

Mechanical Characterization of Banana by Inverse Analysis Method Combined with Indentation Test

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Abstract : This study proposes a novel use of a method to determine the mechanical properties of fruits by the use of the indentation tests. The method combines experimental results with a numerical finite elements model. The results presented correspond to a simplified numerical modeling of banana. The banana was assumed as one-layer material with an isotropic linear elastic mechanical behavior, the Young's modulus found is 0.3Mpa. The method will be extended to multilayer models in further studies.

Keywords : finite element method, fruits, inverse analysis, mechanical properties

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