



How to cite this article:

Paimen, M.S., See, K.F., Baharudin, S.A. & Waked, H.N. (2026). Sustainable agrotourism in Malaysia: a systematic review of development, socioeconomic impacts and challenges. *Journal of Economics and Sustainability*, 8(1), 1-15. <https://doi.org/10.32890/jes2026.8.1.1>

SUSTAINABLE AGROTOURISM IN MALAYSIA: A SYSTEMATIC REVIEW OF DEVELOPMENT, SOCIOECONOMIC IMPACTS, AND FUTURE CHALLENGES

¹Mohd Shah Paimen, ²See Kok Fong, ³Siti ‘Aisyah Baharudin & ⁴Hayyan Nassar Waked

^{1,2}School of Distance Education, Universiti Sains Malaysia, Malaysia

³School of Social Sciences, Universiti Sains Malaysia, Malaysia

⁴City Graduate School, City University Malaysia, Malaysia

³*Corresponding author: sab16@usm.my*

Received: 13/3/2025

Revised: 26/08/2025

Accepted: 8/9/2025

Published: 31/1/2026

ABSTRACT

This study aims to provide a systematic review of agrotourism in Malaysia, including its development, socio-economic impacts, challenges, and potential to assist in post-COVID-19 recovery, all while aligning with the United Nations’ Sustainable Development Goals. Utilising a systematic review approach based on the PRISMA guidelines, literature from key academic databases was scrutinised, yielding 20 relevant articles from 2011 to 2024. The review highlights that Malaysia’s agrotourism, strengthened by government policies and entrepreneurial efforts, has potential benefits such as rural income diversification and cultural heritage preservation. However, it also faces challenges, including skill gaps and infrastructure limitations. The study emphasises the need for improved skills training, infrastructure upgrades, sustainability promotion, and targeted marketing efforts. This review contributes to the theoretical understanding of agrotourism’s role in sustainable rural development and the integration of agrotourism within Malaysia’s post-pandemic recovery strategy. The study suggests practical measures for incorporating agrotourism into Malaysia’s recovery plans and identifies avenues for future research, including exploring tourist motivations, assessing community and environmental impacts, examining technological innovations, and evaluating its integration with broader rural development strategies. Overall, this review underscores agrotourism’s potential as a key driver of sustainable rural growth, economic resilience, and the preservation of Malaysia’s cultural and natural heritage.

Keywords: Agrotourism, sustainable rural development, post-COVID-19 recovery strategy, socioeconomic impacts, rural economic diversification

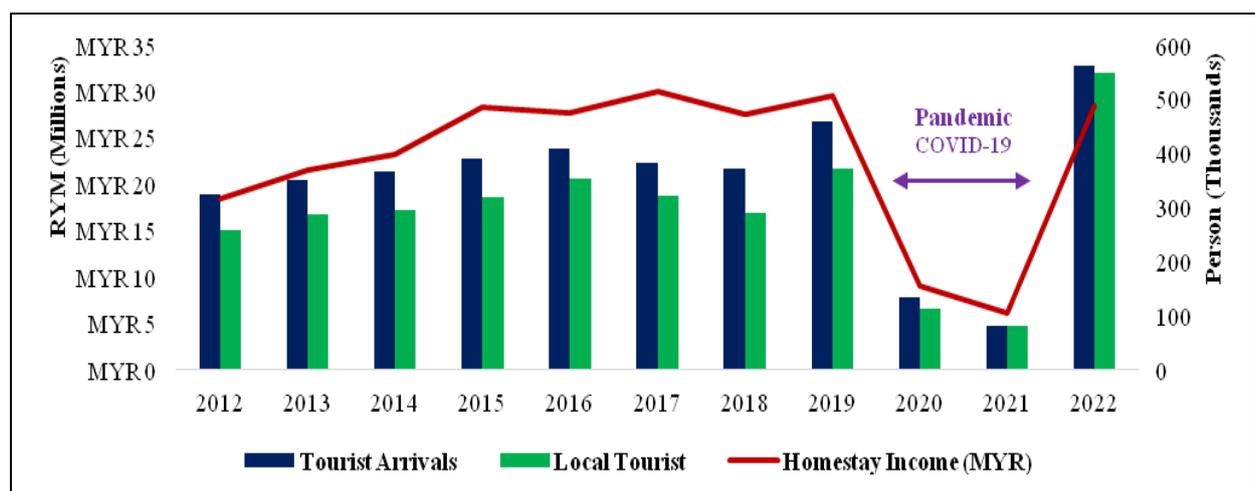
INTRODUCTION

The global trend of sustainability and responsible tourism has highlighted the significance of agrotourism, a tourism subsector where agriculture and rural environments form the basis of tourist attractions. Agrotourism serves as a supplementary income for farmers and contributes to rural development, biodiversity conservation, and cultural preservation. It aligns well with several United Nations Sustainable Development Goals, including No Poverty (Goal 1), Zero Hunger (Goal 2), Decent Work and Economic Growth (Goal 8), Responsible Consumption and Production (Goal 12), and Life on Land (Goal 15). In Malaysia, agrotourism holds significant potential, given the country’s abundant natural resources, rich cultural heritage, and a significant portion of the population engaged in agriculture. Over the years, many researchers have explored the potential, development, and challenges of agrotourism in Malaysia, leading to a substantial body of literature in the field. However, a holistic understanding of agrotourism in Malaysia that can guide practice and policy is still lacking. This situation underscores the need for a systematic review, which can help consolidate existing knowledge, identify gaps, and set the direction for future research.

