



Technologies for African Agricultural Transformation (TAAT)

Monitoring and Evaluation System

**Livestock Outcome Case Study Report
on Sheep Fattening and Fodder-Soil
Conservation Structure in Ethiopia**

TAAT MEL Working Document No. 003

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Acronyms

AATF:	African Agriculture Technology Foundation
AEZ:	Agro-Ecological Zones
AfDB:	African Development Bank
AGRA:	Alliance for a Green Revolution in Africa
BMGF:	Bill and Melinda Gates Foundation
CADS:	Cluster Agriculture Development Services
CARE:	Cooperative for Assistance and Relief Everywhere
CDTO:	Capacity Development and Technology Outreach
CGIAR:	Consultative Group of International Agriculture Research
CBBP:	Community Based Breeding Program
CCO:	Community Cooperative Organizations
CIAT:	International Center of Tropical Agriculture
CoP:	Community of Practice
CU:	Cooperative Unions
DfID:	Department for International Development
ENABLE:	Empowering Novel AgriBusiness-Led Employment
ETB:	Ethiopian Birr
EU:	European Union
FARA:	Forum for African Agriculture Research in Africa
FD:	Forage Development
FGD:	Focus Group Discussions
GAP:	Good Agricultural Practices
GRAD:	Graduation with Resilience to Achieve Sustainable Development
ICARDA:	International Center for Agricultural Research in the Dry Areas
IFAD:	International Fund for Agriculture Development
IITA:	International Institute of Tropical Agriculture
ILRI:	International Livestock Research Institute
ILO:	International Labor Organization
IFDC:	International Fertilized Development Centre
M&E:	Monitoring and Evaluation
MEL:	Monitoring, Evaluation and Learning
NARS:	National Agricultural Research Systems
NARES:	National Agricultural Research and Extension Systems
PIA:	Priority Intervention Areas
RTDI:	Regional Technology Delivery Infrastructure
SFE:	Soil Fertility Enabler
SNNP:	Nations, Nationalities and Peoples' Region
SNV:	The Netherlands Development Organization
SWCS:	Soil and Water Conservation Structures (SWCS)
TAAT:	Technologies for African Agriculture Transformation
TTO:	Technology Transfer Officer
USAID:	United States of Agency for International Development

Executive summary

This document presents the results of MEL case study of two technology interventions supported by the Small Livestock Compact of the African Development Bank's (AfDB) Technologies for African Agricultural Transformation (TAAT) program. The first is the sheep fattening program in partnership with the International Center for Agricultural Research in the Dry Areas (ICARDA). The project was implemented in collaboration with ICARDA led Community-Based Breeding Program (CCBP) in Bonga and Doyogena, Southern Nations Nationalities and Peoples Region (SNNPR) and in Menz, Amhara region of Ethiopia. The second intervention was aimed at incorporating forage production into soil and water conservation structures, and for erosion control for improved fodder production, enhanced feed availability and improving livelihood. This project was implemented in Ethiopia's highlands through a partnership with Inter-Aide.

The objectives of the MEL field visit were to: (i) validate results and outcomes as reported by the Livestock compact through Interviews, Focus Group Discussions, Observations on the development results (outcomes), (ii) document evidence-based results, (iii) document the technology delivery processes (for scaling), (iv) capture lessons learnt and best practices and (v) generate a body of evidence of the milestones attained.

In 2018, the TAAT Livestock Compact partnered with ICARDA to support the Youth focused sheep fattening value chain program in the SNNPR and Amhara regions of Ethiopia. The goal was to improve development outcome by targeting women and youths as a way of increasing the scope of beneficiaries through sheep fattening programs. Since 2012 ICARDA has built a footprint in Ethiopia with research partners contributing to a robust sheep and goat value chain to improve the livelihoods of animal producers. Success stories of ICARDA's program include establishing working relationship with an array of partners, including establishment of Community Based Breeding Programs (CBBP), strong partnership with National Agricultural Research Systems (NARS), Community Cooperative Organizations (CCO), Media, etc. all helping to deploy the sheep fattening program cascading down the results chain to generate tangible Outcome results of which increasing animal live weight, increasing household income increased and creating employment for youth and women.

The TAAT Livestock Compact partnership with ICARDA, from September 2018 to March 2019, implemented a package comprising of a start-up capital for procurement of one 6-12 months old ram, one salt-lick block, and a set of feeding and watering containers. Beneficiaries contributed additionally one ram each. All animals were ear-tagged, castrated, vaccinated and dewormed. The sheep were fattened for ~90 days. In addition, the beneficiaries received technical and business entrepreneur training. Results show that youths have consistently maintained sheep fattening cycles within a short period of 3 months before sales, targeting mainly festive seasons when market forces are conducive. On the other hand, it was demonstrated that consistent sheep fattening cycle has helped farmers in climbing the livestock ladder as well as ascending the assets ladder. Additionally, newly introduced modern sheep fattening has increased income and shifted consumption patterns. The cost of buying a young ram was ~2,600ETB (USD80.7), while fattened rams were sold at ~6,000ETB (USD186), an increase of over 230%.

High erosion and soil degradation are a feature of many parts of the Ethiopian highlands. The TAAT Livestock Compact partnered with Inter-Aide, to scale integrated fodder production and grazing control into water conservation structures built across slopes and to reduce run-off and conserve soil nutrients. The project supported 1,280 beneficiaries, established 3 community and 2,478 family (backyard) nurseries and planted ~25,000 fodder trees in three woredas. This project enabled farmers to gain the knowledge of building anti-erosive structures on farmlands and achieve both sustainable forage production and rehabilitation of the degrading farmlands. The usual conservation practice supported by the government programs was building anti-erosive structure on non-farm mountainous areas with the assumption to reduce run-off that comes to farmlands. However, efforts to contain run-off on mountains has not prevented farmlands from erosion. This project also complemented the Youth sheep fattening activity in increasing the benefits of sheep fattening through increased access to fodder resources, income and improved livelihood.

Farmers in the intervention areas lacked the technical and business knowledge to manage improved sheep fattening, and the understanding the value of engaging women and youths into the family's sheep fattening activities. Younger farmers who have a desire to engage in farming to continue in their parent's footsteps are unable to turn farming into a lucrative and viable income generating business, due to the inheritance-based land tenure system. TAAT's intervention as a partner with ICARDA and Inter-Aide is helping to address these gaps.

Introduction and Background

1



The Livestock Coordinator and the TAAT M&E Specialist on their way to the soil conservation site

Background

The Technologies for African Agricultural Transformation (TAAT) is a program initiated by the African Development Bank (AfDB) as part of its Feed Africa Initiative. The main objective of the program is to improve the business of agriculture across Africa by raising agricultural productivity, mitigating risks, and promoting diversification and processing across nine commodity value chains within eight Priority Intervention Areas (PIA). The program is executed by the International Institute of Tropical Agriculture (IITA) in close partnership with other CGIAR Centers and specialized technical centers (e.g. AATF, IFDC, FARA), national agricultural research and extension systems and private sector partners. TAAT is not a research program but is rather a program aimed to promote and disseminate proven high-performance food production technologies to millions of farmers in a commercially sustainable way through a network of people and institutions referred to in the program as the Regional Technology Delivery Infrastructure (RTDI). The technical coordination of the program is provided by the TAAT Clearinghouse, a semi-autonomous unit in the program's management structure that is independent of IITA and its implementing partners. The Clearinghouse serves as an honest broker in the identification and assessment of proven technologies and products that are ready for widespread dissemination, as well as linking these technical opportunities to wider national development agendas. The TAAT framework guides an ecosystem of players for technology dissemination through successful solutions that are then scaled through partnerships between the AfDB and other developmental partners such as the World Bank, IFAD, BMGF, AGRA, USAID, EU, DfID and others. TAAT operates through a network of interacting "Compacts" with nine devoted to specific commodity value chains, and six others serving as "Enablers" that provide needed specialist services. The nine (9) value chain Compacts are rice, maize, cassava, wheat, sorghum, millet, orange-flesh sweet potato, high-iron beans, small ruminants and poultry, aquaculture Compacts. The six (6) enabler Compacts are soil fertility management, water management, capacity building, seed policy, fall army worm control and youth in agribusiness Compacts.

