

USE OF SORGHUM FLOUR FOR BREAD AND CAKE PRODUCTION AFTER HEAT TREATMENT

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Abstract

Although the modern dietary recommendations forces us to decrease the carbohydrate rich cereal products from our everyday diet, we have to say that they are one of the most important staple foods. As they give the energy basis to the human body and have an important role in the protein intake they are stable components of the foodstuffs, therefore, their selection is necessary to improve their positive effects. Sorghum is an ideal opportunity increasing the demand, as its consumption has several nutritional benefits. On the other hand, it is a gluten free cereal, so it can be attractive both for those who suffer from coeliac disease and those who tries to remove gluten from their diet because of any non health-related reason. The task is to make attractive sorghum based products for the market. The general problem with these products is the structure – if it is possible to form a dough what preserves its shape and structure during processing, storing and transform, most cases it is too dense compared to the gluten containing bakery products.

Dry heat treatment can significantly improve the quality of bakery products made from sorghum flour. In our experiments we evaluated the baking properties of flour mixtures of sorghum flour, corn and rice flour, oatmeal and potato, corn and rice starch alone and in combinations. We found that the flour composition significantly influenced the physical properties of bakery products while the differences were negligible in the case of cakes. The conclusions are similar in the case of sensory evaluations: the consumers did not experienced significant differences in the case of cakes, however, in the case of bread the taste, appearance, structure and overall acceptance showed large differences.

Key words: sorghum flour, heat treatment, baking