

Agritourism as a catalyst for sustainable rural development: Innovations, challenges, and policy perspectives in the post-COVID-19 era

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Abstract: This study investigates the dynamic landscape of agritourism in Thailand, emphasizing innovations, challenges, and policy implications in the post-COVID-19 era. Employing a qualitative approach, including a comprehensive literature review and semi-structured interviews with stakeholders, the research identifies key agritourism models, such as immersive learning experiences, technology-driven agritourism, and unconventional practices like salt and coconut plantations. Findings reveal that agritourism has adapted to shifting market demands through diversification, technological integration, and a heightened focus on sustainability. Notably, technology adoption in precision farming and hydroponics enhances resource efficiency and visitor engagement, while initiatives like rice paddy field tourism and highland agritourism showcase the cultural and ecological richness of rural landscapes. The study underscores the critical role of policy frameworks, infrastructure development, and community empowerment in fostering sustainable agritourism practices. Key policy recommendations include targeted subsidies, capacity-building programs, and harmonized regulatory frameworks to address challenges such as financial constraints, regulatory ambiguities, and inadequate infrastructure. This research contributes to the broader discourse on sustainable tourism and rural development, aligning agritourism with the United Nations Sustainable Development Goals (SDGs). By synthesizing insights on innovation, resilience, and sustainability, this study offers a comprehensive roadmap for policymakers, practitioners, and academics to leverage agritourism as a vehicle for rural revitalization and global sustainability. Future research directions are proposed to explore the long-term impacts of technological integration, community empowerment, and resilience strategies in agritourism.

Keywords: agritourism; innovation; sustainability; rural development; experiential tourism; cultural heritage; resilience

1. Introduction: Agritourism as a catalyst for sustainable rural development

Agritourism, the dynamic intersection of agriculture and tourism, offers immersive experiences rooted in agricultural practices while fostering diversified income streams for farmers (Saxena et al., 2018). It serves as a bridge connecting tourists with rural communities, providing opportunities for experiential learning and promoting environmental conservation. Agritourism offers multifaceted benefits, including income diversification for farmers, authentic experiences for tourists, and the preservation of cultural heritage (Garwi, 2025). As a transformative strategy for sustainable rural development, agritourism addresses critical goals such as preserving cultural heritage, promoting environmental sustainability, and stimulating economic growth (Holden, 2013; UNWTO, 2016). The growing global demand for sustainable

tourism positions agritourism as a key sector for overcoming rural development challenges while fostering economic resilience and environmental sustainability (Carpio et al., 2008).

Beyond its economic and ecological contributions, agritourism serves as a platform for educational and cultural exchange, fostering awareness of sustainable agriculture and bridging the gap between urban and rural communities (Weaver and Fennell, 2007). By facilitating direct interaction with agricultural practices and rural lifestyles, agritourism cultivates a deeper understanding of the complexities of modern farming and inspires collective responsibility for environmental stewardship and food security (Addinsall et al., 2017).

Furthermore, agritourism has become a catalyst for rural innovation, driving the adoption of advanced technologies, fostering creative marketing strategies, and supporting the diversification of agricultural operations (Getz and Page, 2016). These innovations empower farmers to adapt to shifting market demands and enhance their competitiveness. Examples range from eco-conscious organic farming tours to curated farm-to-table culinary experiences, reflecting a harmonious integration of traditional agricultural practices with contemporary sustainability principles (Ashley and Mitchell, 2008).

The COVID-19 pandemic further underscored the resilience of agritourism as travelers sought safe, open-air destinations aligned with public health priorities (Hamdy and Zhang, 2023). This shift highlighted agritourism's potential to revitalize rural economies sustainably (Higgins-Desbiolles, 2021). Consequently, policymakers worldwide have implemented supportive measures such as targeted funding, policy frameworks, and infrastructure investments to bolster the growth of this sector (Clark et al., 2018).

By integrating economic, cultural, and environmental objectives, agritourism contributes significantly to achieving the United Nations' Sustainable Development Goals (SDGs) (Seraphin and Gowreesunkar, 2021). As the sector evolves, it offers innovative solutions to modern challenges while preserving the authenticity of rural landscapes and securing a sustainable future for agricultural communities (Knickel et al., 2018).

2. Literature review

2.1. Agriculture in Thailand: A historical and contemporary overview

Thailand's rich agricultural heritage has shaped its identity, economy, and socio-cultural fabric (Van Esterik, 2020). Abundant natural resources and a favorable climate have positioned Thailand as an agricultural powerhouse, with the sector playing a pivotal role in fostering rural livelihoods and economic resilience (Young, 2019).

