

THE DEVELOPMENT OF INTEGRATED DIGITAL MARKETING FOR SAFE SHRIMP ENTREPRENEURS IN NAKHON PATHOM PROVINCE

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Abstract

This research aims to develop a Intergrated digital marketing strategy for safe shrimp entrepreneurs in Nakhon Pathom Province by employing a mixed-methods approach combining qualitative and quantitative research. The sample consists of 15 safe shrimp farmers and 400 respondents. The study found that two primary digital marketing channels were utilized: Line Official Account (Line OA) and an online shrimp wholesale marketplace website. The Line OA channel facilitated convenient and rapid communication with customers, while the marketplace website enhanced accessibility to product information and sales efficiency. The findings indicated that the development of digital marketing channels integrated both traditional marketing methods and digital marketing, referred to as an omni-channel approach, resulting in seamless transactions and significantly increased customer satisfaction. The combination of these channels contributes to building a strong brand and enhancing sustainable sales opportunities.

Keywords: Integrated Digital Market, Entrepreneurs, Safe Shrimp

Introduction

Thailand plays a crucial role in exporting shrimp to the global market. In 2022, the export of white shrimp and related products reached 98,800.1 tons, valued at 1,072.0 million USD. Major export markets for Thailand include the United States, Japan, and China, which together account for over 70% of the global market share (Department of Export Promotion, 2022). The shrimp farming industry in Nakhon Pathom is vital for the local economy and safe food production, with sales values of safe shrimp reaching 2,422,122.94 USD in 2020 and increasing to 2,676.47 million USD in 2022 (Nakhon Pathom Fisheries Office, 2020; 2022). However, this industry faces several challenges, such as the COVID-19 pandemic, which impacted sales and forced farmers to halt cultivation temporarily (Jantima Piangpol, 2019). Additionally, changes in consumer behavior and the adoption of digital technology require businesses to adapt in order to remain competitive in the new era. Comprehensive digital marketing development is therefore essential to enhance competitiveness and add value to products. Despite the continuous acceptance and study of digital marketing trends abroad (Kumar et al., 2020; Singh & Gupta, 2021; Zhao et al., 2022), shrimp farmers in Nakhon Pathom still face difficulties accessing digital markets. They lack knowledge and skills in digital marketing and cannot effectively utilize online platforms. Furthermore, there is a lack of diverse marketing channels to reach target customers comprehensively. This research aims to develop a comprehensive digital marketing strategy for safe shrimp producers in Nakhon Pathom, which will promote business expansion opportunities and increase access to broader digital marketing channels (Lee, 2023). It will also use various digital marketing communication methods to build close relationships and long-term trust with consumers (Garcia & Martinez, 2022), thereby providing stable income to local farmers and enhancing the quality of the shrimp industry in the province, which impacts the overall economic development of the country. Digital

marketing will be a crucial tool for increasing international competitiveness and ensuring long-term economic sustainability for the nation's agricultural industry.

Literature Review

Safe shrimp

Safe shrimp refers to shrimp that are farmed and managed according to safety standards, including water quality control, disease and health management, and the use of appropriate technology to ensure that the products delivered to consumers are safe and of high quality. Smith et al. (2021) studied the use of new technologies, such as smart water management systems, to control water quality and reduce the risk of diseases in shrimp. Johnson and Lee (2022) explored standards and quality control in shrimp production to ensure that products are safe for consumers, with a focus on product traceability. Nguyen et al. (2023) investigated the environmental impacts of shrimp farming on local ecosystems and proposed sustainable development practices.

Digital Marketing

Digital marketing refers to the use of technology and digital media to communicate marketing messages, build, and maintain customer relationships. In the modern era, digital marketing plays a crucial role in responding to changes in consumer behavior and advancing technologies (Chaffey et al., 2019). It is also a tool for competition in the new market landscape (Kotler et al., 2021), particularly in the agricultural and aquaculture sectors, where the use of e-commerce platforms enhances sales and builds product trust (Zhang et al., 2020; Kumar et al., 2019). Furthermore, direct market access through mobile applications helps address information imbalances between producers and consumers (Thompson et al., 2017).

