryana revealed that majority of the farmers in Haryana were resourceful and innovative and were capable enough for starting agro-ecotourism as a new venture.

Ronningen (2010) based on the study 'Innovation in the Norwegian Rural Tourism Industry: Results from a Norwegian Survey' pointed out a high level of innovativeness among the rural tourism enterprises.

Merity (2017) based on her study 'Entrepreneurial behaviour of rural women of Udaipur district' stated that one among the eight dimensions which influenced the entrepreneurial behaviour of rural women was innovativeness.

Chiodo *et al*. (2019) based on their study conducted among agro-ecotourism operators in Mountainous Regions namely USA, Italy, Brazil and France revealed that the motivation for nearly 95 per cent of the agro-ecotourism farmers to venture into agro-ecotourism was their innovativeness. The innovative practices in their farm included school tours, farm animal activities, seminars, U-pick fruits and vegetables, farm steading, on-farm processing and wedding venues.

Jose (2020) based on her study on FPOs reported that majority of the farmers showed medium level of innovativeness, whereas 12.50 per cent and 10.83 per cent of the farmers showed high and low level of innovativeness respectively.

Roman *et al*. (2020) stated that innovativeness in agro-ecotourism varies from starting a completely new agro-ecotourism unit, like constructing a theme village with unique characteristics, to developing an efficient marketing situation for the natural and cultural products prevailing in a specific region, like establishing services and tourism set-up around the structure of material culture and their promotion.

Panfiluk (2021) based on the study 'Innovativeness of tourism enterprises: example of Poland' reported a lower to medium level innovativeness of the tourism industry. The study also found that maximum innovativeness was attained by enterprises offering recreation and sports activities.

2. 1. 11. Economic motivation

Kumar (2013) in his study 'Prospects of citrus sinensis cultivation in Haryana' pointed out that majority of the farmers (45%) had high level of economic motivation followed by low (32.50%) and medium (15.83%) level of economic motivation.

Namitha (2016) in her study ' Innovations in Technology Dissemination (ITD): in Kannur district' stated that for majority of the farmers considered field and agriculture as a passion than as a profit generating product, but their children were found to have no interest on agriculture fields.

Athira (2017) based on her study on rice farmers in Palakkad district reported that majority of the farmers considered rice cultivation as a part of their tradition, hence they were less concerned about the high profits to be obtained.

Antony (2020) in her study on entrepreneurship behaviour of agripreneursnoted that majority of the agripreneurs exhibited medium level of economic motivation. Further, economic motivation was found to have a positive and significant correlation with the entrepreneurship behaviour.

2.1.12. Happiness to host VFR (Visiting Friends and Relatives)

Choi and Fu (2018) in 'Hosting friends and family as a sojourner in a tourism destination' stated that hosting VFR plays a major role in tourism development.

Bhatta *et al*., (2019) based on a study conducted among farmers in Nepal reported that majority of farmers agreed to the fact that hosting visiting friends and relatives is helpful in managing agro-ecotourism centre. The study pointed out that a major proportion of the village farmer population consisted of Hindu or Buddhist, and cultural ethnicities dictate that they celebrate different occasions and festivals byvisiting each other's homes .

2.1.13. Frequency of hosting VFR (Visiting Friends and Relatives)

Rogerson (2017) in a study 'Visiting friends and relatives travel matters for

Sub-Saharan Africa' reported that those individuals who had a habit of accommodating their friends and relatives frequently were relatively eager to host the tourists also.

Bhatta *et al*. (2019) reported that experience of farmers in hosting their friends and relatives has a positive influence on their willingness to start agro-ecotourism. The study conducted in Nepal revealed that the farmers were willing to host a limited number of tourists per month.

2.1.14. Farm waste disposal behaviour

Jacobus *et al*. (2009) based on their study 'Eco-tourism as a development strategy: experiences from Costa Rica' pointed out that, lack of proper waste management was one of the major drawbacks in the development of eco-tourism.

Smitha (2014) based on her study on village tourism in Kerala reported that under The Kumbalangi Integrated Tourism Village project 600 biogas plants were installed in Kumbalangi panchayat for waste management purposes.

Mahaliyanaarachchi (2015) in his study on agro-ecotourism in Sri Lanka claimed that agro-ecotourism operators, staff and the local people gave at most priorityto the hygiene of environment as it was demanded by the tourists. Hence moretraditional and indigenous method of agricultural practices were incorporated in those farms associated with agro-ecotourism centers when compared to normal farms.

Babu (2017) based on her study on tourism development in the villages of Kerala stated that cleanliness of the tourism destination played an important factor influencing visitor's satisfaction. She further reported that the villagers were consciousabout the need to preserve the environment, and it also enhanced the self-employment prospects of microenterprises like Kudumbasree.

Wu *et al*. (2019) based on their study 'Coordinated triple bottom line approach to sustainable tourism under uncertainty: proposed a hierarchical framework' proposed

that proper waste management practices ensure environmental sustainability.

2.1.15. Resource recycling

Fakoya (2002) in his study disclosed that the major advantage of crop-livestockintegration is that crop residues and other bi-products could be utilized as a feed to animals by which the problem for waste management can be eliminated.

Resource recycling was found to be an inevitable part of integrated farming systems in Kuttanad, practiced by 70 per cent of marginal and 78 per cent of small farmers as reported by Nair (2017) in her study 'Multidimensional analysis of farmers of integrated farming systems in Kuttanad'.

Raj (2018) based on her study on entrepreneurial behaviour of lease land vegetable growers in Thiruvananthapuram district reported that resource cycling had less influence on the entrepreneurial behaviour of farmers. She noticed that resource recycling was rarely practiced by the farmers in the farm.

2.2. Agro-ecotourism

Gladstone and Morris (2000) based on the study 'Farm accommodation and agricultural heritage in Orkney' stated that agro-ecotourism is a tourist activity, closely intertwined with farm activities and often with the viability of the household economy.

Innovative agricultural activity related to tourism and agriculture both which has capacity to create additional source of income and employment opportunities to the farmers and local communities (Kumbhar, 2010).

According to Pinky and Kaur (2014) agro-ecotourism is a range of activities, services, and facilities provided by farmers and rural people to attract tourists to in order to create added income for their business.

Agro-ecotourism is a type of natural tourism in which tourists see and participate in traditional agricultural practices without destroying the ecosystems and the host bases (Deepthi and Davy, 2017).

Karjigi (2019) referred agro-ecotourism as the concept of visiting anagricultural, horticultural, animal husbandry or agri-enterprise operations for the purpose of enjoyment, education, or active involvement in the activities of the farm or operation.

2.3. Perception of the stakeholders about the utility and feasibility of Agro-ecotourism.

2.3.1. Perception of the respondents.

Perception is the process through which an individual gets stimuli from various senses and interprets them (Preeti *et al*., 2014). It differs from individual to individual depending on their expectations, needs and means of thinking.

McGehee and Kim (2004) in a study conducted among agro-ecotourism entrepreneurs sited that the size of the farm, economic dependence on the farming operation and perception of agritourism influenced or motivated them to a great extent.

2.3.2. Utility of agro-ecotourism.

Bernardo *et al*. (2004) stated that the attractiveness of agro-ecotourism rests on its potential to increase farm incomes and enhance utilization of farm resources.

Barbieri and Tew (2009) based on their study conducted among agro- ecotourism operators in Missouri reported that agro-ecotourism providers were extremely satisfied with the functioning of their unit, as it fetched positive economic and intrinsic benefits to themselves and the community.

Walke (2013) on a study conducted in Pune reported that each agro- ecotourism centre has generated minimum 2 to maximum 20 employments for villagers.

Borlikar and Rao (2015) based on the study 'Theory of agri-tourism and its practice in India' claimed that agro-ecotourism is useful in generating rural capital and thus aids in regional development.

Karjigi (2019) reported that agro-ecotourism is claimed to increase farm revenues and serve other entrepreneurial areas of the farmer, such as the enhancement of their quality of life.

Tugade (2020) reported that majority of the agro-ecotourism centers in Philippines were working on a micro-sale as the location does not provide much revenue and services. The products and services offered by those enterprises were limited to the existing crops and livestock. Moreover, the owners considered agro- ecotourism only as a complementary income source.

2.3.3. Feasibility of agro-ecotourism

James (2012) in 'Farm based Rural Tourism in Kerala' said that there is a large potential market for farm-based rural tourism especially for foreign tourists in Kerala. The cost of food, accommodation, recreation and travel is least in agro-ecotourism when compared to other types of tourism which widens the tourist base.

Sravana and Jospeh (2012) in a study 'Farm tourism to set to take off in a big way: a study based on analysis of visitor's satisfaction in Kerala' cited that being an agriculturally dominant state, Kerala has tremendous potential for developing agro-ecotourism in a big way without much additional expenditure.

Mahaliyanaarachchi (2015) classified the feasibilities needed to be checked before starting an agro-ecotourism venture into personal feasibility, regulatory feasibility and business feasibility. Personal feasibility assess the individual and family qualities and skills needed for dealing with the customers, regulatory feasibility refers to the awareness about various policies, rules and regulations associated with both tourism and agriculture and business feasibility assess the economic feasibility in practicing agro-ecotourism.

Feasibility study by assessing the locality and proper planning are important before starting an agro-ecotourism venture as it complements farming activities done in rural areas, as per Pedreira and Fidaldo (2017) mentioned in 'Comparative study on the potential of agritourism in two Brazilian municipalities.'

Tugade (2020) based on his study in stated that agro-ecotourism can be practiced successfully even on a micro-scale. He further stated that agro-ecotourism has the potential to diversify the farm which improves the feasibility of operation.

According to Venugopal and Babu (2020), farm based rural tourism has a great scope in the state of Kerala, and have identified the districts namely, Idukki, Palakkad, Kottayam, Pathanamthitta and Kuttanad region as the major agro- ecotourism destinations.

2.4. Gender role in agro-ecotourism

The involvement of women in tourism is a potential driver for community development, mainly in rural areas. Other than the benefits like economic gains, tourism provides additional benefits such as empowering women by increasing their self-esteem, identity, making them independent and thus encouraging them to engage in activities other than home making.(Acharya and Halpenny, 2013).

Nair (2015) based on his study on eco-tourism in Wayanad revealed that 83.33 per cent of the entrepreneurs were male and only 16.67 per cent were female. He further stated that 34 per cent of the male workers were engaged in driving, while 35 per cent of women workers were engaged in housekeeping, 21.6 per cent in cooking.

Duarte and Pereira (2018) in their study 'The role of women in rural tourism :a study in the Planaltina's Rajadinha circuit-Federal districts' observed that in the specified region two farms practicing agro-ecotourism were owned by women, and they had a space in the labour market which was traditionally male dominated.

The study conducted among agro-ecotourism operators of Andes region claimed that, although agro-ecotourism generated opportunities for women, these opportunities also limited the extent of empowerment, as the jobs performed by womenwere low-skilled, and thus low waged (Arroyo *et al*., 2019).

Tugade (2020) in his study noticed that among the 20 agro-ecotourism owners in Philippines, five were women. He observed that most of the indoor services like housekeeping were done by women employees and physically challenging works such as farming and animal feeding was assigned to male employees.

2.5. Prospects of agro-ecotourism

Miller *et al*. (2012) on the basis of their study conducted among agro- ecotourism operators in Arkansas reported that marketing tactics utilized for promotional activities included word of mouth (97per cent), websites (70per cent), printand broadcasting (63 %) and local media (56 %), travel magazines (18 %) and advertisements in travel magazines (23 %).

Neda and Azimi (2011) in a study 'Agri-tourism: Potential opportunities for farmers and local communities in Malaysia' revealed that for many small-scale farmers agritourism could be an effective means to cope up with the declining farm incomes with manageable farm resources and rural advantage.

Chadda and Bhakare (2012) found that agritourism has emerged out as an offshoot of rural tourism and has enormous opportunity in India. They claimed that introduction of agritourism concept all over India would advance the present agricultural growth rate.

Pinky (2014) in her study on agro-ecotourism observed that the 46.67 per centof the agro-ecotourism operators in Punjab had high prospects whereas 26.67 per cent each exhibited low and medium prospects respectively. Further she reported that 93.33per cent of the respondents showed willingness in improving accommodation facilities,in offering agri-products available at reasonable prices and cent percentage of

respondents were willing to maintain tourist feedback book and to improve transport facilities.

Promotion of agritourism needs conceptual union with rural tourism, health tourism, and adventure tourism. Indeed, as a newly developing field, it has its share of challenges and management issues to face. The problems related to guest-host relationship, sustainability and economic feasibility could be solved through the coordinated activities among the stakeholders, which is essential for any new tourism development (Karjigi, 2019).

2.6. Problems in agro-ecotourism

Malkanthi *et al*. (2015) reported that one of the major problems faced by Sri Lankan farmers in establishing agro-ecotourism was lack of financial resources. Also issues like fear of ruining local culture, lack of provision from government and difficulty in ensuring hygiene were impeding the advancement of agro-ecotourism in Sri Lanka as per the study.

Ratnasree (2010) on her study 'Eco-tourism in Kerala' noticed that lack of proper development and care of eco-tourism could cause detrimental problems like crime and other social glitches.

Haghiri and Okech (2011) based on their study 'The role of the agritourism management in developing the economy of rural regions' conducted in the province of Newfoundland and Labrador reported that lack of support from government, lack of capital and knowledge were the major problems faced by agro- ecotourism units.

Pinky (2014) reported that lack of training in the field of agro-ecotourism, insufficient literature related to agro-ecotourism practices, insufficient fund for publicity and lack of government support were the major problems faced by agro-ecotourism operators in the state of Punjab.

Tugade (2020) reported that problems related to marketing, product expansion,

government support, education and training, partnership and communication were severe among the agro-ecotourism units in Philippines.

2.7. Challenges in agro-ecotourism

According to Sharpley and Vass (2006) challenges associated with agro-ecotourism include location, investment, marketing and quality. With regard to location aspect, some locations will not be alluring to tourists. Investment refers to the fact that all agro-ecotourism operators or aspiring agro-ecotourism operators may not be able to access the economic resources required for the functioning while marketing refers to the fact that some of them may not have the marketing skill or resources essential for advertising their product in an effective way. Sometimes quality of the agro-ecotourism product may not meet the demand and expectation of the consumers.

Haghiri and Okech (2011) based on their study on agro-ecotourism conducted in the province of Newfoundland and Labrador, reported that the location allotted by the provisional government to set up the sign of their venture were distant from the location were the venture was operated. This led to less popularity of the agro-ecotourism units among the tourists. Other challenges faced by the operators were the gasoline volatility, increased fuel prices, small population living in the region andshort tourism season.

Taware (2013) in 'Agritourism: Innovative supplementary income generating activity for enterprising farmers' stated that public conveyance, housing, networking, capacity building of farmers and security of tourists and enhancement of public-private partnership should be guaranteed for the success of agro-ecotourism.

Vasta (2015) on her study 'Shellfish farms as agritourism destinations: the grower's perspective' conducted in East and Pacific Coasts of U.S reported that sea-based farms experiences different kind of challenges than terrestrial farms while starting an agro-ecotourism venture. Shellfish farmers agreed that lack of resources, lack of infrastructure and additional costs required hinders them from practicing agro-

ecotourism. Further she pointed out that Pacific coast shellfish farmers experienced more challenges than East coast farmers. This was due to the fact that Pacific coast farmers had more experience in shellfish farming and were already well established within in their communities hence experienced many challenges.

Chandrashekhara (2018) based on the study 'Agro-tourism and employment opportunities in Karnataka : an economic analysis' disclosed that lack of business approach of the small and medium operators, being unsuccessful in guaranteeing hygiene and basic needs of urban tourist visitors and little or no access to credit and irrigation were the main challenges met in the development of agro-ecotourism.

Chiodo *et al*. (2019) based on their study on agro-ecotourism in USA, Italy, Brazil and France reported that one of the cultural challenge faced in Santa Catarina region was the land ownership. Majority of the young farmers in Santa Catarina started agro-ecotourism on the land owned by their parents, which hindered them from holding autonomy in the development and further progress of agro-ecotourism unit.

Karjigi (2019) specified that high labour cost and high investment need in landscape development were the key challenges as perceived by the agro-ecotourism operators in Maharashtra.

Tugade (2020) based on his study conducted among agro-ecotourism operators in Philippines reported that planning problems, lack of resources, lack of knowledge and training and lack of professionalism of staff were the major challenges impeding agro-ecotourism development.

Wanole *et al*. (2020) in the study 'Scope and challenges of agri- tourism centers in Konkan region of Maharashtra state' reported that lack of training, weak communication ability, lack of co-ordination between agriculture and tourism department, lack of awareness and unavailability of monetary resources for constructing basic infrastructure were the main challenges faced by the farm tourism owners in Konkan region.

METHODOLOGY

3. METHODOLOGY

This chapter deals with the methods and procedures followed for achieving the objectives set-forth in the study. It focus on the methodology of research adopted for the current investigation which manly indicates the details on research design, sampling procedure, selection of dependent and independent variables, their measurement, data collection methods and the usage of statistical tools. The information is presented under the following sub headings.

3.1. Locale of the study

Districts from Northern, Central and Southern Kerala having maximum number of agro-ecotourism units were selected for the study. Wayanad from Northern Kerala, Idukki from Central Kerala and Alappuzha from Southern Kerala were purposively selected for the study.

3.2. Selection of respondents

Thirty functioning agro-ecotourism operators from each district, with a minimum of three years' experience in practicing agro-ecotourism were selected, thus making a total of 90 agro-ecotourism operators as respondents. Thirty officials in the field of tourism were also selected, thus making a total of 120 respondents.

3.3. Research design

Ex-post facto research design was used to study the "Scenario Analysis of Agro-ecotourism in Kerala". This design was used as the study aims at measuring the phenomenon which has already occurred and is continuing. The researcher has no control over independent variable and manipulation is not possible because variables are inherently constant. (Kerlinger,1983).

3.4. Selection of variables

The objective of the study is to analyze the perception of agro-ecotourism stakeholders about the utility and feasibility of agro- ecotourism. Perception towards utility and perception towards feasibility of agro-ecotourism were the dependent variables.

A list of 40 independent variables which were associated with socio- economic constructs and perceived economic variables of the respondents were selected based on the review of literature and informal discussion with subject experts. The list of independent variables along with their operational definition were sent to judges rating. The rating was done on a five- point continuum ranging from 'most relevant', 'more relevant', 'relevant', 'less relevant' and 'least relevant' with scores 5, 4, 3, 2 and 1 respectively. The variables were selected based on mean relevancy score. The score obtained for each variable from 30 judges were added and divided by total number of judges. Average of the total score obtained for all the variables were calculated. The variables that

scored more than the mean relevancy score were selected for the study.

Thus, the independent variables selected through judges rating were age, educational status, years of operation, mass-media exposure, extension contact, credit orientation, creativity, communication ability, managerial ability, innovativeness, economic motivation, happiness to host VFR (Visiting friends and relatives), frequency of hosting VFR, farm waste disposal behaviour and resource recycling.

3.5. Operationalization and measurement of dependent variable

Perception towards utility of agro-ecotourism and perception towards feasibility of agro-ecotourism were selected as the dependent variables.

3.5.1. Perception towards utility of agro-ecotourism

Perception is the mental organization and interpretation of sensory information. It is the opinion expressed by the respondents (Argade *et al*, 2015).

Perception in this case was operationalized as the respondent's opinion towards various utilities of agro-ecotourism. The scale for perception on utility of agro-ecotourism developed by Barbieri and Tew (2009), with slight modifications was selected for the study.

Scale consists of 15 statements, scores obtained on a five point continuum namely, extremely important, very important, important, somewhat important and not important with weightage of 5, 4, 3, 2 and 1 respectively. Thus the maximum and minimum score an individual could obtain was 75 and 15 respectively. Further the respondents were categorized into low, medium and high based on mean and standard deviation.

Sl. No	Statements	E I (5)	V I (4)	I (3)	S I (2)	N I (1)
1.	Capture new customers					
2.	Educate the public about agriculture					
3.	Enhance family quality of life					
4.	Keep you active					
5.	Increase direct-sale of value-added products					
6.	Additional revenues to keep farming					
7.	Increase direct-sale of other products					
8.	Decrease revenue fluctuations					
9.	Enhance ability to meet financial obligation.					
10.	Keep the farm in the family					
11.	Better utilize farm resources					
12.	Make money from a hobby/interest					
13.	Off-season revenue generation					
14.	Provide jobs for family members					
15.	Reduce impact of catastrophic events					

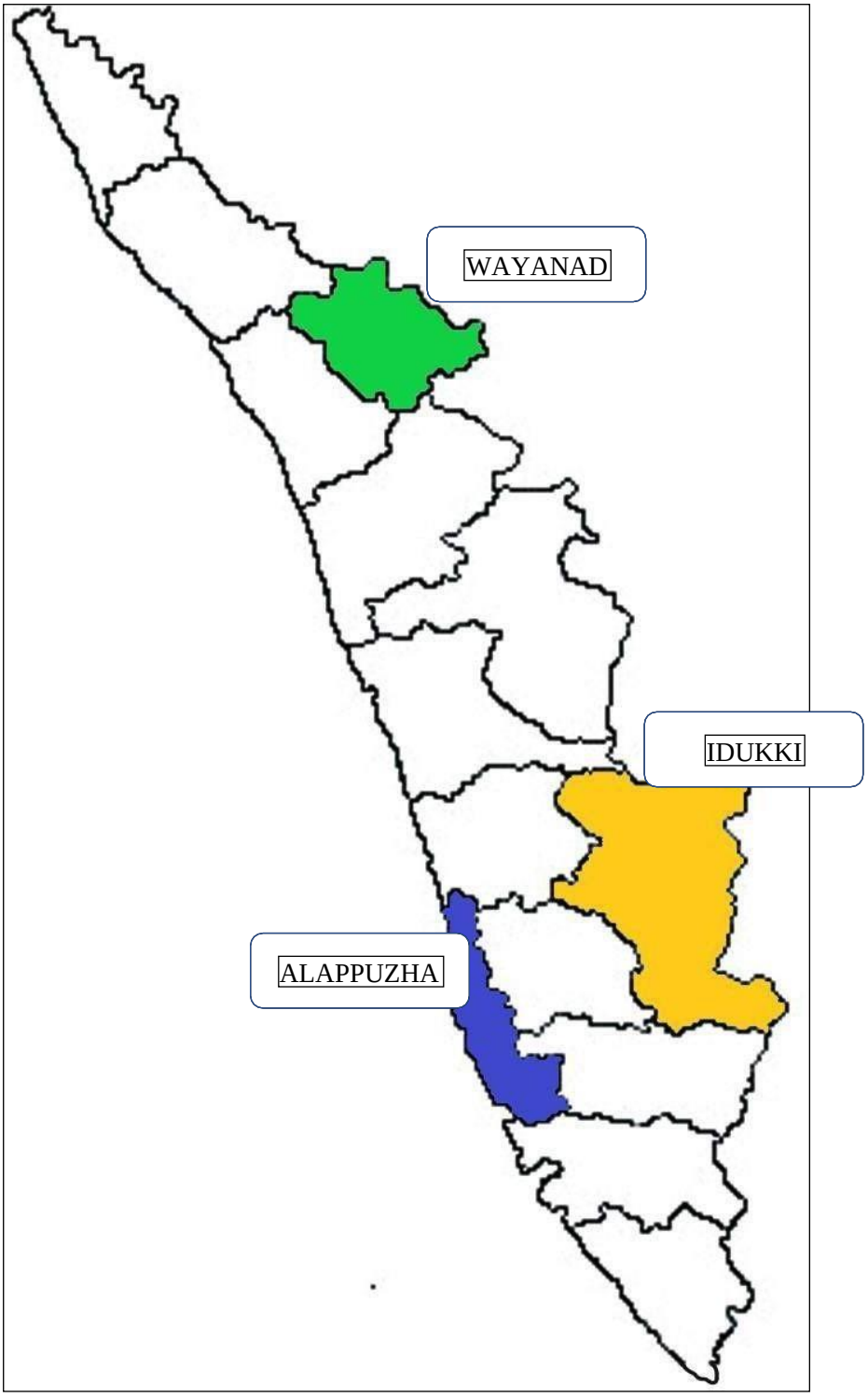


Fig.1. Location map of the study

3.5.2. Perception towards feasibility of agro-ecotourism

Perception was operationalized as the respondent's opinion towards various feasibilities of agro-ecotourism. The scale developed by Argade *et al*. (2015), with modifications was selected for the study. Scale consists of 8 statements including two negative statements, obtained on a three point continuum namely, Agree, Neutral and Disagree with weightage of 2, 1 and 0 respectively. Score was reversed for thenegative statements. Thus the possible score ranges from 0 to 16. After data collection and tabulation the respondents were categorized into low, medium and high based on mean and standard deviation.

Sl. No	Statements	Agree (2)	Neutral (1)	Disagree (0)
1	Agro-ecotourism helps to achieve optimum production level through diversification.			
2	Agro-ecotourism helps to increase income diversification.			
3	Integrated management practices reduce input needs of farmers to some extent.			
4	Agro-ecotourism requires initial investment.			
5	Agro-ecotourism increases competition for resources among different enterprises.			
6	Agro-ecotourism operators have less risk sensation than conventional farmers.			
7	Agro-ecotourism reduces vulnerability to economic losses.			
8	Agro-ecotourism brings farm diversity which leads to decrease farm vulnerability.			

3.6. Operationalization and measurement of independent variables

A total of 15 independent variables were selected for the study. Measurement techniques used for these independent variables are presented below.

Table:1. Independent variables and measurement procedures

Sl. No	Variable	Measurement
1.	Age	Measured according to 2011 census
2.	Educational status	Scale developed by Trivedi (1963)
3.	Years of operation	Scale used by Pinky (2014)
4.	Mass-media exposure	Scale used by Pinky (2014)
5.	Extension contact	Scale used by Athira (2017) with slight modification.
6.	Credit orientation	Scoring procedure developed by Mishra and Sinha (1981) followed by Balakrishnan (2011)
7.	Creativity	Scale used by Sarala (2008)
8.	Communication ability	Scale used by Pratap (1999) with slight modifications
9.	Managerial ability	Scale developed by Wankhade *et al.* (2005)
10.	Innovativeness	Scale used by Gurubalan (2007)
11.	Economic motivation	Scale developed by Supe (1965)
12.	Happiness in hosting VFR	Scale used by Bhatta *et al.* (2019).
13.	Frequency of hosting VFR	Scale used by Bhatta *et al.* (2019).
14.	Farm waste disposal behaviour	Scale used by Arunachalam (2003).
15.	Resource recycling	Arbitrary scale developed by Raj (2018)

3.6.1. Age

Age was operationally defined as the number of calendar years completed by the respondent at the time of investigation. Age was recorded by directly asking the respondents. The measurement was done according to 2011 Census. The respondents were later categorized into young , middle and old aged in accordance with the mean and standard deviation obtained.

Sl. No	Age category	Years	Score
1.	Young	Less than 35	1
2.	Middle aged	35-55	2
3.	Aged	Greater than 55	3

3.6.2. Educational status

Educational status was operationally defined as the extent of formal education achieved by the respondent. Educational status was recorded by directly asking the respondents. Scale developed by Trivedi (1963) adopted by Sreedaya (2000) followed by Athira (2017) was used for measurement.

Sl. No.	Category	Score
1	Illiterate	1
2.	Can read and write	2
3.	Primary school	3
4.	Middle school	4
5.	High school	5
6.	College	6
7.	Professional degree	7

3.6.3. Years of operation

It was operationally defined as the experience of respondents in agro-ecotourism. Scoring pattern used by Pinky (2014) was used for measurement. The respondents were later categorized into young , middle and old aged in accordance with the mean and standard deviation obtained.

3.6.4. Extension contact

Extension contact was operationally defined as the frequency of therespondents for making contacts with agriculture and tourism departments. Scale used by Athira (2017) with slight modifications was used for the study. The scale consisted of seven extension agencies with scores for frequency of contact given as '3' for 'regularly', '2' for 'occasionally' and '1' for 'never'. Thus the minimum score that an individual could obtain was 7 and maximum score was 21.

After the data collection agro-ecotourism operators were categorized intolow, medium and high level of extension contact in accordance with mean and standard deviation obtained.

Officials	**Frequency of contact**		
	Regulary (3)	**Occassionally (2)**	**Never (1)**
Ag. Officers			
Ag. Assistants			
ADA/DDA			
Agri. Scientist			
KVK			
ATMA			
Tourism department			

3.6.5. Mass media exposure

It was operationally defined as the frequency of using different mass media viz. radio. television, newspaper, farm literature and internet by the respondent togain knowledge and bring improvement in practicing agro- ecotourism. Scoring procedure used by Pinky (2014) was used for measurement. Scale consisted of five questions considering the frequency of using the various mass media mentioned above. Scores assigned for frequency of utilization of mass media were '2' for 'regularly', '1' for 'sometimes' and '0' for 'never'. Thus, the minimum score that an individual could obtain was 0 and maximum score was 45.

After the data collection agro-ecotourism operators were then categorized into low, medium and high level of creativity in accordance with mean and standard deviation obtained.

Sl. No	**Mass media**	**Regularly (2)**	**Sometimes (1)**	**Never (0)**
1.				
2.				
3.				
4.				
5.	Any other (specify)			

3.6.6. Credit orientation

Credit orientation was operationally defined as the orientation of the agro-ecotourism operators to take advantage of the financial institution for credit, which help to improve their economic status.

Scale developed by Mishra and Sinha (1981) followed by Balakrishnan (2011) and Hridya (2018) was used for the study. Scale consisted of seven

statements with scores given as '1' for Yes and '0' for No. Thus, the minimum score that an individual could obtain was 0 and minimum score was 7.

After the data collection agro-ecotourism operators were further categorized into low, medium and high level of credit orientation in agreement with mean and standard deviation obtained.

Sl. No	Statements	Yes (1)	No (0)
1.	Making an effort to borrow money, but could not borrow due to several reasons		
2.	Eligible to take credit by saving consistently but not repaying the previous credit		
3.	Borrowing money only from private money lenders, not from banks		
4.	Borrowing money but delaying in repayment and reborrowing in some other form		
5.	Borrowing and reborrowing from banks, after making timely repayment		
6.	Borrowing money from banks, repaying it after borrowing money from some other institutions and continuing the action involving several other sources		
7.	Borrowing money from the local institutions like cooperative society as interest freeloans and not from commercial banks		

3.6.7. Creativity

Creativity was operationally defined as use of imagination or original ideas to create something productive and resourceful. Scale used by Sarala (2008) was used for

the study. Scale consisted of 11 statements with scores given as '1' for Yes and '0' for No. Thus, the minimum score that a respondent could obtain was 0 and maximum score was 11.