The TAAT Monitoring, Evaluation and Learning (MEL) component is an integral part of the program management. It plays an important role in project implementation as it helps stakeholders understand how the program is progressing and facilitates learning and feedback mechanisms. The MEL is designed to proactively provide management with pertinent information about how the program progress as well as generate new ideas which can direct the development of new initiatives. The TAAT MEL promotes accountability and transparency such that the results benefit a range of stakeholders including the donor (AfDB) and most importantly, the beneficiaries. The MEL can adapt to unexpected factors that may come up and can easily change the course of the program implementation if needed. The TAAT MEL also promotes ownership and supports the need for capacity development within implementing institutions to appreciate the need for and how it contributes to the sustainability by end of the program as a legacy.

The Small Livestock and Ruminants Compact is implemented in four countries in Ethiopia, Mali, Kenya, and Nigeria and is led by the International Livestock Research Institute (ILRI). In Ethiopia, the Compact focuses its efforts on Youth sheep (ram) fattening as a bridge to commercial farming expected to promote youth employment and improve farmer livelihoods. The compact has partnered as well with Inter-Aide on identifying best ways for soil conservation by building anti-erosive structures on sloppy lands and producing fodder for animal feed on these structures.

1. Introduction

With a population of 108,386,391 of which 71% of Ethiopians is under 30 years of age with urban youth unemployment at 22% compared to 17% of for all other age groups, it is clear that youth constitute an important asset for the country and can be significant contributors to the country's economic development. Two-thirds of the population are under 25 years old and more than half are women. In the urban area, 6% of the 15- to 19-year-olds, 18 % of the 20- to 24-year-olds, and 11% of the 15- to 24-year-olds are unemployed (CBMS Network 2018)¹ compared to the rest of the world with 16.06% (181 countries in the world) against 13.1% in Sub-saharan Africa according to the World Bank (2019) resulting in significant increase in the rate and magnitude of out-migration to different countries, impeding the productive employment in both rural and urban areas. With a high unemployment rate in rural areas where most of the youth live, they mainly derive their livelihood from traditional farming with very limited land access. Addressing the youth unemployment in Ethiopia is attainable but needs to be done through strategic interventions. Given that land is accessed through inheritance upon death, as gift or as informal rental markets (Kosec, 2017) thus leaving farmers without land inheritance at a disadvantage. With 80% of population residing in rural areas and with women providing most of the agricultural labor, there is a strong enabling environment for improving income, productivity and thus livelihoods. However, agricultural technology and best practices are not widely available or utilized. Women are not fully empowered to make sound financial decisions for their families and struggle to own land and access credit (Gebremeskel, 2014). Livestock fattening and dairy production are areas that mainly employ women in the rural setting. However, in most parts of Ethiopia, lack of training and knowledge has prevented women from taking on leadership roles to spearhead women entrepreneurship into the broader livestock value chain. Studies have shown that when women are supported and empowered, all of society benefits. Their families are healthier, more children go to school, improved agricultural productivity and enhanced incomes (Pathfinder, 2007).

In late 2018, the TAAT Livestock Compact partnered with the International Center for Agricultural Research in the Dry Areas (ICARDA) for expanding sheep fattening interventions in Bonga, Doyogana in the SNNP region and Menz in Amhara region. The partnership was formed with the intent of providing resources and technical backstopping to beneficiaries to move the intervention forward. The TAAT Livestock Compact's sheep fattening intervention in these regions included:

- Creation of Youth and women sheep fattening groups previously nonexistent.
- Provision of one ram (at no cost to farmers) to help kick start interest by youth and women.
- Support for animal medicines/vaccines.
- Provision of plastic feeding and watering containers for the animals.
- Technical training on sheep fattening for the youths through the district NARES on GAPs with regards to sheep fattening.
- Youth entrepreneurship business training through district NARES and consultant.

¹ CBMS Network Update 2018. https://www.pep-net.org/sites/pep-net.org/files/CBMS/Newsletter/June_Newsletter_rev071018.pdf

Sheep fattening in Ethiopia is perceived as a potential business-oriented enterprise that can provide a wide range of economic benefits to communities especially to young people and women through the direct sale and management of well fattened rams. Fattened sheep do not only increase income for farmers, but also stimulate economic activities along the value chain (Girma et al., 2018 unpublished in ICARDA, 2018) and thus has garnered strong support in rural communities. The regions of Menz, Bonga and Doyogena are three areas out of five in the entire country known for high quality sheep breeds. Yet despite the popularity of sheep quality, fattening techniques are outdated and take longer to generate income for the household. Often farmed ruminants are raised in very traditional extensive systems lacking market and commercial production orientation (Mekuria, 2018). The animals are sold to pay for farm inputs and other expenses such as school fees (Legesse, et al., 2008) however, are not seen as sustainable income supported through a vision and planning for improved livelihoods.

The Livestock Compact's sheep fattening program introduced the use of modern fattening techniques through ICARDA's Community-Based Breeding Program (CCBP) project. Modern sheep fattening techniques improve selection of sheep, feed, health, improved housing, general husbandry practices and marketing for farmers and provide for income generation at least three times a year compared to older and outdated fattening techniques that provided incomes once a year if at all. By reducing the fattening cycle from 9-18 months to 3-6 months farmers can target sheep fattening to major holidays, September, December and April, when there is high demand for sheep. The project also provided a series of entrepreneurship skills training to members of the youth groups in order to improve their entrepreneurship skills. The Livestock Compact proposed the Youth employment dimension to the sheep fattening practice. The TAAT Livestock Compact - ICARDA collaboration together with the NARES used the youth groups (cooperatives), COP and other social support networks in CBPP communities to assure that youths can acquire the requisite technical and business skills in sheep fattening and understand the market to have good bargaining power in selling the animals.

The outcome case study intends to highlight the impact supported by TAAT intervention in sheep fattening in two breeding regions of Ethiopia – Bonga and Doyogena as observed during a recent Monitoring and Evaluation site visit. While the third sheep fattening region of Menz was initially part of the study, given program time constraints, discussions on progress in Menz was done through focused group discussion instead of onsite visits with the Menz team in Addis-Ababa. The site visits and focus group discussions on sheep fattening in Bonga, Doyogena and Menz provided direct access to results on the ground.

A knock-on activity of the Compact's sheep fattening intervention is the fodder-soil conservation scheme implemented in partnership with Inter Aide through an integrated approach addressing complex challenges that smallholder mixed crop-livestock farmers of the Southern Nations, Nationalities and Peoples' Region (SNNPR) are facing. Inter Aide is a French NGO working in Ethiopia since 1987. Its approach seeks above all to meet the practical needs of local people and involve them both in the preparation and in the management of the projects. Inter Aide activities in Ethiopia combine soil & water conservation with fodder production. The basic idea is to consider the necessity of soil conservation and climate-changes adaptation as an opportunity to directly improve and diversify the farm productions, through the integration of fodder and biomass production, and gradually engage the farmlands in the preservation of entire micro-watersheds, by involving traditional entities.

By working very closely with farming communities, Inter Aide has shown the benefits of adoption of integrated diversified forage within the cropping system of smallholder farmers. Integrating diversified fodder production within the farm especially on anti-erosive structures and establishing hedges along the contour lines allow preservation of soil nutrients, retard erosion from run-off, while addressing potential yield gaps in the production of animal feed. The partnership with Inter Aide aims at scaling-up the developed technical and organizational solutions while testing larger diffusion strategies in three newly targeted districts namely: Ofa, Kedida Gamela (Adilo), and Mesha – Southern Region – Ethiopia. The project was implemented for a period of 12 months from 15th September 2018 to 15th October 2019. Through the partnership with Inter-Aide, the compact strives to improve fodder-soil conversation by introducing through water retention in ditches for successful implementation and effective erosion control. Efforts to mitigate soil erosion for improved fodder yields are expected to spill over to the areas focused on sheep fattening.

Objective, Rationale & Methodology of the study

2



Focus Group Discussion with ICARDA and Menz field site implementing partners in Addis-Ababa

2.1. Objective

The objective of the MEL field visit was to validate results and outcomes as reported by the Livestock compact between November 2018 and December 2019. The mission's objective shall provide observations on the development results (outcomes) by engaging, learning and listening to stories on the ground, and specifically to.

- Document evidence-based results
- Document the technology delivery processes (for scaling)
- Capture lessons learnt and best practices
- Generate a body of evidence of the milestones attained and adopt a learning model to improve implementation processes and guide future planning for sustainability
- Understand the sustainable role of stakeholders including private and public partners in the attainment of results

2.2. Rationale

The findings of this outcome Case study intend to improve the implementation processes by suggesting corrective measures where possible to ensure that implementation: (i) aligns to the broader TAAT framework, (ii) shows outcomes owned by the final beneficiaries and (iii) demonstrates an ecosystem of implementing partners, (iv) shows that results are well managed to inform management decision making for further action where needed and (v) ensures that partners accountable to beneficiaries.

