

Strategies for Developing Organic Vegetable Farmers in Chiang Mai Province into Sustainable Agribusiness Entrepreneurs

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Received: 31 March 2025; **Revised:** 26 April 2025; **Accepted:** 05 May 2025

Abstracts

This study aims to analyze the strategic approaches for enhancing the capacity of organic vegetable farmers in Chiang Mai in transitioning towards sustainable agribusiness entrepreneurship. The research employs a qualitative methodology, with the target group consisting of organic vegetable farmers in Chiang Mai province. Data collection tools include in-depth interviews and focus group discussions. A SWOT analysis was conducted to identify strengths, weaknesses, opportunities, and challenges affecting the development of 25 selected farmers, followed by a descriptive analysis of the findings.

The results indicate that the key strengths of organic farmers in Chiang Mai include abundant natural resources, knowledge of organic farming, and increasing support from both the government and market expansion. However, the major weaknesses identified were a lack of marketing knowledge and high production costs. Opportunities for development include government policy support, the growth of online marketing channels, and the expansion of organic agricultural exports. Meanwhile, challenges encompass climate change, competition from large-scale farmers, and the issue of counterfeit organic products. Based on the SWOT analysis, the study proposes four strategic approaches to support organic vegetable farmers in becoming sustainable agribusiness entrepreneurs: (1) Proactive Strategy (SO) focusing on improving production standards and expanding markets through online platforms; (2) Preventive Strategy (ST) strengthening cooperative networks and developing smart farming techniques; (3) Corrective Strategy (WO) providing agribusiness training and facilitating access to financial resources; and (4) Responsive

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Strategy (WT) enhancing competitiveness and establishing a quality monitoring system.

Keywords: Development Strategy; Organic Vegetable Farmers;
Sustainable Agribusiness

Introduction

In recent years, organic vegetable farmers in Thailand, particularly in Chiang Mai province, have received support from both the public and private sectors in acquiring knowledge and skills for sustainable and safe agricultural practices. However, they continue to face challenges in developing sustainable agribusinesses, including business management, access to financial resources, marketing, and adapting to rapidly changing market trends (Thanasottigulanun, et al., 2024). While organic vegetable farmers in Chiang Mai possess the potential and expertise in safe agricultural production, they often lack the capacity to expand their businesses for long-term growth and competitiveness in an ever-evolving market (Pimonratnakan, 2022). Therefore, developing strategies that facilitate the transformation of these farmers into sustainable agribusiness entrepreneurs is both essential and urgent.

The transition from being mere producers to becoming agribusiness entrepreneurs requires more than just improving production skills. Farmers must also develop business management capabilities, financial planning, market engagement strategies, and innovations in organic vegetable production that align with consumer demand in competitive markets (Klungnum, et al., 2020). Studying strategies for the development of organic vegetable farmers in Chiang Mai towards sustainable agribusiness entrepreneurship is significant from both economic and social perspectives. It provides insights into enhancing farmers' capacity to drive sustainable business growth and maintain long-term competitiveness. Furthermore, fostering agribusiness entrepreneurship contributes to job creation, income generation, and economic stability within farming communities in Chiang Mai. Despite their potential to produce high-quality organic vegetables, farmers in the province continue to face various obstacles in establishing sustainable agribusinesses. These challenges include a lack of business management skills, insufficient access to financial resources for business expansion, limited access to high-demand markets, and inadequate innovation in production processes to

reduce costs and add value to their products. Additionally, many farmers struggle with inefficient management systems that hinder sustainable business growth.

Given these challenges, this study aims to analyze strategic approaches that can support organic vegetable farmers in Chiang Mai in transforming themselves into sustainable agribusiness entrepreneurs. The research focuses on enhancing essential knowledge and skills in business management, access to financial resources, product and market development, and fostering community collaboration. These efforts are crucial in promoting sustainability in the agricultural profession and strengthening the local economy in a sustainable manner.