After the data collection agro-ecotourism operators were then categorized into low, medium and high level of creativity in accordance with mean and standard deviation obtained.

Sl. No	Statements	Yes (1)	No (0)
1.	I understand complex situations best by trying to picture them in my mind		
2.	When discussing ideas, I tend to support the people who show the strongest conviction		
3.	I tend to believe in ideas more when they feel right		
4.	I like dreaming up unusual ways to do things		
5.	As soon as I come across a problem my mind races with ideas about it		
6.	I think first impression often turn out to be right		
7.	I often catch myself day dreaming about how I would like things to be		
8.	I tend to look at situations as a whole rather than breaking them down into separate		
9.	In my meetings I usually come up with unusual ways to tackle situations		
10.	I think analysis and planning take all the fun out of things and try to avoid them		
11.	I often try to visualize problems		

3.6.8. Communication ability

Communication ability was operationalized as the ability of the respondents to

transfer information, ideas or feelings to the receiver. Scale used by Pratap (1999) with slight modification was used for the study. Scale consisted of twelve statements with scores given as '3' for 'always', '2' for 'sometimes' and'1' for 'never'. Thus, the minimum and maximum scores that an individual could obtain were 12 and 36 respectively. Further, after data collection the agro-ecotourism operators were grouped into categories of low, medium and higher level of communication ability based on the mean and standard deviation obtained.

Sl. No	Statements	Always (3)	Sometimes (2)	Never (1)
1.	I try to be friendly with people.			
2.	I try to participate in group activities			
3.	I tend to have close positive relationship with people			
4.	I like people to ask me to participate in their discussions			
5.	I can speak about things in aconvinc manner			
6.	I try to change things when i am with people			
7.	I am a confident person			
8.	People seem interested when I talk			
9.	People ask me to participate in their discussion			
10.	People say I am not good enough in presenting ideas			
11.	People seem to give attention when I talk			
12.	I put forth my ideas in group discussions			

3.6.9. Managerial ability

Managerial ability was operationally defined as the ability of an individual to manage his business by himself. Scale developed by Wankhade *et al*. (2005) was used for the study. The scale consisted of 6 statements which were measured on a five-point continuum ranging from 'strongly agree', 'agree', 'undecided', 'disagree' and 'strongly disagree' with weightage of 5, 4, 3, 2 and 1 respectively.

Thus, the minimum score that a respondent could obtain was 6 and maximum score was 30. After the data collection agro-ecotourism operators were categorized into low, medium and high levels of managerial ability in accordance to the mean and standard deviation obtained.

Sl. No	**Statements**	**Response**				
		SA (5)	**A (4)**	**UD (3)**	**DA (2)**	**SDA (1)**
1.	I find nothing wrong in consulting expert advice regarding how I must manage my business.					
2.	As an entrepreneur I need to practice basic managerial skills so that my business need not be a one man show for a concerted effort of myself and those who work for me.					
3.	It is not necessary to be scientific and rational labour management as long as one has the will to do what he wants to do.					
4.	I cannot be away too long from my business because no one else can manage its activities.					
5.	I believe the sole proprietorship is the best form of ownership for a business to succeed.					
6.	It is possible to increase the profit through proper project plan					

3.6.10. Innovativeness

Innovativeness was operationally defined as the degree to which an individual is prompt in adopting a new practice and introducing changes into their operations if found practical and feasible. Scale used by Gurubalan (2007) with slight modification was used for the study. The scale consisted of 5 statements which were measured on a five-point continuum ranging from 'strongly agree', 'agree', 'undecided', 'disagree' and 'strongly disagree' with weightage of 5, 4, 3,2 and 1 respectively The possible score ranges from 5 to 25.

Further agro-ecotourism operators were classified into categories of low, medium and higher level of innovativeness in accordance with the mean and standard deviation.

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

3.6.11. Economic motivation

Economic motivation was operationally defined as the extent to which an individual is oriented towards attainment of the economic needs. Scale developed by Supe (1965) was used for the study. The scale consisted of 7 statements which were measured on a five-point continuum ranging from 'strongly agree', 'agree','undecided', 'disagree' and 'strongly disagree' with weightage of 5, 4, 3, 2 and 1 respectively. Thus, the possible score ranges from 5 to 35.

After data collection, the agro-ecotourism operators were classified into categories of low, medium and higher level of economic motivation with respect to mean and standard deviation obtained.

Sl. No	Statements	SA (5)	A (4)	N (3)	DA (2)	SDA (1)
1.	A farmer should work towards higher yields and economic profit					
2.	The most successful farmer is the one who makes more profit					
3.	A farmer should try integration of different components that may help him to earn more profit					
4.	Farmer should grow more food crops both for home consumption and profit					
5.	It is difficult to make good start unless he provides them with economic assistants					
6.	Farmer must earn his living but the most important thing in life cannot be identified in economic returns					
7.	One should set difficult goals for one self and try to reach them					

3.6.11. Happiness to host VFR (Visiting friends and relatives)

It was operationally defined as the level of satisfaction of respondents, who provide accommodation to their friends and relatives at their homes. Scale used by Bhatta *et al.* (2019) was used for the study. The scale consisted of 5 satisfaction levels which were measured on a five-point continuum ranging from 'very happy', 'happy', 'neither happy nor unhappy', 'unhappy' and 'very unhappy' with weightage of 5, 4, 3, 2 and 1 respectively.

Thus the minimum score that an individual could obtain was 1 and maximum score was 5. Further, the respondents were categorized into low, medium and higher level of happiness in hosting VFR in accordance with mean and standard deviation.

Sl no	Happiness level	Score
1.	Very happy	1
2.	Happy	2
3.	Neither happy nor unhappy	3
4.	Unhappy	4
5.	Very unhappy	5

3.6.13. Frequency of hosting VFR (Visiting friends and relatives)

It was operationally defined as the frequency of providing accommodation to friends and relatives by the respondent at their homes in a month, measured using scoring pattern used by Bhatta *et al.* (2019). The scale consisted of 5 frequency levels which were measured on a five-point continuum such as 5,4,3,2 and 1 for frequency level of '5 times', '4 times', '3 times', '2 times' and '1 time' respectively. Further, the respondents were categorized into low, medium and higher frequency of hosting VFR in accordance with mean and standard deviation.

Sl. No.	Frequency	Score
1	1 time	1
2	2 times	2
3	3 times	3
4	4 times	4
5	5 times	5

3.6.14. Resource recycling.

It was operationalized as the reuse of various resources in the agro- ecotourism unit. Arbitrary scale developed by Raj (2018), with four statements reflecting resource recycling was used for the study. Scale consisted of 4 statements with scores given as '2' for Yes and '1' for No. Thus, the maximum score was 8 and minimum score was 1.

Sl. No.	Statements	Yes (2)	No (1)
1.	Reuse of crop residues as manure to the succeeding crop		
2.	Reuse of farm waste for composting		
3.	Reuse of crop residues or farm waste for biogas		
4.	Reuse of cow-dung from your farm as crop manure		

After the data collection, the respondents were classified into categories of categorized of low, medium and higher level of resource recycling in accordance with mean and standard deviation.

3.6.15. Farm waste disposal behaviour

It was operationalized as the extent to which the farm wastes were disposed in line with the eco preservation and conservation. Scale used by Arunachalam (2003) was used for the study. Different modes of farm waste disposal were listed and respondents were asked to state the most commonly adopted method of disposing the farm waste. Thus the minimum score that an individual could obtain was 5 andmaximum score was 15. Further, the respondents were classified into categories of categorized of low, medium and higher level of farm waste disposal behaviour in accordance with mean and standard deviation.

Sl. No	Farm waste	Disposal method	Score
1.	Disposal of waste water after washing the containers equipment in which chemicals inputs were stored/used.	a) Thrown in the main field b) Disposed safely outside	1 2
2.	Disposal of containers/plastic bags	a) Just thrown in the field b) Cleaned & used for domestic purpose c) Safely disposed	1 2 3
3.	Disposal of crop waste	a) Left uncared b) In situ ploughing c) Preparing compost for future use	1 2 3
4.	Disposal of tree waste	a) Left as such b) Saved for future use	1 2
5.	Disposal of animal waste 1. Animal excreta 2. Dead animal/birds	a) Domestic purpose b) Fuel purpose c) Prepare compost a) Burnt safely b) Buried	1 2 3 1 2

3.7. Identification of gender roles.

A total of 40 employees were surveyed from each district, thus making a total of 120 employees as respondents. Gender roles were identified under categories viz. types of job the employees perform, daily working hours and monthly salary earned.

Features	Categories	Male	Female
Job performed	Farm labour		
	House keeping		
	Cooking		
	Driver		
	Manager		
	Guide		
Monthly salary (in Rupees)	<10,000		
	10,001-15,000		
	15,001-20,000		
	>20,001		
Daily working hours	<6 hours		
	7-9 hours		
	> 9 hours		

3.8. Prospects of agro-ecotourism

Prospects were operationally defined as the orientation of agro- ecotourism operators for a successful future plan of expanding their tourism unit. It was studied in terms operator's willingness to increase facilities and promotional activities in agro-ecotourism. The instrument used by Pinky (2014), with slight modifications was used for the study. Willingness was measured on a three point continuum i.e., willing, somewhat willing and not willing with scores 2, 1 and 0 respectively.

Thus the minimum score that an individual could obtain was 0 and maximum score was 40. Further the respondents were classified into lower, medium and higher categories based on mean and standard deviation.

Sl. No	Various aspects of prospects	SW (2)	W (1)	NW (0)
Category 1: Adding facilities to the agro-ecotourism unit				
1.	Increase/expand area under agro-ecotourism			
2.	Integrate more interesting activities			
3.	Improve accommodation facilities at the site			
4.	Offer rural Indian cuisine for breakfast, lunch and dinner			
5.	Provide better medical facilities during emergency			
6.	Offer more recreational/interesting activities that excites the tourist			
7.	Offer agri-products at reasonable prices			
8.	Regularly maintain and follow visitors' feedback book			
9.	Improve transport facilities to site			
10.	Providing pick and drop facilities			
Category 2: Increasing promotional activities				
1.	Develop extensive contact with travel agencies			
2.	Regular Advertisement of the farm house			
3.	Development of own website and update regularly			
4.	Developing contact with Schools, Colleges, NGOS, Club, Union and other organization			
5.	Arrangement of cultural programme			
6.	Creating opportunity for rural games			
7.	Provision of information about culture of Kerala			
8.	Development of good relationship with the tourist			
9.	Customizing agro-tour package for different type of tourist			
10.	Making availability of agri-tourism related literature			

3.9. Problems in agro-ecotourism

Problems faced in agro-ecotourism was studied using the scale used by Pinky (2014), with modifications. The scale consisted of 11 statements which were measured on a two-point continuum such as 'yes' and 'no' with weightage of 2 and 1 respectively. After data collection the problems were ranked based on the relevancy coefficient obtained. The problem with maximum relevancy coefficient was taken as the most important problem.

Sl. No	Statements	Yes (2)	No (1)
1.	Lack of fund for publicity and advertisement of farm tourism		
2.	Lack of knowledge and skills on the part of the farmer.		
3.	Lack of government support		
4.	Lack of communication skills of staff		
5.	Lack of mindset for commercial approach.		
6.	Harsh weather condition.		
7.	No literature on agro-ecotourism		
8.	Non willingness of the tourists to purchase farm products.		
9.	Lack of training for agro-ecotourism.		
10.	Complexity in getting license from the government.		
11.	Inability to introduce more activities		

3.10. Challenges faced by the agro-ecotourism stakeholders.

The challenges were divided into four types namely financial,

human resource, technical and policy challenges. Scale used by Karjigi (2019) was used for the study.

1. Financial Challenges	Response				
	VS (5)	QS (4)	S (3)	NS (2)	LS (1)
Non availability of tourists at vacation time					
High cost of labour					
High cost of land and initial investment					
Maintenance charges					
No insurance coverage					
Lack of awareness about credit and subsidy facilities various components					
2. Human Resource Challenges					
Lack of commercial approach like other tourism venture					
Communication barrier					
Lack of organized effort like farmer organizations					
3. Technical Challenges					
Difficulty in accessing information on agro-ecotourism					
Small land area					
Unfavourable weather conditions					
Non availability of inputs					
Limited and irregular power supply					
4. Policy Challenges					
Lack of training in hospitality and management					
Complexity in getting license from Government					
No specific policy for promotion of agritourism					
Lack of transportation facilities to interior rural places					
Lack of training in hospitality and management					

Thus the scale consists of 18 statements which were measured on a five- point continuum ranging from 'very severe, 'quite severe', 'severe', 'not so severe' and 'least severe' with weightage of 5, 4, 3, 2 and 1 respectively. After the data collection the challenges faced by the agro-ecotourism operators were tabularized and analyzed by means of Relevancy Ranking Technique. Further, the ranking of each constraint was done in accordance to the relevancy coefficient each constraint obtained such that the constraint which obtained the highest relevancy ranking was ranked as 1st and subsequent ranks were given based on relevancy coefficients.

3.11. Factors leading to agro-ecotourism

The reasons for the agro-ecotourism operators to adopt agro-ecotourism were categorized into three, which include economic factors, social factors and external factors. The respondents were asked to rank each components on a five- point continuum ranging from 'strongly agree, 'agree', 'not decided', 'disagree' and 'strongly disagree' with weightage of 5, 4, 3, 2 and 1 respectively. The total score for each components were counted without including the score obtained for the weightage 'not decided'. Further, components were ranked based on the score obtained and overall score also was computed for each factors.

Factors	Components
Economic Factors	Additional income generation through agro-ecotourism
	Direct sale of farm produce
	Better use of resources
	Generating off season revenue
Social Factors	Educating customers about agro-ecotourism
	Brings people into my life (farm)
	Employment to family members
	Community's economic survival
External Factors	Willingness to accept innovations in the farming sector
	Generating revenue out of hobby

3.12. Data collection

Interview schedule was used for data collection which was prepared after discussion with experts in order to meet the objective of the study. Data collection was carried out through structured interview.

3.13. Analysis of data

3.13.1. Mean and standard deviation

Arithmetic mean is ratio of the sum of all the observations to the total number of observations. Standard deviation is the positive square root of the mean of the squared deviation taken from the arithmetic mean. Mean and standard deviation were used to classify the respondents into low, medium and high categories.

Sl. No	Category	Range of score
1	Low	< (Mean-1SD)
2	Medium	(Mean+/-1SD)
3	High	> (Mean-1SD)

3.13.2. Frequency and percentage analysis

The selected variables were studied and analyzed using frequency and per centage analysis. After calculation of the frequency by counting the number of times the data is repeated, per centage was obtained by dividing it with the number of respondents and further multiplying it with 100.

3.13.3. Karl Pearson correlation coefficient

Pearson correlation analysis was done to explain the relationship between independent and dependent variables. Analysis was done to measure the degree of relationship between the variables. Significance of correlation coefficient was tested for 5 per cent and 10 per cent level.

3.13.4. Relevancy ranking technique

Relevancy ranking technique was used to rank the challenges faced in agro-ecotourism. The ranking of each challenge was done according to its relevancy coefficient, such that the challenge having highest relevancy coefficient is ranked 1st.

The relevancy coefficient of challenges were obtained by dividing the total score obtained for each challenge with the multiplication product of the maximum value of continuum and the total number of respondents.

Further, the challenges were ranked based on the relevancy coefficients obtained in such way that the challenge with higher relevancy coefficient was allotted with 1st rank.

$$RCi = \frac{\text{Total score of all the respondents for ith constrain}}{\text{Maximum on the continuum x Total number of respondent}}$$

RESULTS AND DISCUSSION

4. RESULT AND DISCUSSION

The salient findings of the study conducted are presented and discussedunder the following subheads.

4.1. Personal, social, psychological, economic variables contributing to agro-ecotourism

4.2. Perception on utility of agro-ecotourism

4.3. Perception on feasibility of agro-ecotourism

4.4. Correlation between independent and dependent variables

4.4.1. Correlation between perception on utility of agro-ecotourism and independent variables

4.4.2. Correlation between perception on feasibility of agro-ecotourism andindependent variables

4.5. Gender role in agro-ecotourism.

4.6. Prospects of agro-ecotourism.

4.7. Problems in agro-ecotourism.

4.8. Challenges in agro-ecotourism.

4.9. Factors leading to agro-ecotourism.

4.10. Suggestions

4.1. Personal, social, psychological, economic variables contributing to agro-ecotourism.

The personal, socio - psychological constructs and perceived economic variables affecting the functioning of agro-ecotourism units were studied and quantified. The variables include age, educational qualification, years of operation, extension contact, mass-media exposure, credit orientation, creativity,communication ability, managerial ability, innovativeness, economic motivation, frequency of hosting VFR, happiness in hosting VFR, resource recycling and farm waste disposal behaviour.

4.1.1. Age

Age was operationally defined as the number of calendar years completed by the respondent at the time of investigation.

The result as depicted in table 2, indicates that majority of the agro- ecotourism operators belonged to the middle age category (72.22%). However, 12.22 per cent of the operators belonged to young age category and 15.56 per cent of the operators were under old age category.

Table 2. Distribution of the respondents based on age

Category	Alappuzha (n=30)		Idukki (n=30)		Wayanad (n=30)		Total (N=90)	
	f	%	F	%	f	%	f	%
Low (<1.50)	1	3.33	4	13.33	6	20	11	12.22
Medium (1.50-2.56)	21	70	23	76.67	21	70	65	72.22
High (>2.56)	8	26.67	3	26.67	3	10	14	15.56
Mean=2.03, SD= 0.53, Range=2, Maximum = 3, Minimum = 1								

The result indicated that middle aged people were more interested and involved

in agro- ecotourism than old age and young age. Similar result was obtained by Malkanthi *et al*. (2015) in the study conducted among spice farmers in Sri Lanka, where majority of the farmers belonged to the age group of 50 years and above.

4.1.2. Educational status

Educational status was operationally defined as the extent of formal education achieved by the respondent.

The distribution of respondents are presented in table 3. It is evident that majority of the respondents had medium level of education (58.88%), which proves that recently educated farmers are showing interest on diversifying their farm activities in to off-farm ventures like agro-ecotourism.

Table 3. Distribution of the respondents based on educational status

Category	**Alappuzha (n=30)**		**Idukki (n=30)**		**Wayanad (n=30)**		**Total (N=90)**	
	f	%	f	%	f	%	f	%
Low (<5.46)	8	26.67	4	13.33	2	6.67	14	15.56
Medium (5.46-6.73)	16	53.33	18	60	19	63.33	53	58.88
High (>6.73)	6	20	8	26.67	9	30	23	25.56
Mean=6.1, SD= 0.63, Range=2, Maximum = 7, Minimum = 5								

Considering the fact that majority of the respondents had good educational qualification, provision of knowledge about agro-ecotourism through proper training programmes, seminars and discussions will enable them to practice agro-ecotourism in a scientific way.

It can be concluded that education level of agro-ecotourism operators plays a significant role in the proper establishment and management of agro-ecotourism ventures. Educated agro-ecotourism operators understands and utilizes the benefits of

practicing agro- ecotourism by incorporating various components related to farm tourism in their farm. Similar results were found by Borlikar (2017) and Karjigi (2019).

4.1.3. Years of operation

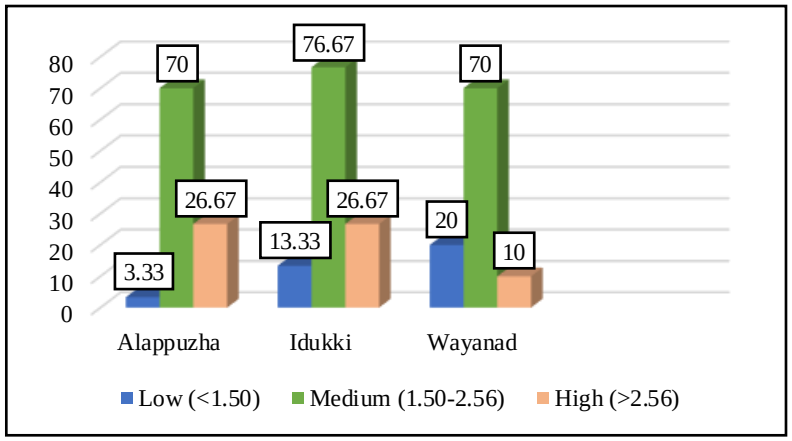
It was operationally defined as the experience of respondents in agro- ecotourism and the scoring pattern used by Pinky (2014) was used for measurement. The result obtained is depicted in table 4.

It is clear from table 4 that 84.44 per cent of the respondents had medium level of experience in the field of agro-ecotourism, while 15.56 per cent of the respondents belonged to the higher category and no respondents belonged to the lower category.

Table 4: Distribution of the respondents based on years of operation

Category	**Alappuzha (n=30)**		**Idukki (n=30)**		**Wayanad (n=30)**		**Total (N=90)**	
	f	%	f	%	f	%	f	%
Low (<3.00)	0	0	0	0	0	0	0	0
Medium (3.00-12.81)	23	76.67	24	80	29	96.67	76	84.44
High (>12.81)	7	23.33	6	20	1	3.33	14	15.56
Mean=7.91, SD= 4.90, Range=22, Maximum = 25, Minimum = 3								

The district wise categorization of agro-ecotourism operators indicates that Alappuzha district had 76.67 per cent of agro-ecotourism operators with medium level of experience and 23.33 per cent with higher level of experience, whereasWayanad district had only 3.33 per cent of agro-ecotourism



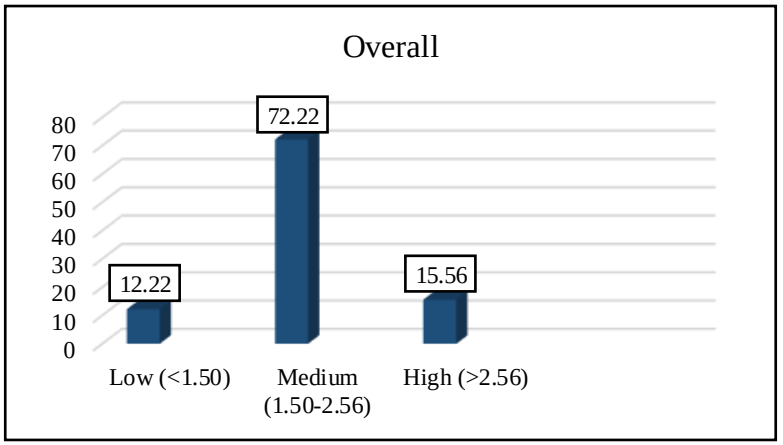
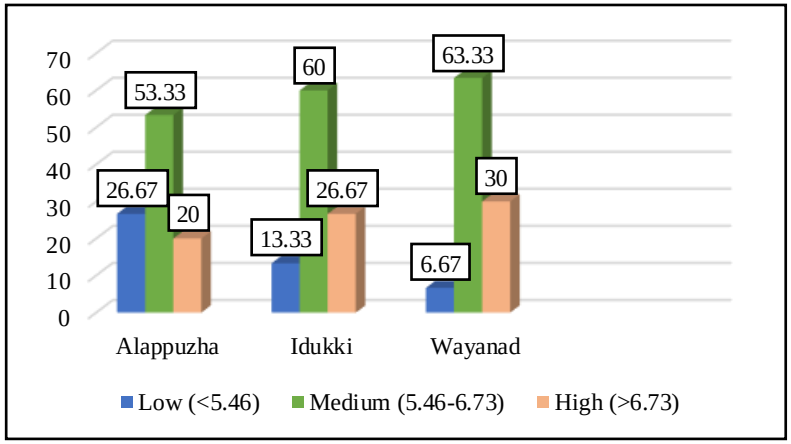


Fig.2. Distribution of the respondents based on age



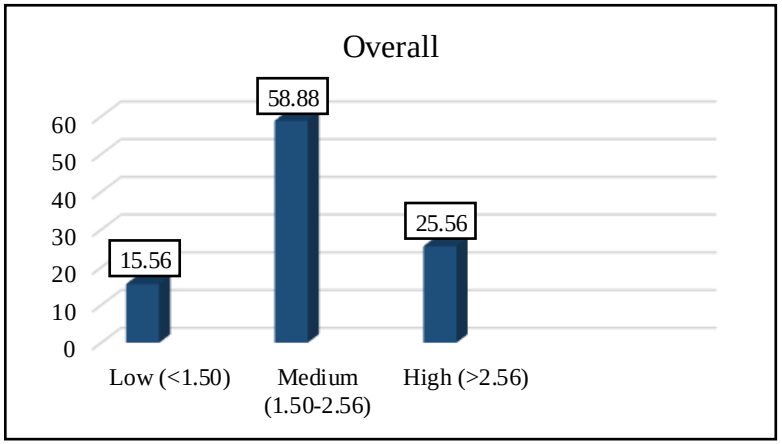


Fig.3. Distribution of the respondents based on educational status

operators with higher level of experience, with nearly cent percentage (96.67%) having medium level of experience. In Idukki district, 80 per cent of the respondents belonged to medium category and 20 per cent of the respondents belonged to higher category. The scenic beauty of rice-based farming system in Kuttanad may be the reason for the promotion of agro-ecotourism in that area. Similarly, the topographical variations in Wayanad may be the reason for attracting the tourists and hence the farmers are ahead in practicing agro-ecotourism.

It can be inferred that majority of the respondents were involved in agro-ecotourism for a moderate time period even on a small scale, which indicates the fact that the operators were able to subsist and retain in the venture. Most of the agro-ecotourism ventures were established as an extension of the existed farm area, which proves that agro-ecotourism is quite feasible and economical if provide with proper support. The finding was in line with the study of Borlikar (2017).

4.1.4. Extension contact

Extension contact was operationally defined as the frequency of the respondents for making contacts with agriculture and tourism departments. The categorization of respondents based on their extension contact is depicted in table 5.

It is obvious from the data that majority of the respondents (72.22%) had medium level of extension contacts, whereas 18.89 per cent were found to have low level of extension contacts and only 8.89 per cent were found to have higher level of extension contact.

Majority of the agro-ecotourism operators in Alappuzha district (70%) had medium level of extension contact and 13.33 per cent had higher level of extension contact. In Wayanad district 90 per cent of agro-ecotourism operators belonged to medium category and 10 per cent belonged to lower category, with no respondents under higher category. Nearly 57 per cent (56.67%) of the respondents in Idukki district belonged to medium category , while 30 per cent and 13.33 per cent of the

respondents belonged to lower and higher category respectively.

Table 5: Distribution of the respondents based on extension contact

Category	Alappuzha (n=30)		Idukki (n=30)		Wayanad (n=30)		Total (N=90)	
	f	%	f	%	f	%	f	%
Low (<10.43)	5	16.67	9	30	3	10	17	18.89
Medium (10.43-14.03)	21	70	17	56.67	27	90	65	72.22
High (>14.03)	4	13.33	4	13.33	0	0	8	8.89
Mean=12.22, SD= 1.80, Range=8, Maximum = 17, Minimum = 9								

This clearly reflects the fact that majority of the respondents were new in the field of agriculture and agro-ecotourism. The finding was supported by Kumar (2009) where 63.75 per cent of the agro-ecotourism operators in rural Haryana belonged to medium level category.

4.1.5. Mass-media exposure

Mass-media exposure was operationally defined as the frequency of using different mass media viz. radio. television, newspaper, farm literature and internet by the respondent to gain knowledge and bring improvement in practicing agro-ecotourism. The categorization of respondents based on mass-media exposure is depicted in table 6.

It is evident from table 6 that 64.44 per cent of the respondents had medium level of mass-media exposure. However, 18.89 per cent and 16.67 per cent respondents were found to have low and high level of mass-media exposure respectively. It can be inferred that more than half of the respondents were utilizing various media of information, which indicates that agro-ecotourism operators exhibited enthusiasm in understanding more dimensions of agro-ecotourism.

Table 6: Distribution of the respondents based on mass-media exposure

Category	Alappuzha (n=30)		Idukki (n=30)		Wayanad (n=30)		Total (N=90)	
	f	%	f	%	f	%	f	%
Low (<10.01)	5	16.67	6	20	6	20	17	18.89
Medium (10.01-15.61)	19	63.33	18	60	21	70	58	64.44
High (>15.61)	6	20	6	20	3	10	15	16.67
Mean=12.81, SD= 2.80, Range=14, Maximum = 19, Minimum = 5								

District wise categorization of respondents shows that Wayanad district had majority of the respondents in the medium category (70%) followed by Alappuzha (63.33%) and Idukki district (60%). It was also observed that, majority of the respondents were utilizing internet and social media for gathering information about the functioning of agro-ecotourism centers, unlike traditional methods. This might be due to the reason that compared to other media, digital media platform provides more information about agro-ecotourism practices adopted in various regions.

Hence it should be ensured that information on recent developments in the field of agro-ecotourism must be provided to operators through social medias and other internet platforms. This result was in contrast with the findings of Pinky (2014), where majority of the agro-ecotourism operators in Punjab belonged to lower category.

4.1.6. Credit orientation

Credit orientation was operationally defined as the orientation of the agro-ecotourism operators to take advantage of the financial institution for credit, which helpto improve their economic status. The distribution of agro-ecotourism operators based on credit orientation is presented in table 7.

From table 7 it can be inferred that most of the respondents had medium level of credit orientation (65.55%). About 19 per cent (18.89%) of respondentsshowed low and 15.56 per cent exhibited higher level of credit orientation.

Table 7: Distribution of the respondents based on credit orientation

Category	**Alappuzha (n=30)**		**Idukki (n=30)**		**Wayanad (n=30)**		**Total (N=90)**	
	f	%	f	%	f	%	f	%
Low (<1.53)	7	23.33	5	16.67	5	16.67	17	18.89
Medium (1.53-4.50)	21	70	20	66.66	18	60	59	65.55
High (>4.50)	2	6.67	5	16.67	7	23.33	14	15.56
Mean=3.01, SD= 1.48, Range=6, Maximum = 7, Minimum = 1								

District wise distribution of respondents indicates that nearly 70 per cent of the respondents in Alappuzha and 66.66 per cent of respondents in Idukki district belonged to medium category, whereas in Wayanad district, 60 per cent of the respondents belonged to medium category. However, a larger number of respondents have not taken credit to establish their agro-ecotourism units in Alappuzha district. This might be due to the reason that most of the agro- ecotourism units were small scale ventures established as a part of the existing farm. Overall, majority of the respondents have taken financial support in the form of loans from banks rather than approaching money lenders.