Agrotourism offers unique attractions through both on-farm and off-farm agricultural experiences. The National Agro-Food Policy 2011–2020 identifies it as a key driver for tourism, benefiting local income and the national GDP. Figure 1 illustrates a decade of Malaysia’s Homestay Experience Program. The data show initial steady growth, driven by government initiatives like the Homestay Program under the Sixth Malaysian Plan, which aimed to boost rural economies by inviting tourists to experience local culture and agriculture. From 2012 to 2019, the program saw consistent increases in both local and international participation, attributed to improved infrastructure, marketing, and local engagement (Ministry of Tourism, Arts and Culture, 2023). However, the onset of the COVID-19 pandemic in 2020 led to a sharp decline across all metrics, reflecting travel restrictions and reduced tourist activities nationwide. Despite this setback, the program demonstrated strong resilience, rebounding significantly in 2021 and 2022 with a 73 percent increase in tourist arrivals, a 112 percent rise in domestic visits, and a 54 percent boost in homestay revenues, suggesting successful adaptation measures and an emphasis on domestic tourism (Ministry of Tourism, Arts and Culture, 2023).

Figure 1

Local Tourist Arrivals and Homestay Revenue in The Homestay Program in Malaysia (2012-2022)



Source: Ministry of Tourism, Arts and Culture (2023)

Despite these positive trends, the contribution of agrotourism, which includes homestay programs, to Malaysia's total tourism revenue has remained limited at just 2.45 per cent (Ministry of Agriculture and Food Industries, 2021). To address this, the National Tourism Policy 2020–2030 was introduced, emphasizing sustainable, open-air tourism experiences that align with global health and safety standards while supporting rural economies. The policy focuses on leveraging agrotourism as a post-pandemic recovery tool by promoting safer, immersive experiences that strengthen the link between urban and rural areas, benefiting both local entrepreneurs and communities (Ministry of Tourism, Arts and Culture, 2021). Furthermore, the government's strategic marketing initiatives, combined with international support aligned with the UN's Sustainable Development Goals, aim to enhance the global visibility and appeal of Malaysia's agrotourism sector. This long-term strategy seeks not only to increase tourist arrivals but also to generate sustainable economic benefits and promote cultural preservation, especially in rural Malaysia.

This review aims to provide an overview of agrotourism development in Malaysia, its socio-economic impacts, and the challenges it faces based on existing literature. The purpose is to offer a critical synthesis of research on agrotourism in Malaysia to facilitate evidence-based decision-making and contribute to the achievement of the UN's SDGs. The review will draw on the findings of both empirical and theoretical papers. By synthesizing these findings, the review intends to provide a clearer picture of the current state and potential future trajectory of agrotourism in Malaysia. The subsequent sections will elucidate the review's methodology, provide a detailed analysis of the development, challenges, and impacts of agrotourism, and finally, discuss the implications for practice and policy, along with potential avenues for future research.

METHODOLOGY

This systematic review adhered to PRISMA (Preferred Reporting Items for Systematic Reviews) guidelines to ensure a comprehensive and unbiased assessment of the existing literature on agrotourism in Malaysia (Moher et al., 2009). A systematic search of the literature was conducted using various academic databases, including Scopus, Web of Science, JSTOR, and Google Scholar. The databases were selected due to their comprehensive inclusion of literature in social science, tourism, and economics. This selection was informed by Pahlevan et al. (2019), who discussed the application of the PRISMA protocol among tourism and hospitality scholars in Asia. To maximize the coverage of relevant studies, we utilized a combination of keywords and Boolean operators. The search terms used included combinations of agritourism, agri-tourism, agrotourism, agro-tourism, farm-based tourism, and Malaysia. Only English language literature was considered. The inclusion criteria for studies were: (1) original research articles, (2) published between January 2011 and January 2025 to ensure the relevance and currency of the data, and (3) focused on agrotourism in Malaysia. Review articles, conceptual papers, and studies lacking explicit focus on Malaysia's agrotourism were excluded. Our inclusion criteria resulted in 20 relevant articles.

Table 1

List of Selected Articles

No.	Author and Year	Title
1.	Kunasekaran et al. (2011)	Development of farmers' perception scale on agro tourism in Cameron Highlands, Malaysia.

No.	Author and Year	Title
2.	Hamzah et al. (2012)	Socio-economic impact potential of agro tourism activities on Desa Wawasan Nelayan community living in Peninsular Malaysia.
3.	Tiraieyari and Hamzah (2012)	Agri-tourism: Potential opportunities for farmers and local communities in Malaysia.
4.	Fahmi et al. (2013)	Involvement in agro-tourism activities among communities in Desa Wawasan Nelayan villages on the East Coast of Malaysia.
5.	Mazlan and Juraimi (2014)	Development and challenges of agritourism in Malaysia.
6.	Rahman et al. (2014)	Service quality factor for the success of home stay agro tourism in Malaysia.
7.	Siti-Hajar et al. (2014)	Entrepreneurial knowledge and hospitality awareness of agro-tourism.
8.	Mansor et al. (2015)	Agro tourism potential in Malaysia.
9.	Annamalah et al. (2016)	Agro-tourism: A cash crop for farmers in Malaysian rural area.
10.	Ariffin and Irwan Yen (2017)	Sustainable agrotourism curating by conferring community involvement in Tanah Rata, Cameron Highlands, Malaysia.
11.	Leh et al. (2017)	Social impact of agro-tourism on local Urban residents. Case study: Cameron Highlands, Malaysia.
12.	Mohammad and Er (2018)	Agro-tourism potentials of agro-ecological paddy farming: A case study in Bachok, Kelantan.
13.	Peng (2018)	Understanding the attributes that motivate tourists' choice towards agritourism destinations in Cameron.
14.	Bachok et al. (2019)	Rural agro-tourism and local community income: the case study of clustered homestays in Kelantan and Terengganu.
15.	Azhar et al. (2020)	Agrotourism in Malaysia: A study of its prospects among youth in Pekan Nanas, Pontian.
16.	Man and Aspany (2020)	Agri-tourism preference factors among urban dwellers.
17.	Ambalegin et al. (2022)	An English-speaking training for dragon fruit plantation workers in Rempang Island, Batam: An agro-tourism base.
18.	Jaunis et al. (2022)	Agrotourism in Malaysia: A review on concept, development, challenges and benefits.
19.	Wahid et al. (2023)	Government agencies impediments towards establishing pertinence agrotourism prospect in Malaysia: Case Study in Jerantut Pahang.
20.	Hoo et al. (2024)	The effect of natural environment, tourism infrastructure, perceived social benefit, and perceived barriers on residents' attitude towards agrotourism in Seremban, Malaysia

