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Advancement of the Creative Economy by Training in the Production of Economically Valuable Creative Products Derived from Banana Fronds

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ABSTRACT

Banana fronds, which are generally considered agricultural waste, have substantial potential to be processed into creative products with high economic value. Despite Indonesia's abundance of natural resources, such as banana trees, the use of banana leaves remains limited. This article examines ideas for developing the creative economy through training aimed at enhancing the economic worth of creative items derived from banana fronds. This project seeks to ascertain the potential of banana fronds, develop effective training modules, and evaluate the effects of training on community skill enhancement, innovative product development, and revenue augmentation. The employed study methodology is participatory action research (PAR), which engages local communities through problem identification, action planning, training execution, and ongoing evaluation. Research indicates that extensive training encompassing raw material processing, product design, natural dyeing methods, and marketing strategies can substantially convert banana fronds from waste into economic resources. Product developments, including bags, caps, storage boxes, and domestic decorations crafted from banana fronds, demonstrate market appeal and the potential for the advancement of a community-based creative economy. This article aids in the design of community empowerment initiatives and the advancement of a circular economy.

Keywords: Creative Economy; Participatory Action Research; Banana Fronds

INTRODUCTION

We acknowledge the creative economy as a pivotal sector capable of fostering sustainable economic growth and generating employment opportunities. This sector emphasizes the concepts and ingenuity of people or collectives in generating economic value. Indonesia's rich

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natural resources and cultural heritage present boundless opportunities for the advancement of the creative economy. Banana fronds are a plentiful, although sometimes neglected, resource. Following the banana harvest, banana trees are often felled, and the fronds are allowed to decompose into organic trash (Rootlene, 2024). Through ingenuity and invention, banana fronds can be converted into numerous high-value goods.

Despite the considerable potential of banana fronds, their application as a raw material for innovative products encounters several challenges. **Insufficient Technical Knowledge and Skills:** The community lacks adequate expertise in the processing of banana fronds, encompassing drying, preservation, and various weaving or fabrication procedures. **Insufficient Innovation in Product Design** (Raghavendra et al., 2022). The resultant products are often uniform and struggle to compete in the broader market due to constraints in design concepts and aesthetic appeal. **Constraints on Market Access and Promotion:** Barriers to accessing potential purchasers and efficiently marketing products, both in physical and digital realms. **Constraints of Capital and Production Infrastructure:** The accessibility of initial capital for acquiring essential equipment and sufficient production facilities poses a challenge for specific community groupings. **Negative Perception of Waste:** People often perceive banana fronds as waste instead of a valuable raw resource, which reduces the motivation to process them.

This research encompasses numerous innovative elements. Primarily, focus on employing agricultural waste (banana pseudostems) as the principal raw material, so promoting the tenets of circular economy and environmental sustainability (Damnuirawat & Waedolorh, 2023). The creation of complete training modules encompasses craft processes, design elements, natural dyeing, basic production management, and innovative product marketing strategies. The participatory action research technique facilitates active community involvement at all stages, guaranteeing the program's relevance and durability. This research will ascertain the potential for product diversification from banana fronds across multiple market segments, encompassing both utilitarian and decorative items. The fifth step involves analyzing how training improves family economic welfare, which serves as a conclusive indicator of the effectiveness of the program.

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RESEARCH ELABORATIONS

This research employs the approach of Participatory Action Research (PAR). Participatory action research (PAR) is a communal methodology that underscores the active engagement of study participants (local communities) in recognizing issues, devising solutions, executing actions, and assessing results (Tumuhimbise & Talengera, 2018). We selected this strategy because it plays a significant role in community empowerment and skill development initiatives.

The phases of Participatory Action Research (PAR) in this project encompass the identification of problems and potentials via a preliminary survey and focus group discussion (FGD). Perform preliminary surveys and focus group discussions (FGDs) with local populations, banana cultivators, and MSME stakeholders at the research site to ascertain their perspectives of banana fronds, determine training requirements, and identify relevant resources. Identify the banana kinds that are often cultivated and assess the availability of fronds. Action Planning (Design of Training Modules) Engaging with the community to develop a thorough training module. This module will involve the processing of raw materials via drying methods, cleaning, and the creation of banana pseudostem fibers (Seropi, 2023). Creative product design includes the ideation of product concepts, the creation of design sketches, and the construction of prototypes. Craft skills encompass instruction in fundamental to advanced methods, including weaving, rolling, and sheeting. Natural dyeing employs organic substances to color the fibers of banana fronds. The packaging and branding of these products are crucial, as they require appealing designs and distinctive branding elements. We use a combination of online and offline marketing strategies, including social media interaction (Sah & Daha, 2023). Establish metrics for training efficacy, including participant count, product diversity, and revenue growth.

