

Opportunities and challenges of plant-based foods from African crops for food and nutrition security - InnoFoodAfrica

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Abstract

InnoFoodAfrica (IFA) is a Research and Innovation Action project implemented in collaboration with 5 European and 13 African partners and funded by the European Commission's Horizon 2020 Framework Programme. The main objective is to develop new sustainable value chains to produce and distribute diverse and healthy foods from African farms to local and export markets. It focuses on Southern and Eastern African regions (South Africa, Ethiopia, Kenya, Uganda) and European export markets by empowering smallholder farmers and SME entrepreneurs. IFA works on strategic food crops (Finger millet, Teff, Maize, Faba Bean, Amaranth, Sorghum, Cowpeas, Bambara Groundnut, Orange Fleshed Sweet Potato, Banana) in the partner countries.

For the past 2.5 years, partners have been focusing on developing solutions to use sustainably produced African crops into nutritious foods for nutrition security, with the approach 'from farm to fork'. The best agricultural practices for the selected crops have been developed together with smallholder farmers using farmer participatory research methodology. The focus was to introduce good agricultural practices to climate smart production in order to boost productivity, develop and link farmers to functional seed systems for sustainability, assist the farmers in adapting modern post-harvest handling technologies to maintain the quality and increase the shelf life of the produced crops. African crops have been used to develop safe and nutrient-dense food ingredients and products. Ingredient innovations developed so far are fat replacers, protein-rich, low glycaemic-index and low anti-nutrient flours obtained by mechanical, thermal or bioprocessing technologies. Promising food prototypes developed are snacks, porridges, pastas, animal protein analogues, grits and baked goods.

Several surveys were conducted in order to get better knowledge on (i) African crops value chains and the barriers hindering the market access of the new products and prototypes developed (ii) food consumption survey with mother-child pairs in African cities to characterize their dietary patterns; (iii) consumer attitudes and dispositions for the new products and prototypes developed; (iv) most potential crop side streams for material development (bio-packaging).

Main Themes

Innovation and Technology