



FEED THE FUTURE ETHIOPIA GROWTH THROUGH NUTRITION ACTIVITY

Adoption and diffusion of recommended nutrition-sensitive agriculture practices through model farmers and most vulnerable households

BACKGROUND

Through its Feed the Future initiative, the U.S. Agency for International Development (USAID) partners with the Government of Ethiopia (GOE) to invest in food security, build resilience, and accelerate economic growth. The Growth through Nutrition activity is USAID's flagship nutrition and water, sanitation, and hygiene (WASH) investment, a six-year (2016-2022) project that aims to improve the nutritional status of women, young children, and adolescents in six regional states of Ethiopia (Southern Nations, Nationalities, and Peoples', Oromia, Amhara, Sidama, Southwest Ethiopia People's and Tigray regions). The project works across multiple sectors in close coordination with the Ministries of Agriculture; Health; Education; and Water, Irrigation and Energy.

Growth through Nutrition focuses on improving early childhood nutrition during the first 1,000 days, from pregnancy through a child's second birthday, a critical window of opportunity for a child's growth and development. It does this through joint implementation of multi-level, evidence-based interventions in livelihood and agriculture, social and behavior change, quality improvement of nutrition services, improved WASH practices at household and community levels, and sectoral capacity strengthening via pre-service education support. Save the Children leads a consortium of local and international partners to implement the Growth through Nutrition activity.

CONTEXT IN ETHIOPIA

The agriculture sector has the potential to significantly impact the underlying determinants of the population's nutritional status, and nutritional status is one of the independent

determinants of farmers' agricultural productivity¹. In the past, however, Ethiopia's agricultural system has not been explicitly nutrition-sensitive, which has affected the agriculture sector's ability to realize its potential impact on the country's nutritional situation. Previously, agriculture sector programs

focused on increased production, productivity, and high value crops, with little emphasis on nutrition issues. Agricultural strategies, programs, and investments did not integrate nutrition objectives, indicators, and targets into their work plans.

THE APPROACH

Growth through Nutrition’s agriculture and livelihood component aimed to increase smallholder farmers’ year-round access to diverse, safe, and quality foods through the promotion of nutrient dense crops and small livestock, use of improved inputs, cultivation practices, and post-harvest handling (PHH) practices. The project also worked to economically empower vulnerable households. These activities aimed to enhance the nutritional status of children and women by improving their consumption of diversified foods as well as the minimum acceptable diet for children. The project implemented its nutrition-sensitive agriculture (NSA) interventions throughout all operational areas.

Growth through Nutrition implemented its capacity strengthening component in three tiers. First, project staff provided training of trainers to Agriculture Extension Workers (AEWs), who in turn trained Development Agents (DAs). DAs, with close follow-up and technical support from AEWs and project staff, trained model farmers (MFs) and most vulnerable households (MVHHs). MFs are farmers recognized and selected by the community and local experts as being early adopters of innovative approaches/ technologies in their area, in this case NSA related agronomic practices. MVHHs are households that are economically among the poorest in the community and have a member/s

within the first 1,000 days. Both MFs and MVHHs are selected by committees of DAs, AEWs, and kebele leaders using established criteria and a transparent process. NSA training packages for MVHHs and MFs included agronomic practices for vegetable and fruits, livestock management and husbandry, importance of producing nutrient rich crops and vegetables and consumption of diversified foods, and micro-enterprise planning and selection. DAs organized field days and community gatherings to promote and demonstrate NSA practices to MFs, MVHHs, and the larger community. During field days, printed educational tools such as posters engaged communities to learn about NSA practices.

Growth through Nutrition supported MVHHs with NSA packages of sheep, goats, chickens, vegetable seeds, and/or fruit seedlings, selected based on their nutritional value and suitability to the agroecological conditions of the area. The project expected these packages to improve dietary diversity of women and children and increase household income generated from the sale of any surplus inputs. In addition, the project organized MVHHs into village savings and credit groups, both to increase the participation of women in economic strengthening activities and to serve as a platform for Enhanced Community Conversation (ECC) sessions. As part of its community social and behavior change (SBC) approach, Growth through Nutrition used ECC sessions to improve maternal, infant, and young child nutrition (MIYCN) and NSA practices as well as communication between couples within the household and joint decision-making. These interventions would lead to the adoption of NSA practices by targeted MVHHs and model farmers as well as the diffusion of the NSA practices to the wider community.

