

**STUDY ON QUALITY VARIATION OF CRUSHED
AND UNCRUSHED COIR FIBERS
BY CHANGING RETTING PERIODS**

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ABSTRACT

Sri Lanka is the largest coir exporter in the world and Today Sri Lanka has faced difficulties because of the low productivity. Coir is a natural, eco-friendly fiber extracted from the coconut (*Cocos nucifera* L) husks. The retting process is responsible for the separation of bristle fiber from the husk and it undergoes two distinguished physical and biological changes. This study was done to find out the effectiveness of the crushing process for the properties of bristle fibers to increase the production of Sri Lankan bristle fibers. The retting was conducted in same retting tanks and retting trials were performed with coconut husks of Tall x Tall cultivar. Selected husks were divided into two samples and one sample was fed in to the crusher for crushing. These crushed and un crushed husks were allowed to retting and at two weeks intervals bristle fiber were extracted using the defibring machine. Physical properties; tensile strength, fineness of coir, breaking loads, length, size distribution, fiber diameter and general properties; impurities and moisture content of the fiber were evaluated and amount of bristle fiber, mattress fibers and coir pith were calculated. Result show that crushing husks before retting and increasing retting period for six to eight weeks improve the quality and quantity of coir fibers extracted.

Key words: crushing process, coir retting, physical requirement, bristle fiber