ENHANCING MICRONUTRIENT INTAKE IN SUB-SAHARAN AFRICA THROUGH SUPPLEMENTATION OF MAIZE PORRIDGES WITH MORINGA OLEIFERA LEAF POWDER


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ABSTRACT

Micronutrient deficiency is a major challenge in most parts of Sub-Saharan Africa. Several attempts have been made to combat micronutrient deficiencies in this region with varying success rates. The food-based approach is considered most sustainable and desirable. Consequently, efforts have been directed at sourcing and applying locally available micronutrient-rich food sources in food recipes in the fight against micronutrient deficiencies. The moringa tree (*Moringa oleifera*) is able to survive and thrive in most African countries and the leaves are believed to be rich in micronutrients. In this study, some mineral composition and antinutrients present in locally available moringa leaf powder were quantified and the sensory acceptability of maize-based porridges prepared with varying levels of moringa were determined. The moringa leaf powder contained high amounts of Ca (1489), K (885), Mg (280) and Fe (20) mg/100g, respectively. However, oxalate (2744 mg/100g) and total phenols levels were also high. Acceptable porridges were obtained from the maize-moringa leaf powder blends at up to 10% (w/w). Higher concentrations yielded products with objectionable dark-green appearance. Moringa leaf powder when added to staple foods such as maize may be useful in delivering needed micronutrients to vulnerable groups living in Sub-Saharan Africa. However, bioavailability studies are required to ascertain the effectiveness of this approach.