



HORTI-TOURISM AND ITS ECONOMICAL, ENVIRONMENTAL AND SOCIAL IMPACT

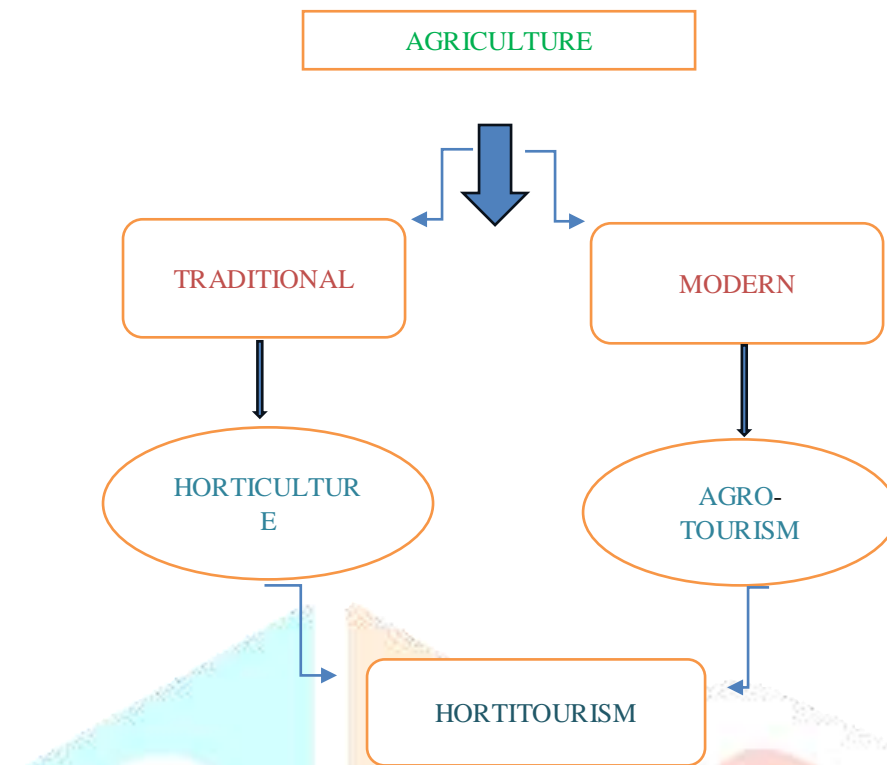
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Abstract: Horti-tourism is a process where we combined horticulture and tourism, to help urban people in a process where they spent some time in natural environment. It helped people to get some fresh air, reduce stress and enjoy the nature. Combination of tourism and horticulture benefits to develop orchards, nurseries and farms, that also develop economic benefits for rural areas. It is a hospitality business that required more effective publication and improving skills, it also helped farmers to reduce incidental failure, and helped local people to find jobs and income sources. Now a day's development of city and urbanization areas that affect the environment like decrease of green open space, growth of pollution, natural disasters, etc. In modern horticulture, we use soil technology, plant breeding, study of plant physiology and plant pathology that helped society to gain knowledge of social science. Ecosystem restoration processes are used to restore indigenous plants, ex situ conservation in botanical gardens. Some techniques focused on ecosystems we apply less water crops that's advanced irrigation technology, integrated pest management, cultural and heritage preservation that help to conservation initiatives, employment opportunities, increased awareness. Some innovations in Indian hortitourism like solar water pumping, solar crop dryer, and solar energy use in greenhouse concepts. Now a day's horticulture therapies are used for treatment and rehabilitation for patients, that help people to reduce mental health conditions and physical illness.

INTRODUCTION

Agricultural field is considered as the backbone of economy growth in India. Directly and indirectly 85 percent of the population depend upon the agriculture and related activities. So now a day's farmers are adopting newer methods away from the typical and orthodox patterns to build with consumers directly and earn extra. Supporting to this statement adding agricultural income with some touristic activities bringing in new hopes and better lives (Nath and Ram, 2022). For the allied activities of agriculture which includes horticulture means that, vegetable gardens, fruit orchards, flower gardens for research, enjoyment, and involvement in cultivation practices like harvesting, it's an very important branch of agriculture (Gyawali et al., 2022). It specially focused in providing food and nutrition security and also promotes to diversify the income of farmers and aid in doubling their income (Jha et.al., 2018). Now a day's world fastest growing industry is Tourism sector (UNCTAD, 2007). It's continued recording developing in most countries, (UNCTAD, 2007).



