

Advocacy and Use of Advocates as a Quick Win in Scaling Up Biofortification in Nigeria: The Case of Building Nutritious Food Basket (BNFB) Project

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Abstract

The Building Nutritious Food Baskets (BNFB) Project explored advocacy and the use of advocates as a model strategy for scaling up biofortification in Nigeria during its three-year implementation. In addition to its direct advocacy efforts, the BNFB project identified and selected key personnel across disciplines, gender and sectors, based on some selected criteria, as Advocates to support the scaling up of biofortification by raise of investments, resource mobilization, the inclusion of biofortification in relevant policy documents, strategies and plans of action. To realize these, the selected 32 Advocates were empowered to mainstream biofortification into their existing and/or potential programs/projects, as well as create awareness and demand for biofortified crops within their spheres of influence. Training and retreats were organized for the Advocates to strengthen their capacities in advocacy and promotion of biofortification and biofortified crops, while a social platform was launched to share opportunities, experiences and address issues around biofortification within the Advocates. As a result of these efforts, biofortification was included in three key national policies, strategies/plans of actions with resource allocation, and investments, over USD3 million were raised for biofortification. The Federal Government of Nigeria and some external governments became committed to biofortification programs while biofortified crops were mainstreamed in at least two national programs in Nigeria. Biofortified crops

were included in the Home-Grown School Feeding Program of two states. The use of Advocates proved to be a resultful strategy in the biofortification scaling up model of BNFB as the advocates, upon being trained, looked out within their sectors and disciplines to mainstream biofortification into their programs. They gave timely information on potential opportunities to follow up with in influencing favorable policies; they mobilized resources nationally, regionally and locally; they facilitated wider coverage of biofortification within a short time. However, the influence of the Advocates was limited to their number and locations; thus, for a quick win in Nigeria, there is a need to raise advocates in all the 36 states of the country while giving equal priority to national and state level advocacy. As a lesson, to engender adoption of biofortification, participation/leveraging on existing programs in advocacy works faster and easier than starting afresh in Nigeria.

Keywords

Biofortification, Advocacy, Policy, Investments, Scaling Up

1. Introduction

The burden of malnutrition remains high while undernutrition rates are not falling fast enough to keep pace with the changing global trends; 1.2 billion people lack key micronutrients like iron and vitamin A, 151 million children are stunted, 50.5 million children are wasted, 20 million babies are born with low birth weight, while an estimated 2 billion and 38.3 million adults and children respectively are overweight or obese, and the world is off track to meet all global nutrition targets [1].

In sub-Saharan Africa (SSA), malnutrition in all its forms continues to be a problem as the number of stunted children under five years of age in SSA rose by 23%, from 42 million in 1990 to 58 million in 2014 [2]. Micronutrient deficiency, which is characterized by a chronic deficiency in essential vitamins and minerals such as vitamin A, iron, zinc and iodine, affects millions of people in SSA, especially the rural poor and other vulnerable populations. Most women of reproductive age, infants and young children in SSA countries suffer from deficiencies in vitamin A, iodine, iron, zinc and folate [3] [4]. An estimated 48% of preschool age children in SSA are vitamin A deficient and 24% of all child deaths are attributable to that deficiency [5].

Nigeria is not an exception in the multiple burdens of malnutrition, and undernutrition, including micronutrient deficiencies as well as overweight, obesity, and associated diet-related, non-communicable diseases. The key challenges include the high prevalence of stunting among children under the age of five years at 43.6%, with particularly high levels in the northeast and northwest. Stunting prevalence of 37% [6] and 31.5% [7] among children under the age of five years have also been reported. The prevalence of wasting is 10.8% and underweight 31.5%, with higher levels in rural areas and among children of women in the poorest quintile with no or non-formal education [8]. About 49% of non-pregnant women of reproductive age (WRA), and 58% of pregnant women were classified as anemic in 2016 [9], while 45% of pregnant women are iodine deficient, and the prevalence of anemia in children 6 - 59 months of age is 71% [10]. The consequences of vitamin A deficiency include a high risk of diseases such as diarrhea and measles, growth retardation and premature death for children under five, weakened immune system, visual impairment, and blindness [2].