2.2.1. Sheep Fattening component

The idea to move forward with the sheep fattening activity for the TAAT Livestock compact stems from the success seen in previous and current ICARDA programs on the subject. Through a partnership with ICARDA, the TAAT Livestock Compact intervention aims to support the initiative further by:

- ✓ introducing entrepreneurial skills to sheep farmers aimed at youth and younger family farmers as a way of filling this gap using the established framework already set in place by ICARDA.
- ✓ targeting youth as disseminators of improved and market-oriented sheep fattening technologies and practices with the intent of increasing their participation in sheep fattening businesses. About 485 youth are the primary beneficiaries of this components

ICARDA has been undertaking sheep fattening to modify the existing feeding strategies in sheep flocks in the context of the ongoing Community-Based Sheep Breeding Program in Ethiopia (CBBP) for more than five years. The CBBP embeds farmer participation into selection of breeding rams. Selection is done when rams are 6 or 9 months of age depending on the breed type. Farmers in the program are obliged to sell off non-selected rams to avoid in-breeding. These rams are fattening before sale. ICARDA's current intervention seeks to focus on market orientation in improved sheep fattening practices. In 2014, ICARDA embarked upon the promotion of the use of improved technologies and practices in sheep fattening by farmers in the highlands of Ethiopia. Financial feasibility analysis of the fattening interventions in the highlands has shown that fattened rams accrue higher net profit compared to those fattened in a traditional way. Improved fattening practices using locally available feed resources are financially rewarding. However, there has been minimum progression by farmers towards commercial based fattening associated with clear production objectives and financial capacity.

Site	District	Name of CBBP	Kebele	Got	No. of youth groups	Youth group members			Champion farmers		
						Male	Female	Total	Male	Female	Total
Doyogena	Doyogena	Serara	Serara	Gidore	2	10	10	20	2	0	2
				Bokata	2	10	10	20	1	1	2
		Anicah Sadicho	Anicha	Sadicho	2	11	9	20	2	0	2
		Murasa	Murasa	Bote	1	6	4	10	1	0	1
				Woricho	1	6	4	10	0	1	1
		Hawora	Hawora	Talfeta	1	5	5	10	1	0	1
				Wurasa	1	5	5	10	0	1	1
		Begedamu	Begedamu	Eticho	1	7	3	10	0	1	1
Bera	1			7	3	10	1	0	1		
Bonga	Adiyo	Boka-Shuta	Boka	Shena	2	25	0	25	2	0	2
				Shaya	2	0	25	25	0	2	2
				Chifera	1	7	5	12	1	0	1
				Utera	1	7	6	13	1	0	1
				Mikira	1	7	5	12	1	0	1
		Alarigexa	Alarigexa	Kera	1	7	6	13	0	1	1
				Meduxa	2	12	13	25	1	1	2
		Meduxa	Yama	Geda	1	7	6	13	1	0	1
	Telo	Yama	Yama	Buba	1	7	5	12	0	1	1
				Modiyo	1	10	2	12	1	0	1
				Village 1	1	10	2	12	1	0	1
	Becha	Modiyo	Negasi-Anba	Wodita	1	10	3	13	1	0	1
Boda				3	20	10	30	3	0	3	
Menz	Menz gera	Negasi-Anba	Negasi-Anba	Sin-Anba	1	6	4	10	1	0	1
				Tsehaysina	2	12	8	20	2	0	2
				Dargegn	2	11	9	20	2	0	2
		Dargegn	Dargegn-Yecha 06	Tebab	2	13	7	20	2	0	2
				Ayoreba	2	13	7	20	2	0	2
				Keyafer	2	9	11	20	2	0	2
	Menz mama	Mollale	Yecha 06	Zole	2	15	5	20	2	0	2
				Yecha 07	2	12	8	20	2	0	2
Total	6	12	16	29	44	287	198	485	35	9	44

Table 1: Mapping of youth groups and champion farmers of the TAAT Livestock Compact

2.2.2. Fodder-Soil conservation component

The Fodder-Soil conservation project is a complementary component of the livestock Compact to help farmers produce fodder on degraded lands with strong anti-erosive and vegetative structures. Inter Aide France has been working in three woredas of Wolaita and Kembata zones of SNNPR on integrated Soil and Water Conservation Structures (SWCS) and Forage Development (FD). Building on lessons learnt from the earlier SWCS failures, the TAAT Livestock and Inter Aid recognized the limitations of access to planting materials and open grazing as major constraints to the adoption of SWCS. The project therefore introduced backyard/family nurseries and controlled grazing measures. The woredas of Inter-Aide activities are located on steep slopes areas where individual land holding is generally ~0.25 ha. Water erosion is often the drawback to farming system management and bear resemblance to the regions of Bonga, Doyogana and Menz where sheep fattening activities are practiced. Having seen the impact on the ground, in November 2018, the TAAT Livestock Compact partnered with Inter Aid to implement and scale out the SWCS and FD in Ofa (Wolaita zone), Mesha (Hadiya zone) and Kedida Gamela (Kembata zone) in the sheep fattening areas of Doyagana.

In addition, this scaling project aimed at supporting households to build SWCSs and planting palatable forages on these structures. This necessitates controlling free grazing, using cut and carry feeding system and selling grasses as animal feed. The role of the social community *Iddirs* is very important in introducing by-laws on controlled grazing. The *Iddirs* is a social group set up to support community members who have lost relations through death or properties through natural event. The intervention combining SWCS and FD accelerated the adoption of anti-erosive structures built inside the farm by integrating diversified fodder production within the farm, especially on anti-erosive structures establishing hedges along the contour lines, allowed both preserving soil from run-off and addressing the critical issues of animal feeding. The effort to use unproductive niches within the farm to cultivate diversified forage species is strategically to maximize forage production at household level (Inter Aide, 2019). The objective of this initiative is primarily to produce fodder on top of the anti-erosive structures built to conserve the soils and increase water retention.

Before the launching of activities related to this project; micro-watershed sites and local *Iddirs* (local traditional community organizations) from each village units have been identified within selected micro-watersheds. Participative sensitization sessions in each community were arranged during which prevailing farming constraints and factors aggravating the challenges were discussed. Coping mechanisms in relation to major farming system challenges were proposed. Each community should come to consensus and make decision to reverse existing situation in collaborating with the project before targeting the site. Based on the explanation of Inter Aide field team about the role and engagement of local *Iddirs* in such project, each community must approve and delegate their *Iddirs* to take part in development project. After these steps, targeted sites and eligible *Iddirs* were identified from three districts (Inter Aide, 2019). Unlike former project intervention areas of Inter Aide, in addition to *Iddirs*, the clan leaders known as *MESHAP* were found to be very influential in guiding community practices and they were involved in restricting open grazing.

The major activities in implementation of this project are:

1. Identification target sites and organizing sensitization workshops: The first step in implementation of the integrated forage-soil conservation project was identification of target sites/micro-watersheds and *Iddirs* operating in these watersheds. This was conducted in collaboration with the woreda administration relevant offices. Once the sites are identified, Inter-Aide identified and dialogued with the *Iddirs* and their members. These fora focused on measures to be taken to come up with intended results and the role of *Iddirs*, *Meshaps*, community members and TAAT-Inter Aide project staff. The discussion involved identification of the major causes of soil erosion, such as: poor rehabilitation of farmlands, strategies to address these problems and how to integrate the soil conservation activities with forage production. The actions taken to address these challenges will improve crop productivity, household income, livestock production, and livelihoods.

2. Selection, training, and equipping peer educators

Peer educators are community elected farmers from each cluster within the village unit inside targeted micro-watershed areas. They are voluntarily serving their fellow villagers on the project development activities. Peer educators, after receiving SWC basic technical training, provide technical support for field layout and appropriate methods for the SWC structures construction to their neighboring farmers. They also motivate farmers and supervise the implementation of other project activities. Each peer educator follows and supports 20 to 25 neighbor farmers. In total, 89 peer educators (185% of the plan) were selected and trained.

3. Communication with *Iddirs* and *Meshaps* and capacitating them to amend their bylaws in order to enforce restriction of animals from open grazing. Once they are identified, the *Meshaps* and *Iddir* leaders attended sensitization workshop as indicated above. After getting the buy-in of the project idea, the *Iddir* leaders and *Meshaps* were capacitated to amend the bylaws of their *Iddir* to incorporate restrictions on free grazing. They set rules which govern all their members and hold community consultations. The rules include the fine imposed on every member found practicing open grazing. *Meshaps* and *Iddir* also control the overall implementation of the project activities.