2.1.1. Historical context and economic contributions

From the ancient kingdoms of Sukhothai and Ayutthaya to contemporary times, agriculture has formed the backbone of the Thai economy (Bowornwathana, 2005). Rice cultivation, deeply ingrained in Thai culture, has long been a symbol of sustenance and community. Administrative reform and tidal waves from regime shifts:

Tsunamis in Thailand's political and administrative history (Rigg and Ritchie, 2002). The ingenious rice terraces carved into the northern highlands exemplify the adaptability of traditional farming systems (Koothafkan and Altieri, 2011). Beyond rice, Thailand has diversified into high-value commodities such as rubber, cassava, and oil palm, contributing significantly to economic growth and export earnings (Birthal et al., 2022). However, the environmental impact of monoculture plantations necessitates a shift towards sustainable agricultural practices (Ghazoul et al., 2010). This includes promoting crop diversification, integrated pest management, and responsible land use to mitigate deforestation and biodiversity loss.

2.1.2. Socio-cultural dimensions

Thai agriculture is inextricably linked to the nation's cultural identity, as evidenced by traditional practices, ceremonies, and cooperative systems (Plaiphum and Tansuchat, 2023). Rural life revolves around the agricultural calendar, with seasonal activities like planting and harvesting fostering a sense of community and shared responsibility (Sumida Huaman and Valdiviezo, 2014). Festivals such as the Royal Ploughing Ceremony and Bun Bang Fai reflect the spiritual significance of agriculture in Thai society (Sarasombat, 2017). However, the pervasive influence of market-driven forces and the rapid adoption of modern technologies present significant challenges to the continuity of traditional cooperative systems, potentially undermining social cohesion within rural communities (Zhao, 2010). Preserving these cultural practices is crucial for maintaining social harmony and strengthening rural identity (Qin et al., 2024).

2.1.3. Environmental challenges and sustainable practices

While contributing to food security and economic growth, intensive agriculture in Thailand has exerted pressure on the environment (Delang, 2006). Challenges include deforestation, water pollution from agrochemicals, and biodiversity loss (Singh and Singh, 2017). The expansion of monoculture plantations, particularly oil palm, has further exacerbated these concerns. In response, the Thai government has promoted sustainable practices such as organic farming, integrated pest management, and community-based forestry initiatives (Chaiklang et al., 2024). Agritourism can play a crucial role in promoting environmental awareness and encouraging sustainable agricultural practices (Pehin Dato Musa and Chin, 2022).

2.1.4. Technological innovations and future prospects

The future of Thai agriculture hinges on its ability to integrate advanced technologies and innovative practices. Precision agriculture, leveraging drones, IoT sensors, and data analytics, offers solutions for optimizing resource use, enhancing productivity, and minimizing environmental impact (Limpamont et al., 2024). Biotechnology and genetic engineering can contribute to developing climate-resilient crop varieties. Digital platforms are empowering farmers by enhancing market access and facilitating direct engagement with consumers (Waqar et al., 2024). These innovations are crucial for strengthening Thailand's agricultural sector in the face of global challenges such as climate change and evolving consumer demands (Waqas et al., 2024).

2.2. Defining agritourism

The United Nations World Tourism Organization (UNWTO) defines agritourism as a form of nature-based tourism that allows visitors to engage with agricultural practices, explore rural landscapes, and foster cultural appreciation (UNWTO, 2016). It serves as a bridge connecting tourists with rural communities, providing opportunities for experiential learning and promoting environmental conservation. Agritourism offers multifaceted benefits, including income diversification for farmers, authentic experiences for tourists, and the preservation of cultural heritage (Garwi, 2025).

2.3 Demand for agritourism

Understanding tourist motivations is crucial for developing successful agritourism offerings. Contemporary travelers seek authentic and immersive experiences that emphasize cultural integration, environmental sustainability, and wellness (Li et al., 2024). Factors influencing tourist preferences include destination accessibility, the diversity of activities, quality of services, and the availability of unique experiences (Karim et al., 2024). Agritourism models that incorporate farm-to-table dining, hands-on workshops, and eco-accommodations have proven particularly effective in attracting niche markets (Wu et al., 2024). The COVID-19 pandemic further amplified the demand for nature-based agritourism experiences, aligning with global trends in sustainable and wellness tourism (Hashmi and Zonah, 2024).

2.4. Supply dynamics in agritourism

The supply side of agritourism involves providing the necessary infrastructure, resources, and community engagement to deliver high-quality experiences (Olatidoye, 2024). Development of Agritourism Business in Emerging Economies in Agripreneurship and the Dynamic Agribusiness Value Chain. Porter's value chain framework offers a useful lens for analyzing agritourism operations, from agricultural production to service delivery and consumer engagement (John, 2022). Community-led approaches are essential for ensuring equitable benefit distribution and fostering social cohesion (Tew and Barbieri, 2012). Developing robust agritourism value chains by integrating local artisans, farmers, and service providers enhances competitiveness and strengthens the overall tourism ecosystem (Wu et al., 2024).

2.5. Innovation in agritourism models

This study examines the innovations driving the evolution of agritourism in Thailand. These innovations encompass a wide range of approaches, including the integration of technology, the development of unique and immersive experiences, and the adoption of sustainable practices. Innovation is key to the resilience and adaptability of agritourism in a rapidly changing world (Novelli et al., 2018). Innovative models, such as immersive workshops, eco-tourism integrations, and digital experiences, are transforming the industry. Technologies like augmented reality (AR) and virtual reality (VR) can enhance the educational and entertainment value of agritourism, offering virtual farm tours and interactive experiences (Bauer, 2023).

