



Evaluation possibilities of growing in turkey some agricultural resources and wastes in production of microfibrillated cellulose (MFC)

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Abstract: Every year millions of ton agricultural residues outcrop in Turkey. Storage and disposal of such large quantities of wastes is very difficult and costly. Therefore, in recent years agricultural resources and wastes have been preferred to produce micro/nanofiber and micro/nanocrystalline cellulose with varied chemical and mechanical methods. These micro/nano particles can be thought as new generation polymeric reinforcement agents for composite materials. Besides they progress physical, mechanical, thermal and optical characteristics of varied composite products. These products can be used in sectors such as electronics, medical, constructional works, pulp and paper production, coating etc. In this study, some morphological and characteristic properties of microfibrillated cellulose (MFC) obtained from corn stalk, sunflower stalk, sesame husk and reed with chemical-mechanical method were revealed and MFC production opportunities were investigated. As a result, MFC production can be thought as a method to evaluate agricultural resources and wastes in bio-based composite materials. Besides, it is thought that this study will be a new source to literature.

Keywords: Agricultural residues, Microfibrillated cellulose, Composite materials