CETICS: Chelo Journal of Technology for Community Service

Vol. 02, No. 01, December, 2024, pp. 108 – 115

ISSN (print) 3026-3326 ; ISSN (online) 3026-474X

Application of Green Marketing on Revitalization of Coconut Coir into Eco-Friendly Products to Realize a Green Economy in Lhokseumawe City

Sapna biby [1*], Nurainun [2], Rini Meiyanti [3], Ikramuddin[4], Rika Annisa[5]

[1,2,4,] Faculty of Economic and Business, Malikussaleh University,
Bukit Indah Campus Blang Pulo Kec. Muara Satu Lhokseumawe, Aceh, Indonesia,
[3] Faculty of Engineering, Malikussaleh University, Faculty of Engineering,
Bukit Indah Campus Blang Pulo Kec. Muara Satu Lhokseumawe, Aceh, Indonesia
[5] Polytechnic State Lhokseumawe, Business Department,
Jl. Medan - Banda Aceh No.Km. 280 3, Buketrata, Mesjid Punteut, Kec. Blang Mangat,
Lhokseumawe, Aceh, Indonesia

Email: sapnabiby@unimal.ac.id

ABSTRACT

The utilization of coconut coir in Lhokseumawe City remains minimal. The application of a rotary screening machine in processing coconut coir can enhance its economic value. However, the economic potential of eco-friendly coconut coir products has not been effectively marketed, causing MSMEs in this sector to struggle with sales. Despite using various media for promotion, the continued utilization of coconut coir faces challenges due to a lack of knowledge about green marketing models. Therefore, this community service initiative aims to conduct an in-depth analysis of the factors hindering green marketing implementation and develop a green marketing model for eco-friendly products. This research is expected to provide MSMEs with knowledge on processing coconut coir into sustainable products and insights into consumer preferences for eco-friendly goods. The implementation involves visiting MSMEs for knowledge and skill transfer, ensuring they can effectively market and benefit from coconut coir-based products.

Keywords: green marketing, coconut coir, rotary screening machine, green products.

CETICS: Chelo Journal of Technology for Community Service
Vol. 02, No. 01, December, 2024, pp. 108 – 115
ISSN (print) 3026-3326 ; ISSN (online) 3026-474X

INTRODUCTION

Indonesia is a tropical country with agro-climatic conditions that are highly supportive of coconut tree growth. According to the Aceh plantation statistics of 2022, the total area of coconut plantations was recorded at 102,779.69 hectares. Over the past five years, the coconut plantation area has increased by 577 hectares or 0.56%. This increase is due to the high market demand for coconut commodities. Lhokseumawe and North Aceh regencies are two of the five main coconut-producing areas in Aceh Province. In 2022, of the total area of 102,779.69 hectares spread across 23 regencies/cities in Aceh, the coconut plantation area in North Aceh reached 14.66% or 15,073.00 hectares, while Lhokseumawe city accounted for 0.58% or 601.50 hectares. The coconut production in North Aceh was 9,950 tons with an average productivity of 719.97 kg/ha per year, and in Lhokseumawe, the coconut production reached 365 tons with an average productivity of 633.45 kg/ha per year. The large amount of coconut production is proportionate to the amount of coconut husk waste produced. Along with the advancement of current technology, there has been an increasing awareness and improvement in the ability of the community to promote the processing of waste into economically valuable goods. The demand for green marketing has increased as consumers have become more environmentally conscious and seek to reduce their environmental footprint [1].

Coconut husk, also known as coco fiber, coir fiber, coir yarn, coir mats, and rugs, is one part of the coconut fruit that is often discarded by most traders after the fruit is harvested [2][3]. Coconut husk can be developed into various eco-friendly products, such as cocopeat, coir fiber, coir mesh, coir pots, coir fiber boards, and coir coir. Coir fiber can be used in the manufacturing of household items and as raw material for industries like carpets, cushions, and others [4][5]. On the other hand, cocopeat can be used as a soil substitute for plant media, which is safer, cheaper, lighter, and more environmentally friendly. Currently, the demand for cocopeat in ornamental plants for homes and agriculture is quite high. Considering the product potential, this industry has great profit potential for the people of Lhokseumawe, given the abundant and affordable raw material supply.

