

Strategies to improve the performances of bakery products made from ancient wheat's

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The growing consumers' attention regarding the inclusion of foods able to provide health benefits in one's diet, is currently a theme of fundamental importance. Between these products, ancient wheat's and whole wheat flours seem to be the most appealing in the cereal industry thanks to their nutritional content. Nevertheless, ancient wheat's show worse rheological and technological performances compared to modern cultivars, in particular when using whole wheat flour. According to Migliorini, et al. (2016), the content of starch and protein is strongly influenced by annual variability and agronomic practices. This highlights the need for further investigation to understand the relationship between different agronomic practices and the rheological and technological properties of flours and dough's made from ancient wheat's. Furthermore, the greatest challenge for the bakery industry still remains the improvement of the technological properties of bakery products made from ancient wheat's. In this paper, some of the strategies aimed to face this challenge are proposed. Starting from the improvement of the rheological properties of dough's made from ancient wheat, Cappelli, et al. (2018) provided a rheological study which allows to identify the optimal water content to be added, through models represented by level curves diagrams. Moreover, regarding the improvement of bakery products based on ancient wheat, the sourdough fermentation (Saa, et al. 2017) and the reduction of free lipid in the doughs (Collar & Angioloni, 2014) seems to be the most interesting strategies. Finally, future strategies finalized to improve the technological properties of bakery products made from ancient wheat's are related to the assessment of suitability and bread-making aptitude of ancient wheat flours blended with the most interesting and innovative sources of proteins, i.e. legume and insect flours.

Biography

Alessio Cappelli is a PhD student in Sustainable Management of Agricultural, Forestry and Food Resources at the Department of Agricultural, Food and Forestry Systems management, University of Florence, Italy. He has completed his Bachelor's degree in Food Science and Technology and Master's degree in Food Science at the University of Florence, Italy.