A MULTI BAND SENSOR FOR FRUIT MATURITY DETECTION

TECHNOLOGY DESCRIPTION

This technology is able to determine the maturity of oil palm fresh fruit bunch (FFB) using the multiband sensor as the FFB maturity is a critical factor that dictates the quality of produced palm oil.

TECHNOLOGY FEATURES

This technology relates to a multiband sensor for fruit maturity detection and classification particularly to a sensor for oil palm fruit bunch detection and classification. It utilizes 8 spectral bands, with specific illumination system and design in order to use for further similar application with different agriculture fruits. This technology can accurately detect and classifies fruit maturity to determine the optimum harvest time of the fresh oil palm fruit bunch. This technology is also can be used for other agriculture fruits.

ADVANTAGES

* Simple and reliable
* Rapid and accurate
* Real time grading for large amount of fruits
* Can be used for other agriculture fruits

INDUSTRY OVERVIEW

Prospect: Oil Palm Companies/DOA/MARDI

Malaysia is the second largest palm oil producer and currently accounts for 39 % of the world's palm oil production and 44% of world exports. In 2011, Malaysia had exported nearly 18 million tonnes of palm oil products, 3.4 million tonnes of palm kernel products, 2.2 million tonnes of oleochemical products, 0.4 million tonnes of finished products and nearly 0.3 million tonnes of other palm-based products. Imports of palm oil had grown from 26% in 2005 to 61% in 2011, while imports of palm kernel oil had tripled over the same period. The demand for palm oil is projected to grow in the near future, with a major part of this demand coming from emerging economies. The average per hectare yield from a palm plantation is higher than other comparable crops. This aspect, coupled with the relatively low production costs of palm oil have proven conducive for the growth of this market. 'Oil World' statistics indicate that consumption in the last five years has increased from a level of some 162 million tonnes in 2008 to 188 million tonnes in 2013. Demand for palm oil from China for example is expected to remain positive, supported by the food requirements of a growing population.
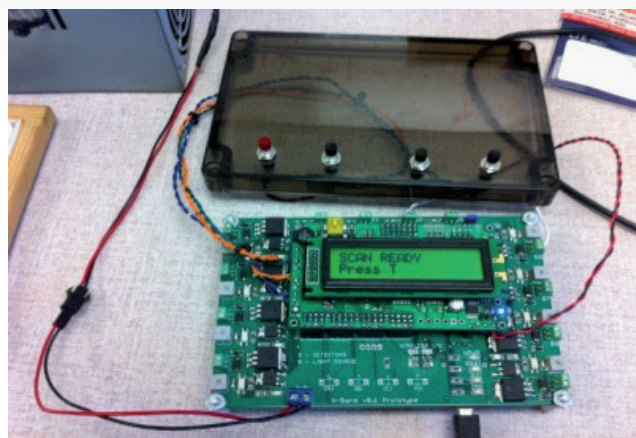
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