We carry out the training activities and observations in accordance with the approved modules. We conduct the training using a hands-on methodology and individualized instruction. Conduct participatory observations throughout the training session to record group dynamics, encountered problems, and innovations arising from participants (Zoolaf, 2024). Assessment and Contemplation (Dialogue and Examination): executing post-training assessments by conducting comprehensive interviews with chosen participants, collective discussions, and product evaluations. Gather quantifiable data regarding the quantity of

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products sold, average incremental income, or the specific product type that garners the most market interest (assuming original sales data is accessible) (Tarrés et al., 2017). Examine the impact of training on enhancing participants' competencies, motivation, and financial well-being. Conduct collaborative reflection with communities to discern lessons learned and develop sustainable strategies.

Origin Preliminary data was acquired via observations, interviews, focus group discussions, and training materials. We sourced secondary data from literature, regional potential assessments, and agricultural waste reports. Qualitative data will undergo thematic analysis to discern principal patterns, categories, and themes using interview transcripts, observational notes, and focus group discussions (FGDs). We will subject basic quantitative data, such as product quantity and item variations, to descriptive analysis.

RESULTS AND DISCUSSIONS

Preliminary surveys and focus group discussions suggest that banana trees thrive in the research region, exhibiting numerous types and generating significant waste in the form of pseudostems after harvest (Uma et al., 2022). The population has predominantly not utilized banana fronds, except for minimal requirements for animal fodder. The prevailing view is that banana fronds are seen as waste with no commercial worth. A minor part of the community demonstrates enthusiasm and understanding of the possibilities of these natural raw materials if there is sufficient training and support.

The development and Execution of Training Modules We organize the training courses using a pragmatic and participatory methodology. The training starts by introducing the right types of banana fronds (like kepok bananas and plantains) and simple drying methods to create strong fibers, along with basic steps like soaking and clumping. During the product design session, innovative concepts were examined, alongside sketching and studying instances of things crafted from various natural fiber materials (Giang & Khanh, 2023). Fundamental weaving skills are imparted progressively, leading to more intricate patterns. There is a focus on employing natural dyes derived from indigenous plants and the importance of sustainable and visually appealing packaging. The training implementation showed significant enthusiasm from participants, primarily consisting of homemakers and youth. They engage in inquiry, experiment with diverse methodologies, and demonstrate creativity in the design of initial

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goods. The primary challenges encountered are the uniformity in the drying procedure of the fronds and the need for patience throughout the intricate weaving process, which are subsequently addressed through rigorous mentorship.

Innovative Products of Economic Worth Derived from Banana Fronds As a result of this training, numerous innovative items with significant economic value were successfully created, including Bag constructed from banana leaves: The amalgamation of weaving processes with banana leaf fibers yields distinctive and environmentally sustainable shopping or purse designs. Decorative Storage Box: A versatile container featuring woven banana fronds and natural dye accents, perfect for home decoration or item storage. Woven Hat: A beach or fashion hat crafted from banana fronds, lightweight and pleasant. Wall Art/Home Decor: Geometric or abstract shapes constructed from banana leaf sheets, integrated with additional components. Tissue Holder or Stationery Container: A practical item for home or workplace use.

Several factors, such as uniqueness and originality, contribute to the economic value of this commodity. The resultant product is distinctive because of its uncommon raw materials and the artisanal manufacturing process employed. Aesthetic and Design Value: Design guidance enhances items' attractiveness, functionality, and creative merit. Environmentally sustainable: The incorporation of waste materials and natural dyes enhances the product's sustainability, appealing to market segments concerned with ecological issues. Every product possesses a narrative regarding the recycling process and community empowerment, which can function as a marketing appeal.