4. Organizing experience sharing farmer to farmer visits to old Inter Aide project sites. These experience sharing visits were organized for extension agents and woreda subject matter specialists, kebele leaders, *Iddir* leaders, model farmers and peer educators. In total, 26 cross exchange sessions were organized to the old project sites for 420 participants from TAAT-Inter Aide project sites.

5. Establishing community nurseries: Since there is a critical shortage of forage planting materials, the TAAT-Inter Aide project established three community nurseries (one in each intervention woreda) that serve as sources of initial planting materials for family/backyard nurseries. These nurseries received planting materials, technical support, and some financial aid from the project while the community provided labor during slack agricultural seasons.

6. Establishment of backyard/family nurseries: Following attendance of the sensitization workshop and advises from peer educators, *Iddir* leaders and *Meshaps*, each of the participant farmers were encouraged to establish backyard nurseries with average size of 9 m² per household. These nurseries multiply forage planting materials obtained from community nurseries to plant them on anti-erosive structures.

7. Building anti-erosive soil conservation structures: with support from peer educators on the field layout of the structures, each participant farmer builds anti-erosive structures on their farmlands. On average, every participant household builds 200 meters of anti-erosive structure on her/his farmland.

8. Transplanting forage planting materials from the nurseries on anti-erosive structures.

2.3. Methodology

The study's framework was based on a descriptive and explanatory approach as the most appropriate for determining the effects of program outcomes towards productivity improvement for farmers involved in the sheep fattening sub-sector in Ethiopia as presented in Menz, Bonga and Doyogena field sites as shown on Map 1. Triangulation by interviews was conducted through focus group discussions and observations to corroborate the findings reported and reduce biases in conclusions. Both qualitative and quantitative data collection methods were used to validate successes and identify lessons learned for the Compact team that included:

- (i) Interviews: Interviews were used to bring more clarity on qualitative data collected and helped to better understand the interviewee's impression and actual experiences of the TAAT Livestock Compact's intervention in Ethiopia. Interviews provided a forum to profile the beneficiaries and interact with them by corroborating information about the beneficiaries' attributes, knowledge, attitudes, beliefs and behavior and practices on the sheep fattening.

A multistage random sampling strategy was used to select sample farmers for household survey in sheep fattening project sites. In the first stage, two project sites were randomly selected among the three sites of intervention. At the second stage, woredas were randomly sampled. Finally, a probability proportional to size was used to determine the number of respondents in each site. Accordingly, 86 respondents were randomly selected from Bonga and 74 selected from Doyogena (Table 1) shows samples drawn from each intervention woredas and kebeles and the gender composition of respondents. While for the SWCS component, a total of 60 farmers were selected with 30 each from Mesha and 30 from Kedida Gamela

Location	Kebele	Male	Female	Total
Bonga	Boka	13	19	32
	Shuta	12	3	15
	Alarigeta	8	10	18
	Meduxa	12	7	19
	Sub total	45	39	84
Doyogena	Ancha	6	5	11
	Serera	22	8	30
	Hawora	5	5	10
	Begedamu	6	5	11
	Murasa	8	6	14
	Sub total	47	29	76
Total		92	68	160

Table 2: Distribution of sample farmers selected from Bonga and Doyogena sheep fattening project sites.

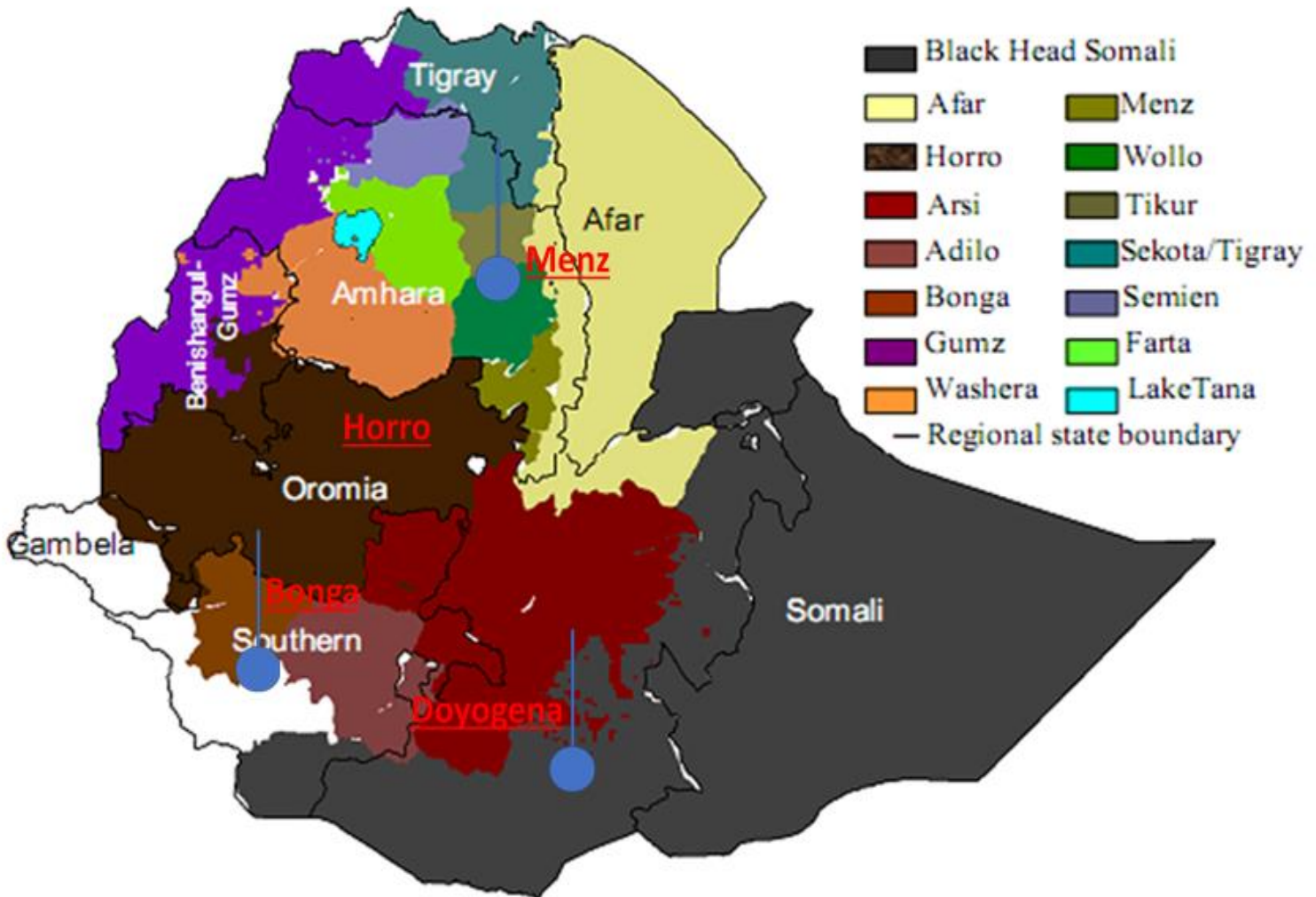
- (ii) Focus Group Discussion (FGD): These discussions were used to tap into existing knowledge and experience of key stakeholders and partners implementing the TAAT Livestock Compact projects in Ethiopia. In each of the 3 wards, 12- 14 people were selected to participate in FGD. In total, 3 FGDs were organized and lasted approximately two hours (Picture 1). The FGD session, allowed all participants to share their experiences and ideas regarding the TAAT Livestock Compact activities and processes, their contribution to the success of the Compact and have real time information from direct beneficiaries. Participants included representatives of different groups: farmers, community leaders; District extensionists; cooperative promoters; representatives of women, youth and children development office; experts from the livestock development office; media houses (Bonga and Doyogena), researchers and CBBPs.



Picture 1. Focus Group Discussion with Bonga with Bonga Implementing partners

- (iii) Ground Truthing: Observations through ground truthing field visit helped the team verify results, ongoing activities at farmer homesteads working directly with the Livestock Compact and the project delivery partners the ICARDA and Inter Aide. Observations also helped appreciate the sheep fattening and fodder-soil conservation activities to scale the program results beyond the intervention sites. Ground visits helped the team to identify any significant changes that happened on course of implementation most especially for the fodder-soil conversation scheme. Success stories were captured and documented to recognize key Compact beneficiaries whose livelihood standards has changed as a result of participating in the program.

