

Marketing Development Strategy for Gluten-Free Corn (*Zea mays Var ceratina*) at the UPT Lebo Food Crop and Horticulture Agribusiness Development, Sidoarjo

Naning Wulandari, Koesriwulandari, Ristani Widya Inti*

Department of Agribusiness, Faculty of Agriculture, University of Wijaya Kusuma Surabaya

Corresponding email: ristani@uwks.ac.id

ABSTRACT

Waxy corn (*Zea mays var. ceratina*) is one of Indonesia's local food commodities with considerable economic potential, driven by the growing consumer demand for alternative food products. However, the development of the waxy corn agribusiness continues to face several challenges, particularly in the marketing aspect. This study aims to analyze the current marketing conditions of waxy corn and formulate appropriate marketing development strategies at the Food Crops and Horticulture Agribusiness Development Unit (UPT PATPH) Lebo, Sidoarjo Regency. The research was conducted in December 2025 using a descriptive qualitative approach. The study site and respondents were selected through purposive sampling, involving six key respondents consisting of producers, distributors, traders, farmers, and consumers. Data were collected through observations, interviews, documentation, and literature reviews. SWOT analysis was employed to identify the internal and external factors influencing the marketing of waxy corn. The results showed that the total internal factor score was 3.10, while the external factor score reached 2.86. These results positioned the marketing of waxy corn in Quadrant I (SO) of the SWOT matrix, indicating a favorable business condition characterized by strong internal capabilities and substantial external opportunities. Therefore, an aggressive (SO) strategy is recommended by leveraging the product's superior quality, the availability of production facilities, and government support programs to expand market coverage, increase production capacity, and strengthen the competitiveness of waxy corn. The implementation of appropriate and sustainable marketing strategies is expected to enhance the development of waxy corn as a leading local commodity, thereby increasing farmers' income and strengthening the competitiveness of local agricultural products within the agribusiness sector.

Keywords: Waxy Corn, Marketing Strategy, SWOT Analysis, Agribusiness.

INTRODUCTION

The development of high-value agricultural commodities has become an important priority in modern agriculture as countries seek to improve food security, diversify agricultural production, and increase farmers' income. Among various food crops, maize (*Zea mays L.*) remains one of the world's most important cereal crops due to its multiple functions as food, feed, and industrial raw material. In Indonesia, maize is the second most important staple crop after rice and plays a strategic role in supporting national food security and rural economic development. Alongside conventional maize varieties, waxy corn (*Zea mays var. ceratina*) has recently attracted increasing attention because of its distinctive characteristics and promising market prospects.

Waxy corn, commonly known as glutinous corn, contains a high proportion of amylopectin starch, which gives the kernels a soft, sticky texture preferred by many consumers. This unique characteristic differentiates waxy corn from conventional maize and creates opportunities for market expansion, particularly in response to the growing consumer demand for alternative and functional food products. In addition to being consumed fresh, waxy corn can be processed into various traditional foods, snacks, flour, and other value-added products. Nearly all parts of the plant can be utilized for different purposes, including animal feed, organic fertilizer, food

processing, and pharmaceutical applications, making waxy corn a commodity with considerable economic potential (Purwanto, 2007).

The increasing trend toward food diversification and healthier dietary preferences has further enhanced the commercial prospects of waxy corn in Indonesia. Consumers are increasingly seeking agricultural products with distinctive sensory characteristics, nutritional value, and processing versatility. Consequently, waxy corn offers significant opportunities for agribusiness development, particularly for smallholder farmers and local agricultural enterprises seeking to diversify production and increase farm profitability.

Despite its considerable potential, the development of waxy corn agribusiness remains constrained by several challenges, particularly in the marketing sector. Previous studies have reported that although waxy corn has broad utilization potential, its commercialization is hindered by limited market information, inefficient distribution systems, and inadequate marketing strategies (Imran et al., 2021). In addition, the socioeconomic characteristics of market participants including education level, farming experience, business capital, and distribution capacity vary considerably, affecting the effectiveness of existing marketing systems and reducing the competitiveness of waxy corn in the marketplace.

The increasingly competitive agricultural market also requires marketing strategies that are more innovative, adaptive, and consumer-oriented. Effective marketing strategies should encompass appropriate pricing policies, efficient distribution channels, promotional activities, and market segmentation to strengthen product competitiveness and expand market access. According to Wahyuni (2021), marketing plays a crucial role in determining the success of agricultural commodities by connecting production with market demand. Likewise, Kotler & Keller (2009) emphasize that marketing strategy is a fundamental instrument for creating customer value, developing competitive advantages, and establishing long-term relationships with consumers. Therefore, strengthening marketing strategies is essential not only to improve market performance but also to enhance the sustainability of agricultural enterprises.

