

BROOM MAKING TRAINING AS AN EFFORT TO UTILIZE COCONUT COIR WASTE TO IMPROVE THE SKILL OF THE PUCANGGADING COMMUNITY

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Abstract - *In Pucanggading Hamlet, Hargomulyo Village, Kokap District, Kulon Progo Regency, Special Region of Yogyakarta, many coconut trees are abundant with coconut fiber waste that has not been utilized properly. Coconut fiber waste if processed properly will produce a high selling value in the market. The method used in collecting data, is first by conducting observations to find out the phenomena that occur in the field—second, conducting interviews with several residents regarding the problems they experience. The aim is to utilize coconut fiber waste properly and improve the skills of mothers in Pucanggading Hamlet. In the implementation of the activity, socialization was carried out on how to make brooms from coconut fiber and continued with practice in the field. The results of this activity showed that the mothers knew and could make brooms from coconut fiber that had been practiced in the field. The enthusiasm of mothers who succeeded in making brooms from coconut fiber wanted to be able to produce more and sell them in the market. This inspired the PKK mothers to make brooms together and then sell them in the market and the proceeds from the sale of brooms were used as cash income.*

Keywords: *Coconut Fiber Waste, Brooms, Utilization*

1. INTRODUCTION

Coconut tree (*Cocos nucifera L.*) is one of the multipurpose plants that plays an important role in human life. Thriving in tropical areas, coconut trees produce various useful products, from its fruit which is rich in nutrients, and refreshing coconut air, to other parts such as fiber, shell, and leaves which can be processed into various products. The benefits of coconut fruit are not only found in coconut flesh and oil but also in coconut fiber which is an additional product. Coconut fiber is the largest part of the coconut fruit in the form of coconut skin so 35% of the weight of the coconut fruit comes from coconut fiber (Opiyanti, 2013). Coconut fiber is the coconut processing waste with the highest percentage. Fiber classification based on its origin, coconut fiber itself is a type of natural fiber that comes from coconut fruit. Coconut fiber if decomposed will produce coir fiber (coco fiber) and coir powder (coco coir) (Indahyani, 2011). Based on this, it is very unfortunate if coconut fiber is only thrown away and not utilized. It turns out that coconut fiber can be used to make various products that have sales value, such as doormats, brooms, wall panels, ceilings, and interior raw materials (Bondra, et al., 2018).

So far, the utilization of coconut fiber waste is still limited to the furniture and household craft industries (Amin and Samsudi, 2010). This can be seen in the community who have not utilized coconut fiber waste so it becomes useless waste. Therefore, it is necessary to increase the added value of coconut fiber to create more profitable products. This is the opinion of Simarmata et al., 2019 that less productive agricultural waste must be utilized for more prospective and profitable products. Thus, the utilization of coconut fiber waste as a raw material for making brooms is an alternative whose products are expected to have sales value so that they can improve people's welfare.

One of the hamlets that still produce a lot of coconuts is in Pucanggading Hamlet, which is located in Hargomulyo Village, Kokap District, Kulon Progo Regency, Special Region of Yogyakarta. Coconut trees in the hamlet are still very abundant, but there is a lot of coconut fiber waste that has not been utilized properly. Therefore, group 61 of the 114th batch of Real Work Lecture UIN Sunan Kalijaga Yogyakarta held a socialization and demonstration of making brooms from coconut fiber waste to utilize the neglected coconut fiber waste in Pucanggading Hamlet. In addition, the activity also aims to improve the skills and welfare of the local community. It is hoped that later it can be used as a reference for how to process coconut fiber waste, and can also open up business opportunities to increase the community's economic income.

2. METHOD

A. Types of research

This study uses a type of field research with a qualitative descriptive method. Qualitative descriptive research is research with a case study method or approach (Sugiyono, 2018). This study uses a scientific setting, to interpret events in natural conditions using various existing methods (Tohirin, 2021). Therefore, the researcher chose to use qualitative descriptive research to determine how to find,

collect, process, and analyze the research data. The researcher conducted direct observations in the field to directly obtain information or data by visiting some community leaders so that they could find out the picture of the social conditions of the community in Pucanggading Hamlet, Hargomulyo Village, Kokap District, Kulon Progo Regency.

B. Method of collecting data

The data collection methods used in this study were observation and interviews. The observation method is used to empirically find out the phenomena observed directly by visiting the research location (Sugiyono, 2018). The interview technique can be interpreted as a language interaction carried out by two or more people facing each other to obtain information related to the object being studied (Emzir, 2011). Observations and interviews in this study were carried out by visiting community leaders and conducting direct observations of the environment and social conditions of the Pucanggading Hamlet community. Based on the results of observations and interviews, it was found that the Pucanggading Hamlet has greater potential in utilizing coconut fiber waste. One of them is that it can be used to make floor brooms that can improve the skills and welfare of the Pucanggading community.