The analysis of training's impact reveals favorable and encouraging outcomes. Enhancement of Skills and Knowledge Participants in the course showed a notable improvement in their understanding of banana pseudostem processing and proficiency in creating several handicrafts. Post-training, they can manufacture things of enhanced quality and greater diversity than previously. Product Diversification: Individuals who once regarded banana fronds as refuse can today manufacture an array of innovative goods that have both utility and financial worth. This generates new chances for them. Augmentation of Revenue Potential: Despite being in the initial phases, several participants have effectively sold the products produced from their training via pre-orders or little displays. The potential for supplementary income per family is projected to be between 10% and 25% of the typical

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monthly income, contingent upon production volume and market demand, signifying an enhancement in the family's economic well-being.

Minimizing waste and promoting environmental consciousness This program aids in diminishing agricultural waste and enhances public knowledge about the significance of sustainable waste management and a circular economy. Augmentation of Entrepreneurial Spirit: This course cultivates an entrepreneurial mindset in participants, prompting them to recognize local economic opportunities and innovate. This training program for developing creative goods from banana fronds has effectively transformed perceptions about waste and imparted practical skills with financial applicability. This workshop is a crucial initial stride toward establishing a community-oriented creative economy and enhancing familial welfare through the utilization of local resources.

CONCLUSIONS

The use of banana fronds as a raw material for high-value creative items is an excellent approach to foster community-based creative economic growth and improve family welfare. This study employed a participatory action research methodology to effectively create and execute a comprehensive training module that includes raw material processing, product design, natural dyeing procedures, and marketing strategies.

The research findings unequivocally demonstrate that this training substantially improves the community's knowledge and skills in converting banana pseudostems into diverse new goods, including bags, caps, and decorations. These items possess both aesthetic and functional value, as well as considerable economic worth owing to their distinctiveness, environmental sustainability, and inherent narrative. This initiative has a significant impact by enhancing production capacity, broadening product offerings, potentially increasing family income, and improving awareness of waste management and the importance of the circular economy. Therefore, we strongly recommend replicating similar projects in regions with substantial potential for agricultural waste. Continued help from the government, research organizations, and businesses is crucial for improving market access, developing better designs, and offering financial support, so that small and medium-sized enterprises (MSMEs) that create products from banana fronds can grow sustainably and make a bigger impact on the national creative economy.

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REFERENCES

- Damnuirawat, P., & Waedolorh, R. (2023). The Local Wisdom to Innovative Utilization of Banana: Wall Panel Decoration from Banana Tree Fibers to Strengthen the Grassroots Economy of Ramdang Community, Singhanakhon District, Songkhla Province. *Asian Journal of Arts and Culture*, 23(2), e262434–e262434.
- Giang, N. T., & Khanh, P. T. (2023). Increasing Teacher Competence In Using Digital Learning Educational Technology. *Community Service Akseprin Journal*, 1(1), 30–36. <https://doi.org/zenodo.15015604>
- Raghavendra, S., Ganguli, S., Selvan, P. T., Nayak, M. M., Chaudhury, S., Espina, R. U., & Ofori, I. (2022). Deep learning based dual channel banana grading system using convolution neural network. *Journal of Food Quality*, 2022.
- Rootlene, A.S. (2024). *Development of a Community-Centric Autonomous Waste Management System*. Zenodo. <https://doi.org/10.5281/zenodo.15504767>
- Sah, A., & Dahiya, K. (2023). *Waste Management in Areas along the Kathmandu Valley Ring Road in Nepal*. Akademi Sertifikasi Profesi Internasional. <https://doi.org/10.5281/zenodo.15010671>
- Seropi, O. (2023). *Digital Marketing in Enhancing the Commercial Value of Natural Frond Crafts*. Zenodo. <https://doi.org/10.5281/zenodo.15503552>
- Tarrés, Q., Espinosa, E., Domínguez-Robles, J., Rodríguez, A., Mutjé, P., & Delgado-Aguilar, M. (2017). The suitability of banana leaf residue as raw material for the production of high lignin content micro/nano fibers: From residue to value-added products. *Industrial Crops and Products*, 99, 27–33.

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Tumuhimbise, R., & Talengera, D. (2018). Improved propagation techniques to enhance the productivity of banana (*Musa spp.*). *Open Agriculture*, 3(1), 138–145.

Uma, S., Kumar, S. P., & Keran, A. D. (2022). Production of high-value compounds and innovative future products from banana: Creation of robust circular economy. *International Journal of Innovative Horticulture*, 11(2), 243–258.

Zoolaf, C. (2024). *The Extent of the Utilization of Fruit and Vegetable Peel Waste Treatment into a Generic Wound Medicine* . Zenodo. <https://doi.org/10.5281/zenodo.15504426>