Abstract

Machines for automatic quality sorting of agricultural products (MAQS) have been implemented in practice since the middle of the 20th century. The improvement of the agricultural technologies and the food industry goes along with the remarkable development of the sorting technique: the range of products being non-destructively qualified using machines continually enlarges; the accuracy and the rate of qualification of the products increase; the design and the maintenance features are being modernized. In the structure of MAQS the informative technologies enable differentiating a smart module - automatic classifier (AC), which accomplishes the entire processing of information and control of the processes in the system that altogether could be defined as "a complex informative system" (CIS). Automatic classifiers, as a "brain trust" of MAQS, are determinative for their functional resources and performance that is to say the development of the machines for automatic sorting consists in the improving of the AC. Some directions for increasing the rate of operation of AC have been analyzed and adequate software and hardware decisions have been presented in this paper. The investigations are based on the developed and put into practice, with the participation of the authors, several generations of sorting machines for fruits and vegetables of series AQS.