

## Improvement of Spice Drink Packaging to Improve Product Quality and Competitiveness at Daniyah Sukoharjo UKM

Mathilda Sri Lestari<sup>1</sup>, Maria Puspita Sari<sup>2</sup>, Ainur Komariah<sup>3</sup>  
Mathilda Sri Lestari

<sup>1</sup>Industrial Engineering Study Program Universitas Veteran Bangun Nusantara  
E-mail: [mathilda3015@gmail.com](mailto:mathilda3015@gmail.com)

<sup>2</sup> Industrial Engineering Study Program Universitas Veteran Bangun Nusantara  
E-mail: [puspitamaria20@gmail.com](mailto:puspitamaria20@gmail.com)

<sup>3</sup> Industrial Engineering Study Program Universitas Veteran Bangun Nusantara  
E-mail: [ainurkomariah@yahoo.com](mailto:ainurkomariah@yahoo.com)

**Abstrak:** In this era of the Covid-19 pandemic, many people consume drinks from spices to increase their immune system. The drinks consumed include raw materials from ginger, kencur, turmeric and temulawak, as well as those produced by UKM Daniyah. The production process at SME Daniyah is still traditional. The packaging process is also carried out manually, namely by inserting it into a plastic clip. On this packaging, a label is also given containing product information. But the *labeling* process only uses *photo copies* so that the gold process goes through a long stage. The financial management in SME Daniyah has also not been well documented. So far, financial management has only been recorded in records and manual calculations. This problem encourages our Univet Bantara Sukoharjo Community Service team to facilitate spice shredders and product packaging tools, assist partners in the packaging process to be able to do packaging properly, and assist partners in financial management until partners can carry out financial management with computerization.

**Keywords:** Packaging, packaging, traditional computerization, SME

### Introduction

In the era of the Covid 19 pandemic, many people / consumers consecrated drinks from spices. It is used to increase the immune system of his body (Sulistiowati et al., 2022). The drinks consumed include raw materials from ginger, kencur, turmeric and temulawak. How to make there is one that is cleaned and then pressed and brewed with boiled hot water. In addition to this method, currently many have sold these drinks that have been made instant as well as those produced by SMEs Daniyah.

UKM Daniyah is located at Kampung Jombor RT.02 RW. VIII, Bendosari Village, Sukoharjo Regency, Central Java Province. Daniyah SMEs are Micro and Medium Small Enterprises. The name of the owner of the SME is Mrs. Sunarmi. This UKM is in the field of instant drinks made from granulated sugar and empon-empon / spices, such as red ginger, emprit ginger, temulawak, kencur, turmeric, tamarind, and others. This business was started in 1995, starting from making ginger essence only. Because consumer demand continues to increase, business owners are increasingly motivated to develop their type of business. Until now, the product variants are increasing and the production capacity is also increasing. There are 7 variants of products currently produced, namely: Ginger Essence, Red Ginger,

Sour Turmeric, White Turmeric, Betel Turmeric, Temulawak and Kencur Rice. To obtain raw materials obtained from the traditional markets in Sukoharjo, namely the Sukarno market and Nguter Market.

The production process is still traditionally done manually. The process begins with the preparation of the ingredients to be produced, namely granulated sugar and empon-empon. Empon empon is cleaned by washing and peeling then grated, to take empon-empon juice by squeezing and filtering manually, empon-empon juice will then be mixed with sugar coupled with water and cooked until the sugar melts and stirred on the fire until the liquid crystallizes. After creating, the tal will be allowed to stand and the last process is packaging. The production capacity of "Daniyah" for each product variant is 5kg per week, so that overall approximately in one week it produces as much as 35kg. The picture during the process of manually crystallizing the spice drink can be seen in figure 1.



Figure 1. The process of crystallizing spice drinks

The ju ga packaging process is done manually. To put it in plastic using a teaspoon then the clip is closed. On this packaging, a label is also given containing product information. But the process of *labeling* only uses photo copies so that the gold process goes through several stages, namely the stage of packaging into plastic clips, inserting into transparent plastic masan, inserting *photo copies* of labels, which is the *pressing process*. With the terse but process takes a long time, and packing has a great chance of tearing. This can potentially reduce consumer attractiveness (Sucipta et al., 2017). In addition, this long stage of the process is also ineffective, because it will hinder work if the amount of production is higher. So a more active way is needed in order to improve work efficiency (Syaifuddin, 2018).

An example of product packaging can be seen in figure 2, and figure 3.



Figure 2. Examples of product gold



Figure 3. Product packaging examples

This SME product also has a PIRT license. Marketing of "Daniyah" products for the Sukoharjo area by depositing them to supermarkets and mini markets such as to MITRA Supermarkets, Fajar, Laris, LA, Biru, Sagino and at herbal stores. Besides being marketed to Sukoharjo, it is also marketed in Semarang, Jakarta and Karanganyar. In addition to a lot of marketing, there are also financial management that have not been well documented due to lack of knowledge about business financial management. So far, financial management is only recorded in the record and it is difficult to know the financial situation because it is made manually included in the calculations.