There have been some interventions that are broadly classified into nutrition specific and nutrition sensitive at all levels to address micronutrient deficiencies in Nigeria. Nutrition specific interventions being scaled up in Nigeria include support for exclusive breastfeeding and improved Infant and Young Child Nutrition (IYCN) practices, micronutrient supplementation, treatment of severe malnutrition, mandatory large-scale fortification of selected foods (salt, sugar, oil, and wheat flour), and Home-Grown School Feeding. Nutrition sensitive interventions include nutrition sensitive agriculture, mainly biofortification, and clean water, sanitation, and hygiene (WASH).

Large scale food fortification, being a food-based intervention approach for addressing micronutrient malnutrition has so far been largely limited to commercial food fortification of salt with iodine, cooking oil, sugar and margarine with vitamin A and flours (Wheat, Semolina, Maize, Cassava and their composite) with vitamin A, iron and zinc [11]. The coverage of fortified foods is dependent on how developed the market infrastructure is. In Nigeria, many rural communities have limited access to commercially processed or fortified foods and locally processed and unfortified foods are often more readily available and cheaper.

Also, the promotion of dietary diversification, nutrition-sensitive food production systems and nutrition education has not received the focus and sustained attention necessary to effect sustainable behavior change [11].

The other food-based approach to reducing micronutrient malnutrition is biofortification, which is the process of breeding staple crops to have higher levels of essential nutrients either through selective breeding or genetic engineering [12]. It is one of the sustainable and cost-effective ways of addressing micronutrient malnutrition that is gaining global recognition and affecting millions of people by addressing food insecurity, especially in Africa. Being within the agricultural sector, offers excellent investment opportunities for addressing this national priority through food-based approaches to producing and marketing diverse and more nutritious crops that can sustainably improve the nutrition status of current and future generations, including the supply of key micronutrients. One of the advantages of biofortified crops is that, beyond the initial investment of crop breeding and introduction, they are an economically self-sustaining strategy that supplies key nutrients to vulnerable populations on a daily basis and creates additional income opportunities along the value chain. Once in the farmer's food system, bio-fortified crops can also reach remote, rural populations that are difficult and expensive to reach with regular supplementation campaigns.

However, awareness of biofortified crops across the value chain has been reportedly poor thus the need to scale up to maximize its contribution towards micronutrient malnutrition reduction. There is no policy awareness of the program while investments and full exploration of its benefits are limited. Mainstreaming biofortification in relevant programs/projects has been challenging because of low awareness of its potentials, thus the need to re-strategize its reach to the public. BNFB, therefore, came up to test a scaling up model strategy to fill these gaps for biofortification impact at scale.

1.1. Goal and Objectives of the Building Nutritious Food Baskets (BNFB)

The Building Nutritious Food Baskets (BNFB) Project was a three-year (November 2015-October 2018) project funded by the Bill & Melinda Gates Foundation that tested a model to scale up biofortified crops for nutrition security in Nigeria and Tanzania [12]. The project built on the earlier achievements, successes and scaling up approaches of the Reaching Agents of Change (RAC) Project. The biofortified crop of BNFB focus was not just the orange-fleshed sweet potato (OFSP) promoted under RAC but expanded to adopt a multi-crop or food basket approach consisting of biofortified high iron beans, pro-vitamin A (orange) maize, OFSP and yellow cassava. As shown in Figure 1, the goal of BNFB was to contribute to the reduction of hidden hunger by catalyzing sustainable investments in the utilization of the selected three biofortified staple





"Scaling up is dependent on supportive policy environment, strong institutional capacities and proven technologies"

Figure 1. BNFB goal, purpose and objectives.

crops at scale in Nigeria and Tanzania. The project was implemented to demonstrate how multiple biofortified crops can be scaled up together at the country level through a structured partnership of a range of Consultative Group on International Agricultural Research (CGIAR) centers and programs as well as subnational, national, regional and international stakeholders. The partners leveraged on proven strengths to deliver on the specific project aspects of advocacy, policy development, nutrition education and behavior change communication. They jointly contributed to creating demand for the biofortified crops, strengthening the capacities of the key actors in the crops' value chains and facilitating institutional learning, all of which were needed to take multiple biofortified crops to scale. The six complementing partners are the International Center for Tropical Agriculture, International Maize and Wheat Improvement Center, International Potato Center (CIP), International Institute of Tropical Agriculture, Harvest Plus and Forum for Agricultural Research in Africa (FARA).

