Is there a best woodland strawberry (*Fragaria vesca*)?  
– A consumer survey of preferred sensory properties and cultivation characteristics of woodland strawberries

Wendin, K.1,2, Forsberg, S.1, Nilsson, A.3, Olsson, V.1, Egan P.A.4 and Stenberg, J.A.4

1. Food and Meal Science, Kristianstad University, Sweden, 2. Dept. of Food Science, University of Copenhagen, Denmark, 3. Kiviks Musteri AB, Sweden, 4. Dept. of Plant Protection Biology, Swedish University of Agricultural Sciences, Sweden

**Introduction**

Resistant varieties are important to combat agricultural pathogens and pests in strawberry and other crops. Consequently, plant breeders aim to develop crop varieties with higher resistance in order to increase sustainability. However, plant resistance may affect quality, e.g. sensory attributes, including visual properties of the fruits, and thereby consumer acceptance. The development of new varieties may also affect consumer attitudes.

The purpose of this study was to investigate consumer preferences and attitudes towards woodland strawberries.

**Methods**

Consumer data from a total number of 176 (78% women and 22% men, ≥18 years) Swedish respondents were collected via a web based survey during two weeks in September 2017. The questionnaire contained pictures of woodland strawberries with different resistance levels (Figure 1) to be assessed due to preferences regarding the appearance. Also questions concerning preferences and attitudes due to sensory perception, naturalness, organic etc. were included. Data were processed using descriptive and analytical statistics.

**Results and Discussion**

The significantly most important preference factors of the woodland strawberries were the flavor of woodland strawberry and intensity of sweetness.

With regard to appearance, berry E was the significantly most preferred berry (Figure 1). Analysis of the appearance attributes showed that red colour, shape and seed density had significant impact on preference (Figure 3).

Further, “naturalness” and “free from pesticides” were of importance to the respondents. Women were significantly more concerned about “naturalness”, especially the older women. The younger claimed that “organic production” was more important.

The older consumers were significantly more interested in “healthiness” compared to the younger, they also found it more important than the younger that strawberries could resist grey mould and insect pests.

All the respondents preferred to eat strawberries fresh.

**References**


Schwieterman et al. 2014. PLoS ONE 9: e88446

Muola et al. 2017. Fr Plant Sci 8: 823