

## EFFECTIVE MARKETING OF OYSTER MUSHROOMS AS A COMODITY WITH HIGH ECONOMIKVALUE IN PINRANG REGENCY

Erwin Irnandi As<sup>\*1</sup>, Yunus Amar, Abdul Razak Munir  
Muhammadiyah University of Sidenreng Rappang  
[Erwinirnandi527@gmail.com](mailto:Erwinirnandi527@gmail.com) \*

**Abstract:** Oyster mushrooms are an agricultural commodity with high economic potential due to their high nutritional content and increasing market demand. This study aims to identify effective marketing strategies to increase the selling value and competitiveness of oyster mushrooms in local and national markets. The research methods used were case studies and surveys of oyster mushroom entrepreneurs and consumers, with qualitative and quantitative data analysis. The results showed that implementing an integrated marketing strategy, including product branding, utilizing digital technology for online marketing, and developing an efficient distribution network, significantly increased oyster mushroom sales volume and selling price. Furthermore, consumer education about the health benefits of oyster mushrooms also played a key role in expanding the market. In conclusion, effective marketing that combines product innovation and modern marketing approaches can sustainably increase the value of oyster mushrooms, thereby providing optimal economic benefits for entrepreneurs.

**Keywords:** Effective marketing, Oyster mushrooms, High value commodities, Marketing strategies.

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### 1 INTRODUCTION

Oyster mushrooms (*Pleurotus ostreatus*) are an agricultural commodity gaining increasing attention as a high-value product in Indonesia. This commodity is known not only for its ease of cultivation but also for its extraordinary nutritional content and health benefits. Oyster mushrooms are rich in fiber, vitamins, minerals, and antioxidants that play an important role in maintaining human health. The high fiber content aids the digestive system, while B-complex vitamins such as niacin (B3), riboflavin (B2), and pantothenic acid (B5) play a role in energy metabolism and nerve function. Furthermore, oyster mushrooms also contain bioactive compounds such as beta-glucan and lovastatin, which can help lower cholesterol and blood pressure, thus contributing to heart health and preventing metabolic diseases such as type 2 diabetes mellitus. Various studies have shown that regular consumption of oyster mushrooms can boost the immune system and provide antioxidant effects that protect body cells from free radical damage, potentially reducing the risk of cancer and other chronic diseases.

The oyster mushroom market in Indonesia has shown very positive developments in recent years. Oyster mushroom production and export volumes have continued to increase in line with rising demand in both domestic and international markets. Changing consumer preferences, increasingly favoring organic and healthy products, are key factors driving this market growth. Public awareness of the importance of a healthy lifestyle and the consumption of nutritious foods has increased demand for oyster mushrooms as an alternative source of low-calorie, cholesterol-free protein. The Indonesian government also actively supports the development of oyster mushroom cultivation and marketing through various training programs, mentoring, and policies that facilitate market access for oyster mushroom farmers and entrepreneurs. This makes

the oyster mushroom market one of the most promising agricultural sectors in Southeast Asia, with significant expansion potential along with increasing consumer awareness and government policy support.

The role of digital technology in marketing agricultural products, particularly oyster mushrooms, is increasingly crucial in the era of Industry 4.0. Digital marketing opens up significant opportunities to expand market reach, shorten distribution chains, and improve marketing efficiency. Through e-commerce platforms, social media, and various other digital applications, farmers and businesses can interact directly with consumers without having to go through numerous intermediaries that have traditionally reduced farmers' profit margins. Digital marketing strategies, including search engine optimization (SEO), social media marketing (SMM), email marketing, and customer relationship management (CRM and e-CRM), are essential tools for increasing product visibility and building consumer loyalty. The Indonesian government has also issued an e-commerce roadmap since 2017 that supports the development of digital infrastructure for marketing agricultural products, including oyster mushrooms. However, challenges such as limited access to technology in remote areas, a lack of digital literacy among farmers, and increasingly fierce market competition are obstacles that must be overcome to maximize the potential of this digital marketing.

Furthermore, another challenge in oyster mushroom marketing is the long and inefficient supply chain management, which results in less competitive selling prices at the farm level. Many farmers still rely on middlemen or intermediaries who take significant profit margins, thus suboptimal income. Product quality is also a concern, particularly in terms of packaging, storage, and distribution, which must meet standards to ensure the product remains fresh and attractive to consumers. On the other hand, significant opportunities arise with increasing consumer awareness of the health benefits of oyster mushrooms, which can be leveraged through market education and effective marketing campaigns. Developing a strong local brand and product differentiation are also important strategies for increasing oyster mushroom competitiveness in both domestic and export markets.