Research Objective

To analyze strategic approaches for enhancing the capacity of organic vegetable farmers in Chiang Mai in transitioning towards sustainable agribusiness entrepreneurship.

Research Methodology

This study employs a participatory action research approach driven by an action learning process, utilizing a qualitative research design to obtain in-depth insights. The research methodology consists of the following steps:

1 . Population and Sample: This study focuses on organic vegetable farmers in Chiang Mai province. A purposive sampling method was employed to select 25 farmers with experience in organic vegetable farming from various areas. This approach ensures that the collected data accurately reflects the real context of organic farming in the region.

2. Research Instruments: The research employs in-depth interviews and focus group discussions as key data collection tools. These methods facilitate a comprehensive understanding of strategic approaches that can support organic farmers in transitioning into sustainable agribusiness entrepreneurs. Focus group discussions provide opportunities for farmers and experts to exchange perspectives, allowing the researcher to gather diverse viewpoints and identify practical, contextually relevant strategies.

3. Data Collection: The data collection process begins with the selection of organic vegetable farmers in Chiang Mai and experts in agricultural development. In-depth interviews and focus group discussions are conducted to gather insights

into development strategies and the challenges farmers face in their transition to agribusiness entrepreneurship. The collected data is systematically recorded and organized for analysis, aiming to identify key themes and strategies that can promote the sustainability of organic farming careers.

4. Data Analysis: A qualitative data analysis approach is employed in this study. The process begins with categorizing relevant documents and data from in-depth interviews and focus group discussions. The analysis focuses on identifying key themes and strategic approaches used by farmers in developing their agricultural businesses sustainably. The study examines the relationships between various factors, such as institutional support, farmers' knowledge and skills, and challenges they encounter. The synthesized data is then used to formulate strategic recommendations for fostering sustainable agribusiness entrepreneurship among organic farmers.

Results

This study explores the development strategies for organic vegetable farmers in Chiang Mai to transition into sustainable agribusiness entrepreneurs. The research findings can be summarized in accordance with the study objectives as follows:

The SWOT analysis was employed to assess the development potential of organic vegetable farmers in Chiang Mai in their transition towards sustainable agribusiness entrepreneurship.

1. Strengths	2. Weaknesses
1.1 The abundance of natural resources and a favorable climate for organic vegetable cultivation.	2.1 Lack of knowledge in marketing and business management, resulting in limitations in market expansion.
1.2 Farmers' knowledge and experience in organic farming practices and agricultural management.	2.2 Higher production costs compared to conventional farming due to the necessity of using organic fertilizers and complex production processes.
1.3 A strong network of farmers and agricultural groups that support learning and knowledge exchange.	2.3 Inefficient distribution channels, leading to excessive dependence on middlemen.
1.4 Support from government and private sector agencies, such as organic agriculture promotion programs and green business policies.	2.4 Limitations in organic agricultural standards and certification, which remain costly and involve complicated procedures.

1.5 A growing consumer market for organic agricultural products, leading to increased demand.	2.5 Shortage of skilled labor for the development and management of organic farms.
<p>3. Opportunities</p> <p>3.1 The increasing consumer preference for health and environmental concerns has led to a rising demand for chemical-free agricultural products.</p> <p>3.2 Government support through policies promoting organic farming and sustainable agribusiness, such as agricultural loans and infrastructure development.</p> <p>3.3 The growth of online marketing channels and e-commerce platforms enables farmers to reach consumers directly, reducing dependence on intermediaries.</p> <p>3.4 The promotion of agritourism, which provides an additional source of income for farmers.</p> <p>3.5 The expansion of export markets for organic agricultural products to high-demand regions such as Europe and Japan.</p>	<p>4. Threats</p> <p>4.1 Climate change affecting agricultural productivity.</p> <p>4.2 Competition from large-scale farmers and agribusiness corporations with higher capabilities.</p> <p>4.3 Counterfeit organic agricultural products undermining consumer confidence.</p> <p>4.4 Strict export regulations and standards that may hinder market expansion abroad.</p> <p>4.5 Volatility in agricultural product prices, potentially impacting farmers' long-term income.</p>

