

**TRAINING AND MENTORING ON PACKAGING OPTIMIZATION OF  
POLINEMA CRISPY DUWET BANANA GEDEBOG CHIPS IN THE  
COMMUNITY OF DUWET VILLAGE, TUMPANG SUB-DISTRICT,  
MALANG DISTRICT**

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**Abstract**

*This PKM/Service program aims to improve the packaging and promotion of "Debog Banana Duwet Polinema Crispy Chips" in Duwet Village, Tumpang District, Malang Regency. The residents of Duwet Village face challenges in effectively packaging and promoting their product, which currently lacks adequate branding and labels. To address these issues, this community service initiative aims to provide guidance and support in improving the packaging of the chips, as well as enhancing their promotional activities. Simple packaging equipment will also be provided to streamline the packaging process. The program's implementation will begin with partner coordination and conclude with a comprehensive evaluation. The outcomes of the training and mentoring activities reveal several key findings: Partners have limited knowledge about product quality improvement, affecting the product's market recognition. Current packaging methods used by partners are basic, consisting of plastic clips without product labels, limiting their market reach to the local community. "Kribog's DuPo Crispy" products, created by partners, lack attractive branding and labels. To ensure the sustainability of "Kribog's DuPo Crispy" products produced by our partners, the following recommendations are made: Conduct training sessions focused on enhancing product quality, fostering creativity, and innovation among "Kribog's DuPo Crispy" producers. Provide support in marketing strategies to address partners' limited knowledge in this area. Offer assistance in obtaining government-issued certifications, such as P-IRT licenses and food safety certifications, to ensure product quality and safety standards for "Kribog's DuPo Crispy."*

**Keywords:** Banana Stem, Chips, Promotion, Packaging

**INTRODUCTION**

On the western slopes of Mount Bromo, Semeru, and Tengger, several villages are nestled. Among them is Duwet Village, which covers an area of 799.216 hectares. Geographically, the village is situated at approximately 8°00'27.92" - 8°01'23.53" N latitude and 112°45'57.40" - 112°46'27.13" E longitude, at an altitude ranging from 700 to 1500 meters above sea level. Administratively, Duwet Village shares its borders, with Benjur Village to the north, Duwet Krajan Village to the south, Tulusbesar Village to the west, and the Bromo Tengger Semeru National Park Buffer Forest to the east.

The distance from Duwet Village to the sub-district capital is 5 km, which can be

reached in about 10 minutes. The distance to the sub-district capital can be reached in about 1 hour, covering a distance of 45 km. Duwet Village generally has geological characteristics in the form of black soil that is very suitable for agriculture and plantation activities. Duwet Village is divided into 2 (two) hamlets, namely Kedampul Hamlet and Petungsewu Hamlet. The livelihoods of Duwet Village residents are predominantly farmers (80.96%), as reported by BPS in 2020 (Badan Pusat Statistik Kabupaten Malang, 2022).

Duwet Village is a village included in the partner village program by Malang State Polytechnic. This program is one of the efforts made by Malang State Polytechnic to fulfill the *Tridharma* of Higher Education. In its implementation, Malang State Polytechnic has 2 (two) Partner Villages, namely Wringinsongo Village and Duwet Village. As a result, research and community service activities can be conducted in partner villages based on the unique characteristics, potential, and opportunities present in each village. The service activity in this instance was carried out in Duwet Village, as indicated in Memorandum of Understanding No. 470/372/35: 470/372/35.07.16.2013/2020 between the Head of Duwet Village, Tumpang District, Malang Regency, and the Deputy Director for Cooperation of Malang State Polytechnic.

The village, situated in the eastern part of Tumpang sub-district, is a mountainous area well-suited for cultivating coffee plants, fruits (such as apples, durians, avocados, longans, and bananas), and vegetables (potatoes, cabbage, carrots, onions, shallots, and others). In Duwet Village, the majority of the population engages in farming. In addition to farming, to supplement their family income, the residents of Duwet Village also explore home-based businesses by utilizing locally available raw materials to produce snacks.

