

Scaling up Improved Sheep Fattening Practices and Technologies in Ethiopia

Implementation of Technologies for African Agricultural Transformation
(TAAT) Livestock Compact



TAAT Technical Report
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Executive Summary

The International Center for Agricultural Research in the Dry Areas (ICARDA), has been promoting the use of improved technologies and practices in sheep fattening by farmers in the Ethiopian highlands since 2014. 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. Therefore, this TAAT (Technologies for African Agriculture Transformation) project aimed to introduce entrepreneurial skills to sheep farmers. The approach of the project targeted youth as disseminators of improved and market-oriented sheep fattening technologies and practices. Four hundred and eighty-five youth, both male and female, across 3 sites in Ethiopia namely, Menz, Bonga and Doyogena were organised into 44 youth groups of 10-20 persons each and facilitated by the TAAT project to collectively coordinate to undertake sheep fattening. 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). A start-up package comprising a fattening ram, salt-lick block, a feed and water trough was provided to each youth. Trainings on improved sheep fattening methods, entrepreneurial skills development and group management was provided to youth groups. To ensure sustainability of skills and knowledge, a training of trainers was also offered. Youth groups organised and managed field days at village level to disseminate improved fattening methods. This was supported by promotional material provided by the project. To provide mentorship, inspiration and leadership, a champion farmer was selected for each youth group. Additionally, the existing, well-established Community-based breeding Program (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 in each 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 youth groups will be key to foster successful agripreneuers.

Introduction

A review of sheep fattening systems in Ethiopia ([Animut and Wamatu, 2014](#)), revealed that sheep fattening is a long-standing practice targeting festive seasons. It is characterized by 4 predominant systems; rural smallholder, peri-urban and urban, cooperative and large-scale. The average fattening cycle is 6-12 months with a tendency of households to fatten less than 5 per cycle. It is perceived as low-risk and more profitable compared to large ruminants. However, sheep fattening is deluged by feed scarcity, poor husbandry practices, disease prevalence and labour shortage and poor market access. Sheep fattening as a business has the potential to provide a wide range of economic benefits to communities and especially to young people through direct sale of fattened rams as well as stimulating economic activities along the value chain (Girma et al, 2018 unpublished). About 20 percent (nearly 21 million people) of the estimated 105 million total population of Ethiopia in 2018 are in the age category of 15-24

years.¹ If given the right support, such young people are an important asset to foster socioeconomic development. However, youth in the country are predominantly unemployed or underemployed. According to ILO (2018), about 7.43 percent of youth in Ethiopia are unemployed², the majority of whom live in rural areas where farming has been traditionally the main livelihood of the people. Ethiopia currently faces severe land scarcity in parts of the highlands where population densities have become very high and farm sizes have become very small. This TAAT project targeted the youth as main beneficiaries to be empowered so that they can act as disseminators of market-oriented sheep fattening using improved sheep fattening technologies and practices.

ICARDA has been undertaking a project 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 six or nine months of age depending on the breed type. Farmers in the program are obliged to sell off non-selected rams to avoid negative selection. These rams can be utilized for fattening before sale. ICARDA's current intervention seeks to focus on market orientation in improved sheep fattening practices. The objectives of the proposed 3-year scaling project are:

- To scale up adoption of improved sheep fattening technology and practices with a commercial lens in Ethiopia through implementation of benchmark sites (sheep fattening youth cooperatives and model champion farmers) in 75 villages, implemented at a rate of 25 villages per annum in 3 regions; Amhara, Oromia and SNNPR (Fig. 1). The benchmark sites are intended to act as disseminators of improved sheep fattening technologies and practices, and facilitators of participatory learning.
- To develop and strengthen business and institutional models for the benchmark site approach and involve local organizations, government livestock departments and the private sector (input suppliers, insurance and agri-business entrepreneurs) to reach scale;
- To consolidate and strengthen converging partnerships involving youth cooperatives, local organizations (community-based breeding organizations), model farmers (champions), local governments involved in livestock promotion, gender, cooperatives in youth promotion and Agricultural research centers for dissemination of innovations to smallholder farmers.

This report documents activities (Annex 1) undertaken towards progression of the above objectives during the first phase of funding of the TAAT project, a 6-month period between August 2018-January 2019. Achievements are documented progressively as they occurred during the project implementation. Therefore, the sequential flow of outputs does not follow that shown in Annex 1 which shows the status of each planned deliverable.

Output 1: Networks and Partnerships Mobilized

Mobilization and sensitization of key implementation partners on the importance of scaling improved sheep fattening technologies and forging their buy-ins, kicked-off the project in August 2018. Two partner mobilization and stakeholder workshops were held; A knowledge exchange *cum* planning workshop on July 2-3, 2018 and a plan validation workshop on August 29, 2018.