The result indicates that incorporating agro-ecotourism components in an existing farm or starting a new agro-ecotourism unit increases the extend of availability of credit to the operators or farmers. Hence appropriate financial support may be provided by the government organizations and banks through tailor made

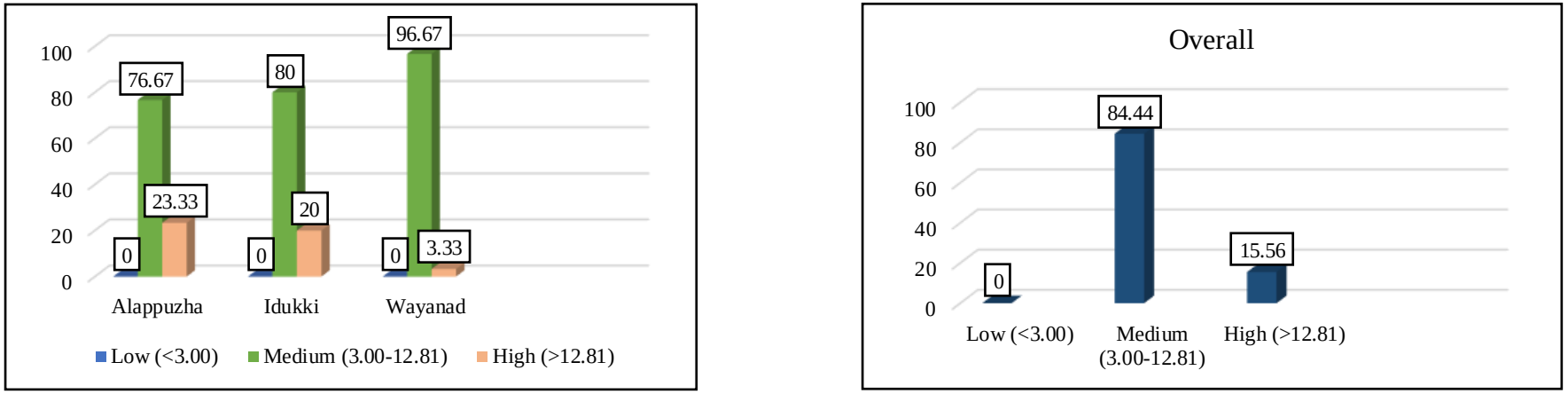


Fig. 4. Distribution of the respondents based on years of operation

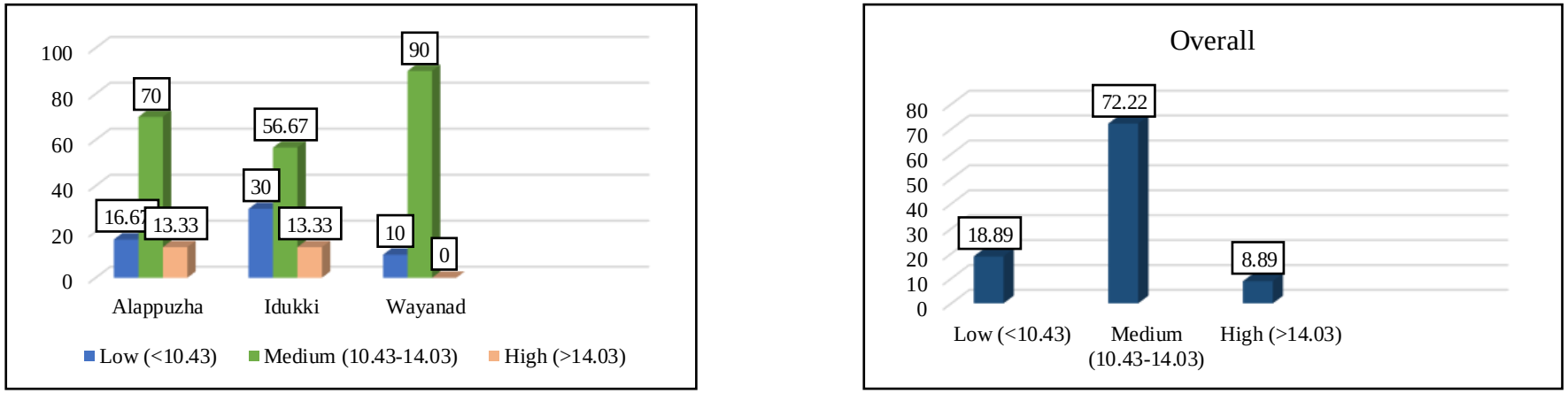
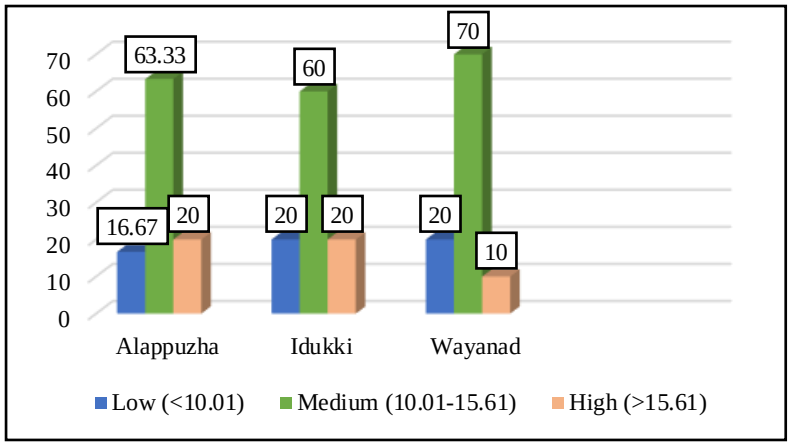


Fig. 5. Distribution of the respondents based on extension contact



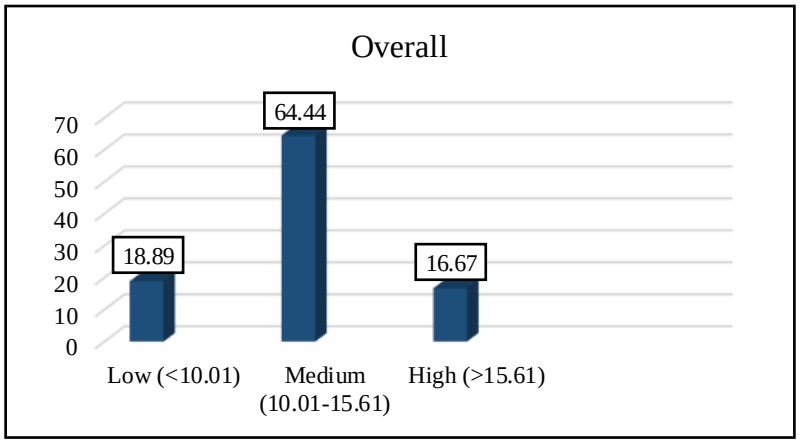
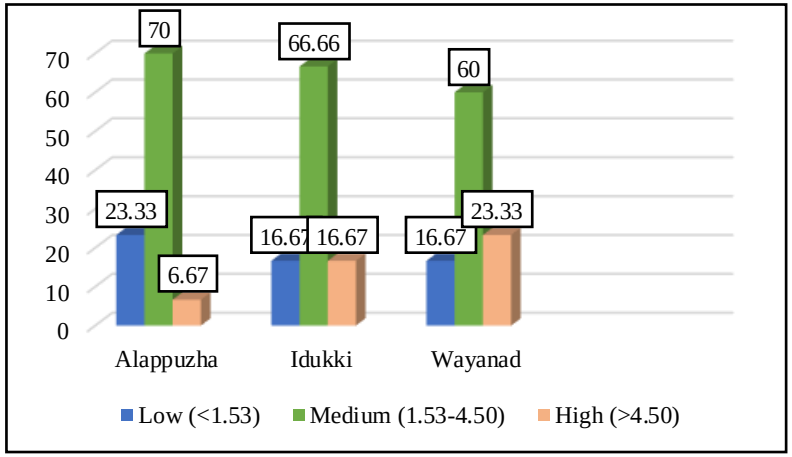


Fig.6. Distribution of the respondents based on mass-media exposure



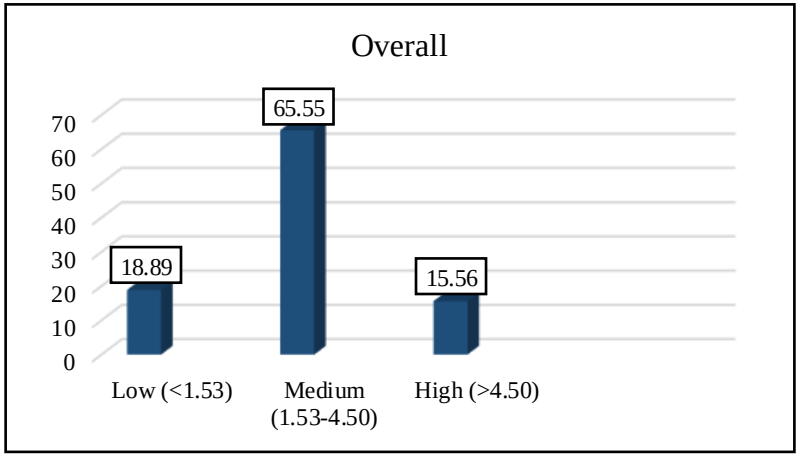


Fig.7. Distribution of the respondents based on credit orientation

schemes and policies. Policy makers should make sure the continuous credit facility should be made available for agro-ecotourism operators without collateral.

4.1.7. Creativity

Creativity was operationally defined as use of imagination or original ideas to create something productive and resourceful. The result obtained is presented in table 8.

Table 8: Distribution of the respondents based on creativity

Category	Alappuzha (n=30)		Idukki (n=30)		Wayanad (n=30)		Total (N=90)	
	f	%	f	%	f	%	f	%
Low (<7.88)	1	3.33	1	3.33	3	10	5	5.56
Medium (7.88-9.29)	28	93.34	25	83.34	26	86.67	79	87.77
High (>9.29)	1	3.33	4	13.33	1	3.33	6	6.67
Mean=8.58, SD= 0.72, Range=3, Maximum = 10, Minimum = 7								

It is clear from the table 8 that 87.77 per cent of respondents had medium level of creativity, 5.56 per cent and 6.67 per cent had low and high level of creativity respectively. In all the selected districts, majority of the respondents belonged to medium category. Alappuzha district had highest number of respondents belonging to medium category (93.34%) followed by Wayanad (86.67%) and Idukki (83.34%).

The result indicates that a vast majority of respondents were creative enough to practice agro-ecotourism. Creative farmers or agro-ecotourism operators seeks new sources of ideas, generates ideas by themselves which increases the quality and uniqueness of the services offered in the farm tourism unit. The result was in agreement with the results obtained by Jose (2020) in her study on FPO farmers, where majority of them belonged to medium category.

4.1.8. Communication ability

Communication ability was operationalized as the ability of the respondents to transfer information, ideas or feelings to the receiver. Distribution of respondents based on communication ability is depicted in table 9.

Table 9: Distribution of the respondents based on communication ability

Category	Alappuzha (n=30)		Idukki (n=30)		Wayanad (n=30)		Total (N=90)	
	f	%	f	%	f	%	f	%
Low (<29.87)	5	16.67	1	3.34	2	6.67	8	8.9
Medium (29.87-33.41)	21	70	22	73.33	28	93.33	71	78.89
High (>33.41)	4	13.33	7	23.33	0	0	11	12.22
Mean=31.64, SD= 1.76, Range=11, Maximum = 35, Minimum = 24								

It is evident from the table 9 that nearly 79 per cent (78.89%) of the respondents had medium level of communication ability. About 9 per cent and 12.22 per cent of respondents belonged to lower and higher category respectively. Nearly70 per cent of the respondents in Alappuzha and 73.33 per cent of the respondents in Idukki district exhibited medium level of communication ability, whereas in Wayanad district it 93.33 per cent of the respondents belonged to medium category. When 13.33 per cent of the respondents in Alappuzha district and 23.33 per cent of the respondents in Idukki exhibited higher communication ability, no respondents in Wayanad district belonged to higher category.

Hence, it can be concluded that majority of the agro-ecotourism operators exhibited good communication ability. It can also be inferred that communication ability of operators and staff is important for the success of agro- ecotourism venture.

The finding was supported by Madan (2014) based on the case study conducted on agro-ecotourism units in Peri-urban Mumbai and Pune, where he

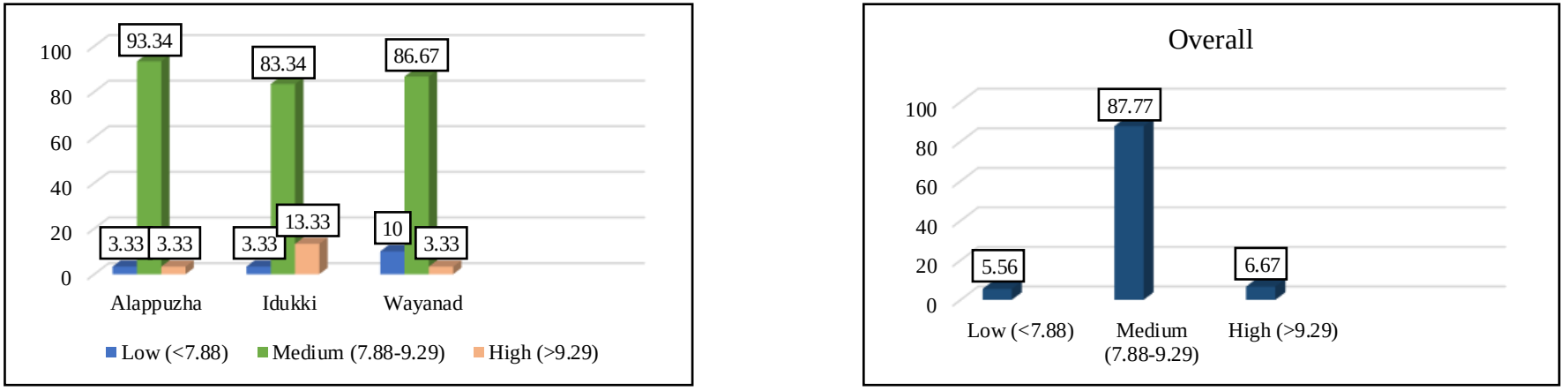


Fig. 8. Distribution of the respondents based on creativity

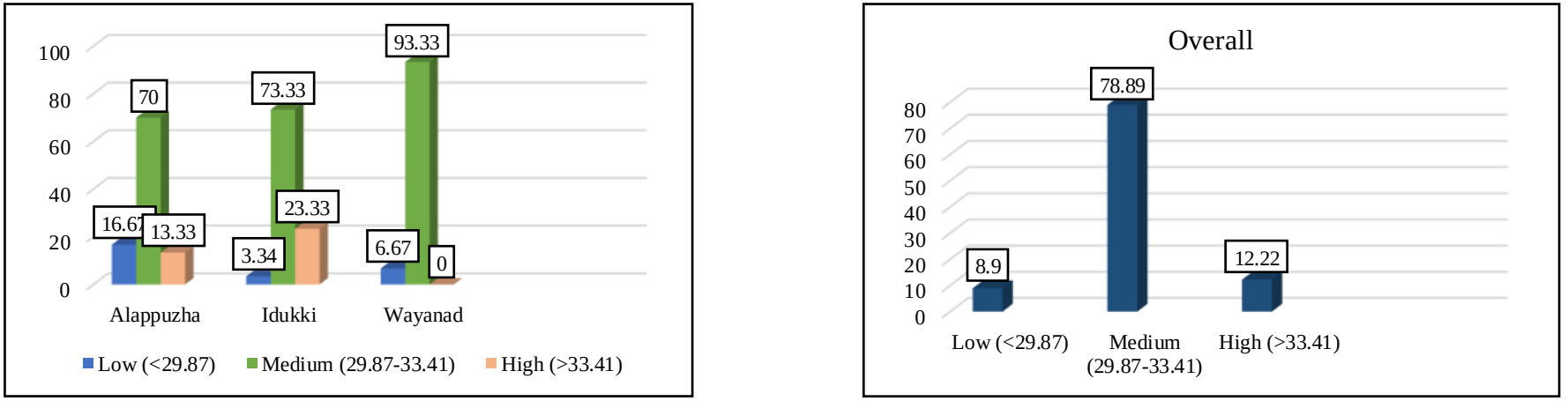


Fig.9. Distribution of the respondents based on communication ability

stated that agro- ecotourism operators and employees were expected to have good communication skill which is crucial in determining its success.

4.1.9. Managerial ability

Managerial ability was operationally defined as the ability of an individual to manage his business by himself. Scale developed by Wankhade *et al*. (2005) with slight modification was used for the study.

The result depicted in table 10 reveals that majority of the respondents (74.45%) appeared to be in the medium level category, while 14.44 per cent and 11.11 per cent belonged to lower category and higher category respectively. There was no significant difference between the managerial ability characteristic of respondents inthe three districts. Nearly 70 per cent of the respondents in Alappuzha (70%) and 73.33 per cent of the respondents in Idukki district belonged to medium category, whereas in Wayanad district it was 80 per cent.

Table 10: Distribution of the respondents based on managerial ability

Category	**Alappuzha (n=30)**		**Idukki (n=30)**		**Wayanad (n=30)**		**Total (N=90)**	
	f	%	f	%	f	%	f	%
Low (<21.55)	3	10	5	16.67	5	16.67	13	14.44
Medium (21.55-25.17)	21	70	22	73.33	24	80	67	74.45
High (>25.17)	6	20	3	10	1	3.33	10	11.11
Mean=23.36, SD= 1.80, Range=9, Maximum = 29, Minimum = 20								

Since agro- ecotourism is a new concept, farmers / stakeholders gradually develops the managerial skill hence the medium level of managerial ability. Gaining experience over years, they develop skills to deal with complex or difficult situations. The result was supported by Park *et al*. (2014) in their study on managerial behaviour for farm- based tourism conducted in South Korea, where they claimed that functioning of farm tourism business demands desirable managerial behaviour.

4.1.10. Innovativeness

Innovativeness was operationally defined as the degree to which an individual is prompt in adopting a new practice and introducing changes into their operations if found practical and feasible. Scale used by Gurubalan (2007) with slight modification was used for the study.

It is clear from table 11 that 76.66 per cent of respondents had medium level of innovativeness, whereas 6.67 per cent and the remaining 16.67 per cent of respondents those were found to be in higher and lower category respectively.

When a vast majority of respondents (93.33%) in Wayanad district exhibited medium level of innovativeness, 70 per cent of respondents in Alappuzha and 66.667 per cent of the respondents in Idukki district belonged to medium category, showing no significant difference. However, in Wayanad district no respondents belonged to the higher category, while 30 per cent and 10 per cent of respondents showed higher level of innovativeness in Alappuzha and Idukki districts respectively.

Table 11: Distribution of the respondents based on innovativeness

Category	**Alappuzha (n=30)**		**Idukki (n=30)**		**Wayanad (n=30)**		**Total (N=90)**	
	f	%	f	%	f	%	f	%
Low (<18.68)	6	20	7	23.33	2	6.67	15	16.67
Medium (18.68-22.04)	21	70	20	66.67	28	93.33	69	76.66
High (>22.04)	3	30	3	10	0	0	6	6.67
Mean=20.36, SD= 1.67, Range=10, Maximum = 25, Minimum = 15								

Innovations in agro-ecotourism depends on the creativity of the owner or community to an extent (Roman *et al*., 2020). The medium level of creativity and managerial ability would have contributed to the medium level of innovativeness

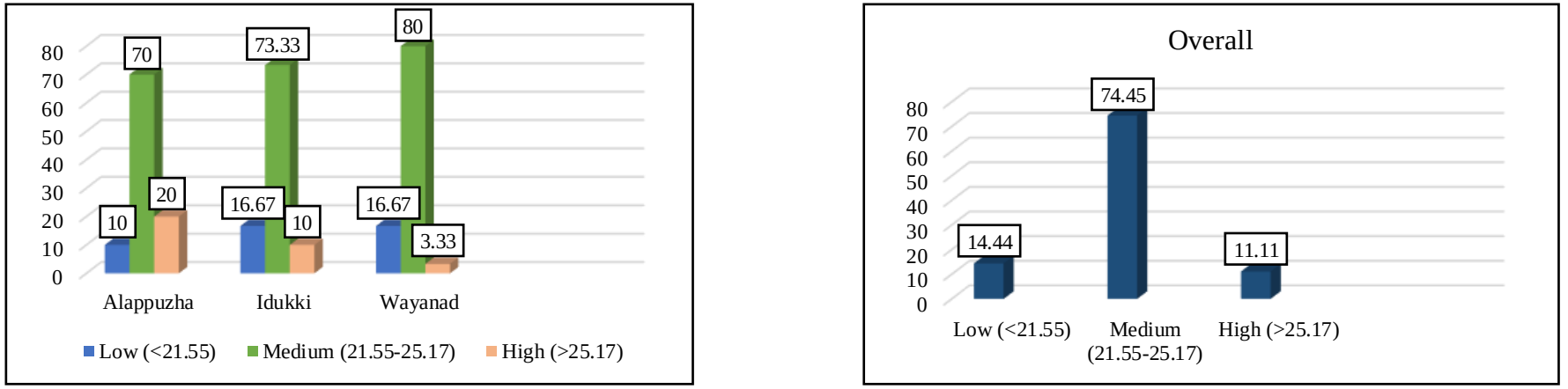


Fig.10. Distribution of the respondents based on managerial ability

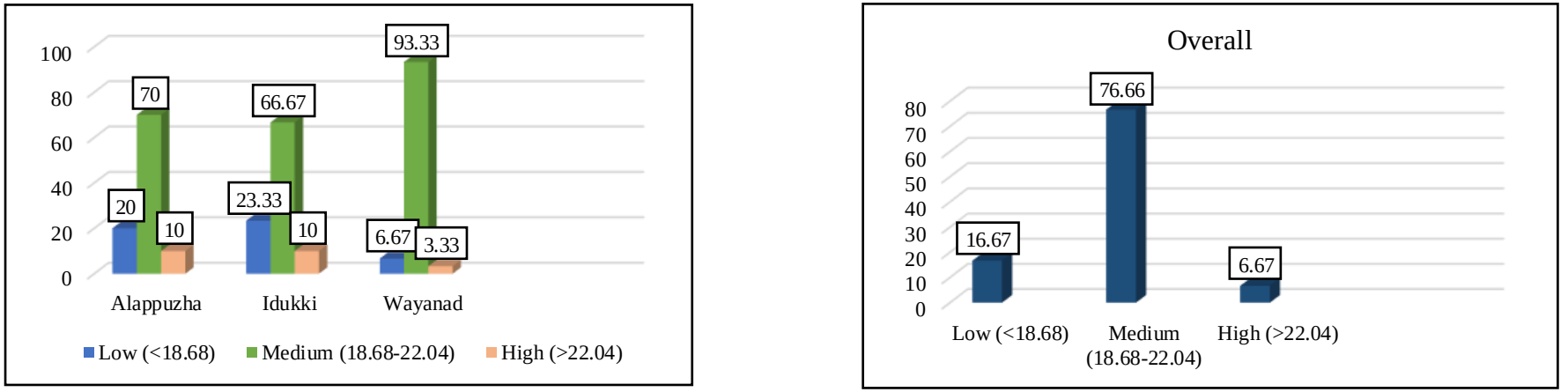


Fig.11. Distribution of the respondents based on innovativeness

among the operators. The result was in conformity with the findings of Panfiluk (2021).

4.1.11. Economic motivation

Economic motivation was operationally defined as the extent to which an individual is oriented towards attainment of the economic needs. Scale developed by Supe (1965) was used for the study.

Table 12: Distribution of the respondents based on economic motivation

Category	Alappuzha (n=30)		Idukki (n=30)		Wayanad (n=30)		Total (N=90)	
	f	%	f	%	f	%	f	%
Low (<33.41)	2	6.67	1	3.33	2	6.67	5	5.56
Medium (33.41-35.42)	28	93.33	29	96.66	28	93.33	85	94.44
High (>35.42)	0	0	0	0	0	0	0	0
Mean=34.42, SD= 1.00, Range=8, Maximum = 35, Minimum = 27								

Table 12 indicates that majority of the respondents (94.44%) had medium level of economic motivation, 5.56 per cent of respondents showed less inclination towards economic aspects, and no respondents exhibited higher economic motivation. This might be due to the fact that majority of the agro-ecotourismoperators are considering it as a method for better utilization of farm resources, diversification of farm activities and to create awareness about agriculture rather thanas an additional source of income.

All the districts had a higher segment of respondents belonging to medium category, with no significant difference among the districts. Alappuzha and Wayanad district both had 93.33 per cent of respondents under medium category, and Idukki district with 96.66 per cent under medium category.

4.1.12. Frequency of hosting VFR

It was operationally defined as the frequency of providing accommodation to friends and relatives by the respondent at their home in a month and was measured using scoring pattern used by Bhatta *et al*. (2019).

It is clear from the table 13 that 60 per cent of respondents belonged to medium level category and 40 per cent belonged to lower level category. However, no respondents belonged to higher category. Nearly 64 per cent of the respondents in Alappuzha district belonged to medium category, whereas 60 per cent and 56.67 per cent of respondents exhibited medium level of frequency in hosting VFR in the districts Idukki and Wayanad respectively. A large segment of respondents exhibited least VFR hosting behaviour.

Table 13: Distribution of the respondents based on frequency of hosting VFR

Category	**Alappuzha (n=30)**		**Idukki (n=30)**		**Wayanad (n=30)**		**Total (N=90)**	
	f	%	f	%	f	%	f	%
Low (<1.10)	11	36.67	12	40.00	13	43.33	36	40.00
Medium (1.10-2.09)	19	63.33	18	60.00	17	56.67	54	60.00
High (>2.09)	0	0	0	0	0	0	0	0
Mean=1.6, SD= 0.49, Range=1, Maximum = 2, Minimum = 1								

This might due to various reasons like lack of proper professional planning, lack of adequate infrastructure and resource. Also the busy daily schedule of the agro-ecotourism operators, which hampers them from hosting many tourists at once. Hosting VFR helps in understanding the respondents general experience in hosting tourists. Experience in hosting VFR improves the operator's ability to manage the tourist's accommodation and helps to treat them well. The finding was supported by the study conducted by Bhatta *et al.* (2019).

4.1.13. Happiness in hosting VFR

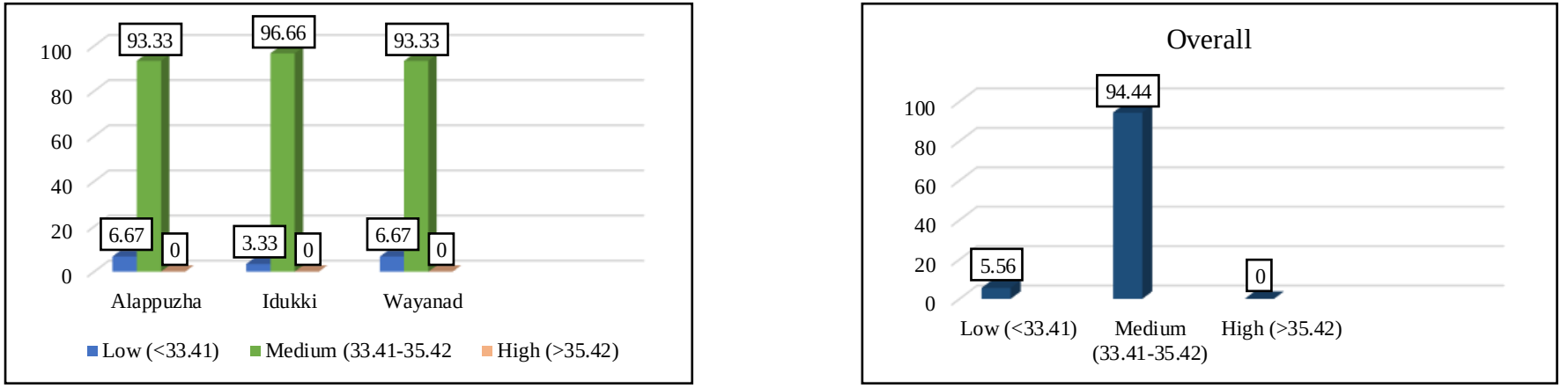


Fig.12. Distribution of the respondents based on economic motivation

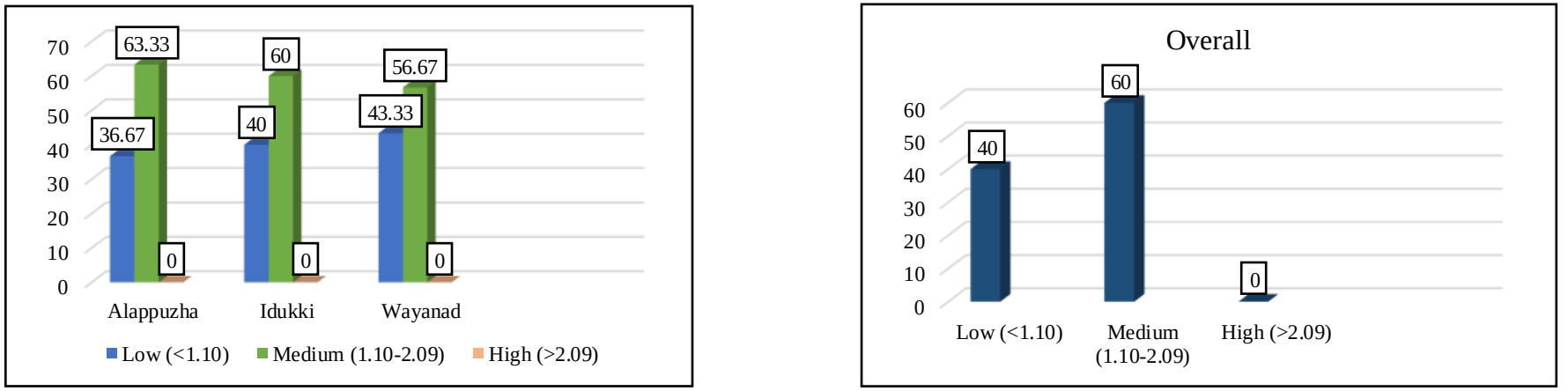


Fig 13: Distribution of the respondents based on frequency of hosting VFR

It was operationally defined as the level of satisfaction of respondents, who provide accommodation to their friends and relatives at their home and was measured using the scoring pattern used by Bhatta *et al*. (2019).

