

# Increasing Distribution Efficiency And Digital Platform Approaching Of Rose Apple Farmers In Nakhon Pathom Province For Sales-Boosting

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## Abstract

This article aims to 1) study the distribution of rose apples among farmers in Nakhon Pathom Province, Thailand; 2) propose an approach to easily and effectively introduce rose apple farmers onto a digital platform; and 3) create new knowledge on the appropriate use of online communities to increase sales. A mixed methods research design was used. The research population consisted of 591 households of rose apple farmers and related people. Data was collected through interviews, surveys, and data verification using triangulation. The research results found that: 1) the distribution of Pink Pomelo by farmers consists of many variables, including price, quantity, transportation methods, cultivation, distribution sources, and distributors. 2) Rose apple farmers should start direct marketing through Facebook because it is an easy social media. 3) Necessary knowledge includes the basic digital technology with farmers, preparation of basic resources, use of social media, management of expenses with a focus on low cost, creation of farmers' websites, and creation of content.

**Keywords:** Increasing product distribution effectiveness, Digital platform, Tubtim Chan Rose Apples

## 1. Introduction

Nakhon Pathom Province is located in the central region of Thailand, near Bangkok, covering an area of 1,355,204 rai. It consists of seven districts. In 2017, the province's gross provincial product (GPP) from the agricultural sector was valued at 18,356 million baht. The main occupations of the population include rice farming, fruit and vegetable cultivation, and other crop farming (Nakhon Pathom Provincial Office, Strategic and Development Information Group, 2018). Major economic crops include rice, sugarcane, and fruit. The most widely cultivated fruits are aromatic coconuts, pomelos, mangoes, guavas, rose apples, limes, bananas (kluai namwa and kluai hom), and longans. Thailand cultivates rose apple varieties, including Thub Thim Chan, in 33 provinces across the country.

Studies on this issue reveal that the distribution of Thub Thim Chan rose apples by farmers is limited to a few channels, which affects their selling price. The fruit is distributed through two main channels: international markets and domestic markets, with significant price differences. Thus, ensuring that the distribution of Thub Thim Chan rose apples is carried out in the right place, at the right time, and aligned with market demands directly impacts the

price. Distribution is one of the key activities in logistics and supply chain management (Setthachotsombut & Aunyawong, 2020; Seyangnok & Areerakulkan, 2023).

In agricultural production, natural factors such as soil conditions, climate, water, and humidity are critical. These factors necessitate production in suitable areas and transportation of agricultural goods to consumer markets or agricultural industries by farmers or middlemen through various market outlets. Key markets can be categorized into (1) local markets, (2) provincial central markets, and (3) destination central markets. This distribution process often results in lower agricultural product prices, limiting farmers' profitability and bargaining power. Farmers also lack understanding of market mechanisms, which forces them to rely on middlemen. Additionally, they face challenges adapting to technological changes, have limited access to agricultural and information technology, and encounter constraints in utilizing IT for promotion.

An assessment of the efficiency of agricultural logistics management from 2015 to 2017 found that farmers and cooperatives lacked the ability to manage information effectively, particularly in production management. The information available in each agricultural institute's area was insufficient for decision-making in creating networks for production, marketing, or agricultural logistics.

Addressing these challenges with the concept of distribution and entry into digital platforms a principle in logistics and supply chain management (Setthachotsombut, 2020) could help improve sales efficiency. Preliminary surveys indicate that farmers face limitations in using technology. Conversely, effective solutions heavily rely on technology, such as online sales. These platforms allow agricultural products to reach international and domestic markets, enabling consumers to purchase fruit directly from farmers without going through middlemen. Consumers can buy directly from agricultural cooperatives, fruit producer groups, or individual farmers via online posts. E-commerce, another popular online sales channel, expands farmers' trading opportunities. Additionally, various online channels can drive and increase sales.

Given the above reasons, the study titled "Enhancing Distribution Efficiency and Integration into Digital Platforms for Thub Thim Chan Rose Apple Farmers in Nakhon Pathom Province to Increase Sales" should be conducted to benefit farmers, society, and Thailand's economic system.