Digital Marketing Channels

Digital marketing channels refer to the methods and platforms used to connect businesses with customers in an online environment (Lee, 2023). Developing digital marketing approaches is crucial for meeting the increasing demands of consumers, as online platforms and social media can build trust and boost sales for farmers (Nguyen et al., 2019). Enhancing shrimp marketing strategies through digital channels can improve access to international markets (Chakraborty & Roy, 2020). Additionally, these channels help establish long-term relationships between farmers and consumers (Patel, 2022) and provide accurate product information to increase customer satisfaction (Santos, 2023).

Omni-Channel Marketing

Omni-channel marketing refers to the seamless integration of both online and offline marketing channels, allowing customers to access products and services anytime and anywhere (Garcia, 2021). The use of modern technology enhances the efficiency of managing omni-channel approaches (Lee et al., 2020). Meanwhile, Johnson (2022) found that integrating digital marketing channels helps build stronger relationships between brands and customers. These studies highlight the importance of integrating marketing channels in the digital age.

Digital Marketing Communication

Digital marketing communication refers to the process of using digital channels to engage with consumers, build relationships, and promote sales (Garcia & Martinez, 2022). Adapting to rapidly changing consumer behavior is crucial for marketing strategies. Smith & Johnson (2019) found that social media fosters engagement and strengthens customer relationships, while Lee & Kim (2021) emphasized the use of AI technology to refine communication strategies and better target audiences. Miller (2022) proposed creating campaigns that focus on privacy and transparency to enhance customer trust. Additionally, Garcia et al. (2023) analyzed the use of video and live streaming to achieve higher

engagement levels. These studies underscore the importance of digital marketing communication in building long-term relationships with consumers.

Integrated Digital Marketing

Integrated digital marketing refers to the use of marketing strategies that combine various digital channels to ensure consistency and effectiveness in communicating with target audiences (Garcia, 2021). Developing an integrated digital marketing approach is crucial for brand building and increasing consumer awareness. Adams & Brown (2019) emphasized the importance of blending online and offline strategies, while Taylor et al. (2020) analyzed the use of insights to tailor strategies that precisely meet customer needs. Miller & Davis (2021) proposed a comprehensive customer experience management model that incorporates social media and content marketing. Lee (2022) found that integrating strategies enhances customer trust and satisfaction. All of these studies highlight the significance of creating integrated strategies to deliver a superior customer experience.

Measuring the Effectiveness of Digital Marketing Channels

Measuring the effectiveness of digital marketing channels involves evaluating the performance of these channels to improve strategies effectively (Brown, 2021). Effective digital marketing relies on appropriate measurement metrics. Johnson & Smith (2019) emphasize the use of Key Performance Indicators (KPIs) to assess digital marketing in alignment with objectives. Meanwhile, Nguyen et al. (2020) analyze the use of data analytics tools, such as Google Analytics, to adjust strategies based on results. Additionally, Brown (2021) proposes evaluating performance from a consumer perspective to assess satisfaction, while Garcia & Lee (2022) analyze the relationship between website traffic and actual sales. These studies underscore the importance of measurement for making informed and effective decisions.

Research Methodology

This study employs a mixed-methods approach combining both qualitative and quantitative research to develop an integrated digital marketing strategy for safe shrimp entrepreneurs in Nakhon Pathom Province.

Population and Sampling

The population for this research consists of shrimp farmers in the Huai Muang Subdistrict, Kamphaeng Saen District, Nakhon Pathom Province, totaling 441 individuals. The sample is divided into two groups:

Qualitative Sample: This group is selected using a purposive sampling method, targeting informants with relevant knowledge. The selection criteria require participants to be shrimp farmers who primarily engage in safe shrimp farming and have their own shrimp ponds. A total of 15 individuals will be chosen for this group, and data collection will continue until theoretical saturation is reached, meaning that no new significant content can be added.

Quantitative Sample: This group comprises general consumers of safe shrimp, totaling 400 individuals. The sample size is determined using the W.G. Cochran (1953) formula, with a convenience sampling method employed for selection.

Research Instruments

The research instruments used include an interview guide and a questionnaire designed to develop an integrated digital marketing strategy for safe shrimp entrepreneurs in Nakhon Pathom

Province. During the interviews, audio recordings are made for subsequent transcription. Additionally, preliminary data is collected from various documents, textbooks, journals, and related research to obtain in-depth details and categorize information for structured in-depth interviews.

A pre-test is conducted to evaluate the data collection process and ensure mutual understanding of the questions used in communication with the sample group. The questionnaire is utilized to measure the effectiveness of the integrated digital marketing strategy. Content validity is assessed using the Index of Item Objective Congruence (IOC) (Wiersma & Jurs, 2009), and reliability is measured using Cronbach's Alpha Coefficient, which yields a value of 0.85, indicating high reliability (George & Mallery, 2010).

