Abstract:

With the present developments in CA technology it becomes possible to fine tune the storage conditions to the specific needs of the product. This generates the need to know the exact quality conditions of the product before storage starts. By measuring the initial quality we can determine these conditions optimally. At present the most likely candidates to assess the initial quality with fast and non-destructive measurements are colour, chlorophyll fluorescence, and maybe NIR spectroscopy. Two examples are presented where initial colour measurements on all products in a batch can be shown to be indicative for the keeping quality of that batch. The first example focuses on how initial colour measurements using a 3CCD video camera can be utilised to predict the keeping quality of a batch of cucumbers where colour itself is regarded as the most important quality attribute. The second example focuses on how colour measurements can be used to predict the keeping quality of a batch of strawberries where the ability to suppress a Botrytis cinerea infection is the most important quality attribute. Furthermore, attention is given to the use of modulated chlorophyll fluorescence imaging as a possible initial quality indicator for rose leafy stem cuttings. The level of inhomogeneity in the quantum yield of photochmistry od PSII of leaves of rose cuttings may be an indictor of the capability of the cutting to recover from severance, and to form roots and generate regrowth.