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Creating Coconut Fiber Waste for Souvenirs in Pakandangan, West Sumatera

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Abstract: The processing of coconut fiber into souvenirs is not widely known by the public, especially in the form of powder (cocopeat). In fact, by processing coconut fiber, it is hoped that creative works of economic value can be created as a source of income for the community. Community Service in the form of processing coconut waste into souvenirs in the Pakandangan area aims at (1) providing insight into the processing of coconut fiber which is broken down into powders to be used as souvenirs; (2) guiding and directing the processing and creation of souvenirs from coconut fiber powder (cocopeat). The method adopted in the implementation of Community Service includes training and mentoring activities. The implementation of the activity takes place in six times face to face, starting from the orientation of the introduction of tools and materials as well as the process of creating, then making models or industrial prototypes, then the process of printing in which the coconut coir powder is made as a souvenir in the form of a statue with a mixture of resin or fiberglass into an innovation product. The results that can be achieved in this training activity are: (1) the trainees have insights related to the processing of cocopeat materials into souvenirs, (2) the training participants master the skills of processing coconut fiber into souvenirs.

Keywords: Coconut fiber waste, cocopeat, innovation, souvenirs

INTRODUCTION

Nagari Pakandangan at Enam Lingkung District is located in Padang Pariaman Regency, which has an area of 1,328.79 Km2. The district, which is a part of West Sumatra Province, has a variety of superior potential for agricultural commodities that can be developed. One of the commodities that can be developed is coconut. The use of coconuts as a complement to community food fulfillment efforts is also associated with the utilization of residual coconut waste, which is processed into a variety of applied products as mandated in Law of the Republic of Indonesia No. 32 of 2009 concerning Environmental Protection and Management. The management is oriented towards the conservation of natural resources (natural resources oriented) and the use of sustainable (sustainable use) as a whole and integrated.

The official website of the Padang Pariaman District Government published data in 2013 that coconut is the dominant crop cultivated by farmers to become one of the commodities that dominate markets both inside and outside the region. The community can sell 10,000.00 pieces per day from the total production area of 34,722.00 Ha with a total production of 512.7 tons per year, and that number has increased by 10% every year until 2017 to 825.8 tons per year. So far, farmers have only dared to set a price of Rp.2,000, - / item or starting from Rp.3,000, '/ item to Rp. 7,000 / item on the market.

The price is still relatively low, considering the small wages earned by smallholders compared to market traders who distribute garden products to the broader community. Coconut has a high economic advantage that has managed to penetrate the domestic and even foreign markets. This is because it is known that not only is the fruit used as a basic ingredient in traditional West Sumatran cuisine, it will be therapeutic as well as a raw material for various other functional objects, which are used as tools for daily community activities.

It turns out that from the coconut tree, there are a variety of materials that have the potential to become new products ranging from coir, shell, and sticks from the leaves of the palm. So far, coir processing for daily needs has been carried out by many people in the form of mattresses, car seats, mattresses, ropes, reclamation nets, road hardening coir net, vibration-dampers, and sound dampers, planting media materials, pots, whether or not as a mat and house broom.

So far, coir waste and coconut shells have only been used as a substitute for firewood for cooking Minangkabau traditional dishes, not only used as fuel in making bika but also cooking rendang and other dry or wet cakes. Whereas with a little touch of coconut fiber and coconut shell, it can be of higher selling value if it is processed into a typical souvenir of the village of Pakandangan, the Enam Lingkung sub-district of Pariaman city as Hadi (2018) and Fitriyah (2018) process in the economy of regional-based communities. Because to work on making souvenirs, many people do not yet know the process. Fitriyah makes coir waste as a natural coloring agent for fashion products. Thus it is considered essential to hold a selection and guiding related to how the process of processing coconut into souvenirs in a practical, effective, and efficient manner. The campus will significantly contribute to improving the ability and skills of the community to lead to efforts to improve community welfare.

Starting from this knowledge, the team strives to achieve the following objectives: (1) providing knowledge in the form of theory and practice about processing coconut husk which is broken down into powder to be used as souvenirs; (2) guiding and directing the way of processing and the process of creating works from coir dust. The design scheme carried out to achieve the above objectives includes the introduction of tools and materials and the process of work. Next is the manufacture of industrial models or prototypes. Industrial prototypes that have been created are followed up by printing. The printing process is carried out using materials from a mixture of coir and resin.

FINDINGS AND DISCUSSION

Several researchers have pioneered the processing of coconut fiber waste into something of use-value. However, no one has processed it into souvenirs, especially from the coir dust material. Widiawati et al. (2007) utilize coconut fiber waste to be used as an alternative raw material for textiles. This also indicates that coir is not only used as a doormat as often found by the people of West Sumatra so far. Many opportunities or the potential of this coir waste can be created so that it can be an income for people whose natural potential is rich in coconuts such as Pakandangan.

Maulidyah and Sakundria (2018) used the design of coconut shell lamps in the creation of technology and craft-based works. Thus the wealth of nature that exists can be maximized for products that are efficient and have aesthetic value. When it was explored further, the provisional calculation of the sales turnover of coconut, shell, or coconut shell and coir, which has been processed into mats ranges from Rp.159,000,000 per year. This means that this amount will be further increased if the coconut shell and coconut fiber obtained can be processed even better into objects of high artistic value. Zulhelman et al. (2018) proved that coir waste and coconut shells could even be used as wall hangings in making Islamic calligraphy for learning in schools for the learning of high school/MAN level school children in Padang Panjang.

