Feasibility study of a non-destructive fruit maturity testing system on banana utilizing capacitive properties

Abstract

Fruit maturity classification is hard to determine. This is certainly true, for some fruits whose color have no direct correlation with its level of maturity or ripeness. The levels of maturity can be determined by human expert, however for larger quantity inspection, this method is beyond practical. Therefore, accurate automatic classification for fruit maturity may be advantageous for the agriculture industry. In addition, consumers in supermarkets may also benefit from this system. This paper describes variant methods used for this purpose and the method which is proposed to enhance the measuring techniques. Feasibility study been conducted for nondestructive fruit maturity classifier system based on capacitive properties measurement methods using parallel-plate capacitor. This method is used to determine different levels of fruit maturity using dielectrics of banana hence it is suitable for this measuring technique because it does not destroy the texture and the nutrient of fruit. ©2008 IEEE.