Hortitourism was first newly introduced in Nepal and also stimulus in other countries. This strategy also helped urban people to spend some time with nature from their busy boring life, to get some fresh air, reduce stress, and enjoyment with nature. Horticulture plays an important role to attract domestic and international tourists that help rural people to develop economically. The intersection of tourism and horticulture are benefits to develop orchards, nurseries and farms that attract tourists to visit this kind of place and also economic benefits from Horti-tourism (Gyawali et al., 2022).

In India the majority of farmers are in small-scale. They invest in good quality of hybrid seeds, fertilizers and pesticides with high expectation of profits. But at the time of harvesting of crops failure is very common in season as a result of natural disasters is extremely prevalent. The government has also introduced various other techniques to encourage farming in a number of communities, including water harvesting, integrated farming, subsidizing seeds, pesticides and fertilizer. In India, urbanization level was increased from 27.81% in 2001 to 31.16% in 2011, primarily due to migration of people for improved their standard of living (Kuchi and Kabir, 2017).

In India reaching of Horti-tourism spots very difficult due to poor transportation facilities in rural area. For most of the farmers, income is so critical to yield 3-5 year in a fruit orchards field so they need of tourism. Indian farmers are not well educated but they well know to give hospitality to guests so now a day's tourists are also interested to go and experienced some cultural, rural and farm operations by farmers (Kuchi and Kabir, 2017).

2.1 Economic Impact of Horti-tourism

Horti-tourism can be defined as to a working horticultural farm, for the involvement in the farm activities to enjoyment, education, recreation, and involvement in farm operation. It is a hospitality business that required more effective public relation and improving skill. In India reaching of remote area to visit a horticulture farm is very difficult because of poor transportation facilities, if we want hortitourism will be successful when we maintain some small things that increase of visitors to see something, do buy at farm (Kuchi et al., 2017).

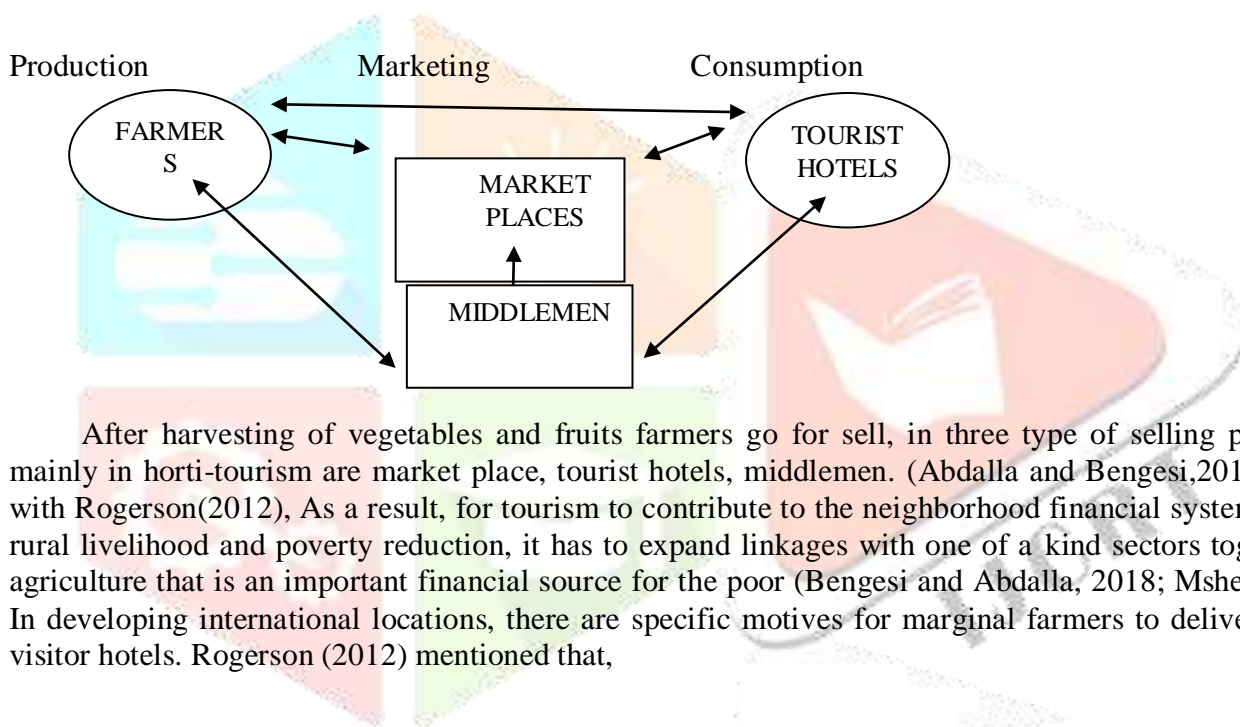
Agriculture sector is one of the main income factors. We know that after plantation orchards start giving yield after 3–5 years, (Kutchi et al., 2017). This may take 5 to 8 years in mango orchards. Horti-tourism use as a resolving concept that can convert this concept to a null economic yielding to produce a new source of income generation. Farmers are reported making a substantial amount of income through tickets sold for a farm visit (Gyawali et al., 2022).

