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PROMOTING CSA THROUGH REVITALISING FARMER TRAINING CENTRES

REVITALISING EXISTING FARMER TRAINING CENTRES (FTCS) CAN HELP CURB THE IMPACTS OF CLIMATE CHANGE AND IMPROVE FARMERS' PRODUCTIVITY AND RESILIENCE TO SHOCKS BY PROMOTING THE ADOPTION OF CLIMATE-SMART AGRICULTURE (CSA) PRACTICES AND TECHNOLOGIES.

PROJECT RATIONALE

Diseases and pest prevalence and extreme weather, such as droughts and floods, can be catastrophic for smallholder farmers. Whole harvests can be wiped out, leaving families with little or nothing to feed their children. With no other way to earn an income their situation can become extremely challenging. That's why Farm Africa, in partnership with Irish Aid and local governments, has been working in three drought-prone districts (Hadero Tunto, Boloso Bombe and Weradijo) of Kembata-Tembaro, Wolyeta and Halaba zones in Southern Nation Nationalities and Peoples' Region (SNNPR) of Ethiopia, helping farmers to find ways to make their farms, and incomes, more resilient to the shocks that extreme weather can bring.

As part of the CSA project, Farm Africa worked to revitalise existing Farmer Training Centres (FTCs), particularly in food-insecure areas regularly affected by climate shocks. This approach enabled the Government of Ethiopia, through its agricultural extension service, to train many smallholder farmers in location-specific and appropriate climate-smart agricultural practices and technologies. This delivery channel strengthened government capacity to continue the training after the end of the project and assures the sustainability of Farm Africa's work.

Designed in a way to target men, women and youth, the project contributed to the no poverty and zero hunger agendas in the Sustainable Development Goals and the targets on agricultural productivity and extension services set out in the Ethiopian government's Growth and Transformation Plan. The project developed manuals and strengthened development agents' (DAs) capacity to promote a sustainable model of agricultural practice across the country.

CLIMATE-SMART AGRICULTURE

The five-year Improving Smallholder Livelihoods through Climate-Smart Agricultural Economic Development project aimed to alleviate poverty and build resilient, sustainable livelihoods in Ethiopia's SNNP and Oromia regions.

Funded by Irish Aid, a consortium of SOS Sahel Ethiopia, Self Help Africa, Vita and Farm Africa worked with more than 50,000 households, with a particular focus on poor farmers, women, children and landless youth. This booklet is one of a series of seven focusing on each of the project's key components:

1. Small-scale irrigation
2. Cooperative-based seed multiplication systems
3. Mango value chain development
4. Ecosystem-based adaptation to climate change
5. Engaging women in entrepreneurial farming businesses
6. Promoting CSA through revitalising Farmer Training Centres
7. Promoting fuel-saving stoves

FARM AFRICA
Self Help Africa
SOS SAHEL ETHIOPIA
Vita Building Sustainable Livelihoods

BACKGROUND

The Government of Ethiopia has established nearly 12,000 FTCs, which are intended to provide a wide range of services such as farmer training and extension services, as well as market-oriented information and coordination on natural resource management.

In practice, FTCs work at varying levels of functionality and many are unable to provide the expected services to farmers. However, they are important community resources and provide opportunities to move agricultural extension forward. FTCs can reach many farmers at minimal cost and have at least two hectares of land each in order to carry out demonstrations.

The challenge lies in making FTCs more functional and effective. The project's ambition for working with FTCs was to:

- Share good production practice through skill sharing events such as farmer-to-farmer visits and plot demonstrations.
- Demonstrate and disseminate new technologies to large numbers of farmers within a short timeframe and with a small budget.
- Minimise risk by conducting trials of new crop varieties and technologies at FTCs before promoting products to individual farmers.
- Enhance the capacity of DAs through exposure to crop and technology trials and contact with external researchers and implementing partners.