Map1. Area of study



Blow a brief description of different beneficiary group and the role they play on the livestock value chain is described as follows:

- Youth group management committee:** Organizationally, the youth group is composed of the chairperson, secretary, enumerator, champion farmers, and members of the group. The chairperson and secretary of the group are responsible for the overall coordination of the group activities. They encourage members of the group to implement the full package as much as possible. Enumerators are the only paid members of the youth group leadership committee. They are hired and paid by ICARDA from the TAAT project when TAAT was active and other sources after the TAAT project phased out. Enumerators are responsible for the day to day monitoring of the activity of the sheep fattening activities, provision of technical support to members,

measuring and recording liveweight of the sheep every 15 days, disease monitoring and reporting to research centers and ICARDA. There is one enumerator per youth fattening group.

- 2. Champion farmers:** are model farmers who are successful in the community-based breeding program and have been doing the fattening business. These farmers are model to the community in their crop and livestock production activities, saving, household management and overall success in their livelihoods. There are two (one male and one female) champion farmers per youth group. The champion farmers also receive all the training, material and other technical supports that other members of the youth group got from ICARDA and TAAT. Since they have rich experience and are respected in the community, they provide technical supports to the group members and mentor them towards success in the fattening activity in the short and medium terms and overall success in livelihood in the long run.
- 3. Guiding committee** is composed of 2 members of the control (monitoring and evaluation) committee in the CBBP and the chairperson, secretary, and enumerator of the youth group. The guiding committee helps members of the youth group in market assessment, selling of the fattened sheep and buying replacement stock. The guiding committee encourages group members to stick to their business plan especially after selling the fattened sheep. The plan might be doubling or tripling the number of fattened animals or buying large ruminant animal in addition to the fattening sheep after selling the already fattened animals. The guiding committee helps the youths not to use the sales proceeds for unplanned expenditures. The owner of the fattened animals will be with the guiding committee members during market assessment and she/he will be the one to decide whether to sell the animal.
- 4. Community of practice:** in sheep fattening is composed of representatives of essential government offices responsible for creating enabling environment for youth groups to get access to finance, markets, technical supports and growing into cooperative societies, among others. The important members of the community of practice are representatives of offices of livestock development, women and youth affairs, cooperative promotion, job creation, mass media, and local administration.

Key findings, Lessons Learned, Conclusions and Recommendations

3



Meeting with Bonga beneficiaries group members

3.1. Key findings

Key findings presented in this outcome case study relate largely to the implementation processes (inputs and activities) and contribution of partners to successfully roll out the technology delivery interventions to achieve outputs and outcome results. However, beneficiary profiling is ongoing and the report on survey findings will be presented in the subsequent series of MEL reports. The findings highlight the implementation processes by the TAAT Livestock Compact and how activities have addressed the needs of beneficiaries through strategic partnerships with ICARDA and Inter Aide.

3.1.1. Sheep fattening component observations

3.1.1.1. Inputs validated

To kickstart the activities on the ground, the TAAT Livestock Compact partnered with ICARDA and signed technology delivery contract valued at one and twenty thousand american dollars (USD 120,000) over a six-month period, from September 2018 to March 2019. A Stakeholder Consultation workshop was jointly organized on 29th August 2018 in Addis-Ababa to develop a participatory framework to successfully roll out the program and ensure that all partners have a common understanding on the TAAT Compact objective. Subsequent planning meeting took place between the ICARDA lead scientist and the compact coordinator during the next 4-6 weeks. The following was agreed to during the workshop:

- As a result of the successful ICARDA intervention, in 2014, the Ethiopian government launched what was called the Community Based Breeding Program (CBBP) formed by researchers, key sheep value-chain actors, government experts and administrators. At village level, the guidance committee elected from CBBPs were mandated to oversee the day to day youth group operations and provide technical backstopping to champion farmers. Funded by ICARDA and co-financed by the government, the CBBPs provide learning and knowledge sharing platform to smallholder farmers on modern sheep fattening techniques and the methods for selecting the right sheep for breed improvement. Non selected sheep were to be culled for selling (market selection) for higher market returns. In order to improve sheep producers' bargaining power, particularly during the seasons when supply is very high, and demand is low, the youth sheep fattening groups were organized into cooperatives that enabled them to better coordinate, aggregate and collaborate for collective bargaining power at the larger markets.
- Community of Practices (CoPs) were formed involving key stakeholders in the sheep value chain. Their role is mainly to coordinated promotional activities and provide guidance to youth as needed.
- Additionally, both Sub-committee and CoPs oversaw the identification and selection of participating sub-villages, youth groups and champion farmers.
- In collaboration with ICARDA, NARs were tasked to provide capacity building activities on improved sheep fattening technology and practices, strengthening and widening the delivery mechanism of beneficiaries, organize technology promotional activities and undertake M&E as well as reporting functions.
- To ensure sustainability of the knowledge disseminated a training of trainers was also offered. Youth groups organized and managed field days at village level to disseminate improved fattening methods. This was supported by promotional material provided by the project (ICARDA, 2019).

- To provide mentorship, inspiration, and leadership, two champion farmers (a male and a female) were selected for each youth group responsible for ensuring the farmers assigned to him/her were benefitting from the guidance and training.

The gap identified with youth involvement in sheep fattening was an innovative and timely niche identified by the Compact as the main drivers of technology dissemination and scaling out of improved practices. In order to deliver efficiently and effectively, the project determined that in order to kick start efforts, the targeted youth would need an incentive to kick-start the business as well as a motivation to retain their commitment to the project. Together with ICARDA, the TAAT Livestock Compact decided that some start-up capital was needed. This came in form of a free young ram given to each youth member. However, in order to assure that the youths are committed, they were required to provide one ram of their own. This ram was bought by the youth, donated by their parents or obtained through lease with other farmers. The start-up package provided to youth and champion farmers included:

- 1 ram of 6-12 months of age with the potential to grow
- 1 set of feeding and watering containers
- 1 saltlick block
- Each ram was weighed, ear-tagged, castrated, vaccinated and dewormed to ensure good health for the first investment.

The inputs purchased for the project are presented in Table 3 below

Item	Quantity purchased
Ear-tags	1540
Salt lick blocks	770
Watering container	710
Feeding container	710
Vaccines - PPR	20 vials
Antibiotics - Oxytetracycline 10% (100ml)	85
Multi-vitamin Injections 100ml	85
Dewormers - Fasinex 250mg	37 Packs
Dewormers - Albendazole 300mg	32 packs
Dewormers - Ivermectin 50ml	69
Tag applicator	18
Burdizzo	18
Syringes	1540

Table 3: Inputs purchased for youth groups and champion farmers

To maintain the quality of the sheep, as part of the intervention, TAAT partnered with ICARDA to ensure that extension workers can provide technical backstopping to youths with capacity to utilize readily

available local feed as an affordable input to sheep fattening. Planting fodder in homesteads was also encouraged for a more efficient and sustainable solution. To further support transforming youths towards commercial sheep fattening business, additional activities were undertaken as steps to move the sheep fattening program forward. These included:

- Training on how to keep the ram sheltered, ensuring clean feeding practices, and caring and management (deworming, vaccination, castration).
- Scaling up adoption of improved sheep fattening technologies and practices.
- Developing and strengthening business institutional models building on youth cooperative approaches through capacity building focusing mainly on entrepreneurship to change youth minds of the long-term benefits of sheep fattening.
- With training support, each youth develops a business plan
- Demonstrating how sheep fattening leads to increase household income.
- Organizing seasonal media coverage activities through radio and television.
- Organizing seasonal field days to showcase sheep fattened animals using improved practices.
- Organizing daily supervision by enumerators for effective sheep management and maintaining consistent animal feeding regime.

3.1.1.2. Outputs Validated

Successful implementation of the TAAT intervention through the partnership with ICARDA was observed to have direct impact on beneficiaries in the regions of Bonga and Doyogana. Successful outputs observed included:

- **12** CBBPS formed of which **4** per site whose role is to oversee sheep fattening process from selection of rams, growth and sale management to ensure sustainability of the fattening cycles.
- **12** sub-committees with a total of **60** members (15, 20 and 25 respectively in Menz, Bonga and Doyogana).
- **3** CoPs formed one per site.
- **21** Enumerators (6 women, 15 men) were employed of which Bonga (7 men), Doyogana (3 men, 3 women) and Menz (5 men, 3 women). These are trained facilitators who have previously worked with National Agricultural Research Stations (NARS) researchers on various projects and are familiar with their respective Kebeles (villages) and farmers. They provide M&E support to beneficiaries.
- **537** rams between 6-12 months of age were purchased and distributed to **12** CBBP for the **3** sites.
- Sheep fattening input suppliers identified.
- Market outlets around the intervention areas were identified and characterized.
- **485** young class of agripreneurs supported.
- **44** champion farmers identified and upskilled. They must have at least 5-6 years of experience in commercial sheep fattening, marketing, working together as a group able to build trust in youth and willing to mentor youth groups on a basis of 1 champion farmer per Got (sub-village) hosting 1 youth group;
- **3 to 5** sheep fattening cycles recorded. A cycle is a period when a sheep is purchased, fattened under good management, to gain weight and sold usually within a 3-6 months period. This has enabled farmers to keep regular sheep fattening cycles and sales when prices are higher.

