
Abstract

Leaf Color Chart (LCC) is used in agriculture modelling for monitoring the plant performance by comparing the leaf color and its corresponding color in LCC. To digitize the acquisition and interpretation of leaf color, smartphone camera is used. A color calibration is necessary for a smartphone before capturing and interpreting leaf color. The calibration process evaluates the camera performance with the operational lighting conditions and determine whether the smartphone camera can be used for leaf color interpretation or not. The result from camera color calibration is used as a relative color chart for interpreting leaf color. Farmer can use the app offline or online. Farmer takes picture by using smart phone, smart phone will process the image. App will ask the user for field area farmer then put total area of paddy field than app will show the amount of fertilizer need for the field. For segmentation farmer will keep the leaf on hand no white paper is needed.