This problem prompted our Community Service team of Universitas Veteran Bangun Nusantara Sukoharjo to facilitate investment in re-heating equipment and product packaging equipment, assist partners in the packaging and *labeling* process until they are able to do packaging properly, and assist partners in financial management until partners can carry out financial management with computerization.

## Method

The service is carried out at the UKM 'Daniyah' which is addressed in Jombor village, RT. 02 RW. VIII, Kel. Jombor, Kec. Bendosari, Kab. Sukoharjo, Prov. insi Central Java. In this activity, it is emphasized to improve the packaging of the product by doing several stages, including: 1.) Evaluating the current product packaging; 2.) Optimizing packaging; 3.) Evaluating current financial management; 4.) Assisting in financial management; 5.) Evaluation of packaging and financial management.

The implementation of the devotion refers to the problem-solving flowchart as shown in figure 4.

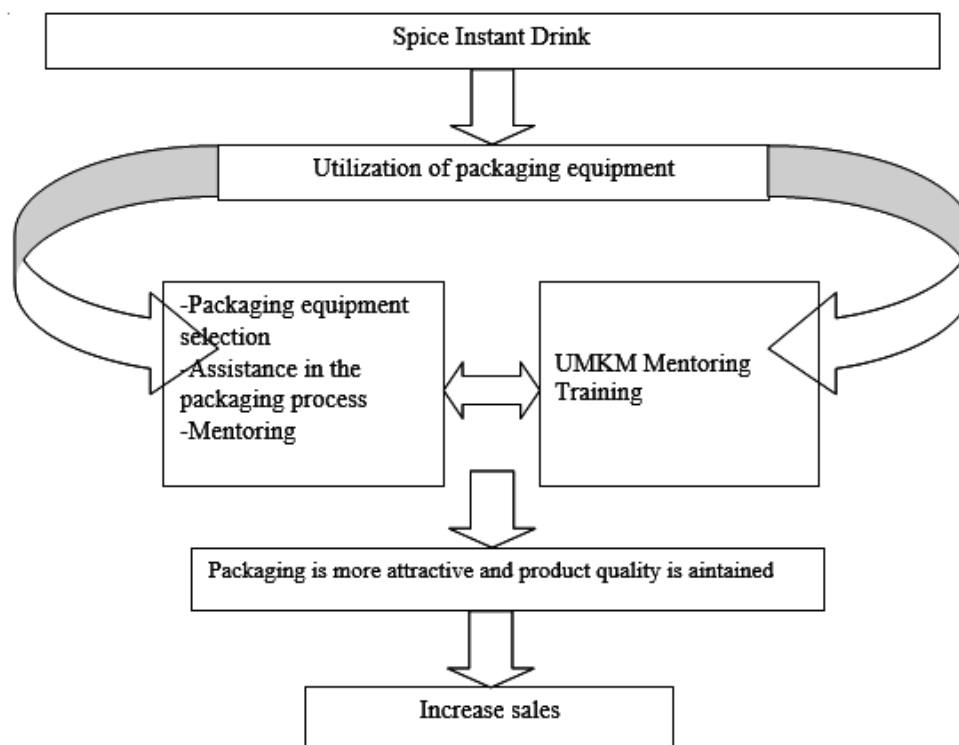


Figure 4. Troubleshooting Flowchart

## Result

Daniyah UKM is a Small and Medium Enterprise that produces ready-to-eat drinks made from spices. The main raw materials are spices in Indonesia such as Ginger, Red Ginger, White Turmeric, Turmeric, Temulawak, Betel and Asam. The products produced by Daniyah SMEs have several flavors according to the raw materials used such as fresh drinks: Kencur Rice, Ginger Essence, Red Ginger, Sour Turmeric, Curcuma, White Turmeric and Betel Turmeric. Daniyah's SME products so far, in addition to being marketed in several Super Markets and grocery stores in the Sukoharjo area, have also been sent to various other cities such as Jakarta, Bandung and Semarang.

The production process in SMEs is still very simple and uses traditional equipment, including:

### 1. The process of gluing spices.

The process of grate spices still uses an ordinary grate tool so it takes a long time. The time it takes to grate spices in one production process is approximately 1.5 hours. To speed up the kneading process, the AbMas team provided training and applied semi-automatic scarring devices to SME owners. By using this semi-automatic grate tool, the grate process time takes approximately 15 minutes. So that the grate process using a semi-automatic tool scarring time can be reduced by 75 minutes so that there is an increase in productivity by 116%. Images of the use of ordinary scarring tools and the use of semi-automatic scarring tools, can be seen in figure 5, and figure 6.



Figure 5. The use of ordinary grated tools



Figure 6. The use of semi-automatic scarring devices

### 2. Packaging Design and Packaging Process

The packaging design at Daniah SMEs is still very simple because it is packaged using a small size plastic clip which is then inserted into a larger size plastic and labeled as paper with *photographedcopies*. Each plastic packaging contains 10 plastic clips. With such packaging, it can reduce and attract consumers to buy (Willy & Nurjanah, 2019). Small packaging with plastic clips can cause perishable products because it is possible that the clips will open easily.

