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Challenges of Developing Gluten-Free Bakery Products from Cowpea Grains / Flours

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Abstract

The paper focuses on the challenges of producing gluten-free baked products from cowpea grains/flours. Cowpea (*Vigna unguiculata* (L.) Walp) is known in developing countries for its immersive ability in contributing to food security as part of daily staple diets. Called the meat of the poor since it is a significant source of dietary proteins and essential nutrients. It is widely cultivated in an immature pod, mature seeds, consumed in tropical and sub-Saharan Africa, Latin America, Southeast Asia, and in the southern United States. It is produced in some parts of South Africa, such as Limpopo, Mpumalanga, North-West and KwaZulu-Natal provinces. Cowpea is known as koertjie in Afrikaans, dinawa in Setswana, imbumba in Xitsonga and munawa in Venda. Most gluten-free bakery products are made of gluten-free cereals (e.g., rice, maize, sorghum, and millet), legumes and pulses (e.g., soybean, chickpea, lupin, lentils, and pea), and pseudocereals (e.g., buckwheat, amaranth, and quinoa). There is little research conducted on the production of cowpea baked products. Flour especially from maize and rice are commonly used to develop gluten-free bakery goods. Research conducted demonstrated absence of wheat gluten would impair the structure and further result in a liquid batter. Associated with gluten-free bakery products is the lack of functional gluten in the system that results in inferior rheological properties of the dough or batter and less desirable texture and quality of the resultant products.

Biography: **Tabea Mokhele**

Tabea M. Mokhele is a PhD student at the University of Venda and a Sensory and Product Development Technician. Tabea focuses her research on climate-smart crops specifically cowpea.