Table 14 indicates that majority of the respondents (42.22%) had higher level of happiness in hosting the visiting friends and relatives, whereas 22.22 per cent and 35.56 per cent of respondents had medium and lower level of happiness in hosting the visiting friends and relatives respectively.

Table 14: Distribution of the respondents based on happiness in hosting VFR

Category	**Alappuzha (n=30)**		**Idukki (n=30)**		**Wayanad (n=30)**		**Total (N=90)**	
	f	%	f	%	f	%	f	%
Low (<3.18)	10	33.33	12	40.00	15	33.33	32	35.56
Medium (3.18-4.95)	6	20.00	9	30.00	5	16.67	20	22.22
High (>4.95)	14	46.67	9	30.00	15	50	38	42.22
Mean=4.06, SD= 0.88, Range=2, Maximum = 5, Minimum = 3								

When 46.67 per cent of the respondents in Alappuzha district exhibited higher level of happiness, the percentage of respondents belonged to this category in Idukki and Wayanad district were 30 and 50 respectively. The finding reveals that higher the satisfaction level of respondents in hosting their relatives and friends, the more will be their willingness to start agro-ecotourism. It seems that happiness to host VFR and frequency of hosting VFR per month is contradictory. This indicates that the agro-ecotourism operators are not willing to accommodate tourists more frequently.

4.1.14. Resource recycling

It was operationalized as the reuse of various resources in the agro- ecotourism

unit. The categorization of respondents based on resource recycling is presented in table 15.

It is clear from table 15 that 61.11 per cent of respondents belonged to the medium category in resource recycling, while 20 per cent and 18.89 per cent belonged to lower and higher category respectively. Majority of the agro-ecotourism operators in Alappuzha district had (60%) medium level of resource recycling behaviour and 30 per cent had higher level of resource recycling behaviour. Nearly 54 per cent of the respondents in Idukki (53.33%) and 70 per cent of respondents in Wayanad district belonged to medium category.

Table: 15 Distribution of the respondents based on resource recycling

Category	**Alappuzha (n=30)**		**Idukki (n=30)**		**Wayanad (n=30)**		**Total (N=90)**	
	f	%	f	%	f	%	f	%
Low (<6.28)	3	10.00	9	30.00	6	20.00	18	20.00
Medium (6.28-7.64)	18	60.00	16	53.33	21	70.00	55	61.11
High (>7.64)	9	30.00	5	16.67	3	10.00	17	18.89
Mean=6.96, SD= 0.67, Range=3, Maximum = 5, Minimum = 8								

Considering the medium level of resource recycling behaviour of agro-ecotourism operators, they should be provided with resource recycling technologies using crop residues and farm wastes in order to reduce the input cost and to maintain the hygiene of the unit. The finding was in line with the results obtained by Nair (2017) in her study on integrated farming system in Kuttanad.

4.1.15. Farm waste disposal behaviour

It was operationalized as the extent to which the farm wastes were disposed in line with the eco preservation and conservation. Scale used by Arunachalam (2003)

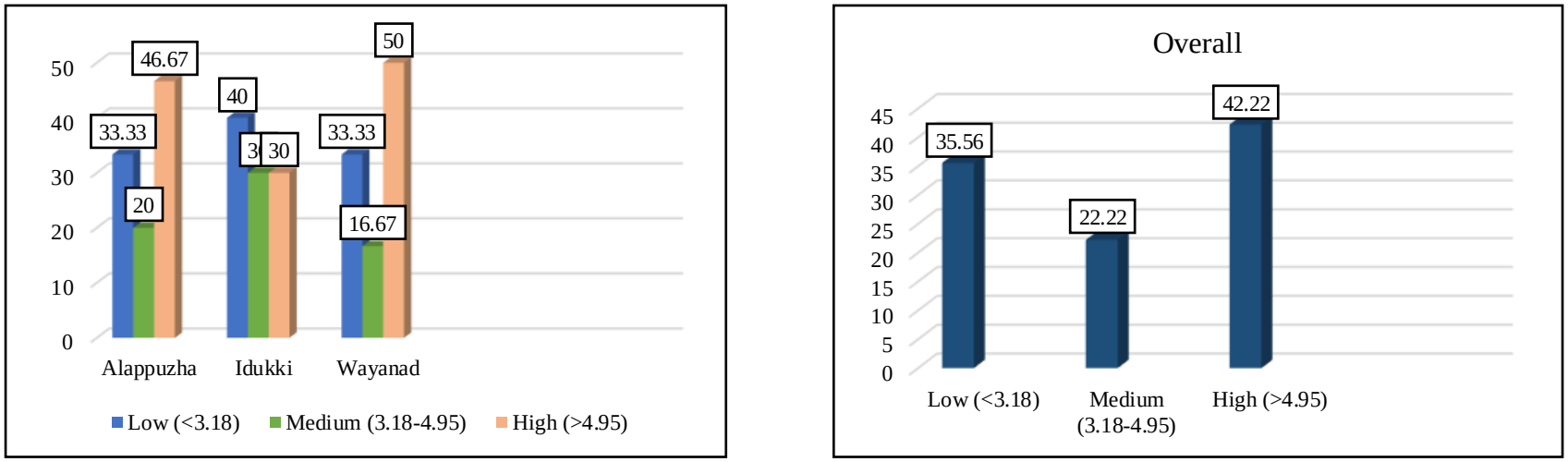
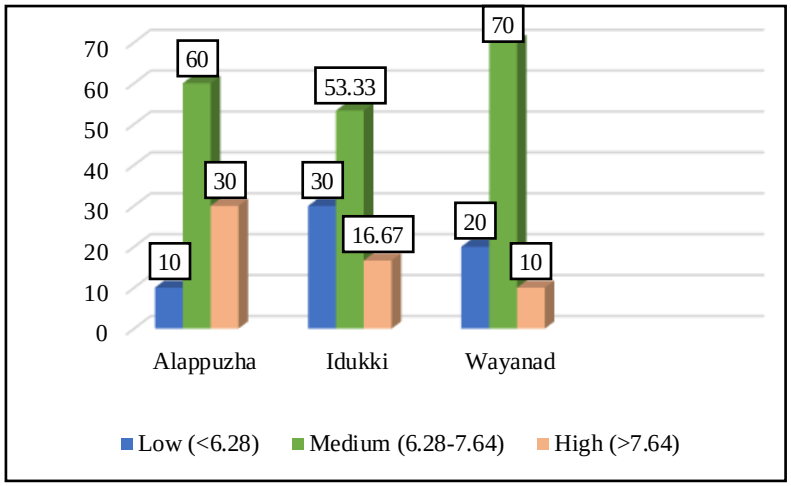


Fig. 14: Distribution of the respondents based on happiness in hosting VFR



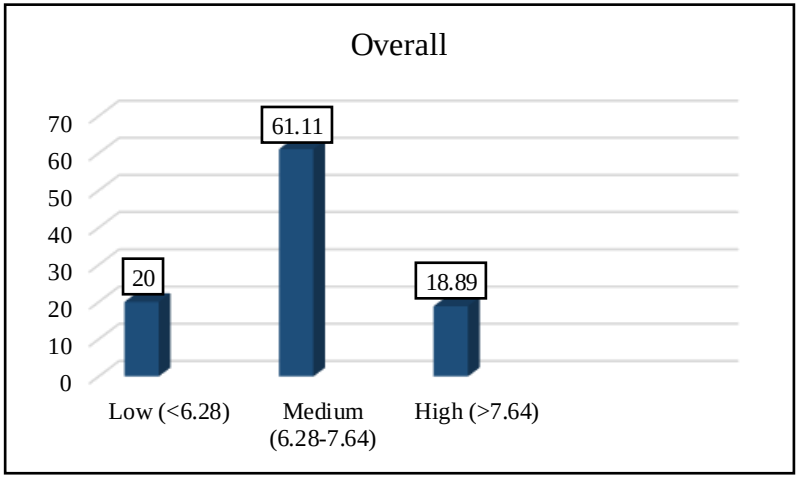


Fig 15: Distribution of the respondents based on resource recycling

was used for the study.

Results obtained depicted in table 16 reveals that 52.22 per cent of the respondents had medium level of eco-friendly farm waste disposal behaviour, whereas 37.78 per cent had high and 10 per cent had low level of eco-friendly farm waste disposal behaviour.

Table 16: Distribution of the respondents based on farm waste disposal behaviour

Category	**Alappuzha (n=30)**		**Idukki (n=30)**		**Wayanad (n=30)**		**Total (N=90)**	
	f	%	f	%	f	%	f	%
Low (<13.64)	6	20.00	3	10.00	0	0.00	9	10.00
Medium (13.64-14.91)	17	56.67	18	60.00	12	40.00	47	52.22
High (>14.91)	7	23.33	9	30.00	18	60.00	34	37.78
Mean=14.27, SD= 0.63, Range=2, Maximum = 15, Minimum = 13								

When 60 per cent of the respondents showed higher level of farm waste disposal behaviour in Wayanad district, it was 23.33 per cent and 30 per cent in Alappuzha and Idukki respectively, whereas 20 per cent of respondents in Alappuzha district belonged to lower category. Hence conducting proper awareness programmes might help them in practicing proper farm waste disposal practices. The group of respondents with least farm waste disposal behaviour were only 10 per cent.

This indicates that the agro-ecotourism operators were conscious about environment safe and eco-friendly practices for a sustainable tourism unit. The finding is supported by Babu (2017), based on her study on role of alternative tourism on village development in Kerala, where she stated that villagers were aware of the importance of maintaining proper waste disposal methods.

4.2. Perception on utility of agro-ecotourism

Perception refers to activity of sensing, interpreting and appreciating objects both physical and social (Young, 1957). Here, utility of agro-ecotourism as perceived by agro- ecotourism operators was studied.

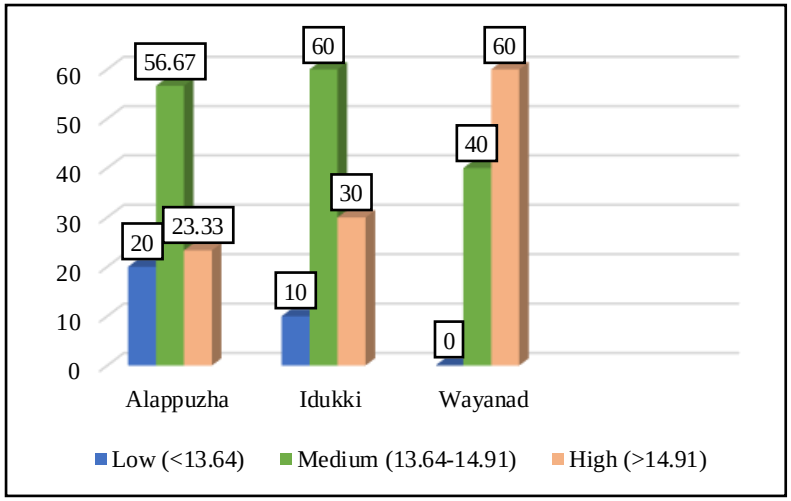
Various utilities identified by Barbieri and Tew (2009) were selected for the study. The opinion of respondents on perception about utility of agro-ecotourism were obtained on a five point continuum viz. 'extremely important', 'very important', 'important', 'somewhat important' and 'not important' with weightage of 5, 4, 3, 2 and 1 respectively.

It can be seen from the table 17 that 71.11 per cent of the respondents felt agro-ecotourism useful and belonged to the medium level category. Only 13.33 per cent of respondents felt higher utility and 15.56 per cent felt less utility for agro- ecotourism.

Table 17: Distribution of the respondents based on perception on utility

Category	**Alappuzha (n=30)**		**Idukki (n=30)**		**Wayanad (n=30)**		**Total (N=90)**	
	f	%	f	%	f	%	f	%
Low (<48.87)	6	20.00	4	13.33	4	13.33	14	15.56
Medium (48.87-61.12)	20	66.67	22	73.34	22	73.34	64	71.11
High (>61.12)	4	13.33	4	13.33	4	13.33	12	13.33
Mean=55, SD= 6.12, Range=2, Maximum = 69, Minimum = 40								

Table 18 reveals that 60 per cent of the agro-ecotourism operators have perceived the utility of agro- ecotourism for capturing new customers as extremely important and nearly 54 per cent of them have perceived agro-ecotourism as extremely important for keeping the family in farm. A significant segment of respondents (33.33%) reported that agro- ecotourism is not important or helpful in reducing the



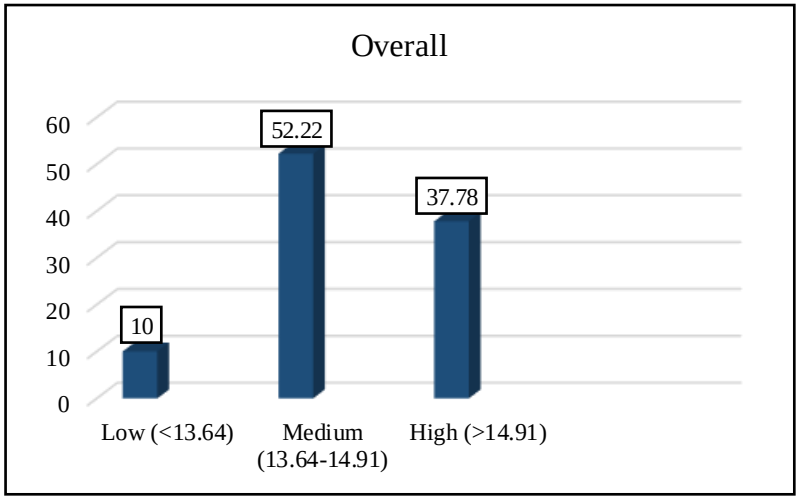


Fig.16 : Distribution of the respondents based on farm waste disposal behaviour

Table 18. Perception on utility of agro-ecotourism

Sl. No	Utilities	EI		VI		I		SI		NI	
		f	%	f	%	f	%	f	%	f	%
1	Capture new customers	54	60	23	25.56	13	14.44	0	0	0	0
2	Educate the public about agriculture	45	50	34	37.78	11	12.22	0	0	0	0
3	Enhance family quality of life	33	36.66	36	40	10	11.11	11	12.23	0	0
4	Keeps you active	32	35.56	34	37.77	18	20	6	6.67	0	0
5	Increase direct-sale of value-added products	27	30	22	24.44	26	28.89	15	16.67	0	0
6	Additional revenues to keep farming	30	33.33	24	26.67	21	23.33	5	5.56	10	11.11
7	Increase direct-sale of other products	19	21.11	16	17.78	15	16.66	16	17.78	24	26.67
8	Decrease revenue fluctuations	27	30	25	27.78	22	24.44	10	11.11	6	6.67
9	Enhance ability to meet financial obligations	30	33.33	22	24.44	12	13.33	7	7.78	19	21.12
10	Keep the farm in the family	48	53.34	13	14.44	25	27.78	4	4.44	0	0
11	Better utilize farm resources	40	44.44	19	21.12	31	34.44	0	0	0	0
12	Make money from a hobby/interest	33	36.67	18	20	39	43.33	0	0	0	0
13	Off-season revenue generation	27	30	19	21.11	24	26.67	13	14.44	7	7.78
14	Provide jobs for family members	10	11.12	11	12.22	29	32.22	12	13.33	28	31.11
15	Reduce impact of catastrophic events	19	21.12	13	14.44	15	16.67	13	14.44	30	33.33

impact of catastrophic events, while 31.11 per cent of the respondents perceived agro-ecotourism as less important or suitable for providing job to family members.

It can be inferred that incorporating agro-ecotourism practices in farm is useful both economically and socially. Hence initiation should be taken by various government agencies, farmer organizations and other private sector institutions along with experts in the field of both agriculture and tourism, to motivate farmers topractice agro-ecotourism in their farm land.

4.3. Perception on feasibility of agro-ecotourism

Feasibility of agro-ecotourism as perceived by agro-ecotourism operators was studied. The scale developed by Argade *et al*. (2015), with slight modifications was selected for the study. The opinion of respondents were obtained on a three-point continuum viz. , 'agree', 'neutral' and 'disagree' with weightage of 2, 1 and 0 respectively.

Table 19: Distribution of the respondents based on feasibility of agro-ecotourism

Category	**Alappuzha (n=30)**		**Idukki (n=30)**		**Wayanad (n=30)**		**Total (N=90)**	
	f	%	f	%	f	%	f	%
Low (<7.88)	1	3.33	1	3.33	3	10	5	5.56
Medium (7.88-9.29)	28	93.34	25	83.34	26	86.67	79	87.77
High (>9.29)	1	3.33	4	13.33	1	3.33	6	6.67
Mean=8.58, SD= 0.70, Range=3, Maximum = 10, Minimum = 7								

It can be observed from the above table that 63.33 per cent of the operators had medium level of perception on feasibility of agro-ecotourism, which was followed by 14.44 per cent and 22.23 per cent having high and low level of perception. It can be inferred that incorporating agro-ecotourism in farm activities is feasible, without muchadditional investments.

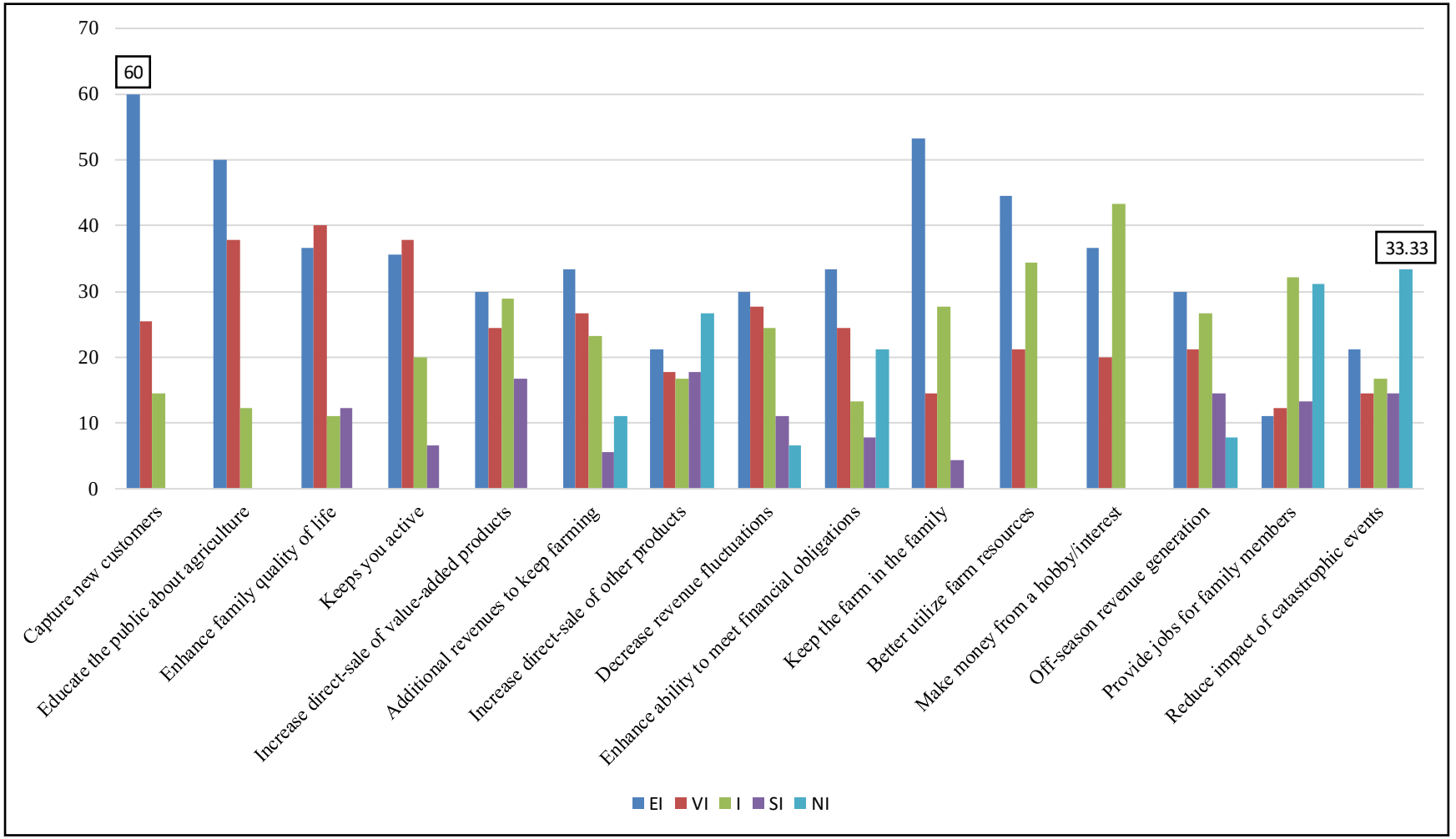


Fig 17. Perception on utility of agro-ecotourism

Table 20. Perception on feasibility of agro-ecotourism

Sl. No	Utilities	AGREE (2)		NEUTRAL (1)		DISAGREE (0)	
		f	%	f	%	f	%
1	Agro-ecotourism helps to achieve optimum production level through diversification.	81	90	9	10	0	0
2	Agro-ecotourism helps to increase income diversification.	87	96.67	3	3.33	0	0
3	Integrated management practices reduce input needs of farmers to some extent.	62	68.89	23	25.56	5	5.56
4	Agro-ecotourism requires initial investment.	76	84.44	14	15.56	0	0
5	Agro-ecotourism increases competition for resources among different enterprises	74	82.22	13	14.44	3	3.34
6	Agro-ecotourism operators have less risk sensation than conventional farmers.	72	80	17	18.89	1	1.11
7	Agro-ecotourism reduces vulnerability to economic losses	60	66.67	30	33.33	0	0
8	Agro-ecotourism brings farm diversity which leads to decrease farm vulnerability.	85	94.44	5	5.56	0	0

Table 20 reveals that 96.67 per cent of the respondents agreed that agro-ecotourism helps in increasing income diversification and 94.44 per cent of the respondents agreed that agro-ecotourism brings farm diversity leading to reducedfarm vulnerability. Whereas, 84.44 per cent of the respondents agreed to the fact thatagro-ecotourism requires initial investment and 82.22 per cent agreed that agro- ecotourism increases competition for resources among different enterprises.

4.4. Correlation between independent and dependent variables

The relationship between socio-economic variables of agro- ecotourism stakeholders and the dependent variables were analyzed using Karl PearsonCorrelation Analysis. The results are presented below.

4.4.1. Correlation between perception on utility of agro-ecotourism and independent variables

Correlation was done for perception of agro-ecotourism stakeholders on utility of agro-ecotourism with independent variables and it is presented in table 21. Perception of agro-ecotourism operators on its utility was positively correlated with innovativeness and economic motivation at 5 per cent significance level and managerial ability at 10 per cent significance level. It can be inferred that innovativeness, economic motivation and managerial ability led to increase in perception of operators towards utility of agro-ecotourism.

Innovation proneness might have facilitated exposure to agro-ecotourism and influenced to experiment agro-ecotourism the same with new ideas for additional rewards and satisfaction. Agro-ecotourism operators with high level of innovativeness are expected to have more information about the concept and its benefits and thus experiments with novel ideas of farm diversification. This might be the reason for the positive correlation between perception on utility and innovativeness. The results of the study was in conformity with the findings of Athira (2017).

Economically motivated agro-ecotourism operators had high perception on its

utility. This might be due to the fact that the benefit of gaining extra income have influenced the operators to practice agro-ecotourism.

Table 21: Correlation between perception on utility and independent variables

Sl. No.	Independent variables	Correlation coefficient 'r' value
1	Age	-0.131
2	Educational status	0.0461
3	Years of operation	0.0441
4	Extension contact	-0.153
5	Mass-media exposure	-0.053
6	Credit orientation	0.081
7	Creativity	0.007
8	Communication ability	-0.025
9	Managerial ability	0.188*
10	Innovativeness	0.245**
11	Economic motivation	0.204**
12	Frequency of hosting VFR	-0.026
13	Happiness in hosting VFR	0.004
14	Resource recycling	0.111
15	Farm waste disposal behaviour	0.025

** Significant at 5% significance level* Significant at 10% significance level

4.4.2 Correlation between perception on feasibility of agro-ecotourismand independent variables

Correlation was done for perception of agro-ecotourism stakeholders ou feasibility of agro-ecotourism with independent variables and is presented in table 22.

Perception of agro-ecotourism operators on its feasibility was positively correlated with innovativeness and farm waste disposal behaviour at 5 per cent significance level and with economic motivation at 10 per cent significant level. It can be inferred that innovativeness, farm waste disposal behaviour and economic

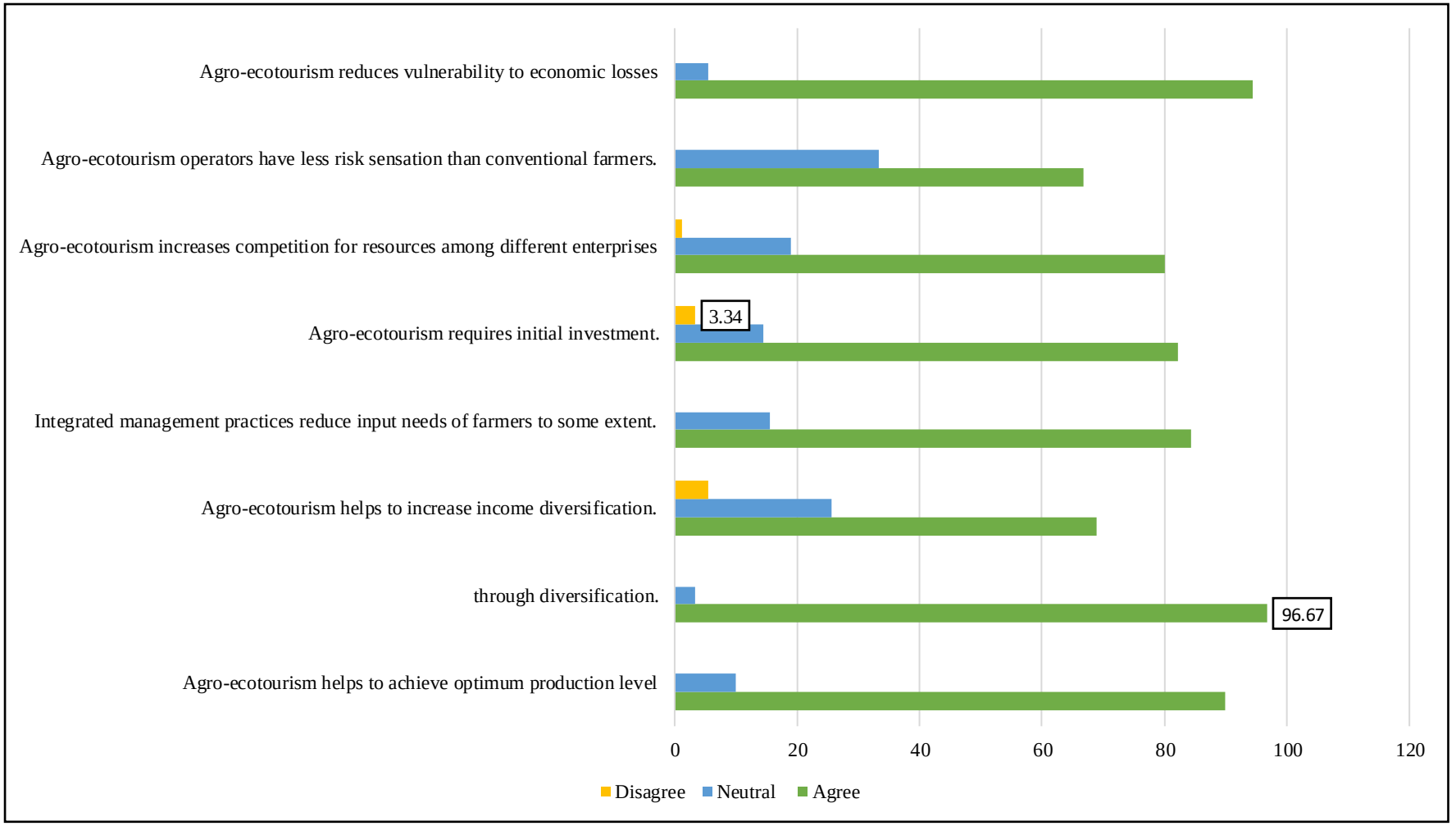


Fig 18. Perception on feasibility of agro-ecotourism

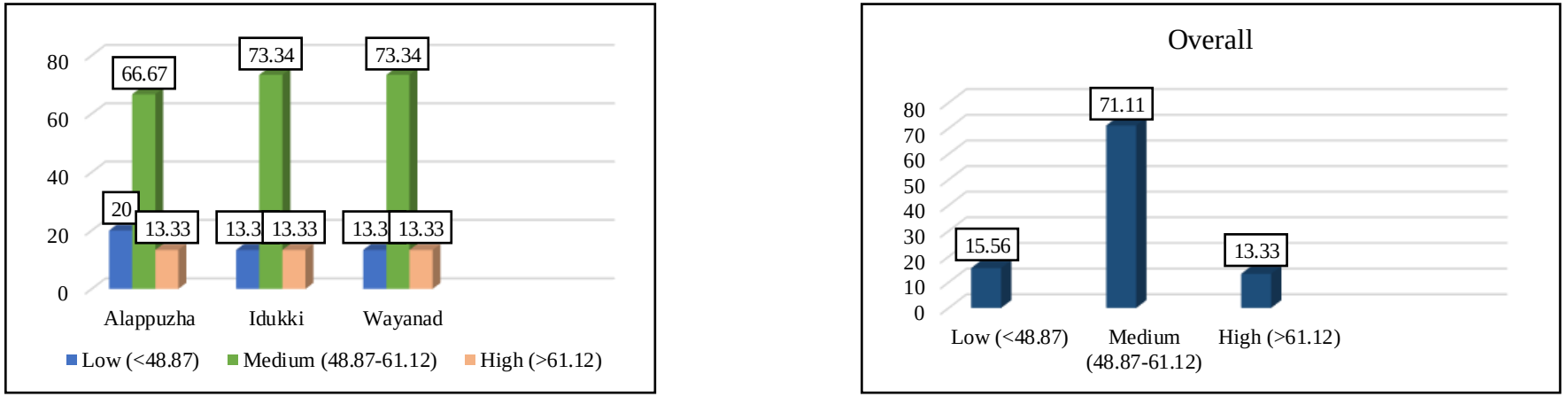


Fig.19 : Distribution of the respondents based on perception on utility of agro-ecotourism

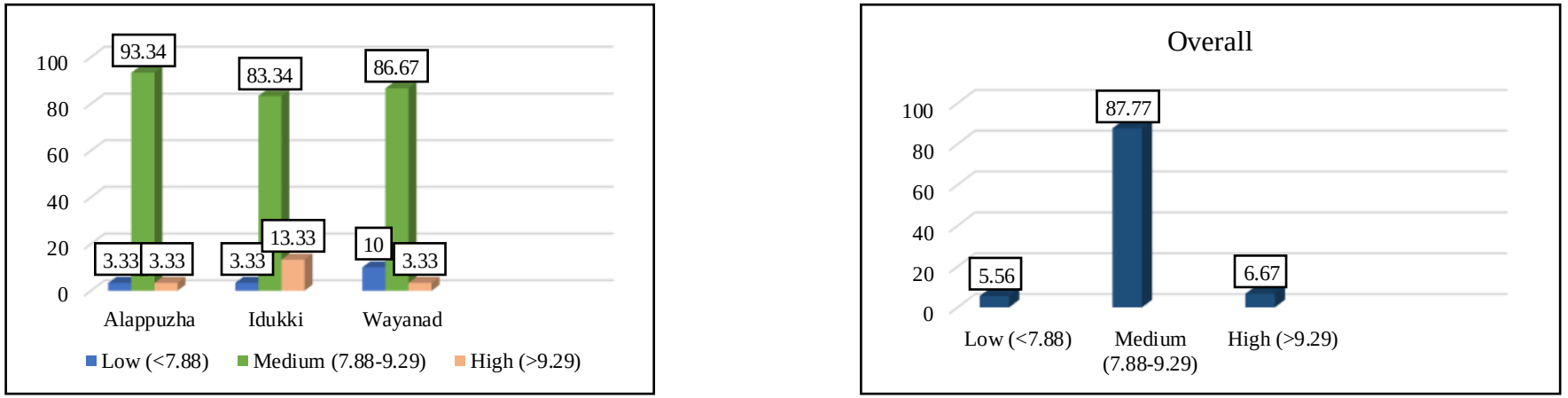


Fig.20 : Distribution of the respondents based on perception on feasibility of agro-ecotourism

motivation led to increase in perception of operators towards feasibility of agro-ecotourism.

