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1. Introduction

The pineapple, *Ananas comosus* belonged to the family *Bromiliaceae*, is a short tropical herbaceous perennial plant with a height of 1.0-2.0 m. In the Indian subcontinent, pineapple leaves are left unutilized after harvesting of fruits causing wastage of natural wealth which needs to be explored. Generally, the plants are uprooted and keeping remnants in the soil after harvesting the fruit. The farmers used to fire the dried agro waste causing serious effect on carbon footprints. Pineapple leaf contains a certain percentage of long fibrous material, commonly called pineapple leaf fiber (PALF). The properties of PALF vary according to species, geographical regions, age, locations, and weather conditions (Bismarck et al., 2005). Extraction of fibers from pineapple leaf may be carried out either by manual or by mechanical means. The pineapple leaf fibers are white in colour, having good strength and softness (Nadirah et al., 2012, Jose et al., 2016). PALF is a multicellular lignocellulosic fiber with polysaccharides, lignin and other organic compounds viz., fat, wax, pectin, uronic anhydride, pentosan, coloring matter and some inorganic substances (Banik et al., 2011). In spite of having a lot of potential, Indian PALF is not yet fully exploited due to various social, socioeconomic as well as technological constrains like, lack of knowledge for the extraction of PALF from the leaves and unavailability of suitable decorticating machines for the extraction of the fibers. Due to these issues, in India, the PALF is still under underexploited condition. In Philippines, PALF based textiles are known as Pina fabric, which is being produced since long back. However, scientific data on its structure and property is scanty. To obtain most suitable fiber, moderately mature leaves, obtained from plants which have been grown partly in shade are preferred to make fine

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