



Pulses for Food and Nutrition Security in Southern Ethiopia:

A Snapshot of Stories of Change

Brief No 6



Key Message

- ◆ Wider adoptions of improved variety seed coupled with packages of practices have significantly enhanced the productivity of smallholder farmers in southern Ethiopia. The interventions improve soil health and allows farmers to produce more than once in a given production season. Thus, it ensures farmers more income and food security;
- ◆ Community-based nutrition education programs and targeted trainings increased the use of pulses in household-level food preparation and commercial production of pulse-cereal complimentary foods. Such capacity building and awareness creation efforts have been very effective to change the Attitude, Knowledge and Practices (A-K-P) of Women. More importantly, the increased consumption of pulse crops helped to improve nutrition status and reduce the prevalence of underweight and stunting among children.
- ◆ With a renewed effort in linking agriculture and nutrition, along with the established programs focusing on boosting productivity, community-based nutrition, and integrated infant and pregnant women feeding counseling services, impressive achievements and success stories have been documented.

Context

Household food insecurity, high rates of protein calorie malnutrition, micronutrient deficiency, and poor nutritional status of women and children have been crucial concerns in Ethiopia. The problems are mainly acute in southern Ethiopia (SNNPR), where about 75% of pregnant women suffer from zinc deficiency and nearly 50% of all child deaths are associated with deficiencies in protein and micronutrients.

The anthropometric data suggest that the region faces a very high burden of malnutrition: it has high prevalence of stunting (53%) and wasting (14%). Studies show that lack of dietary diversity and micronutrient-dense food consumption, and problematic child feeding practices contribute to the high rates of child undernutrition. Therefore, to successfully combat food and nutrition insecurity, policy and program interventions aiming at boosting productivity coupled with changing nutrition knowledge and awareness are imperative.

The SPIFoNS Project: Progresses and Outcomes

In an effort to reduce food and nutrition insecurity in southern Ethiopia, "Scaling-up Pulse Innovations for Food and Nutrition Security (SPIFoNS)" is a three-year collaborative and demand-driven project between Hawassa University (HU) and University of Saskatchewan (UofS) with grant and support from International Development Research Center (IDRC) and the government of Canada. The project combines improved agricultural practices with human nutrition programs, focusing on the scaling-up of pulse crop innovations for food and nutrition security in three agro-ecological zones of southern Ethiopia. At this stage, it aims at scaling-up the innovations in food and nutrition security to 70, 000 farm households (about 20 % female-headed) with the collaboration of public and private sector partners.

Here are some of the benefits attributed to the project:

- **Improved the nutrition Knowledge, Attitude, and Practices of Women:**
- **Enhanced local capacity and expertise**
- **Improved soil health and crop productivity**
- **Increased household income**



Farmers' Stories: 2 Kg of Seed can make a difference

During popularization of improved varieties and practices, local actors were hesitant and very skeptical about the innovations. Most farmers and local officials were saying that it is too small to materialize. Despite the early challenges and adoption barriers, now the project has reached a significant milestone and there are amazing stories worth sharing pertinent to adoption and further scaling-up/out.



Photo: Project Farmer in Hudad-sebat, Habeshge district

Andargae Misganaw, is a model farmer and beneficiary of SPIFoNS project in Hudad-sebat, Habeshge district. Here is the success story in his own words:

"In the previous production season, I took 2 Kg of Haricot bean (Hawassa Dumme variety) from this project, and I planted it following the advice of Development Agents (DAs). I have applied most of the technology packages and adopted improved management practices. During harvesting period, I have got 170 Kg of Haricot bean. I kept 100 Kg for seed and sold the remaining 70 Kg to my neighbors. For upcoming production period, seed is not an issue for me. Many of my colleagues were not keen to the improved variety and even those who took the seed did not give enough attention to it. As a result, there was considerable yield difference among us. Instead of buying seed from the market, which is often mixed and impure, it is advisable for farmers to test and keep their own seed. I encourage fellow farmers to take part in such endeavor and look at the long-term benefit of ensuring reliable access to improved variety seed. In my household, we often consume pulse crops in different form. My wife often mix pulses with cereals to prepare local bread, soup and enjera. It helps us to diversify our diet", Mr. Andargae said.

Amarech Madebo is one of the female beneficiaries of SPIFoNS project in Halaba special district, southern Ethiopia. According to her response, this project has an eye-opening experience for her and the community at large. Due to the training she has received from the project, she has significantly increased the use of pulse crops in household food preparation. This is what she has to say about the project in her own words:

"Even though we produce pulse crops, we did not give a due attention for home consumption. We were not well-aware of the nutrition and health relevance of such crops. Particularly, last year our district was heavily affected by drought and our food security was at stake. During the short rainy season, we planted haricot bean and it saved so many lives. The health extension workers often give us training on how to prepare nutritious food using the pulse crops we produce. Previously, our consumption of pulse was not as high as the consumption now. Besides, our consumption was very much limited to kolo and nifro (mix of cooked grains), and it was monotonous for children. Now due to the training I have received, I try to prepare soup and mix pulses with other cereals to ensure diversity. Currently, I am pregnant. The consumption of pulse would help me to lead healthy life and hopefully I will do the same in my lactating period as well. Furthermore, the adoption of chickpea is helping us to produce twice in a year. Pulses also have high market value: the cash we get from the sale of pulses is high, compared to other crops such as maize", Amarech said.



Photo: Project Farmer in Halaba Special District

Stories continued....