AGROTOURISM DEVELOPMENT IN MALAYSIA

Agrotourism has emerged as a prominent phenomenon in numerous nations, including Malaysia, owing to its capacity to foster sustainable agricultural methodologies, stimulate rural economic growth, and offer distinctive and instructive encounters for visitors. Agrotourism was introduced in 1991 under the Sixth Malaysian Plan, aiming to aid rural farmers. The subsequent years saw initiatives such as the Homestay Program (1995) and Kampung Stay Programs (2011), encouraging rural communities to participate in community-based tourism. Notably, in 2012, Malaysia's homestay program received the Ulysses Award from the UNWTO for its efficient development and its ability to attract both local and foreign tourists (Malaysia Tourism Promotion Board, 2012). In 2021, the Pasar Tani Agropelancongan was established, serving as a hub for agrotourism commodities, benefiting local communities, tourists,

and entrepreneurial ventures (Ministry of Tourism, Arts and Culture, 2023). This section provides a systematic synthesis of the literature on the evolution, strategies, and current state of agrotourism development in Malaysia.

Firstly, the evolution of agrotourism in Malaysia is deeply rooted in the country's rich agrarian heritage. Historically, Malaysia's economy was predominantly agricultural before the wave of urbanisation and industrialisation transformed the landscape. As cities grew and modernised, the rural countryside, with its natural serenity, traditional farming practices, and cultural heritage, began to attract interest from both locals and international visitors seeking a respite from urban life. According to Mansor et al. (2015) and Annamalah et al. (2016), this shift reflects a broader global trend where rural areas leverage their agricultural roots to diversify economic opportunities through tourism. Malaysia's increasing commitment to sustainable tourism has further propelled agrotourism from a marginal activity to a strategic pillar supporting rural development and environmental conservation. For example, Cameron Highlands, once primarily a farming region, has emerged as a major agrotourism destination renowned for its strawberry farms, tea plantations, and cool climate, attracting over 3 million tourists annually as reported by Tourism Malaysia (2023). With an increasing emphasis on sustainable and responsible tourism practices, agrotourism has been elevated from a peripheral activity to a strategic component of Malaysia's tourism industry and rural development (Mazlan & Juraimi, 2014).

The development of agrotourism in Malaysia has been underpinned by deliberate strategies involving both governmental and private sector initiatives. Government policies have played a critical role in shaping the agrotourism landscape, primarily through financial support, capacity building, and promotional efforts. The Malaysian government, via agencies like the Ministry of Agriculture and Food Industries, has implemented programs offering funding and technical training to local communities, enabling farmers to diversify their income sources by incorporating tourism into their agricultural activities. For instance, the Young Agropreneur Program encourages young entrepreneurs to develop agrotourism ventures, fostering innovation and sustainability in rural areas. Additionally, public-private partnerships have been crucial, with farmers and private investors collaborating to improve infrastructure such as accommodation facilities, farm tours, and local markets. This approach has allowed many small-scale farmers in regions like Sabah and Sarawak to tap into the growing agrotourism market, contributing to rural socio-economic development (Jaunis et al., 2022; Tiraieyari & Hamzah, 2012).

Currently, agrotourism in Malaysia is characterized by marked regional disparities in development and popularity. Some areas have established themselves as prominent destinations with comprehensive tourism offerings, while others remain in the early stages of development. The Cameron Highlands is a prime example of a mature agrotourism hub, offering a variety of experiences such as farm stays, strawberry picking, and agricultural tours that cater to both domestic and international visitors. Similarly, Desa Wawasan Nelayan, a fishing village in Penang, has integrated agrotourism with local fishing traditions, providing tourists with unique opportunities to engage in fish farming and seafood culinary experiences (Peng, 2017; Hamzah et al., 2012). Conversely, many rural areas in East Malaysia and parts of Peninsular Malaysia are still developing their agrotourism potential due to challenges such as limited infrastructure and investment, and lack of awareness. National tourism statistics from Tourism Malaysia indicate an upward trend in tourist arrivals to agrotourism sites, contributing significantly to rural income generation and employment. This uneven development suggests that while some regions reap substantial benefits from agrotourism, others require targeted support to unlock their potential.

Agrotourism offerings across Malaysia are diverse, catering to a broad spectrum of tourists with varying interests and motivations. Experiences range from immersive farm stays where visitors live alongside

farmers, to educational tours that highlight sustainable farming techniques and local biodiversity. Visitors can participate in hands-on activities such as planting, harvesting, or cooking using local produce, which enhances cultural exchange and learning. Culinary tourism is another growing segment, with agrotourism sites promoting traditional Malaysian dishes made from farm-fresh ingredients, appealing to food enthusiasts and cultural tourists alike (Man & Aspany, 2020; Rahman et al., 2014). These multifaceted experiences attract domestic tourists seeking weekend escapes from urban centers like Kuala Lumpur and Johor Bahru, as well as international travelers eager to explore authentic rural lifestyles in Southeast Asia. The relevant agencies actively support these initiatives by encouraging agricultural entrepreneurs to diversify into tourism, providing advisory services and financial incentives through programs like the Young Agropreneur initiative (Ministry of Agriculture and Food Industries, 2021).

Agrotourism in Malaysia has demonstrated significant potential as a driver of sustainable rural development by diversifying income sources, preserving cultural heritage, and promoting environmental conservation. The sector's growth has been supported by strategic government policies, community engagement, and private sector investments, evolving from a niche initiative into an integral part of Malaysia's broader tourism landscape. Moving forward, enhancing infrastructure, expanding marketing efforts, and ensuring equitable community benefits will be vital to sustaining momentum and addressing regional disparities within the industry.

