LEI WAGENINGEN UR

Consumer segmentation based on taste preference of tomatoes – methodological approach –

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Main outcomes

- Linking consumers' liking of tomato varieties to data on characteristics of both the consumers as well as the tomato varieties provides valuable information for consumer driven product design.
- The common approach for this type of L-shaped data is to create segments of consumers based on their liking of the tomato varieties and analyse the associations of these clusters with tomato and consumer characteristics.
- The current study will provide information on consumer attitudes and lifestyle characteristics beyond the level of intake and demographics. This will provide more insights in how lifestyle aspects are related to consumers preferences for taste attributes.

Background

For tomatoes, consumer clusters that differ in their liking have been linked to demographics, purchase criteria and usage characteristics (Le and Ledauphin, 2008) as well as consumer preferences for tomato sizes, shapes, ripeness (Sinesio et al, 2009). Consumer lifestyle aspects such as health and food related motives have not been studied in relation to tomato liking. The aim of this study is to combine sensory and instrumental data on tomatoes with both consumer liking of those varieties and with consumer lifestyle aspects. This will enable breeding companies to develop and to market fruits and vegetables for specific liking and lifestyle target groups.

Methodology

424 consumers, tasted 9 tomatoes varieties and gave a (hedonic) score for their liking of each of the tomatoes (one in duplo). The tomatoes were selected to vary on main taste attributes and were additionally rated on sensory attributes by a trained sensory panel. Instrumental measurements were carried out on sensory parameters. Also, a range of lifestyle variables were included in a questionnaire.
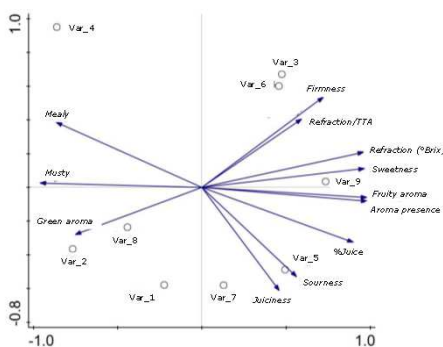

Figure 1. PCA of the 9 tomato varieties (var_1 to 9) in relation to the sensory attributes; TTA =Total Titratable Acidity
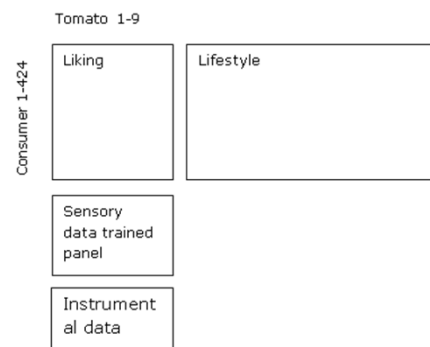
L shaped data

Figure 2. L-shaped data on 424 consumers' lifestyle, tomato sensory and instrumental data, linked by consumers' linking of the 9 tomato varieties

Discussion

In this study we will follow the common approach to create segments of consumers based on their liking of the tomato varieties. These clusters will (1) be plotted on the preference map were sensory and instrumental characteristics of the varieties are reduced to dimensions, and (2) be described in terms of consumer characteristics. Additionally, with a Generalized Linear Mixed Model approach (GLMM) tomato characteristics will directly be linked to consumer characteristics.

The study will advance current literature by including lifestyle variables on health and food choice related motives. This will contribute to more insights on how health motives together with other motives are related to consumers preferences for taste attributes.

Acknowledgements