1.2. Objectives and Targets of the BNFB-Nigeria Advocacy Strategy

The BNFB-Nigerian advocacy strategy aimed to influence decision-makers, laws and regulations, strategies and practices on the adoption of biofortification approaches to address micronutrient deficiency in Nigeria through advocating for increased investments in biofortification and enhancement of institutional and community capacities to produce and consume biofortified crops.

2. Methods

At the inception of the project, a situation analysis (SITAN) of biofortification in Nigeria was conducted, out of which advocacy strategy was developed for BNFB, which was followed in the implementation. Stakeholders were mapped appropriately, and various advocacy efforts were laid out strategically. Based on the SITAN report and advocacy strategy, BNFB-Nigeria focused its advocacy mainly towards policy engagement, resource mobilization and raising of investments, mainstreaming of biofortification into existing public and private sector programs/activities, awareness for adoption and demand creation as shown in **Figure 2**. These were to be achieved jointly with the Advocates that the project raised and trained.

2.1. Advocacy to Policy/Decisionmakers at National and State Levels

The advocacy strategy targeted a wide array of influential audiences at both national and state levels to influence decisions made by the government, particularly legislators or members of regulatory agencies to ensure that the existing policies that support food-based approaches to vitamin A deficiency, and especially biofortification, are implemented in such a way that OFSP, yellow cassava and orange maize are prioritized as crops of choice. BNFB advocated for resource



Figure 2. BNFB targets for advocacy.

allocation for biofortification activities and during the periodic reviews of the nutrition, health and agricultural policies to ensure that these polices were used for disseminating information on the benefits of biofortification.

At the national level, selected and targeted Ministries, Departments and Agencies (MDAs) were visited for advocacy. The project made a visit to the Federal Ministry of Agriculture and Rural Development (FMARD) to advocate for inclusion and prioritization of biofortification in the Agricultural Sector-Food Security & Nutrition strategy. An awareness program was also held at the Ministry, where there was a seminar on biofortification with biofortified crops and products exhibited to the Minister of state and other policy makers that were in attendance.

Others were the Federal Ministry of Health-Advisory Committee, FADAMA, Home-Grown School feeding program, 5th Raw Material Research and Development (RMRDC) international conference where biofortification was a sub-theme, and the Federal Ministry of Budget and National Planning (MBNP) towards the development of the strategy for the food and nutrition policy (2016-2020).

At each of these advocacy visits, there was a presentation on the importance of biofortification, complementarity of biofortification and other interventions (vitamin A supplementation, micronutrient powder, food fortification, etc.) to alleviate micronutrient deficiency diseases. Every advocacy talk went with exhibition of biofortified crops and products for improved nutrition and livelihood. Advocacy was carried out publicly and privately with policy makers, campaigning and public events and policy dialog, media work, and production and dissemination of materials to support the different types of activities. Raising awareness was part of advocacy when it was seeking to educate people and increase understanding of issues of micronutrient malnutrition.

At the state level, advocacy was made to Gombe, Kano, Kaduna, Oyo, Ogun and Kebbi states.

2.2. Raise of Advocates/Advocacy Champions

To catalyze the project advocacy efforts, some key personnel were selected across

sectors, disciplines, gender and in relevant MDAs, institutions/organizations (public and private) based on some selected criteria, to serve as Advocates for biofortification in Nigeria under BNFB. Upon signing the agreement, they were trained and empowered as Advocates for scaling up biofortification within their spheres of influence. The training focused on:

- how to write grant-winning concept note/proposal on biofortification.
- Advocacy for biofortification.
- Mainstreaming biofortification into relevant programs and projects.
- Leveraging on existing programs/projects to scale up biofortification.
- Private-public partnership in biofortification.
- Creating awareness/sensitization on biofortification within their institutions/ organizations while BNFB back stopped technically.
- Promoting biofortified crops and food products for household consumption and commercialization.

After training, BNFB technically back stopped them on their advocacy mission in their various institutions/organizations. Some of the efforts made by the Advocates in their MDAs include.

1) Creating an enabling environment within their organizations for BNFB team to ride on in advocacy.

2) Writing and submitting unsolicited concept note(s)/proposals on biofortification to their organizations and other potential donors, which BNFB helped with inputs to facilitate approval.

3) Inclusion of biofortification awareness in their programs, which the MDA(s) funded.

4) Promotion of biofortification among key value chain actors of the biofortified crops-farmers, processors, marketers.

5) Invitation of BNFB team to programs/conferences and seminars where biofortified crops could be showcased and awareness/demand created.