2.6. Agritourism in the post-COVID-19 era

The COVID-19 pandemic has reshaped global tourism, with travelers increasingly seeking open-air, less crowded destinations (Gössling et al., 2021). Agritourism, with its inherent focus on nature and outdoor activities, is well-positioned to meet these preferences. Farms have adapted by offering contactless experiences, promoting local food systems, and utilizing digital tools for remote engagement (O'Connell et al., 2021). Policymakers recognize agritourism's potential to drive economic recovery in rural areas, leading to increased investment in infrastructure, training programs, and marketing campaigns (Yamagishi et al., 2024).

2.7. Policy challenges in agritourism development

Despite its potential, agritourism in Thailand faces challenges such as regulatory ambiguities, inadequate infrastructure, and limited financial support (Kontogeorgopoulos et al., 2015). Addressing these barriers requires coordinated efforts across the agricultural, tourism, and environmental sectors to streamline policies, ensure sustainability, and promote equitable growth.

This research fills a gap in the literature by examining the role of technology in shaping the future of Thai agritourism, particularly in the context of the COVID-19 pandemic. The literature underscores the transformative potential of agritourism as a driver of rural development and innovation (Leal Filho et al., 2024). By aligning with contemporary trends and addressing emerging challenges, agritourism can contribute significantly to global sustainability efforts. The insights gleaned from this review inform the subsequent research stages, guiding the formulation of hypotheses and methodological design.

3. Methodology

This research is the third of previous Damnet et al. (2024) explore Thailand's innovative agritourism in the post-COVID-19 new normal is a new paradigm to achieve sustainable development goals, this phase employs a multi-stage qualitative approach to investigate agritourism innovation in the post-COVID-19 era. This methodology is well-suited for examining complex social phenomena, such as the evolving dynamics of agritourism, by providing rich insights into stakeholder perspectives and experiences (Braun and Clarke, 2006). The research unfolds in four stages:

- 1) Literature review: A comprehensive review of scholarly articles, industry reports, and policy documents establishes a theoretical framework and identifies key themes in agritourism innovation, with a focus on technology adoption, sustainability, and post-pandemic tourism trends (Piras, 2024).
- 2) Semi-structured interviews: To gather diverse perspectives on agritourism innovation in Thailand, in-depth interviews were conducted with a range of stakeholders, including agritourism operators, tourists, industry experts, and policymakers. In-depth interviews with agritourism operators, tourists, experts, and policymakers gather diverse perspectives on the impact of COVID-19, technological advancements, sustainability practices, evolving tourist demands, and the future of agritourism. A purposive sampling strategy was employed to

ensure representation across different agritourism models, geographical regions, and roles within the sector. The interviews explored topics such as the impact of the COVID-19 pandemic, the adoption of technology, sustainable practices, evolving tourist demands, and the future of agritourism. This qualitative data provides rich insights into the lived experiences and perspectives of those involved in the agritourism sector (Cheteni and Umejese, 2023).

- 3) **Thematic analysis:** Following the six-step framework outlined by Braun and Clarke (2006), the interview data is analyzed using thematic analysis to identify patterns and themes related to agritourism innovation. This involves familiarization with the data, generating initial codes, searching for themes, reviewing and defining themes, and presenting the findings. This rigorous process ensured that the key insights and nuances from the qualitative data were captured and interpreted effectively. This rigorous analysis ensures that the key insights and nuances from the qualitative data are captured and interpreted effectively (Joffe, 2011).
- 4) **Synthesis and interpretation:** The findings from the thematic analysis are interpreted in relation to the existing literature to identify key innovations, analyze their impact, and draw conclusions about the future direction of agritourism in the post-pandemic world. This synthesis provides a comprehensive understanding of the phenomenon under investigation, highlighting the key drivers of innovation and the challenges faced by the agritourism sector in Thailand. This synthesis provides a comprehensive understanding of the phenomenon under investigation (Liñán and Fayolle, 2015).

A total of 26 semi-structured interviews were conducted, with an average duration of 45 min. Participants included 10 agritourism operators, 5 policymakers, 8 tourists, and 3 industry experts. Diversity was ensured by considering factors such as geographical location (representing all major regions of Thailand), type of agritourism operation, years of experience in the sector, and gender.

All interviews were conducted in accordance with ethical research guidelines, including obtaining informed consent, ensuring anonymity, and maintaining confidentiality. Interviews were audio-recorded and transcribed verbatim. The transcripts were then analyzed using thematic analysis to identify recurring patterns and themes.

Ethical considerations, including informed consent, anonymity, and confidentiality, are prioritized throughout the research process. Rigor and trustworthiness are ensured through triangulation, reflexivity, member checking, and thick description. This approach provides a comprehensive understanding of agritourism innovation in the “new normal”, generating valuable insights for stakeholders and contributing to the sustainable development of the agritourism industry (Vanclay et al., 2013).