CETICS: Chelo Journal of Technology for Community Service
Vol. 02, No. 01, December, 2024, pp. 108 – 115
ISSN (print) 3026-3326 ; ISSN (online) 3026-474X

In Lhokseumawe city, products based on coconut husk are not widely known by the community, making it difficult to develop, even though they have the potential to advance the local economy. Processing coconut husk into eco-friendly products will reduce the waste of abandoned coconut husks. The business of utilizing coconut husks into environmentally friendly products must be supported by a proper marketing strategy. Without an effective marketing strategy, the development and success of this initiative will be limited.

METHOD

This activity was conducted in Gampong Jeulekat, Lhokseumawe City, using a socialization method with 10 participants. The activity was carried out twice. The material used is coconut husk, with the help of a rotary screening machine. Rotary Screening machine is designed with ergonomic considerations to ensure a more comfortable operation. In addition to its focus on ergonomics, the machine also prioritizes safety for both operators and those nearby. By emphasizing these aspects, the machine is expected to enhance work productivity. The goal is that the coconut fiber decomposition machine, which transforms fibers into cocopeat and cocofiber, will accelerate the decomposition process, save energy, and maintain a high level of safety for operators and those in the surrounding area.

The goal to be achieved in this activity is to transfer knowledge about coconut husk based green product. The coconut husk will be fed into the machine for sorting, and then it will be fermented to become cocopeat. To make the turus (a type of product), a crafting process is needed to insert the cocofiber into wire.

CETICS: Chelo Journal of Technology for Community Service
Vol. 02, No. 01, December, 2024, pp. 108 – 115
ISSN (print) 3026-3326 ; ISSN (online) 3026-474X

RESULTS AND DISCUSSION

The socialization activity was held as part of a knowledge transfer on green marketing, aimed at enhancing participants' understanding of the importance of marketing environmentally friendly products. In addition, a live demonstration was conducted on the creation of green products from cocofiber, where participants were taught step by step how to process cocofiber into marketable products, such as cocopeat and cocomesh, which can support environmental sustainability. This activity is expected to provide new insights into the wise and eco-friendly utilization of natural resources.

Figure 1 Photos of Photos of the socialization activity for green products made from cocofiber.

The activity began with the separation of coconut husks using a rotary screening machine, which is specifically designed to sort the husks based on their texture and size. This machine consists of rotating drums equipped with a mesh screen that allows for the separation of materials by their coarseness. The process starts by feeding the coconut husks into the machine, where they are sifted through different screens. The fine husks pass through the smallest holes of the mesh, while the larger, coarser husks remain trapped in the larger holes. This sorting process ensures that each type of husk can be further processed according to its intended use.

Once separated, the fine coconut husks are set aside for the creation of green products, particularly turus. Turus are vertical supports used in gardening and agriculture, specifically designed to support climbing plants such as vines or creeping plants. The process of making turus begins by taking the fine husks and inserting them into pre-cut mesh nets that are sized according to the required

CETICS: Chelo Journal of Technology for Community Service
Vol. 02, No. 01, December, 2024, pp. 108 – 115
ISSN (print) 3026-3326 ; ISSN (online) 3026-474X

length for each turus. These nets are carefully filled with the husk fibers and then tightly bound to maintain their structure. Once completed, the turus are ready for use in supporting plants, offering an eco-friendly and biodegradable alternative to traditional plant stakes or metal supports. Turus provide stability for plants while also being sustainable, as they decompose over time without harming the environment.

In parallel, the coarser coconut husks are collected for a different purpose. These husks undergo a fermentation process, which is key to transforming them into cocopeat. During fermentation, the coarse husks are broken down through natural microbial activity, which converts the fibrous material into a fine, spongy substance known as cocopeat. This transformation typically involves a period of moisture retention, where the husks are kept in controlled conditions to promote microbial decomposition. After fermentation, the cocopeat is sieved and dried, making it an excellent alternative to soil as a growing medium. It has remarkable properties, such as excellent water retention, aeration, and drainage, making it ideal for use in gardening, horticulture, and as a soil amendment.