SOCIOECONOMIC IMPACTS OF AGROTOURISM

Agrotourism has significant socio-economic implications for Malaysia, creating a diverse range of benefits for farmers, local communities, and the wider economy. These effects are derived from an in-depth analysis of the selected studies. One of the most evident benefits of agrotourism is its capacity to generate additional income for farmers and rural communities. By inviting tourists to their farms and offering various services such as accommodation, farm tours, and the sale of farm products, farmers can diversify their income sources and increase their economic resilience (Annamalah et al., 2016; Bachok et al., 2019). At a broader level, agrotourism can contribute to rural development by stimulating local economies and generating employment opportunities (Hamzah et al., 2012). Agrotourism can also foster the development of social capital in rural communities. As farmers and locals engage with tourists, they cultivate relationships, build networks, and strengthen community cohesion. Additionally, interaction with the different cultures brought by tourists can lead to cultural exchange, enhancing mutual understanding and respect (Leh et al., 2017).

Agrotourism often involves showcasing traditional farming practices, local cuisine, and rural lifestyles, which helps in preserving and promoting local cultural and agricultural heritage. This not only provides tourists with authentic experiences but also fosters pride among local communities for their culture and traditions (Ariffin & Yen, 2017). The quality of the natural environment and the availability of adequate tourism infrastructure are crucial in shaping residents' and tourists' attitudes toward agrotourism. Issues such as river pollution and inadequate facilities can hinder growth, while well-maintained environments and infrastructure foster positive perceptions and participation (Hoo et al., 2024). Agrotourism also serves as an effective platform for educating tourists about agriculture, sustainability, and the rural way of life. This educational aspect is beneficial for both adults and children and can be especially impactful for urban dwellers who are often disconnected from agricultural processes (Man & Aspany, 2020). Educational and awareness experience in agrotourism activities in Malaysia can be beneficial for both farmers and visitors by providing income, education, and entertainment. Visitors can also enjoy fresh and healthy food produced on the farm or nearby (Mansor et al., 2015).

By fostering sustainable tourism and rural development, agrotourism can significantly contribute to the achievement of several UN Sustainable Development Goals, including SDGs 1, 2, 8, 12, and 13. In pursuit of Goal 1 (No Poverty), agrotourism serves as a vital avenue for generating income in rural communities, contributing significantly to poverty alleviation and reducing inequality. Additionally, aligning with Goal 2 (Zero Hunger), agrotourism fosters sustainable agriculture, imparting knowledge about food security to visitors. Furthermore, in support of Goal 8 (Decent Work and Economic Growth), agrotourism acts as a catalyst for job creation and economic advancement in rural regions. It also addresses Goal 12 (Responsible Consumption and Production) by promoting sustainable practices, including reducing food waste and supporting local farmers, thus ensuring responsible consumption and production. Moreover, agrotourism contributes to Goal 13 (Climate Action) by encouraging sustainable land use and mitigating the adverse impacts of climate change through eco-friendly practices (Mohammad & Er, 2018; Ait-Yahia et al., 2021).

Agrotourism in Malaysia presents a multifaceted socio-economic impact, contributing not only to income diversification and employment creation in rural areas but also to the enhancement of social capital, the preservation of cultural heritage, and the promotion of sustainable practices. By aligning with multiple UN Sustainable Development Goals, agrotourism fosters holistic growth, addressing poverty, food security, responsible production, and climate action. Strengthening community engagement and ensuring sustainable practices are key to maximizing its socio-economic benefits while supporting broader national development objectives.

CHALLENGES IN AGROTOURISM

Despite the promising growth and development of agrotourism in Malaysia, several challenges have emerged that could hinder its sustainable growth. These issues were identified through a systematic review of the literature. A critical barrier lies in the limited knowledge and skills among local farmers and rural communities. Many individuals engaged in agrotourism are often unfamiliar with best practices in tourism service delivery. For instance, studies have shown that farmers in regions such as Perak and Kelantan struggle with hospitality standards, basic entrepreneurship, and customer service (Siti-Hajar et al., 2014). Moreover, the inability to communicate in foreign languages, particularly English and Mandarin, reduces the appeal of agrotourism sites to international visitors, an issue that is also reflected in similar ASEAN markets like Indonesia and Vietnam where tourism workers in rural areas face linguistic barriers (Ambalegin et al., 2022).

Another significant hurdle is the inadequate infrastructure in many rural regions of Malaysia. Essential facilities such as paved roads, transportation access, sanitation, and comfortable lodging are often lacking in agrotourism zones. For example, agrotourism sites in rural Sabah and parts of Pahang have struggled to accommodate visitors due to poor road conditions and limited public transportation. These infrastructural deficits not only restrict tourist mobility but also affect the quality of the visitor experience, deterring repeat visits and reducing word-of-mouth promotion (Mansor et al., 2015). In contrast, countries like Thailand have successfully addressed this issue through integrated rural tourism policies that combine infrastructure development with community-based tourism initiatives, thereby ensuring smoother access and greater appeal to both domestic and foreign tourists.

Environmental sustainability is another pressing concern, particularly in heavily visited agrotourism areas such as Cameron Highlands. While tourism brings economic benefits, it also increases human activity and the risk of environmental degradation. Improper waste disposal, land conversion, and overexploitation of natural resources have caused serious ecological damage. For instance, the rapid

development of agriculture and tourism in Cameron Highlands has resulted in severe water pollution from sedimentation and agrochemical runoff, exacerbated by indiscriminate land clearing over the past three decades (Razali et al., 2018). Without effective regulation and awareness, such practices threaten not only the ecological integrity of these regions but also the very agricultural foundation upon which agrotourism is built (Mohammad & Er, 2018). This pattern is similarly observed in Vietnam's Sapa and Bali's upland farming villages, where mass tourism and poor environmental practices have led to deforestation and water contamination.