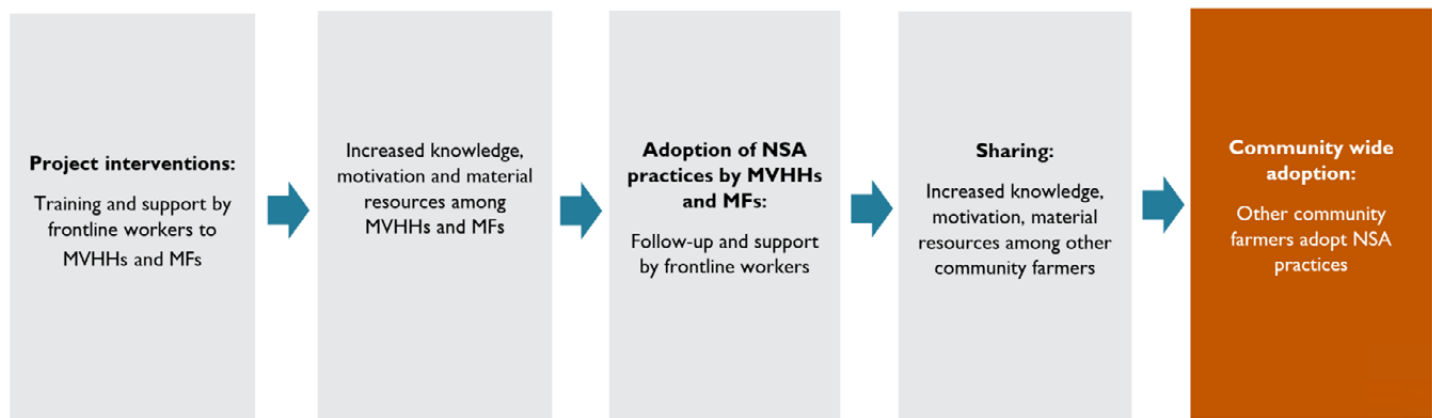


Figure 1: Growth through Nutrition’s approach to adoption of NSA practices from project-supported model farmers (MFs) and most vulnerable households (MVHHs) to other community farmers

Key nutrition-sensitive agriculture interventions:

- **NSA trainings** targeted nutritionally most vulnerable households (MVHHs), model farmers, and governmental Agriculture Extension Workers (AEWs), including Agriculture Development Agents (DAs)
- **Field days and experience sharing visits** provided opportunities to share project experiences and disseminate NSA practices to the wider community
- **Provision of inputs for nutrition dense foods** (egg laying chickens, vegetable seeds, fruit seedlings) to economically and nutritionally MVHHs with a family member in the first 1,000 days
- Reduce post-harvest loss through **improved PHH practices and technologies**



Photo 1: A MVHH member milks the cow she bought using income earned by selling sheep provided by Growth through Nutrition

RESULTS AND LESSONS LEARNED

Growth through Nutrition conducted a 2017 baseline survey and 2020 follow-up with a cohort of 386 MVHHs in 25 targeted woredas within the Amhara, Oromia, SNNP, and Tigray Regions to assess the changes brought about by the interventions targeting MVHHs. The 2020 survey showed an increase in household income and improved food security and child dietary diversity (see Figure 2). Women's dietary diversity had also improved due to the increased consumption

of dairy, eggs, vegetables, meat, and legumes. These results indicate that the project's NSA approaches and interventions have improved the NSA practices of target MVHHs.

To reach the wider community, Growth through Nutrition held agronomic and cooking demonstrations within households, farmer training centers, and schools led by DAs and AEWs. The project also organized demonstration field days among farmers' households to showcase the diversified products produced at gardens, farmer training centers, and schools to community members. Community members are encouraged to learn and adopt these practices, and following the demonstration were given the opportunity to purchase planting material or fertile eggs for brooding. One model farmer reported the purchase of fertile eggs by over 80 households in his village and now sees many improved breeds of chicken. This success is mainly due to the availability of improved inputs from the model farmer.

"My dishes are full of both animal and plant source foods ... My family's livelihood and especially nutrition has improved. I want to thank God and Save the Children for helping me to get out from a miserable life."

-Mother and MVHH member, Tiyo woreda

In 2021, Growth through Nutrition conducted an assessment of the uptake and diffusion of nutrition-sensitive agriculture in three intervention regions (Amhara, Oromia, and SNNP) to assess the adoption of NSA knowledge, attitudes, and practices among MFs and MVHHs and the diffusion of these practices from target beneficiaries to other community members. Virtually all study participants reported that they have adopted NSA practices and are reaping their benefits, including the availability of more foods for family consumption, increased dietary diversity, and extra income from the sale of produce. Homestead gardening is widely practiced and the project observed the availability of fruits and vegetables in homes. 42 percent of farmers had one or more types of fruit available and nearly 70 percent had one or more of the types of vegetable promoted by the project. Raising animals such as chickens, sheep, and dairy cows is much more common, and Growth through Nutrition noted some animal protein sources in farmers' homes, including goat (17 percent) and beef (28 percent). The assessment also revealed that role modelling, learning from a community peer, appears to be very motivational. Community members also appreciated