Duwet Village is known for producing high-quality bananas, including red temple, rojomolo, jackfruit, and kepok varieties. These bananas are not only processed into banana chips but are also consumed as fresh fruit. Moreover, residents also turn banana *gedebogs* (Banana Stem) into chips, while the only parts of the banana tree that are utilized by residents are the banana leaves and the banana heart. Banana leaves are commonly used for wrapping cakes, while the banana heart is utilized by the community in various processed dishes (vegetables and *botołk*). It's important to note that the utilization of banana heart and banana leaves must be done carefully, as only specific types are suitable for use. Similarly, not all banana *gedebogs* are suitable for processing into chips and consumption.

The processing of banana gedebogs into chips is currently carried out using manual and traditional methods. Consequently, production activities have not reached their full potential, and the quantity produced remains limited. Furthermore, the packaging is retained in its current form, as depicted in Figure 1.



**Figure 1. Kripik Debog Banana Duwet Polinema (Kribog's DuPo Crispy) Products produced by Residents**

The production of Kribog's DuPo Crispy is carried out by the residents of Duwet Village with assistance from the State Polytechnic of Malang, provided by lecturers from the Department of Commercial Administration. This product is expected to contribute to the economic development of the village. This is particularly important because Duwet Village is still classified as a low-income community, with a poverty rate of 42.26% (Central Bureau of Statistics, 2020). The potential of Duwet Village, combined with the processing of Kribog's DuPo Crispy, is substantial. These products are healthy snacks suitable for consumers of all ages, offering essential vitamins and minerals that the body requires, while also serving as an energy source.

Additionally, banana gedebog (banana stem), as discussed by Sagajoka et al. (2021), has various medicinal and healing properties, including detoxifying the digestive system, aiding in weight loss, regulating cholesterol and blood pressure, alleviating stomach acidity, managing blood sugar levels, and more.

This product also holds economic value for the families involved in its production, meeting their snack and healthy food needs. Food is a fundamental requirement for

families, as it provides the necessary energy and nutrients for the human body, as noted by Saputri et al. (2016). In the present day, people increasingly recognize the importance of consuming food that not only satisfies hunger but also meets the body's nutritional demands. Entrepreneurial activities that increase the economic value of banana stems can serve as a catalyst for community economic growth, as highlighted by Sagajoka et al. (2021). Leveraging and utilizing local resources owned by the community can significantly enhance the local economy, as suggested by Paramita et al. (2018).

Based on the results of observations and interviews conducted within the Duwet Village community, it was discovered that the Kribog's DuPo Crispy products currently employ packaging in the form of plastic clips without labels. However, Kribog's DuPo Crispy has the potential to generate additional income for the people of Duwet Village and make use of discarded banana gedebogs. Consequently, community service activities are necessary within the Duwet Village community group. Another aspect that requires improvement is the product promotion process.

One effective method to market and promote a product is by enhancing its packaging and introducing labeling to attract a broader consumer base. Packaging serves not only as a container and protector but also as a means of product communication to consumers. Thus, well-designed packaging can make a product more competitive in the market. The primary function of packaging is to house and safeguard the product from damage.

The challenges faced by the food-producing community are becoming increasingly intricate, particularly in providing added value to their products. In the long term, the failure to enhance people's income can lead to a reduction in purchasing power, thereby affecting the overall income of a region. In such circumstances, a range of strategies is required to increase the added value of a product. Yuliari & Riyadi (2015), in their work, explained that improving the appearance of product packaging is one way to increase product value. This not only preserves product quality but also serves as a medium for promoting the product (Rosalina et al., 2012).

Regarding the packaging of a product, several factors are considered, including the uniqueness of the packaging, the suitability of the packaging design for the product, variations in packaging for different sizes or shapes, recyclable packaging, and packaging tailored to consumer preferences (Apriyanti, 2018). In this case, many MSMEs still face challenges in optimizing the appeal of their product packaging. In other words, product

packaging is often kept simple (Yuliani & Widyakanti, 2020). Technical improvements in product packaging don't always come with high costs. Many cost-effective methods can enhance the quality of product packaging, such as implementing the heat sealing method in the packaging process (Tanjung & Maury, 2018).

