Abstract:

Research on the robotic technology are focused on certain agricultural crops. This can be summarized as classification of crops, harvesting of fruits, vegetable productions and control of the plant growth. Especially, at the fruit harvesting, it is well known that most of the expenditure goes into manpower so that automation became much more important. In agriculture there are many systems about crop processing and classification, one of them is robot getting important in recent years. The most important problem in controlling the process is automatically putting an inspection system, instead of user. This system should be capable of making decision about object's shape and position and capable of carrying this object. As well moreover, this system should find the uniformity and the quality level of the crops in order to make certain decision. Especially, robots used in agriculture the other most important problem is difficult to visualize the objects in their certain form. In this research, finding the position of "Bursa Siyahı" fig cultivar by using optical techniques is discussed. For this purpose, colour readings were performed on branch, leaves, petiole and fruit especially on maturation period. In the measuring process Hunter Lab method was used. Images of the fruit trees are taken with digital camera and images are taped with leaves and without leaves. Special software (IMPROFIG) prepared by using Delphi.5 program language are in order to determine the position of fruit in moving image. By using this software X and Y coordinates of the "Bursa Siyahı" fig cultivar are determined. These data will be used for controlling of robot arm that will possibly construct in the future.