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The Sustainable Agricultural Farm Tourism for Farmer's Development in Kerala – Feasibility, Issues, And Challenges

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Abstract

The tourism industry is one of the major revenue-generating industries in the world thus the investment in tourism is always economical. The commercialization of sustainable agricultural farm tourism can benefit farmers with an additional income, it also helps in developing the farmer's community, increases the publicity of agriculture, inspires the young generation to agriculture, and leads to sustainable agricultural development. There are more than 500 established farm tourism destinations in Kerala which all offer a wide variety of tourism activities and contribute as the pulling factors of the tourism industry. This research focuses on the sustainability of farm tourism and also focuses on the successful implementation of sustainable agriculture in the different levels of cultivation with its impacts. This study explores the feasibility, issues, and challenges of farm tourism by collecting data from secondary sources including company websites, government portals, published journal papers, case studies, internet searches, and research reports. NOISE analysis has been used to assess the feasibility, challenges, and issues of sustainable farm tourism in farmer's community development by selecting sample agricultural farm tourism destinations in Kerala State. The result of the study highlights the significance of sustainable Farm tourism and farmer's development in terms of opportunities, improvements, strengths, and the feasibility of farm tourism growth. The research will provide suggestions to the governing bodies in the tourism sector to give enough promotion and encouragement for sustainable agricultural farm tourism development in Kerala State.

Keywords: - Sustainability, Commercialization, Farm Tourism, Feasibility, NOISE analysis.

Introduction

The agricultural sector is the backbone of the world's food supply, so farmers must be taken care of. The invention of farm tourism and its demand among tourists are increasing daily [1]. Kerala one of the south Indian states has more than 60% of people meeting their livelihood from agriculture or farming [2]. Kerala state produces the major share of India's natural rubber other remarkable agricultural contributions include Cashew, spices, tea, coffee, etc. Spices are the most famous agricultural product in Kerala, commonly called Kerala spices. However, the farmers face difficult situations due to multiple reasons like deficiency in rainfall, decline in prices, lower production and the consequent increase in debt burden on farmers, lack of technological advancement in harvest, exploitation from middlemen, etc. Consequently, farmers are ending their lives at an increasing rate due to these problems [3]. Thus, the importance of providing an opportunity for additional income is an important need for farmer's community development. Many states in India provide legal authority for farmers to remake their farmland as a farm tourism destination for interested tourists and there are guidelines to follow for the planning and development of farm tourism from the government [4].

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One of the panoramic states of south India, Kerala has lots of potential in terms of developing farm tourism destinations and that create lots of opportunities for the local farmers. Introduction of sustainability in agricultural makes drastic changes to the concept of farm tourism and form a transition of farm tourism to sustainable agricultural farm tourism.

Statement of the Problem

Agricultural farm tourism is one of the most demanded tourism products in the industry in India. There existed a few research exploring the sustainability of farm tourism and its implementation in sustainable agriculture, specifically highlighting different levels of cultivation in Kerala State [5]. This gap suggests the need for an explorative study that examines the relationship between sustainable farm tourism and its impact on farmer's development focusing on traditional agriculture in the farm tourism sector of Kerala state. The results of the study aspire to provide valuable insights and recommendations for promoting sustainable farm tourism and farmer development in Kerala's tourism industry [6-7].

Objectives

1. To study the nature and state of sustainable farm tourism in Kerala state focusing on farmer's development.
2. To conduct NOICE analysis and to explore the feasibility of sustainable farm tourism for farmer's development in the state of Kerala.
3. To identify and list the benefits of adopting sustainability in farm tourism in Kerala state.
4. To identify the issues and challenges towards the successful implementation of sustainable farm tourism for farmer's development in Kerala state.