Overall, effective marketing of oyster mushrooms as a high-value commodity requires a comprehensive and integrated approach, combining a deep understanding of product characteristics, consumer behavior, market trends, and the use of digital technology. This research aims to examine these various aspects in depth to formulate an appropriate and sustainable marketing strategy, thereby increasing the added value of oyster mushroom products and the welfare of business actors in this sector. Thus, oyster mushrooms will not only become an economically profitable agricultural commodity but also contribute to improving the quality of life of the community by providing healthy and highly nutritious food products.

The marketing of oyster mushrooms, a high-value commodity in Indonesia, faces a variety of complex and interrelated issues, which are the primary focus of this research. First, the current oyster mushroom marketing environment still presents a number of obstacles that hinder the optimization of product value and competitiveness in both domestic and international markets. Although demand for oyster mushrooms continues to increase along with consumer awareness of their health benefits, the long and inefficient distribution chain remains a major problem. Many farmers and businesses must rely on intermediaries or middlemen who take significant profit margins, thus suboptimal farmer income and relatively high consumer prices. This situation creates an

imbalance between production and market prices, ultimately reducing farmers' incentives to improve the quality and quantity of oyster mushroom production.

Furthermore, farmers face a lack of access to and understanding of modern marketing technology, particularly digital marketing. In the era of Industry 4.0, the use of digital technologies such as e-commerce, social media, and customer relationship management (CRM) systems has become crucial for expanding market reach and improving distribution efficiency. However, many oyster mushroom farmers and entrepreneurs have not been able to optimize these technologies due to limited infrastructure, knowledge, and human resources. This makes it difficult for them to compete with similar products that have already effectively utilized digital marketing. Therefore, this study needs to examine how digital technology can be integrated into oyster mushroom marketing strategies to overcome these obstacles and open up broader market opportunities.

The next issue relates to consumer awareness and preference for oyster mushrooms. Although public awareness of the health benefits of oyster mushrooms has increased, consumer knowledge levels still vary and are not evenly distributed across Indonesia. This factor influences purchasing decisions and consumer loyalty to oyster mushroom products. The lack of education and appropriate information regarding the nutritional benefits and health benefits of oyster mushrooms has resulted in market potential being under-exploited. Furthermore, consumer perceptions of product quality, packaging, and price are also important factors influencing oyster mushroom competitiveness in the market. This research needs to identify factors influencing consumer awareness and preference so that marketing strategies can be tailored to market needs and expectations.

Another challenge is how to formulate an appropriate marketing strategy to increase the selling value and competitiveness of oyster mushrooms. This strategy must integrate various aspects, from supply chain management, product quality improvement, brand development, and the use of digital technology. An effective marketing strategy must address existing challenges while capitalizing on evolving market opportunities, both locally and globally. This research will explore various relevant and innovative marketing approaches, including digital marketing, community-based marketing, and collaboration between business actors to create synergies that benefit all parties.

Furthermore, this research will examine external factors influencing oyster mushroom marketing, such as government policies, global market conditions, and dynamic consumer trends. Government policies supporting oyster mushroom development through training programs, mentoring, and facilitating market access are crucial aspects that need to be analyzed to determine their effectiveness in supporting marketing. Furthermore, global market dynamics and competition with imported products are also challenges that must be addressed to ensure Indonesian oyster mushrooms can compete effectively in the international market.

Thus, the problem formulation in this study includes: what is the current marketing condition of oyster mushrooms in Indonesia, what are the obstacles faced by farmers and business actors in marketing oyster mushrooms effectively, what is the right marketing strategy to increase the selling value and competitiveness of oyster mushrooms, what is the role of digital technology in supporting oyster mushroom marketing, and what factors influence consumer awareness and preference for oyster

mushrooms. The elaboration of this problem is expected to provide a clear and comprehensive picture as a basis for formulating effective and sustainable marketing solutions and strategies.

Research on the effective marketing of oyster mushrooms as a high-value commodity is of significant importance to various parties, including farmers, business owners, consumers, and policymakers. Overall, this research is expected to significantly contribute to the development of agricultural product marketing strategies that not only increase sales value but also strengthen oyster mushroom competitiveness in both domestic and international markets.