In the process of horticulture the production of fruit and vegetables has a comparative advantage for conditions where is labour abundant, and markets accessible due to positive relation between income and employment in the horticultural crops- Horti-tourism. So as per the study of (singh 2019) it says that the cultivation of horticultural crops focuses on the capital-intensive and labour intensive and through high value agricultural (HVA) crops cultivation, post harvest management, grading and packaging, and marketing provide more opportunities for income and employment generation.

2.2 Social Dynamics of Horti-tourism

Tourists arriving at the destination as consumers, they produce opportunities for selling additional foods and services to local communities with exchange of cash. So tourism help to rise the production of agricultural food, such activities helped local people to easily find job and income sources, market linkage in the framework that help farmers to sell their products after harvesting (Abdalla and Bengesi,2018).

Producer-Market Linkage:



After harvesting of vegetables and fruits farmers go for sell, in three type of selling possibilities mainly in horti-tourism are market place, tourist hotels, middlemen. (Abdalla and Bengesi,2018). in line with Rogerson(2012), As a result, for tourism to contribute to the neighborhood financial system, enhance rural livelihood and poverty reduction, it has to expand linkages with one of a kind sectors together with agriculture that is an important financial source for the poor (Bengesi and Abdalla, 2018; Mshenga,2010). In developing international locations, there are specific motives for marginal farmers to deliver meals to visitor hotels. Rogerson (2012) mentioned that,

2.3 Environmental Sustainability in Hortitourism

The development of city and rapid urbanization such as the decrease of green open space, growth of pollution, natural disaster, etc. horti-tourism is one of the solution for those bad effects of urbanization (Cousin and Witkowski, 2015).

About 25% of (250000) species in the world may become extinct the next 50yr, so government appoint biologist to counting task to identifying and evaluate the cause of endangerment of plant species(W.Schemske et al., 1994).

An modern horticulturist is a unique technique like soil technology, ecology, principles of plant breeding, and botany like plant physiology and pathology (Stuart Gager, 1919). Its also helped society to gain knowledge of social science such as education, commerce, and healthcare from the contribution of horticulture's. community horticulture project focus on the cultivation of medicinal plant and food and some indigenous plant species. Urban spaces are becoming an increasing retreat for biodiversity, and cultivation of indigenous plant benefit and local indigenous plant population, but also native animal population (Cousin and Witkowski, 2015).

To focused on best of approaches to apply low water for crops even as preserving or increasing general crop productivity and improving the green use of water in advanced irrigation technology. strategies to be use as part of those activities consist of remodeling general irrigation structures for better performance, reusing of degraded waters, lowering evaporation losses, introducing web site-particular programs, using

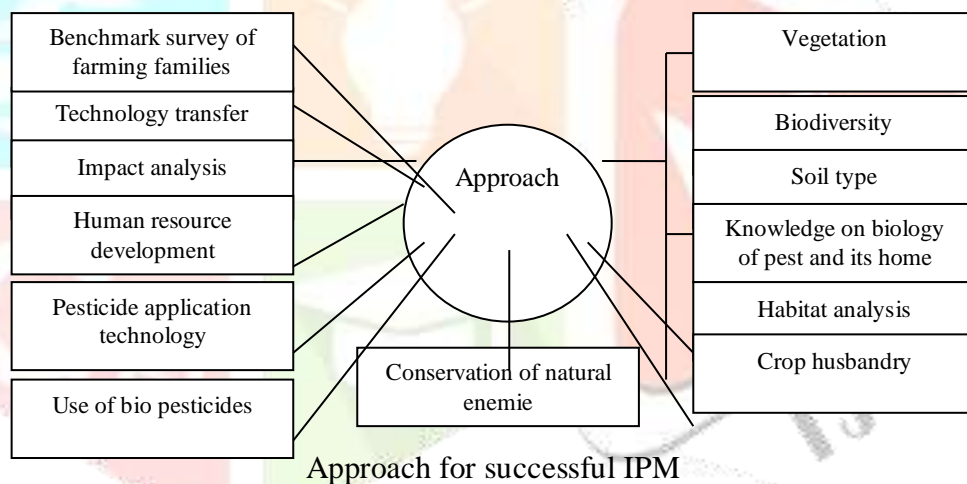
engineering strategies to decrease leaching and water losses to unrecoverable sinks, (G. Evans and Sadler, 2008).