Table 1 Strategic Approaches for Strengthening Organic Vegetable Farmers' Transition to Sustainable Agribusiness Entrepreneurship in Chiang Mai

Development Strategies for Organic Vegetable Farmers in Chiang Mai Province Towards Becoming Sustainable Agribusiness Entrepreneurs: Based on the SWOT analysis, the following key strategies are proposed to develop farmers into sustainable agribusiness entrepreneurs:

1. Proactive Strategy (SO - Strengths & Opportunities); The proactive strategy consists of: 1.1 Developing Production Standards: Utilize the natural resources and climate conducive to growing organic vegetables to meet international standards, such as Organic Thailand and GAP. 1.2 Promoting Markets and Distribution Channels: Expand domestic and international markets through online platforms and e-commerce. 1.3 Creating Added Value for Products: Develop processed products such as dried vegetables, health juices, and biological products. With this proactive strategy, organic vegetable farmers in Chiang Mai will be able to

grow into strong agricultural entrepreneurs, with enhanced competitiveness, and move towards sustainable access to international markets.

2. Preventive Strategy (ST - Strengths & Threats); The preventive strategy consists of: 2.1 Strengthening Collaborative Networks: Coordinate with the government, private sector, and educational institutions to develop knowledge, technology, and financial resources. 2.2 Developing Smart Farming: Utilize technology to increase efficiency, reduce costs, and address climate challenges. 2.3 Establishing Agricultural Cooperatives: Create cooperatives to increase bargaining power regarding prices and reduce production costs.

3. Corrective Strategy (WO - Weaknesses & Opportunities); The corrective strategy consists of: 3.1 Training in Agribusiness: Promote knowledge in management, marketing, and finance for farmers. 3.2 Supporting Access to Financial Resources: Establish organic agricultural loan programs and funding support from both the government and private sectors. 3.3 Developing Logistics and Supply Chains: Improve transportation systems to maintain product quality and reduce costs.

4. Responsive Strategy (WT - Weaknesses & Threats); The responsive strategy consists of: 4.1 Enhancing Competitiveness: Support the creation of brand identity and digital marketing to increase product visibility. 4.2 Establishing Learning and Advisory Centers: Create knowledge hubs for farmers to access technical production and marketing information. 4.3 Creating a Quality and Standards Monitoring System: Ensure consumer confidence and improve competitiveness.

Discussion

Based on the SWOT analysis conducted to guide the development of organic vegetable farmers in Chiang Mai province towards becoming sustainable agribusiness entrepreneurs, it was found that the proposed strategies align with various related concepts and research in multiple dimensions. These include sustainable agricultural management, promoting the competitiveness of small-scale farmers, and applying technology to enhance production and marketing efficiency. The following key points can be discussed based on the findings:

1. Proactive Strategy (SO - Strengths & Opportunities); This strategy focuses on leveraging the strengths of natural resources and favorable climate conditions, while creating market opportunities for farmers to develop to

international standards, such as Organic Thailand and GAP, which align with Singtanasarn's (2021), Parama, et al. (2024). concept of Competitive Advantage, which highlights that creating standards and product differentiation can enhance competitive capabilities. Additionally, expanding markets through online platforms and developing processed products further support Sangphong et al.'s (2021) concept of Marketing 4.0, which emphasizes the use of digital technologies to expand markets and create competitive advantages.

2 . Preventive Strategy (ST - Strengths & Threats); To address the challenges of competition and market changes, building a cooperative network between farmers, government, private sectors, and educational institutions is crucial for sustainable development. This aligns with Inprom's (2018) concept of Sustainable Agriculture, which advocates for reliance on networks and shared knowledge to achieve efficient agriculture. Furthermore, applying Smart Farming based on the framework of Intarapanich and Pakpian (2017), Kosuwin & Kittitanus (2024). which focuses on utilizing IoT technology in the production process, can significantly improve productivity, reduce costs, and minimize the impact of natural risks.