Additionally, the coarse coconut husks are also repurposed to create cocopots. This process involves compacting the fermented husks into molds to form pots. These pots are not only lightweight and sturdy but also biodegradable, meaning that once they are used for planting, they break down naturally in the soil. Cocopots serve as a sustainable alternative to plastic pots, which are often harmful to the environment due to their long decomposition time. The cocopots provide a way to reduce plastic waste and promote the use of renewable, biodegradable materials in the gardening and horticultural industries.

Overall, this activity demonstrates the effective use of coconut husks, transforming what would otherwise be waste material into valuable and environmentally friendly products. By utilizing both the fine and coarse husks, the process supports sustainability in agriculture and horticulture, while also contributing to waste reduction and the promotion of green initiatives. The production of green products such as turus, cocopeat, and cocopots offers practical

CETICS: Chelo Journal of Technology for Community Service
Vol. 02, No. 01, December, 2024, pp. 108 – 115
ISSN (print) 3026-3326 ; ISSN (online) 3026-474X

solutions for environmentally conscious consumers and industries looking for alternatives to conventional, resource-intensive products.

Figure 2 Photos of the activity from the separation of cocofiber to the process of making green products.

CONCLUSION

In conclusion, the socialization activity conducted in Gampong Jeulekat, Lhokseumawe City, successfully achieved its goal of transferring knowledge about the potential of coconut husks as raw materials for eco-friendly products. The use of the rotary screening machine to separate fine and coarse coconut husks allowed participants to directly witness how these materials could be transformed into valuable products such as turus, cocopeat, and cocopots. The activity not only demonstrated the importance of green marketing and sustainable practices but also highlighted the significant potential of coconut husks, which are typically discarded, to contribute to environmental sustainability and economic growth.

By engaging the community in hands-on demonstrations, the initiative increased awareness of the value of coconut husks and encouraged the adoption of green marketing strategies to promote these products. The production of turus as plant supports, cocopeat as a soil substitute, and cocopots as biodegradable planting containers presents a practical solution to reducing waste while providing

eco-friendly alternatives to conventional products. This approach aligns with the growing demand for sustainable and environmentally conscious practices, particularly in agriculture and horticulture. Ultimately, the activity has the potential to support local economic development by promoting the processing of coconut husks into green products, benefiting both the environment and the community.

ACKNOWLEDGEMENTS

First, we would like to thank the participants from Gampong Jeulekat, Lhokseumawe City, for their active involvement and eagerness to learn about the potential of coconut husks in creating eco-friendly products. Your enthusiasm and commitment were key to the success of this event.

A special thanks to the technical team who managed the operation of the rotary screening machine and ensured the demonstration was both informative and efficient. Your expertise and attention to detail played a crucial role in showcasing the practical application of the technology.

Lastly, we are grateful for the support and guidance provided by the organizing team, whose dedication and effort in planning, coordinating, and executing the event made it a resounding success. We look forward to further collaboration and continuing our collective efforts to promote sustainable practices and green marketing in our community.

REFERENCES

[1] Kazemi, F., & Soltani, F. (2024). The energy industry's response to competitive intelligence in green marketing (case study of Qatar). *Journal of Open Innovation: Technology, Market, and Complexity*, *10*(1), 100192. https://doi.org/10.1016/j.joitmc.2023.100192

[2] Yashwanth, M. K., Easwara Prasad, G. L., and N. K, Akshay. 2016. Comparative Study on Properties of Coir And Sisal Fibre Reinforced Composites. International Journal of Inovative Research in Science, Engineering and Technology. Vol.5, Special Issue 9, hal:992-926.

[3] Shi, J., Yang, D., Zheng, Z., &Zhu, Y. (2022). Strategic investment for green product development and green marketing in a supply chain. Journal of Cleaner Production, 366, Article 132868. https://doi.org/10.1016/j.jclepro.2022.132868

[4] Kartodihardjo, Hariadi, dkk. (2020). Ekonomi Sumber Daya Alam dan Lingkungan. Penerbit Erlangga

[5] Nugroho, Bambang, dkk. (2018). Pengelolaan Pertanian Berkelanjutan: Konsep dan Aplikasi di Indonesia. Penerbit IPB Press.