Source of Income	2017 (N = 386)	2018 (N = 357)	2020 (N = 656)
Percentage earning income from own production (vegetable or fruit products, live animals or animal products)	60%	59%	90%
Percentage earning income from sources other than agriculture	60%	82%	80%
Percentage earning income from production supported by project (vegetable or fruit products, live animals or animal products)	2%	64%	83%

Figure 2: Sources of household income for project-supported MVHHs³

hands-on demonstrations for showing practical guidance rather than simply being told how to do something.²

The assessment also identified prevailing barriers to the adoption of NSA practices, many of which relate to basic factors in the enabling environment. The most frequently mentioned barriers include the inability to grow homestead gardens in the dry season due to limited access to water or irrigation, diseases and death of chickens, plant pests, and lack of inputs. In a rapid assessment conducted in April 2022, model farmers reported the challenges faced in the poultry business, with the main challenges being disease (36 percent) and availability of feed (29 percent).

Growth through Nutrition also noted the following lessons learned:

- With the appropriate capacity strengthening support, MVHHs and model farmers can serve as entry points for the introduction and diffusion of NSA practices among communities
- Saturation within a community is essential to successfully spread NSA practices to non-targeted households. Too few model farmers and MVHHs within a kebele will not spur community level behavior change
- Model farmers who received Koekoek chickens successfully diffused them to other farmers by selling fertile eggs to community farmers, who use local broody hens to hatch the eggs
- Field days are effective means of demonstrating NSA to

the wider community and good platforms to diffuse NSA practices

- Farmer training centers, MFs, and saving groups serve as a seed source for the local community. The Wara Babo Megna farmer training center in West Oromia and saving groups in SSNP's Bule woreda are both serving as a source of Irish potatoes for community members
- Engaging MFs in fertile egg production and fruit seedling production for improved access to chickens and fruit seedlings and distribution to local smallholder farmers improves the diffusion rate of NSA practices



Photo 2: Chicks of improved chicken breeds hatched from fertile eggs using local hens



Photo 3: A model farmer in Silte zone harvesting carrots from her garden

allow others to see the benefits of these new technologies

- **Facilitating community dialogues using Enhanced Community Conversation sessions** to discuss issues, create awareness of available technologies, and collectively resolve problems for improved group dynamics will increase adoption
- The project should provide training, technical support, and incentives for building and maintenance of irrigation and water storage systems to **address production gaps due to water shortages**, which is a critical barrier negatively impacting diffusion

CONCLUSION

Growth through Nutrition strategies to introduce and demonstrate NSA interventions across all entry points, including model farmers, farmer training centers, and schools, have played a significant role in disseminating NSA practices to the wider community. The provision of nutrient dense crops, fruit seedlings, vegetable seeds, poultry, sheep, and goats, coupled with capacity strengthening interventions, has improved household income and consumption. Capacity strengthening interventions and Enhanced Community Conversation sessions allowed target households to manage improved technologies on their farms and use farm products for household consumption, leading to more diversified household diets and improved nutritional status among children. Field days were key events for kebeles to disseminate good agricultural practices to the wider community and create relationships between one another for experience sharing. During field days, Growth through Nutrition provided nutrition education to farmers through cooking and agronomic demonstrations and by disseminating nutrition messages.

RECOMMENDATIONS

Despite these successes, barriers remain which impede the diffusion of NSA. Strategies to overcome these barriers should be promoted, while supporting salient enabling factors. The following recommendations may address some of these challenges.

- **Continued mentorship and coaching support to MVHHs** in their income generating activities is critical to ensure that households can sustain their agricultural productivity and meet their consumption and economic needs
- Create opportunities to recognize the most enthusiastic performers, showcase testimonies from those internally motivated to help others, and **strengthen the social bonds between community members**
- Set criteria for when individuals and institutions should be recognized as models rather than using criteria to select individuals/institutions at the beginning and supporting them to be models. **Model is a status to be earned, not bestowed**
- **Advocate alongside agriculture input suppliers for smaller packages**, with government support for distribution, so that packages are available at events to attract community members and to share NSA education
- **Distributing improved inputs locally through early adopters of technology** to increase access and

References

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2 Save the Children. Most Vulnerable Households Study, 2017-2020. *Unpublished*

3 Save the Children (2021). Assessment of Uptake and Diffusion of Nutrition-sensitive Agriculture in Four Save the Children Intervention Areas in Ethiopia June 2021. *Unpublished*

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