However, there are many market forces that drive the market, determine the cost and thus affect income. This has enabled farmers to tap into the holiday market oriented system majorly targeting peak sale periods when the demand for local consumption and export for the Middle East market is high and prices are better ;

- **40** youth groups with a total **433** youth of which **154** women and **279** men and **41** champion farmers of which **7** women and **34** men attended intensive entrepreneurship program in their respective villages. In attendance were also enumerators and development agents from various Government offices.
- The total number of beneficiaries is **485** (male and female), across the **3** sites in Ethiopia by organizing beneficiaries into **44** youth groups of **10-20** persons each and facilitated by the TAAT to collectively coordinate and undertake sheep fattening activities on the ground (Table 1);
- Youth groups were formed in **29** sub-villages, in **6** districts within **2** regional states of Amhara and Southern Nations, Nationalities and Peoples' Region (SNNPR).

Specifically, in each site:

(i) In Menz, key output results include:

- **3rd – 4th** cycle of sheep fattening with **6** months fattening period.
- **5** training sessions were held in Menz. **18** youth groups with a total of **120** members, **12** champion farmers and **31** extension workers were trained by Researchers from Debre Berhan Agricultural Research Centre.
- **450-500** sheep recorded to have been sold in Menz. Each sheep cost 3,000ETB² (USD 93) in rural setting against 4,500 - 5000ETB (USD 140 – 155) when sold in urban market offering competitive prices. This has enabled the program to organise farmers into cooperatives to sell the sheep fattened with no value addition in bulk and have higher bargaining power than selling in silo and in rural markets;
- **4** youth groups of **40** members established **2** cooperatives with a membership of **20** youth per cooperative of which **30%** are women globally. These cooperatives have been registered legally with the support of Cooperative Union. The cooperatives support collective actions to members such as animal collection, group sales.

(ii) In Bonga, key output results include:

- **4th** cycle of sheep fattened with **3** months (90 days) fattening period.
- **6** training organized in Bonga. **7** youth groups with a total of **226** members of which **59** women and **167** men and **14** champion farmers and **41** extension workers were trained.
- **5** TV episodes broadcast with an estimated catchment of **1.5 million** followers in Southern Kafa with countrywide reach. The broadcast is aired seasonally on South TV, Kafa TV and FM radio. All episodes are broadcast in Kafa language and relayed in Amharic and Woreda. Media in Ethiopia provides an avenue for awareness creation, dissemination and scaling. This has gained Government interest and receives financial support as region's contribution reaching a large number of farmers with right information on sheep fattening. The interest of the Government is geared towards shortening fattening cycles for 3-6 months enough to meet export requirement

² 1USD=32.22 ETB by 23rd February 2020

and quality, building interest in non-program beneficiaries to get involved through debating topics such as entrepreneurship and sheep fattening for job creation, mediatizing field days through knowledge sharing among beneficiaries and non-beneficiaries, etc.

- **2** youth groups of a membership of **25** people with **2** champions per group were formed. Female proportion is **50%** both for members and champion farmers except the Boka Shaya Women's group made of **100%** of female. The process of legalization into a formal cooperative is underway.
- **378** sheep recorded to have been sold in Bonga. The Purchase Price recorded was 1,500ETB (USD 46.5) and Sale Price 4,800ETB (USD 149) giving farmers a margin of 3,300ETB (USD 102). This profit margin enables farmers to move in the next cycling and sustain the fattening cycles.

(iii) In Doyogena, key output results include:

- **4th - 5th** cycle of sheep fattening with a reduced fattening period of **3** months only.
- **5** training sessions were carried out in Doyogena. **12** youth groups with a total of **120** members and **24** champion farmers participated in the trainings. Trainings were attended as well by stakeholders of which **32** local administrators and officials from Government ministries (member of community of practice).
- **2** youth groups of a membership of **22** people with **2** champions per group were formed. Female proportion. The process of legalization into a formal cooperative is ongoing. Legalization of cooperative paves the way to credit access by farmers from Micro-Finance Institutions and expand their businesses.
- A minimum of **240** fattened sheep were recorded to have been sold in Doyogena in the first fattening cycle of fattening that was supported by the TAAT Livestock Compact. The Purchase Price recorded was 1200ETB (USD 37.2) and Sale Price 6,000ETB (USD 186) giving farmers a margin of 4,800ETB (USD 149). This profit margin enables farmers to move in the next cycling and sustain the fattening cycles.

3.1.2. Partnership Framework

The contribution of an array of partners established by ICARDA, including CBBP, CoP, NARS, Cooperative Organizations, Media, etc. remains key to the success of the Livestock Compact's initiative in Ethiopia. Through TAAT, the practices were modernized, youth and women were the major beneficiaries because they are perceived as the main recipients of the technologies dissemination to reach millions of farmers. The outstanding contributions of the established partnership of the different groups sustainable built into sheep fattening activities are as follows:

- The CBBP, Guiding Committee and CoPs' roles are irrefutable to ensure that youth and women are committed to sustain a thorough breeding selection processes for consanguinity purposes, maintaining the integrity of the breeding program and empowering women and youth to become self-dependent. In these 3 sites, women and youth are a reference of business role models in sheep fattening and market development. While the Guiding Committee provides routine monitoring of individual members' performance and advices, the CoP members are young people role models with long-standing experience in sheep fattening, marketing and cycling. They help women and youth to work in a well-coordinated manner and reliably keep the fattening pattern. They are also the main source of market information system (pricing and sale periods).

- The well-established CBBP cooperatives, a long-standing ICARDA-supported program, located at village level within the project sites were engaged as overseers of youth group activities. Sub-committees from the CBBP leaderships were formed for this purpose. To enhance an enabling environment where stakeholders and partners support youth issues through an inclusive approach of developing actionable ideas, knowledge and policies to promote innovations in sheep fattening, three Community of Practice teams were formed, one per site. These comprise researchers, key sheep value-chain actors, Government experts and Administrators. The project has initiated a process and environment to reinvigorate interest in collective sheep fattening by the youth. Youth groups are targeting the Easter festive season of 2019 to collectively market their fattened rams. Further mentoring of the will be key to foster successful agripreneurship skills in youth groups.
- The Community Cooperative Organizations (CCO) also played an important role in organizing the groups, upskill them to meet Government criteria for legalization of the groups, operate as business entities and sell animals at better prices. CCOs are spread across Kebele and Got levels to ensure that all farmers have equal access to information and knowledge by leaving on one behind. It is important to stress that the government of Ethiopia has made available funds to support farmers if farmers follow a rigorous capacity development curriculum to be eligible. Currently, the most performing beneficiaries are enrolled in the Capacity Development Program to access the funds. The CCOs are also an interface between farmers and the Cooperative Union. The Cooperative Unions (CU) are generally formed of **20 CCOs** who contribute shares, meet Government requirement and work as business entities. In addition, cooperative offers other benefit to farmers. Primarily by gathering animals from individual keepers and bulk the animals for a large number, selling the animals to CUs at better prices. The latter transport the animals to Addis Ababa for consumption and export markets for Middle East.
- The Media played another essential role as the program was aired in National language on radio stations with countrywide coverage capacity to elicit the interest of more farmers to improve fattening practices for better return compared to traditional systems
- The commitment of beneficiaries themselves is undeniable factor and has greatly contributed to the success of the program in the 3 sites. Women and youth are strongly committed to change their livelihood conditions and economic challenges. According to the Director of Bonga Agriculture Center, Mr. Muluken Zeleke *“Women empowerment is real and practical because women are the main heirs of community mindset change and livelihood improvement. The TAAT Livestock Compact is not only about filling the quotas of women representation in the intervention. Young women were targeted as they can pass on the information at an unprecedented pace using different channels such as on market day, in churches, by words of mouth, etc. One can noticeably see changes in women through the way they dress up, and how their children are looked after. With TAAT, women are now involved in household decision making because they invest their time in animal keeping though they cannot sell because they do not have the right skills for negotiating prices with buyers”*

