

Abstract

Quality of our food becomes more and more important to consumers. To increase quality has its price. That consumer doesn't want to pay. To ascertain that consumers come back to us and buy again food from our supply chain, we have to increase quality find while cutting down at the same time in other costs. One of the possibilities to achieve that is optimizing the handling and information exchange throughout the supply chain. But still be able to assure quality to each and every actor in that chain.

This goal we set ourselves touches several difficulties. In this lecture we will not go into the economic or operational details, but some attention will be devoted to quality, what it is, how to understand it, how to describe its changes, and how this concept can be applied by modelling for quality assurance.

First of all quality itself, quality is different for every individual or group of individuals. No wonder that quality is so ill defined. But fortunately, a consistent philosophy of quality is possible. Decomposing the problem into its constituting parts, one arrives at three interactive areas: the product, the market and the community the user is in. All three affect the appreciation and acceptance of a particular product by a particular consumer. As a consequence, the consumer assigns quality to a product based on the intrinsic properties of that product (are all quality related properties OK?), the market and economic situation (is the price right? Are there other products on the market?). And the social-psychological conditions of that particular consumer in that particular community. What actually is (most of the time) meant by quality is the assigned quality or acceptance.

To decrease the burdens of working with such an ill define property, very frequently specifications are drawn up by mutual agreement that replaces the acceptability of the product by (large) groups of consumers. Advantages and disadvantages of this system will briefly be highlighted.

In the second place, there is the problem of supply chain optimisation. One of the items absolutely necessary for that is a feeling, a knowledge or even better a model how the intrinsic property of perishable produce change during its journey through the supply chain. As indicated in the quality philosophy, the intrinsic quality of produce is entirely based on product properties. Modelling the changes in these quality properties (and attributes) can help to provide useful information throughout the chain, without the need to measure or ascertain quality all over again at every crossing of actors boundaries. In other words modelling or rather prediction of quality can

reduce the cost of quality assurance, provided all other necessary conditions are met. The most important conditions here is the mutual trust of all actors in a chain. Some examples of modelling quality aspects of perishable produce will be provided and worked out in this lecture.

In the last place, we have to make sure that all that knowledge and insight, available on product behaviour and quality changes throughout the chain, can be applied in full for understanding how supply chains actually work, their consequences and the effect of the consumers attitude (will he come back to buy?) and from there start to progress to real and total optimisation of the food supply chain as contrary to the local optimization now frequently used.