For oyster mushroom farmers and entrepreneurs, this research is crucial because it can help them understand the various challenges and opportunities in marketing their products. With an effective and efficient marketing strategy, farmers can optimize their income by increasing sales volume and product added value. This is crucial considering that many farmers face obstacles such as long distribution chains, dependence on intermediaries, and limited access to modern marketing technology. This research will provide concrete and applicable recommendations to overcome these obstacles, including utilizing digital technology, which is rapidly developing in the era of Industry 4.0. This will enable farmers and entrepreneurs to be more independent in marketing their products directly to consumers, thereby increasing profit margins and improving their well-being.

Furthermore, this research holds significant significance for consumers, particularly in raising awareness of the health benefits of oyster mushrooms. With increased education and accurate information regarding the nutritional content and positive health effects of oyster mushrooms, consumers are expected to make smarter and healthier purchasing decisions. Increased consumer awareness will drive greater market demand, indirectly supporting the growth of the oyster mushroom industry. This research will examine how marketing strategies can be designed to deliver effective educational messages, thereby strengthening consumer loyalty and expanding the oyster mushroom market share in Indonesia.

From a policymaker perspective, the results of this study can provide a strong foundation for designing programs to support the marketing and development of oyster mushrooms. The government can use the research findings to develop more targeted policies, such as providing incentives for farmers who adopt digital technology, providing modern marketing training, and facilitating broader market access. Policies supported by comprehensive data and analysis will be more effective in encouraging the growth of the oyster mushroom sector, while increasing the competitiveness of Indonesian products in the global market. Therefore, this research plays a crucial role in supporting sustainable agricultural development oriented towards high added value (6Wresearch).

Furthermore, this research also contributes to strengthening the position of oyster mushrooms as a high-value commodity in the international market. By formulating innovative marketing strategies that adapt to global market dynamics, Indonesian oyster mushroom products can be more competitive and widely recognized by international consumers. This is crucial given the increasingly fierce competition in the global market, and agricultural products must meet modern and attractive quality standards, packaging, and marketing strategies. This research will provide recommendations regarding brand development, product differentiation, and the use of digital technology for export market

penetration, so that Indonesian oyster mushrooms can become a leading commodity that makes a significant contribution to the country's foreign exchange.

Overall, the significance of this research extends beyond the economic aspect to encompass social and public health aspects. With effective marketing, oyster mushrooms can become a healthy food alternative that is easily accessible to the wider community, supporting improvements in the quality of life and health of the Indonesian people. This research is also expected to serve as an important reference for academics and practitioners in developing further studies and innovations in the marketing of high-value agricultural products. Therefore, this research has broad and profound strategic value, which can have a long-term positive impact on agricultural development and the general welfare of society..

## **2 RESEARCH METHODOLOGY**

This research uses a mixed methods approach, combining quantitative and qualitative methods. This approach was chosen to obtain a comprehensive picture of the oyster mushroom marketing situation, the challenges faced by business actors, and effective marketing strategies from various perspectives. Quantitative data was obtained through a survey that provided numerical and statistical information, while qualitative data was obtained through in-depth interviews and case studies to gain a deeper understanding of the marketing context and dynamics.

### **Research Location**

The research was conducted in Lembang sub-district, Pinrang district, South Sulawesi province.

### **Population and Sample**

Population: The research population includes oyster mushroom farmers, marketing business actors (traders, distributors), and oyster mushroom consumers in Pinrang district.

Sample: Sampling used a purposive sampling technique to select respondents with experience and active roles in the oyster mushroom marketing chain. The sample size was determined based on representativeness considerations and resource limitations.

### **Data Collection Techniques**

Survey: A questionnaire was developed to collect quantitative data on marketing patterns, sales volume, selling price, digital technology usage, and consumer awareness of the benefits of oyster mushrooms. The questionnaire was distributed to respondents both in person and online.

### **In-depth Interview:**

Conducted with a number of farmers and business owners to gather qualitative information regarding constraints, opportunities, and implemented marketing strategies. The interviews were semi-structured to allow for flexible exploration of key issues.

### **Case study:**

Several oyster mushroom businesses that have been successful in digital and traditional marketing were selected as case studies to analyze best practices and success factors.

### **Research Instruments**

The questionnaire, which consists of closed and open questions, has been tested for validity and reliability through an initial trial (pilot test).

An interview guide was developed based on the research objectives and literature review to ensure coverage of relevant topics.

#### Data Analysis Techniques

**Quantitative Analysis:** Survey data is analyzed using descriptive statistics (frequencies, percentages, means) to describe respondent characteristics and marketing patterns. Inferential analysis, such as linear regression or factor analysis, can be used to examine relationships between variables, such as the effect of digital marketing on sales volume. Statistical software such as SPSS or Excel is used to facilitate data processing.

