

Evidence-Based Practices: Interventions to Enhance Household Resilience to Food Crises in West Africa

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A best practice is a method or technique that has been generally accepted as superior to any alternatives because it produces results that are superior to those achieved by other means or because it has become a standard way of doing things. This document is one of a series of reports from the Food Security Portal on best practices for emerging topics in agriculture and food security policy.

Introduction

Over the last decade, food crises have deepened in Africa, accompanied by acute hunger, malnutrition and death. The worst hit populations in the region and the world have been in Africa south of the Sahara (SSA), particularly in West Africa. Africa accounted for 54 percent of the global total number of people in in IPC Phase 3 (Crisis)-food insecurity or worse. In addition, the number of acutely food-insecure people in the region has increased over the past five years, mostly due to insecurity and large-scale displacement in conflict-affected countries. About 11.4 million people were estimated to be in immediate need of assistance in March-May 2020 in 13 countries in the Sahel and West Africa region, including 5.1 million in Nigeria, 1.6 million in Burkina Faso, and 1.6 million in Niger (SWAC/OECD, 2020).

The recent rise in food crises in West Africa is due to a marked fall in local food production and quality, increasing poverty, and rising food prices orchestrated by the impacts of climate change, a weak agricultural system, poorly implemented policies, a lack of well-focused interventions, and outbreaks of conflict in several countries, including Ivory Coast, Mali, Nigeria, Ghana, and Burkina Faso. More than 12.3 million people across 15 countries in West Africa and the Sahel were estimated to be in acute crisis during the 2019 peak. According to Food Security Information Network and Global Network Against Food Crises (2020), the highest numbers were in northern Nigeria, where about 5.0 million experienced significant food crises; this number was 1.4 million in Cameroon, 1.4 million in the Niger, and 1.2 million in Burkina Faso.

In addition, it has been projected that the population of West Africa will increase from its current 1.07 billion to 1.40 billion by 2030 and may reach 3.78 billion at the end of the century (United Nations, 2019). This population trend will force many more households in West African countries into intense hunger, and the situation could be worsened by the outbreak of COVID-19, which has placed an additional burden on the region's weak political and social systems. The World Food Programme (2020) forecasted that more than 43 million people in West Africa are likely to be in urgent need of food assistance in the coming year. In view of this, households in the region must become resilient to the present and future impending hunger crises. Highly targeted and well-designed interventions to help beef up households' resilience to food crises are thus crucial. This could be achieved by supporting local agricultural systems and food production in West African countries, among other measures.

The following profile provides specific evidence-based recommendations to enhance household resilience to food crises in the region.

Greater investment in agriculture

Affordable and improved agricultural technology systems

The application of innovative technologies, such as artificial intelligence, information communication technology, and irrigation technology, as a sustainable business model in the agri-food system has the potential to drive food security in Africa. It has been established that crop growth can be managed in real time using aerial images from satellites or drones, weather forecasts, and soil sensors (Ekekwe, 2017). In Nigeria, for example, Zenvus, a precision farming start-up, measures and analyzes soil data like temperature, nutrients, and vegetative health to help farmers apply the right amount of fertilizers and optimally irrigate their farms (Oladele, 2021). In Burkina Faso, fertilizer deep placement technology introduced in irrigated rice production system has been identified as one of the best practices to increase yield and ensure food security (West African Forum on Precision Agriculture [WAFPA], 2020).

Value chain development and promotion

The development and promotion of agricultural value chains is imperative to achieve food security in West Africa. To enhance households' resilience to food crises in Ghana, USAID funded ADVANCE II under its Feed the Future initiative and implemented by ACDI/VOCA. Started in 2014, this program uses a value chain approach to promote the scaling up of private sector investment in maize, rice, and soybean value chains so as to achieve greater food security among the rural population. Under this program, smallholder farmers are better linked to output markets, financial institutions, and input and equipment dealers (Grewer *et al.*, 2016).

Available and accessible modern agricultural inputs

For agriculture to prosper, farm inputs need to be available, affordable, accessible, and of good quality (AGRA, 2013). In 2012, the Federal Government of Nigeria liberalized fertilizer distribution by launching the Growth Enhancement Support Scheme (GESS) to transform the delivery of input subsidies as part of its Agricultural Transformation Agenda. The government's role shifted from direct procurement and distribution of fertilizers to facilitation of procurement and promotion of the private-sector fertilizer value chain. The program has yielded positive results, with more farmers gaining access to fertilizers at a subsidized price (Uduji, *et al.*, 2019).

Facilitated access to credit sources for producers, processors, and marketers

Access to credit sources is important for all actors (producers, processors, and marketers) along the agricultural value chain. Enhanced access to finance requires needs assessments and inventory of available financial services and products, as well as better linkages between demand for and supply of these existing financial services of products. Kehinde and Kehinde (2020) investigated the impact of credit access and cooperative membership on the food security of rural households in Southwestern Nigeria using a food security index, binary logit model, propensity score matching, and augmented inverse probability weighting model. They found that credit access and cooperative membership increase the food security for these rural populations.

Practicable and friendly agricultural policies

Sustained implementation of a mix of complementary and comprehensive food security and nutrition policies and programs is required over time to effectively make an impact on hunger, food insecurity, and malnutrition in SSA (FAO, 2015). For example, Nigeria's Agricultural Transformation Agenda (ATA) policy provides a platform to re-engage key stakeholders in Nigerian agriculture and has shifted focus toward the building of a self-sustaining agribusiness economy. Its achievements, among others, include the creation of special funds to support farmers, a revived Bank of Agriculture, the establishment of a national incentive-based risk sharing system for agricultural lending, and the creation of funds for agricultural finance in the country (Lokpobiri, 2019).

