

THE DEVELOPMENT OF COGON GRASS (CYLINDRICA IMPERATA) AND ROSE (ROSA RUBIGINOSA) AS A SUBSTITUTE MATERIAL FOR STATIONARY PAPER

ABSTRACT

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This study aims to explore the potential of cogon grass (*Imperata cylindrica*) as a sustainable alternative fiber source for paper production. The growing environmental impact of wood-based paper manufacturing, particularly deforestation, underscores the need to identify non-wood fiber materials that are both abundant and eco-friendly. Cogon grass, often considered a weed, offers promising characteristics due to its widespread availability and fast growth. By developing stationery paper from cogon grass and rose (*Rosa rubiginosa*), this research seeks to reduce tree consumption, utilize biodegradable materials, and assess whether these alternatives can serve as a temporary substitute in the paper industry. The study employed a quantitative experimental research design with purposive sampling. A structured survey questionnaire was used to evaluate the level of acceptability of stationery paper made from cogon grass and rose, based on criteria such as paper strength, surface texture, thickness and capacity, biodegradability, and overall presentation. Respondents included art teachers and environmentalists. Data analysis involved frequency and percentage, rating scale, weighted mean, and t-test to compare the assessments of the two respondent groups. The experimental paper produced from cogon grass and rose was rated as "acceptable" in terms of strength, texture, thickness, biodegradability, and presentation. Art teachers gave an overall weighted mean of 3.67 (variance = 0.174), while environmentalists gave a mean of 2.62 (variance = 0.158). Both groups' assessments, tested at a 0.05 significance level with a t-critical value of 2.145 and a t-computed value of 4.067, indicated no statistically significant difference. Thus, the product was generally accepted by both groups, with art teachers rating it more favorably. The findings suggest that cogon grass and rose fibers are viable materials for producing environmentally friendly stationery paper. While both groups accepted the paper, feedback emphasized the importance of extended development time, enhanced feasibility studies, and expert involvement to improve production quality. Future efforts should focus on refining the manufacturing process and ensuring environmental sustainability. Continued research and collaboration with professionals may further improve the success rate of this eco-friendly paper alternative.

RECOMMENDED CITATION

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