

SENSORY QUALITY OF FRESH MARKET TOMATOES: STUDIES OF ITALIAN PREFERENCES

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Sensory properties are important elements to evaluate the qualities of vegetable products and are also determinant factors in purchasing decision. Therefore, the knowledge of the perceived organoleptic quality, as well as of the tomato varieties preferred by consumers, represent key elements for quality improvement and product diversification.

Here we report the Italian results of a preference mapping study conducted within the European project “High Quality Solanaceous crops for consumers, processors and producers by exploration of natural biodiversity” (EU-SOL, <http://www.eu-sol.net/>) with the aim of describing the preferences of European consumers in regards to the diversity of traditional and modern tomato varieties, available on the market.

This work has allowed the assessment of fruit quality at three levels: objective description of sensory properties, consumers’ preference tests and chemico-physical measurements with instruments. A set of 16 tomato cultivars, with different sizes and shapes, was described and classified according to 18 sensory attributes including flavour, appearance and texture characteristics. The same cultivars were evaluated by 179 consumers (aspect, familiarity, flavour) in a “preference mapping” experiment with the goal of identifying the preferred varieties and the reasons for the choice.

A hierarchical analysis of the clusters allowed to distinguish, within the sampled Italian consumers, four segments with different preferences which respectively represented 19%, 25%, 41% e 15% of the population. A multivariate regression model allowed the identification of the sensory attributes that were linearly correlated with the preferences of each cluster of consumers. The four groups were analyzed for demographic, behavioural characteristics, usage habits and factors relevant for purchasing (e.g. price, packaging, origin, expiration date, shape, dimension, colour, apparent texture, etc.).