

Effect of background color on rice seed image segmentation using machine vision

ABSTRACT

One of the crucial part in the development of machine vision for rice seed identification are the design of the seed holder itself. In this project, seed holder was designed to hold rice seed for image acquisition purposes. Four different colors such as black, blue, green and red was painted on the seed holder. Effect of background colors on rice seeds image segmentation were tested under machine vision setup. Simple rice seed parameters such as seed length and width were measured using image processing technique programmed in LabVIEW software. Percentage error for each background color was calculated based on the actual length and width of the rice seed. Blue background color was found to provide good contrast for estimation of length and width with accuracy less than 2% and 5%, respectively.

Keyword: Rice seed variety; Seed holder; Image processing; Thresholding; RGB color; Seed parameters