Methodology

The research methodology employs mainly secondary data collected from sources which include: company websites, government portals, published journal papers, case studies, internet searches, and research reports and observations. This study has been completed by using the NOISE analysis tool. The term NOISE analysis consists of five core components of an analysis to develop a business plan. It also discusses the future scope and developing strategy of a business. The secondary data collected for this study was categorized according to the components in the NOISE analysis [8]. The different components in NOISE analysis are as follows Needs Opportunities Improvement**s** Strengths Exceptions. The study also utilized different research articles from Google Scholar to define and understand the scope and implementation of sustainable agricultural farm tourism.

The model description is given below:

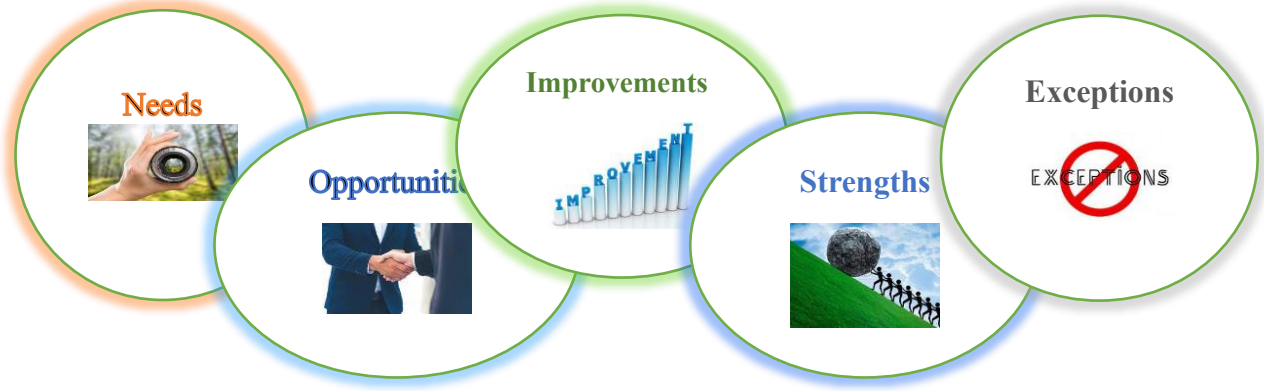

Fig.1 NOISE analysis Model Compiled by Author

J ✓ Yes Sustainable Agriculture Farm Tourism Destination Kerala :

J Yes Farms is a family-owned business that has been operating for over 20 years. The guiding spirit behind the farm was Joy Chemmachel, a successful businessman in Chicago who had a passion for agriculture and farming. Besides other attractions, J Yes Farms also boasts an agricultural museum that showcases antique tools and equipment used by farmers throughout history. Visitors can explore these exhibits at their leisure while learning about the evolution of agriculture over time. In 2011, the farm was awarded the title of "Best High-Tech Diary Farm" in Kottayam, further cementing its reputation as a leader in agricultural innovation.

One of the most notable awards received by J Yes Agricultural Farm is the "Best Fish Farmer" award, which was presented to Joy Chemmachel in 2010. The farm is located at Neendoor, Kottayam, Kerala PIN – 686601 [9]

Highlights of J Yes sustainable agricultural farm tourism

- They provide an opportunity to study and discover the benefits of sustainable farming methods and benefits.
- J Yes farm tourism can be used as a venue for knowing more about the amazing birds and animals studying in person and learning about their environment and behaviour.
- J Yes sustainable farm tourism destination is capable of growing plants including medicinal and gardening naturally and selling them to people who value natural cures.
- Variety of sustainably and organically cultivated banana species. Additionally, our coconut farming is renowned for the sweetest and finest coconuts in the area.
- J Yes farmers raise a wide variety of fish utilizing environmentally friendly practices at a cutting-edge fish farming facility on more than eight acres of land.
- The face of Kerala's agriculture is paddy cultivation. And the prime objective of J Yes Farms is the same. they take great pride in adopting ancient techniques to raise the best-quality rice crops.

