Title: Selected Aspects of the Extrusion-Cooking Process of Snack Pellets with the Addition of Hot Pepper

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Abstract:

Recent years have seen dynamic growth in the convenience food and snack market with enhanced nutritional value. Consumers are increasingly seeking products characterized not only by attractive sensory characteristics but also by the presence of bioactive ingredients that can beneficially impact the human body. In response to these expectations, the food industry is intensively developing technologies enabling the production of functional foods while maintaining high quality of the final product. One of the most important technologies currently used in snack production is extrusion-cooking. The possibility of enriching extruded products with plant-based additives is currently attracting particular interest. Such raw materials include hot peppers of the Capsicum genus, which are a source of many valuable bioactive compounds, including capsaicin, polyphenols, and carotenoids. An increase in efficiency was observed with increasing the screw speed and the proportion of hot peppers in the recipes. Analysis of the obtained data showed that the extruder screw speed had the greatest impact on the process's energy consumption and pellet bulk density. For most samples, a tendency was observed for the expansion index to decrease with higher hot pepper addition, while the index increased with higher extruder screw speed.

Biography

Maciej Combrzyński has completed his PhD at the age of 28 years from University of Life Sciences in Lublin. He is a university professor. He is an author and co-author of 56 scientific papers and 48 conference proceedings. His scientific activity is focused on functional food and ecological biopolymers.