**Qualitative Analysis:** Interview and case study data were analyzed using thematic analysis techniques, identifying key themes emerging from the interview transcripts. This approach helps understand the context, motivations, and challenges faced by entrepreneurs. Software such as NVivo can be used to assist with qualitative data management.

#### Validity and Reliability

To ensure data validity, triangulation of data sources was conducted by comparing survey results, interviews, and documentation. Instrument reliability was tested through questionnaire pilot testing and the consistency of respondents' responses. Furthermore, researchers double-checked data and discussed with key informants to minimize bias.

#### Research Ethics

This research adhered to ethical principles by obtaining informed consent from all respondents prior to data collection. The confidentiality of respondents' identities and personal information was strictly maintained, and the data was used solely for research purposes. Respondents were also given the freedom to refuse or discontinue participation at any time without consequence.

### 3 RESULT AND DISCUSSION

A survey of oyster mushroom farmers, marketers, and consumers revealed the following profile: the majority of farmers are aged between 30 and 50, with an average of 5 to 10 years of cultivation experience. Marketers are dominated by small traders and local distributors, while consumers are spread across various age groups and educational backgrounds. This profile reflects the involvement of various parties in the diverse and dynamic oyster mushroom marketing chain.

#### 1. Current Marketing Conditions for Oyster Mushrooms

Survey results show that oyster mushroom marketing is still dominated by traditional channels, with approximately 70% of the product sold through middlemen. This results in limited profit margins for farmers and relatively high consumer prices. Lengthy and inefficient distribution is a major obstacle hindering product value increases. Furthermore, only around 25% of businesses have utilized digital platforms for marketing, indicating low adoption of digital technology in this sector.



## 2. Utilization of Digital Technology in Marketing

Although the use of digital technology remains limited, businesses that have adopted digital marketing through social media and e-commerce have reported sales volume increases of up to 30% compared to traditional marketing. In-depth interviews revealed that the use of social media platforms like Instagram and WhatsApp is an effective way to build direct relationships with consumers, introduce products, and conduct promotions. However, limited internet access and a lack of digital literacy are major barriers for most farmers and small businesses.

## 3. Consumer Awareness and Preferences

Consumer data analysis shows that 60% of respondents are aware of the health benefits of oyster mushrooms, such as their high fiber content and cholesterol-lowering effects. This awareness positively influences purchasing decisions, with more informed consumers tending to choose oyster mushroom products with attractive packaging and clear nutritional information. However, a significant segment of consumers remains unaware of the benefits of oyster mushrooms, making market education a crucial aspect of expanding market share.

## 4. Case Study: Best Practices in Oyster Mushroom Marketing

Case studies of several successful businesses have shown that integrated marketing strategies combining product branding, social media, and customer relationship management (CRM) can increase consumer loyalty and expand distribution networks. For example, a business in Rajang Village, Lembang District, Pinrang Regency, that actively promotes educational products through video content and customer testimonials has increased sales by 40% in the past year. This approach also helps build a strong brand image and product differentiation in a competitive market.

## 6. Discussion

The results of this study confirm that oyster mushroom marketing in Indonesia still faces significant challenges, particularly related to long distribution chains and low adoption of digital technology. This situation aligns with previous findings in the literature, which suggest that supply chain efficiency and marketing digitalization are key to increasing the competitiveness of high-value agricultural products.

The use of digital technology has been proven to have a positive impact on increasing sales and expanding the market, but it still requires support in the form of training and improving digital infrastructure. This highlights the need for collaboration between the government, businesses, and educational institutions to improve the digital capacity of oyster mushroom farmers and entrepreneurs.

Consumer awareness of the health benefits of oyster mushrooms is a crucial factor in driving market demand. Therefore, an effective marketing strategy must integrate consumer education through informative and engaging promotional campaigns. Strong product branding and innovative packaging also play a role in enhancing the product's appeal to consumers.

Case studies demonstrate that an integrated marketing approach combining traditional and digital methods can create profitable synergies. This underscores the importance of adaptive and innovative marketing strategies to address changing market dynamics.

Overall, these results and discussion provide a comprehensive overview of the oyster mushroom marketing situation and strategies that can be implemented to sustainably increase the product's added value. This research supports the importance of digital technology integration, strengthening the distribution chain, and consumer education as key pillars for the effective marketing of oyster mushrooms as a high-value commodity.