Linkages among various actors in agricultural research, extension, farmers, marketers and consumers

Closing agricultural production gaps between smallholder farmers/producers' actual production and the potential created by scientific advancements is vital to address global challenges such as food insecurity (FAO, 2020). Therefore, enabling and enhancing linkages between research, extension, and farmers/producers and marketers requires the creation of conducive environments, involving supportive policies and institutions. In Benin, Uganda, Kenya, and Lesotho, FAO initiated a pilot program in 2018 whereby graduates from member universities of the Regional Universities Forum for Capacity Building in Agriculture in Africa (RUFORUM) were selected to implement field projects. For six months, these researchers interacted with local farmers to share their academic work, exchange knowledge, and develop new solutions for enhancing nutrition and food security. Results revealed that through these local enhanced linkages, graduates developed practical skills, applied their research findings to development-related field projects, and generated innovative solutions for local farmers.

Coordinated efforts

Mitigating the effects of price instability

Price fluctuations remain a serious risk to food security in West Africa. One example of an initiative to reduce these price risks is the World Food Programme's five-year Purchase for Progress (P4P) pilot initiative in 20 African countries, including Burkina Faso and Niger. The program facilitated aggregation of grains and other commodities by smallholder farmers. It also allowed grading and standardization to ensure that the quality and quantity of the grain specified on farmers' warehouse receipts were correct and to guarantee delivery by the warehouse operator (FAO, 2016).

Reducing conflict and insecurity

West African countries continue to face the effects of conflict and insecurity for people and property. FAO (2016) affirmed that good management of conflict and insecurity involves making informed decisions and implementing them quickly and efficiently. It encompasses not just the development and application of regulatory frameworks to minimize conflict and insecurity but also commitment of both public and private investments. Jakkie (2018) established that more rapid, inclusive economic development, combined with good governance and developmentally oriented leadership, will make Africa less vulnerable to violence and instability.

Establishing a viable system and sound agricultural policies and programs for guiding and coordinating food and nutrition activities

Numerous sound agricultural policies and programs have been established for guiding and coordinating food and nutrition activities in West Africa. For example, the Economic Community of West African States adopted a regional agricultural policy called ECOWAP in response to agricultural and food issues in the region. In Nigeria, successful agricultural policies and programs that have been initiated to increase food production and eliminate poverty include: Operation Feed the Nation, National Fadama Development Project, and the National Special Programme on Food Security. Nigeria's National Food and Nutrition Policy also provides the framework for addressing the problems of food and nutrition insecurity (Ministry of Budget and National Planning, 2016).

Building resilience

Mitigating and adapting to effects of climate change

Dissemination of information on climate change is one of the best practices recommended for strengthening the resilience of communities in the Sahel and Western Africa, according to the Permanent Interstate Committee for Drought Control in the Sahel (CILSS) and FAO, in collaboration with IGAD (Food and Agriculture Organization of the United Nations, 2016). The interventions adopted by these organizations help to subsidize inputs that increase households' resilience, such as drought-adaptive crop varieties, and to implement programs targeting farmers' knowledge of how to face climate change effectively. In Benin and Togo, low-cost irrigation systems designed and developed by farmer groups involving bunds, drainage canals, and irrigation infrastructure have helped farmers diversify their crops and income and enhance their climate resilience (Vermeulen and Dinesh, 2016).

Access to agricultural information and data through ICT

Access to agricultural information and data through information communication technology (ICT) has proven to be effective in enhancing households' resilience to food crises. In Nigeria, the e-wallet, powered by the the Growth Enhancement Support (GES) scheme, is an electronic distribution channel that provides an efficient and transparent system for the purchase and distribution of agricultural inputs, including fertilizers, seeds, and other inputs from agro-dealers (Cellulant, 2019). The scheme has generally increased the yield and quantity of fertilizer purchased, thereby reducing food insecurity (Alabi and Adam, 2020). Similarly, Ghana implemented the E-Agriculture program, an ICT initiative through the West African Agriculture Productivity Programme that gives agriculture value chain actors access to comprehensive and up-to-date information on crop and animal production, market prices, and farm management techniques and practices (FAO, 2017).

Preventing food losses along value chain through proper management practices

Proper management practices, such as storage, refrigeration, transport, and agro-processing, increase food accessibility and enhance households' resilience to food crises. For example, the strategic priorities of the Agricultural Sector Food Security and Nutrition Strategy in Nigeria enhance value chains through post-harvest loss reduction. The practices encouraged under this strategy include proper cold storage, packaging, and processing solutions that were developed to reduce produce perishability and damage along the value chain (Federal Ministry of Agriculture and Rural Development, 2017).

Building local capacity of agricultural stakeholders

For households and communities, building resilience in food systems centers building capacities (Bene, 2020). In Niger, the Catholic Relief Services's food security and nutrition program (PROSAN) uses a multisectoral approach aimed at strengthening livelihoods, improving the health and nutrition status of children, and enhancing resilience through improved community capacity to identify and respond to recurrent shocks. The program's findings revealed that promoting positive coping strategies and investing in natural resource management has contributed to increasing the absorptive capacity of households and communities. It has also contributed to transforming the community's capacity through good governance, management, and transparency at the village level by emphasizing village committees and farmers' groups (Frankenberger *et. al.*, 2014).

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