6) Training of farmers on biofortified crop planting.

2.3. Supports to Multi-Sectoral Meetings

During implementation, BNFB supported three quarterly meetings of the National Committee of Food and Nutrition (NCFN) and at each meeting, biofortification seminar/awareness/advocacy had a section where everything about biofortification was talked about and issues around it addressed, as well as how to mainstream it in their ongoing programs. At the end of each meeting, an advocacy visit was paid to the government of the host state. There was a state level advocacy made in Gombe (Northeast) and Kano (Northwest) where two of the three meetings were held.

2.4. Civil Society/Associations

Some civil society organizations/associations were also mapped through the Advocates, as key stakeholders in scaling up biofortification in Nigeria. They

were visited to promote awareness and education on biofortification with the exhibition of biofortified crops. These are the Nutrition Society of Nigeria (NSN), 2017 & 2018, Nigerian Institute of Food Science & Technology (NIFST), faith-based organizations, Northern Traditional & Religious leaders forum on food & nutrition interventions, and Nigerian Nutrition week of 2016 where Food and Nutrition policy was launched.

2.5. Capacity Building

Capacity building encompasses human resource development as an essential part of development. It was based on the concept that education and training lie at the heart of development efforts and that without them most development interventions would be ineffective. It focused on a series of actions directed at helping individuals in the development process to increase their knowledge, skills and understanding and to develop the attitudes needed to bring about the desired behavioral change.

In the BNFB project, the capacity of the following was built:

- Farmers: Farmers' capacity was built on the best agronomic practices through on-field demonstrations, basic empowerment for enhanced productivity, and re-orientation of farming for business rather than as a hobby.
- Processors: Similarly, the technical capacity of processors was enhanced through training on processing techniques for a broad range of biofortified crop products.
- Media: media advocacy was found very important in public education and enlightenment on biofortification. From the situation analysis report, public misconception on biofortification was evident, thus the need for media empowerment to dispel them. Media personnel from notable media houses were trained and educated on media messages around biofortified crops.
- Youths: from the private and public sector that was into agriculture were trained on biofortified crops planting and processing.
- Eight (8) advocates were sponsored for a 10-day Train-the trainer course on everything you ever wanted to know about Orange-fleshed sweetpotato. They were supported to step-down the training in their locations to more stakeholders.

2.6. Innovation Platform Established for Biofortified Crops

An innovation platform is a space for learning and change. It gathers in one group individuals with different backgrounds and interests such as farmers, traders, food processors, researchers, government officials, etc. The individuals, who often represent organizations, come together to diagnose problems, identify opportunities, and find ways to achieve their goals. They may design and implement activities as a platform or coordinate activities undertaken by individual members.

The BNFB project physically established an innovation platform called "BNFB Support Platform", which later transformed into Nutritious Food Basket. The platform was formally inaugurated, and executives were appointed to coordinate the group activities and register all members, which comprised all key actors of biofortified crop value chains (orange-fleshed sweet potato, yellow cassava and orange maize) and also Advocates of biofortification. The groupmeets regularly on social medium platform, precisely WhatsApp group to discuss everything around biofortified crop value chains, challenges faced by each expressed and addressed or members linked to solution. Members encourage/challenge themselves on biofortified crop value chain; markets are linked for biofortified crops and information/opportunities are shared on the platform. Representatives of all the actors, including policymakers, seed companies, input dealers, financial institutions, processors, researchers, extension agents, marketers, transporters, the National Variety Release Committee, agricultural development programs (ADPs) and farmers, among others were included and encouraged to join the platform.

2.7. Advocacy to Donors and Development Partners/Organizations for Resource Mobilization

One of the key mandates of BNFB was to mobilize resources for biofortification in Nigeria and to meet this, donor and development partners mapping was done to identify donor interests, align and follow up in resource mobilization for biofortification through unsolicited concept notes/proposals, physical visits/meetings directly or through the Advocates.

3. Results

3.1. Policy, Strategies and Plan of Action

As a result of the project advocacy efforts, biofortification was included in the following documents.

1) Revised food and nutrition policy (2016-2020) that was launched in 2016.

2) Food security and nutrition strategy (2016-2025) of the Federal Ministry of Agriculture and Rural Development (FMARD). In this document, biofortification was included in priority area 1 for the government's attention in implementation. Biofortification also has the third largest cost (13%) for the first four years of implementation.

