

Harum Manis mango dielectric properties based on maturity

Abstract

This paper presents Harum Manis mango maturity characterizations based on dielectric properties. Currently, Harum Manis maturity is determined by referring to number of weeks of growth and farmer experience. This paper proposes a quick and simple microwave measurement technique. An open ended dielectric probe is used to measure dielectric properties of Harum Manis mango for frequency range from 500 MHz until 20 GHz. The relationship between dielectric constant and loss factor as well as week of growth is established. These data contributes to further research of Harum Manis maturity sensor application.

Keywords — Dielectric properties, Harum Manis mango, maturity, open ended probe