Mr. Mathios Geramo, is a model farmer and beneficiary of SPIFoNS project in Fete-Jeju kebele, Habeshge district. He has adopted improved varieties of haricot bean and chickpea together with allied agronomic practices. He often adheres to the advice of extension agents and applies the recommended agronomic packages. He is expecting a very good haricot bean yield, up to 40 quintals per hectare, where the national average is not more than 20 quintals per hectare. He is fully aware of the relevance of pulses in improving soil health. To this end, Mathios intercroops haricot bean with maize and double-crops chickpea with different cereals. He is also keen to the adopted varieties, on issues of yield and susceptibility to stress. Thus, he has shown considerable interest in the Hawassa Dumme haricot bean variety, and he also revealed strong preference towards the "Key Dube" variety of chickpea because of its resistance to disease and drought and higher yield, compared to Ararti (Nech Dube) variety.

"During the previous production season, there was a complete damage of chickpea in most fields of this kebele due to severe drought. However, I manage to get some level of output because of the good practices I have adopted: including, early planting, water harvesting and disease protection", Mathios said.

In nutshell, Mr. Mathios has gained a lot from this project and helped him to improve his food and nutrition security. His propensity to learn and achievements incentivize many farmers to make similar decision. His field and farming practices are used by the kebele DAs as demonstration site.



Photo: Project farmer in Fete-Jeju, Habeshgae District

Mrs. Bogalech Yilma (right), SPIFoNS project participating farmer and member of seed producing cluster in Sodo district, pointed out that she has widely used pulse crops for home consumption. In the process, she tries to prepare Enjera and Ambasha (a local bread often served as a snack) by mixing cereals with pulse crops, which is not a usual thing to do in that community. She has admirable level of understanding about the relevance of pulse crops and shared her practices with neighbors using rural social networks. In many ways, she is a champion of improving nutritional status. Further dissemination and scaling-up efforts in SPIFoNS project need to capitalize on the experiences and practices of champions. Her experience and achievements shade some light on what can be done to persuade and influence other women farmers in the locality. Therefore, enough platforms should be there to trigger joint learning and share best practices related to nutrition.



Photo: Two members of seed producing clusters in Sodo

As one of the advantages of the improved variety of chickpea, Bogalech pointed towards the issue of cooking convenience. She has also made important remark about the merit of clustering approach.

"The cluster approach of seed multiplication allows women farmers to collaborate with their fellow men farmers. Personally, I gained tremendously in relation to agronomic practices and postharvest handling. In our seed cluster, members plant, weed and protect crops together. This allows team work and experience sharing among us", Bogalech said.



How to go forward: Scaling-up and Institutionalization

As the success stories of farmers briefly show, the SPIFoNS project has strong foundation in improving food and nutrition status of farmers. There is high demand and strong take-up from communities for the interventions provided by the project. The main issue at stake now is how to use pulse innovations as an entry point to facilitate system change towards food and nutrition security in the region. Brining large-scale change in the region requires institutionalization in such a way that the local partners could be able to lead and advance the project's overarching agenda of improving food and nutrition security. Activities include strengthening and scaling up the current efforts of building capacity among agriculture and health extension workers, and improving the synergy among local actors. To this end, farmer field days and nutrition extension program have resulted in increased dissemination of seeds, crop management, and cooking and processing methods. Women from farming communities have been trained on modified food processing methods, to promote inclusion of pulses in their daily diets.

To further increase the reach of the project, suggested strategies include: set-up advocacy efforts, organize on-site visits to share the vision and encourage new 'champions' to emerge. Capacity can feasibly be developed to allow government and other partners to take over the leadership and implementation roles.



Photo: Nutrition experience sharing with woman farmers in Wolayita

Conclusion Food insecurity is primarily caused by low productivity and poor access to farming resources and technology, as well as poor access to and consumption of key nutrients. In SPIFoNS project, the adoption of high yielding varieties of chickpea and haricot bean has significantly improved yield in most project districts. Furthermore, community-based nutrition education and targeted trainings improved mothers' feeding practices and reduced the prevalence of wasting and underweight in young children. In fact, such agricultural and nutrition innovations can only have a wider impact on the economy if they are used by a large population of beneficiaries, and the success associated with these technologies depends on whether policy and decision makers will be able to speed the rate of diffusion. Therefore, innovative partnership should be strengthened and further efforts are required to scale-up locally-proven innovations to reach more people in the region.

Contact: About the Project

Dr Carol Henry: carol.henry@usask.ca

Dr Sheleme Beyene Jiru: shelemebe@yahoo.com

Contact: About Scaling strategies

Dr Tilahun Amede: t.amede@cgiar.org

Mr Yidenekachew Zewdie: y.zewde@cgiar.org



Photo: SPIFoNS project partners during field visit in Sodo

SPIFoNS is a development project undertaken with the financial support of Canada's International Development Research Centre (IDRC), www.idrc.ca, and the Government of Canada, provided through Global Affairs Canada (GAC), www.international.gc.ca. Its aim is to apply a pulse crop-centered strategy to enhance food and nutrition security in southern Ethiopia. The strategy involves using pulse innovations as an entry point to facilitate system change towards food and nutrition security of rural households. The University of Saskatchewan, Canada and Hawassa University, Ethiopia jointly lead the project. It is implemented by a consortium of partners including International Crops Research Institute for Semi-Arid Tropics (ICRISAT), Ethiopian Public Health Institute (EPHI), Farm Radio International (FRI), World Food Program (WFP), and Southern Region's Bureaus of Agriculture (BOA) and Health (BoH).

For more information: <https://scalingup-pulse.wikispaces.com/>