Meanwhile, there has not been a community group in Nagari Pakandangan, District of Enam Lingkung, who has a workshop on processing coconut waste into a souvenir. In addition to the limited number of experts, it is also due to the lack of information related to tools and materials that can be empowered to process coco fiber and coconut shells into suitable souvenirs for export commodities.

The method adopted in the implementation of Community Service includes training and mentoring activities. The implementation of the activity takes place in six times face to face, starting from the orientation of the introduction of tools and materials as well as the process of creating, then making industrial models or prototypes, then the process of printing in which the coconut fiber powder is made as a souvenir in the form of sculpture with a mixture of resin or fiberglass material into an innovation product.

The activity covers three main activities, including (1) Preparation of the equipment needed, (2) Making industrial prototypes, (3) Printing. Furthermore, this method can be broken down into several steps:

1. Preparation of equipment and materials needed

a. Equipment

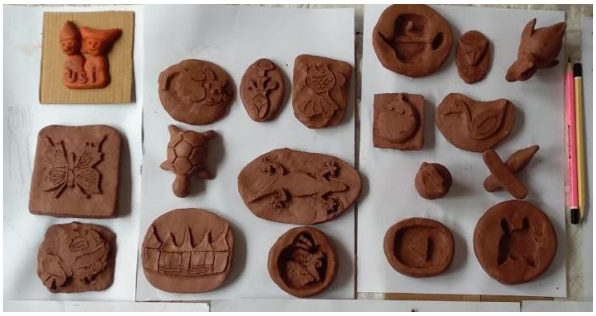
As the primary tool in the process of making souvenirs from coir powders, it is a decomposing machine for coconut coir, wood grains, wire grains, pencils, cutter blades, and files. Then the tools are pumping glue pump, miser, and a plastic bowl.


b. Material

The primary materials are coir, which has been decomposed, glass glue, tapioca flour, clay, transparent resin, mixed resin, catalyst.

2. Manufacturing industrial prototypes

a. Making sketches or working drawings; at this stage, the product is designed to be printed with cocopeat powder. The simple way is to make several alternative sketches, then choose the best one to print.



b. The selected sketches are followed up by making models from clay that is easily found on the market. The aim is to create new forms or developments of products that have been known in the community environment.

3. Print

a. Manufacture of print masters

Processed clay according to the desired design wrapped with a mixture of glass glue and tapioca flour. The process of mixing these two ingredients can be done in a bowl or a flat area so that both are smooth, like a cake mixture. The process of wrapping a one-sided clay model can last for 5 to 10 minutes. If the mold is double-sided, it must be waited for the first side to dry before the other side is also wrapped.

b. Printing process

When printing, note that the mold is in a dry condition as well as cocopeat powder, which is stirred in a container that contains a mixture of clear resin with a catalyst in the ratio between 1:10 to 1:15. As far as possible, cocopeat powder to be printed has been sifted and dried in the sun to reduce the risk of failure in printing due to moisture containing water.

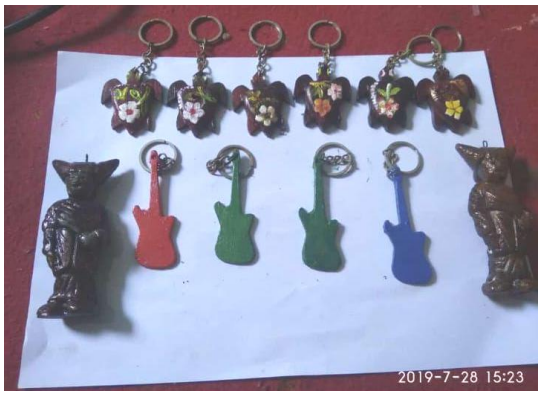
c. Drying process

After the mixture of resin and catalyst that has been stirred with cocopeat is put into the mold, the drying process can take anywhere from 10 to 20 minutes. Avoid opening the mold too early to avoid parts of the motif or object that change position and curve. If possible, at the time of drying, the part that will be used

as a hole for key chain hooks has been marked or stabbed with sticks that have been obtained by vaseline or other oil-containing materials, so there is no need to drill.

d. Finishing

The provision of finishing touches or finishing works can be achieved by spraying bright-colored pilot paint or also by adding paintings and variations of other ornaments to enhance the appearance of souvenir cocopeat.



From the above training activities, two important things can be stated: (1) the training participants have insight related to the processing of coir dust into souvenirs; (2) the training participants master the skills to process coir dust into souvenirs.

CONCLUSION

The Community Service Activities have allowed the younger generation of Pakandangan to be able to process coir waste into an aesthetic value item. Although in the processing of souvenir designs, the younger generation of Pakandangan is still at the beginner level, but they have the potential to create a combined design with sketches or interesting drawings that are commonly found in various mass media. Coir creations that are processed into souvenirs can be sold to provide opportunities for the community to obtain additional income.

The training and assistance that has been carried out are expected to run sustainably. So far, the role of Wali Nagari is the key to the success of the activities, which, if adequately supported by the community, would undoubtedly be more optimal. It is hoped that this activity will take place multi-yearly so that the coaching that is carried out can be maximized. Furthermore, training and assistance so far will be more meaningful if, in the following year, new ways to process coconut waste such as shells are developed with better marketing tips.

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