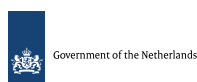


Co-led By:

Funding From:



COMMERCIALISATION OF BIOFORTIFIED CROPS (CBC)

FACT SHEET SHEET: 2019 - 2022



GOAL:

Reach at least 167 million consumers with nutrient-dense biofortified foods

FOCUS

Vitamin-A Maize (VAM) and Vitamin-A Cassava (VAC)

TARGETED

34 million people

BACKGROUND

The Commercialisation for Biofortified Crops (CBC) project was launched by GAIN and HarvestPlus in 2020 with an overall goal to reach at least 167 million consumers with nutrient-dense biofortified foods (previously piloted by HarvestPlus) by 2022 in six countries in Africa (Nigeria, Kenya, and Tanzania) and Asia (India, Bangladesh, and Pakistan), through commercial pathways. To realize this goal, both organizations developed country-specific strategies informed by inception assessments.

In Nigeria, Vitamin-A Maize (VAM) and Vitamin-A Cassava (VAC) were the focus, and 34 million people were targeted across 8 states namely Anambra, Imo, Oyo, Osun, Cross River, Nasarawa, Kaduna, and Niger States with biofortified foods. This included reaching 23 million people in Imo, Oyo, Niger and Kaduna states with Vitamin-A Maize and 11 million people in Cross River, Anambra, Osun and Nasarawa states with Vitamin-A Cassava.

THE SITUATION IN NIGERIA:

Nigeria, one of the most populous nations on the African continent, faces a severe double burden of malnutrition, with one in every five children undernourished and more than a quarter of adult women overweight or obese (NDHS, 2018). In comparison to the 37% reported in 2018 for the stunting rate in children under five, the preliminary reports of the 2022 national food consumption and micronutrient survey indicate that 33% of all children under five are stunted. Stunting is most prevalent in the north-west zone (48%), followed by the north-east zone (35%). Additionally, severe acute malnutrition affects 3% of all children under five. This burden generates huge costs for the country in terms of sickness, lost lives, and lost incomes. According to the World Bank, Nigeria loses \$1.5 billion of its GDP annually due to poor malnutrition indices. With 1 in 2 children and 2 in 3 women worldwide suffer from one or more forms of micronutrient deficiencies (Lancet Global Health, 2022), in Nigeria.

According to UNICEF, malnutrition is a direct or underlying cause of 45% of all deaths of under-five children. Nigeria has the second highest burden of stunted children in the world, with a national prevalence rate of 32% of children under five. An estimated 2 million children in Nigeria suffer from severe acute malnutrition (SAM), but only two out of every 10 children affected are currently reached with treatment. 7% of women of childbearing age also suffer from acute malnutrition (UNICEF, 2015). People at the bottom of the pyramid were mostly affected as they had low-income earning potential and less diverse diet options.

Leveraging on the strong evidence that biofortified foods are a cost-effective and sustainable way to improve the intake of micronutrients among consumers, the CBC project identified biofortified VAM and VAC value chains as having the highest potential for impact, with the potential to provide 40-50% of the Vitamin-A recommended daily allowance for children under 5. Nigeria is the biggest producer of cassava globally with an estimated annual production of 60 million tons in 2017 and the 12th largest maize producer globally and 2nd in Africa after South Africa; estimated at almost 11.6 million MT in 2021, with over 100 million Nigerians consuming the conventional varieties. However, only 2.8% of the Cassava produced in Nigeria was biofortified, while maize accounted for less than 1% of its annual volume (Dalberg, 2019).



WHAT WAS DONE {OUTPUT METRICS}

Supply of Vitamin-A Maize Seeds and Vitamin-A Maize Stems



5,366,000 kg Vitamin-A Maize seeds and **1,711,942** bundles of stems were made available for farmers which were by acquired by 509,595 and **602,006** Vitamin-A Maize and Vitamin-A Cassava farmers respectively.

Demand Generation for Biofortification Foods



Estimated **57,861,464** people were reached with various demand generation messages including market activation on biofortified foods.