A further obstacle to successful agrotourism development in Malaysia is the lack of cohesive collaboration among key stakeholders. The success of agrotourism depends on coordinated efforts between farmers, local authorities, tourism operators, and policymakers. However, evidence suggests that this collaboration is often fragmented or absent, leading to misaligned goals and inefficient use of resources (Tiraeyari & Hamzah, 2012). For example, in some agrotourism projects in Negeri Sembilan and Terengganu, overlapping responsibilities between government agencies have caused delays in implementation and support. ASEAN neighbors, such as the Philippines, have addressed similar issues by forming local agrotourism councils, which serve as platforms for stakeholder dialogue and shared planning. A study by Wahed et al. (2023) highlights that government agencies in Malaysia encounter significant challenges, including unclear communication channels, limited knowledge transfer between relevant industries, underdeveloped marketing capabilities, and the absence of a practical and replicable agrotourism model.

Lastly, insufficient marketing and promotion significantly limit the visibility and growth potential of Malaysia's agrotourism sector. While Malaysia offers a rich and diverse array of agrotourism experiences, ranging from fruit farms in Johor to paddy field tours in Kedah, many of these attractions remain under-promoted. A study by Jaunis et al. (2022) highlighted that many rural operators lack digital marketing skills and rely on outdated promotional channels, leaving potential tourists unaware of available experiences. In contrast, countries like Thailand and Singapore actively use social media campaigns and partnerships with travel platforms to enhance their agrotourism reach. To remain competitive, Malaysia must invest in more targeted and tech-savvy marketing strategies, including influencer collaborations, multilingual content, and tourism apps to attract both local and international markets.

The growth of agrotourism in Malaysia faces several notable challenges, including limited skills among local farmers, inadequate infrastructure, environmental concerns, insufficient collaboration among stakeholders, and ineffective marketing strategies. These issues highlight the need for targeted capacity-building programs, infrastructure development, sustainable tourism policies, stronger stakeholder partnerships, and strategic marketing initiatives. Addressing these challenges will be essential to ensuring the sustainable and resilient development of Malaysia's agrotourism sector.

DISCUSSION

The systematic review of the literature on agrotourism in Malaysia revealed a multitude of dimensions: its development, challenges, socio-economic impacts, and its potential for post-COVID-19 recovery and contribution towards the UN's SDGs. The discussion synthesizes these findings and their implications. The development of agrotourism has demonstrated progressive momentum, largely driven by state policies, grassroots entrepreneurship, and the rising consumer demand for sustainable and experiential travel. However, its trajectory is not without constraints. Empirical studies consistently highlight systemic challenges such as inadequate infrastructure, fragmented stakeholder collaboration, limited

marketing capabilities, and insufficient technical knowledge among operators. These barriers, while significant, also reveal key leverage points for targeted policy and institutional reforms. A strategic, multi-stakeholder approach is essential to address these structural inefficiencies and to foster an enabling environment for sustained sectoral growth.

The socio-economic impacts of agrotourism further reinforce its relevance as a rural development tool. Agrotourism not only facilitates income diversification among rural households but also strengthens social cohesion and reinforces cultural heritage. It serves as a platform for community-based participation, local empowerment, and intergenerational knowledge transfer. Such dimensions underscore agrotourism's potential to mitigate rural poverty, curb urban migration, and foster inclusive development. However, to maximize these benefits, the literature calls for sustained financial investment, capacity-building programs, and the integration of agrotourism within broader rural development strategies.

In the phase of post-COVID-19 recovery, agrotourism emerges as a strategic alternative to mainstream tourism. With pandemic-induced shifts in consumer preferences favouring nature-based, less-crowded, and locally grounded experiences, agrotourism stands well-positioned to capitalize on emerging domestic tourism trends. This is particularly pertinent for Malaysia, where rural destinations can serve as safe and attractive retreats for urban populations. Moreover, agrotourism's reliance on local supply chains and its potential to stimulate micro-enterprises enhance its resilience to external shocks. It thus presents itself as a viable pathway for tourism recovery and economic revitalization in the post-pandemic era. Aligned with global sustainability agendas, agrotourism's contribution to the UN Sustainable Development Goals further legitimizes its strategic value. Literature points to its alignment with goals related to poverty alleviation, decent work and economic growth, sustainable communities, and responsible consumption and production. Its ecological sensitivity and promotion of agrobiodiversity also intersect with environmental objectives such as SDG 15. Therefore, agrotourism is not merely a niche economic activity but a conduit for integrated rural transformation, sustainability, and resilience.

The discussion herein makes it apparent that agrotourism in Malaysia offers a promising pathway for sustainable development, economic diversification, and rural resilience. While its socio-economic potential is evident, addressing challenges such as skill gaps, infrastructure deficiencies, and environmental impacts is crucial for balanced growth. Enhancing stakeholder collaboration and strategic marketing will further support its role in Malaysia's post-COVID-19 recovery and contribute meaningfully to achieving the UN Sustainable Development Goals. Prioritizing these efforts will be essential for harnessing agrotourism's full potential as a transformative sector in rural Malaysia.

IMPLICATIONS FOR PRACTICE AND POLICY

The recent introduction of the Agrotourism Development Program under Malaysia's Industry Funding and Commercialization Incentive marks a promising institutional commitment. This initiative, led by the Ministry of Agriculture and Food Security, offers financial support to individuals and organizations engaged in agriculture-based tourism. It represents a paradigm shift toward the formalization and commercialization of agrotourism, promoting sustainable practices and enhancing the visitor experience. Overall, the literature underscores the urgent need for coordinated efforts across sectors to elevate agrotourism as a core component of Malaysia's rural and tourism development strategy. The findings from this systematic review have several important implications for practice and policy for agrotourism development in Malaysia, as illustrated in Figure 2.

1. Agropreneurs

Strengthening Capacity and Skills: Given the identified skills and knowledge gaps among farmers and local communities, there is an urgent need to strengthen their capacity through relevant training programs. These should aim to develop entrepreneurship, business management, customer service, and foreign language skills. Special emphasis should also be placed on the principles and practices of sustainable tourism.

