

Utilizing Coconut Shell Waste Into A Crafts and Driving Economic Income in the Covid Pandemic in Berangir Plantation Village

Inggi Priyanata, Bayu Eko Broto, & Nurintan Asyiah Siregar*

Faculty of Economic and Business Labuhanbatu University, Indonesia

Abstract

Coconut shells have the characteristics to be used as various handicraft products. Study this aim for knowing benefit waste shell coconut Becomes something craft hand and push income economy during the Covid pandemic. Study this set Berangir Plantation Village as location research. The method used in this research is the method of observation and experiment. Thus, coconut shell waste can become more economically valuable and of course will have an effect on increasing people's income. The result of this research is a craft product that has aesthetic value and is beneficial to the community and can be of economic value.

Keywords: Coconut shell, Income, economical, experiment.

1. Introduction

The handicraft industry is an industry with high economic value. Artworks from handicrafts that have commercial value can be produced through proper and appropriate industrial management. In Indonesia, the handicraft industry is growing rapidly. In its development, various handicraft commodities can improve the economy in one group or community that is able to absorb labor from various levels of education. As we all know that home-based businesses or small industries that can produce quality handicraft products and have economic selling value. In general, those who become workers in the cottage industry are people from the lower classes or people who have low levels of education.

Poverty is one of the main problems that occur in developing countries, although some developing countries have succeeded in carrying out economic development in production and national income. The condition of poverty in a country also reflects the level of welfare of its population (Christianto, 2013). As a developing country, Indonesia is still struggling with the problem of poverty. National economic development which includes the creation of job opportunities to realize the welfare of the population and a decent life, is one of the strategies carried out by the Government of Indonesia. Pockets of poverty are the priority targets of various development programs and activities. Regional development must of course be carried out in an integrated and sustainable manner in accordance with the needs and characteristics of the region. Regional development and growth must be in line with national development targets in the long and short term. In assessing the success of national development, the rate of decline in the number of poor people can be a decisive determinant (Jantan, 2013).

There is a *coronavirus disease* 2019 (Covid 19 Pandemic) at the end of 2019 became one of the problems that hit the entire international world, including in Indonesia. The COVID- 19 pandemic has had economic, social and political implications in almost all countries, including Indonesia (Junus et al., 2020). This impact is also very influential on the progress and development of the MSME sector in Labuhan Batu.

Coconut trees have many benefits from the trunk to the fruit. Coconut is not only used as food, but can also be used for crafts. Coconut fruit, especially coconut shell and coir, is one of the potential natural resources that can be developed to improve the community's economy. One of the efforts to increase people's income, especially coconut farmers, is to process all components of the fruit into a high-value product (Indahyani, 2011).

The lack of community skills in utilizing the existing potential causes coconut waste to have no value and even the selling value is very cheap, so that the surrounding community allows the waste which can automatically pollute the

* Corresponding author.

E-mail address nurintanasyahsiregar@gmail.com

surrounding environment and become useless waste. Coconut coir comes from coconut fibers, so 35% of the weight of coconuts comes from coconut fibers. Therefore, it is very regrettable if coconut fibers are only thrown away and not used. In addition to coconut fiber, coconut shells are also still not being cared for and used to generate selling value. Because coconut shells can also be used for various handicraft products that have a selling value (Aminuddin, 2019). The lack of innovation in the utilization of coconut waste into products that are worth selling certainly has an impact on people's income, coupled with the current COVID-19 pandemic, which makes it difficult for people to fulfill their daily needs. Thus, through this program, the utilization of coconut waste which was initially not used optimally as a raw material for the manufacture of various unique and creative souvenir products and decorations such as can be processed into trophies, key chains, study lamps, flower pots, flower creations from coconut shells, cups and so on become an alternative that is expected to be of sale value so that it can improve the economy of the village community.

Along with the increasing public awareness of environmental issues, contemporary products from natural materials are increasingly favored. Coconut shell as a natural material also has more opportunities in its development as a selling value product. For this reason, a contribution in material processing techniques and design development is needed so that it can be an alternative in the business of utilizing coconut shell waste with a better selling value. The approach used in this research is the evaluation of the character of the coconut shell material and experimentation in the development of its production technique, which is then applied to a product with a specific function with added value design (Pugersari, 2011).