Sustainable Agriculture

Sustainable agriculture is explained as the sustainable way of agriculture. The sustainable way indicates meeting the needs of the present generation without compressing the ability of future generations to meet their own needs [10]. When explained in terms of agriculture, meet the food needs of the present generation by using the resources without compressing the probabilities of future generations to meet their own food needs. Sustainable agriculture focuses on the environment and ecological conservation. Sustainable agriculture has the economic advantages of cost saving, efficiency and marketing, and multiple developments. Sustainable agriculture also enables training and education in Agri, possibilities of research and innovation, cross-sector collaboration, and regeneration of nature-based agricultural solutions [11].

Table 1: Sustainable agriculture procedures and benefits

Sl.No	Components	Execution	Benefits
1	Farm or Land Based	Soil health, soil regeneration	Extended soil life
2	Irrigation	Advanced technologies to reduce water usage	Water conservation
3	Agroforestry	The practice of unused and unfertile land for trees growing	Contribution to nature's health and climate
4	Recourses	Use of minimal resources and promote the utilization of renewable resources	Protection and preservation of resources

5	Harvesting	Usage of natural harvest and proper disposal of plant waste	Pollution control
6	Crop Storage	Usage of natural preservation methods	Fast marketing reduces the shelf life and cost of storage it also ensures fresh items to customers

Source: Author

Principles of Sustainable Agriculture

The principles of sustainable tourism include the conservation of all resources for agriculture. A Social Environmental Management System in agriculture is a practice of doing agriculture. In which the major intention is to manage social and agricultural integrity. The proper management of all resources in agriculture is also important in sustainable agriculture [12]. Ecosystem conservation is the prime intention of sustainable agriculture which includes natural ways of Preparation of soil, Sowing, Manuring, Irrigation, Harvesting, and Storing.

The commercialization in agriculture brought lots of pesticides and chemical plant destroyers for soil preparation which is a cost-saving and time-saving process for soil preparation [13]. But the negative impacts of these poisonous pesticides will never die and they will be carried by the agricultural plants when they start sowing and when the plant grows. According to the definition of sustainability, this act is spoiling future opportunities.

Sowing of high-yield and hybrid plants comes under sustainable agriculture due to their withstand power in climate change insect attacks but generally, genetically modified seeds are not considered sustainable agriculture due to its mandate about fumigation and chemical spraying [14]. Water conservation is a most discussed topic in sustainable agriculture the usage of irrigation in agriculture transformed into different new technologies. It includes sprinkling Drip irrigation, Bottom watering, Distilled water for plants, Wicking system. The latest one in practice is the proposed automated plant watering system using IoT [15].

Wildlife protection along with sustainable agriculture together brought the concept of Agroforestry. This is simply explained as the identification of unused and unfertile land and plant trees that can grow in the land area. This act makes a lot of changes in the agriculture field. Miyawaki also goes along with the concept of the creation of an artificial forest in urban areas. Fair working conditions are another sustainable agriculture principle, in this the men in the field should get good working conditions in terms of the time of work type of man, and wage. Community growth and relations is another focus of sustainable agriculture where the practitioners of this organic farming need a community in common, we say farmer's community [16-18]. Natural Harvesting and storage are mandated in sustainable agricultural practices; they restrict the kinds of harvest which harm the soil and resources in the agricultural fields. The waste after harvest needs to be sustainably managed and should not treated with fire. Soil regeneration After every agricultural harvest the soil regeneration purpose should be fulfilled. Which will occur only if we don't use pesticides or chemicals during our cultivation [18-20].

