



The Image Analysis, Tools for Measuring Quality Criteria of Apples by Characterization of its Cellular Structure

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The measure of the quality of fruits is an economic stake and of human health. The tools for estimating the quality of fruit are still limited. Each tool provides a partial approach; it is the case of the colorimeter, the sound level meter, the penetrometer, etc. The assessment of the quality of fruit resulted from the combination of qualitative and quantitative measures. Histology and image analysis open up new fields of investigation by examining the internal structures of fruits and accurately locating the compounds involved in the development of quality. The work undertaken aims to develop methods for measuring the thickness of the cuticle, size and density of cells and cell walls of apple. We show here that the image analysis of histological sections is full of potential solutions allowing to better understanding the differences in texture and firmness or crispness among the three varieties of apples are examined as Braeburn, Fuji and the Golden Delicious. The materials and methods used to demonstrate are described. The results are presented and analyzed.

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