### **1.1 Research Objective**

1. To study the distribution of rose apples among farmers in Nakhon Pathom Province, Thailand.
2. To propose an approach to easily and effectively introduce rose apple farmers onto a digital platform
3. To create new knowledge on the appropriate use of online communities to increase sales.

## **2. Methods**

This study employs a mixed-methods research design, combining: Qualitative Research and Survey Research. The qualitative research approach involves focus group discussions and in-depth interviews. The research population comprises: Farmers cultivating Thub Thim Chan

rose apples in Nakhon Pathom Province, totaling 591 households. Stakeholders involved in the distribution of Thub Thim Chan rose apples, whose exact number is unspecified but known to be significant. The sample groups include:

- Focus Group Discussions: A total of 20 groups, each consisting of 10 participants, for a total of 200 participants.
- In-depth Interviews: A sample of 20 farmers who grow Thub Thim Chan rose apples.
- Training Participants: 40 individuals receiving knowledge transfer on simple and effective digital platform adoption.

### **Research Instruments**

The tools used in this study include: Interview Guides, Distribution Model for Thub Thim Chan Rose Apples

### **Data Collection**

Data collection is conducted through scheduled interviews, where appointments are made in advance to agree upon suitable dates and times for in-depth interviews with key informants.

### **Data Analysis**

Qualitative data from the interviews are analyzed using data triangulation to ensure reliability and are validated for content accuracy against the research framework

## **3. Results and Discussion**

The research findings are summarized to address the research objectives as follows:

Objective 1: To study the distribution of Thub Thim Chan rose apples by farmers in Nakhon Pathom Province, Thailand

The findings reveal the following:

1. Price/Pricing
  - The selling prices vary across different channels, including sales to central markets, sales at the farm, sales to mobile vendors, and export prices to China.
  - The fruits are graded and sorted by size to match market demands.
2. Quantity
  - The total production of Thub Thim Chan rose apples is less than 50,000 tons, which is relatively low compared to other fruits.
3. Transportation/Logistics
  - The majority of domestic transportation uses pickup trucks, while international exports are primarily shipped via sea freight.
  - Exports require the use of temperature-controlled containers to maintain product quality.

4. Cultivation/Harvesting Period

- Thub Thim Chan rose apples can be cultivated year-round, but the rainy season is considered the best planting period.
- The fruits start yielding after approximately 2 years of planting.

5. Distribution/Sales Channels

- Farmers sell their produce to local vendors, market vendors, and middlemen who purchase directly at the farms. Some farmers set up their own roadside stalls.
- Central markets for Thub Thim Chan rose apples include Talad Thai, Si Mum Mueang Market, Pathom Mongkhon Market, Ratchaburi Market, and Sri Muang Market.
- Most products are sold domestically, with only a small portion exported compared to other fruit exports.

6. Distribution to International Markets

- Exports to international markets are primarily handled by companies registered as legal entities.

Objective 2: To propose guidelines for integrating Thub Thim Chan rose apple farmers into digital platforms effectively and efficiently

The research findings are summarized, which illustrates a model for guiding farmers toward adopting digital platforms in a simple and suitable manner. Key Components of the Model:

1. Knowledge Transfer

- Provide training programs to educate farmers about digital tools, including social media, e-commerce platforms, and mobile applications tailored for agricultural sales.

2. Digital Platform Accessibility

- Design user-friendly interfaces and provide technical support to ensure that farmers with minimal technical knowledge can easily participate.

3. Collaborative Networks

- Establish cooperatives or farmer groups to facilitate shared resources, collective bargaining, and access to digital marketplaces.

4. Market Integration

- Connect farmers with domestic and international buyers through partnerships with existing digital platforms and logistics providers.

5. Ongoing Support and Evaluation

- Implement a support system for troubleshooting and regular assessments to ensure the effectiveness and sustainability of digital platform adoption.

This model aims to empower farmers by simplifying digital adoption while maximizing the benefits of connecting directly with broader markets, reducing reliance on intermediaries, and improving profitability.

