

Classification of Germinatable Mung Bean by Near Infrared Hyperspectral Imaging

Authors : Kaewkarn Phuangsombat, Arthit Phuangsombat, Anupun Terdwongworakul

Abstract : Hard seeds will not grow and can cause mold in sprouting process. Thus, the hard seeds need to be separated from the normal seeds. Near infrared hyperspectral imaging in a range of 900 to 1700 nm was implemented to develop a model by partial least squares discriminant analysis to discriminate the hard seeds from the normal seeds. The orientation of the seeds was also studied to compare the performance of the models. The model based on hilum-up orientation achieved the best result giving the coefficient of determination of 0.98, and root mean square error of prediction of 0.07 with classification accuracy was equal to 100%.

Keywords : mung bean, near infrared, germinatability, hard seed

Conference Title : ICAFE 2017 : International Conference on Agriculture and Food Engineering

Conference Location : Prague, Czechia

Conference Dates : July 09-10, 2017