Capacity Building of Value Chain Actors



15,948 farmers (for both Vitamin-A Maize and Vitamin-A Cassava) were reached through training on good agronomic practices, improved processing of biofortified food products, training on business readiness and access to finance, matchmaking for value chain actors for input distribution, seed fair, and nutritious food fair for exhibition of notorious produce and products.

Policy and Advocacy Engagements



Stakeholders' round table meetings were held across the focal states to improve the enabling environment for biofortified foods and food products. This includes key MDAs such as the Ministry of Agriculture; Ministry of Health; Ministry of Education; Ministry of Commerce; Ministry of Women Affairs; Ministry of International Development Corporation; Ministry of Information; Ministry of Environment; Budget and Planning Commission, National Bureau of Statistics; Agricultural Development Programme (ADP) Nutrition Society of Nigeria

RESULTS {OUTCOME METRICS}

Increased Production of Biofortified Foods



Farmers across the project's focal states produced a staggering **1,709,660,000** kg of Vitamin-A Maize and **4,514,716,000** kg of Vitamin-A Cassava this year.

A combined **1,946,836** farmers reported an increase in the production of biofortified foods: **1,302,654** Vitamin-A Maize farmers and **644,182** Vitamin-A Cassava farmers.

More Availability of Biofortified Foods



About 33% and 40% of the annual production recorded by farmers for Vitamin-A Maize and Vitamin-A Cassava respectively were sold which accounts for about **570,788,000** kg of the Vitamin-A Maize and **1,789,046,000** kg of the Vitamin-A Cassava that were made available in local markets.

Increased Demand for (and Income from the Sales of) Biofortified Foods:



999,233 farmers reported increased income from the sale of Vitamin-A Maize and **336,503** farmers reported increased income from the sales of Vitamin-A Cassava, showing a greater market demand for biofortified foods and higher income levels for the farmers who are growing and selling biofortified crops.

Increased Consumption of Biofortified Foods

In 2022, an estimated **30,690,410** people consumed Vitamin-A Maize and **31,490,045** people consumed Vitamin-A Cassava, a combined total of **62,180,455**. This shows the growing popularity of biofortified foods among consumers.

Number of new policy/legislation documents that mention biofortified foods at any level



Biofortification was entrenched as a strategy in four (4) subnational policy related documents, this includes Kaduna State Agriculture Sector Food Security & Nutrition Strategy and in the new draft policy submitted for validation (which was renamed Maternal Infant & Young Child Nutrition policy), and in the new National Strategic Plan of Action on Nutrition draft policy. Other documents developed and released in 2022 were: the Oyo State inclusion of Vitamin-A Maize into the school feeding programme (2022), the Cross River Strategic plan of action for food and nutrition (2022-2025) and the Niger State Multisectoral plan of action for food and nutrition (2022-2025).



Available processed and branded biofortified food products

- **Vitamin A Cassava:** Cassava products- Flakes (Vitamin A Garri), Odorless Fufu, Castard (Vit A Cassava custard), High Quality Cassava Flour, and Biobite.
- **Vitamin A Maize -** BioPap Powder, Cornmeal, Maizplan Fufu, Manut Pap, NutriMoi, Pap Powder, Powdered Pap, Provitamin A Maize Fufu, Takero Mixed Pap -Yellow, Turnbrown, Tuwonvita, Vita Rich, Vitamin A Corn Flour, Maize Flour, and Plain Mix Grain.

Some of the processors biofortified food products

- Cato foods (Osun) Krunch foods (Kaduna), Esomchi Foundation (Anambra), Zuex (Akwa Ibom) Takero Foods (online), Ise-Oluwa (Oyo), Divine Mercy Goods (Oyo), OG Foods (Oyo), Feslorens Foods (Oyo), Somma's Yummies (FCT), Grandeur's Food (Imo), Leene's Foodie (Imo), Rahama (Niger), Mfwa food processors (Cross River), Abisal Megatop Unique venture (Oyo) and BDB divine ventures (Niger).

[Note: The consumption figures are the sum of the on-farm and commercial pathways]



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"This publication has been produced by GAIN and HarvestPlus with funding from the Netherlands Ministry of Foreign Affairs and German Federal Ministry for Economic Cooperation and Development. The views expressed herein are those of the author(s) and do not necessarily express the views of the people or government of the Kingdom of the Netherlands and Germany."