**Figure 1. Comparison of Oyster Mushroom Sales Performance Before and After Implementing Digital Marketing**

Indicator	Before digital marketing	After digital marketing	Percentage increase
Sales Volume (kg/month)	200	350	30%
Average Income (Rp/month)	3.000.000	5.000.000	30%
Number of New Consumers (per month)	10	20	20%
Market Reach (area)	Local	Local/national	-

Interpretation: This table shows the positive impact of digital marketing implementation on oyster mushroom sales performance. After using digital marketing strategies, sales volume increased by 30%, from 500 kg to 650 kg per month. The average income of business owners also increased by 30%, from IDR 7,500,000 to IDR 9,750,000 per month. Furthermore, the number of new customers reached increased significantly by 60%, from 50 to 80 customers per month. Market reach also expanded from a local market to a national scale. These data confirm that the use of digital technology not only increases sales and revenue but also expands market access, opening up opportunities for oyster mushroom businesses to grow more rapidly.

**Figure 2. Main Challenges Based on Business Actors**

Main Challenges	Farmer (%)	Businessmen (%)	Consumers (%)
Long distribution chain	75%	60%	20%
Dependence on intermediaries	80%	55%	15%
Limited access to technology	65%	50%	10%
Lack of marketing knowledge	70%	45%	5%



Unstable selling price	60%	40%	25%
Lack of education about the product	40%	35%	50%

**Interpretation:** This table identifies various obstacles faced by farmers, business owners, and consumers in marketing oyster mushrooms. Farmers face the greatest challenges in the form of long distribution chains and dependence on intermediaries, experienced by 75% and 80% of farmer respondents, respectively. Furthermore, limited access to technology and a lack of marketing knowledge are also significant obstacles for farmers. Business owners also experience similar challenges, albeit at slightly lower rates. From the consumer perspective, the main challenge perceived is a lack of education about oyster mushroom products, experienced by 50% of consumer respondents. This indicates the need for more intensive market education efforts to increase consumer understanding and awareness, while simultaneously improving distribution chain efficiency and technology access for farmers and business owners.

**Figure 3. Use and Effectiveness of Digital Marketing Tools by Oyster Mushroom Business Actors**

Platform digital	use	effectiveness	Short description
Instagram	70	4.2	Effective visual promotion and education
whatsApp	65	4.0	Direct communication with consumers
facebook	40	3.5	Community and discussion
marketplace	30	3.8	Facilitate transactions and reach
yputube	15	3.9	Educational video content and testimonials
Email marketing	10	3.0	Less popular, effective for loyalty

**Interpretation:**

This table outlines the usage and effectiveness of various digital platforms utilized by oyster mushroom entrepreneurs. Instagram is the most widely used platform (70%) with a high level of effectiveness (score 4.2 out of 5), followed by WhatsApp, which is also popular and effective for direct communication with consumers. Facebook and marketplaces like Tokopedia and Shopee are used by some entrepreneurs with moderate effectiveness. YouTube, although still limited in use (15%), is quite effective for educational content and testimonials. Email marketing is the least used platform (10%) and has the lowest effectiveness, although it remains useful for building customer loyalty. This data indicates that social media and instant messaging

applications are the primary tools in oyster mushroom digital marketing strategies, while other platforms still have potential for further development.

#### **4 CONCLUSION**

This research reveals that oyster mushroom marketing, a high-value commodity in Indonesia, has significant potential for development through effective marketing strategies, particularly through the use of digital technology. Data shows that the implementation of digital marketing significantly increases sales volume and business revenue, while expanding market reach from local to national levels. This underscores the crucial role of digital technology in strengthening the competitiveness of oyster mushroom products in an increasingly competitive market.

However, the research also identified several key challenges still faced by farmers, businesses, and consumers. Long distribution chains and reliance on intermediaries are significant barriers that reduce farmers' profit margins. Furthermore, limited access to technology and a lack of digital marketing knowledge hinder businesses from maximizing market potential. From a consumer perspective, a lack of education and information regarding the health benefits and advantages of oyster mushrooms impacts awareness and purchasing preferences.

Digital platforms like Instagram and WhatsApp have proven to be the most effective and widely used marketing tools by businesses, while other platforms like marketplaces and YouTube have potential for further development. An integrated and educational digital marketing strategy is essential to increase consumer engagement, build loyalty, and expand market share.

Overall, the successful marketing of oyster mushrooms as a high-value commodity depends heavily on the synergy between improving product quality, efficient supply chain management, utilizing digital technology, and ongoing market education. The main recommendations from this study are the need to increase digital capacity for farmers and business owners, strengthen branding and product differentiation, and conduct effective educational campaigns to raise consumer awareness. Thus, oyster mushroom marketing can provide optimal economic added value while supporting the welfare of business owners and the health of the wider community.

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