2. Communities

Enhancing Marketing and Promotion: There is a significant potential to improve the marketing and promotion of agrotourism in Malaysia. This could involve developing a national branding strategy for agrotourism, leveraging digital marketing channels, and targeting specific segments of tourists who are more likely to be interested in agrotourism experiences.

3. Government

a) **Improving Infrastructure:** Governments, in collaboration with private sector partners, should invest in improving the infrastructure necessary for agrotourism. This includes developing and maintaining quality accommodation options, improving transportation links, and ensuring accessibility to rural areas.

b) **Environmental Sustainability:** Policymakers should establish and enforce regulations aimed at ensuring environmental sustainability in agrotourism activities. This should include guidelines for waste management, regulations to prevent damage to local ecosystems, and incentives for practices that protect and enhance the local environment.

c) **Alignment with the UN Sustainable Development Goals:** The alignment of agrotourism with several UN Sustainable Development Goals should be leveraged to garner support and resources from international agencies and donors. This would also enhance the global appeal and reputation of agrotourism in Malaysia.

4. Multiple Stakeholders

Promoting Collaboration: There is a need to foster better collaboration among the different stakeholders involved in agrotourism. This includes creating platforms for dialogue and cooperation among farmers, local communities, tourism operators, and government agencies. Joint planning and coordination can lead to more effective and inclusive outcomes.

5. Researcher

Integration in Post-COVID-19 Recovery Plans: Given the potential of agrotourism to support post-COVID-19 recovery, it should be integrated into the national recovery strategy. This could involve specific measures such as promotional campaigns targeting domestic tourists, financial support for farmers and communities affected by the pandemic, and initiatives to improve health and safety standards in agrotourism.

6. Integration of Agrotourism with Rural Development

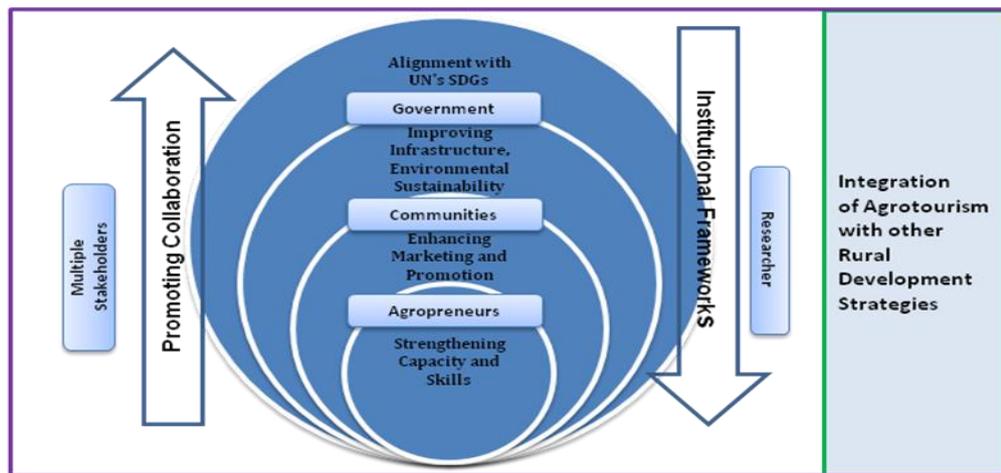
Stakeholder Engagement and Strategic Frameworks highlight the need for the strategic integration of agrotourism into rural development. This underscores the need for agropreneurs' skill enhancement, combined with community-driven marketing. The government plays a crucial role in bolstering infrastructure and aligning with the UN Sustainable Development Goals, while emphasizing environmental conservation. Collaborative efforts among stakeholders in the agrotourism chain are

essential. Ongoing research further strengthens this framework, aligning agrotourism with overarching rural development goals.

The findings of this review suggest critical steps for agrotourism development in Malaysia. Prioritizing skill-building among farmers and communities, improving infrastructure, and ensuring environmental sustainability are key to effective practice. Enhanced collaboration among stakeholders, better marketing strategies, and the integration of agrotourism into national post-COVID-19 recovery plans can drive growth. Aligning these initiatives with the UN Sustainable Development Goals can attract international support, making agrotourism a central component of sustainable rural development. The next section will discuss directions for future research.

Figure 2

Integration of Agrotourism with Rural Development: Stakeholder Engagement and Strategic Framework



Source: Developed by the researchers

FUTURE RESEARCH DIRECTIONS

While the present systematic review has illuminated several key aspects of agrotourism in Malaysia, it also identifies areas where further research is needed.

- i. Deepening Understanding of Tourist Behavior: Understanding the motivations, expectations, and behaviors of tourists engaging with agrotourism is crucial for its success. More research is needed to explore these aspects, especially considering the post-COVID-19 context where tourists' preferences and concerns may have changed.
- ii. Evaluating Impacts on Local Communities: While this review highlights several socio-economic benefits of agrotourism, there is a need for more empirical studies assessing its actual impact on local communities, both positive and negative. This would involve measuring changes in income, employment, social cohesion, and cultural preservation attributed to agrotourism.
- iii. Exploring Environmental Impacts: The environmental implications of agrotourism require further exploration. While agrotourism has the potential to promote sustainable practices, it can also strain local resources if not managed correctly. Studies assessing the environmental footprint of agrotourism activities would be valuable in this regard.
- iv. Assessing Policy and Institutional Frameworks: Further research should evaluate the effectiveness of existing policies and institutional frameworks supporting agrotourism. This

could provide insights into areas for improvement and identify best practices that could be adopted by other regions or countries.

- v. **Technological Innovations in Agrotourism:** As digital technology is becoming increasingly influential in tourism, studies exploring how technology can enhance the agrotourism experience would be beneficial. This could involve using digital marketing, virtual reality, mobile apps, and other technology-based solutions in the context of agrotourism.
- vi. **Integration of Agrotourism with Other Rural Development Strategies:** Future research should explore how agrotourism can be integrated with other rural development strategies, such as organic farming, renewable energy production, and rural crafts. This could lead to a more holistic and sustainable approach to rural development.