4. Results and discussion

This section presents the key findings from the analysis of data collected through semi-structured interviews with stakeholders in the Thai agritourism sector. Thematic

analysis was employed to identify recurring patterns and themes related to agritourism innovations, challenges, and policy perspectives in the post-COVID-19 era.

4.1. Agritourism innovations in the new normal

The COVID-19 pandemic has acted as a catalyst for innovation within the agritourism sector, prompting a shift towards experiences that prioritize safety, authenticity, and engagement with nature and local communities. This section explores the diverse innovations emerging within Thai agritourism, drawing upon insights from the literature, interviews with stakeholders, and observations of successful agritourism initiatives.

4.1.1. Immersive learning experiences

Transforming agricultural spaces into immersive learning environments has emerged as a key trend in agritourism (Getz and Brown, 2006). Farms offer educational experiences ranging from workshops and seasonal programs to bespoke events, allowing tourists to gain practical agricultural knowledge and connect with rural life (Chen and Diao, 2022).

For example, Rai Khun Chai in Kanchanaburi Province provides hands-on learning in organic farming and sustainable agriculture. Tourists participate in activities such as planting, harvesting, and preparing organic meals from **Figure 1**. Similarly, the Tai Lue Weaving community in Nan Province offers workshops on traditional weaving techniques, allowing visitors to learn about the cultural significance of textiles and create their own handicrafts from **Figure 2**.



Figure 1. Rai Khun Chai in Kanchanaburi Province.

Photo: Author.



Figure 2. Tai Lue Weaving community in Nan Province.

Photo: Author.

The success of such initiatives hinges on several factors. Firstly, adequate infrastructure, including well-maintained facilities and convenient access, is crucial (Moscardo, 2018). Secondly, engaging learning activities led by knowledgeable personnel enhance the visitor experience (Antón et al., 2018). Finally, active community involvement ensures the authenticity and sustainability of these initiatives (Zhang et al., 2024). It is also essential to consider the target audience and tailor the learning experiences to their interests and needs. For instance, families with young children might enjoy interactive activities and games, while adults might prefer in-depth workshops and demonstrations (Lieberman, 2012).

4.1.2. Integrated agritourism

Integrated agritourism combines traditional Thai agricultural knowledge with modern techniques, offering diverse experiences that cater to a wide range of tourist preferences. These experiences include organic food production and consumption, interaction with animals, unique dining experiences, and engagement with trending agricultural practices like cactus cultivation and aquaponics (Prayukvong et al., 2015).

For instance, Green Me Organics farm in Nakhon Ratchasima Province showcases organic farming practices and offers farm-to-table dining experiences. Visitors can learn about organic farming methods, participate in harvesting, and enjoy fresh, healthy meals made with ingredients grown on the farm from **Figure 3**. Phonphisai garden in Nong Khai Province offers a unique experience focused on cactus cultivation. Tourists can explore the diverse collection of cacti, learn about their unique characteristics, and even purchase plants to take home from **Figure 4**.

Integrated farming systems, which involve the synergistic cultivation of crops and rearing of animals, are a key component of this approach. These systems optimize resource utilization, promote environmental balance, and enhance natural resource sustainability (Bhagat et al., 2024). By diversifying production activities, integrated farms mitigate risks, stabilize income streams, and reduce reliance on external inputs,

aligning with the principles of self-sufficiency advocated in His Majesty King Bhumibol Adulyadej’s philosophy of sufficiency economy (Truelove et al., 2023).



Figure 3. Phonphisai garden in Nong Khai Province.

Photo: Author.



Figure 4. Phonphisai garden in Nong Khai Province.

Photo: Author.

4.1.3. Animal farm tourism

Animal farm tourism focuses on providing engaging experiences with a variety of animals, appealing particularly to families with young children. These attractions often feature animal enclosures, petting zoos, and educational programs on animal husbandry (Gorman and Cacciatore, 2023).

For example, Pasuthara farm in Ratchaburi Province offers interactive experiences with farm animals and educational programs on animal care. Visitors can feed animals, collect eggs, and learn about different breeds from **Figure 5**. Moo Maa

farm & cafe in Kanchanaburi Province combines animal interactions with a cafe setting, providing a relaxed environment for families to enjoy.

This model capitalizes on the cultural significance of livestock in Thai society and provides opportunities for visitors to learn about animal welfare and responsible farming practices from **Figure 6**.

However, it's important to ensure ethical treatment of animals and prioritize their well-being. Farms should adhere to animal welfare standards, provide adequate space and enrichment for the animals, and educate visitors about responsible interactions.



Figure 5. Pasuthara farm in Ratchaburi Province.

Photo: Author.



Figure 6. Moo Maa farm & cafe in Kanchanaburi Province.

Photo: Author.

However, it's crucial to ensure the ethical treatment of animals and prioritize their well-being. Farms should adhere to animal welfare standards, provide adequate space and enrichment for the animals, and educate visitors about responsible interactions.

4.1.4. Coastal and fishery tourism

Fishery farm tourism immerses visitors in the world of aquaculture and fishing communities (Szromek et al., 2023). Tourists can experience the daily life of fishermen, engage in fishing activities, and savor fresh seafood. This model leverages the appeal of coastal and freshwater environments, offering access to pristine natural landscapes and authentic cultural experiences (Belly et al., 2024).

