

NEW INSIGHTS INTO FRUIT CULTIVATION AND PROCESSING BASED ON PRODUCT FLAVOUR

Barbara Siegmund^{1*}

¹ Graz University of Technology, Graz, Austria

*Corresponding author - E-mail: barbara.siegmund@tugraz.at, Phone: +43-316-873-32506

Fruit cultivation plays a very important role in the Southern parts of Austria. Besides the cultivation of grapes for the wine production, enormous amounts of apples, elderberries, peaches and other crop have been traditionally cultivated. Due to the developments on the European fruit market (e.g. developments after the start of the Russian embargo), the price for apples from the local production decreased significantly. In addition, new agricultural problems arose due to the occurrence of new parasites like *Drosophila suzukii* as well as due to extreme climatic conditions like the very late onset of winter in April 2016 leading to enormous crop failure in the harvest 2016. All these issues trigger a rethinking process within the local agriculture as for many farmers the cultivation of international apple varieties like Golden Delicious or Gala is not further economically viable under the existing conditions. As a consequence, there is - on the one hand - a change in crop and on the other hand a recall on old fruit varieties that have been traditionally grown in this geographic region for many decades. The production of high quality products from not traditionally grown crop as well as from old fruit varieties require a deep understanding of the flavour properties and the flavour changes that occur in course of the production cycle. In this lecture, it will be demonstrated at the examples of selected fruit varieties like apples or black chokeberry (*Aronia melanocarpa*) how the use of flavour analysis (by means of mainly gas chromatographic techniques) as well as sensory evaluation (by the use of traditional as well as new and rapid techniques) is used to support the production of high quality products in order to strengthen the position of local farmers on the market.

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