Future research on agrotourism in Malaysia should prioritize understanding tourist behavior, assessing socio-economic and environmental impacts, and evaluating existing policies. Deepening insights into tourist motivations and behaviors, especially in a post-COVID-19 context, is crucial for designing responsive agrotourism offerings. Empirical studies are also needed to measure local socio-economic outcomes and environmental implications. Moreover, exploring the role of technology in enhancing agrotourism and integrating it with broader rural development strategies like organic farming and renewable energy could support a more sustainable model of rural development.

CONCLUSION

This systematic review has provided valuable insights into the development, challenges, and socio-economic impacts of agrotourism in Malaysia. The findings emphasize the immense potential of agrotourism as a strategy for rural development, economic diversification, cultural preservation, and the achievement of the UN Sustainable Development Goals. Agrotourism in Malaysia has witnessed notable progress, driven by supportive policies, entrepreneurial initiatives, and growing interest in sustainable tourism. However, challenges such as limited knowledge and skills, inadequate infrastructure, environmental concerns, collaboration gaps, and marketing deficiencies need to be addressed to ensure sustainable and inclusive growth. The socio-economic impacts of agrotourism are significant, generating additional income for farmers, enhancing social capital, preserving cultural heritage, and fostering education and awareness. Moreover, agrotourism can contribute to the post-COVID-19 recovery by attracting domestic tourists seeking rural experiences and by promoting a more resilient and sustainable tourism sector. The novelty of this research lies in its systematic exploration of agrotourism in Malaysia, offering new perspectives on its development, socio-economic impacts, and integration into post-pandemic recovery strategies. The study's focus on both empirical outcomes and strategic interventions sets a foundation for more targeted, evidence-based approaches in future agrotourism initiatives.

The implications of this study are multifaceted and actionable, providing clear directions for enhancing Malaysia's agrotourism sector. First, capacity building among farmers should be prioritized through regular workshops focused on entrepreneurship, digital marketing, and sustainable practices. These programs can improve service quality and enable farmers to diversify their income sources effectively. Second, infrastructure improvements require targeted investments, particularly in rural areas lacking basic amenities like accommodation, reliable transportation, and digital connectivity. For instance, establishing a national program to develop eco-friendly accommodations and improve road access could significantly boost tourist engagement.

To ensure environmental sustainability, it is crucial to implement strict regulations on waste management, land use, and resource consumption. Incentives, such as tax benefits for farms that adopt

eco-friendly practices, can promote the wider adoption of sustainable measures. Additionally, fostering collaboration among stakeholders, including government agencies, local communities, and the private sector, should be pursued through formal platforms that facilitate dialogue and joint planning, ensuring resource optimization and strategic marketing. Furthermore, integrating agrotourism into Malaysia's national post-COVID-19 recovery strategies is essential. This includes launching domestic campaigns that highlight safe, outdoor experiences and implementing financial support measures like micro-loans for rural entrepreneurs affected by the pandemic. Aligning these efforts with the UN Sustainable Development Goals can attract international funding and strengthen the sector's global appeal. By following these steps, agrotourism can effectively contribute to sustainable rural development, cultural preservation, and economic resilience in Malaysia.

ACKNOWLEDGEMENT

This work was supported by the Ministry of Higher Education Malaysia for Fundamental Research Grant Scheme with Project Code: FRGS/1/2022/SS0/USM/02/27.

REFERENCES

- Ait-Yahia Ghidouche, K., Nechoud, L., & Ghidouche, F. (2021). Achieving sustainable development goals through agritourism in Algeria. *Worldwide Hospitality and Tourism Themes*, 13(1), 63-80. <https://doi.org/10.1108/WHATT-08-2020-0092>.
- Ambalegin, A., Tomi, Handayani, N. D., & Mubarak, Z. H. (2022). An English speaking training for the dragon fruit plantation workers in Rempang Island, Batam: agro-tourism base. *Puan Indonesia*, 3(2), 255-264. <https://doi.org/10.37296/jpi.v3i2.75>
- Annamalah, S., Munusamy, J., & Sentosa, I. (2016). Agro-tourism: A cash crop for farmers in Malaysian rural area. *SSRN Electronic Journal*. <http://dx.doi.org/10.2139/ssrn.2876269>
- Ariffin, A. R. M., & Irwan Yen, A. M. (2017). Sustainable agrotourism curating by conferring community involvement in Tanah Rata, Cameron Highlands, Malaysia. *Journal of Design and Built Environment, (Special Issue: Livable Built Environment)*, 38-52. <https://doi.org/10.22452/jdbe.sp2017no1.4>
- Azhar, S. N. F. S., Khanafi, S., Hassan, M., & Sibly, S. (2020). Agrotourism in Malaysia: A study of its prospects among youth in Pekan Nanas, Pontian. *e-Review of Tourism Research*, 18(1), 168-185. <https://ertr-ojs-tamu.tdl.org/ertr/article/view/184>
- Bachok, S., Hasbullah, H., & Amin, T. A. T. M. (2019). Rural agro-tourism and local community income: The case study of clustered homestays in Kelantan and Terengganu. *Journal of the Malaysian Institute of Planners*, 17(1), 128-137. <https://doi.org/10.21837/pm.v17i9.592>
- Fahmi, Z., Hamzah, A., Muhammad, M., Yassin, S. M., Samah, B. A., D'Silva, J. L., & Shaffril, H. A. M. (2013). Involvement in agro-tourism activities among communities in Desa Wawasan Nelayan villages on the East Coast of Malaysia. *Asian Social Science*, 9(2), 203-207. <https://doi.org/10.5539/ass.v9n2p203>
- Hamzah, A., Yassin, S. M., Samah, B. A., D'Silva, J. L., Tiraiyaei, N., Shaffril, H. A. M., & Uli, J. (2012). Socio-economic impact potential of agro tourism activities on Desa Wawasan Nelayan community living in Peninsular Malaysia. *African Journal of Agricultural Research*, 7(32), 4581-4588. <https://doi.org/10.5897/AJAR11.295>
- Hoo, W., Hong, A., Madhavedi, S., Ho, R., Ngui, K., & Prompayo, M. (2024). The effect of natural environment, tourism infrastructure, perceived social benefit, and perceived barriers on residents' attitude towards agrotourism in Seremban, Malaysia. *Journal of Infrastructure, Policy and Development*. <https://doi.org/10.24294/jipd.v8i8.6370>.