For instance, Home Krateng in Samut Songkhram Province offers a homestay experience in a fishing village, allowing tourists to participate in fishing activities and learn about traditional fishing methods from **Figure 7**. This type of tourism can empower local communities, diversify income sources, and promote sustainable fishing practices (Belly et al., 2024). It also creates opportunities for cultural exchange and raises awareness about the importance of marine conservation.



Figure 7. Home Krateng in Samut Songkhram Province.

Photo: Author.

4.1.5. Floral tourism: Gardens and artistic expressions

Flower garden tourism showcases the beauty and diversity of flora through innovative cultivation techniques and artistic landscaping (Wang et al., 2024). These attractions cater to the growing trend of nature-based tourism and offer opportunities for photography and appreciation of natural beauty.

Jim Thompson farm in Nakhon Ratchasima Province is a prime example, featuring extensive flower gardens with vibrant displays of blooms. By incorporating cultural elements, such as traditional architecture and local crafts, flower gardens can further enhance the visitor experience and promote cultural heritage from **Figure 8**.



Figure 8. Jim Thompson farm in Nakhon Ratchasima Province.

Photo: Author.

Furthermore, integrating artistic expression with flower gardens creates captivating and immersive experiences. These attractions stimulate imagination and offer unique perspectives, appealing to tourists seeking creative inspiration (Wang et al., 2024).

4.1.6. Technology-driven agritourism

This model showcases cutting-edge agricultural technologies to attract tech-savvy tourists and those interested in modern farming practices. By demonstrating innovations like precision farming, hydroponics, vertical farming, and smart greenhouses, these attractions educate visitors on the role of technology in enhancing productivity, optimizing resource use, and ensuring food security (Abdelfattah et al., 2023).

For instance, CORO HOUSE melon greenhouse showcases advanced hydroponic technology for growing melons, allowing visitors to observe the controlled environment and learn about the benefits of soilless cultivation from **Figure 9**. Rim farm little space demonstrates vertical farming techniques and urban agriculture practices, highlighting how technology can be used to grow food in limited spaces from **Figure 10**.



Figure 9. CORO HOUSE melon greenhouse, Chiangmai Province.

Photo: Author.



Figure 10. Rim farm little space, Chiangmai Province.

Photo: author.

4.1.7. Experiencing Thailand's staple: Rice paddy field tourism

Rice paddy field tourism offers a nostalgic glimpse into Thailand's agricultural heritage, showcasing the traditional practices and cultural significance of rice cultivation. Tourists can experience the beauty of rice paddies, engage in activities such as rice planting and harvesting, and learn about the challenges and rewards of rice farming (Lennon and Taylor, 2012).

Examples include Rainbow Rice Ban Sang in Chiang Mai Province, which showcases colorful rice varieties and offers immersive experiences in rice cultivation from **Figure 11**.



Figure 11. Rainbow Rice Ban Sang, Chiangmai Province.

Photo: Author.

This type of tourism provides a unique opportunity for urban dwellers to connect with rural landscapes and appreciate the cultural significance of rice farming in Thai society.

4.1.8. Unconventional agritourism: Salt and coconut plantations

Agritourism is not limited to traditional farms and crops. It also extends to unique agricultural practices such as salt and coconut production.

Salt farm tourism offers a glimpse into the traditional process of salt extraction from seawater. Visitors can witness the process, learn about its historical and cultural significance, and explore innovative salt-based products. Salt Lake de Maeklong in Samut Songkhram Province is an example of a salt farm that has incorporated tourism into its operations, featuring a cafe and offering tours showcasing the salt production process from **Figure 12** (Wu et al., 2015).



Figure 12. Salt Lake de Maeklong in Samut Songkhram Province.

Photo: Author.

Coconut plantation tourism immerses visitors in the idyllic setting of coconut groves, offering opportunities to learn about the cultivation and processing of coconuts, a staple crop in Thai agriculture. Tourists can enjoy the scenic beauty, savor coconut-based cuisine, and experience the versatility of coconut products (Pimonratanakan, 2019). Phrao Hom cafe in Samut Sakhon Province is an example of a cafe situated within a coconut plantation, offering a variety of coconut-based dishes and beverages from **Figure 13**.



Figure 13. Phrao Hom cafe in Samut Sakhon Province.

Photo: Author.

4.1.9. Highland agritourism

Highland agritourism capitalizes on the unique appeal of mountainous terrain and cooler climates, offering breathtaking scenery, fresh air, and distinctive agricultural practices adapted to higher altitudes. This model often caters to a more affluent clientele seeking unique experiences and a respite from urban life.

Examples include Suan Eden in Chiang Mai Province, a resort offering luxurious accommodations and stunning views of the surrounding mountains and terraced rice fields from **Figure 14**.

The iconic terraced rice fields of Mae Chaem district in Chiang Mai Province also provide breathtaking views and opportunities to learn about traditional rice farming practices in mountainous terrain from **Figure 15**.