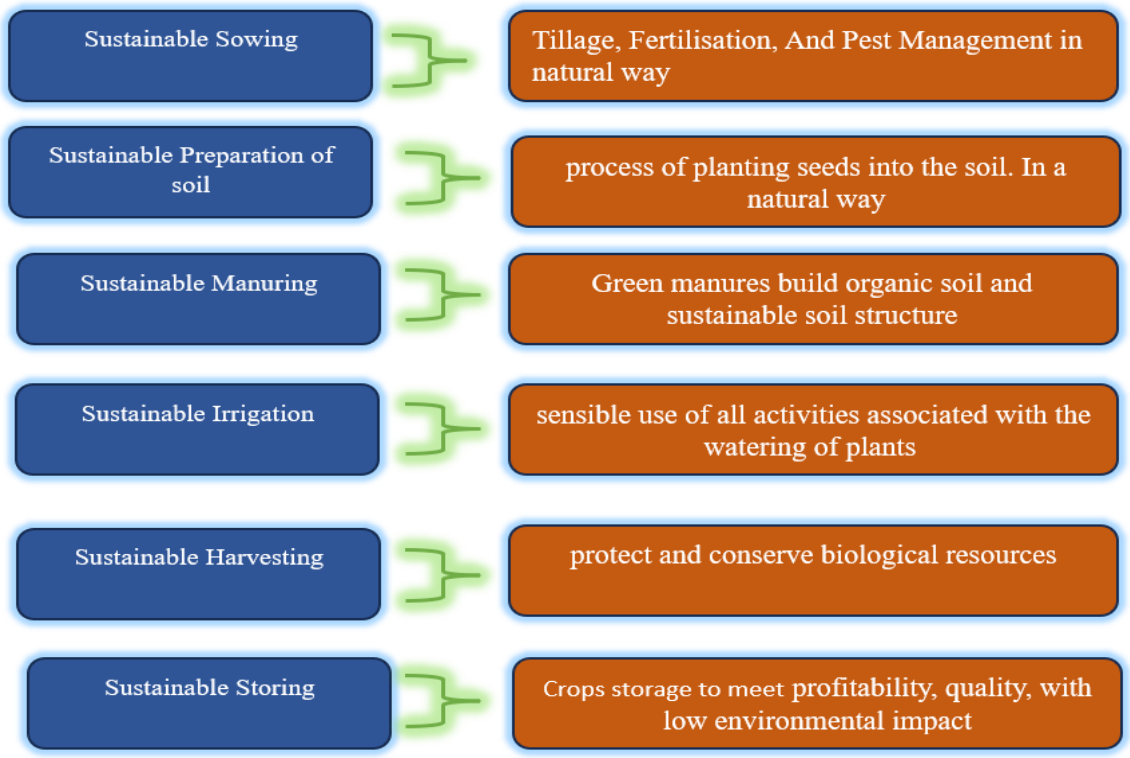

Fig. 2 Stages of farming and application of sustainability Compiled by the author

