

### Abstract:

The sour cherry is an important species for European fruit processing industry. The quality of cherry products depends primarily on soluble solids content (SSC) in fruits. Thus, the fruits should be harvested when SSC and mass of fruits are the highest possible. The fruits of sour cherry of two cultivars 'English Morello' and 'Nefris' were picked six times (in case of 'English Morello') and five times (in case of 'Nefris') before date of commercial maturity, in roughly weekly intervals. Each time 200 fruits were examined for peduncle detachment force and 150 of these fruits were used for measurements of firmness and SSC. Fitting the logistic curves to collected data showed that this function is not a reliable method for prediction of mean value changes of quality attribute measured destructively. Observation of frequency distribution can, however, much better evaluate the stage of fruit development. Thus analyses of batch data distribution can help prediction of optimal harvest date.