2. Research Methods

The research method used in writing this scientific paper is a method with a qualitative approach. Qualitative research methods are research that is usually used to investigate a problem, find problems, describe a problem, and explain the quality or features of the social influence of society that cannot be directly explained, measured or described without going through a quantitative approach. So that the authors use qualitative methods in this study so that the results of this study are in accordance with the desired (Saryono, 2010).

The steps in the implementation of qualitative research are adjusted according to the needs, as well as the situations and conditions that occur in the field. Broadly speaking there are several stages in qualitative research are as follows:

1. Formulate the problem as the object of research
2. Collecting data in the field as a reference material.
3. Analyze existing data
4. Formulate the results of existing studies
5. Develop suggestions for making a research decision.

Material Experiment

Experiments in this study were divided into two, namely initial experiments and follow-up experiments. The initial experiment aims to determine the specific properties of young coconut shells directly and the limitations in various possible utilization techniques, while further experiments aim to determine the efforts that can be made in maximizing the quality of coconut shells in their use as product materials. The qualities that are expected include visual form and texture, durability, and service life. Experiment process in the scheme on Figure 1.

3. Discussions

Coconut trees are very easy to find throughout Indonesia because it has a tropical climate, coconut has a thick and hard shell. The hardness of the coconut shell also affects the service life of the resulting equipment. This study aims to utilize coconut shell waste in an effort to increase people's income generated from various coconut shell crafts which are processed into various handicraft products that have economic value (Hermita, 2019). The trunk of a coconut tree is usually used as a board or pole as a weather-resistant building material. Coconut leaves are usually used as the basic ingredient for making diamonds, then the bones of the leaves or often referred to as sticks can be used as broom sticks. The leaf midrib can be used as firewood instead of a stove. The young flesh of the fruit is usually used as a drink or young coconut ice, while the old coconut meat can be used as an ingredient in coconut milk for processed foods and can also be processed into cooking oil or massage oil in health products. Apart from that, the most interesting part of the coconut lies in the coconut shell or what is called the coconut shell or the fruit shell of the coconut. We know that the coconut shell has its own economic value and is much higher in value than the coconut itself.

Coconut shells that are processed into various forms of crafts will have a much higher selling value than other parts of coconut if they are managed creatively. With the creativity and perseverance of creative hands, coconut shells can be transformed or made into handicrafts that have artistic value and use can increase the income of the craftsmen themselves. Before being processed into handicrafts, coconut shells are soaked in water to remove remnants of the meat so that it is easier to clean.

