

## **ABSTRACT**

Rice straw is currently an agricultural waste often only handled by burning it in rice fields, while its chemical composition of cellulose, hemicellulose and lignin are comparable to commonly used materials such as wood and bamboo. Rice straw is abundant, and has been extensively researched as the base material to pulp-based products, but researchers thus far have used wood pulp manufacturing techniques to treat rice straw. An exploration of rice straw as a unique material may offer a unique insight on rice straw research. The research method used is the design thinking methods for research operation with the following stages: 1) Empathize to explore various insights on rice straw, 2) Define to identify problems by multiple experimentations of rice straw processing, 3) Ideate in the form of analyzing experiment results and creating recommendations for prototyping, 4) Producing various prototype iterations, and 5) Testing the feasibility of rice straw pulp biocomposite for craft product and the degradability time of the products to water. This research can provide a contribution in the form of recommendations for the use of rice straw agricultural waste as pulp products for home industries and farmers union business units.