3) Strategy of the revised food and nutrition policy.

4) National advocacy brief developed by the then Federal Ministry of Budgets and National Planning (FMNBP), now Federal Ministry of Finance, Budgets and National Planning.

5) Four (4) states' government; Oyo, Rivers, Cross River and Kano have also included biofortification in their strategy.

Government to support scaling up of existing biofortified crops (OFSP, PVA Maize & yellow cassava), release of more biofortified crops-plantain, potato, etc. and promote production & consumption of biofortified crops. Implications of the inclusion are that Government would allocate resources to biofortified crops-the value chain & promotion. Relevant Stakeholders' interest in biofortification (development partners, research institutes, Donors) would be stimulated. There would also be increased production and consumption/utilization of biofortified crops while investments in biofortified crops protected thus enhancing Investors' willingness to bio-fortification.

3.2. Resource Mobilization and Raise of Investments

A total of ten (10) donor organizations were visited/met in advocacy and some resources/investments were raised, as shown in Table 1.

Government support: both state and federal invested a total of USD 171666.00 to biofortification in awareness/sensitization, training and planting material dissemination to selected farmers and other beneficiaries.

From external governments, a sum of three million, five hundred and ten thousand dollars (USD 3,510,000) while non-governmental organizations, mainly international committed over USD 1M to biofortification as a result of the BNFB advocacy effort. An unsolicited biofortification focused proposal of 10M was also developed by an international NGO and submitted to the EU.

Since the BNFB implementation, the federal government of Nigeria has been allocating resources from the annual budgets to support the Train the Trainers (ToT) course on "Everything you ever wanted to know about orange fleshed sweet potato". The government gave full scholarship to 49 selected participants in two batches in 2018. The government also supported the Potato value chain department of FMARD to train farmers in six states (Kano, Jigawa, Plateau, Ekiti, Anambra and Ebonyi) and planted five ha land for OFSP in each state, covering the six geo-political zones of the country. Also, some funds were committed to the distribution of biofortified seeds and crops to the northeast as an emergency response to insurgency. As a result of the advocacy to the Federal Ministry of Health and enlightenment on the complementarity of nutrition specific and sensitive interventions to address micronutrient malnutrition, the primary health care center established an OFSP demo plot in its Community Management of Acute Malnutrition (CMAM) center.

The external government grants came from the Department for International Development of the United Kingdom (DFID), Dutch and German government, as well as the USD 10M proposal submitted to the United States Agency for International Development (USAID). The DFID-UK fund was a sub-grant of USD

Table 1. Achievements on resource mobilization and raise of investments.

S/N	Investments/Resources	Amount (\$)
1	Government support	171666.00
2	External governments	3,510,000
3	NGOs	1,057,000
4	A biofortification proposal to EU	10M

510,000 for the implementation of nutrition kitchen garden comprising biofortified maize and sweet potato, groundnut and moringa in two northern states (Jigawa and Yobe states) of the Working to Improve Nutrition in Northern Nigeria (WINNN) project. Dutch and German government also gave a grant of USD 11M to support the implementation of GAIN and HarvestPlus project on commercialization of biofortified crops in the SSA, out of which USD 3,000,000 (\$3M) was allocated to Nigeria. The advocacy started during BNFB implementation, but a grant was given after the project.

Some NGOs/foundations also mainstreamed biofortification into their programs/projects thus investing in it to the tune of over a million dollars. These include Catholic Relief Services (CRS) which under its project SMILE included the distribution of OFSP vines to its five states beneficiaries and developed a manual on production and processing of OFSP and yellow cassava for household food security. Helen Keller International (HKI) implemented a project called "Healthy Living" in 11 schools within a LGA in Lagos state where school gardens were established and biofortified crops included in the gardens. GAIN/FMARD supported Statewide Stakeholders' sensitization in Oyo state towards inclusion of OFSP in the state school feeding menu.

United nation agency, UNICEF also supported OFSP vine dissemination to 30 women groups and 29 secondary schools in Nasarawa state.

Promotion/advocacy to the private sector, at a medium scale also yielded results as two OFSP bread bakers emerged in Abuja and Rivers state in addition to other processing confectionaries (chin chin) using wheat flour-OFSP puree composite.

3.3. Mainstreaming Biofortification into Existing Programs/Project

Six institutions/organizations were approached and sensitized to mainstream biofortification into their relevant programs.

