

Harum Manis Mango Weevil Infestation Classification Using Backpropagation Neural Network

Abstract

Postharvest non-destructive detection methods in fruit quality have been widely studied ever since. This includes studies of maturity, bruises and detection of pests or weevil existence in fruits such as apple, banana, zucchini including mango. Regarding fruit grading, the non-destructive methods which can be used are image processing and dielectric properties. Either technique has its own benefits and drawbacks. As for image processing technique, the cost is high since suitable devices to acquire the images are by using MRI or X-Ray. Whereas for dielectric method, permittivity is difficult to record because the reading is very small and is prone to environment and temperature influence. This paper analyzes about classification of Harum Manis Mango infestation using dielectric sensor which was trained and tested using Back-propagation Neural Network. In addition, reviews regarding Neural Network design is also discussed.

Author Keywords

Dielectric sensor; Neural network; Non-destructive detection; Weevil