Highland agritourism destinations, such as the Royal Agricultural Station Angkhang and Inthanon, showcase the successful implementation of sustainable agricultural practices in mountainous regions, promoting economic development and environmental conservation in remote communities. These attractions offer diverse experiences, from exploring flower gardens and fruit orchards to learning about coffee cultivation and trout farming, while immersing visitors in the stunning natural beauty of highland (Ariffin et al., 2014).



Figure 14. Suan Eden, Chiang Mai Province.

Photo: Author.



Figure 15. Terraced rice fields of Mae Chaem district, Chiang Mai Province.

Photo: Author.

4.1.10. Agritourism and accommodation

Agritourism destinations are increasingly incorporating unique and comfortable accommodation options to enhance the visitor experience and cater to the growing demand for experiential travel. These range from rustic farm stays and cozy homestays to luxurious resorts with scenic views (Elshaer et al., 2022).

Examples include:

- Pasuthara farm in Ratchaburi Province, which offers farm stays in traditional Thai houses alongside animal interaction and agricultural activities from **Figure 16**.



Figure 16. Pasuthara farm in Ratchaburi Province.

Photo: Author.

- Sakatdee homestay in Nan Province, providing a rustic and authentic experience in a traditional village setting from **Figure 17**.



Figure 17. Sakatdee Homestay in Nan Province.

Photo: Author.

- The Lofberry Suan Phueng in Ratchaburi Province, a resort offering stylish accommodations with views of vineyards and the surrounding countryside from **Figure 18**.



Figure 18. The Lofberry Suan Phueng in Ratchaburi Province.

Photo: Author.

- Toopna homestay in Nan Province, offering a tranquil escape in a rice paddy field setting from **Figure 19**.



Figure 19. Toopna Homestay in Nan Province.

Photo: Author.

These diverse accommodation options cater to a wide range of preferences and budgets, enhancing the overall agritourism experience.

4.1.11. Mindfulness and wellness in agritourism

Integrating elements of spirituality and mindfulness into agritourism offerings caters to tourists seeking a deeper connection with nature and their inner selves. These destinations provide a tranquil and reflective environment for visitors to unwind, recharge, and find inspiration (Arora et al., 2023).

For example, Mee Na cafe in Kanchanaburi Province offers a serene setting amidst rice paddies, providing a space for reflection and contemplation. Agritourism destinations are increasingly incorporating activities such as yoga, meditation, and nature walks to provide a holistic experience that nourishes the mind, body, and soul from **Figure 20**.



Figure 20. Mee Na cafe in Kanchanaburi Province.

Photo: Author.

4.1.12. Pick-your-own: Strawberry farm tourism

Strawberry farm tourism capitalizes on the popularity of this fruit, offering visitors the opportunity to pick their own strawberries and enjoy the scenic beauty of strawberry fields (Rouquet and Paché, 2017). This model provides a fun and engaging experience for families and individuals, fostering appreciation for the agricultural process and providing access to fresh, locally grown produce.

For example, OK Strawberry farm in Nakhon Ratchasima Province offers strawberry picking experiences and sells a variety of strawberry-based products. By incorporating additional activities, such as farm tours, educational programs, and cafes serving strawberry-themed treats, these attractions can further enhance the visitor experience and promote local agricultural products from **Figure 21**.

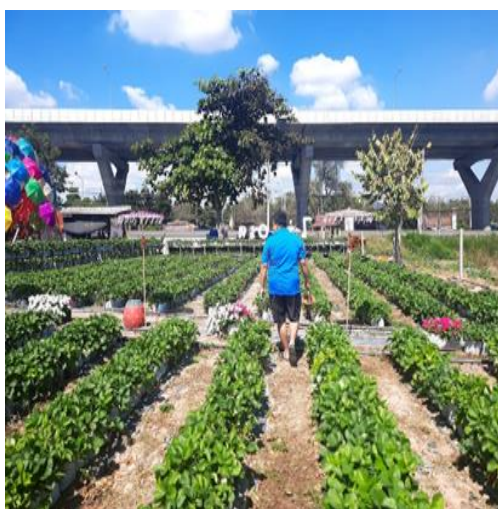


Figure 21. OK Strawberry farm in Nakhon Ratchasima Province.

Photo: Author.

4.1.13. Simulated tourist destination agritourism

This innovative approach recreates the ambiance of popular tourist destinations within an agricultural setting, offering a unique and accessible experience for those unable to travel to the actual locations. By replicating iconic landmarks and cultural elements, these attractions provide a taste of faraway places while promoting local agriculture and tourism.

For instance, Kad Ma Pao in Chiang Mai Province recreates the atmosphere of Amphawa, Samut Songkhram Province, with a coconut plantation and canal-side setting. This allows visitors to experience the charm of Amphawa without having to travel to the coastal province. Simulated tourist destinations offer a creative way to experience different cultures and environments without extensive travel from **Figure 22**.



Figure 22. Kad Ma Pao in Chiang Mai Province.

Photo: Author.

