The effect of production season on sensory characteristics of Dalmatian ham

I. Kos, B. Sincic-Pulic

1 University of Zagreb Faculty of Agriculture, Croatia, 2 Istrian County, Croatia

Dalmatian ham is produced in a specified southern part of Croatia and is designated a Protected Geographical Indication (PGI). In order to utilize favorable climatic conditions, most of the Dalmatian ham production is seasonally organized, starting in autumn. Since climatic conditions may differ over the years, the aim of this study was to determine the effect of the production season on sensory characteristics of Dalmatian ham. For that purpose 10 fully matured Dalmatian hams from the production season 2010 and 14 from the season 2011 were collected from the local large-scale producers. Sensory analysis was performed in autumn 2011 and 2012 by a trained panel of 16 members, using a quantitative descriptive analysis method for 17 different attributes. Panelists were trained and had previously participated in sensory evaluation of dry-cured products. Data obtained were compared by a one-way analysis of variance and by a principal component analysis (PCA) based on covariance matrices. Results demonstrated that there were significant differences (P<0.05) in redness, color uniformity, marbling, cured odor, tenderness, solubility, butter flavor and overall acceptability between the production seasons. PCA analysis after Varimax rotation showed that 66.79% of the variance was explained by the first two principal components. The first principal component was mostly characterized by marbling, butter flavor and tenderness while the second principal component was mostly defined by after-taste, overall acceptability and rancid flavor. The observations on the PCA score plot were substantially arranged in two groups: the first one included all hams from the production season 2010, and the second one included all hams from the season 2011. Based on the results given, it can be concluded that production season had marked impact on sensory attributes of Dalmatian ham.

Keywords: Dalmatian ham, sensory attributes, PCA analysis, quantitative descriptive analysis