Banana Fibers As By Product of Agro Waste: Raw Source of Material for Paper and Handicrafts.

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Banana fibers have potential to be developed into paper and handicrafts. Banana fibers based products have unique properties and could be used as a symbol of Malaysian craftsmanship. The objective of this study was to identify the best method in producing the fibers, determine the properties of the fibers and its suitability for paper and crafts. Initial preparation process was conducted in the laboratory using two methods. The methods include (i) A mechanical process for decortication (ii) A chemical process using pectin as a catalyst in a retting process. After determine the mechanical methods as the more efficient method in producing the fibers, the technology was implemented at the cottage industry level. The properties of the fibers were determined in the laboratory. Various standard test methods and dyeing procedures were used to determine the physical and chemical properties of the fibers. The physical structures of the fibers were studied using Scanning Electron Microscope and other properties such as tensile strength and luster were also determined. In developing products, the fibers and stems were treated with various chemical and processes to be made into paper. Other methods include stripping the stem, pressing the thin strips and drying them before weaving them into sheets and handcrafting them into various form. The fibers were dyed to provide variations and aesthetic. Results showed that banana fibers have good tensile strength, lustre, spin able, high heat resistance and absorb dye quite easily. Products developed include bags, picture frames, lamp shade, tissue boxes and textured paper. Implications of the study include its suitability for production as paper and crafts and can be developed as a by product which could have added value for agro-wasted in the rural areas. This is in line with the rural development programmes encourage by the government of Malaysia. The production of these banana fibers based products could provide economic activities among crafts and banana plant growers.

Key words: Banana Fibers; paper; handicrafts; natural fiber.