To set the level of assumptions that are four following are:

- (1) Irrigation need to be economically sustainable on the basis of the argument that money for to lose the big contributions to meals production from irrigated lands.
- (2) To control of agriculture water that also increasing production requires the evolution of cultural, engineering, and control structures.
- (3) There can be a decreasing of water uses in both agricultural and nonagricultural, how water is used in waterless areas however moving to extra humid areas.
- (4) The important institutional could be completed to facilitate extra efficient of water. The precept to carried out water that isn't always consumed by the sector of weeds, evaporated.

Efficiencies of irrigation subsystem: workshop, movement, distribution off and on farm utility. He defines ratio of water intensity brought by the particular subsystem and the water intensity supplied to subsystem, normally being expressed in percentage. Consequently a overall device efficiency to create diverse efficiencies of the respective subsystems.

Integrated pest management encourages most compatible and ecologically combination of available pest suppression techniques to keep pest population below the economically levels, the principle of that it not to eliminate all pests but to suppress pest population to a limited level at which pests not be able to causes losses(Trivedi and Ahuja, 2011). To defense against pests we used good agronomic practices or cultural methods that control pests to develop,



Cultural and Heritage Preservation in Horti-tourism

From the concept of Worldwide the cultural heritage preservation affected by the impact of tourism, to studie the effect of conservation strategies, community involvement to preservation initiatives, government policies, challenges observed in maintaining these sites, to successful in tourism and preservation the Indian. it has some positive impact on tourism a s like impact on the economic sustainability of heritage sites, a part of the funding for preservation efforts for revenue generated from conservation initiatives, employment opportunities, increased awareness and appreciation, funding and resources for conservation. monitoring of the tourist activities are key to maintaining historical and cultural heritage (Chhabra et al.,2024).

Cutting-Edge Technologies and Innovations in Indian Horti-tourism

Management of a farm with the help of modern technology is known as smart farming, where as it develop the quality and quantity of agriculture food. To reduce in food loss both in pre and post harvest stage with safety of food we need help from modern technology like Machine Learning(ML), Artificial Intelligence(AI) and Across the global we use of Drones, Satellite, to IoTs are redefining(Madaswamy, 2020).

Some key technologies are:

1. Artificial Intelligence(AI), Analytics Operation Research
2. Blockchain
3. Cloud, IoT, 5G communication
4. Big Data and Ecosystem

The government of India has planned to equip the NeGP-A Program with emerging technology, in telangana state, has wide range of empowering farmers as given below:

- a. Free SIM Card to farmers for use of internet, SMS and With Toll-Free no.
- b. With the help of social media interact with farmers
- c. Use of TV, Radio, FM Radio, Newspaper etc.
- d. Mobile Advisories and Real Time messaging
- e. Digital video on farming
- f. Capacity building of farmers on use of ICT
- g. Geo-tagging of plots and integration of GIS and GPS application in GPA
- h. Establishing Agriculture produce traceability through ICTs

Operational of smart farming requires massive Direct Learning Opportunities (DLO) for small and marginal scale farmers(Madaswamy, 2020).

In agriculture system the use of solar power technology in various way such as water pumps, solar desalination system, solar heat point system, and solar dryers for better yield and development of agriculture system(Thakur et al., 2022).

Solar water pumping system:

solar water pumping system is an eco-friendly, and it is an simple device made up with waterpump, solar panels and tubing. It is of two type such as surface water pump and submersible water pump, in surface water pump water rise up to 20m deep and in submersible maximum required depth of 50 m.