Innovativeness of agro-ecotourism operators might have helped the operators to realize the possibilities for practicing agro-ecotourism in Kerala. Innovative agro-ecotourism operators identifies and explores more agro- ecotourism practices which leads to the success of the venture. These operators incorporates those agro- ecotourism practices in their farm which are feasible both economically and culturally. This might have led to the positive correlation between perception on feasibility of agro-ecotourism and innovativeness.

Farm waste disposal behaviour and perception on feasibility of agro-ecotourism was significantly and positively correlated. Eco-friendly management or disposal of farm waste improves the attractiveness of the agro-ecotourism unit and maintains a hygienic environment. This might have led them to realize the practicability of starting agro- ecotourism in an environment friendly manner.

Economically motivated agro-ecotourism operators had high perception on its feasibility. This might be due to the fact that agro-ecotourism brings extra income without much investment and keeps the investor with profit.

Year round income replacement opportunity is possible through agro-ecotourism venture. It can be inferred that innovativeness, farm waste disposal behaviour and economic motivation led to increase in perception of operators towards feasibility of agro-ecotourism.

Table 22: Correlation between perception on feasibility and independent variables

Sl. No.	Independent variables	Correlation coefficient ' r' value
1	Age	0.031
2	Educational status	-0.129
3	Years of operation	0.143
4	Extension contact	0.079
5	Mass-media exposure	-0.064
6	Credit orientation	0.014
7	Creativity	0.062
8	Communication ability	0.070
9	Managerial ability	-0.050
10	Innovativeness	0.217**
11	Economic motivation	0.189*
12	Frequency of hosting VFR	-0.096
13	Happiness in hosting VFR	0.066
14	Resource recycling	-0.037
15	Farm waste disposal behaviour	0.256 **

** Significant at 5% significance level * Significant at 10% significance level

4.5. Gender role in agro-ecotourism

Gender role in agro-ecotourism was studied to identify the gap between contribution of male and female employees in an agro-ecotourism unit.

4.5.1. Types of jobs performed by employees in agro-ecotourism venture

Various kinds of jobs performed by employees in the agro-ecotourism units are presented in Table 23. The data presented in the table indicates that, there were about six major duties done by the employees. Among them, 33.93 per cent of male employees were engaged in farm activities whereas only 21.88 per cent of the female

employees were engaged in this. Majority of the female employees were engaged in housekeeping, whereas only 16.0 per cent of the male employees were engaged in this. It is evident from the table that majority of the female were employed in housekeeping, cooking and farm activities.

Table 23: Gender wise job performed by employees

Job performed	Male		Female	
	No.	Percentage	No.	Percentage
Farm labour	19	33.93	14	21.88
House keeping	9	16.07	22	34.37
Cooking	6	10.72	18	28.13
Driver	5	8.93	0	0
Manager	10	17.85	7	10.93
Guide	7	12.50	3	4.69
Total	56	46.66	64	53.34

4.5.2. Monthly salary of employees

Table 24 reveals that majority of the employees working in agro- ecotourism units receives a monthly salary between rupees 10,001- 15,000. Categorization of monthly salary of employees according to their gender reveals that 39.29 per cent of male employees and 41.67 per cent of female employees draws a salary between rupees 10,001-15,000 per month. Only a few male employees (14.28 %) draws salary more above rupees 20, 001 per month, and in case of female it was only 7.81 per cent. Hence both male and female employees could be utilized for both indoor and outdoor activities and thus providing female with higher salary.

Table 24: Monthly salary of employees

Monthly salary (in rupees)	Male		Female	
	No.	Percentage	No.	Percentage
<10,000	10	17.86	12	18.33
10,001-15,000	22	39.29	28	41.67
15,001-20,000	16	28.57	19	29.16
>20,001	8	14.28	5	10.84

4.5.3. Daily working hours of employees

It is clear from table 25 that majority of the employees (57.50%) were working for 7-9 hours a day. It was found that nearly 32 per cent of the employees works for less than 6 hours and 10 per cent of employees works for more than 9 hours. Among the female employees, 60.93 per cent were reported to be working for 7-9 hours and only 6.26 per cent were found to be working for more than 9 hours daily. In contrary, 14.28 per cent of male employees were found to be working for more than 9 hours daily.

Table 25: Daily working hours of employees

Working hours (daily)	Male		Female		Total	
	No.	Percentage	No.	Percentage	No.	Percentage
<6 hours	18	32.14	21	32.81	39	32.5
7-9 hours	30	53.58	39	60.93	69	57.50
> 9 hours	8	14.28	4	6.26	12	10

4.6. Prospects of agro-ecotourism

Prospects is operationally defined as the orientation of agro-ecotourism operators for a successful future plan of expanding their tourism unit. It was studied in terms of operator's willingness to increase facilities and promotional activities in agro-ecotourism. Instrument used by Pinky (2014) was used for the study. Table 26 reveals that, the overall prospects of agro-ecotourism venture was medium as reported by 62.22 per cent of the respondents while 25.56 per cent reported high and 12.22 per cent reported low overall prospects.

Table 26: Overall prospects of agro-ecotourism

Category	Frequency	Percentage
Low (<33.83)	11	12.22
Medium (33.83-37.98)	56	62.22
High (>37.98)	23	25.56

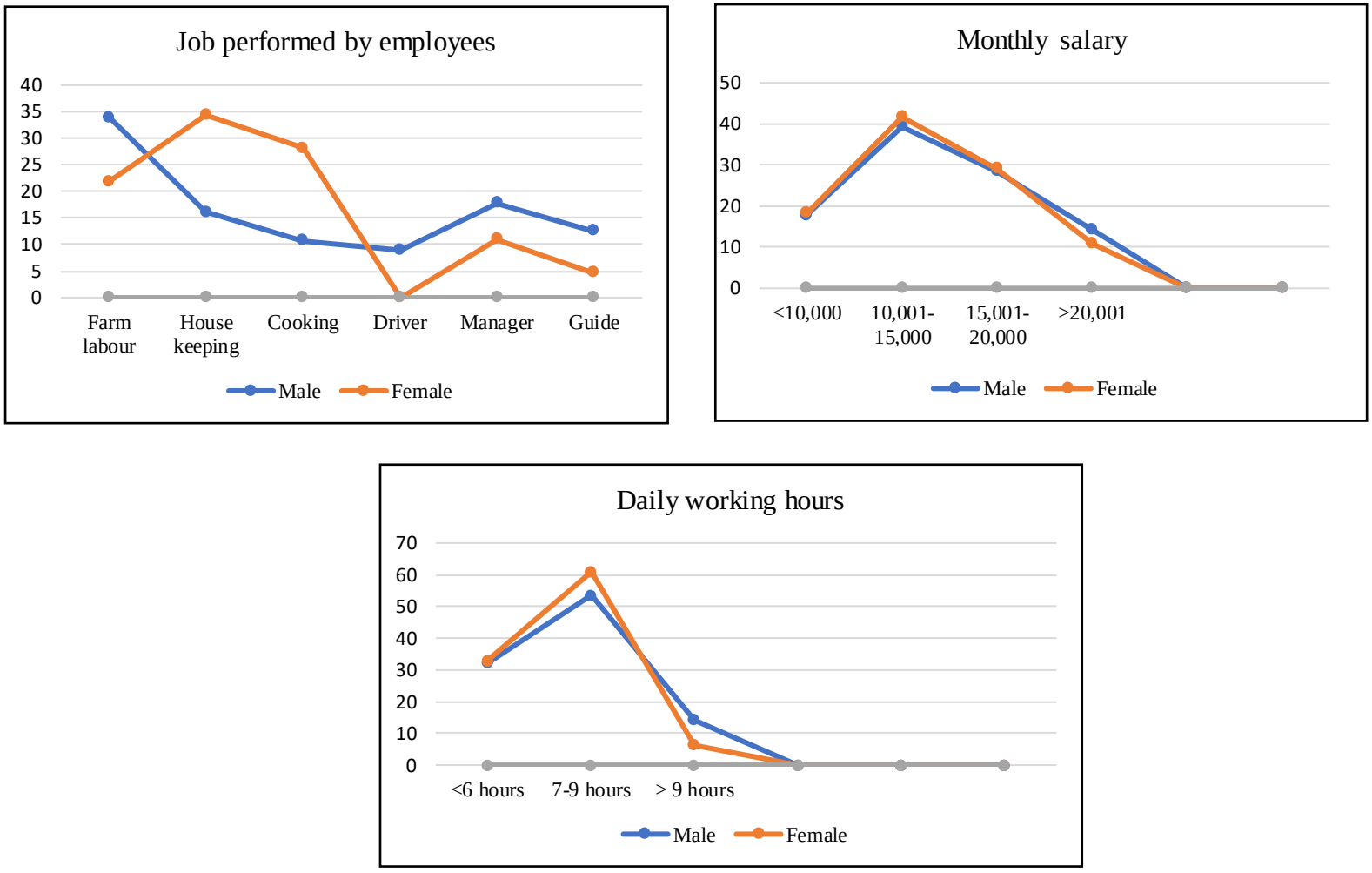


Fig.21. Gender role in agro-ecotourism

Table 27. Distribution of the respondents based on prospects of agro-ecotourism

ADDITIONAL FACILITIES	SW (%)	W (%)	NW (%)	PROMOTIONAL ACTIVITIES	SW (%)	W (%)	NW (%)
Increase/expand area under agritourism	81.11	18.89	0	Develop extensive contact with travel agencies	81.11	18.89	0
Integrate more interesting activities	100	0	0	Regular advertisement of the farm house	83.33	16.67	0
Improve accommodation facilities at the site	100	0	0	Development of own website and update regularly	100	0	0
Offer rural Kerala cuisine for breakfast, lunch and dinner	100	0	0	Developing contact with Schools, Colleges, NGOS, Club, Union and other organization	66.67	24.44	8.89
Provide better medical facilities during emergency	100	0	0	Arrangement of cultural programme	66.67	21.11	12.22
Offer more recreational activities that excites the tourist	100	0	0	Creating Opportunity for rural games	37.78	33.33	28.89
Offer agri-products at reasonable prices	78.89	21.11	0	Provision of information about culture of Kerala	100	0	0
Regularly maintain and follow visitors' feedback book	100	0	0	Development of good relationship with the tourist	100	0	0
Improve transport facilities to site	54.44	45.56	0	Customizing agro-tour package for different type of tourist	50	45.55	4.45
Providing pick and drop facilities	45.56	54.44	0	Making availability of agri-tourism related literature	100	0	0

It is clear from table 27 that, cent percent of respondents were strongly willing to integrate more interesting activities, to improve accommodation facilities, to offer rural Indian cuisine, to provide better medical facilities, to offer more recreational activities and to regularly maintain and follow visitor's feedback book.In terms of promotional activities, cent per cent of the respondents were strongly willing to develop own website, ready to provide information about the culture of Kerala, have a good relationship with the tourists and to provide agro-ecotourism related literature to the tourists.

Nearly 29 per cent (28.89%) and 12.22 per cent of respondents were not willing to offer rural games as entertainment activity and to arrange cultural programmes respectively. This might be due to various reasons such as busy schedule of the agro-ecotourism operators, limited land availability for conducting the programmes and security reasons. However, a vast majority of agro-ecotourism operators were willing to provide those facilities which they can afford. The agro- ecotourism operators exhibited great level of happiness to cooperate with educational institutions, to create their own website and to promote agro- ecotourism through advertisements.

Hence it can be inferred that majority of agro-ecotourism were willing to incorporate those additional facilities and to invest on more promotional activities they can afford. This further creates more opportunities among agro-ecotourismoperators by attracting more tourists in to their farm and thus benefits both operators, employees and the community.

4.7. Problems in agro-ecotourism

Problems faced in agro-ecotourism was studied using the scale used by Pinky (2014), with modifications. Relevancy ranking was done to find out the major problems faced by the respondents. The respondents comprised of ninety agro- ecotourism operators and thirty tourism officials. Based on the discussion with experts in the field of agro-ecotourism, eleven problems were identified and tested.

Further the problems were ranked based on the relevancy coefficient obtained. The problem with maximum relevancy coefficient was taken as most important problem. The result obtained is depicted in table 28.

Table 28: Problems in agro-ecotourism

(N=120)

Sl. No.	Problems	Relevancy Coefficient	Rank
1.	Lack of fund for publicity	0.88	6
2.	Lack of knowledge and skill	0.95	2.5
3.	Lack of government support	0.9	4
4.	Weak communication skill of staff	0.69	10
5.	Lack of mindset for commercial approach	0.89	5
6.	Harsh weather conditions	0.78	8
7.	No literature on agro-ecotourism	0.95	2.5
8.	Non willingness to buy products by visitors	0.53	11
9.	Lack of training	0.98	1
10.	Complexity in getting license	0.85	7
11.	Inability to introduce more activities	0.73	9

Table 28 reveals that majority of the respondents reported lack of training (1st rank) as the major problem followed by lack of knowledge and skill and lack of literature on agro- ecotourism. While lack of government support and lack of mindset for commercial approach were ranked as 4th and 5th respectively, while weak communication skill of staff and non-willingness of visitors to buy products were ranked as the least severe problems faced by the respondents. The findings were in line with the findings of Pinky (2014).

4.8. Challenges in agro-ecotourism

The four broad categories of challenges like financial challenges, human resource challenges, technical challenges and policy challenges were analyzed and

presented below. Relevancy ranking technique was used to find major challenges faced by the agro-ecotourism operators. As per the method, challenges were divided into four categories. After data collection, challenges were ranked based on the relevancy coefficient obtained. The challenge with maximum relevancy coefficient was taken as most important challenge.

4.8.1. Financial challenges

Table 29 indicates that non-availability of tourists was perceived as the severe financial challenge in all the three districts. Since the work was conducted during the COVID pandemic, the forecast challenge was highlighted and hence the ranking.

Table 29: Financial challenges faced by agro-ecotourism operators

(N=90)

Challenges	Relevancy coefficient		
	Alappuzha	Idukki	Wayanad
Non availability of tourists at vacation time	0.95	0.9	0.92
High cost of labour	0.73	0.6	0.66
High cost of land and initial investment	0.86	0.79	0.82
Maintenance charges	0.7	0.76	0.77
No insurance coverage	0.69	0.85	0.79
Lack of awareness about credit and subsidy components	0.68	0.58	0.62

Further, high cost of land and initial investment in Alappuzha (0.86) and Wayanad (0.82), no insurance coverage (0.85) in Idukki were the second most severe financial challenges faced by respondents. Since majority of the agro- ecotourism centers were functioning on the existing large scale farm area, where farm visits and farm stay facilities were offered erstwhile, the cost of establishment was apparently not so severe challenge in Wayanad and Idukki districts.

4.8.2. Human Resource challenges

Table 30 indicates that lack of commercial approach was perceived as the severe human resource challenge in all the three districts, along with lack of organized effort like farmer organizations in Alappuzha (0.88). Further, communication barrierin Alappuzha (0.78) and Wayanad (0.79), lack of organized effort like active farmer organizations (0.73) in Idukki were the second most severe human resource challenges reported by respondents.

Table 30: Human Resource challenges faced by agro-ecotourism operators

(N=90)

Challenges	Relevancy coefficient		
	Alappuzha	Idukki	Wayanad
Lack of commercial approach like other tourism venture	0.88	0.87	0.89
Communication barrier	0.78	0.73	0.79
Lack of organized effort like farmer organizations	0.88	0.78	0.72

Very narrow difference was observed in the relevancy coefficient between the districts in terms of human resource challenges. Organized efforts were more observed in Idukki and Wayanad in the form of various groups formed through social media, while in Alappuzha there is lack of co-ordination among the operators. Commercial approach was a severe challenge in all the three districts due to lack of suitable agritourism policies.

4.8.3. Technical challenges

Table 31 indicates that non availability of inputs (0.89), was perceived as the severe technical challenge in Alappuzha followed by unfavourable weather conditions (0.88) difficulty in accessing information on agro-ecotourism (0.88). Inthe case of Idukki district, difficulty in accessing information on agro-ecotourism

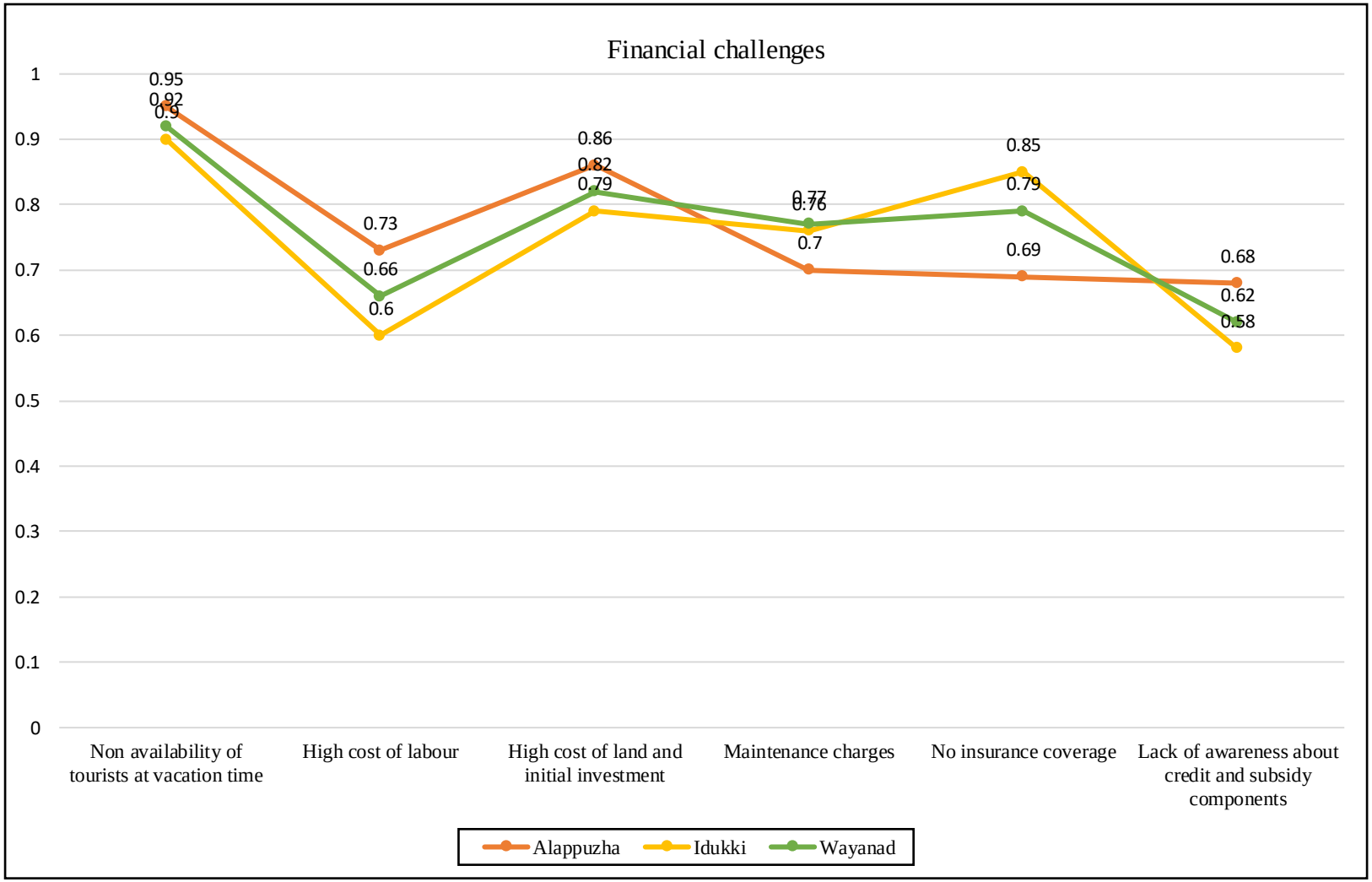


Fig 22. Relevancy index of financial challenges faced by agro-ecotourism operators

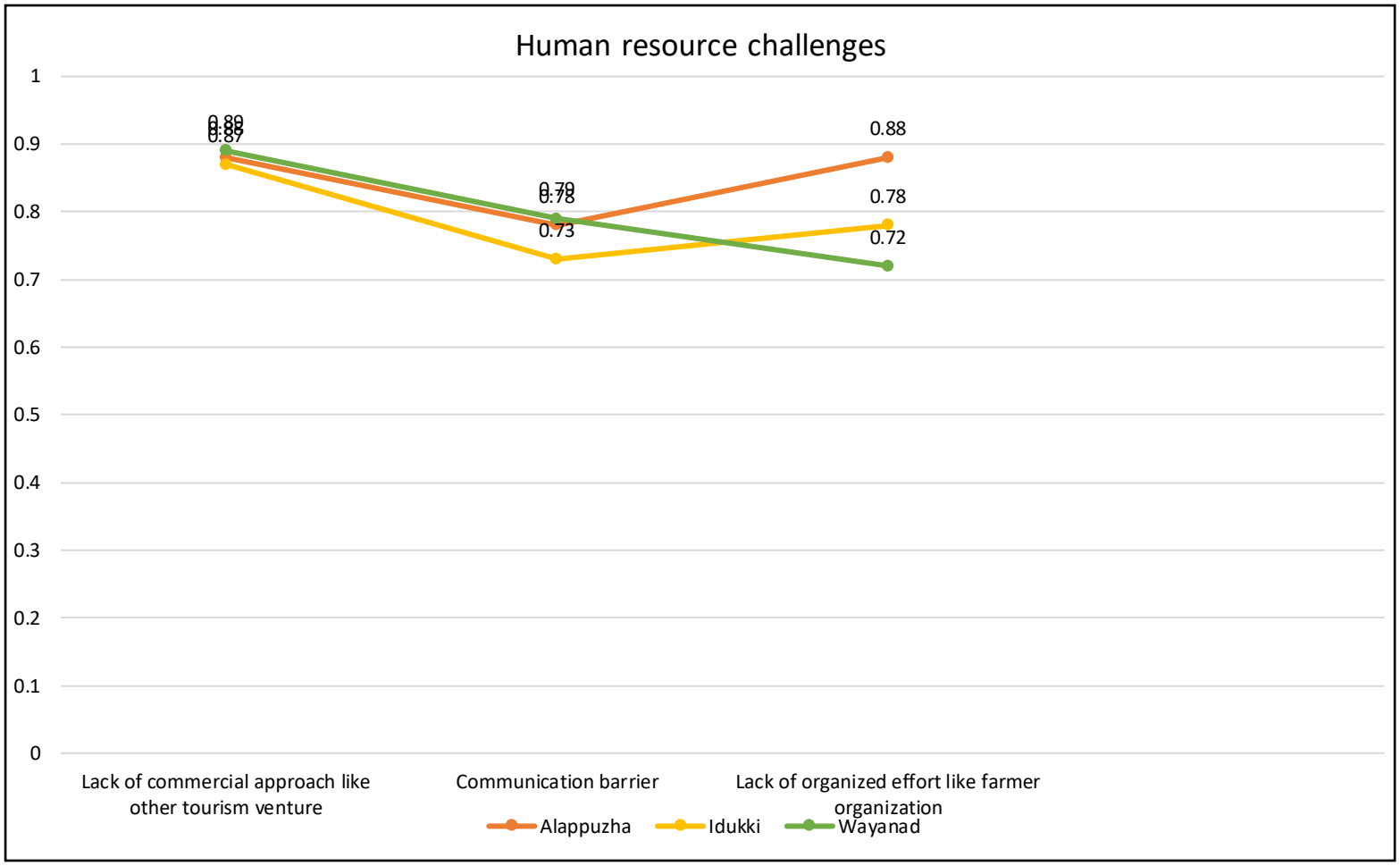


Fig 23. Relevancy index of human resource challenges faced by agro-ecotourism operators

(0.91) was the most severe challenge faced followed by non-availability of inputs (0.8). Agro-ecotourism operators in Wayanad district ranked non-availability of inputs as the severe challenge (0.91) followed by unfavourable weather conditions and difficulty in accessing information on agro-ecotourism.

Table 31: Technical challenges faced by agro-ecotourism operators

(N=90)

Challenges	Relevancy coefficient		
	Alappuzha	**Idukki**	**Wayanad**
Difficulty in accessing information on agro-ecotourism	0.83	0.91	0.88
Small land area	0.62	0.54	0.49
Unfavourable weather conditions	0.88	0.86	0.88
Non availability of inputs	0.89	0.8	0.91
Limited and irregular power supply	0.67	0.66	0.74

4.8.4. Policy challenges

Table 32 indicates that no specific policy for promotion of agritourism (0.89), was perceived as the severe policy challenge in all the three districts. Further, lack of training in hospitality and management was the second most severetechnical challenge faced by the respondents.

The result indicates that non availability of tourists at vacation or pandemic situations, lack of commercial approach like other tourism ventures, non- availability of inputs, insufficient literature on agro-ecotourism and lack of specificpolicies were the major challenges in agro- ecotourism, as reported by the operators. The finding is supported by Balu (2017), based on his study 'Socio- economic appraisal of agro-tourism in Maharashtra'.

Table 32: Policy challenges faced by agro-ecotourism operators

(N=90)

Challenges	Relevancy coefficient		
	Alappuzha	**Idukki**	**Wayanad**
Lack of training in hospitality and management	0.87	0.79	0.73
Complexity in getting license from Govt.	0.8	0.7	0.8
No specific policy for promotion of agritourism	0.9	0.92	0.8
Lack of transportation to interior rural places	0.66	0.64	0.48

4.9. Factors leading to agro-ecotourism

The reasons for the agro-ecotourism operators to adopt agro-ecotourism were categorized into three, which include economic factors, social factors and external factors. The respondents were asked to rank each components on a five- point continuum ranging from 'strongly agree, 'agree', 'not decided', 'disagree' and 'strongly disagree' with weightage of 5, 4, 3, 2 and 1 respectively.

It is clear from the table 33 that, majority of the respondents reported social factors as the leading factor for practicing agro-ecotourism, followed by economic and external factors. It is evident that both social factors and economic factors were given equal priority by the agro- ecotourism operators. Further, the respondents reported that the opportunity for better utilization of existing resources, community's economic survival and the opportunity to educate the customers about agro-ecotourism motivated them to start agro-ecotourism practicesin their farms.

This was in confirmation with the study, 'Factors Motivating Agritourism Entrepreneurs', conducted by Mace (2005), where both social and economic factors motivated the active agri-tourism operators and aspiring operators equally.