C. Time and Place of Implementation

The activity of utilizing coconut fiber waste in floor brooms was carried out in Pucanggading Hamlet, Hargomulyo Village, Kokap District, Kulon Progo Regency on August 10, 2024. This activity was carried out by considering the large amount of coconut fiber waste that has not been utilized properly by the local community with the community service activity in the form of utilizing coconut fiber waste in floor brooms, it is hoped that it can help improve skills, increase insight, and increase community economic empowerment. In addition, it can also reduce coconut fiber waste that is scattered in the surrounding environment so that later a clean, cool, and beautiful environment can be created.

D. Tools and materials

The tools used in making brooms from coconut fiber are iron brushes, jute needles, hammers, and scissors. The materials needed are coconut fiber, bamboo or wood, rope, nails, raffia, and rubber tires.

E. Work procedures

1. Before the implementation of the socialization and demonstration of broom making, the initial activities carried out were the procurement of raw materials and a simulation of broom making by group 61 of the Real Work Lecture (KKN) class 114 of UIN Sunan Kalijaga Yogyakarta.
2. Next, socialization was carried out on making brooms from coconut fiber to explain and introduce to the community the benefits of coconut fiber waste and explain how to make the brooms.

3. The demonstration of making a broom is done in several stages. The first is to select green coconut fiber waste, then the coconut fiber is pounded until flat to make it easier to peel the outer skin of the coconut fiber. Next, the coconut fiber that has been separated from its outer skin is combed to separate the powder and fiber from the coconut fiber. The combed coconut fiber is placed on the end of the bamboo or wood arranged to form a broom. Then tie the top end of the coconut fiber and the bottom end of the bamboo with raffia and rubber tires then tighten the ties with nails. Clamp the middle of the coconut fiber with two pieces of bamboo to make it easier to sew the coconut fiber fibers in the middle of the top near the broom handle. Sew the coconut fiber fibers using a jute needle and rope to the entire middle of the top of the broom fiber that is clamped by bamboo. Finally, clean the broom fibers that are not strong enough by cutting or brushing them so that the broom looks neat. The broom from coconut fiber waste is ready to use.

3. RESULTS AND DISCUSSION

Community service activities carried out by group 61 of the Real Work Lecture of UIN Sunan Kalijaga Yogyakarta in the form of utilizing coconut fiber waste to improve the skills of the Pucanggading Hamlet community. The purpose of making brooms from coconut fiber is to utilize coconut waste that is widely found in the Pucanggading Hamlet area and to improve the skills of mothers in Pucanggading Hamlet. The existence of making brooms from coconut fiber is because many residents of Pucanggading Hamlet do not know about the utilization of coconut fiber waste. Especially making brooms from coconut fiber. Making brooms from coconut fiber is a skill that is quite easy to do at home. The tools and materials are easy to find and the results of the broom-making product have a marketable selling value. This activity can also be an inspiration for mothers, especially PKK mothers, to make brooms together. The brooms that have been made will later be sold at the market and the proceeds from the sale of brooms are used as additional income for the PKK mothers' cash.

The coconut fiber broom-making training was held on Saturday, August 10, 2024, from 09.00 to 13.00 WIB together with the PKK mothers' group of Pucanggading Hamlet. However, before conducting the socialization and demonstration of making brooms from coconut fiber, we, group 61 of the UIN Sunan Kalijaga Yogyakarta Community Service Program, conducted a simulation of making brooms first to find out the most effective materials and methods for making brooms from coconut fiber. There are two different types of coconut fiber. First, making brooms from dry coconut fiber or coconut fiber that has not been processed for a long time. Second, use coconut fiber that is still green or has just been picked. Making brooms from dry coconut fiber takes a longer process than green coconut fiber. Dry coconut fiber must go through a soaking process for 1 day so that it can be combed easily when separating the fiber powder from the fiber. Meanwhile, green coconut fiber can be directly pounded and then combed, no soaking is needed.

Therefore, in choosing the most effective materials and methods, we choose to use green coconut fiber without going through the soaking process. We choose to use conventional materials and methods or traditional methods to make it easier to practice making and applying.

Before the demonstration activity was carried out, we held a socialization about making brooms from coconut fiber waste targeting participants from the PKK mothers' group in Pucanggading Hamlet. This socialization was carried out so that participants would know in advance what processed products from coconut fiber are and the benefits they get. The material presented in the socialization contained the special features of coconut trees, other uses of coconut fiber, and the process of making brooms from coconut fiber. The socialization lasted about 30 minutes with enthusiastic participants who listened solemnly and interactively with each other. The socialization activity also conveyed the lack of optimal utilization of coconut fiber waste. This is due to the lack of attention from the government and the local community in processing coconut fiber waste into products with high sales value. So far, the government has only processed other parts of the coconut tree such as making brown sugar, coconut milk, charcoal, etc. While coconut fiber waste that should be processed into products with sales value is still neglected. Therefore, this socialization activity can increase public awareness that coconut fiber waste can also be processed and utilized to make a product with sales value that can increase the community's creative economy.