Data Collection

Data collection is conducted through observation and in-depth interviews with safe shrimp farmers, as well as through questionnaires distributed to the general public and consumers of safe shrimp according to specified criteria. The data collection process spans from June to November 2022.

Data Analysis

Data obtained from field observations and interviews are recorded in notebooks and transcribed from audio recordings. The transcribed data are then organized, categorized, and summarized into study themes. The collected data are verified for accuracy and reliability by having the summary data reviewed or rechecked by the researchers or informants to confirm and provide the most accurate feedback through triangulation (Chanthonwanit, 2018). Qualitative data analysis is conducted using content analysis, while quantitative data are analyzed using descriptive statistics, including frequencies, percentages, and standard deviations.

Results

In Nakhon Pathom Province, safe shrimp marketing channels currently rely on offline methods involving intermediaries who purchase shrimp directly from farmers and distribute them to various markets. The primary markets include: 1) Nakhon Pathom Safe Shrimp Central Market: This market serves as a hub for collecting and selling safe shrimp from farmers in Nakhon Pathom and surrounding areas. It operates with stringent quality control and is connected with wholesalers and retailers both domestically and internationally. 2) Samut Sakhon Safe Shrimp Market: A major central market known for distributing safe shrimp nationwide. It buys shrimp from Nakhon Pathom for distribution and sale, including serving as a collection point for export companies. 3) Farmers' Markets and Fresh Markets: These markets sell safe shrimp directly from farmers to consumers, often organizing special events to allow farmers to sell their products directly. 4) Supermarkets and Restaurants: These establishments purchase safe shrimp directly from farmers for distribution to supermarkets, such as Makro, and restaurants within Nakhon Pathom Province. Thus, offline marketing channels have long been used to distribute safe shrimp and play a crucial role in quality control and expanding market access for farmers in Nakhon Pathom Province, as illustrated in **Figure 1**.

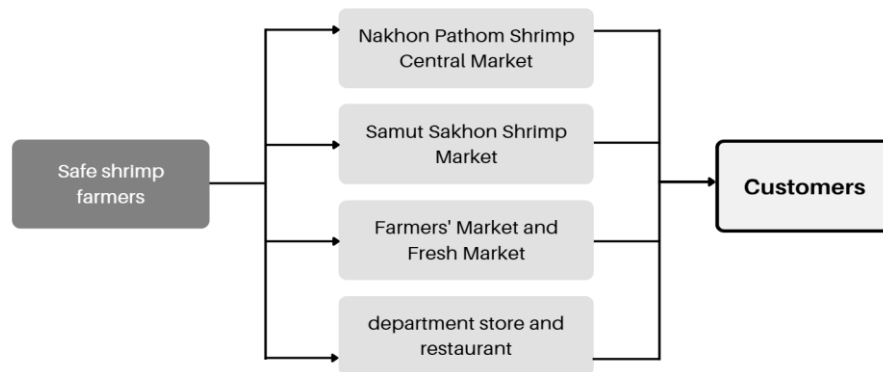


Figure 1: Marketing Channels of Safe Shrimp Farmers in Nakhon Pathom Province (Offline Marketing Channels)

Digital Marketing Channels for Safe Shrimp Farmers in Nakhon Pathom Province

The inefficiencies of traditional marketing channels prompted this research to enhance the digital marketing effectiveness for the safe shrimp business in Nakhon Pathom Province. The digital marketing channels are divided into two types: 1) Developing digital marketing channels through Line Official Account (Line OA), and 2) Developing digital marketing channels through an online wholesale shrimp market website. These approaches aim to reach customers more quickly and broadly. This research applies these strategies for shrimp farmers in Nakhon Pathom Province.

Developing Digital Marketing Channels through Line Official Account (Line OA)

Safe shrimp farmers in Nakhon Pathom Province utilize technology alongside traditional marketing methods via Line OA to enhance communication efficiency and expand their market. The process begins with registering a Line OA account, setting up profile information, and presenting details about the shrimp farm and its products. Farmers connect with customers through features such as Chat and Broadcast Messages to communicate and receive orders effectively. Additionally, the Rich Menu feature is used to facilitate customer interactions. Marketing efforts are further supported through various campaigns, such as distributing discount coupons and advertising via the Line Ads Platform to broaden the customer base. Data from internal Line OA analytics is used to refine marketing strategies for greater effectiveness, as illustrated in the development process shown in Figure 2.



