

# MARKETING ANALYSIS OF ALTERNATIVE PELLETS FROM MAGGOT

Siti Yuliani<sup>1</sup>, yuliawati<sup>2</sup>

<sup>1</sup>, Universitas Djuanda Bogor, Indonesia ;

<sup>2</sup>, universitas djuanda bogor, Indonesia ;

<sup>1</sup>; <sup>2</sup>;

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## Abstract

**Background** - The livestock industry is a very important sector in creating food security in the world, especially in providing animal protein that is urgently needed by the community. However, this sector faces various challenges, one of which is the high cost of animal feed which is the largest part of production costs, reaching around 60-70% of total operational costs (Kasri 2021). Most conventional animal feed relies on imported raw materials, which in addition to increasing production costs, also leads to dependence on limited natural resources and has a negative impact on the environment. Therefore, more economical, sustainable, and environmentally friendly feed alternatives are needed to support the sustainability of the livestock sector. One of the solutions that is starting to get attention is the use of maggot (*Hermetia illucens*), which is the larvae of the Black Soldier Fly, as an alternative feed raw material. Maggot has a very high nutrient content, such as crude protein up to 30 - 45% (Amandanisa and Suryadarma. (2020), which makes it a potential feed raw material for various types of livestock, such as fish and poultry. In addition, maggots can also be cultivated by utilizing organic waste, making them a solution that is not only cost-efficient but also environmentally friendly. Maggot-based pellets as an alternative to animal feed are expected to help reduce dependence on commercial feed made from imported raw materials. However, despite its great potential, the development and marketing of maggot pellets in the market still faces various challenges, such as a lack of market knowledge regarding the benefits of maggot and a negative stigma against this raw material (Kinasih et al., 2020). Therefore, the right marketing strategy is needed so that maggot pellet products can be widely accepted and used, especially by small and medium farmers who are the main targets. This study aims to analyze the marketing strategy of maggot pellets, including market identification, pricing, distribution, and promotion. The methods used in this study are market surveys, SWOT analysis, and digital-based marketing strategy studies and local communities. The results of this study are expected to provide useful recommendations for the development and marketing of maggot pellets as a more economical and sustainable feed alternative.

**Purpose** - This research aims to: 1. Analyzing the Potential of the Maggot Pellet Market Identify potential markets for maggot-based pellets, particularly among small and medium-sized farmers, and understand the factors influencing the adoption of these products. 2. Analyzing Maggot Pellet Marketing Strategies Develop an effective marketing strategy, which includes price analysis, distribution, promotion, as well as digital and local community-based marketing approaches to increase market penetration. 3. Identifying the Competitive Advantages of Maggot Pellets Evaluate the advantages of maggot pellet products in terms of competitive price, nutritional efficiency, and positive impact on environmental sustainability. 4. Suggest Marketing Recommendations Provide recommendations on marketing strategies that can increase the acceptance and use of maggot pellets by farmers, taking into account sustainability and cost-effectiveness aspects.

**methodology** - This study uses an analytical descriptive approach with the aim of analyzing the marketing strategy of maggot-based pellets as an alternative to animal feed. The method used in this study consists of several stages, namely market surveys, SWOT analysis, and studies of digital-based marketing strategies and local communities. The details of the method used are as follows: 1. Market Survey The market survey was conducted to identify potential markets and understand consumer preferences regarding the use of maggot pellets as animal feed. The survey involved small and medium-sized farmers, as well as animal feed distributors. The data obtained from this survey includes information on the price that farmers are willing to pay, feed nutrition needs, and the level of acceptance of maggot pellets. The survey was conducted directly to get a broader picture. 2. SWOT Analysis A SWOT analysis is conducted to evaluate the strengths, weaknesses, opportunities, and threats related to the marketing of maggot pellets. Using this analysis, the research will identify the internal and external factors that influence the success of maggot pellet marketing, as well as determine strategies that can be implemented to maximize opportunities and mitigate threats. 3. Digital Marketing and Local Community Studies Digital-based marketing is carried out by analyzing the use of online platforms, such as social media and other digital campaigns, to increase brand awareness and market penetration. In addition, collaborations with local farmer communities were also analyzed to see how community-based approaches can accelerate product adoption at the small and medium farmer level. The study also includes the use of education through seminars and training to increase farmers' knowledge about the benefits of maggot and how to use it in animal feed. 4. Data Collection and Analysis The data collected through market surveys and secondary analysis of related literature will be analyzed using descriptive and quantitative analysis techniques. The data from the survey results will be processed to describe market trends, consumer preferences, and acceptance of maggot pellets. Meanwhile, a SWOT analysis will help formulate recommendations for appropriate marketing strategies. By using these methods, this study is expected to provide comprehensive insights into the marketing strategy of maggot pellets and their potential as a sustainable and environmentally friendly alternative to animal feed.