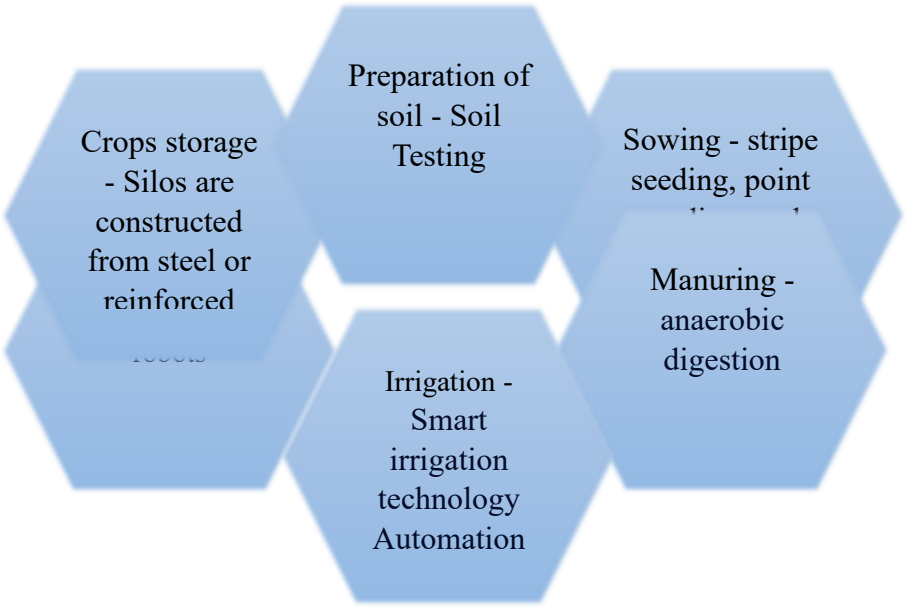

Fig. 3 Stages of farming and application of Technology Compiled by the author

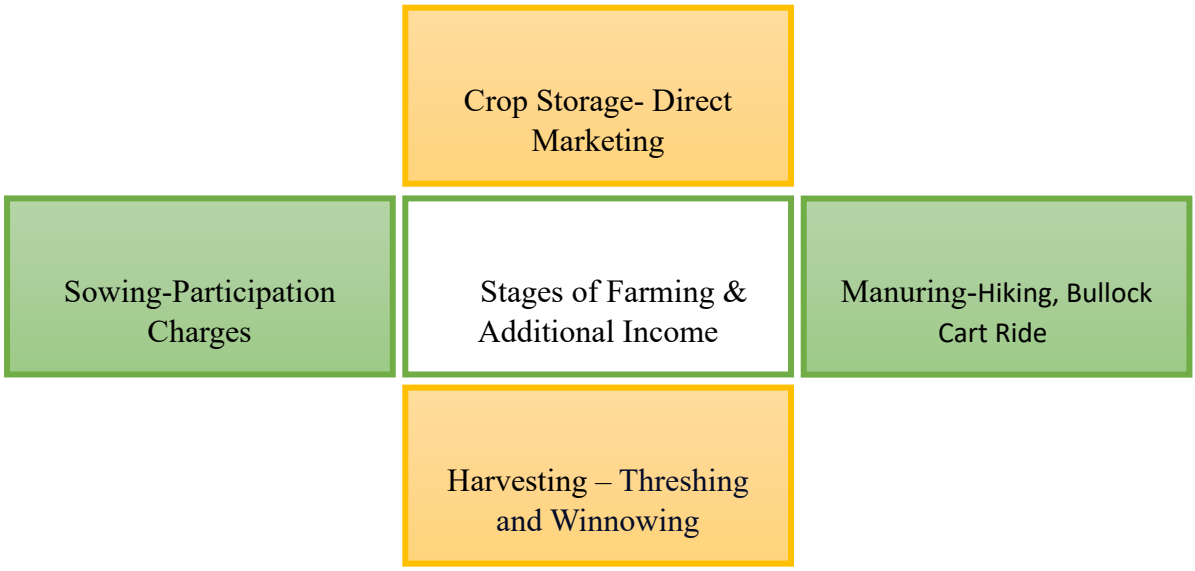

Fig. 4 Stages of farming and income generation Compiled by the author

Noise Analysis of Sustainable Farm Tourism for Farmer's Development in Kerala :

The table shows the NOISE analysis carried out for this study. Agricultural farm tourism is one of the most demanded tourism products in the industry. The inclination of the concept of sustainability gives multiple benefits for farmers as well as nature. The current needs for agriculture farm tourism, the upcoming opportunities, the most demanded improvements required, the strengths of sustainable agriculture as a tourism destination, and the elements that need to be eradicated for the smooth functioning of farm tourism are studied by using the NOISE analysis. The following table describes the specific details:

Table 2: NOISE analysis of sustainable farm tourism for farmer's development in Kerala