Figure 2: The Process of Developing Digital Marketing Channels through Line Official Account (Line OA)

Development of Digital Marketing Channels through an Online Shrimp Wholesale Marketplace Website

The development of the online shrimp wholesale marketplace website in Nakhon Pathom enhances the effectiveness of expanding digital marketing channels for farmers. The website, available at <http://npruonline.com/shrimp/>, is designed to connect farmers with consumers through various pages covering information about safe shrimp, farms, and contact details, facilitating easy access to information and ordering. Additionally, the website emphasizes engaging and credible graphic design and the development of relevant content related to safe shrimp, such as recipes and farming information, to stimulate customer interest. The integration of e-commerce functionality for online shrimp ordering boosts sales and fosters relationships between farmers and consumers, as illustrated in the development process shown in **Figure 3**.

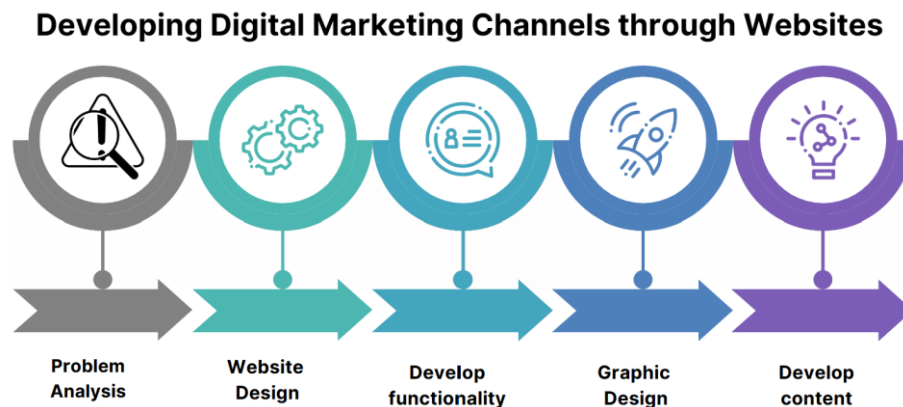


Figure 3: Development Process of Digital Marketing Channels through the Online Shrimp Wholesale Marketplace Website

Development of Digital Marketing Channels for Shrimp Farmers in Nakhon Pathom Province

The development of digital marketing channels for shrimp farmers in Nakhon Pathom Province involves two primary channels: 1) Digital marketing through Line Official Account (Line OA) and 2) Digital marketing through the online shrimp wholesale marketplace website. Utilizing both digital marketing channels effectively promotes shrimp farmers in Nakhon Pathom by enhancing communication and customer management through Line OA, which offers a convenient and modern approach. The online shrimp wholesale marketplace website, on the other hand, enhances access to product information and targeted sales. The combination of these channels allows farmers to build a strong brand, increase sales opportunities, and comprehensively and effectively meet customer needs, as illustrated in **Figure 4**.

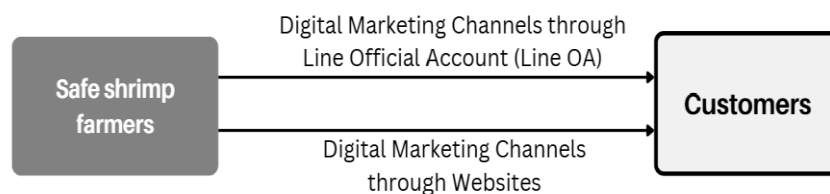


Figure 4: Digital Marketing Channels for Shrimp Farmers in Nakhon Pathom Province

The Development of Integrated Digital Marketing Communication for Safe Shrimp Entrepreneurs in Nakhon Pathom Province

The development of digital marketing communication for the safe shrimp business in Nakhon Pathom is significant, utilizing three main platforms: 1) Blockdit, which focuses on creating quality content linked to lifestyle to enhance awareness of the quality and standards of safe shrimp; 2) TikTok, which emphasizes creative short videos that quickly reach the target audience and boost sales; and 3) YouTube, which presents in-depth information and builds credibility for the products. All three platforms contribute to enhancing understanding and confidence in safe shrimp, expanding the customer base, and improving efficiency in reaching the target audience, as illustrated in **Figure 5**.