- Jaunis, O., Mojiol, A. R., & Kodoh, J. (2022). Agrotourism in Malaysia: A review on concept, development, challenges, and benefits. *Transactions on Science and Technology*, 9(2), 77-85. <https://tost.unise.org/pdfs/vol9/no2/ToST-9x2x77-85xRA.pdf>
- Kunasekaran, P., Ramachandran, S., Yacob, M. R., & Shuib, A. (2011). Development of farmers' perception scale on agro-tourism in Cameron Highlands, Malaysia. *World Applied Sciences Journal*, 12 (Special Issue of Tourism & Hospitality), 10-18.
- Leh, O. L. H., Noor, M. H. C. M., Marzukhi, M. A., & Musthafa, S. N. A. M. (2017). Social impact of agro-tourism on local urban residents: Case study: Cameron Highlands, Malaysia. *Journal of the Malaysian Institute of Planners*, 15(2), 51-66. <https://doi.org/10.21837/pm.v15i2.267>
- Man, N., & Aspany, H. A. H. (2020). Agri-tourism preferences factors among urban dwellers. *Malaysian Journal of Agricultural Economics*, 29(1), 1-22. <https://doi.org/10.36877/mjae.a0000153>
- Mansor, N., Rashid, K. M., Mohamad, Z., & Abdullah, Z. (2015). Agro-tourism potential in Malaysia. *International Academic Research Journal of Business and Technology*, 1(2), 37-45. <https://www.iarjournal.com/wp-content/uploads/IBTC2015-p37-44.pdf>
- Mazlan, N., & Juraimi, A. S. (2014). Development and challenges of agritourism in Malaysia. *Journal of the International Society for Southeast Asian Agricultural Sciences*, 20(1), 131-138. <https://www.pustaka-sarawak.com/eknowbase/attachments/1625124856.pdf>
- Ministry of Agriculture and Food Industries. (2021). Malaysia agriculture and farm industry. https://www.mafi.gov.my/en_US/sektor-agropelancongan-negara.
- Malaysia Tourism Promotion Board. (2012). Malaysia's homestay programme wins the UNWTO 2012 ulysses awards. <https://www.tourism.gov.my/media/view/malaysia-s-homestay-programme-wins-the-unwto-2012-ulysses-awards>.
- Ministry of Tourism, Arts and Culture Malaysia. (2021). Executive summary - National Tourism Policy 2020-2030. <https://www.motac.gov.my/en/download/category/114-dasar-pelancongan-negara-dpn-2020-2030>.
- Ministry of Tourism, Arts and Culture Malaysia. (2023). Malaysian homestay experience programme. <https://www.motac.gov.my/en/programme/tourism/homestay>.
- Mohammad, Z., & Er, A. C. (2018). *Agro-tourism potentials of agro-ecological paddy farming: A case study in Bachok, Kelantan*. In Proceedings of the International Conference on Tourism Business and Technology (ICTBT, 2018), 8-9 December, Sabah, Malaysia. 201-208.
- Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., & PRISMA Group. (2009). Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. *Annals of Internal Medicine*, 151(4), 264-269. <https://doi.org/10.1371/journal.pmed.1000097>
- Pahlevan Sharif, S., Mura, P., & Wijesinghe, S. N. (2019). Systematic reviews in Asia: Introducing the "PRISMA" protocol to tourism and hospitality scholars. In *Quantitative Tourism Research in Asia: Current Status and Future Directions*. 13-33.
- Peng, L. E. (2018). Understanding the attributes that motivates tourists choice towards agritourism-destination in Cameron. *Qualitative and Quantitative Research Review*, 3(1), 39-60.
- Rahman, S. B. A., Rahman, I. R. A., & Nasruddin, M. N. M. (2014). *Service quality factor for the success of home stay agro tourism in Malaysia*. In Proceedings of MIICEMA 2014, 10-11 November, Putrajaya, Malaysia. 338-352.
- Razali, A., Syed Ismail, S. N., Awang, S., et al. (2018). Land use change in highland area and its impact on river water quality: A review of case studies in Malaysia. *Ecol Process*, 7(19). <https://doi.org/10.1186/s13717-018-0126-8>
- Siti-Hajar, Z., Fadzilah, M. S., Muzzamir, M., & Norhaslin, A. H. (2014). *Entrepreneurial knowledge and hospitality awareness of agro-tourism*. In Proceedings of Theory and Practice in Hospitality and Tourism Research, Leiden, The Netherlands. 275-278.

- Tiraieyari, N., & Hamzah, A. (2012). Agri-tourism: Potential opportunities for farmers and local communities in Malaysia. *African Journal of Agricultural Research*, 6(31), 4357-4361. <https://doi.org/10.5897/AJARx11.035>
- Tourism Malaysia. (n.d.). Malaysia tourism statistics. <https://www.tourism.gov.my/statistics>.
- Wahid, N., Hassan, M., & Kassim, M. (2023). Government Agencies Impediments Towards Establishing Pertinence Agrotourism Prospect in Malaysia: Case Study in Jerantut Pahang. *Compendium by PaperASIA*. [https://doi.org/10.59953/cpa.v39i5\(b\).24](https://doi.org/10.59953/cpa.v39i5(b).24).