4.2. Synthesis and interpretation of findings

This study provides the first comprehensive analysis of agritourism innovations in Thailand in the post-COVID-19 era, with a specific focus on the diverse range of experiences offered and the role of technology in driving the sector's growth. The analysis of agritourism innovations in Thailand reveals several key trends:

- **Diversification:** Agritourism is evolving beyond traditional farm visits to encompass diverse experiences, including educational tours, adventure activities, wellness retreats, and cultural immersion (Bannor et al., 2022).
- **Technology integration:** The adoption of technology, such as precision farming, digital marketing, and online booking platforms, is enhancing the efficiency and reach of agritourism businesses (Ananya, 2021).
- **Sustainability:** There is a growing emphasis on sustainable practices, such as organic farming, eco-friendly accommodations, and community-based tourism, reflecting a commitment to environmental and social responsibility (Pérez-Olmos and Aguilar-Rivera, 2021).
- **Experiential focus:** Agritourism experiences are becoming increasingly immersive and interactive, providing visitors with opportunities to engage with local communities, learn new skills, and connect with nature (Liang et al., 2021).

These trends reflect the dynamic nature of agritourism and its potential to contribute to sustainable rural development in Thailand.

5. Policy recommendations for sustainable agritourism development

To foster the sustainable development of agritourism in Thailand and maximize its contribution to rural economies, cultural preservation, and environmental stewardship, the following policy recommendations are proposed:

5.1. Infrastructure development

- **Improve physical infrastructure:** Invest in upgrading rural roads, prioritizing road widening and paving projects on routes leading to agritourism clusters. Ensure reliable transportation networks, and provide (Koliopoulos et al., 2022).

Introduce subsidies for local communities to improve road signage and maintenance leading to agritourism destinations.

- Enhance digital infrastructure: Expand internet and mobile network coverage in rural areas to facilitate online booking, digital marketing, and the development of agritourism-specific mobile applications. This includes promoting the use of digital payment systems and providing training to agritourism operators on how to effectively utilize online platforms. This will enable agritourism businesses to reach a wider audience and provide convenient services to tourists (Musungwini et al., 2025).

5.2. Financial support and incentives

- Offer targeted subsidies: Provide financial assistance to agritourism operators adopting sustainable practices, such as organic farming, renewable energy use, and water conservation. Consider a tiered subsidy system based on the farm size and the extent of sustainable practices adopted. For example, smaller farms that fully transition to organic farming could receive higher subsidies. This will encourage environmentally responsible practices and reduce the ecological footprint of agritourism (Galluzzo, 2021).
- Facilitate access to finance: Establish accessible financing options, such as low-interest loans and microfinance schemes, specifically tailored to the needs of agritourism businesses. This could include offering matching grants for investments in renewable energy or providing loan guarantees for new agritourism ventures. This will enable small-scale farmers and rural entrepreneurs to invest in developing their agritourism offerings (Yusuf et al., 2024).

5.3. Innovation and technology

- Support research and development: Invest in research on emerging agritourism trends, consumer preferences, and innovative business models to guide the development of new and exciting agritourism experiences (Getz and Page, 2016).
- Promote technology adoption: Provide training and technical assistance to farmers on utilizing smart farming technologies, digital marketing strategies, and online platforms (Ananya, 2021). This will help agritourism businesses enhance their efficiency, reach a wider audience, and improve the visitor experience.

5.4. Capacity building and training

- Invest in human capital: Develop training programs for agritourism operators, focusing on sustainable farming practices, hospitality management, financial literacy, and digital skills (Getz and Page, 2016). This will equip them with the necessary knowledge and skills to operate successful and sustainable agritourism businesses.
- Promote entrepreneurial skills: Encourage youth and women in rural areas to participate in agritourism by providing entrepreneurial training and mentorship programs (Valencia-Arias, et al., 2022). This will foster inclusive growth and empower marginalized groups.

5.5. Community engagement and empowerment

- Foster collaborative planning: Ensure that local communities are actively involved in the planning and decision-making processes for agritourism development. This participatory approach ensures that agritourism initiatives align with community needs and values, leading to more sustainable and culturally appropriate outcomes (Bhatta and Ohe, 2019).
- Promote community-based tourism: Support the development of community-based tourism initiatives that empower local residents to manage and benefit from agritourism ventures (Tew and Barbieri, 2012). This model fosters greater ownership and ensures a more equitable distribution of economic benefits.

5.6. Sustainability and conservation

- Promote environmental conservation: Develop and enforce policies that encourage sustainable practices in agritourism operations, such as waste reduction, water conservation, and renewable energy use (Becken and Hay, 2007). Provide incentives for agritourism operators to obtain eco-certifications and participate in sustainability initiatives.
- Preserve cultural heritage: Integrate traditional knowledge, arts, and crafts into agritourism experiences to promote cultural preservation and provide authentic experiences for visitors. Support the documentation and promotion of local cultural heritage as a key attraction for tourists (Timothy and Boyd, 2003).