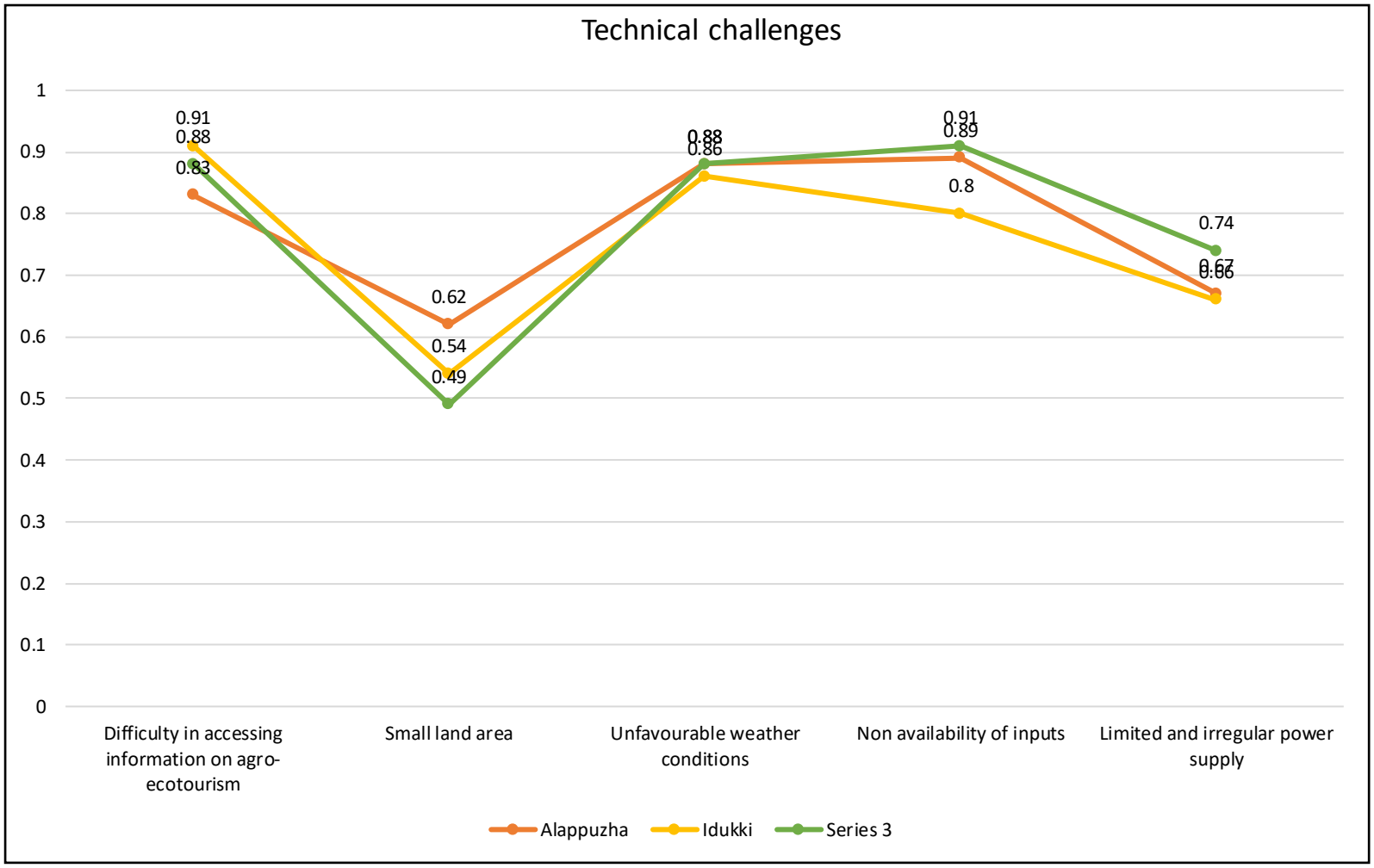


Fig 24. Relevancy index of technical challenges faced by agro-ecotourism operators

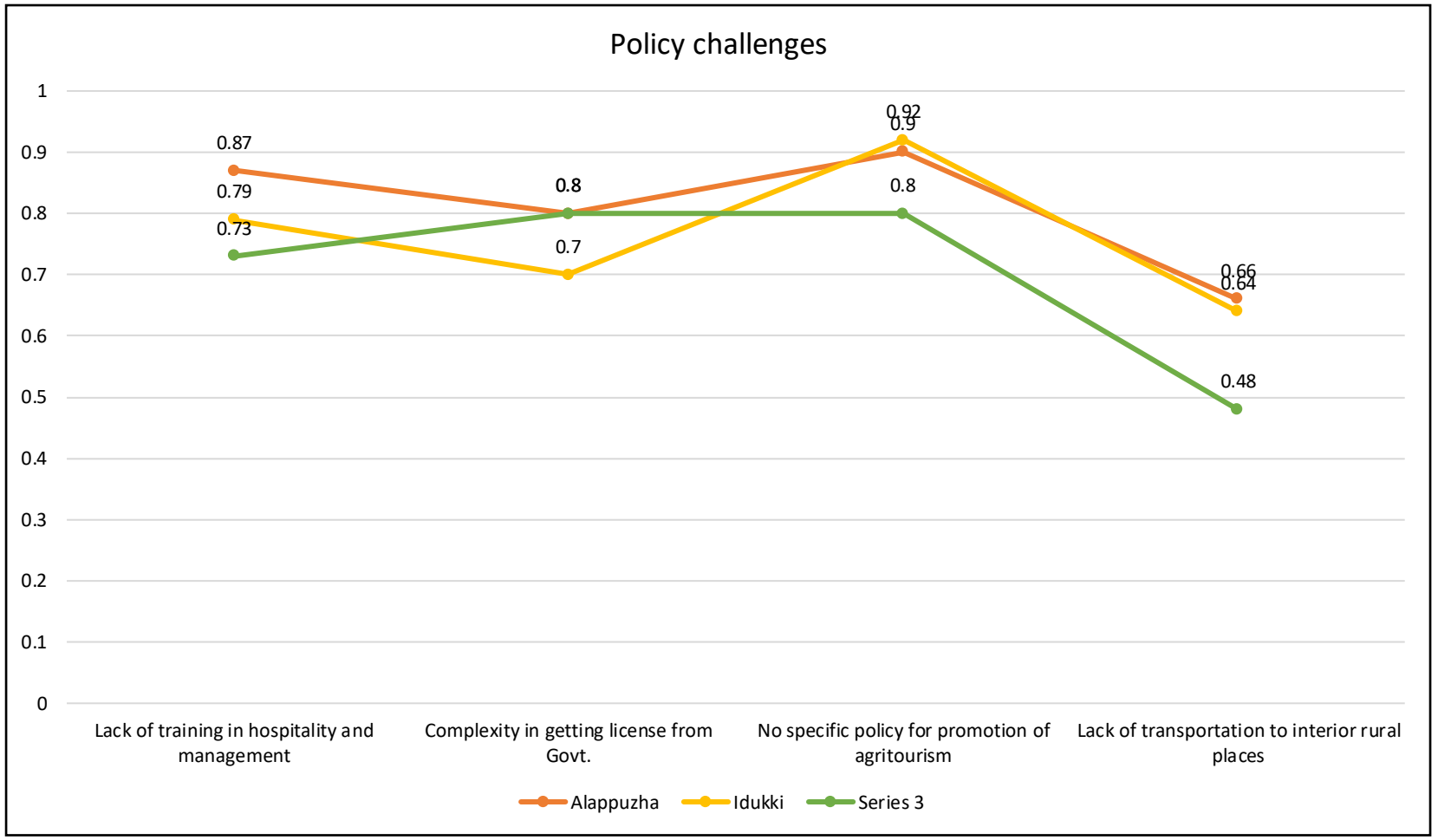


Fig 25. Relevancy index of policy challenges faced by agro-ecotourism operators

Table 33. Factors which motivated respondents to adopt agro-ecotourism
(N=120)

Factors	Rank	Total score	Rank
Economic factors		1942	2
Additional income generation through agro-ecotourism	5		
Direct sale of farm produce	8		
Better use of resources	1		
Generating off season revenue	7		
Social factors		1980	1
Educating customers about agro-ecotourism	3		
Brings people into my life (farm)	4		
Employment to family members	9		
Community's economic survival	2		
External factors		744	3
Willingness to deal with innovative ideas in farming sector	10		
Generating revenue out of hobby	6		

4.10. Suggestions

1. Promotion and support from government by implementing various schemes will motivate the respondents to prosper in the field of agro-ecotourism.

2. Proper direction from extension agents and tourism professionals for starting agro- ecotourism is needed to support the operators for gaining a sustainable and secure income from agro- ecotourism.

3. More agro-ecotourism related information and knowledge should be provided to active operators and aspiring operators in order to make them aware of the vast opportunities of agro- ecotourism.

4. Agro-ecotourism operators should maintain regular contact with various agricultural and tourism departments.

5. Government and travel agencies should promote agro-ecotourism units by providing agro- ecotourism package for the tourists. More tourists should be motivated to choose agro- ecotourism units as their tourism destinations.

6. Agro-ecotourism operators should take initiation in forming organizations like Farmer Organization so that more opportunities could be made and explored.

Plate.1. Interaction with owner of Grama Earth Farm Stay Panavally, Alappuzha

Plate.2. Accommodation facilities for tourists at Grama Earth Farm Stay

Plate.3. Nettle Tree Farm Stay, Mararikulam

Plate.4. Fishing pond arranged for farming and recreational activities at Nettle Tree Farm Stay

SUMMARY

5. SUMMARY

Development of agro-ecotourism is in its nascent stage in the rural areas of Kerala. Being one of the emerging enterprises of agriculture, agro-ecotourism has created an impression of sustainable income generation method. Agro-ecotourism is a global trend which provides city dwellers an opportunity to escape from urban concrete environment and re-discover their roots in rural areas of farming (Deepthiand Davis, 2017). Agro-ecotourism is mainly based on farm activities and farm attractions, which encourages the visitors to take part in farming and other related activities.

The objective of the study is to analyze the perception of agro-ecotourism stakeholders about the utility and feasibility of agro-ecotourism, to identify gender role in agro-ecotourism and to assess the prospects, problems and challenges inagro-ecotourism.

Alappuzha district from Southern Kerala, Idukki district from Central Kerala and Wayanad district from Northern Kerala were purposively selected for thestudy as they were identified as the potential agro-ecotourism centers. Thirty functioning agro-ecotourism units with a minimum of three year operation period were selected from each district. Thus a total of 90 agro-ecotourism operators were selected. Ten officials in the field of tourism were selected from each district, thus making a total of 30 respondents. Ex-post facto research design was used as the study aims at measuring the phenomenon which already occurred and is continuing. Interview schedule was used for data collection which was prepared after discussion with experts in order to meet the objective of the study. Data collection was carried out using structured interview schedule.

Personal, socio-economic variables (independent variables) selected through judges rating were age, educational status, years of operation, extension contact, mass-media exposure, credit orientation, creativity, communication ability, managerial ability, innovativeness, economic motivation, frequency of hosting VFR, happiness in

hosting VFR, resource recycling and farm waste disposal behaviour.

5.1. Salient findings of the study

1. Majority of the respondents (72.22%) were belonged to the middle age category. 12.22 per cent of the respondents belonged to young age category and 15.56 per cent were coming under old age category. This indicates that middle aged population are more inclined towards agro-ecotourism.

2. More than three fourth (84.44%) of the respondents had medium level of experience in the field of agro-ecotourism, and 15.56 per cent having goodexperience. This indicates that agro-ecotourism is in its initial stage of emerging as a commercial tourism model in Kerala.

3. More than half (72.22%) of the respondents had medium level of extension contacts, whereas 18.89 per cent and 8.89 per cent of the respondents belonged to lower and higher category respectively. This clearly reflects the fact that majority ofthe respondents are new in the field of agriculture and agro-ecotourism, and there is lack of proper policy measures for agro-ecotourism in Kerala.

4. Nearly 65 per cent of the respondents (64.44%) had medium mass- media exposure, whereas almost 19 per cent (18.89%) and 17 per cent (16.67%) had lower and higher mass-media exposure respectively. This indicates that majority of the respondents are curious about agro-ecotourism and its benefits, but the lack of media in providing the information related to agro-ecotourism may be the reason for the less proportion of respondents with good mass-media exposure.

5. More than sixty per cent (65.55%) of the respondents belonged to medium category in terms of credit orientation followed by 18.89 per cent and 15.56 per cent under lower and higher category respectively. It indicates that practicing agro-ecotourism increases the extend of availability of credit to the agro-ecotourism operators.

6. Majority of the respondents (87.77%) had medium level of creativity, whereas only 5.56 per cent and 6.67 per cent had low and high level of creativity respectively. Creativity is important in the field of agro-ecotourism as it increasesthe ability of the agro-ecotourism operators in providing unique and interesting activities in the agro-ecotourism unit, which in turn attracts more tourists. The result indicates that a vast majority of respondents were creative enough to practice agro- ecotourism.

7. Nearly 80 per cent of the respondents (78.89%) belonged to medium category in terms of communication ability. However, nearly nine percentage (8.9%) and 12.22 per cent of the respondents belonged to lower and higher category respectively. This indicates that communication ability of the operators and staff is important for the success of agro-ecotourism venture, as good communication skills and the ability to provide information to visitors influences the visitor's perception about the agro-ecotourism unit.

8. More than three fourth of the respondents (74.45%) had medium levelof managerial ability followed by 14.44 per cent of the respondents in lower category. Only 11.11 per cent of the agro-ecotourism operators exhibited high level of managerial ability. This indicates that majority lacked the ability to delegate responsibility to others. Hence such traits should be developed in them for better working of the agro- ecotourism unit.

9. More than half of the respondents exhibited medium level of innovativeness (76.66%), followed by 16.67% with low level of innovativeness. However, only 6.67 per cent of the respondents exhibited high level of innovativeness, which might be due to their lack of scientific knowledge and skills like hospitality, which is important in the field of agro-ecotourism. Moreover, majority of the respondents tend to be confident in practicing agro-ecotourism.

10. Nearly 95 per cent of the respondents (94.44%) had medium level ofeconomic motivation, and the remaining 5.56 per cent of the respondents belongedto

the lower category. The reason for no respondents having higher economic motivation might be the fact that majority of the respondents started agro-ecotourism as a leisure time activity, for the better utilization of farm resources, for the prosperity of the community and to create awareness about agriculture and agro- ecotourism among others, mainly urban population.

11. In terms of frequency of hosting visiting friends and relatives by the agro-ecotourism operators, 60 per cent of the respondents belonged to the medium category, and the remaining 40 per cent belonged to lower category. This might be due to many reasons like their busy life and also receiving too many guests might hamper their work. However frequency of hosting VFR helps in understanding the respondents general experience in hosting tourists. Experience in hosting VFR increases the operator's ability to manage the tourist's accommodation and helps to treat them well.

12. About 42.22 per cent of the respondents had high level of happiness in hosting VFR, while 35.56 per cent and 22.22 per cent of the respondents belonged to lower and higher category respectively. Higher the level of happiness of those respondents who accommodates their friends and relatives, they are more willing to start agro ecotourism and to provide more accommodation facilities. It seems that happiness to host VFR and frequency of hosting VFR per month is contradictory. This indicates that the agro-ecotourism operators are not willing toaccommodate more tourists at once.

13. More than 50 per cent (61.11%) of the respondents had medium level of resource recycling behaviour, whereas 20 per cent and 18.89 per cent of respondents had low and high level of resource recycling behaviour respectively.

14. More than half of the respondents (52.22%) had medium level of eco-friendly farm waste disposal behaviour, followed by 10 percent under lower category and 37.78 per cent in higher category.

15. Most of the outcomes of agro-ecotourism were perceived as useful by the

agro-ecotourism operators. Agro-ecotourism appears to be extremely useful to capture new customers (60%), to keep the farm in the family (53.34%), to educatepublic about agriculture (50%) and to better utilize farm resources (44.44%).

16. Majority of the respondents had medium level of perception on feasibility of agro-ecotourism, followed by 14.44 per cent under higher category and 22.23 per cent of respondents under lower category. More than 90 per cent of respondents agreed that setting of agro-ecotourism unit is feasible in the state considering the ecological and environmental factors.

17. Perception on utility of agro-ecotourism shows positive and significant correlation with managerial ability, innovativeness and economic motivation. Educational qualification, years of operation, credit orientation, creativity, happinessin hosting VFR, resource recycling and farm waste disposal behaviour shows a non-significant correlation with perception on utility of agro-ecotourism. Perception on utility shows negative and non-significant correlation with age, extension contact, mass media exposure, communication ability and frequency of hosting VFR.

18. Perception on feasibility of agro-ecotourism shows positive andsignificant correlation with innovativeness, farm waste disposal behaviour and economic motivation. Age, years of operation, extension contact credit orientation, creativity, communication ability and happiness in hosting VFR and farm waste disposal behaviour shows a non-significant correlation with perception on feasibility of agro-ecotourism. Perception on feasibility shows negative and non- significant correlation with, educational qualification, mass media exposure, managerial ability, frequency of hosting VFR and resource recycling.

19. Majority of the female employees were engaged in housekeeping activities (34.37%), whereas majority of male employees were engaged in farm activities (33.93%). Only 7.81 per cent of employees draws a monthly salary more than₹20,001. Majority of the employees (57.50%) were engaged in different kinds of jobs for 7-9 hours on a daily basis in the agro-ecotourism units, among them 53.58 per

cent were male and 60.93 per cent were female employees.

20. More than 60 per cent (62.22%) of the operators belonged to medium category with respect to perceived a level of prospects of agro-ecotourism. Only 4.44 per cent of respondents were not willing to provide customized agro-tourpackage for different type of tourists. Nearly 9 per cent (8.89%) of respondents were not willing to develop contact with various institutions like school, NGOs, clubs etc., and 12.22 per cent and 28.89 per cent of respondents were not willing to arrangevarious cultural programme and to conduct rural games respectively.

21. The problems that were perceived as important by both agro-ecotourism operators and tourism officials were the lack of training, lack of knowledge and skill and lack of literature on agro-ecotourism.

22. Major financial challenge faced by the agro-ecotourism operators of the three districts were non availability of tourists at vacation time. Among the human resource challenges, lack of commercial approach like other tourism venture was ranked first and among the technical challenges, non-availability of inputs was reported as the major challenge faced by agro-ecotourism operators in Alappuzha and Wayanad, whereas it was difficulty in accessing literature on agro-ecotourism practice in Idukki. Lack of specific policy for promotion of agro-ecotourism was the major policy challenge as reported by the respondents , in all the three districts.

23. Social factors were found to be the major reason for the respondents to start agro-ecotourism, followed by economic factors and external factors. Majorityof the respondents stated that the opportunity to utilize the resources in a better way was the major component leading to agro-ecotourism, followed by attainment of community's economic survival and educating customers or public about agriculture.

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APPENDICES

APPENDIX I
Profile analysis of agro-ecotourism operators

KERALA AGRICULTURAL UNIVERSITY
Department of Agricultural Extension
VELLAYANI - 695 522 THIRUVANANTHAPURAM

Dr. Jayalekshmi. G
Asst. Professor & Head
KVKKumarakom,
Kottayam

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email:jayalekshmi.g@kau.in

Date: 11-03-2021

Sir/Madam,

Ms. Sreelekshmy Sadanand (Ad. No. 2019-11-228), the post graduate scholar in the Department of Agricultural Extension, College of Agriculture, Vellayani is undertaking a research study entitled " Scenario Analysis of Agro-ecotourism in Kerala" as part of PG work. Variables supposed to have close association with the study have been identified after extensive review of literature.

Considering your vast experience and knowledge in the subject, I request you to kindly spare some of your valuable time for examining the variables critically as a judge to rate the relevancy of them. Your kind and quick response will help us to completethe study in time.

Thanking you
Yours faithfully

Dr. Jayalekshmi.

OBJECTIVES OF THE STUDY

Analysis of the perception of agro-ecotourism stakeholders about the utility and feasibility of agro- ecotourism. Gender role in agro- ecotourism will be identified. Prospects, problems and challenges in agro-ecotourism will be assessed. Identification of social, ecological, economic and other external factors leading to agro-ecotourism.

Dependent variables

Perception of agro-ecotourism stakeholders about the utility and feasibility of agro-ecotourismare the dependent variables

Independent variables

The following independent variables are identified for the study based on the available literature. Please mark the relevancy of the variables in terms of **MOR-Most Relevant, MR-More Relevant, R-Relevant, LR-Less Relevant, LER- Least Relevant** against the appropriate column.

	VARIABLE	OPERATIONAL DEFINITION	RELEVANCY RATING				
			MOR	MR	R	LR	LER
1.	**Age**	Refers to the number of calendar years completed by the respondent at the time of enquiry.					
2.	**Gender**	Refers to the male and female respondents whoare involved in agro-ecotourism.					
3.	**Educational status**	Refers to the extent of formal education achieved by the respondent.					
4.	**Occupation**	Refers to the respondent's principal work or business especially as a means of earning.					
5.	**Family size**	Refers to the absolute number of members in the family of respondent, sharing the same economic unit.					
6.	**Annual income**	Refers to the total income from all the sources in the previous year (in Rs).					

7.	**Landholding**	Refers to the total area put under cultivation, including land leased in and excluding land leased out by the respondent at the time of investigation.					
8.	**Tenure status**	It refers to the title and conditions by which the respondent's property is held.					
9.	**Farm organization**	Refers to the type of ownershipof the farm.					
10.	**Location of the agro-ecotourism centre**	Refers to the place of operation of agro-ecotourism.					
11.	**Years of operation**	Refers to the experience of respondents in agro-ecotourism, expressed in termsof number of years.					
12.	**Farming experience**	Refers to the farming experience of respondents expressed in years.					
13.	**Cropping intensity**	Refers to the ratio between total cropped area andactual net cultivated area expressed in percentage.					
14.	**Irrigation source**	Refers to the source ofwater to which the respondent is depending for meeting the farm and farm visitor requirements.					
15.	**Labour utilization**	Refers to the number of persons who have been employed, by the respondent either on temporary or permanent basis including the respondent himself/herself and family members					

16.	**Standard of living**	Refers to the degree of comfort, prosperity and other materials available with the respondent.					
17.	**Material Possession**	Refers to the tangible assets or belongings possessed by the respondent, at the time of study.					
18.	**Public access**	Refers to the extent of publicaccess for recreational activities in the farm, providedby the operator.					
19.	**Mass-media exposure**	Refers to the frequency of using different mass media viz. radio, television, newspaper,					
20.	**Extension contact**	Refers to the frequency of the respondents for making contacts with agriculture andtourism departments.					
21.	**Extension participation**	Refers to the extent of participation of the respondents in different activities such as educational tours, field days, exhibitions etc.					
22.	**Social participation**	Refers to the extent formal or informal organizations.					
23.	**Cosmopoliten ess**	Refers to the degree to which the respondent is oriented to his/her immediate socialsystem.					
24.	**Training received**	Refers to the number of trainings undergone by the respondent in relation to the agro-ecotourism activities.					
25.	**Credit orientation**	Refers to the degree to which respondents are accessible to various credit sources.					

26.	**Happiness to hostVFR (Visiting friends and relatives)**	Refers to the level of satisfaction of respondents, who provide accommodation to their friends and relatives at their homes.					
27.	**Frequency of hosting VFR (Visiting friendsand relatives)**	Refers to the frequency of providing accommodation to the friends and relatives by the respondent at their homes.					
28.	**Creativity**	Operationalized as the use of imagination or original ideas in order to create something productive and resourceful.					
29.	**Decision makingability**	Refers to the ability of an individual to select a logical choice from available alternatives.					
30.	**Communicationability**	Refers to the ability of the respondents to transfer information, ideas or feelings to the receiver					
31.	**Innovativeness**	Refers to the degree to which an individual is prompt in adopting a new practice and introducing changes into their operations					
32.	**Self confidence**	Refers to the extent of feeling of an individual about ones power, abilities and resourcefulness to perform any activity which he/she desires to undertake.					
33.	**Flexibility**	Refers to the degree to which respondent alters his/her decisions as per the demand ofthe situations.					
34.	**Risk orientation**	Refers to the degree to which the respondent is oriented towards risk and					

		courage to face the problems in agro-ecotourism.					
36.	**Farm waste disposal behaviour**	Refers to the extent to which the farm wastes were disposed in line with the eco preservation and conservation					
37.	**Economic motivation**	Refers to the extent to which an individual is oriented towards attainment of the maximum economic needs.					
38.	**Resource recycling**	Refers to the reuse of various resources in the agro- ecotourism unit by the respondent.					
39.	**Managerial ability**	Refers to the ability of the respondent to manage the business by himself					
40.	**Any other (specify)**						

APPENDIX-II

KERALA AGRICULTURAL UNIVERSITY

COLLEGE OF AGRICULTURE, VELLAYANI, TRIVANDRUM

DEPARTMENT OF AGRICULTURAL EXTENSION

INTERVIEW SCHEDULE FOR AGRO-ECOTOURISM OPERATORS

1. **Name of the agro-ecotourism unit:**
2. **Complete address:**
3. **Name of the farmer/owner:**
4. **Name of the manager:**
5. **Age**:
6. **Educational status**: Illiterate____Can read and write____

   Primary school___middle school____

   High school___College___Professional degree____
7. **Years of operation:**
8. **Extension contact**

   How often have you contacted with the following during the previous year?(Please tick at the appropriate place)

Extension agency	**Frequency of contact**		
	Regularly	Occasionally	Never
Ag. Officers			
Ag. Assistants			
ADA/DDA			
Agri. Scientist			
KVK			
ATMA			
Tourism department			

9. Mass-media exposure

How often did you use the following mass- media to improve your knowledge regarding agriculture in general and agri-tourism in particular?

i. Please specify the newspaper and the frequency of reading the supplement onagriculture. Please tick mark in the appropriate column against each statement.

Sl. no	Name of the newspaper	Regularly(2)	Sometimes (1)	Never(0)
1				
2				
3				
4				
5	Any other (specify)			

ii.Please specify the farm magazine and the frequency of reading.

Sl. no	Name of the magazine	Regularly(2)	Sometimes (1)	Never(0)
1				
2				
3				
4				
5	Any other (specify)			

iii. How often do you listen to farm radio broadcast? Please specify in detailed thefarm radio programme and the frequency of listening.

Sl. no	Name of the radio talk	Regularly(2)	Sometimes (1)	Never(0)
1				
2				
3				
4				
5	Any other (specify)			

iv. How often do you view agri-tourism related television programme(s). Please specify the name of the programme and the frequency of viewing.

Sl. no	Name of the programme	Regularly(2)	Sometimes (1)	Never(0)
1				
2				
3				
4				
5	Any other (specify)			

v. How often do you use internet for updating your knowledge regarding agri-tourism?

Sl. no	Name of the website	Regularly(2)	Sometimes (1)	Never(0)
1				
2				
3				
4				
5	Any other (specify)			

vi. Any other (please specify)_____

10. Credit orientation

Sl. No	Statements	Yes (1)	No (0)
1.	Making an effort to borrow money, but could not borrow due to several reasons		
2.	Eligible to take credit by saving consistently but not repaying the previous credit		
3.	Borrowing money only from private money lenders, not from banks		
4.	Borrowing money but delaying in repayment and reborrowing in some other form		
5.	Borrowing and reborrowing from banks, after making timely repayment		
6.	Borrowing money from banks, repaying it after borrowing money from some other institutions and continuing the action involving several other sources		
7.	Borrowing money from the local institutions like cooperative society as interest free loans and not from commercial banks		

11. Creativity

Sl. no	Statements	Yes (1)	No (0)
1.	I understand complex situations best by trying to picture them in my mind		
2.	When discussing ideas, I tend to support the people who show the strongest conviction		
3.	I tend to believe in ideas more when they feel right		
4.	I like dreaming up unusual ways to do things		
5.	As soon as I come across a problem my mind races with ideas about it		
6.	I think first impression often turn out to be right		
7.	I often catch myself day dreaming about how I would like things to be		
8.	I tend to look at situations as a whole rather than breaking them down into separate		
9.	In my meetings I usually come up with unusual ways to tackle situations		
10.	I think analysis and planning take all the fun out of things and try to avoid them		
11.	I often try to visualize problems		

13. Communication ability

Sl. No	Statements	Always (3)	Sometimes (2)	Never (1)
1.	I try to be friendly with people.			
2.	I try to participate in group activities			
3.	I tend to have close positive relationship with people			
4.	I like people to ask me to participate in their discussions			
5.	I can speak about things in a convincing manner			
6.	I try to change things when i am with people			

7.	I am a confident person			
8.	People seem interested when I talk			
9.	People ask me to participate in their discussion			
10.	People say I am not good enough in presenting ideas			
11.	People seem to give attention when I talk			
12.	I put forth my ideas in group discussions			

13. Managerial ability

Sl. No	Statements	Response				
		SA (5)	A (4)	UD (3)	DA (2)	SDA (1)
1.	I find nothing wrong in consulting expert advice regarding how I must manage my business.					
2.	As an entrepreneur I need to practice basic managerial skills so that my business need not be a one man show for a concerted effort of myself and those who work for me.					
3.	It is not necessary to be scientific and rational labour management as long as one has the will to do what he wants to do.					
4.	I cannot be away too long from my business because no one else can manage its activities					
5.	I believe the sole proprietorship is the best form of ownership for a business to succeed.					
6.	It is possible to increase the profit through proper project plan					

14. Innovativeness

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

15. Economic motivation

Sl. No	Statements	SA (5)	A (4)	N (3)	DA (2)	SDA (1)
1.	A farmer should work towards higher yields and economic profit.					
2.	The most successful farmer is the one who makes more profit					
3.	A farmer should try integration of different components that may help him to earn more profit					
4.	Farmer should grow more food crops both for home consumption and profit					
5.	It is difficult to make good start unless he provides them with economic assistants					
6.	Farmer must earn his living but the most important thing in life cannot be identified in economic returns					
7.	One should set difficult goals for one self and try to reach them					

16. Frequency of hosting VFR

How often you provide accommodation for your friends and relatives?

17. Happiness in hosting VFR

Mention your level of satisfaction while providing accommodation to your friendsand relatives

Very happy___Happy____Neither happy nor

unhappy_____Unhappy___Veryunhappy_____

18. Farm waste disposal behaviour

Sl. No	Farm waste	Disposal method	Score
1.	Disposal of waste water after washing the containers equipment in which chemicals inputs were stored/used.	a) Thrown in the main field b) Disposed safely outside	1 2
2.	Disposal of containers/plastic bags	a) Just thrown in the field b) Cleaned & used for domestic purpose c) Safely disposed	1 2 3
3.	Disposal of crop waste	a) Left uncared b) In situ ploughing c) Preparing compost for future use	1 2 3
4.	Disposal of tree waste	a) Left as such b) Saved for future use	1 2
5.	Disposal of animal waste 1. Animal excreta 2. Dead animal/birds	a) Domestic purpose b) Fuel purpose c) Prepare compost a) Burnt safely b) Buried	1 2 3 1 2

19. Resource recycling

- Do you use crop residues as manure to the succeeding crop? Yes/No
- Do you use farm waste for composting? Yes/No
- Do you use crop residues or farm waste for biogas? Yes/No
- Do you use cow-dung from your farm as crop manure? Yes/No

(I) Perception on utility of agro-ecotourism

Sl. No	Statements	E I (5)	V I (4)	I (3)	S I (2)	N I (1)
1.	Capture new customers					
2.	Educate the public about agriculture					
3.	Enhance family quality of life					
4.	Keep you active					
5.	Increase direct-sale of value-added products					
6.	Additional revenues to keep farming					
7.	Increase direct-sale of other products					
8.	Decrease revenue fluctuations					
9.	Enhance ability to meet financial obligation.					
10.	Keep the farm in the family					
11.	Better utilize farm resources					
12.	Make money from a hobby/interest					
13.	Off-season revenue generation					
14.	Provide jobs for family members					
15.	Reduce impact of catastrophic events					

(II) Perception on feasibility of agro-ecotourism

Sl. No	Statements	Agree (2)	Neutral (1)	Disagree (0)
1	Agro-ecotourism helps to achieve optimum production level through diversification.			
2	Agro-ecotourism helps to increase income diversification.			
3	Integrated management practices reduce input needs of farmers to some extent.			
4	Agro-ecotourism requires initial investment.			
5	Agro-ecotourism increases competition for resources among different enterprises.			
6	Agro-ecotourism operators have less risk sensation than conventional farmers.			
7	Agro-ecotourism reduces vulnerability to economic losses.			
8	Agro-ecotourism brings farm diversity which leads to decrease farm vulnerability.			