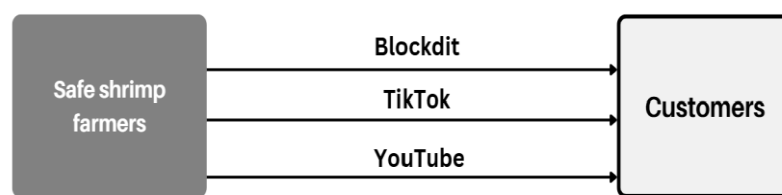


Figure 5: Integrated Digital Marketing Communication Model for Safe Shrimp Entrepreneurs in Nakhon Pathom Province

Omni-Channel Marketing

The development of an Omni-Channel marketing strategy involves integrating traditional (Offline) channels, multi-channel digital marketing, and cross-channel marketing to create a seamless and connected experience across all customer touchpoints. For the safe shrimp business in Nakhon Pathom Province, Offline channels such as fresh markets or department stores can build trust through physical product interaction. Multi-channel digital marketing expands customer reach using various online and offline channels, though these channels are not interconnected. Cross-channel marketing connects online purchasing with in-store pick-up, enhancing convenience. Omni-Channel marketing consolidates all channels into a cohesive, integrated system, ensuring a consistent and continuous experience regardless of the purchasing channel. This approach improves customer satisfaction, promotes repeat purchases, and strengthens the relationship between the business and its customers. Details are illustrated in Figure 6.

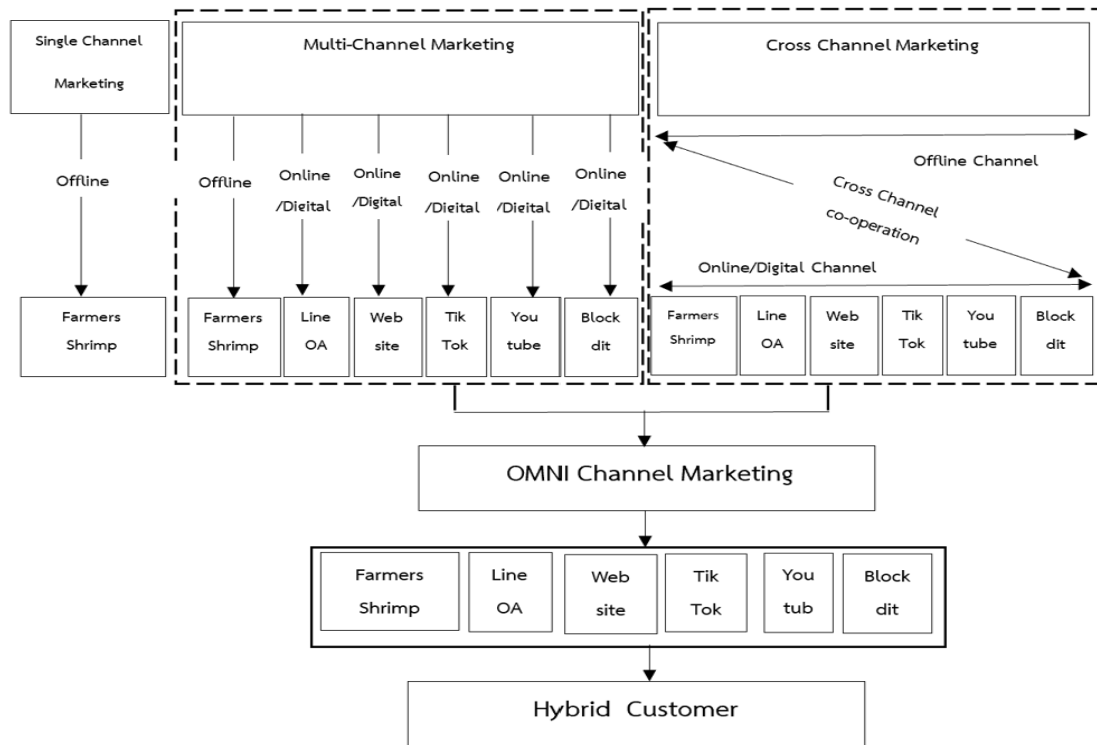


Figure 6 : The Integration of Traditional Marketing Channels (Offline Channels), Multi-Channel Marketing, and Cross-Channel Cooperation Towards the Development of an Omni-Channel Marketing Strategy.