PROJECT APPROACHES AND ACTIVITIES

Providing FTCs with financial, material and technical support helps centres gradually transform into well-functioning multi-purpose centres that provide farmers, and other rural actors, with a range of useful services. Farm Africa helped build the capacity of nine FTCs spread across all the intervention areas, all of which are now functional. This enabled us to reach a large number of farmers at a low cost: the knowledge and skills of 5,800 farmers (20% female) improved as a result of FTC training and model farmer-to-farmer exchange visits.

Project activities included:

- The demonstration of new technologies and agricultural techniques. A total of 560 model (including 182 female-headed) households attended practical demonstration training sessions.
- Supporting crop research, trialling new ideas at the FTCs and assessing their effectiveness before rolling them out on individual farmers' land.
- Improving the quality of training delivered to farmers. For example, 700 women living in poverty were trained in sheep and goat rearing, management and forage development.
- Enhancing FTCs' role in the multiplication of improved seeds.
- Improving FTCs' financial health and management, contributing to the sustainability of project interventions.
- Delivering bespoke agronomic training sessions in priority crops to FTCs. These interventions were followed up with input, service and market linkage sessions. Improving FTC staff's financial, business, agricultural and technical knowledge allowed them to deliver better services to the farmers they work with.

Successful CSA practices and technologies adopted through revitalised FTCs include:

- Switching to new varieties of crops including mung bean and turmeric in Hadero and Boloso Bombe and Irish potato in Wera Dijo in Halaba zone.
- Inter-cropping and diversification of a wide variety of crops new to the area including turmeric, taro, mung bean, pigeon pea, orange-fleshed sweet potatoes and forage grasses. 2,107 smallholder farmers (537 of whom are females) households engaged in the production of high-value crops such as turmeric, hot pepper, haricot beans and ginger. The project focused on helping farmers improve the quality of crops produced, with a particular emphasis on ginger rehabilitation.
- 2500 farmers in nine kebeles practised Integrated Soil Fertility Management techniques.
- Integrated pest and disease management practices: ginger and pepper diseases were rehabilitated by shifting the planting season, changing agronomic practices including planting peppers in rows and treating pepper seeds using the chemical apronstar. Unemployed young people also received training in Integrated Pest and Disease Management so that they could providing chemical spray service to farmers.
- Building farmers' institutions' links to market and to a sustainable input supply.
- Building farmers and local government experts' technical capacity in post-harvest handling and marketing. Warehouses were constructed and equipped with crop production facilities to enable farmers to engage in high-value crop marketing.
- Soils were analysed in order to develop guidance on appropriate fertiliser usage.

INTEGRATED PEST AND DISEASE MANAGEMENT: GINGER PRODUCTION REHABILITATION

Ginger is an important cash crop in Hader Tunto and Boloso Bombe woredas. The community depends on ginger production to make ends meet. An outbreak of bacterial wilt saw ginger production significantly reduce yields, weakening farmers' livelihoods. Before the project's intervention, ginger stood at 160 quintals per hectare. The regional government suspended ginger production to control the prevalence of bacterial wilt.

A grassroots partnership was built between Farm Africa, FTC-based DAs, model farmers and Areka Research Centre to rehabilitate ginger from the effects of bacterial wilt. The research centre recommended planting on disease-free land that had not been used to grow ginger for the last three to four years. The centre suggested helping households run by innovative and reliable farmers to improve their access to water.

The project purchased and distributed 500 kg of ginger seed to five farmers and provided Lechacho Kebele FTC with access to irrigation equipment and training in changing agronomic practices. Lessons generated were shared with the government for scale-up of the rehabilitation work. Three hundred visitors, including federal, regional, zonal and woreda-level government officials, as well as other farmers, came to see the successful ginger growers. It was decided that the initiative should be scaled up to the federal and regional level. After the exposure visit, Hadero woreda's ginger production coverage increased from 341 hectares in 2017/2018 to 700 hectares in 2019/2020.

