



Potential of indigenous vegetable-fortified food products for improved human nutrition and health in West Africa

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Abstract:

The indigenous vegetables project (MicroVeg), implemented in Nigeria and Benin Republic, focused on the development of innovative systems of production, utilization and value addition options to enhance nutrition and economic empowerment of resource-poor rural populations, especially women, at 41 selected locations. This paper reports the results of work done on value additions in Nigeria. We developed and tested the acceptability of key innovative value-added products, including vegetable-fortified bread and pastry products (cookies and chinchin), using three indigenous vegetables, namely *Telfairia occidentalis* f. *Hooke* (fluted pumpkin) *Amaranthus viridis* L. (local amaranth), and *Solanum macrocarpon* L. (eggplant). The project also developed protocol for the optimization of extraction of polyphenol from the vegetables leaves for use in fortifying a local weaning food (a maize porridge, locally called Ogi). We carried out sensory evaluation of the new products at 41 locations in southwest Nigeria with 10,250 panelists. Results from the MicroVeg project showed that bread fortified with 3% (w/w) dried vegetable leaf powders had higher nutritional properties, especially radical scavenging ability and blood pressure reductions than the regular white bread. Pastry formulations that included 3% dried vegetable leaf powders had slightly lower consumer acceptability in terms of taste and colour; however, due to the associated potential health benefits, consumers were willing to buy the vegetable-fortified products as replacements for the regular products. In order to enhance local adoption of the vegetable-fortified products, a total of 5466 persons (68% women) at 25 rural locations and 100 bakery owners were trained on these value addition innovations in 2016-2017.



Biography:

Kehinde A. Taiwo holds a B.Sc. Degree in Food Science and Technology (FST) and M.Sc. and Ph.D. degrees from the Department of Agricultural Engineering both from Obafemi Awolowo University (OAU) Ile-Ife, Nigeria. She is the Head of Department of FST. Her research interests are in the areas of post harvest processing of agricultural materials, gender studies involving issues on technology adoption and management by female food processors at the rural level, and Science and Technology Policy Management issues. She has over 60 research publications in international journals of repute and is a Fellow of the Nigerian Society of Engineers.

Publication of speakers:

1. Kehinde A. Taiwo. Assessment of the capabilities for innovation by small and medium industry in Nigeria
2. Kehinde A. Taiwo, Strategic communication for climate change awareness and behavioural change in Ota Local Government of Ogun State
3. Kehinde A. Taiwo, Physicochemical properties of four tomato cultivars grown in Nigeria
4. Kehinde A. Taiwo, Utilization potentials of cassava in Nigeria: The domestic and industrial products
5. Kehinde A. Taiwo, Acceptability and challenges of implementing the NICE guidelines for schizophrenia in Lagos, Nigeria

Webinar on Food Safety | October 28, 2020 | Dubai, UAE

Citation: Kehinde A. Taiwo; Potential of indigenous vegetable-fortified food products for improved human nutrition and health in West Africa; October 28, 2020; Dubai, UAE