(III) Prospects

Sl. No	Various aspects of prospects	SW (2)	W (1)	NW (0)
Category 1: Adding facilities to the agro-ecotourism unit				
1.	Increase/expand area under agro-ecotourism			
2.	Integrate more interesting activities			
3.	Improve accommodation facilities at the site			
4.	Offer rural Indian cuisine for breakfast, lunch and dinner			
5.	Provide better medical facilities during emergency			
6.	Offer more recreational/interesting activities that excitesthe tourist			
7.	Offer agri-products at reasonable prices			
8.	Regularly maintain and follow visitors' feedback			

	book			
9.	Improve transport facilities to site			
10.	Providing pick and drop facilities			
Category 2: Increasing promotional activities				
1.	Develop extensive contact with travel agencies			
2.	Regular Advertisement of the farm house			
3.	Development of own website and updateregularly			
4.	Developing contact with Schools, Colleges, NGOS, ClubUnion and other organization			
5.	Arrangement of cultural programme			
6.	Creating opportunity for rural games			
7.	Provision of information about culture of Kerala			
8.	Development of good relationship with the tourist			
9.	Customizing agro-tour package for different type oftourist			
10.	Making availability of agri-tourism related literature			

(IV) Problems

Sl. No	**Statements**	**Yes (2)**	**No (1)**
1.	Lack of fund for publicity and advertisement of farm tourism		
2.	Lack of knowledge and skills on the part of the farmer.		
3.	Lack of government support		
4.	Lack of communication skills of staff		
5.	Lack of mindset for commercial approach.		
6.	Harsh weather condition.		
7.	No literature on agro-ecotourism		
8.	Non willingness of the tourists to purchase farm products.		
9.	Lack of training for agro-ecotourism.		
10.	Complexity in getting license from the government.		
11.	Inability to introduce more activities		

(V) Challenges

1. Financial Challenges	Response				
	VS (5)	QS (4)	S (3)	NS (2)	LS (1)
Non availability of tourists at vacation time					
High cost of labour					
High cost of land and initial investment					
Maintenance charges					
No insurance coverage					
Lack of awareness about credit and subsidy facilities various components					
2. Human Resource Challenges					
Lack of commercial approach like other tourism venture					
Communication barrier					
Lack of organized effort like farmer organizations					
3. Technical Challenges					
Difficulty in accessing information on agro-ecotourism					
Small land area					
Unfavourable weather conditions					
Non availability of inputs					
Limited and irregular power supply					
4. Policy Challenges					
Lack of training in hospitality and management					
Complexity in getting license from Government					
No specific policy for promotion of agritourism					
Lack of transportation facilities to interior rural places					
Lack of training in hospitality and management					

(VI) Factors leading to agro-ecotourism

Factors	SA (5)	A (4)	UD (3)	D (2)	SD (1)
Economic factors					
Additional income generation through agro-ecotourism					
Direct sale of farm produce					
Better use of resources					
Generating off season revenue					
Social factors					
Educating customers about agro-ecotourism					
Brings people into my life (farm)					
Employment to family members					
Community's economic survival					
External factors					
Willingness to accept innovation the farming sector					
Generating revenue out of hobby					

Appendix III

കേരള കാർഷിക സർവകലാശാല

കാർഷിക കോളേജ്, വെള്ളായണി, തിരുവനന്തപുരം

കർഷകരുമായുള്ള അഭിമുഖം

കേരളത്തിലെ അഗ്രോ-ഏകോടൂറിസത്തിന്റെ സാഹചര്യ വിശകലനം

1. അഗ്രോ-ഏകോടൂറിസം യൂണിറ്റ്ന്റെ പേര് :
2. വിലാസം :
3. കർഷകന്റെ/ഉടമസ്ഥന്റെ പേര് :
4. മേലധികാരിയുടെ പേര് :
5. വയസ്സ് :
6. വിദ്യാഭ്യാസ യോഗ്യത : നിരക്ഷരർ ____ പ്രാഥമിക _____ ഹൈ സ്കൂൾ _____ അക്ഷര വിദ്യ ____ മദ്ധ്യമ _____ കോളേജ് ___ പ്രൊഫെഷനൽ ഡിഗ്രീ _____
7. പ്രവർത്തന കാലയളവ് :
8. വിജ്ഞാന വ്യാപന വിഭാഗവുമായുള്ള സമ്പർക്കം :

കഴിഞ്ഞ വർഷം എത്ര തവണ താങ്കൾ വിജ്ഞാന വ്യാപന വിഭാഗവുമായി ബന്ധപ്പെടുകയുണ്ടായി ?

വിജ്ഞാന വ്യാപന വിഭാഗം	മറുപടി		
	തുടർച്ചയായി	വല്ലപ്പോഴും	ഒരിക്കലും ഇല്ല
അഗ്രി. ഓഫീസർ			
അഗ്രി. അസിസ്റ്റന്റ്			
ADA/DDA			
അഗ്രി ശാസ്ത്രജ്ഞർ			
കെ . വി . കെ			
ആത്മ			
ടൂറിസം വിഭാഗം			

9. മാധ്യമങ്ങളുമായി ഉള്ള സമ്പർക്കം :

കൃഷി അല്ലെങ്കില് അഗ്രോ-ഏകോടൂറിസവുമായി ബന്ധപ്പെട്ട വിവരങ്ങൾ ലഭിക്കുവാനായി താഴെ പറഞ്ഞിരിക്കുന്ന മാദ്ധ്യമങ്ങൾ ഏത് അളവ് വരെ താങ്കൾ ഉപയോഗിക്കുന്നുണ്ട് ?

i. കാർഷികപരമായ വിവരങ്ങൾ ഉള്ള പത്രത്തിന്റെ പേരും ഉപയോഗിക്കുന്ന തോതും രേഖപ്പെടുത്തുക.

ക്രമ നമ്പർ	പത്രത്തിന്റെ പേര്	തുടർച്ചയായി	ഇടയ്ക്കു	ഒരിക്കലും ഇല്ല
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4				
5	മറ്റേതെങ്കിലും ഉണ്ടെങ്കിൽ സൂചിപ്പിക്കുക			

ii. കാർഷിക വാരികയും ഉപയോഗിക്കുന്ന തോതും രേഖപ്പെടുത്തുക.

ക്രമ നമ്പർ	വാരികയുടെ പേര്	തുടർച്ചയായി	ഇടയ്ക്കു	ഒരിക്കലും ഇല്ല

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5	മറ്റേതെങ്കിലും ഉണ്ടെങ്കിൽ സൂചിപ്പിക്കുക			

iii. ഫാം റേഡിയോ സംപ്രേക്ഷണം ചെയ്യുന്ന പരിപാടികൾ കേളക്കാറുണ്ടോ? പരിപാടിയുടെ പേരും കേൾക്കുന്ന തോതും സൂചിപ്പിക്കുക.

ക്രമ നമ്പർ	പരിപാടിയുടെ പേര്	തുടർച്ചയായി	ഇടയ്ക്കു	ഒരിക്കലും ഇല്ല
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5	മറ്റേതെങ്കിലും ഉണ്ടെങ്കിൽ സൂചിപ്പിക്കുക			

iv. അഗ്രോ-ഏകോടൂറിസവുമായി ബന്ധപ്പെട്ട ടെലിവിഷൻ പരിപാടികൾ കാണാറുണ്ടോ? പരിപാടിയുടെ പേരും കാണുന്ന തോതും സൂചിപ്പിക്കുക .

ക്രമ നമ്പർ	പരിപാടിയുടെ പേര്	തുടർച്ചയായി	ഇടയ്ക്കു	ഒരിക്കലും ഇല്ല
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4	മറ്റേതെങ്കിലും ഉണ്ടെങ്കിൽ സൂചിപ്പിക്കുക			

5. അഗ്രോ-ഏകോടൂറിസവുമായി ബന്ധപ്പെട്ട അറിവുകൾ ലഭിക്കുവാനായി താങ്കൾ ഇൻറ്റർനെറ്റ് ഉപയോഗിക്കാറുണ്ടോ?

ക്രമ നമ്പർ	വെബ്സൈറ്റിന്റെ പേര്	തുടർച്ചയായി	ഇടയ്ക്കു	ഒരിക്കലും ഇല്ല
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6. മറ്റേതെങ്കിലും ഉണ്ടെങ്കിൽ സൂചിപ്പിക്കുക : _____

10. വായ്പ സ്വീകരിക്കുന്നതിനോടുള്ള മനോഭാവം

ക്രമ നമ്പ	പ്രസ്താവന	ശരി	തെറ്റ്
1	പണം കടം വാങ്ങാൻ ശ്രമിക്കാറുണ്ട്. പക്ഷേ, പല കാരണങ്ങളാൽ സാധിക്കാറില്ല.		
2	വായ്പ ലഭിക്കാൻ യോഗ്യത ഉണ്ട് പക്ഷേ മുൻവായ്പ തിരിച്ചടക്കറില്ല .		
3	സ്വകാര്യ പണമിടപാടുകാരിൽ നിന്നു മാത്രമേ പണം കടം വാങ്ങാറുള്ളൂ. ബാങ്കുകളെ സമീപിക്കാറില്ല		

4	പണം കടം വാങ്ങാറുണ്ട് പക്ഷേ തിരിച്ചടക്കാൻ താമസിക്കാറുണ്ട്. മറ്റു രീതിയിൽ വീണ്ടും കടം വാങ്ങാറുണ്ട്.		
5	യഥാസമയത്തു തന്നെ ബാങ്കിൽ പണം തിരിച്ചടക്കുകയും വീണ്ടും വാങ്ങുകയും ചെയ്യാറുണ്ട്		
6	മറ്റു സ്ഥാപനങ്ങളിൽ നിന്നും കടം വാങ്ങിയ പണം ഉപയോഗിച്ച് ബാങ്കിലെ വായ്പ തിരിച്ചടക്കാറുണ്ട്. ഇങ്ങനെ ഒരുപാട് സ്ഥാപനങ്ങളെ ആശ്രയിക്കാറുണ്ട്.		
7	ബാങ്കുകളെ സമീപിക്കാതെ സഹകരണ സംഘങ്ങളിൽ നിന്നും ഓഹരി കുറഞ്ഞ വായ്പ സ്വീകരിക്കാറുണ്ട്		

11. <u>സർഗ്ഗവൈഭവം</u>

ക്രമ നമ്പ	പ്രസ്താവന	ശരി	തെറ്റ്
1	സങ്കീർണമായ സാഹചര്യങ്ങൾ, മനസ്സിൽ ചിത്രീകരിക്കാൻ ശ്രമിക്കുന്നതിലൂടെ ഞാൻ നന്നായി മനസ്സിലാക്കുന്നു.		
2	ആശയങ്ങൾ ചർച്ച ചെയ്യുമ്പോൾ, ശക്തമായ ബോധ്യം കാണിക്കുന്ന ആളുകളെ ഞാൻ പിന്തുണക്കുന്നു.		
3	ആശയങ്ങൾ ശരിയാണെന്നു തോന്നുമ്പോൾ അവയെ വിശ്വാസിക്കാനുള്ള പ്രവണത ഞാൻ കാണിക്കുന്നു.		
4	കാര്യങ്ങൾ ചെയ്യാനുള്ള അസാധാരണമായ വഴികൾ സ്വപ്നം കാണാൻ ഞാൻ ഇഷ്ടപ്പെടുന്നു.		
5	എനിക്ക് ഒരു പ്രശ്നം നേരിട്ടയുടനെ എന്റെ മനസ്സ് അതിനെക്കുറിച്ചുള്ള ആശയങ്ങൾ ഉൾക്കൊള്ളുന്നു.		
6	ആദ്യ മതിപ്പ് പലപ്പോഴും ശരിയാണെന്ന് ഞാൻ കരുതുന്നു.		
7	കാര്യങ്ങൾ എങ്ങനെയായിരിക്കണമെന്ന് ഞാൻ സ്വപ്നം കാണുന്നു.		
8.	സാഹചര്യങ്ങളെ പ്രത്യേകമായി വിഭജിക്കുന്നതിനേക്കാൾ മൊത്തത്തിൽ ഞാൻ നോക്കുന്നു.		
9.	എന്റെ മീറ്റിംഗുകളിൽ, സാഹചര്യങ്ങൾ കൈകാര്യം ചെയ്യുന്നതിനുള്ള അസാധാരണമായ വഴികളാണ് ഞാൻ സാധാരണയായി കാണുന്നത്.		
10.	വിശകലനവും ആസൂത്രണവും എല്ലാ തമാശകളും കാര്യങ്ങളിൽ നിന്ന് ഒഴിവാക്കുന്നതിനാൽ ഞാൻ പലപ്പോഴും അതിനു ശ്രമികാറില്ല.		
11.	ഞാൻ പലപ്പോഴും പ്രശ്നങ്ങൾ ദൃശ്യവൽക്കരിക്കാൻ ശ്രമിക്കുന്നു.		

12. <u>ആശയവിനിമയം നടത്താനുള്ള കഴിവ്</u>

ക്രമ നമ്പ	പ്രസ്താവന	തുടർച്ചയായി	ചിലപ്പോൾ	ഒരിക്കലും ഇല്ല
1	ആളുകളുമായി സൗഹൃദത്തിലാകാൻ ഞാൻ ശ്രമിക്കുന്നു.			
2	സംഘമായി ചെയ്യുന്ന പ്രവർത്തനങ്ങളിൽ പങ്കെടുക്കാൻ ഞാൻ ശ്രമിക്കുന്നു.			
3	ഞാൻ ആളുകളുമായി നല്ല ബന്ധം പുലർത്തുന്നു.			
4	ആളുകൾ അവരുടെ ചർച്ചകളിൽ പങ്കെടുക്കാൻ എന്നോട് ആവശ്യപ്പെടുന്നത് ഞാൻ ഇഷ്ടപ്പെടുന്നു			
5	ആളുകളെ ബോധ്യപ്പെടുത്തുന്ന രീതിയിൽ കാര്യങ്ങളെക്കുറിച്ച് സംസാരിക്കാൻ എനിക്ക് കഴിയും			
6	ഞാൻ ആളുകളുമായിരിക്കുമ്പോൾ കാര്യങ്ങൾ മാറ്റാൻ ശ്രമിക്കുന്നു			
7	ഞാൻ ആത്മവിശ്വാസമുള്ള വ്യക്തിയാണ്			
8	ഞാൻ സംസാരിക്കുമ്പോൾ ആളുകൾ താൽപ്പര്യം പ്രകടിപ്പിക്കുന്നതായി കാണാറുണ്ട്			
9	ആളുകൾ എന്നോട് അവരുടെ ചർച്ചയിൽ പങ്കെടുക്കാൻ ആവശ്യപ്പെടുന്നു			
10	ആശയങ്ങൾ അവതരിപ്പിക്കുന്നതിൽ ഞാൻ മതിയായവനല്ലെന്ന് ആളുകൾ പറയുന്നു			
11	ഞാൻ സംസാരിക്കുമ്പോൾ ആളുകൾ ശ്രദ്ധിക്കുന്നതായി തോന്നുന്നു			
12	ചർച്ചകളിൽ ഞാൻ എന്റെ ആശയങ്ങൾ മുന്നോട്ടുവെക്കാറുണ്ട്			

13. <u>കൈകാര്യം ചെയ്യാനുള്ള കഴിവ്</u>

ക്രമനം	പ്രസ്താവന	മറുപടി				
		ശക്തമായി സമ്മതിക്കു	സമ്മതിക്കുന്നു	തീരുമാനിച്ചിട്ടില്ല	നിഷേധിക്കുന്നു	ശക്തമായി നിഷേധിക്കു
1	എന്റെ ബിസിനസ്സ് എങ്ങനെ നിയന്ത്രിക്കണം എന്നതിനെക്കുറിച്ച് വിദഗ്ദ്ധ ഉപദേശതം തേടുന്നതിൽ ഞാൻ തെറ്റൊന്നും കാണുന്നില്ല					
2	ഒരു സംരംഭകനെന്ന നിലയിൽ എനിക്ക് ഒരു മേലധികാരിക്ക് വേണ്ട അടിസ്ഥാന കഴിവുകൾ പരിശീലിക്കേണ്ടതുണ്ട്, അതിലൂടെ എന്റെയും എനിക്കും വേണ്ടി പ്രവർത്തിക്കുന്നവരുടെ					

	യും സമന്വയ പരിശ്രമത്തിനായി എന്റെ ബിസിനസ്സ് ഒരു മനുഷ്യന്റെ മാത്രം പ്രവർത്തനം ആക്കേണ്ടതായി വരുന്നില്ല					
.3	ഒരാൾക്ക് ചെയ്യാൻ ആഗ്രഹിക്കുന്ന കാര്യങ്ങൾ ചെയ്യാനുള്ള ഇച്ഛാശക്തി ഉള്ളിടത്തോളം കാലം തൊഴിൽ മാനേജ്മെൻറ് ശാസ്ത്രീയവും യുക്തിസഹവുംആയിരി ക്കണമെന്നില്ല					
4	എന്റെ ബിസിനസ്സിൽ നിന്ന് വളരെ ദൂരെയായിരിക്കാൻ എനിക്ക് കഴിയില്ല, കാരണം മറ്റാർക്കും അതിന്റെ പ്രവർത്തനങ്ങൾ നിയന്ത്രിക്കാൻ കഴിയില്ല					
5	ഒരു ബിസിനസ് വിജയിക്കാനുള്ള ഉടമസ്ഥാവകാശത്തിന്റെ ഏറ്റവും മികച്ച രൂപമാണ് ഏക ഉടമസ്ഥാവകാശം എന്ന് ഞാൻ വിശ്വസിക്കുന്നു					
6	ശരിയായ പദ്ധതിയിലൂടെ ലാഭം വർദ്ധിപ്പിക്കാൻ കഴിയും					

14. <u>പുതുമ</u>

ക്രമ നമ്പ	പ്രസ്താവന	പ്രസ്താവന				
		ശക്തമായി സമ്മതി ക്കുന്നു	സമ്മതി ക്കുന്നു	തീരുമാ നിച്ചിട്ടില്ല	നിഷേധി ക്കുന്നു	ശക്തമായി നിഷേധിക്കു ന്നു
1	നിങ്ങൾ കണ്ട നൂതനമായ ഒരു രീതി പരീക്ഷിച്ചില്ലെങ്കിൽ നിങ്ങൾക്ക് അസ്വസ്ഥത അനുഭവപ്പെടും					
2	പുതിയ കീഴ്വഴക്കങ്ങൾ പരീക്ഷിക്കുന്നതിൽ നിങ്ങൾ ജാഗ്രത പാലിക്കുന്നു					
3	താൽപ്പര്യമുള്ള വിഷയങ്ങളെക്കുറിച്ചു ള്ള ഏറ്റവും പുതിയ വിവരങ്ങൾ സൂക്ഷിക്കാൻ നിങ്ങൾ ആഗ്രഹിക്കുന്നു					

4	ആദ്യം മറ്റുള്ളവർ പുതിയ രീതികൾ പരീക്ഷിക്കുന്നതിനായി കാത്തിരിക്കാൻ നിങ്ങൾ താൽപ്പര്യപ്പെടുന്നു					
5	പുതിയ രീതികളിലേക്ക് കടക്കുന്നതിനേക്കാൾ പരമ്പരാഗത രീതിയിലുള്ള കാര്യങ്ങൾ നിങ്ങൾ തിരഞ്ഞെടുക്കുന്നു.					

15. <u>സാമ്പത്തികമായ പ്രചോദനം</u>

ക്രമനമ്പ	പ്രസ്താവന	ശക്തമായി സമ്മതിക്കുന്നു	സമ്മതിക്കുന്നു	തീരുമാനിച്ചിട്ടില്ല	നിഷേധിക്കുന്നു	ശക്തമായി നിഷേധിക്കുന്നു
1	ഒരു കർഷകൻ ഉയർന്ന ആദായത്തിനും സാമ്പത്തിക ലാഭത്തിനും വേണ്ടി പ്രവർത്തിക്കണം					
2	കൂടുതൽ ലാഭം നേടുന്നയാളാണ് ഏറ്റവും വിജയം കൈക്കൊണ്ട കർഷകൻ					
3	ഒരു കർഷകൻ കൂടുതൽ ലാഭം നേടാൻ സഹായിക്കുന്ന വ്യത്യസ്ത ഘടകങ്ങളുടെ സംയോജനത്തിന് ശ്രമിക്കണം					
4	ഗാർഹിക ഉപഭോഗത്തിനും ലാഭത്തിനുമായി കൂടുതൽ ഭക്ഷ്യവിളകൾ വളർത്തണം					
5	സാമ്പത്തിക സഹായികളെ അദ്ദേഹം നൽകിയില്ലെങ്കിൽ നല്ല തുടക്കം കുറിക്കുക പ്രയാസമാണ്					
6	കൃഷിക്കാരൻ തന്റെ ജീവിതം സമ്പാദിക്കണം, പക്ഷേ ജീവിതത്തിലെ ഏറ്റവും പ്രധാനപ്പെട്ട കാര്യം സാമ്പത്തിക വരുമാനത്തിൽ തിരിച്ചറിയാൻ കഴിയില്ല					
7	ഒരാൾ സ്വയം പ്രയാസകരമായ ലക്ഷ്യങ്ങൾ വെക്കുകയും അവയിലെത്തുവാൻ ശ്രമിക്കുകയും വേണം					

16. <u>സന്ദർശിക്കുന്ന സുഹൃത്തുക്കളെയും ബന്ധുക്കളെയും സ്വീകരിക്കുന്നതിന്റെ ആവൃത്തി</u>

നിങ്ങളുടെ വീട്ടിൽ നിങ്ങളുടെ സുഹൃത്തുക്കൾക്കും ബന്ധുക്കൾക്കുമായി നിങ്ങൾ എത്ര തവണ താമസസൗകര്യം നൽകുന്നു?

17. <u>സന്ദർശിക്കുന്ന സുഹൃത്തുക്കളെയും ബന്ധുക്കളെയും സ്വീകരിക്കുന്നതിലെ സംതൃപ്തി</u>

നിങ്ങളുടെ സുഹൃത്തുക്കൾക്കും ബന്ധുക്കൾക്കും താമസസൗകര്യം നൽകുമ്പോൾ നിങ്ങളുടെ സംതൃപ്തിയുടെ നില പരാമർശിക്കുക.

വളരെ സന്തോഷം ____ സന്തോഷം _____ സന്തോഷമോ അസന്തുഷ്ടമോ അല്ല _____ അസന്തുഷ്ടി__ വളരെ അസന്തുഷ്ടി_____

18. <u>ഫാർമിലെ മാലിന്യം നീക്കം ചെയ്യുന്ന രീതി</u>

ക്രമ നമ്പ	ഫാർമിലെ മാലിന്യം	നീക്കം ചെയ്യുന്ന രീതി	സ്കോർ
1	രാസപഥാർത്തങ്ങൾ സൂക്ഷിച്ചിരുന്ന പാത്രങ്ങൾ/ ഉപകരണങ്ങൾ കഴുകിയ വെള്ളം	a) പ്രധാന പ്രദേശത്തേക്ക് /പാടത്തേക്ക് കളയുക b) സുരക്ഷിതമായി പുറത്തേക്ക് മാറ്റുക	1 2
2	പാത്രങ്ങൾ /പ്ലാസ്റ്റിക് ബാഗുകൾ	a) പാടത്തേക്ക് കളയുക b) വൃത്തിയാക്കിയ ശേഷം ഗാർഹിക ആവശ്യങ്ങൾക്കായി ഉപയോഗിക്കുക c) സുരക്ഷിതമായി നീക്കം ചെയ്യുക	1 2 3
3	വിള മാലിന്യങ്ങൾ	a) അങ്ങനെതന്നെ ഉപേക്ഷിക്കുക b) നിലവിലുള്ള അവസ്ഥയിൽ തന്നെ ഉഴുതുമറിയ്ക്കുക c) പിന്നീട് വളമായി ഉപയോഗിക്കുക	1 2 3
4	വൃക്ഷങ്ങളിൽ നിന്നുള്ള മാലിന്യങ്ങൾ	a) അങ്ങനെതന്നെ ഉപേക്ഷിക്കുക b) ഭാവിയിലെ ആവശ്യത്തിനായി മാറ്റിവെക്കുക	1 2
5	മൃഗ മാലിന്യങ്ങൾ 1. മൃഗങ്ങളുടെ മലമൂത്ര വിസർജ്ജനം 2. ചത്ത മൃഗങ്ങൾ / പക്ഷികൾ	a) ഗാർഹിക ലക്ഷ്യം b) ഇന്ധന ഉദ്ദേശ്യം c) വളം a) സുരക്ഷിതമായി ദഹിപ്പിക്കുക b) കുഴിച്ചിടുക	1 2 3 1 2

19. <u>വിഭവ പുനരുപയോഗം</u>

- വിളയുടെ അവശിഷ്ടങ്ങൾ അടുത്ത വിളയ്ക്കു വളമായി ഉപയോഗിക്കാറുണ്ടോ?
  ഉണ്ട് / ഇല്ല

- കാർഷിക മാലിന്യങ്ങൾ കമ്പോസ്റ്റിംഗിനായി ഉപയോഗിക്കാറുണ്ടോ?
  ഉണ്ട് / ഇല്ല

- നിങ്ങൾ ബയോഗ്യാസിനായി വിള അവശിഷ്ടങ്ങളോ കാർഷിക മാലിന്യങ്ങളോ ഉപയോഗിക്കാറുണ്ടോ?
  ഉണ്ട് / ഇല്ല

- നിങ്ങളുടെ ഫാമിൽ നിന്നുള്ള ചാണകം വിള വളമായി ഉപയോഗിക്കാറുണ്ടോ?
  ഉണ്ട് / ഇല്ല

(I) അഗ്രോ ഇക്കോടൂറിസത്തിന്റെ ഉപയോഗത്തെക്കുറിച്ചുള്ള ധാരണ

ക്രമ നമ്പ	പ്രസ്താവന	വളരെയേറെ പ്രാധാന്യമുള്ളത്	വളരെ പ്രാധാന്യമുള്ളത്	പ്രാധാന്യമുള്ളത്	കുറച്ച് പ്രാധാന്യമുള്ളത്	പ്രാധാന്യമില്ല
1	പുതിയ ഉപഭോക്താക്കളെ ആകർഷിക്കുക					
2	കൃഷിയെക്കുറിച്ച് പൊതുജനങ്ങളെ ബോധവൽക്കരിക്കുക					
3	കുടുംബ ജീവിത നിലവാരം ഉയർത്തുക					
4	നിങ്ങളെ സജീവമായി നിലനിർത്തുക					
5	മൂല്യവർദ്ധിത ഉൽപ്പന്നങ്ങളുടെ നേരിട്ടുള്ള വിൽപ്പന വർദ്ധിപ്പിക്കുക					
6	കൃഷി തുടരാൻ അധിക വരുമാനം					
7	മറ്റ് ഉൽപ്പന്നങ്ങളുടെ നേരിട്ടുള്ള വിൽപ്പന വർദ്ധിപ്പിക്കുക					
8	വരുമാനത്തിലെ ഏറ്റക്കുറച്ചിലുകൾ കുറയ്ക്കുക					
9	സാമ്പത്തിക ബാധ്യതകൾ നിറവേറ്റാനുള്ള കഴിവ് വർദ്ധിപ്പിക്കുക					
10	കൃഷിസ്ഥലവും കുടുംബവുമായി ബന്ധിക്കുക					

11	കാർഷിക വിഭവങ്ങൾ നന്നായി ഉപയോഗിക്കാൻ സാധിക്കുന്നു					
12	ഒരു ശീലം / താല്പര്യം എന്നതിൽ നിന്ന് പണം സമ്പാദിക്കുക					
13	ഓഫ് സീസൺ വരുമാനം					
14	കുടുംബാംഗങ്ങൾക്ക് ജോലി നൽകുക					
15	ദുരന്ത സംഭവങ്ങളുടെ ആഘാതം കുറയ്ക്കുക					

(II) അഗ്രോ ഇക്കോടൂറിസത്തിന്റെ സാധ്യതയെക്കുറിച്ചുള്ള ധാരണ

ക്രമ നമ്പ	**പ്രസ്താവന**	**സമ്മതിക്കുന്നു**	**നിഷ്പക്ഷത**	**നിരസിക്കുന്നു**
1	അഗ്രോ ഇക്കോടൂറിസം ഉൽപാദന നിലവാരം കൈവരിക്കാൻ സഹായിക്കുന്നു.			
2	കാർഷിക പരിസ്ഥിതി ടൂറിസം വരുമാന വൈവിധ്യവൽക്കരണം വർദ്ധിപ്പിക്കാൻ സഹായിക്കുന്നു.			
3	സംയോജിത നടത്തിപ്പ് രീതികൾ കർഷകരുടെ നിക്ഷേപണ ആവശ്യങ്ങൾ ഒരു പരിധിവരെ കുറയ്ക്കുന്നു.			
4	കാർഷിക ഇക്കോടൂറിസത്തിന് പ്രാരംഭ നിക്ഷേപം ആവശ്യമാണ്.			
5	അഗ്രോ ഇക്കോടൂറിസം വിവിധ സംരംഭങ്ങൾക്കിടയിൽ വിഭവങ്ങൾക്കായുള്ള മത്സരം വർദ്ധിപ്പിക്കുന്നു.			
6	പരമ്പരാഗത കർഷകരെ അപേക്ഷിച്ച് അഗ്രോ ഇക്കോടൂറിസം ഓപ്പറേറ്റർമാർക്ക് അപകടസാധ്യത കുറവാണ്.			
7	കാർഷിക ഇക്കോടൂറിസം സാമ്പത്തിക നഷ്ടത്തിന്റെ സാധ്യത കുറയ്ക്കുന്നു.			
8	കാർഷിക-ഇക്കോടൂറിസം കാർഷിക വൈവിധ്യത്തെ കൊണ്ടുവരുന്നു, ഇത് കാർഷിക ദുർബലത കുറയ്ക്കുന്നു.			