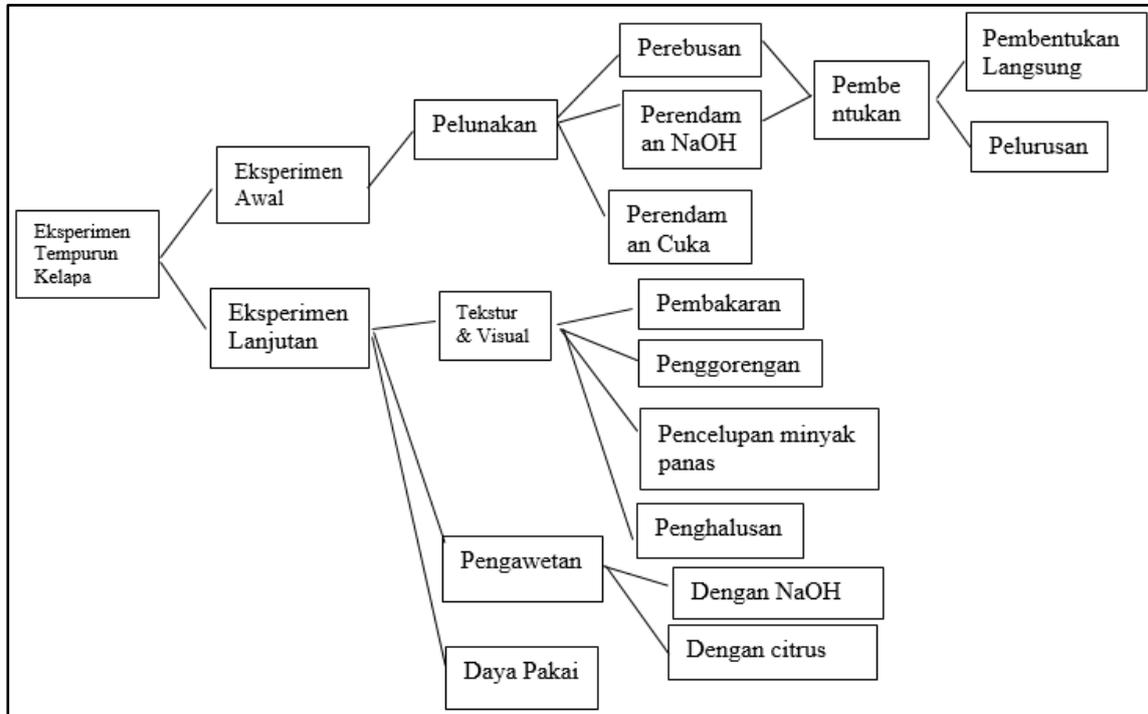


Figure 1. Experimental Process of Coconut Shell Material (in Indonesia)

After going through a series of treatments, experimental results were obtained for further analysis. The analysis in this experiment includes the analysis of the characteristics of the coconut shell material in general, the analysis of the initial experiments and the analysis of further experiments. During the experimental process, direct knowledge was obtained about the typical characteristics of coconut shell materials (Eskak, 2015).

Coconut Shell Characteristics

Some of the characteristics possessed by coconut shells include :

1. Hard nature

Coconut shell has a hard nature because it has fiber in its structure. This causes the coconut shell to be cut manually or using tools such as cutters or machetes.

2. Uneven coconut shell thickness

Coconut shell has an uneven thickness so that in the process of forming it must have expertise and accuracy because it greatly affects the resulting shape.

3. Coconut shell has a distinctive motif

Coconut shell has a distinctive motif that is formed from fiber lines. This distinctive motif is what can provide its own aesthetic value and make it an economical selling point.

4. Strong

Coconut shell has good strength, it is not easy to break when dropped.

5. Resistant to water

Coconut shell is resistant to water because it has very tight pores. So that the coconut shell can hold water.

Table 1. Analysis of Initial Experimental Results

Technique/Treatment	Advantages	Deficiency
Formation by immersing NaOH	Material becomes soft and can be shaped	<ul style="list-style-type: none"> - Material is shrinking - Soaking too long can cause spoilage - Resulting in discoloration - At a certain point it becomes prone to fracture
Formation with redemption	<ul style="list-style-type: none"> - Material becomes soft and can be shaped - Material does not experience shrinkage - Preserves the original color and texture of the coconut shell 	<ul style="list-style-type: none"> - Requires energy in the process - At a certain point it becomes prone to fracture
Straightening by immersion NaOH	Material becomes flat (straight) permanently	<ul style="list-style-type: none"> - Material is shrinking - Material becomes brittle - Resulting in discoloration - Cannot be applied to shells with a certain thickness
Straightening with boiling	<ul style="list-style-type: none"> - Material becomes flat (straight) permanently - Material does not shrink - Material stay strong - Retains the original color and texture of the coconut shell 	Requires energy in the process

The following are the results of further experimental analysis on coconut shells in tabular form.

Table 2. Analysis of Advanced Experimental Results

Technique/Treatment	Advantages	Deficiency
Burning	Alternative coloring on coconut shell material	<ul style="list-style-type: none"> - The creation of accents and colors is difficult to evenly distribute - Matter becomes brittle
Frying	The material is durable and water resistant	<ul style="list-style-type: none"> - Eliminate the natural motif of the shell - Eliminates the character of the material completely
Hot oil immersion	The material is durable and water resistant	The natural motif of the shell becomes very clearly visible so it looks dirty
Smoothing	<ul style="list-style-type: none"> - The material is smooth, durable and water resistant - Bring out the natural texture, color, and motif of the shell 	sanding until smooth takes time
Preservation with NaOH	Alternative material preservation without harmful chemicals	The rot in some parts becomes obvious
Preservation with citron	<ul style="list-style-type: none"> - Alternative material preservation without harmful chemicals - Does not change the original color and texture of the shell 	

Utilization of Coconut Shell Waste

Coconut shell is part of the coconut fruit that is still not widely used compared to other coconut benefits starting from the stems, leaves and sticks, although a small number of people have processed it into charcoal. Besides being used as a raw material for crafts, it can be done with several techniques that have been applied by coconut shell craftsmen. Utilization of coconut shell waste as a basic material for crafts can be done by several techniques by coconut shell

craftsmen:

1. Coconut

Coconut is a fruit that generally grows in the tropics which has characteristic leaves like needles and generally grows in clusters in coastal areas.