Needs	Opportunities	Improvements	Strengths	Exceptions
Additional income for farmers	Technological advancement	Tourist safety	Current demand for farm tourism	Negative Commercialisation of Farm Tourism
Lifestyle improvements	Government support	Government guidelines for tourism establishment	Types of farm tourism available	Black marketing
Agricultural infrastructure	Non-governmental org. support	Accessibility facilities	Post-pandemic tourist flow	Middlemen interference
Regional marketing facility	Promotional support	Food and accommodation	Popularity of Kerala spices	Control over the tourist guides and taxi drivers
Authorised farm tourism publicity	Awareness programs and counselling	Amenities, attractions, and activities	Direct income for farmers from tourist spending	Limitations on the development of tourism destination
Concept of private tourism destination	Direct marketing of crops	Adaptation to modern technologies	Activities at the destination	

Compiled by the author

Results and Discussion

The results of the NOISE analysis conducted have been listed as follows:

Feasibilities of agricultural tourism

- Environmental Feasibilities
  - When consumers buy locally-grown foods, they have a positive impact on the environment.
  - Sustainable agricultural development promotes the protection and preservation of all environmental resources,
  - Purchasing local foods reduces the need for packing, storage, and long-distance drives.
  - Authorised farm tourism publicity provides guidelines to operate agricultural tourism destinations by satisfying the principles of Sustainability.

- Economic Feasibilities
  - Additional income for farmers will help them meet their livelihood and emergencies.
  - When income increases their lifestyle will also improve and that will create positive inspiration in others.
  - The development of farm tourism and the demand for such destinations will promote infrastructural development that helps the area to be developed.
  - When the farmers engage in regional marketing of their product that will lead to economic development and reduce the role of middleman
  - The Concept of private tourism destinations is going to contribute to the economy by working hand in hand with the tourism industry.
  - When tourists buy products from the farmland that makes an indirect contribution to the state's economy.

- Socio-cultural Feasibilities
  - Agricultural tourism helps enhance the dignity and status of the local community.
  - This also reduces the parity between different social communities.
  - Agricultural tourism promotes cultural heritage among local people.
  - It can also contribute to the modernization of agriculture and increase income for farmers.

Issues and challenges in establishing agricultural tourism

- Environmental issues
  - Pollution by tourists
  - Deforestation for facility development
  - Biodiversity loss due to crowed movement
  - Dead zones
  - Soil degradation

- Economic issues
  - Local communities need to be able to fund the tourist demands
  - Which leads to an increase in taxes.
  - The overall price of living increases in tourist destinations in terms of rent and rates
  - The value of property increases

- Socio-cultural issues
  - Conflict between host and guest community
  - Drug abuse and sexual assaults.

- It can also exacerbate conflicts between humans and wildlife.

Suggestions

- Sustainable agricultural development promotes the protection and preservation of all environmental resources.
- Government support required to design and develop sustainable agricultural and tourist-based transition of farmland to sustainable agricultural farm tourism.
- The sustainable agricultural procedures benefit both farmers and environment in different ways at different levels so inclination of sustainability will be an effective way to protect farmers life as well as farmland.
- Strict lawful regulations have to be implemented to avoid hassle free operation of agricultural farm tourism.
- The role of middlemen should be restricted with a government guideline for the appropriate benefit of farm tourism for the farmers.

Conclusion

This research aimed at exploring the sustainability of farm tourism and also focused on the successful implementation of sustainable agriculture in the different levels of cultivation with its impacts in Kerala state. The concept of agricultural farm tourism is a dynamic product in the tourism industry; it connects and benefits with different industries. The current needs for agriculture farm tourism, the upcoming opportunities, the most demanded improvements required, the strengths of sustainable agriculture as a tourism destination, and the elements that need to be eradicated for the smooth functioning of farm tourism have been explored in this research. Sustainable agriculture is a typical method to achieve many benefits to the protection and preservation of environmental resources. The sustainability of farm tourism considering the agricultural field will contribute to the state's economy as the major population of Kerala depends on agriculture. The results of the study provide valuable insights and suggestions for promoting a sustainable farm tourism sector and for farmer development in Kerala state.

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