Based on the field observations conducted by the team, it was evident that the marketing challenges experienced by the community of Duwet Village, Tumpang Subdistrict, Malang Regency, producing Kribog's DuPo Crispy primarily relate to weak and suboptimal packaging and promotion. These issues have a direct impact on the business development of Kribog's DuPo Crispy product. Therefore, the involvement of academics in supporting the business development of the community in Duwet Village, Tumpang District, Malang Regency, involved in the production of Kribog's DuPo Crispy, is crucial for empowering their business. Given the challenges faced by the partners mentioned above, a community service program is necessary to provide solutions to business actors facing these issues.

Based on interviews with the community of Duwet Village, Tumpang Subdistrict, Malang Regency, who produce Kribog's DuPo Crispy, the challenges faced in developing their business are related to weak promotional activities and inappropriate packaging. These problems are attributed to the following factors:

1. The knowledge and skills of Duwet Village residents in packaging and labeling Kripik Debog Banana Duwet Polinema (Kribog's DuPo Crispy) are still limited.
2. The promotion of Kribog's DuPo Crispy products produced by the community of Duwet Village, Tumpang District, Malang Regency, is currently limited and not optimized. This is evident from the low level of awareness about the product among potential customers.
3. The community involved in producing Kribog's DuPo Crispy does not yet have access to a simple packaging machine to properly package their products.

## **RESEARCH METHOD**

In this Service activity, the following methods were used:

- a. Knowledge Transfer

This form of community service activity is in the form of training and assistance in persuasive packaging design for the community producing Kribog's DuPo Crispy. The benefit is that they know the importance of packaging in influencing buyers in choosing

and buying a product in addition to maintaining product hygiene. Furthermore, in addition to the aesthetic aspect that is highlighted, the packaging designed also pays attention to human health and environmental hygiene. In addition, training and mentoring on promotional strategies that must be carried out by the community producing Kribog's DuPo Crispy.

b. Discussion and Q&A

Carried out to provide space for the target audience to understand more about the material presented and help build a closer relationship between the PkM implementer and the target audience.

c. Problem Discussion

In this activity, PkM implementers were directly involved in helping the Duwet Village community to produce Kribog's DuPo Crispy with the technique of delivering Kribog's DuPo Crispy packaging material hygienically and maintaining human health and the environment, keeping the situation formal, choosing language that is firm, straightforward but polite, especially how to influence the community but not seem patronizing. In addition, training and mentoring on promotional strategies that must be carried out by the Kribog's DuPo Crispy producing community.

d. Grant of Packaging Equipment

At the end of the activity, the PkM implementer donated packaging equipment that functioned to assist the community in practicing the knowledge gained from the knowledge transfer activities provided by the PkM implementer. Thus, the Kribog's DuPo Crispy products produced can be packaged properly and recognized by the community.

The evaluation design used in this activity is:

a. Evaluation before PkM activities.

Analyzing the situation by making the people of Duwet Village who produce Kribog's DuPo Crispy as the target of interviews / question and answer discussions with the Implementation Team, which is guided by an Interview Guide to facilitate data and information collection. The content of the Interview Guide is about the difficulties and obstacles in the process of promoting and packaging Kribog's DuPo Crispy and trying to help provide solutions. The benchmark of this stage is to assess the extent to which the Duwet Village community that produces Kribog's DuPo Crispy is able to package Kribog's DuPo Crispy hygienically.

b. Evaluation during PkM activities.

Evaluation at this stage includes the following:

- 1) Evaluation of the absorption of the material that has been given.
- 2) Evaluation of the perceptions formed from the target audience so as to form a positive or negative opinion of the proposed PkM implementer.
- 3) Evaluation of the attitude of acceptance and support for the proposed material presented, so that the ability and willingness of the Duwet Village community producing Kribog's DuPo Crispy to implement the proposed material that has been submitted.

The benchmark of this stage is to ask for answers from the target audience on the questionnaire that has been prepared, where from these answers conclusions can be drawn about the perceptions and attitudes of the target audience, namely supporting or rejecting the proposal of the PkM implementer.

c. Final evaluation of PkM activities

From the overall results of PkM activities, analyze the things or proposals of PkM implementers that are approved and rejected. The background, reasons, and factors that support the perceptions and attitudes formed from the target audience are sought. From the data and information collected, it can be concluded whether PkM activities contribute and benefit and are in accordance with the institution where PkM activities are carried out.