Seeing the design and packaging process, the AbMas Team gave directions on packaging and how to package the beverage product. Regarding packaging design, the AbMas team made packaging with a new packaging design. In addition to how to design good packaging, the AbMas team also provides training using *sellers*. The new packaging



design of each package no longer contains 10 packs of clip palstics but the packaging is made with a larger size with a content weight of 350 grams, so the packaging process is easier and neater. The packaging uses plastic clips that are *label* according to the contents of the product. To maintain the quality and quality of the product after it is packaged, pressing the packaging is carried out using a *seller* so that the packaging can be airtight.

Byusing new packaging, the packaging process for one spice drink production can save approximately 1.75 hours of time. Because the packaging process with old packaging takes approximately 3 hours while using new packaging the time that is bundled to pack is 1.25 hours.

With this new security, Daniyah SMEs in targeting their products are getting wider because they are not only marketed in super markets andgrocery stores in Sukoharjo, but also marketed *online* through question media. With *online* sales, it can increase sales because consumers can more easily get information about this spice drink product. The sales of products with new packaging to date sales have increased by about 27%. Gamber packaging yang old, training using sellers, and new packaging can be seen in figure 7, figure 8, and figure 9.



Figure 7. Old picture of packaging



Figure 8. Training using *sellers*



Figure 9. New packaging

### 3. Determination of Cost of Goods Manufactured

Production costs/cost of goods produced are costs that are used/incurred to make a product (Meroekh et al., 2018). The components of production costs consist of: Raw material costs, direct labor and *overhead* costs. The cost of raw materials is a certain amount of funds necessary for the pawning of raw materials to make a product. Labor costs are distinguished into 2, namely direct labor costs and indirect labor costs. Direct labor costs are a certain amount of funds that are spent to pay for labor that is directly involved in the manufacture of a product. Indirect labor costs are costs incurred to pay for labor other than direct labor such as: supervisors, managers, security guards, department guards, and others (Ardianti, 2014). However, for indirect labor costs, these will be included as overhead costs. Factory *overhead* costs include: administrative and general costs, marketing costs, indirect work costs and others.

So far, the production cost at Daniyah SMEs has never been calculated in detail so that it has not included elements of production costs as a whole. The calculation of production costs is only based on things that can be calculated in real terms, for example, the cost of raw materials and the cost of buying packaging alone, even labor costs so far have never been calculated on the basis that everything is done by themselves and assisted by the family. An example to calculate the production costs of making ginger spice drink products so far consists only of the price of ginger raw materials, sugar, packaging, and fuel (gas).

From the assistance that has been carried out by the AbMas team that the production costs for the manufacture of spice drinks raw material costs consist of: The cost of procurement of spices, the cost of granulated sugar. The cost of paying direct labor amounted to 3 people. As for the *overhead* costs of the factory include: packaging costs, transportation costs, administrative and general expenses, water, electricity and telephone use costs.

### Conclusion

The implementation of community service that has been carried out by the AbMas team at UMKM Daniyah was obtained that the use of grate tools for the spice or empon-empon kneading process compared to using ordinary grate can save 75 minutes of time or increase time use efficiency by 116%. With the new packaging product sales rose by about

27%. In addition to increasing time efficiency and increasing the number of sales, Daniyah MSME owners with assistance in calculating production costs can find out the cost components for the production of spice drinks.

## Reference List

- Ardianti, Y. (2014). Percentage of Raw Material Costs, Labor Costs, Factory Overhead Costs Against Cost of Goods Produced at Pt. Indohamafish in 2014. *Journal of Economic Education*, 5(2), 1–10.
- Meroekh, H. M. A., Rozari, P. E. De, & Foenay, C. C. (2018). Calculation of Cost of Goods Produced in Determining Selling Price through the Cost Plus Pricing Method (Case Study at the Tahu Pink Jaya Oebufu Factory in Kupang). *Journal Of Management (SME's)*, 7(2), 181–205.
- Sucipta, I. N., Suriasih, K., & Kencana, P. K. (2017). Food Packaging Studies Safe, Comfortable, Effective and Efficient Packaging. In *Udayana University Press* (1st ed.). Denpasar: Udayana Press University.
- Sulistiowati, A. R., Nopriansyah, U., Syarif, A. H., Islam, U., Purwokerto, N., Islam, U., Lampung, N., Islam, U., Lampung, N., Nusawungu, K., Cilacap, K., & Imun, S. (2022). Assistance in the Process of Making Natural Herbal Powder as an Effort to Improve the Body's Immune System during the Covid-19 Pandemic. *Al Mu'awanah: Journal of Community Service*, 3(1).
- Syaifuddin, S. (2018). Analysis of Factors Affecting Employee Work Efficiency at Pt. Petro Fajar Berlian, Medan. *SULTANIST: Journal of Management and Finance*, 4(2), 50–58. <https://doi.org/10.37403/sultanist.v4i2.73>
- Willy, & Nurjanah, S. (2019). 288244-Influence-Packaging-Products-And-Taste-Had-663F1557 Yosi's Reference. *The Effect Of Product Packaging And Taste On Buying Interest That Impacts Energy Drink Customers' Purchasing Decisions*, 9(2), 1–74.