

# A Holistic Approach to Addressing Hidden Hunger for Nutrition Security in Africa



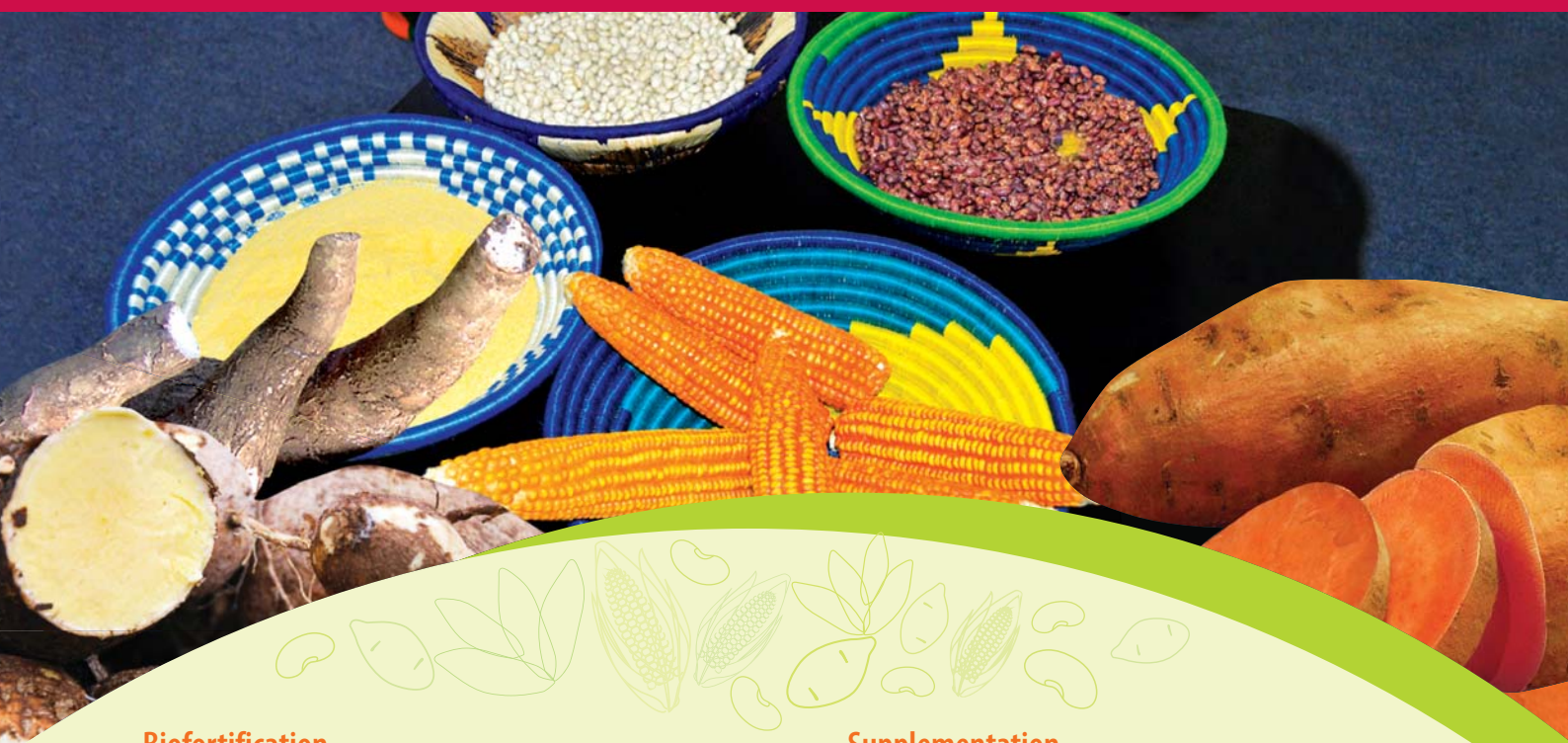
**Almost a quarter of the people** in sub-Saharan Africa suffer from micronutrient malnutrition or 'hidden hunger.' This problem disproportionately affects women of reproductive age, infants, and young children, many of whom suffer deficiencies of essential micronutrients such as vitamin A, iron and zinc. Micronutrient malnutrition results in several health problems including weak immune system, visual impairment, night blindness in pregnant women and children, cognitive ability, retarded growth and reproductive potential, increased risk of disease and ultimately affects the general productivity of populations.

Several approaches that complement each other are employed to address the complex problem of micronutrient malnutrition. In addition to actively promoting exclusive breastfeeding of infants for the first six months of life to achieve optimal growth, development and health in infants, other approaches that mitigate against micronutrient deficiencies in young children and women of reproductive age include supplementation, food fortification, dietary diversification and biofortification.



Diagram 1 Integrated Approach: Adapted from HarvestPlus

## Combating hidden hunger through nutritious food baskets



### Biofortification

Biofortification is recognized as an effective and sustainable approach to addressing micronutrient malnutrition by increasing nutritional value of staple food crops by increasing the density of vitamins and minerals in a crop through either conventional plant breeding, agronomic practices or biotechnology. Examples of vitamins and minerals that can be increased through biofortification include provitamin A carotenoids, zinc and iron. Growing and consuming biofortified foods such as vitamin A-rich orange-fleshed sweetpotato (OFSP), provitamin A (yellow) cassava, provitamin A (orange) maize and high iron/zinc beans is beneficial to most vulnerable groups - especially children, pregnant and breastfeeding women, and poor rural and urban households.

### Dietary diversification

Cultivation and consumption of a variety of foods with high vitamin and mineral content strengthened with nutrition education, can be very effective addressing micronutrient malnutrition. Dietary diversification ensures availability of a wider selection of foods with high levels of essential micronutrients and a more balanced diet. Many nutritious foods such as mangoes, papaya, pumpkins, dark green leafy vegetables, maize, beans, eggs, potatoes, sweet potatoes; yam, cassava, liver, milk and biofortified foods are readily available to most households, especially the rural poor populations.

### Supplementation

This is provision of highly concentrated vitamins and minerals in form of either capsule, tablets or injections. In the case of vitamin, A, this is usually administered twice a year to children aged between 6 months to 5 years to increase child survival rates. The damage caused by micronutrient deficiencies in the early years of life can be irreversible, therefore, supplementation ensures that young children have sufficient amounts of micronutrients especially in their first 2 years of life.

### Food fortification

Commercial and industrial fortification with essential nutrients such as iodine, iron and vitamin A and zinc is usually done during production and processing of common staple foods such as flour, rice, and oils. Implemented through the food industry, it can be used to reach large numbers of consumers through retail and local markets particularly in the densely populated urban areas. Point-of-use fortification such as using multiple micronutrient powders, have been shown to reduce the risk of iron deficiency and anemia in infants and young children, 6-23 months of age. Multiple micronutrient powders are used as an alternative way of providing micronutrients to populations where other interventions are difficult to implement. They can be sprinkled onto any ready-to-eat semi-solid food consumed at home, school or any other point-of-use.



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