Solar energy in horticulture applications in greenhouse concept:

In India agriculture discovery and extension system is so challenging in rural development, so horticulture is played an important role in rural development, to control heat of green house the use of solar assisted source heat pump to analyze the thermal, to control greenhouse cooling system used of solar photovoltaic technology assisted by an earth to air exchanger, Thermal energy storage technology used in storage of heat in a closed greenhouse (Thakur et at., 2022).

3.1 Health and Well –Being Benefits of Horti-tourism

Horticulture therapies are very popular in all over the world for treatment for positive health enhancement of elderly people. In a hospital horticulture garden has increase feelings of well beings, influence healing, alleviate stress for patients with brain damage (Kamioka et al., 2014).

With the help of gardening based intervention, people get benefits to reduction symptoms of depression and anxiety to rebuild self esteem. Types of benefits provides to clients such as reduced stress and improved mood, develop social network and social skill, and also focused on gardening based mental health helped people to connected to wider society and education and employment opportunities (Clatworthy et al., 2013).

The intention of our look at is to offer the significance of horticultural therapy activities and to show how that is highly affects our senses. The major advantage of horticultural therapy is that it improves cognitive, bodily, social, emotional and non secular well-being. whilst we engage with nature thru Horticulture remedy, we revel in herbal textures, soothing colors, smooth sounds and refreshing smells. This experience calms the thoughts, triggers superb recollections, and leads to tranquility all of which assist humans with afflicted minds. Horticultural therapy sessions include a group of sports with unique remedy goals. We use some of activities each for corporations and individuals for therapeutic cause (V. Karthikeyan and Eswar, 2016).

Horticultural groups promote self-efficacy of psychiatric illness persons, who showed typical symptoms content emotion and attention, In a horticulture therapy scheme, individuals found out to work with vegetation in a healing, vocational, In widespread, that scheme carried out in outdoor environment often established extra high-quality result than indoor setting(C.Y. Kam and Siu, 2010). Horticulture environment support healing process and recovery from stress or working and promotes rehabilitation persons with disabilities (C.Y. Kam and Siu, 2010).

Horticulture activities took place in five outdoor theme:

1. Garden farm
2. Sensory garden
3. Practice
4. Display
5. Farm

Horti-tourism served as an wellness tourism also, the world first introduced spa resorts in a dead sea about 25 BC (Svart, 2006) in the Europe the middle East and North Africa. Where wellness treatment facilities spa tourism based on hot and mineral springs as well as health and wellness industry are available, wellness tourism, as described by using the research Institute for enjoyment and Tourism at the college of Berne, Switzerland is the 'sum of all of the relationships and phenomena resulting from a journey and residence through human beings whose predominant motivation is to hold or promote their fitness' specialized hotels or spas offer the ideal professional and character care, generally added through a comprehensive provider package comprising elements of bodily healthcare, healthy nutrients or weight loss plan, rest meditation and mental interest training know how outline wellness tourism as being 'a manner of life orientated towards most fulfilling fitness and nice-being in which the frame, mind, and spirit are included by way of the man or woman to stay greater completely inside the human and natural community. This definition accords with the method taken in this ebook in assessing the importance of fitness and wellness (Erfurt-Cooper, P., & Cooper, M. 2009). Thermal baths with an array of techniques and elements including balneo-therapy and hydrotherapy, face and body beauty treatments, massages, alternative therapies for relaxation, specific cures, including slimming cures, aromatherapy and other new treatments are also benefits to people.

3.2 Challenges and Opportunities in Hortitourism Development :

According to the study of (Wetleji and Zerihun 2018) disclose that agriculture and tourism there is no economically profitable concurrence. Agriculture and tourism combined activity of the community which is now name as horti-tourism in these above field develop. The linkage of the two sectors was challenged by the practices of agricultural activities like small market size of tourism industry and its more dependency on wildlife. The growth of tourist flows are pointed out as opportunities. Therefore 86% of the respondents said that rural Horti-tourism will be beneficial for both rural and urban society. This will also help in economic development of rural areas.

Conclusion:

The above reviews that as per the study of tourism is an a powerful tool for developing countries to trade their way out of poverty to help down to the more peripheral regions, disadvantageous communities and also to poor people. Horti-tourism will emerged as an important instrument for sustainable human development including employment generation, environmental regeneration, poverty alleviation, and advancement of women and development of remote areas and other disadvantaged groups in the country apart from promoting social integration and international understanding.

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