The Food Crops and Horticulture Agribusiness Development Unit (UPT PATPH) Lebo in Sidoarjo Regency is one of the institutions actively promoting waxy corn production and agribusiness development. However, despite favorable production potential, marketing performance has not yet been fully optimized, limiting opportunities to expand market reach and improve farmers' income. Understanding the existing marketing conditions and identifying strategic priorities are therefore necessary to support the sustainable development of waxy corn agribusiness.

Previous studies have primarily focused on the cultivation techniques, nutritional characteristics, and utilization of waxy corn, while relatively limited attention has been given to the formulation of comprehensive marketing development strategies at the institutional level. This research addresses that gap by analyzing the internal and external factors influencing waxy corn marketing and formulating strategic recommendations using the SWOT analytical framework.

Accordingly, this study aims to analyze the marketing conditions of waxy corn at UPT PATPH Lebo, Sidoarjo Regency, based on the socioeconomic characteristics of the marketing system and to formulate appropriate marketing development strategies. The findings are expected to provide practical recommendations for improving the competitiveness of waxy corn, expanding market opportunities, increasing farmers' income, and strengthening the sustainability of local agribusiness development.

RESEARCH METHODS

This study employed a qualitative descriptive research design to examine the marketing conditions of waxy corn (*Zea mays var. ceratina*) and formulate appropriate marketing development strategies at the Food Crops and Horticulture Agribusiness Development Unit (UPT PATPH) Lebo, Sidoarjo Regency, Indonesia. Respondents were selected using a purposive sampling technique, in which participants were intentionally chosen based on their knowledge, experience, and involvement in the waxy corn agribusiness. A total of six key informants participated in the study, consisting of one producer, one distributor, one trader, two farmers, and one consumer. These respondents were considered capable of providing reliable information regarding production, distribution, marketing, and consumption practices relevant to the research objectives.

Data collection involved both primary and secondary sources. Primary data were obtained through direct field observations, semi-structured interviews, documentation, and field notes. Observations were conducted to examine production, post-harvest handling, and marketing activities. Semi-structured interviews were carried out with key stakeholders to obtain in-depth information regarding cultivation practices, product distribution, marketing strategies, and market constraints. Documentation, including photographs, administrative records, and official documents, was used to complement and validate the information collected during field observations and interviews.

Secondary data were collected through a literature review of scientific journals, books, research reports, government publications, and other relevant sources related to waxy corn agribusiness and agricultural marketing. These data were used to strengthen the theoretical foundation and support the interpretation of the research findings.

Data were analyzed using the Strengths, Weaknesses, Opportunities, and Threats (SWOT) analytical framework. The analysis began by identifying internal factors (strengths and weaknesses) and external factors (opportunities and threats) influencing the marketing of waxy corn. These factors were then evaluated and organized into the Internal Factor Evaluation (IFE) and External Factor Evaluation (EFE) matrices. Finally, the SWOT matrix was employed to formulate alternative marketing development strategies by aligning the organization's internal capabilities with external market conditions. This approach enabled the identification of strategic priorities aimed at enhancing marketing effectiveness and strengthening the competitiveness of waxy corn agribusiness.

RESULTS AND DISCUSSIONS

Respondent Characteristics

The study involved six key informants representing the major stakeholders in the waxy corn marketing chain, including one producer, one distributor, one trader, two farmers, and one consumer. The respondents were selected purposively because of their direct involvement in the production, distribution, and marketing of waxy corn at the Food Crops and Horticulture Agribusiness Development Unit (UPT PATPH) Lebo, Sidoarjo. Their diverse roles enabled the study to capture comprehensive perspectives regarding the internal capabilities and external conditions affecting the marketing system.

SWOT Analysis of Waxy Corn Marketing

The SWOT analysis identified several strategic factors influencing the marketing performance of waxy corn. The Internal Factor Analysis Summary (IFAS) produced a total weighted score of 3.10, indicating that the organization possesses relatively strong internal capabilities. These strengths include the superior quality of waxy corn, adequate production facilities, strategic location, and government support for agricultural development. Nevertheless, several weaknesses remain,

including limited market penetration, relatively simple promotional activities, and competition from similar agricultural products.

