

ABSTRACT

Tomato colour changing could be observe in direct. Generally, unripe tomato have green colour and will be change to red. Holticulture's expert have identification unripe tomato with visual observe. Image processing can be solution to get value of ripe tomato colour. This value was got from detection process of RGB value (Red, Green and Blue) on tomato colour. Start from colour detection the value will get process be ripe or Un-ripe tomato decision. This process was got from find mean value on red, green and blue colour on tomato. Tomato colour could be identitificated with feature extraction used colour detection methode. Information from tomato image was statistic value. Based on value of extraction, acquisitions image wille be grouping with euclidean distance.

Based on examination, highest accuration is 88% in taking 20cm with preprocessing and bright light. If distance failure to focus and avoid from object the accuration will go down. Distance of object focus on webcam was optimal with 20cm with accution 88%. Different resolution of camera make effect accuration till 80% in 5MP and down if used low resolution. Average computation time for PC with RAM 2GB is 500ms.

Keywords: Image Processing, Tomato, RGB, Automation, Holtikultura, Matlab