3.4. Raise of National Advocates

By the end of the project, there were active and functioning 32 Advocates across sectors, disciplines, and regions.

The Advocates, empowered by BNFB resulted in a quick win on biofortification scale up and scale out within the country. The eight of them that were sponsored for the ToT course on "Everything you ever wanted to know about sweet potato", went back to step down in their locations across the country. The advocates reached areas where the project could not have reached within its allocated resources.

Some activities were initiated by the advocates in their locations with substantial achievements as shown in Table 2.

The Advocates went back to raise the profile of biofortification in media awareness, public education, biofortified food product demonstration, training of the grassroots, inclusion in social protection programs like home-grown

S/N	Advocates-led Achievements
1	Step down trainings on everything you ever wanted to know about sweetpotato, which over 1000 farmers and other stakeholders benefitted from.
2	Successful advocacy to the Rivers state government on inclusion of biofortified foods in the school feeding menu.
3	Cross Rivers state school feeding team trained on processing of OFSP cookies.
4	Biofortification education to mothers and seniors in Lagos state-over 100 in attendance
5	Youth sensitization/engagement on OFSP enterprise in three states.
6	Media awareness on biofortification in Abuja and Rivers state.
7	Potato Farmers Association trained over 400 farmers on OFSP agronomic practices.
8	Sensitizations and trainings to different groups of people-faith-based programs-women convention, Christian Association of Nigeria (CAN) farmers Cooperatives.
9	Establishment of a biofortification focused NGO in Ogun and Rivers states.
10	Community sensitization on biofortified crops in a LGA in Lagos and Rivers State
11	Six (6) Advocates wrote and submitted proposals on promotion of biofortified crops.
12	OFSP demo farm established in a CMAM center in the Federal Capital Territory (FCT) of Nigeria.
13	Capacity building of civil society organizations and institutions on mainstreaming biofortification into their programs. These include Nutrition Society of Nigeria, Rivers State Chapter, International Institute for Tropical Agriculture (IITA) Onne Station, Rivers State and staff of the "School to Land" Authority
14	Participation and exhibitions of biofortified crops in programs, conferences like World Food Day in Rivers State, Nutritious Food Fairs and launch of Breastfeeding Collective in the Context of Global Infant and Young Feeding Strategy in Rivers State

school feeding program, establishment of biofortified crop demonstration farms, complementing biofortification with other nutrition sensitive and specific interventions. Inclusion of biofortification and biofortified crops in commemoration of important days like World food day, international women's day, farmers' day, etc.

4. Outcomes

1) After the policy launch, FMARD nutrition focal points were trained nationally and at the state level on nutrition, which included biofortification.

2) Potato value chain of FMARD trained farmers, disseminated vines and

planted five ha of OFSP six states from of geo-political division of Nigeria.

5. Some lessons

- Use of Advocates was one of the resultful strategies in the biofortification scaling up model as they provide information on potential opportunities for influencing policies, and for quick win in Nigeria, there is a need to raise advocates in all the 36 states of the country while giving equal priority to national and state level advocacy.
- To engender adoption of biofortification, participation/leveraging on existing programs in advocacy works faster and easier than starting afresh in Nigeria especially at the initial stage.
- Scaling Out and Scaling Up of biofortification go together and should receive equal attention and resources.

6. Some Challenges

- Low "buying-in" of some Donors because not all the crops in the BNFB food basket are in the list of Nigeria mandate crops for government attention, thus the need for more advocacy to include biofortified crops in Donors' list of crops of interest.
- Limited availability of biofortified crops, which constrained advocacy efforts at some point. Advocacy for biofortification and biofortified crops went faster and farther than the biofortified crops themselves. The biofortified crops need to be made available and accessible to the public, programs and policy makers to see and not just hear about it.

7. Conclusion

BNFB's advocacy strategy has raised the profile of biofortification in Nigeria, especially with its inclusion in key policy and strategy documents. Donor and government interest in biofortification has increased, thus increasing the potential to reduce micronutrient malnutrition in Nigeria. Understanding the complementarity of nutrition specific and nutrition sensitive intervention seems growing, coupled with the growing capacities of the nutrition division/unit of many MDAs to mainstream biofortification into their programs, which are good opportunities for scaling up biofortification in Nigeria if adequately tapped. However, availability and access to the biofortified crops by the public will further support impact at scale.

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Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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