KEY RESULTS

Increased function and reach of FTCs

- Target FTCs helped farmers increase production and productivity, strengthened the existing agricultural development infrastructure, promoted inclusiveness and produced a replicable model for climate-smart agricultural development in nine kebeles in three woredas.
- CSA practices and technologies such as soil fertility management, forage production, crop intensification, and agroforestry, were introduced to 8,180 (3,403 female) smallholder farmers in three districts (Hadero Tunto, Bolso Bombe and Wera Dijo woredas). As a result, the area of land covered with CSA practices increased from 125 hectares at the start of the project to 478 hectares at the end.
- A number of the FTCs the project worked with, such as Lay Tuqa FTC, have gone on to become 'model centres'. These centres have experienced greater demand for their services, and the farmers they serve have adopted new production techniques and crop varieties. Farmers are using the market information they receive from FTCs to engage with new actors and decide when to sell their produce.

Increased smallholder farmer adoption of tested CSA models.

The proportion of farmers practising at least 50% of identified CSA practices in field crops and livestock grew from 7.1% and 23.9% respectively at the baseline in 2015 to 28.2% and 59% at end of 2018. These achievements enabled farmers to adapt to climate extremes and increase their agricultural incomes, while reducing emissions from their agricultural practices. This has resulted in increased productivity of major crops and incomes from small ruminant production.

Employment and income generation

Training in agronomic practices, post-harvest handling and market linkages enabled target farmers to transition from rain-fed to irrigation-based farming, growing improved variety crops that are more resilient to climate extremes, whilst reducing carbon emissions from their agricultural practices.

The increased adoption of climate-smart agriculture practices enabled targeted smallholder farmers to increase their incomes and their families' food security and nutrition.

- Annual average total income of targeted households increased from ETB 13,079 (Euro 421) to ETB 26,746 (Euro 863).
- The percentage of the targeted population living below the poverty line fell from 76% to 68%.
- The proportion of food-secure households increased from 30% to 38%.
- The proportion of households with poor nutrition fell from 33% to 7%.
- Non-beneficiary farmers have learnt improved agricultural practices from their neighbours who took part in the project.
- Non-beneficiaries are benefiting from the improved supply chain of agricultural inputs and planting materials (seedlings and grass split and cuttings).

KEY LEARNING

The promotion of climate-smart agriculture by FTCs in Hadero tunto, Wera dijo and Boloso Bombe woredas of Kembata Tembaro, Halaba and Wolyeta zones respectively was found to be a successful and scaleable approach.

The revitalisation of FTCs is an effective platform for agricultural extension and research. CSA technologies can be demonstrated by FTCs at fairly low costs to large number of farmers, who are able to replicate the practices on their own plots. Building Development Agents' skills and the model farmer joint working system is an effective and efficient way of developing smallholder farmers' skills in CSA practices at kebele level.

Collaboration between governmental and non-governmental organisations nurtured a shared sense of ownership over the project. This sense of joint ownership is key to sustaining project outcomes.

FTCs are part of a broader system of kebele-level agricultural services including cooperatives that supply farmers with inputs and public animal health clinics that offer veterinary services. FTCs are connected to zone-level research centres across Ethiopia. FTCs provide many services for free and all farmers can access their local FTCs' services.

As FTCs receive funding from the Government of Ethiopia and donor-funded projects, the long-term financial sustainability of FTCs is dependent on these actors. However, FTCs also have the potential to generate their own income through the sale of products and encourage local people to support them through voluntary work.

The project's experiences show that the services FTCs deliver to farmers can be enhanced and improved. Target FTCs helped farmers increase production and productivity, strengthened the existing agricultural development infrastructure, promoted inclusiveness and produced a replicable model for promoting climate-smart agriculture. To further support this, a comprehensive strategy is needed to revitalise the use of FTCs as centres for effective climate change resilient technology demonstration and spaces for participatory learning.

Next steps to scale up enhanced CSA extension services

- Refine FTC-based extension service provision policy, operation manuals and service quality checking frameworks including FTC management manuals.
- Refine and develop DA technical guides and incorporate them in the extension service and FTC management policy framework to ensure DAs and model farmers receive incentives in the form of shares of FTCs' self-generated income. Such incentives would motivate DAs to transform from model farmers into agrepreneurs and increase the functionality and service quality of the FTCs across the country.
- Ensure FTC based extension services prioritise rural job creation and the inclusion of resource-poor farmers and women.

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