Title Study of Physical Properties to Predict the Maturity of Pomelo Using Image Analysis and Texture Analysis Technique

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Abstract

The Aim of this research was to study the physical properties and texture properties of pomelo, specially the outside observe properties and compressive resistance, to create the algorithm of relationship between physical properties and maturity index to predict the maturity of pomelo for Apply to non-destructive test.

The physical properties from image analysis technique, results showed that specific gravity and number of oil gland reveres variation to pomelo harvesting age, but size of oil gland direct variation to pomelo harvesting age. The physical properties from texture analysis technique, result showed that total soluble solid and ratio of total soluble solid and titration acidity direct variation to pomelo harvesting age, but titration acidity and firmness reverse variation to pomelo harvesting age. When using discriminant analysis, for original and cross-validated, the accuracy percentage to predict pomelo maturity was 96.0 % and 89.3 % respectively