5.7. Marketing and promotion

- Launch national campaigns: Implement nationwide marketing campaigns to promote agritourism destinations and highlight their unique offerings (Pike, 2005). Utilize diverse marketing channels, including digital platforms, social media, and partnerships with influencers and travel bloggers (Munar and Jacobsen, 2014), to reach a wider audience.
- Foster regional collaboration: Collaborate with neighboring countries to create regional agritourism routes and joint marketing initiatives (Hall and Williams, 2019). This will enhance the visibility of agritourism destinations and attract international tourists. For example, explore partnerships with Laos, Cambodia, and Myanmar to develop cross-border agritourism itineraries.

5.8. Regulatory frameworks

- Simplify licensing procedures: Streamline and simplify the process for obtaining permits and licenses for agritourism businesses (Dsouza et al., 2024). This will reduce bureaucratic hurdles and encourage investment in the sector.
- Harmonize policies: Ensure consistency and avoid contradictions in agritourism-related policies across different government sectors. Develop a comprehensive national agritourism strategy that aligns with broader rural development and sustainability goals (Srikatanyoo and Campiranon, 2010).

5.9. Monitoring and evaluation

- Establish monitoring systems: Develop systems for collecting data on agritourism operations, visitor demographics, economic impacts, and sustainability performance (Koliopoulos et al., 2021). This data will provide valuable insights for policy adjustments and future development.
- Develop performance metrics: Define clear performance indicators to monitor the environmental, social, and economic impacts of agritourism. Regularly evaluate the effectiveness of policies and programs to identify areas for improvement (Castellani and Sala, 2010).

5.10. Crisis resilience and adaptation

- Develop emergency preparedness plans: Establish contingency plans to support agritourism operators during crises such as pandemics, natural disasters, or economic downturns (Barrett and Leeds, 2022). These plans should include measures to ensure the safety of tourists and employees, provide financial assistance to affected businesses, and facilitate recovery efforts.
- Promote diversification: Encourage agritourism operators to diversify their offerings and revenue streams to enhance resilience and adaptability to changing market conditions (Zanetti et al., 2022). This could involve incorporating wellness tourism, educational workshops, virtual agritourism experiences, and other innovative activities.

6. Future research directions

This research has highlighted the dynamic landscape of agritourism innovation in the post-COVID-19 era. However, further research is needed to deepen our understanding and address emerging challenges. Future research directions include:

- Long-term impacts of the pandemic: Investigate the lasting effects of COVID-19 on tourist behavior, preferences, the evolving role of technology in shaping agritourism experiences, and the long-term trajectory of agritourism demand.
- Technology integration: Conduct in-depth studies on the adoption and impact of specific technologies in agritourism, such as artificial intelligence, the Internet of Things, and blockchain, to assess their potential for enhancing efficiency, sustainability, and visitor engagement. This could include examining the use of AI-powered chatbots for customer service, the application of IoT sensors for precision farming, and the potential of blockchain for supply chain traceability in agritourism.
- Sustainability assessment: Develop comprehensive frameworks and metrics for evaluating the environmental, social, and economic sustainability of agritourism operations. This could involve creating a sustainability index specifically for agritourism businesses, incorporating indicators such as resource consumption, waste management, community engagement, and economic viability.
- Policy evaluation: Assess the effectiveness of agritourism policies and incentives in promoting sustainable practices and supporting the growth of the sector. This could involve conducting surveys of agritourism operators to gather feedback on

existing policies and analyzing the impact of specific incentives on the adoption of sustainable practices.

- **Cross-cultural studies:** Conduct comparative studies on agritourism innovation across different countries and regions to identify best practices and understand the influence of cultural factors on agritourism development. This could involve comparing agritourism models in Southeast Asia with those in Europe or North America, examining how cultural values and traditions shape the development of agritourism experiences.
- **Community empowerment:** Investigate the role of agritourism in empowering marginalized communities, such as women, youth, and indigenous groups, and explore how it can contribute to social inclusion and economic development. This could involve case studies of successful community-based agritourism initiatives that have led to increased income, improved livelihoods, and greater social participation for marginalized groups.
- **Resilience and adaptation:** Examine the adaptive capacity of agritourism businesses to climate change and other external shocks, identifying strategies for enhancing resilience and ensuring long-term sustainability. This could involve developing risk assessment tools for agritourism businesses and promoting the adoption of climate-smart agricultural practices.

7. Conclusion

Agritourism offers a transformative approach to sustainable rural development, integrating economic, social, and environmental objectives. This study has highlighted the multifaceted role of agritourism in preserving cultural heritage, promoting environmental sustainability, and fostering innovation. The findings of this research underscore the dynamic nature of agritourism and its potential to contribute to sustainable rural development in Thailand. By embracing technology, engaging local communities, and adapting to changing market demands, agritourism can contribute significantly to achieving the UN's Sustainable Development Goals (SDGs). However, the growth and sustainability of the sector depend on supportive policies, robust infrastructure, and ongoing research to address emerging challenges. This study has provided valuable insights into the key trends and innovations shaping the future of agritourism in Thailand, as well as the challenges and opportunities that lie ahead. By fostering collaboration among stakeholders and promoting responsible practices, agritourism can play a vital role in revitalizing rural economies and ensuring a sustainable future for agricultural communities.

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