Objective 3: To develop new knowledge on the appropriate use of social media to increase sales

The research findings indicate the following new insights on the effective use of social media to boost sales:

1. Utilization of Basic Digital Technologies
  - Introducing basic digital tools to farmers enhances their capability to engage in marketing activities effectively, thereby improving the sales performance of Thub Thim Chan rose apple producers.
2. Preparation of Essential Resources
  - Providing the necessary foundational resources to develop simple digital platforms ensures ease of adoption and effective implementation.
3. Use of Social Media
  - Various popular social media platforms can be utilized to create straightforward digital platforms. These platforms are accessible, user-friendly, and offer farmers the opportunity to reach a broader audience efficiently.

This approach highlights how leveraging digital technologies and social media platforms can transform traditional farming practices and significantly increase sales potential for agricultural products.

## 4. Conclusion

Distribution of Thub Thim Chan Rose Apples by Farmers in Nakhon Pathom Province, Thailand

- Price/Price Setting: Most farmers sell their products to central markets where prices vary based on quality and size:
  - Central market price: 24–31 THB/kg
  - Large-size grade (LA): 35 THB/kg
  - Medium-size grade (MA): 25 THB/kg
  - Small-size grade (SA): 15 THB/kg
  - On-site farm price: 20 THB (5–6 fruits/kg), 35–38 THB/kg
  - Local vendors' prices: 25, 30–40, 50 THB/kg
  - Export price to China: 70–100 THB/kgRetail prices are generally higher than wholesale or central market prices.
- Quantity: The total production of Thub Thim Chan rose apples is less than 50,000 tons, relatively low compared to other fruits.

- Transportation: Domestic distribution primarily relies on pickup trucks, while international exports use refrigerated containers transported by sea.
- Cultivation/Seasonality:
  - Year-round cultivation is possible, with the first harvest occurring approximately two years after planting.
  - Three harvest cycles per year:
    - First cycle: December–January
    - Second cycle: February–March
    - Third cycle: April–May
- Market Distribution: Farmers sell to local vendors, market traders, and middlemen who purchase directly at farms. Sales are also made at roadside stands or central markets, such as Talad Thai, Talad Si Mum Muang, Talad Pathommongkol, Talad Ratchaburi, and Talad Sri Muang. Exports are typically managed by companies operating as legal entities.
- Recommendation: To achieve better prices and increase sales, farmers and related stakeholders should expand online distribution channels via various platforms. They should also focus on improving cultivation practices to support international exports. This aligns with findings by Thaipost (2021).

#### Integration into Digital Platforms for Direct Marketing by Thub Thim Chan Rose Apple Farmers

- Digital Technology Application:

Farmers can begin by utilizing social media platforms like Facebook for direct marketing. Facebook is simple to set up and cost-effective compared to other platforms. Key considerations include:

  - Creating a Facebook page with an easily searchable name using Google-friendly keywords (identified via tools like Google Keyword Planner).
  - Including the brand name and keywords in the page URL and description for better SEO performance.
  - Building backlinks to the Facebook page by sharing links on platforms like YouTube to increase traffic.
- Other Platforms:

Utilizing Line Official Account (Line OA) can help advertise products on the platform's timeline, allowing more customers to access product information. However, there are initial service fees for setting up Line OA.
- Key Success Factors:
  - Consistent posting of updates to maintain activity on the Facebook page.
  - Prompt responses to customer inquiries via Facebook Messenger or comments.

- Designating an admin to manage these activities and allocate a budget for advertisements to attract new customers and build a loyal customer base.

Without regular updates, customer engagement, and promotional efforts, achieving success in direct marketing to increase farmers' income would be difficult.

### **Recommendations**

#### **Recommendations for Practical Applications**

1. Farmers and stakeholders should adopt online sales through various platforms to expand their distribution channels.
2. Training and learning techniques for developing tools to enhance e-commerce sales should be encouraged.
3. Farmers and stakeholders can effectively utilize the proposed digital platform marketing approach for direct sales.
4. Farmers should maintain and manage their social media platforms by ensuring consistent activity, such as regular posting of relevant information, to sustain engagement.

#### **Recommendations for Future Research**

Future studies should explore sustainable approaches to generating stable income for farmers through direct online marketing on digital platforms.

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