## **RESULT AND DISCUSSION**

### **1. SWOT Analysis**

SWOT analysis was conducted based on the results of interviews with the community producing Kribog's DuPo Crispy in Duwet Village, Tumpang District, Malang Regency. The results are as follows:

a. Strengths

- 1) Home production that has not many competitors
- 2) Healthy snacks
- 3) Savory taste
- 4) Good for health

b. Weaknesses

- 1) Not well known to the public
- 2) People have difficulty finding information about Kribog's DuPo Crispy
- 3) Does not yet have a label

c. Opportunities

- 1) The need for healthy snacks is increasing
  - 2) Has uniqueness because it is a healthy snack
  - 3) Made with easily available ingredients
- d. Threats
- 1) Similarity of labels with other snack producers, so it could be demanding
  - 2) Other manufacturers sell similar products at lower prices
  - 3) Simple packaging but can attract consumers

## **2. Procurement of Equipment for Packaging Kribog's DuPo Crispy**

The results of the survey conducted at the beginning of the service activity found that the packaging of Kribog's DuPo Crispy in Duwet Village, Tumpang Sub-district, Malang Regency was still using simple equipment. Based on the identification results, it is known that the packaging is done simply, using plastic clips. Even without labeling. Therefore, equipment is needed that can help Kribog's DuPo Crispy producers in packaging their products. On this occasion, equipment was purchased in the form of plastic packaging with a sealer and front label and back label. This is done in packaging using only plastic sealers without labels. Thus, the packaging equipment will make Kribog's DuPo Crispy packaging tidier and attract consumers to buy.



**Figure 2. Briefing on Packaging**



**Figure 3. Plastic Packaging of various sizes**

### **3. Kribog's DuPo Crispy Packaging Assistance**

After purchasing equipment to package Kribog's DuPo Crispy, the Service Team needs to provide assistance for packaging. This assistance aims to provide an overview to Kribog's DuPo Crispy producers to do packaging and labeling properly. Assistance activities are carried out by providing direction on how to pack well and how to attach labels that have been made by the Service Team. Labeling here aims to promote the products they produce. This was done because the initial packaging of the tortilla chips product did not have a label.



**Figure 4. Packaging Label Applied to the Packaging**



Figure 5. New Packaging of Kribog's DuPo Crispy



Figure 6. Packaged Kribog's DuPo Crispy Products

#### 4. Evaluation Results Before and After Assistance in Product Packaging

The results of assistance at the service location show an increase in packaging results before and after assistance. Table 1 and 2 show the results of these changes.

**Table 1. Evaluation Results of Kribog's DuPo Crispy Packaging Before the Assistance Activity**

Tools for packaging	Activity	Result
Plastic Seal	Packaging Kribog's DuPo Crispy	Packaging is very simple and unlabeled, so potential customers are less interested in buying.

**Table 2. Evaluation Results of Kribog's DuPo Crispy Packaging After the Mentoring Activity**

Tools for packaging	Activity	Result
Plastic sealer label	Packaging Kribog's DuPo Crispy, using packaging prepared by the Service Team. Weighing Kribog's DuPo Crispy before packaging.	The packaging has begun to be neat, labeled and weighed. Thus, Kribog's DuPo Crispy that will be marketed, weighs uniformly. Potential customers began to be interested in buying Kribog's DuPo Crispy products.

Based on the results of observations and evaluations that have been carried out by the Service team during the mentoring activities, it shows that the mentoring activities and the procurement of simple product packaging equipment have improved the quality and quantity of Kribog's DuPo Crispy produced by residents of Duwet Village, Tumpang District, Malang Regency as partners. Thus, it shows that by using the equipment provided to partners, it is able to increase partner production both in terms of quality and quantity. This is reinforced by the opinion of Muhsin & Ahmad (2017) that the production process is inadequate both in terms of quality and quantity when the production process has not used a good machine.