3 . Corrective Strategy (WO - Weaknesses & Opportunities); Training farmers to acquire knowledge in agribusiness is a key approach that aligns with Wuttaphan's (2017) Human Capital Theory, which suggests that developing individuals' potential through education and training enhances work efficiency and long-term income. Additionally, supporting access to financial resources through loans and government and private sector support programs connects with Stiglitz and Weiss's (1981) work, which emphasizes that access to credit is crucial for small businesses to expand and grow steadily. Moreover, developing logistics and supply chains is consistent with Pongsanam and Thaosombat's (2023) concept, which stresses that effective supply chain management can reduce costs, improve quality, and increase customer satisfaction.

4. Responsive Strategy (WT - Weaknesses & Threats); To help farmers cope with the challenges of competition and product standards, developing branding and digital marketing is a key approach that supports Aaker's (1992) Brand Equity concept, which suggests that brand and product image can create added value and competitive advantages. Additionally, establishing learning centers and advisory services applies Despres and Chauvel's (1999) concept of Knowledge

Management, which focuses on knowledge exchange between experienced individuals and those seeking development to enhance production capabilities and long-term agricultural business management.

From the discussion of the research findings and SWOT analysis, it is clear that the development approach for organic vegetable farmers in Chiang Mai to become sustainable agribusiness entrepreneurs is highly feasible, provided that the existing strengths are leveraged to create opportunities, knowledge is developed, obstacles are addressed, and weaknesses are systematically corrected. Furthermore, integrating academic concepts and related research can strengthen the potential of Thai farmers to grow sustainably in both national and international markets.

New Knowledge

The research on strategies for developing organic vegetable farmers in Chiang Mai towards becoming sustainable agribusiness entrepreneurs has enabled the researcher to develop a process and acquire new knowledge, as illustrated in the following diagram.

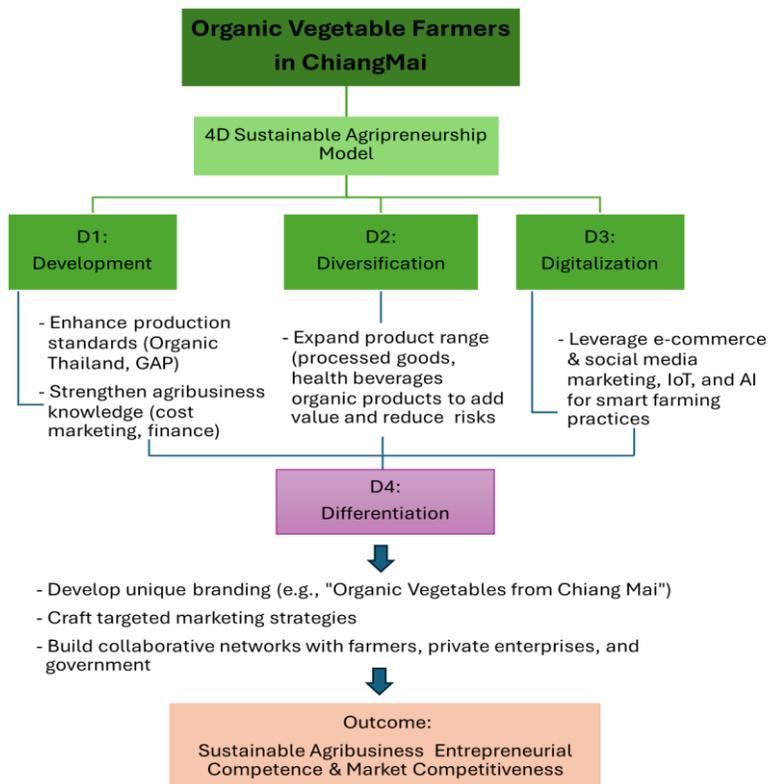


Figure 1 Knowledge Derived from the Research

From the conceptual framework of the model for developing organic vegetable farmers into sustainable agribusiness entrepreneurs, this is a key goal for modern agriculture. This study analyzes and synthesizes data using SWOT Analysis and presents a practical development model that can be applied at the individual, farmer group, and government policy levels. Thus, the “4D Sustainable Agripreneurship Model” has been developed as a systematic approach for the development of farmers into sustainable agribusiness entrepreneurs. The model consists of four main components:

D1: Development; Development refers to enhancing production standards, such as Organic Thailand and GAP certification, so that farmers can produce high-quality products and compete in the global market. It also involves strengthening agricultural business knowledge, such as cost management, marketing, and finance, through training and in-depth consulting.

D2: Diversification; Risk diversification involves developing a variety of products, such as processed vegetables, health-oriented vegetable beverages, and organic products, to add value and reduce risks from fluctuating product prices. It also promotes integrated farming to increase flexibility in adapting to economic and environmental conditions.

D3: Digitalization; The use of digital technology promotes the use of e-commerce platforms and social media for marketing to expand distribution channels both domestically and internationally. It also encourages smart farming by utilizing IoT and AI to analyze farming data, increasing production efficiency and reducing costs.

D4: Differentiation; Differentiation involves developing a brand and marketing strategies that focus on unique selling points, such as “Organic Vegetables from Chiang Mai,” to build recognition, increase market value, and establish collaborative networks between farmers, private enterprises, and the government. This facilitates knowledge exchange and business expansion opportunities.

The “4D Sustainable Agripreneurship Model” is a comprehensive approach that can be applied to elevate organic vegetable farmers into competent entrepreneurs capable of competing sustainably in the market. It focuses on developing knowledge, diversifying risks, utilizing technology, and creating unique

selling points. This model can be expanded to other agricultural sectors in the future.

Conclusion and Suggestion

In summary, the SWOT analysis revealed that the strengths of farmers in Chiang Mai include abundant natural resources, knowledge of organic farming, and growing support from the government and market. Weaknesses identified include a lack of marketing knowledge and high production costs. Key opportunities include government policy support, the growth of online markets, and the export of organic agricultural products. Meanwhile, challenges include climate change, competition from large-scale farmers, and counterfeit products.

Based on the SWOT analysis, the researcher proposes four main strategies for developing farmers: (1) Proactive Strategy (SO) – improving production standards and expanding both domestic and international markets via online platforms, including adding value through agricultural product processing; (2) Preventive Strategy (ST) – strengthening cooperation networks between government, private sectors, and academic institutions, as well as developing smart farming techniques; (3) Corrective Strategy (WO) – promoting agricultural business training and supporting access to financial resources; and (4) Responsive Strategy (WT) – enhancing competitiveness through branding and digital marketing, as well as establishing learning and advisory centers to provide farmers with access to technical information. Overall, the findings suggest strategies that can help farmers in Chiang Mai transition into sustainable agribusiness entrepreneurs effectively and compete in the market.

1. Policy Recommendations: The study finds that the government must support the creation of public understanding and participation in policy decision-making processes related to development in the study area. This includes enhancing knowledge and providing training to increase capacity for participating in social and political activities. To address issues or develop appropriate policies, it is essential to focus on building networks between the government, private sector, and civil society to promote cooperation and effective responses to various challenges.

2. Operational Recommendations: At the local level, attention should be given to strengthening community participation processes and using appropriate

tools for data collection and presenting feedback from all sectors. Public meetings and the use of technology should be utilized to ensure broad access to information and participation. Additionally, sustainable operational plans should be developed with measurable follow-up for assessment.

3. Recommendations for Future Research: Based on the findings of this study, it is recommended that future research expand to other areas to apply the results in different contexts and potentially present a broader range of perspectives. Additionally, research should incorporate diverse data collection techniques and explore long-term impacts to provide more comprehensive and detailed information.

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