Effectiveness of Digital Marketing Channels for Shrimp Farmers in Nakhon Pathom Province

The effectiveness of the digital marketing channel via LINE Official Account (LINE OA) was found to be high overall, with an average score of 4.43 and a standard deviation of 0.72. The convenience and speed of logging in were rated highest (average score of 4.45), followed by processing speed (average score of 4.43) and data connectivity capabilities (average score of 4.42). Therefore, the development of the digital marketing channel through LINE OA is crucial for increasing sales and building customer relationships, as well as for effectively and sustainably reaching target customers through training and support from government agencies.

Additionally, the evaluation of the website's effectiveness found it to be high overall, with an average score of 4.37 and a standard deviation of 0.50. The effectiveness of the content had an average score of 4.36 with a standard deviation of 0.46, while the use of language and website aesthetics scored 4.30 and 4.31, respectively. This indicates that the website is of high quality and effectively meets user needs.

Conclusion and Discussion

The utilization of digital marketing channels for shrimp farmers in Nakhon Pathom Province consists of two main channels: 1) Line Official Account (LINE OA) and 2) an online wholesale shrimp market website. The combined use of these two channels plays a significant role in promoting marketing and enhancing the operational efficiency of farmers, particularly in communication and information accessibility (Chakraborty & Bhattacharya, 2020). LINE OA enables farmers to communicate with

customers conveniently and quickly through various functions, such as answering inquiries, sending updates, and managing orders, resulting in increased customer satisfaction and long-term relationships (Tansuhaj et al., 2021). Simultaneously, the online wholesale shrimp market website allows farmers to access product information and sales data directly, enhancing opportunities for effective marketing (Sukprasert et al., 2022). The combination of these channels empowers farmers to build a strong brand and better meet customer needs, leading to increased sales opportunities and sustainable business development (Khan et al., 2023). Therefore, the use of technology in digital marketing is a crucial tool for enhancing the efficiency of shrimp farmers in the present era (Singh & Verma, 2022).

The development of marketing channels for safe shrimp farmers in Nakhon Pathom Province has been divided into three formats: traditional (offline) marketing channels, digital marketing channels, and Omni-channel marketing. These formats enable farmers to create a comprehensive and interconnected buying and selling experience. The traditional marketing channel emphasizes transactions through local markets, wholesalers, or intermediaries, which helps build confidence in product quality since customers can see and touch the actual products (Jung et al., 2020). This method fosters close relationships with local customers but has limitations in reaching new customers and expanding markets to new areas (Lee & Kim, 2021).

Digital marketing channels, through LINE OA, facilitate convenient communication and customer management, while the wholesale market website expands access to customers outside the local area (Patel et al., 2022). Transactions via digital channels can enhance competitiveness and effectively build brand awareness, although there are limitations in establishing trust with customers who cannot physically touch the products (Singh & Gupta, 2023).

On the other hand, Omni-channel marketing integrates traditional and digital marketing, linking all channels together so that customers can access products through any method, such as ordering online and picking up in-store or ordering in-store with home delivery (Chen et al., 2021). The use of Omni-channel marketing provides a seamless purchasing experience and creates a consistent experience for customers (Huang & Benyoucef, 2022). This integration enhances customer satisfaction, promotes repeat purchases, and fosters strong relationships between businesses and customers (Smith et al., 2023).

suggestions

Academic suggestions for developing an integrated digital marketing strategy for safe shrimp entrepreneurs in Nakhon Pathom should include enhancing the understanding of modern digital marketing strategies, such as data analytics and the use of AI to improve communication and marketing efficiency. Future research should focus on studying the impact of digital platforms on market expansion and building customer relationships. Surveying the opinions of entrepreneurs and customers on the use of new technologies will help ensure that the development of strategies is more appropriate and effectively meets market demands.

Reference

- Johnson, M., & Lee, S. (2022). Food safety standards in shrimp production: Ensuring quality and safety. *Journal of Aquaculture Research*, 15(4), 234-245.
- Nguyen, T., Tran, H., & Pham, A. (2023). Environmental impacts of shrimp farming and sustainable practices. *Aquatic Ecosystem Management*, 12(1), 56-68.
- Smith, J., Brown, L., & Davis, R. (2021). Innovative shrimp farming technologies: Smart water management systems. *International Journal of Fisheries Science*, 8(2), 120-135.