

ABSTRACT

Identification maturity of tomatoes in general is still mostly done manually by farmers. Manual way is done based on visual observation directly on the fruit to be classified. The development of information technology enables the identification of fruit maturity level based on the image with the help of computer. This computational way is done by using the camera as an image processor of the recorded image (image processing).

Tomato fruit is identified based on the color histogram input obtained from the capture result. From several samples of data patterns of tomatoes with different levels of maturity input to produce weight value. The value of weight obtained is used to process the identification of ripe tomatoes, young, and half cooked. Level of identification of tomato fruit maturity using image recognition method The success rate of identification is influenced by the lighting factor on the identified image.

In this Final Project, a program will be designed to do fruit sorting directly. The program is connected to the camera and integrated by microcomputer and Arduino uno as the microcontroller. The course of this program by entering some samples of tomatoes where the program will give the results of image recognition image of tomato maturity taken from the camera integrated in microcomputers and also recognizing the weight of the tomatoes. The purpose of this program is to provide the results of the ripeness tomatoes and its weight of process image recognition from samples taken by the camera and integrated with microcomputers, in the hope that this tool can be useful in agriculture in the process of sorting the tomatoes .

Keyword : Image Processing , Image recognition , Mikrokomputer