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Banana fibre extraction: Problems and prospects for machine development

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After harvest of banana fruits, huge quantity of biomass residues (60 t/ha-80 t/ha) is left over as waste that constitutes pseudo stem, leaves, sucker etc. Among these waste components, there exists a vast potential of extracting fibres from the banana pseudo stem. Fibre from this pseudo-stem can be extracted both manually and by mechanical processes. Low cost, user-friendly machines can extract 15-20 kg fibres from the banana pseudostem in a day compared to 500 gm through the laborious manual process. Though banana fibre extractors have been designed and developed at various parts of the country over the years, no where the quality matches the desirable properties of textile grade fibre like fineness, strength etc., to get fine quality yarn. Moreover, the fibres obtained from these extractors differ in quality posing problem to the processor. Hence, there is a great scope in developing an efficient extractor for getting good quality fibre for textile use.

Biography

Laxmikanta Nayak, presently working as Senior Scientist at National Institute of Research on Jute & Allied Fibre Technology, Kolkata has Completed his Ph.D. in Agricultural Engineering from prestigious Indian Agricultural Research Institute, New Delhi. He is involved in R&D in the field of natural fibre extraction & Biomass energy. He has more than 35 publications in international and national journals and more than 30 presentations in international & national conferences/symposia/ workshops.

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