

# Innofruit

## Innovative Technologies for Supply Chain Quality Management of Fruit and Vegetable

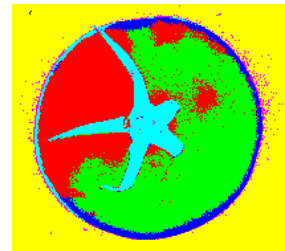
### Background

Several large scale projects for developing quality management in supply and demand chains of fruits and vegetables are currently being performed in the EU. The majority of these projects addresses the relative quality decay in relation to environmental constraints during transport in the chain. However, consumers are not interested in relative quality but absolute quality at the moment of purchase.



Method for measuring changes in fruit colour of tomatoes:

by separating parts of the image, only the flesh colour (combination of light red and dark red) can be obtained



### Main Targets

The overall objective of the project is to validate an already existing model which allows to predict product quality at any stage of the supply chain up to the point of sale. This model is based on the biological variability of product quality and phytosanitary status at harvest. The variability will be determined, and the obtained results will serve as a basis for the prediction of the forthcoming quality status in the whole supply chain, e.g. from the farm to the consumer. The model is designed to serve as an appropriate tool for the quality management of each participant of supply chains and will make them contribute to a consumer-orientated high quality produce.

### Target Groups

Target groups are decision makers of fresh produce trade to improve their efforts in supplying the different markets with suitable products as well as consumers which will be provided with a higher percentage of high-quality products with an extended shelf life and last but not least also horticultural science will benefit.

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<b>Acronym</b>	Innofruit
<b>Title</b>	Innovative Technologies for Supply Chain Quality Management of Fruit and Vegetable
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<b>Duration</b>	November 2005 – September 2007
<b>Project approach</b>	<p>A model for predicting product quality at any point of the supply chain has been developed by the project partner from Wageningen, NL, and is to be validated under practice conditions by the other two partners (NRW, CH), who also contribute as data suppliers. In different trials the main factors influencing product quality will be determined (CH, NRW) and implemented in the stochastic model (NL). Furthermore, in order to determine the quality decay within the chain, appropriate non-destructive measurement techniques will be employed (NRW, CH). Selected pilot chains are carrots (CH), tomatoes and apples (NRW).</p>
<b>Expected results and outputs</b>	<p>The challenge is to determine the initial absolute product quality at harvest and to use this information in combination with the environmental parameters within the chain to understand how the process of production leads up to a final quality in the growth phase, i.e. an initial quality in the postharvest phase. Non-destructively measured quality attributes like firmness and colour are regarded as appropriate parameters to sufficiently describe the product quality of selected produce. Environmental factors like fertilization (tomatoes), phytosanitary status (carrots) or temperature during shelf life (tomatoes, apples) will be evaluated in order to get an information about their influence on the product quality at harvest, i.e. on the product quality at the moment of purchase. All currently available as well as historic data will be used to validate the model.</p>