3.1.3. Unintended changes on course of implementation of the sheep fattening

This outcome case study also provided the team an opportunity to observe unintended changes that happened on course of the program implementation. These are changes that were observed due to desired and continuous engagement of partners and beneficiaries. These changes were never anticipated to contribute to the success of the program. Sheep fattening as observed is a means of smallholder farmers to ascend the livestock ladder. Maass et al., (2010), highlighted that the livestock ladder depicts a system that poor smallholders can use to ascend from small stock husbandry to larger animal keeping while Todd and Dolberg (2003) demonstrated that the benefits from small stock husbandry are not necessarily limited to large animal acquisition, but help farmers as well to ascend the assets ladder. Key unintended changes observed include:

- In Doyogena for example, Ms. Abaynesh Demisse, a youth beneficiary aged 19 years, observed that sheep fattening helps her (and her family) move up in livestock and asset ladders (*Picture 2*). Ms. Abaynesh who started the sheep fattening business with two rams, is on her 5th sheep fattening cycle. She currently owns a Holstein Friesian crossbreed heifer worth 9,000ETB (USD279) and 4 sheep. She has also upgraded her father's house structure and has created shelter for her livestock in her homestead. In Bonga, Ms. Ashebir who qualified as a beneficiary on a sharecrop basis to acquire a sheep and benefit from the start-up package, is currently on his 4th sheep fattening cycle owning an ox worth of 12,000ETB (USD372) and 4 rams. They are both targeting the upcoming Easter season when prices will be high to sell the rams for to the next sheep fattening cycle.



Picture 2: Ms. Abaynesh with her livestock asset

- As pointed out in previous sections, youth and women engagement in medium scale marketing and entrepreneurship activities are the major entry points for the TAAT Livestock Compact. The TAAT

Livestock Compact has garnered the breadth of interest of new partners coming from International Development World agencies such as the Graduation with Resilience to Achieve Sustainable Development (GRAD-II), a USAID-funded project implemented in Ethiopia by a consortium led by the Cooperative for Assistance and Relief Everywhere (CARE) International and the Netherlands Development Organization (SNV). GRAD-II is seeking partnership with the program to scale up the sheep fattening project using improved feeding practices and the CoP model.

- The feed technology preparation using the false banana recipes known as *Ensete ventricosum* is exclusively done by women. They are the trailblazers of *Ensete* plants processing into useful material (utilized both as feed for animals and food for human consumption) which is a tedious work. Since women invest much of their time in animal keeping, they are the most skillful people to undertake animal feed preparation than men. Their perspicacious style of animal feeding regimes is unquestionable compared to men. Moreover, they retain the formula for feed mixture portions. Otherwise if done by men, it habitually leads to animal toxicity and death.
- With the commitment of the CoP members and Enumerators, observed results are also attributable to their dedication. The CoP provides guidance to youths through knowledge sharing. Enumerators have been hired and upskilled to provide daily supervision mission to beneficiaries. They provide technical support; weight recording on biweekly basis and address other health related issues. With this mechanism in place, it was observed that the fattening cycle shortened and was consistently sustained from cycles to cycle. At the end of each cycle, farmers are able sell the fattened sheep, renew animal stocks with younger breeds aged 6 months maximum. And the surplus is used to meet household basic needs such as housing refurbishment, clothing, medical care, school fees, animal barn, etc.

3.1.2. Fodder-soil conservation scheme component

Following the visits to the sheep fattening sites in Bonga and Doyogana, a 2-hour FGD was held with Inter Aide staff and partners from government agencies. The peculiar nature of the activity in these woredas is that it addressed highly degraded land on steep slopes that could not be addressed by the conventional government program. During the FGD, the importance of this component of the project was highlighted by Inter Aide Chef of Bureau Mr. Pierre Perrault where he noted: *“The commitment of direct beneficiaries is the major determinant factor of this project. So far, it has been proven that where beneficiaries have abided to project conditions by zero grazing the animals, feed is well managed, and erosion is reduced. The role of peer educators is very crucial to achieve results. With many years of experience in SWCS-FD, they are considered as the source of inspiration for technology uptake and dissemination. They have learned from Government experience. Their commitment in the delivery processes of the project is very impressive. They have influenced about 68-70% of direct beneficiaries to establish the family backyard nurseries despite land shortage which has conquered to launch the next phase of the project”.*

The role of different actors in the SWCS-FD project are as follows:

- Inter Aide: is the main implementing partners with TAAT livestock compact working on the scaling of the proven SWCS-FD technologies. The major roles of Inter Aide in this process are:

- Taking a lead in communicating with relevant government office at regional, zonal, woreda and kebele levels.
 - Selection of intervention sites in collaboration with relevant government offices and community leaders
 - Identification of Iddir/Meshaps, peer educators and extension workers within the selected intervention sites, organization of sensitization workshops to these entities and the community members on the purposes of WCS-FD technology and its implementation.
 - Training of peer educators' provision of tools for the field layout of anti-erosive structures
 - Organizing cross exchange visits to the old project sites
 - Establishing and running community nurseries for forage planting materials
 - Supporting farmers in setting up backyard/ family nurseries
 - Supporting peer educators in construction of anti-erosive structures and vegetalizing them.
 - Carrying out follow up and coordination of project implementation as well as reporting progress
- Iddirs/Meshaps: are community organizations established and run by members. They are very close local institutions with very strong influence on community actions. The role of Iddirs in this project is to enforce zero grazing by-laws with a purpose to ensure rehabilitation of degraded farmlands using vegetated anti-erosive soil conservation structures. If animals are left to freely graze in the area, the damage the planted forages and anti-erosive structures and discourage people to invest on such initiatives. Iddirs amend their bylaws and set fines to be imposed on their members who leave their animals on free grazing. These penalties may ultimately include social exclusion of members who do not abide by the bylaws. Meshaps are the clan leaders in charge of community activities. These elders may oversee more than one Iddir. In addition to enforcing zero grazing, Iddir and Meshaps look after implementation of project activities onsite.
 - Peer educators: these are voluntarily serving farmers selected from the community. They are trained on the field layout of anti-erosive structures and provide technical support to 20-25 farmers in their neighborhood in design and construction of the physical structures. They also help their follower farmers in setting up and managing backyard nurseries, transfer of forage planting materials to the physical structures, cut-and-carry feeding of the mature forages. They are also members of Iddirs.
 - Government extension agents: Apart from peer educators and Iddirs and Meshaps, Inter Aide trained extension agents in the new SWCS-FD technology so that they support the implementation of the project and its further scaling to non-project sites. For instance, the community nurseries are established on the farmers training centers that are managed by extension agents. This creates an opportunity for extension agents to learn from the project implementation, strengthen their relationship with surrounding farmers and scale out the technology. Extension agents support the TAAT-Inter Aide in provision of technical backstopping to farmers.

- Zonal and woreda office of natural resources development; agriculture and livestock development: these are government agencies offices overseeing the SWCS-FD project. These offices play a crucial role project by providing guidance to ensure that the project is compliant and is sustainable beyond closure with a clearly laid out exit strategy.

Key achievements observed of the SWCS-DF include:

- **3** woreda (Mesha, Keida/Adilo and Ofa) are implementing the project.
- **27** villages identified, sensitized, organized and engaged in the SWCS-FD work.
- **30** Iddirs mobilized and engaged in the SWC-FD work.
- **1,822** household in the watershed are benefiting directing from the SWCS-FD work with a potential to reach **1,000** per each woreda.
- **89** peer educators trained. Each peer educators should at least provide technical support to **25** farmers in construction of anti-erosive structures, organized cross visits to older project sites for farmers and community leaders to learn and make sound decision to adopt the technology.
- **874** family backyard nurseries of an average size of 50 m² established and animals zero grazed
- **70%** of farmers were trained to set up vegetative structures and multiply forage planting materials on anti-erosive structures (Pictures 3 and 4).
- **392** families were involved in the construction of about **30.55km** linear physical SWC (mainly soil bund and fanyaju) structures during the dry season through the support of development agents and project field workers.
- **374** farmers participated in the cross-exchange visit observing physically protected and well managed sloppy micro-watershed areas (IA old project sites) as well as other integrated activities.
- **1** community conversation facilitated between the visiting and hosting communities. This allowed farmer to farmer exchange and experience sharing not only on physical (technical) results but also adopted implementation strategies and type of organizational arrangements (Iddirs, PEs, internal bylaws etc) set up to achieve the outcomes.