**Findings** - 1. Market Survey The market survey was conducted by interviewing 10 Gappokan groups, consisting of 15 members. The data obtained shows that 70% of farmers show interest in the use of maggot pellets as animal feed, especially in fish and poultry feed. Some of the main factors influencing their acceptance are their high protein content, lower cost compared to traditional feed, and the potential to reduce dependence on imported feed. The survey results also revealed that 65% of respondents are willing to pay a competitive price for maggot pellets, as long as the quality can be guaranteed. 2. SWOT Analysis A SWOT analysis conducted on maggot pellet marketing identified several important factors that affect the success of a marketing strategy. Here are the results of the SWOT analysis: 1. Strengths: • The high nutritional content (crude protein up to 45%) makes maggot pellets very suitable as animal feed. • Lower production costs compared to traditional animal feed. • Maggot's ability to treat organic waste makes it an environmentally friendly alternative. 2. Weaknesses: • There is a lack of market knowledge regarding the benefits of maggot pellets, especially among small and medium-sized farmers. • Negative stigma against the use of raw materials derived from fly larvae. 3. Opportunities: • Increased awareness of the importance of sustainable and environmentally friendly animal feed. • The potential to replace some of the more expensive imported feed. • Increasing demand for more efficient and low-cost animal feed. 4. Threats: • Fierce competition from conventional animal feed and other well-known raw materials. • Challenges in production scale that can affect supply consistency. 3. Digital Marketing and Local Community Studies Digital-based marketing through social media, websites, and online education has proven to be effective in increasing brand awareness among farmers. Through platforms such as Facebook, Instagram, and YouTube, various educational materials about the benefits of maggot as animal feed have reached more than 100 people within two months. Social media allows for the rapid and interactive dissemination of information, which can build consumer trust. In addition, collaboration with local farming communities in several regions has succeeded in introducing maggot pellet products through training sessions and live demonstrations. These communities are very responsive to initiatives that involve them in the learning process and share information about the benefits of maggot pellets. On average, 80% of farmers who took part in this training expressed a desire to try using maggot pellets after getting more information. 4. Data Collection and Analysis Data obtained from market surveys and interviews with farmers shows that there is considerable market potential for maggot pellets, especially among farmers who are looking for more affordable feed alternatives. The results of the analysis show that marketing that involves education and counseling to farmers, as well as utilizing digital platforms, is a very effective strategy in increasing product acceptance. Overall, the results of the study show that maggot pellets have the potential to become a sustainable and environmentally friendly animal feed solution, with a huge market opportunity among small and medium-sized farmers. Marketing based on digitalization and collaboration with local communities is key to increasing market penetration and adoption of this new technology.

**Originality** - Maggot-based pellets (*Hermetia illucens*) offer innovative solutions to address the challenges of availability of quality and affordable animal feed. With a high nutrient content, such as crude protein of up to 45%, maggot is a potential raw material for fish and poultry feed. This article highlights the marketing strategy of maggot pellets through market identification, pricing, distribution, and promotion. The research uses market surveys, SWOT analysis, and studies of digital marketing strategies and local community engagement. The results show that maggot pellets have broad market potential, especially among small and medium-sized farmers, with competitive price advantages, nutritional efficiency, and positive impact on the environment. Digital marketing, educational campaigns, and collaborations with farming communities have proven to be effective in increasing market acceptance. Maggot-based pellets are an economical, sustainable, and environmentally friendly alternative to feed, supporting modern livestock systems.

Keywords: maggot, alternative pellets, marketing, animal feed, sustainability.

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