Product packaging is an important aspect of product marketing and distribution. It is a process that involves the use of containers or packages to protect, identify, and promote products to consumers. Here are some of the benefits of product packaging:

- a. Product Protection:

Packaging protects the product from physical damage, contamination, and environmental damage. It helps maintain product quality and consumer safety. This is in accordance with the opinion of Kotler & Armstrong (2016) which states that packaging offers physical protection and reduces the risk of damage during transportation and storage.

b. Identification and Branding:

Packaging allows products to be recognized and differentiate from competitors' products. This makes it easier for consumers to identify brands and product types. This relates to the concepts of "brand identification" and "branding." Packaging is an important element in building brand image and consumer loyalty (Aaker & Joachimsthaler, 2000).

c. Product Promotion:

Packaging can serve as a powerful marketing tool. The design and message on the packaging can influence consumers and increase sales. This statement relates to the concepts of "promotion" and "marketing communication." This is in accordance with the opinion of Belch and Belch (2014) which suggests that packaging is an important visual communication channel in reaching consumers.

d. Practical Function:

Packaging makes products easier for consumers to use, store, and dispose of. This increases consumer convenience. Norman (2013) in his writing states that well-designed packaging can increase product usage. This relates to the concepts of "product ergonomics" and "consumer experience."

e. Environmental Protection:

Packaging can also support sustainability by using environmentally friendly materials and more efficient designs. The environmental protection benefits of packaging relate to the concepts of "sustainability" and "environmental impact." Charter and Polonsky (2007) state that environmentally friendly packaging reduces waste and environmental damage.

Product packaging plays an important role in marketing and influences consumer perception, sustainability and product success. These benefits reflect a number of marketing and management theories that have been applied in business practice.

In addition, the packaging of a product must visually, emotionally and visually attract the attention of potential consumers. Good packaging design can provide added value to the product in the package (Cenadi, 2000 in Apriyanti, 2018). Thus, it can be said that

packaging for consumers is very decisive in giving the impression of buying a product. Therefore, Kribog's DuPo Crispy produced by service partners in Duwet Village, Tumpang District, Malang Regency needs to be packaged attractively.

But in reality, not all producers are able to display packaging that is as attractive as possible. This is due to many factors. These factors include the lack of funds that must be allocated in the promotion program (including packaging design), the lack of understanding of the management of product producers of the importance of the appearance of the packaging for the products they produce, or the lack of creative and innovative personnel in the promotion / marketing management section (Apriyanti, 2018). Thus, these producers only pack sober or ordinary products. In fact, it is appropriate for producers to package their products with the best packaging and even periodically innovate the packaging they display, because this can affect consumer buying interest at large.

In an effort to increase product sales in the business world, which is currently full of intense competition, companies are required to be able to be creative in many ways, both in producing their products and in captivating consumers to be interested in buying the output they produce, one of which is through the appearance of physical packaging as well as the display of electronic advertisements and print advertisements for these products. This happened to the producer of Kribog's DuPo Crispy, in Duwet Village, Tumpang District, Malang Regency. In fact, packaging is not just a wrapper, because packaging gives a deep impression at first glance that makes consumers fall in love with a product and then decide to buy or cancel the purchase.

With the procurement of equipment and labeling, partners are able to produce products with attractive and inexpensive packaging in terms of sales. Of course, this will improve the quality of Kribog's DuPo Crispy products produced by partners.

## **CONCLUSION**

Based on the findings presented in the previous chapter, several conclusions can be drawn. First, the partners have limited knowledge about improving product quality, which has led to their products being relatively unknown in the market. Second, the partners utilize simple packaging methods, typically employing plastic clips without any labels to introduce their products. As a result, their market is restricted primarily to the local community. Lastly, Kribog's DuPo Crispy products produced by these partners lack distinctive brands and labels, which are essential for consumer recognition.

To sustain the production of Kribog's DuPo Crispy by these partners, several recommendations are proposed. First, training sessions focused on enhancing product quality are necessary to foster creativity and innovation among the partners, thereby ensuring the longevity of their products. Second, given the partners' limited knowledge of marketing, they would benefit from incentive-based assistance to improve their marketing strategies. Lastly, support is needed to help partners obtain government-issued certifications, such as P-IRT licenses and food safety certifications, to guarantee the quality and safety of Kribog's DuPo Crispy.

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