2. Coconut shell

Is the skin on the coconut fruit or the shell used to protect the coconut inside. Coconut shell is a material that protects the coconut fruit which has a hard and stringy structure compared to other parts of the coconut fruit.

3. Waste

Waste is something that results from the use of a product where the waste can be reprocessed and used into goods that have economic value in the hands of creative people in managing it.

Purpose of Utilizing Coconut Shell Waste

The purpose of the use of coconut shells is to reduce coconut shell waste that comes from the rest of the use of coconut fruit. Coconut shells can be used as valuable objects and have value if they can be processed properly. Coconut shell waste can not only be burned directly as firewood instead of stoves, or processed into charcoal. But coconut shells can also be used as crafts. But without us realizing it, the use of coconut shell waste is very profitable. This unused coconut shell can be used as a home decoration craft.

Characteristics of Coconut Shell Craft Business

Based on a survey that has been carried out, coconut shell processing activities into a craft, no This is so difficult, because to find the raw materials it is very easy to find around the place of residence. Therefore, making coconut shell crafts such as vegetable spoons will give the impression of an elegant, unique and luxurious society. In the craftsmanship of making vegetable spoons from coconut shells, it can be sold from Rp. 15,000 to Rp. 100.000,-. With additional features and product innovations, it can be marketed both online and offline.

Marketing through social networks or with the help of social media can be an opportunity for the community during the COVID-19 pandemic to increase their income by selling handicraft products made from coconut shells. The advantages of vegetable production are as show in Table 3.

Table 3. Advantages of vegetable spoon production

No.	Information	Income (Rp)	Expenditure (Rp)
1	Production output	-	8,219,350
2	Sales revenue	14,500,000	
3	profit	6280,650	

From the table 3, it can be seen that processing coconut shells into vegetable spoons can benefit.

4. Conclusions

From the research that has been done, it can be concluded that coconut shell waste can be processed into new products in the form of handicrafts and vegetable spoons. From the description, simple waste can be reproduced and developed in the community. The interesting thing about this is to overcome two problems simultaneously with one action, namely processing coconut shell waste, causing an increase in income which has a big impact on the community because it does not need to be on a large scale, because it can increase profits which can be seen.

References

Aminuddin, J., HA, & SS (2019). Manufacturing Process Rooftile Sokka Kebumen. *Dynamics Journal: Community Service*, 1 (4).

Arfadiani, D. (2013). Utilization Waste Shell Young Coconut Via Cutlery Product Design Development. *Journal Fine Arts and Design. ITB:Bandung*.

Christianto, T. (2013). Determinants and Characteristics Poverty in Maluku Province. *dream Economics*, 7 (1), 220–235.

- Eskak, E. (2015). Laminate Pattern Identification Shell Coconut. Dynamics Crafts and Batik. *Hall Big Crafts and Batik Yogyakarta*, 32.
- Hermita, R. (2019). Utilise Coconut Shell Waste Become Various Type Form Craft. *Journal Proportion*, 4 (2).
- Indahyani, T. (2011). Utilization Waste Fiber Coconut on Interior Planning and Furniture that Impacts the Empowerment of the Poor. *Bina Nusantara University*, 2 (1), 15–23.
- Jantan, M.-D., MI, & HI (2013). The impact of diverting a fuel subsidy to the agricultural sector on income distribution and poverty. *International Journal of Interdisciplinary Environmental Studies*, 7 (02), 1–13.
- Junus, N., Julius, M., & Karlin Z, M. (2020). *Utilization Waste Coconut in Improving the Village Community Economy For Support Preservation Environment In the middle Covid-19 pandemic*.
- Pugersari, D. (2011). Experiment Development Product Functional Worth Commercial Shell Raw Material Coconut Young Age With Softening Techniques. *Journal of Vis Art.ITB:Bandung*, 5.
- Saryono. (2010). *Method Study Qualitative*. PT. Alfabet.