Picture 3: Severely damaged farmlands by gully erosion. Photo Credit: Adeniyi Adediran TAAT Livestock



Picture 4: Reclaimed farmlands through soil and water conservation structures and fodder production. Photo Credit: Adeniyi Adediran TAAT Livestock

In Kedida Gamela woreda at Kembata zone, the FGD was held with group of community members engaged in integrated SWCS and FD project. The community members indicated that they have been building anti-erosive structures on the hills through the Government scheme to protect the area from gullies. However, all the efforts made to protect gullies did not work and they lost their farm and grazing lands. With the TAAT Livestock Compact in partnership with Inter Aid, the innovation to work on farmlands and not on the gradients was very exciting. The elderly people indicated, at the beginning of the project, they were reluctant to embark upon anti-erosive structures on lowlands for the risk of losing large portions of their farmlands. However, the project demonstrated that it is possible to fight erosion from the valleys, enhance fertility and degraded land and production of forage all over the year.

In observing the progress of fodder systems, the selection of peer-educators was another major contributor towards achieving the results. Peer educators are community elected farmers from each cluster within the village unit inside targeted micro-watershed areas. Each peer educator follows and supports **20 to 25** neighbor farmers. They are voluntarily willing to serve their fellow villagers on the project development activities. Peer educators, after attending Soil and Water Conservation Structures (SWC) basic technical training provide neighboring farmers with guidance on counter line layout of the field for SWC structures construction. Following training the peer educations are equipped with basic field tools that assist them to make the necessary field lay out that includes ranging poles, strings and water leveling instrument. After field exercise with the support of development agents and project field workers peer educations become actively involved in project operations by motivating other farmers and supervising the implementation of other project activities. Beyond training sessions, selected peer educations get the opportunity to meet old peer educators during cross visits, notably those who achieved very good results and gained lessons.

Overall, the project has provided many positive returns for beneficiaries. They are very happy with the project in that it helped them to transfer well managed land to the next generation for sustainability of good practices. They also assured the MEL validation team that sustainability cannot be an issue to this project since every member of the community implements it for its own survival. The community members are helping elders and those who have shortage of labor in construction of anti-erosive structures (*Picture 5*). The *Weshap* and *Iddir* are strongly working to control free grazing and encouraging community members to conserve their land while producing forage for their livestock. What is clear is that the TAAT intervention on capacity building in partnership with inter aide is working and showing results.



Picture 5: SWCS-FD structure in Misha district

3.2. Lessons learned

In Ethiopia, the private sector in sheep fattening is not a strong player in the sheep fattening value chain. While the private sector is starting to gain interest by seeing more young farmers benefiting from the market, it is premature to talk about private sector and the concept of entrepreneurship, particularly in youth. The progress of sheep fattening through youth entrepreneurship is slow given cultural attitudes and behaviors of women and youth in these farming communities.

The predominant idea among youths of a business is one in which either there is access to large piece of land or capital. One of the main attractions of the sheep fattening practice is that it does not require ownership of large piece of land. A major component of the feed comes from communal grazing land or rented land. Secondly, the project has demonstrated that with low start-up capital, two rams costing about 5,000 ETB, of which one is provided by the project, technical and business training, it is possible to start a modest sheep fattening business with less than USD 100.

Given that the concept of entrepreneurship through sheep fattening was new in rural Ethiopia, it took the program quite some time to understand this and redesign its capacity development curriculum towards first delivering a mindset change of the beneficiaries. One needs to be cautious of cultural consideration to noticeably perceive beneficiaries' interest. Additionally, it was observed that there has been frequent youth turnover during the early stages of other program implementation either due to lack of interest or inability to maintain healthy fattened sheep. To safeguard their interest in sheep fattening, the number of animals made available at the start is a vital parameter that should be carefully maintained (*Picture 6*). As youth are able to multiply the number of rams they own, it is clear that the profit margins are a strong

(if not the stronger) influence towards change. It is for this reason that the TAAT intervention became successful by reducing entry bottlenecks through the provision of one free ram each to the beneficiaries and encourage the provision of another ram by the youth.



Picture 6: Best performing beneficiary with 8 rams and his mother

In addition to the challenges in the private sector, marketing patterns have changed for the past five years and have influenced consumption patterns. Five years ago, a fattened sheep was sold at 2,600ETB (USD80.7). Today a fattened sheep through the program is sold at 6,000ETB (USD186) which translates to a 230% sale price increase. This is due to the improved practice factors taking into consideration the cost of feeding concentrate, veterinary products, etc that have helped to increase farmer sale margins. Though, we were not able to collect data on expenditure because farmers do not record the data on daily basis, the field visits show a clear demonstration of a successful TAAT intervention. It is anticipated that that with the ongoing profiling of beneficiaries, we will be able to get quantitative data to explain the change in pricing of sheep animal with real facts to provide real data on the impact of the TAAT intervention.

It was also observed that the National Agriculture Research Centers of Bonga and Doyogena, with their commitment to growing the sheep fattening value chain, have limited resources to broaden the scope of the intervention. While the benefits of sheep fattening are collectively organized and managed through the district NARES offices, there are still many gaps in farmer knowledge of the benefits. The project is limited to only direct beneficiaries while it offers several opportunities for scale out such as:

- A potential for scalability with about 600 youth per Kebele
- Profitability of the sheep fattening business with a reduced fattening cycle of 3-6 months only

- Higher domestic demand for fattened sheep usually in 3 months period
- Fast growing breeds meeting export markets timeliness and quality of meat (fat-free carcass)
- Accessibility of locally available feed suitable for forage production in the 3 sites with different agroecological conditions
- Aligned with Government portfolio to empower women and youth
- Commitment of partners and beneficiaries to succeed

3.3. Recommendations

- (i) The Compact should work closely with Enabler Compacts to strengthen the existing partnership in place and build the capacity of beneficiaries in several areas identified. For instance, engage the Water Enabler Compact (WEC) to strengthen the existing partnership with Inter Aide; Capacity Development and Technology Outreach (CDTO) Enabler Compact to build the capacity of groups in business driven multistakeholder platforms, ENABLE-TAAT to address youth entrepreneurship issues building on their current expertise to engage youth in agribusiness, etc.
- (ii) The partnership between ILRI and ICARDA can be enhanced to include frequent check ins on the impact of TAAT contributions and sustainability of the activity. Timely remedial measures should be taken to ensure that ILRI is carried along in project implementation activities albeit the funding provided to ICARDA has ended. ILRI remains the lead institution for the TAAT Livestock Compact.
- (iii) Given the multifaceted nature of partnership arrangement with clearly defined roles and responsibilities of partners and their contribution (in-kind or monetary) to the delivery of both tangibles and non-tangible results, a rapid cost-benefit analysis should be undertaken by the Compact to determine if the investment of the Compact for 485 beneficiaries is good value for money and the knock on impacts of how the successes can be taken forward and to scale.
- (iv) Animal health issue is a major constraint of the modern sheep fattening practice. There seems to be a disconnect between the NARS providing this service and the farmers. We visited a lady farmer in Bonga, who had lost two rams out of the five she had, because she had no access to veterinary services support. If properly harnessed, this is a business opportunity area that youth can tap into to generate income. We recommend that ILRI and ICARDA should carry forward this discussion with national partners to arrive at how best this challenge can be addressed.

3.4. Conclusion

It is clear from the field visit that the TAAT intervention in partnership with ICARDA is generating results which is positively impacting farmer's livelihoods. We did not see any cases of failed interventions to understand the factors that might have affected them and learn from such cases. While farmers lack knowledge in understanding the benefits of incorporating women and youth into a family's sheep fattening activities it is evident that the successes are having an impact on changing the mindset. Younger farmers have a desire to engage in farming to continue in their parent's footsteps yet are unable to turn farming into a lucrative and viable income generating solution. For this reason, it is critical for the intervention and partnership to continue. It is thus critical that the Compact explores mechanisms for keeping the youths incentivized while at the same time scaling to more youths through funded youth

programs focused on training, contract fattening, peer sharing arrangements, champion farmer technical support, etc. that are all critical activities to scaling of sheep fattening in a sustainable manner.

On the SWCS-FD initiative, it was noted that all beneficiaries are elderly people 100% men of which 70-80% are aged above 70years. Young people are almost non existing, because the traditional land tenure system deprived them of land access. This is not because they are not interested in SWCS-FD but solely because they can only work on land until they inherit it after death of their parents. At the present time, many of them live in neighboring villages and towns, some have migrated to Addis-Ababa, while others have left the country for South-Africa and the Middle East because of poverty.

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