The External Factor Analysis Summary (EFAS) generated a total score of 2.86, demonstrating that external opportunities outweigh potential threats. Increasing consumer awareness of healthy and local food products, expanding market opportunities, and continued government support provide favorable conditions for business development. However, challenges such as fluctuating market conditions, climate variability, and competition from substitute products remain important considerations for future marketing strategies.

The combination of IFAS and EFAS scores positioned the waxy corn agribusiness in Quadrant I (Strength-Opportunity) of the SWOT matrix. This strategic position indicates that the organization is in a favorable condition, possessing strong internal resources while simultaneously facing attractive external opportunities. According to the SWOT framework, organizations in this quadrant should adopt an aggressive growth strategy that emphasizes market expansion, product development, and the effective utilization of existing competitive advantages. The study's findings are consistent with strategic management theory, which suggests that firms with strong internal capabilities should capitalize on external opportunities to maximize organizational growth.

Marketing Development Strategies

Based on the SWOT matrix, the recommended strategy is the Strength-Opportunity (SO) strategy, which seeks to maximize internal strengths to exploit market opportunities. Several strategic priorities were identified.

First, the available land resources and production facilities should be optimized to increase waxy corn production while taking advantage of government agricultural development programs. Second, the strategic location of UPT PATPH near urban markets provides opportunities to expand distribution and reach consumers who increasingly prefer healthy and locally produced food products. Third, the established reputation of waxy corn for its distinctive taste and quality should be utilized to attract new customer segments. Fourth, expanding distribution to modern retail outlets and supermarkets would increase product accessibility and strengthen market penetration. Finally, pricing strategies should remain competitive while maintaining product quality to sustain consumer confidence and long-term competitiveness.

The proposed SO strategy is supported by the unique characteristics of waxy corn, including its soft texture, high amylopectin content, attractive kernel colors, and simple preparation process, which differentiate it from conventional maize varieties. These characteristics create opportunities to position waxy corn as a premium local food product targeting health-conscious consumers and niche markets. Furthermore, the relatively short processing time and convenient preparation enhance its attractiveness in modern food markets.

Besides the SO strategy, Strength-Threat (ST) strategies were also identified to maintain competitiveness under less favorable market conditions. These strategies emphasize maintaining product quality, improving cultivation practices to reduce production risks associated with climate variability, optimizing production facilities, implementing quality standards throughout production and marketing activities, and improving distribution planning to ensure continuous product availability. These measures are expected to strengthen the resilience of the marketing system against external uncertainties.

Overall, the findings demonstrate that UPT PATPH Lebo possesses considerable internal strengths and favorable external opportunities for expanding the waxy corn market. Therefore, the implementation of an aggressive growth strategy focusing on market expansion, product quality enhancement, stronger institutional support, and broader market access is expected to improve the competitiveness of waxy corn while contributing to farmers' income and the sustainable development of local agribusiness. These findings are consistent with previous studies reporting

that agribusinesses positioned in Quadrant I should prioritize growth-oriented strategies by leveraging their competitive advantages and responding proactively to market opportunities.

CONCLUSIONS

This study analyzed the marketing conditions of waxy corn (*Zea mays var. ceratina*) at the Food Crops and Horticulture Agribusiness Development Unit (UPT PATPH) Lebo, Sidoarjo, and formulated appropriate marketing development strategies using SWOT analysis. The findings indicate that the Internal Factor Score (IFAS) was 3.10, while the External Factor Score (EFAS) was 2.86, demonstrating that the organization possesses strong internal capabilities and favorable external opportunities. These results position the marketing of waxy corn in Quadrant I (Strength–Opportunity), indicating that the business is in a favorable strategic position for growth.

The recommended marketing approach is an aggressive (SO) strategy, which emphasizes leveraging the strengths of the organization to capitalize on available market opportunities. The priority strategies include optimizing production capacity through available land and production facilities, expanding market access by utilizing the strategic location of UPT PATPH, strengthening product positioning based on the superior quality and unique characteristics of waxy corn, increasing distribution through modern retail channels, and maintaining competitive pricing while preserving product quality. These strategies are expected to enhance market competitiveness, expand consumer reach, and contribute to the sustainable development of the waxy corn agribusiness.

The study demonstrates that effective integration of internal resources with favorable external conditions can strengthen the market position of waxy corn as a promising local food commodity. Consequently, implementing an SO-oriented marketing strategy can support higher farmer incomes, improve agribusiness competitiveness, and promote the long-term sustainability of local agricultural products.

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