After the socialization activity was completed, it was continued with a demonstration of making brooms from coconut fiber waste. The demonstration was guided by one of the members of group 61 of the UIN Sunan Kalijaga Yogyakarta Community Service Lecture. Participants were divided into 3 groups that had their respective tasks in the form of pounding and peeling coconut fiber from its skin, combing coconut fiber, and assembling brooms from coconut fiber on bamboo using ropes and nails.



Figure 1. Broom making guide

The implementation of the practice of making brooms from coconut fiber waste begins with the process of pounding and peeling the outer skin of the coconut fiber as shown in Figure 2. The green coconut fiber is pounded until it is flat. This pounding process is carried out to make it easier when peeling the outer skin and combing the coconut fiber.



Figure 2. Pounding and peeling of coconut husk

Next, the participants carried out the process of combing the coconut fiber that had been separated from its outer skin. This combing process aims to remove coconut fiber powder from its fibers. Combing is done using an iron brush that is combed in one direction so that the fibers do not fall out and break. As seen in Figure 3. the participants were very enthusiastic and patient in practicing each stage of making.



Figure 3. Coconut fiber combing

The next process is assembling the broom from coconut fiber on bamboo. The tools used in the assembly are nails, rubber tires, raffia rope, fishing line, and jute needles. This process is quite long compared to the previous process because it must arrange the coconut fibers to form a broom and must be adjusted to the broom handle in the form of bamboo or wood. As in Figure 4. coconut fiber is tied to bamboo using raffia rope and then coated with rubber tires and then strengthened with nails.



Figure 4. Assembling coconut fiber on bamboo handle

Next, to strengthen the top of the broom, it needs to be sewn to make it tighter and neater as shown in Figure 5. The sewing process is carried out using a jute rope and needle. To make it easier during the sewing process, the top of the broom is first clamped using two pieces of bamboo. The technique used when sewing is the basting stitch technique. The basting stitch technique is a technique used to unite two surfaces that will be sewn into one. How to make a basting stitch is to insert the needle into the part to be sewn and adjust the stitch distance as needed (Indrayani, 2020). This technique is used to sew the top of the broom that is clamped by

bamboo and the edges to make it look neat. Finally, clean the broom fibers that are not strong enough by cutting or brushing them so that the broom looks neat as shown in Figure 6. In addition to looking neat, this is done so that the appearance of the broom is more suitable for sale on the market.



Figure 5. The process of sewing the top of the broom



Figure 6. The final process is tidying up the broom

After going through several stages of the process of making brooms from coconut fiber waste, the final broom product is shown in Figure 7. By the agreement between the participants and the groups of 61 Real Work Lecture UIN Sunan Kalijaga Yogyakarta, the results of the broom products from this demonstration activity were given to some of the most active and enthusiastic participants as an appreciation. The results of the broom products can be used for household needs or can be sold so that in addition to increasing the creative economy of the community, this activity is also able to improve the skills of the community, especially the training participants, namely the PKK mothers of Pucanggading Hamlet.



Figure 7. Final product documentation of the broom

This training activity on making brooms from coconut fiber waste can provide new knowledge and motivation for the Pucanggading community. The response from the training participants was very enthusiastic and some participants planned to practice it themselves at home. The products from the results of this training can be developed into products in the form of household industries so that they can absorb labor to improve the community's economy by optimizing the potential of natural resources of coconut trees in the Pucanggading Hamlet environment.

4. CONCLUSION

The activity of making brooms from coconut fiber in Pucanggading Hamlet began with a large amount of coconut fiber waste that was not utilized properly. We, KKN Group 61 UIN Sunan Kalijaga Yogyakarta, observed and interviewed mothers in Pucanggading Hamlet regarding the problems that arose in the environment. We found that many mothers there were still not skilled and could not make brooms from coconut fiber. From there we held a broom-making activity from coconut fiber which aimed to inform and improve the skills of mothers in Pucanggading Hamlet, especially PKK mothers in Pucanggading Hamlet. Some of the mothers in Pucanggading Hamlet felt motivated and intended to make brooms from coconut fiber in their respective homes. Skilled PKK mothers can be brought together to do side jobs producing brooms from coconut fiber which will later be sold at the market. The proceeds from the sale of brooms from coconut fiber can be used as cash income for PKK mothers.

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