



Bakery Products and Cereals: Are They Worth Their Salt ?

A lively discussion was held in the European Bakery Innovation Centre, Papendrecht, the Netherlands on the effects of salt reduction in bakery products in cereals on health, flavor, shelf life and dough/bread properties. A selected group of ca 25 scientists and technologists from some 10 European countries were present on the first Symposium of this kind devoted to the bakery and cereal sector. The participants were specialists in the field of salt reduction and were coming from academia and industry (both raw material suppliers and industrial bakeries). Next to the overwhelming proof of the negative effects of salt on health and the role bakery products are playing (Marianne Geleijnse, Wageningen University, the Netherlands) also the importance to place this in a healthy lifestyle (Wouter Lox, EuSalt, Brussels, Belgium) was discussed. The role of salt in flavor perception was presented from fundamental and applied perspectives. Surprising was that next to enhancement, salt also suppresses many flavours and that even sensory specialists needed to be trained to taste salt in a reproducible way (Peter Köhler, University of Munich, Germany). The effect of salt on shelflife of bread was mentioned.

Main point of discussion was the effect of salt on the processing and bread quality. As presented in many of the presentations salt reduction to a level of 1% on flour basis (275 mg sodium/100 g bread) did not affect bread quality in terms of volume, crumb structure and appearance. An important role is also to act a "police" for the yeast, keeping it under control. The most controversial point was its effect on dough properties. Below a level of 1.7% on flour basis (470 mg sodium/100 g bread) stickiness of dough becomes a major problem for bakeries (processing problems, increased waste levels, etc.), but also for scientists as there is not an appropriate and reproducible method to measure stickiness and thus define the problem and demonstrate improvements. Despite that none of the presenters was able to present the "magic bullet" to solve the problems, several solutions were offered, such as the bread with low and high salt layers by the Topinstitute Food and Nutrition in Wageningen, Proson Taste of Sonneveld, the Netherlands, the various approaches by CSM, Germany is taking and Maxarite of DSM, the Netherlands.

The Symposium was organized by Cereals&Europe, the European section of the American Association of Cereal Chemists – International, which is the largest organization of cereal and bakery scientists and technologists in with more than 400 members in Europe and over 4000 world wide.