(III) വെല്ലുവിളികൾ

ക്രമ നമ്പ	**വെല്ലുവിളികൾ**	**പ്രസ്താവനകൾ**	വളരെ കഠിനമാണ്	കുറച്ച് കഠിനമാണ്	കഠിനമാണ്	കഠിനമല്ല	ഒട്ടും കഠിനമല്ല

	സാമ്പത്തികം	അവധിക്കാലത്ത് വിനോദസഞ്ചാരികളുടെ ലഭ്യതയില്ല ഉയർന്ന തൊഴിൽ ചെലവ് പരിപാലന നിരക്കുകൾ ഇൻഷുറൻസ് പരിരക്ഷയില്ല വിവിധ ഘടകങ്ങൾക്ക് ക്രെഡിറ്റ്, സബ്സിഡി സൗകര്യങ്ങളെക്കുറിച്ചുള്ള അവബോധത്തിന്റെ അഭാവം					
	മാനവ വിഭവശേഷി	മറ്റ് ടൂറിസം സംരംഭങ്ങളെപ്പോലെ വാണിജ്യപരമായ സമീപനത്തിന്റെ അഭാവം ആശയവിനിമയം നടത്തുന്നതിലുള്ള ബുദ്ധിമുട്ട് കർഷക സംഘടനകളെപ്പോലെ സംഘടിത പരിശ്രമത്തിന്റെ അഭാവം					
	സാങ്കേതികം	അഗ്രിടൂറിസത്തിനെക്കുറിച്ചുള്ള അറിവ് ലഭിക്കുന്നതിലുള്ള തടസ്സം ചെറിയ ഭൂപ്രദേശം പ്രതികൂല കാലാവസ്ഥ നിക്ഷേപനങ്ങൾ ലഭ്യമല്ല പരിമിതവും ക്രമരഹിതവുമായ വൈദ്യുതി വിതരണം					
	നയം	ആതിഥ്യമര്യാദയിലും നടത്തിപ്പിലും പരിശീലനത്തിന്റെ അഭാവം					

		സർക്കാരിൽ നിന്ന് ലൈസൻസ് ലഭിക്കുന്നതിലെ സങ്കീർണ്ണത. അഗ്രിടൂറിസത്തിന്റെ ഉന്നമനത്തിനായി പ്രത്യേക നയങ്ങളൊന്നുമില്ല ആന്തരിക ഗ്രാമപ്രദേശങ്ങളിലേക്ക് ഗതാഗതത്തിന്റെ അഭാവം					

(IV) വ്യാപകദൃശ്യം

ക്രമ നമ്പ	വിവിധ വശങ്ങൾ	സന്നദ്ധനാണ്	തീർച്ചയായും സന്നദ്ധനാണ്	സന്നദ്ധ നല്ല
കാറ്റഗറി 1: അഗ്രോ ഇക്കോടൂറിസം യൂണിറ്റിലേക്ക് സൗകര്യങ്ങൾ ചേർക്കുന്നു				
1	അഗ്രിടൂറിസത്തിന് കീഴിലുള്ള പ്രദേശം വർദ്ധിപ്പിക്കുക / വികസിപ്പിക്കുക			
2	കൂടുതൽ രസകരമായ പ്രവർത്തനങ്ങൾ സംയോജിപ്പിക്കുക			
3	താമസ സൗകര്യങ്ങൾ മെച്ചപ്പെടുത്തുക			
4	പ്രഭാതഭക്ഷണം, ഉച്ചഭക്ഷണം, അത്താഴം എന്നിവയ്ക്കായി ഗ്രാമീണ ഇന്ത്യൻ വിഭവങ്ങൾ വാഗ്ദാനം ചെയ്യുക			
5	അടിയന്തിര സമയങ്ങളിൽ മെച്ചപ്പെട്ട മെഡിക്കൽ സൗകര്യങ്ങൾ നൽകുക			
6	വിനോദസഞ്ചാരികളെ ആവേശം കൊള്ളിക്കുന്ന കൂടുതൽ വിനോദ പ്രവർത്തനങ്ങൾ വാഗ്ദാനം ചെയ്യുക			
7	കാർഷിക ഉൽപ്പന്നങ്ങൾ ന്യായമായ വിലയ്ക്ക് വാഗ്ദാനം ചെയ്യുക			
8	സന്ദർശകരുടെ അഭിപ്രായ പുസ്തകം പതിവായി പരിപാലിക്കുകയും പിന്തുടരുകയും ചെയ്യുക			
9	ഗതാഗത സൗകര്യങ്ങൾ മെച്ചപ്പെടുത്തുക			
10	പിക്ക് ആൻഡ് ഡ്രോപ്പ് സൗകര്യങ്ങൾ നൽകുന്നു			
വിഭാഗം 2: പ്രചാരണ പ്രവർത്തനങ്ങൾ വർദ്ധിപ്പിക്കുന്നു				
1	ട്രാവൽ ഏജൻസികളുമായി വിപുലമായ സമ്പർക്കം വികസിപ്പിക്കുക			
2	ഫാം ഹൗസിന്റെ പതിവായി പരസ്യം നൽകുക			
3	സ്വന്തം വെബ്സൈറ്റിന്റെ വികസനവും പതിവായി പുതുക്കുക			
4	സ്കൂളുകൾ, കോളേജുകൾ, എൻജിഒഎസ്, ക്ലബ്, യൂണിയൻ, മറ്റ് ഓർഗനൈസേഷൻ എന്നിവയുമായി സമ്പർക്കം വികസിപ്പിക്കുന്നു			
5	സാംസ്കാരിക പരിപാടിയുടെ ക്രമീകരണം			

6	ഗ്രാമീണ ഗെയിമുകൾക്ക് അവസരം സൃഷ്ടിക്കുന്നു			
7	കേരളത്തിന്റെ സംസ്കാരത്തെക്കുറിച്ചുള്ള വിവരങ്ങൾ നൽകൽ			
8	ടൂറിസ്റ്റുമായുള്ള നല്ല ബന്ധത്തിന്റെ വികസനം			
9	വ്യത്യസ്ത തരം ടൂറിസ്റ്റുകൾക്കായി അഗ്രോ-ടൂർ പാക്കേജ് ഇച്ഛാനുസൃതമാക്കുന്നു			
10	കാർഷിക-ടൂറിസവുമായി ബന്ധപ്പെട്ട സാഹിത്യത്തിന്റെ ലഭ്യത ഉണ്ടാക്കുന്നു			

(v) പ്രശ്നങ്ങൾ

ക്രമ നമ്പ	പ്രസ്താവന	ഉണ്ട്	ഇല്ല
1	ഫാം ടൂറിസത്തിന്റെ ഖ്യാതിയ്ക്കും പരസ്യത്തിനുമുള്ള ഫണ്ടിന്റെ അഭാവം		
2	കൃഷിക്കാരന്റെ ഭാഗത്തുനിന്നുള്ള അറിവിന്റെയും കഴിവുകളുടെയും അഭാവം		
3	സർക്കാർ പിന്തുണയുടെ അഭാവം		
4	ദുർബലമായ ആശയവിനിമയ കഴിവുകൾ.		
5	വാണിജ്യപരമായ സമീപനത്തിനുള്ള മാനസികാവസ്ഥയുടെ അഭാവം.		
6	കൂടുതല് കാര്യങ്ങൾ ചെയ്യാനുള്ള ബുദ്ധിമുട്ട്		
7	കഠിനമായ കാലാവസ്ഥ.		
8	കാർഷിക ഉൽപന്നങ്ങൾ വാങ്ങാൻ വിനോദസഞ്ചാരികളുടെ അസന്നദ്ധത.		
9	അഗ്രോ-ഏകോടൂറിസവുമായി ബന്ധപ്പെട്ട സാഹിത്യത്തിന്റെ കുറവ്		
10	അഗ്രോ-ഏകോടൂറിസവുമായി ബന്ധപ്പെട്ട ട്രെയിനിങ് വളരെ വിരളമാണ്		
11	ലൈസെൻസ് ലഭിക്കാനുള്ള ബുദ്ധിമുട്ട്		

(v) അഗ്രോ-ഏകോടൂറിസത്തിലേക്ക് നയിക്കുന്ന ഘടകങ്ങൾ

ഘടകങ്ങൾ	ശക്തമായി സമ്മതിക്കുന്നു	സമ്മതിക്കുന്നു	തീരുമാനിച്ചിട്ടില്ല	നിഷേധിക്കുന്നു	ശക്തമായി നിഷേധിക്കുന്നു
സാമ്പത്തികം					
അധിക വരുമാനം					
കൃഷി ഉല്പന്നയങ്ങളുടെ നേരിട്ടുള്ള കച്ചവടം					
ഫാമിലെ വസ്തുക്കൾ നല്ല രീതിയിൽ ഉപയോഗിക്കുക					
കൃഷിയില്ലാതെ സമയത്തെ വരുമാന മാർഗ്ഗം					
സാമൂഹികം					
ഉപഭോക്താക്കൾക്കു അഗ്രോ-ഏകോടൂറിസത്തേക്കുറിച്ച് അറിവ് നല്കുക					
ഫാമിലെക് ആളുകളെ ആകർഷിക്കുക					
കുടുംബാംഗങ്ങള്ക്ക് തൊഴിൽ അവസരം'					
സമൂഹത്തിന്റെ സാമ്പത്തികമായ നിലനിൽപ്പ്					

External factors					
കൃഷിയിലെ നൂതന കാര്യങ്ങൾ ചെയ്യുവാനുള്ള					
വിനോദത്തിൽ നിന്നും വരുമാനം					

APPENDIX IV

INTERVIEW SCHEDULE FOR OFFICIALS IN THE FIELOFTOURISM

1. Name :
2. Age :
3. Educational status :
4. Job status :
5. Tourism department / tourism related institution where currently employed
5. Place :
6. Problems faced while promoting / performing agro-ecotourism:

Sl. no	Problems	Yes (2)	No (1)
1.	Lack of fund for publicity		
2.	Lack of knowledge and skill		
3.	Lack of government support		
4.	Weak communication skill of staff		
5.	Lack of mindset for commercial approach		
6	Harsh weather conditions		
7.	No literature on agro-ecotourism		
8.	Non willingness to buy products by visitors		
9.	Lack of training		
10.	Complexity in getting license		
11.	Inability to introduce more activities		

7. Factors which motivates people to practice agro-ecotourism

Factors	SA (5)	A (4)	UD (3)	D (2)	SD (1)
Economic factors					
Additional income generation through agro-ecotourism					
Direct sale of farm produce					
Better use of resources					
Generating off season revenue					
Social factors					
Educating customers about agro-ecotourism					
Brings people into my life (farm)					
Employment to family members					
Community's economicsurvival					
External factors					
Willingness to accept innovations in the farm sector					
Generating revenue out of hobby					

ABSTRACT

SCENARIO ANALYSIS OF AGRO-ECOTOURISM IN KERALA

By

SREELEKSHMY SADANAND

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ABSTRACT

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ABSTRACT

The study on "Scenario Analysis of Agro-ecotourism in Kerala" was conducted in the three districts, Alappuzha, Idukki and Wayanad of Kerala with the objectives: to analyze the perception of agro-ecotourism stakeholders about the utility and feasibility of agro-ecotourism, to identify gender role in agro-ecotourism and to assess the prospects, problems and challenges in agro-ecotourism. Thirty agro- ecotourism operators from each district with a minimum of three years' experience in practicing agro-ecotourism were selected, thus making a total of 90 respondents. Thirty officials in the field of tourism were also selected, thus making a total of 120 respondents.

Perception on utility of agro-ecotourism and perception on feasibility of agro-ecotourism were selected as the dependent variables. Perception on utility and perception on feasibility were analyzed using the scales developed by Barbieri and Tew (2012) and Argade *et al* (2015) respectively. Age, education, years of operation, extension contact, mass-media exposure, credit orientation, creativity, communication ability, managerial ability, economic motivation, innovativeness, frequency of hosting VFR (Visiting Friends & Relatives), happiness in hosting VFR, resource recycling and farm waste disposal behaviour were the independent variables selected through judges rating. Data was collected by interviewing the respondents personally with the help of pre – tested and well-structured interview schedule. The data collected were processed, coded and tabulated with the help of different statistical tools. The salient findings of the study are as follows:

Majority of the respondents had a medium level of perception about utility of agro-ecotourism (71.11%). 13.33 per cent of respondents had high level of perception about utility of agro-ecotourism and 15.56 per cent belonged to the lower category. Nearly 63.33 per cent of the respondents had a medium level of perception about feasibility of agro-ecotourism. 14.45 per cent of respondents had high level of perception about feasibility of agro-ecotourism and 22.23 per cent belonged to the lower category.

Majority of the respondents belonged to middle age category (72.22 %). More than half of the respondents had medium level of education and a large proportion (74.44%) of the agro-ecotourism operators had a medium level of experience in the field of agro-ecotourism and only 10 per cent of the respondents had a low level of experience. Majority (72.22%) of the respondents had a medium level of extension contact, 64.44 per cent of the respondents had medium level of exposure to mass media. With regard to credit orientation, creativity and communication ability, majority of the respondents belonged to medium level category with a proportion of 68.89 per cent, 87.78 per cent and 72.22 per cent respectively.

With regard to managerial ability, 74.45 per cent of the respondents belonged to medium category. Most of the respondents had a medium level of innovativeness (76.66%) and economic motivation (94.44%). Majority of the respondents (60.00%) belonged to the medium category in the frequency of hosting VFR, whereas 42.22 per cent of the respondents reported higher level of happiness in hosting VFR. Morethan half of the respondents (61.11%) had a medium level of resource recycling behaviour and 52.22 percent of the respondents had a medium level of farm waste disposal behaviour.

Independent variables viz., innovativeness, managerial ability and economic motivation were positively and significantly correlated with the perception on utilityof agro-ecotourism. Perception on feasibility of agro-ecotourism had positive and significant correlation with innovativeness, economic motivation and farm waste disposal behaviour.

With regard to prospects in agro-ecotourism, cent per cent of the respondents were strongly willing to integrate more interesting activities, to improve accommodation facilities, to offer rural Indian cuisine, to provide better medical facilities, to offer more recreational activities and to regularly maintain and follow visitor's feedback book. Under the promotional activities, cent per cent of the respondents were strongly willing to develop own website, ready to provide information about the culture of Kerala, happy to have a good relationship with the

tourists and to provide agro-ecotourism related literature to the tourists.

Lack of training in the field of agro-ecotourism, lack of literature on agro-ecotourism and lack of knowledge and skill were identified as the major problems faced by agro-ecotourism operators. Non-availability of tourists at vacation time, lack of commercial approach, non-availability of inputs and lack of specific policy for promotion of agro-ecotourism were the major challenges raised by the respondents. Among the factors which motivated the respondents to practice agro- ecotourism, social factors obtained the highest relevancy coefficient, followed by economic factors and external factors.

Among the 120 employees in the various agro-ecotourism ventures,56 employees were male and 64 were female. Mainly female employees were involvedin indoor jobs such as housekeeping and cooking, whereas male employees were engaged in farm and managerial activities. Monthly salary of majority of the employees ranges from ₹10,001-15,000. Majority of the employees (57.5%) were reported to be working for 7-9 hours on a daily basis.

Innovativeness, managerial ability and economic motivation plays an important role in the perception of operators about the utility of agro-ecotourism and years of operation, innovativeness and economic motivation plays a crucial role in the perception of operators about the feasibility of agro-ecotourism. Promotion and support from government by implementing various schemes will motivate the respondents to prosper in the field of agro-ecotourism. Proper direction for starting agro-ecotourism is needed to support the operators for gaining a sustainable and secure income from agro-ecotourism.

സംഗ്രഹം

കാർഷിക-ഇക്കോടൂറിസത്തിന്റെ പ്രയോജനവും സാധ്യതയും സംബന്ധിച്ച കാർഷിക-ഇക്കോടൂറിസം പങ്കാളികളുടെ ധാരണ വിശകലനം ചെയ്യുക, കാർഷിക-ഇക്കോടൂറിസത്തിലെ ലിംഗപരമായ പങ്ക് തിരിച്ചറിയുക, കാർഷിക-ഇക്കോടൂറിസത്തിലെ സാധ്യതകളും പ്രശ്നങ്ങളും വെല്ലുവിളികളും വിലയിരുത്തുക എന്ന ലക്ഷ്യങ്ങളോടെയാണ് കേരളത്തിലെ ആലപ്പുഴ, ഇടുക്കി, വയനാട് എന്നീ മൂന്ന് ജില്ലകളിൽ "കേരളത്തിലെ കാർഷിക-ഇക്കോടൂറിസത്തിന്റെ സാഹചര്യ വിശകലനം" എന്ന പഠനം നടത്തിയത്. ഓരോ ജില്ലയിൽ നിന്നും അഗ്രോ ഇക്കോടൂറിസം പരിശീലിക്കുന്നതിൽ കുറഞ്ഞത് മൂന്ന് വർഷത്തെ പരിചയമുള്ള മുപ്പത് അഗ്രോ ഇക്കോടൂറിസം ഓപ്പറേറ്റർമാർ എന്ന രീതിയിൽ മൊത്തം 90 വ്യക്തികളെ തിരഞ്ഞെടുത്തു. ടൂറിസം മേഖലയിലെ മുപ്പത് ഉദ്യോഗസ്ഥരെയും, അങ്ങനെ മൊത്തം 120 വ്യക്തികളെ പഠനത്തിനായി സ്വീകരിച്ചു.

ആശ്രിത വേരിയബിളുകളായി തിരഞ്ഞെടുത്തത് കാർഷിക-ഏകോടൂറിസം എന്ന പ്രവർത്തനത്തിന്റെ പ്രയോജനത്തെക്കുറിച്ചുള്ള ധാരണയും സാധ്യതയെക്കുറിച്ചുള്ള ധാരണയും ആയിരുന്നു. പ്രായം, വിദ്യാഭ്യാസം, പ്രവർത്തന വർഷങ്ങൾ, വിപുലീകരണ സമ്പർക്കം, മാസ്-മീഡിയ എക്സ്പോഷർ, ക്രെഡിറ്റ് ഓറിയന്റേഷൻ, സർഗ്ഗാത്മകത, ആശയവിനിമയ ശേഷി, കൈകാര്യം ചെയ്യാനുള്ള കഴിവ്, സാമ്പത്തിക പ്രചോദനം, നൂതനത, വി. യെഫ്. ആർ ഹോസ്റ്റിംഗിന്റെ ആവൃത്തി, വി. യെഫ്. ആർ ഹോസ്റ്റുചെയ്യുന്നതിലുള്ള സന്തോഷം, വിഭവ പുനരുപയോഗം , കാർഷിക മാലിന്യ നിർമാർജന സ്വഭാവം എന്നീ തിരഞ്ഞെടുത്ത സ്വതന്ത്ര വേരിയബിളുകൾ പഠനത്തിനായി ഉപയോഗിച്ചു. മുൻകൂട്ടി പരിശോധിച്ചതും നന്നായി ചിട്ടപ്പെടുത്തിയതുമായ ഇന്റർവ്യൂ ഷെഡ്യൂളിന്റെ സഹായത്തോടെ വ്യക്തികളെ അഭിമുഖം നടത്തി വിവരങ്ങൾ ശേഖരിച്ചു. ശേഖരിച്ച ഡാറ്റ വിവിധ സ്റ്റാറ്റിസ്റ്റിക്കൽ ടൂളുകളുടെ സഹായത്തോടെ വിശകലനം ചെയത് ചിട്ടപ്പെടുത്തുക ഉണ്ടായി. പഠനത്തിന്റെ പ്രധാന കണ്ടെത്തലുകൾ താഴെ പറയുന്നവയാണ്.

ഭൂരിഭാഗം ഓപ്പറേറ്റർമാർക്കും കാർഷിക-ഇക്കോടൂറിസത്തിന്റെ പ്രയോജനത്തെക്കുറിച്ച് (71.11%) ഇടത്തരം ധാരണ ഉണ്ടായിരുന്നു. സർവേയിൽ പങ്കെടുത്തവരിൽ

13.33 ശതമാനം പേർക്കും കാർഷിക-ഇക്കോടൂറിസത്തിന്റെ പ്രയോജനത്തെക്കുറിച്ച് ഉയർന്ന തലത്തിലും 15.56 ശതമാനം പേർക്ക് താഴ്ന്ന തലത്തിലും ധാരണ ഉള്ളതായി കണ്ടെത്തി. പങ്കെടുത്തവരിൽ 63.33 ശതമാനം പേർക്കും കാർഷിക-ഇക്കോടൂറിസത്തിന്റെ സാധ്യതയെക്കുറിച്ച് ഇടത്തരം ധാരണയുണ്ടായിരുന്നു. 14.45 ശതമാനം പേർ കാർഷിക-ഇക്കോടൂറിസത്തിന്റെ സാധ്യതയെക്കുറിച്ച് ഉയർന്ന തലത്തിലുള്ള ധാരണയുള്ളവരായിരുന്നു. 22.23 ശതമാനം പേർ കുറഞ്ഞ വിഭാഗത്തിൽപ്പെട്ടവരായി കാണപ്പെട്ടു.

പ്രതികരിച്ചവരിൽ ഭൂരിഭാഗവും മധ്യവയസ് വിഭാഗത്തിൽപ്പെട്ടവരായി കണ്ടെത്തി (72.22 %). പകുതിയിലധികം പേർക്കും ഇടത്തരം വിദ്യാഭ്യാസം ഉണ്ടായിരുന്നു. വലിയൊരു വിഭാഗം (74.44%) കാർഷിക-ഇക്കോടൂറിസം ഓപ്പറേറ്റർമാർക്കും കാർഷിക-ഇക്കോടൂറിസം മേഖലയിൽ ഇടത്തരം തലത്തിലുള്ള പ്രവൃത്തി പരിചയം ഉണ്ടായിരുന്നു. ഭൂരിഭാഗം പേർക്കും (72.22%) ഇടത്തരം രീതിയിൽ എക്സ്റ്റൻഷൻ വിഭാഗവുമായി സമ്പർക്കം ഉണ്ടായിരുന്നതായി നിരീക്ഷിച്ചു. പ്രതികരിച്ചവരിൽ 64.44 ശതമാനം പേരും ഇടത്തരം രീതിയിൽ മീഡിയ ഉപയോഗിച്ചിരുന്നതായി കണ്ടെത്തി. ക്രെഡിറ്റ് ഓറിയന്റേഷൻ (68.89%), സർഗ്ഗാത്മകത (87.78%), ആശയവിനിമയ ശേഷി (72.22%) എന്നിവയുമായി ബന്ധപ്പെട്ട്, പ്രതികരിച്ചവരിൽ ഭൂരിഭാഗവും ഇടത്തരം വിഭാഗത്തിൽപ്പെട്ടവരായി കാണപ്പെട്ടു.

കാർഷിക-ഇക്കോടൂറിസം കൈകാര്യം ചെയ്യുന്നതിൽ 74.45 ശതമാനം വ്യക്തികളും ഇടത്തരം വിഭാഗത്തിൽപ്പെട്ടവരായാണ് കാണപ്പെട്ടത്. ഭൂരിഭാഗം പേരും ഇടത്തരം തോതിൽ നവീനതയും (76.66%) സാമ്പത്തിക പ്രചോദനവും (94.44%) പ്രകടിപ്പിക്കുക ഉണ്ടായി. പ്രതികരിച്ചവരിൽ ഭൂരിഭാഗവും (60.00%) ബന്ധുക്കളെയും സുഹൃത്തുക്കളെയും സ്വീകരിക്കുന്നത്തിന്റെ ആവൃത്തിയിൽ ഇടത്തരം വിഭാഗത്തിൽപ്പെട്ടവരാണ്. അതേസമയം 42.22 ശതമാനം പേർ ഇതിൽ ഉയർന്ന തലത്തിലുള്ള സന്തോഷം രേഖപ്പെടുത്തി. പകുതിയിലധികം പേരും (61.11%) ഇടത്തരം രീതിയിൽ വിഭവ പുനരുപയോഗം പരിശീലിച്ചിരുന്നതായും 52.22 ശതമാനം വ്യക്തികൾ ഇടത്തരം രീതിയിൽ മികച്ച കാർഷിക മാലിന്യ നിർമാർജനം നടത്തിയിരുന്നതായും കണ്ടെത്തുകയുണ്ടായി .

സ്വതന്ത്ര വേരിയബിളുകളായ നവീനത, കൈകാര്യം

ചെയ്യൽ, സാമ്പത്തിക പ്രചോദനം എന്നിവ കാർഷിക-ഇക്കോടൂറിസത്തിന്റെ പ്രയോജനത്തെക്കുറിച്ചുള്ള ധാരണയുമായി ബന്ധപ്പെട്ടിരുന്നതായി കണ്ടെത്തി. അതേസമയം കാർഷിക-ഇക്കോടൂറിസത്തിന്റെ സാധ്യതയെക്കുറിച്ചുള്ള ധാരണയ്ക്ക് നൂതനത, സാമ്പത്തിക പ്രചോദനം, കാർഷിക മാലിന്യ നിർമാർജന പെരുമാറ്റം എന്നിവയുമായി ബന്ധമ്മുള്ളതായി കണ്ടെത്തി.

കാർഷിക-ഇക്കോടൂറിസത്തിലെ ഭാവി സാധ്യതകളെ സംബന്ധിച്ച്, പ്രതികരിച്ചവരിൽ നൂറു ശതമാനം പേരും കൂടുതൽ രസകരമായ പ്രവർത്തനങ്ങൾ സമന്വയിപ്പിക്കാനും, താമസ സൗകര്യങ്ങൾ മെച്ചപ്പെടുത്താനും ഗ്രാമീണ ഇന്ത്യൻ പാചകരീതികൾ വാഗ്ദാനം ചെയ്യാനും, മികച്ച മെഡിക്കൽ സൗകര്യങ്ങൾ നൽകാനും കൂടുതൽ വിനോദ പരിപാടികൾ നൽകാനും ശക്തമായി തയ്യാറായി. വിപുലീകരണ പ്രവർത്തനങ്ങൾക്ക് കീഴിൽ, പ്രതികരിച്ചവരിൽ നൂറു ശതമാനം പേരും സ്വന്തം വെബ്സൈറ്റ് വികസിപ്പിക്കാനും കേരളത്തിന്റെ സംസ്കാരത്തെക്കുറിച്ചുള്ള വിവരങ്ങൾ നൽകാനും വിനോദസഞ്ചാരികളുമായി നല്ല ബന്ധം പുലർത്താനും വിനോദസഞ്ചാരികൾക്ക് കാർഷിക-ഇക്കോടൂറിസവുമായി ബന്ധപ്പെട്ട സാഹിത്യങ്ങൾ നൽകാനും തയ്യാറായിരുന്നു.

കാർഷിക-ഇക്കോടൂറിസം മേഖലയിലെ കർഷകരുടെ പരിശീലനത്തിന്റെ അഭാവം, കാർഷിക-ഇക്കോടൂറിസത്തെക്കുറിച്ചുള്ള സാഹിത്യത്തിന്റെ അഭാവം, അറിവിന്റെയും വൈദഗ്ധ്യത്തിന്റെയും അഭാവം എന്നിവ കാർഷിക-ഇക്കോടൂറിസം ഓപ്പറേറ്റർമാർ നേരിടുന്ന പ്രധാന പ്രശ്നങ്ങളായി തിരിച്ചറിഞ്ഞു. അവധിക്കാലത്തുള്ള വിനോദസഞ്ചാരികളെ ലഭ്യതക്കുറവ്, വാണിജ്യ സമീപനത്തിന്റെ അഭാവം, സ്രോതസ്സുകളുടെ ലഭ്യതക്കുറവ്, കാർഷിക-ഇക്കോടൂറിസം പ്രോത്സാഹിപ്പിക്കുന്നതിന് പ്രത്യേക നയത്തിൻറ്റെ അഭാവം എന്നിവയായിരുന്നു പ്രതികരിച്ചവർ ഉയർത്തിയ പ്രധാന വെല്ലുവിളികൾ. അഗ്രോ ഇക്കോടൂറിസം പരിശീലിക്കാൻ പ്രേരിപ്പിച്ച ഘടകങ്ങളിൽ, സാമൂഹിക ഘടകങ്ങൾ ഏറ്റവും ഉയർന്ന പ്രസക്തി ഗുണകം നേടി.

വിവിധ കാർഷിക-ഇക്കോടൂറിസം സംരംഭങ്ങളിലെ 120 ജീവനക്കാരിൽ 56 ജോലിക്കാർ പുരുഷന്മാരും 64 സ്ത്രീകളുമായതായി കാണപ്പെട്ടു. പ്രധാനമായും സ്ത്രീ

ജീവനക്കാർ ഹൗസ് കീപ്പിംഗ്, പാചകം തുടങ്ങിയ ജോലികളിൽ ഏർപ്പെട്ടിരുന്നു. അതേസമയം പുരുഷ ജീവനക്കാർ ഫാം, മാനേജർ പ്രവർത്തനങ്ങളിൽ ഏർപ്പെട്ടിരുന്നു. ഭൂരിഭാഗം ജീവനക്കാരുടെയും പ്രതിമാസ ശമ്പളം ₹10,001-15,000 വരെയാണ്. ഭൂരിഭാഗം ജീവനക്കാരും (57.5%) പ്രതിദിനം 7-9 മണിക്കൂർ ജോലി ചെയ്യുന്നതായി കണ്ടെത്തി .

കാർഷിക-ഇക്കോടൂറിസം എന്ന പ്രവർത്തനത്തിന്റെ പ്രയോജനത്തെക്കുറിച്ചുള്ള ഓപ്പറേറ്റർമാരുടെ ധാരണയിൽ നൂതന മനോഭാവം, കൈകാര്യം ചെയ്യൽ, സാമ്പത്തിക പ്രചോദനം എന്നിവ ഒരു പ്രധാന പങ്ക് വഹിക്കുന്നു. കാർഷിക-ഇക്കോടൂറിസത്തിന്റെ സാധ്യതയെക്കുറിച്ചുള്ള ധാരണയിൽ പ്രവർത്തന പരിചയം, നൂതന മനോഭാവം, സാമ്പത്തിക പ്രചോദനം എന്നിവ പ്രധാന പങ്ക് വഹിക്കുന്നതായി കണ്ടെത്തി. വിവിധ പദ്ധതികൾ നടപ്പിലാക്കുന്നതിലൂടെ സർക്കാരിൽ നിന്നു ലഭിക്കുന്ന പ്രോത്സാഹനവും പിന്തുണയും കാർഷിക-ഇക്കോടൂറിസം മേഖലയിൽ അഭിവൃദ്ധിപ്പെടാൻ കർഷകരെയും മറ്റ് സംരംഭരെയും പ്രേരിപ്പിക്കും. കാർഷിക-ഇക്കോടൂറിസത്തിൽ നിന്ന് സുസ്ഥിരവും സുരക്ഷിതവുമായ വരുമാനം നേടുന്നതിന് ഓപ്പറേറ്റർമാരെ പിന്തുണയ്ക്കേണ്ടത് ആവശ്യമാണ്. ഇതിൽ കാർഷിക-ഇക്കോടൂറിസം ആരംഭിക്കുന്നതിനെക്കുറിച്ചുള്ള ശരിയായ ദിശാബോധം നൽകേണ്ടത് ഒരു അനിവാര്യ ഘടകമാണ്'.