On July 2-3, 2018, 5 representatives of major ICARDA partners were invited to ICARDA Offices at the ILRI campus, Addis Ababa. Representatives came from SNNPR Agricultural Research Institute (SARI), that hosts Bonga Agricultural Research Centre (ARC) and Areka ARC and representatives from Amhara Agricultural Research Institute (ARARI) that hosts Debre Birhan ARC. ARARI, SARI and OARI (Oromia Agricultural

¹https://www.indexmundi.com/ethiopia/demographics_profile.html

²<https://www.statista.com/statistics/811979/youth-unemployment-rate-in-ethiopia/>

Research Institute) have over the past 5 years worked with ICARDA in sheep fattening projects in the Ethiopian Highlands. Among the representatives were Livestock Directors of SARI and ARARI, the National Sheep Research Program Coordinator and ARC National Researchers. During this initial phase of the project, only SARI and ARARI was engaged. OARI will join in, in future scaling out phases. For the purposes of this project, a Memorandum of Understanding for collaborative activities pertaining to the TAAT project was signed between ICARDA and ARARI as well as between ICARDA and SARI for the period between September 2018 and 31 January 2019.

The [workshop](#) discussed the scaling-up plan; established pre-conditions for scaling-out; outlined how to manage the scaling-up process and generated a [proposed scaling framework](#). Further mobilization of key stakeholders was undertaken by SARI and ARARI in their respective target areas. Their inputs were used to refine the scaling plan that was further validated in a workshop by fifteen participants from participating Research centres, CBBP representatives, Bureau of Agriculture officials and entrepreneurship specialists (Fig. 2) on August 29, 2018 in Addis Ababa. [Action plans adopted](#) can be summarized as follows:

- The target regions of Menz, Bonga and Doyogena may not have existing youth groups to match targeted project numbers, therefore youth groups would be formed, albeit with provision of start-up kits to facilitate take off.
- Registration of cooperatives in Ethiopia allows a minimum of 50 members, therefore youth groups with a proposed target number of 10-20 members cannot be registered in the Office of Cooperatives, but instead be registered at village (*Kebele*) Administration level as groups. Youth group formation would be formed at sub-village (*Got*) level.
- Champion farmers would be identified at sub-village level to act as role models for youth groups.

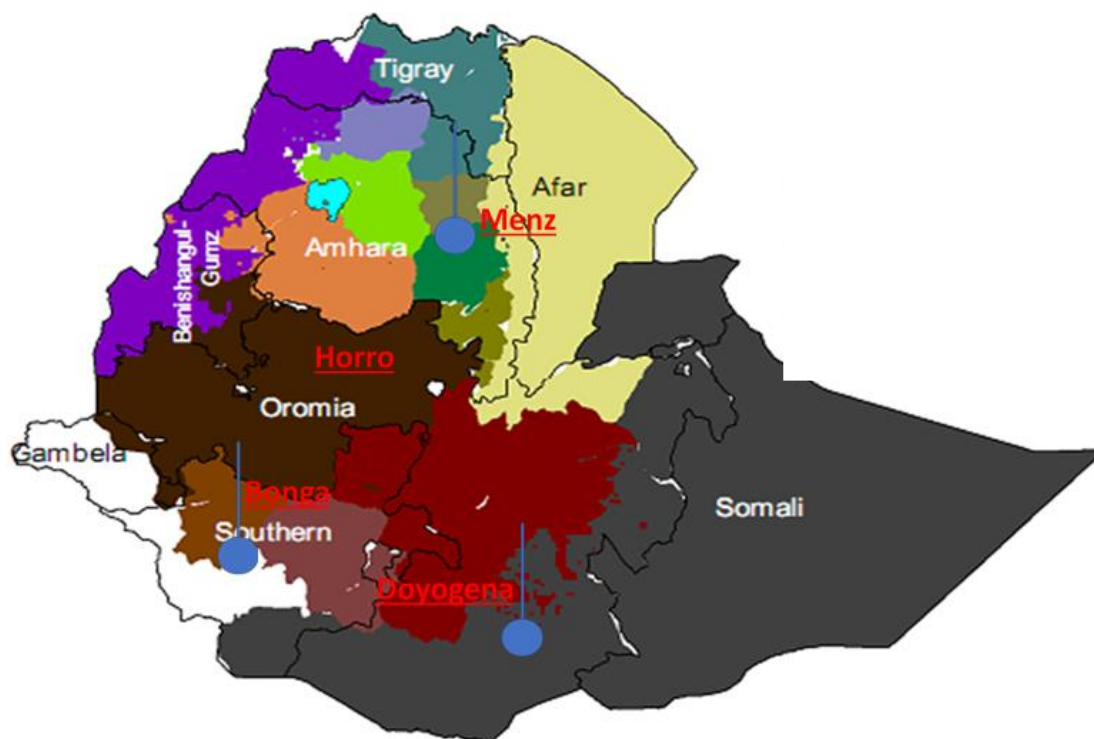


Fig 1: Location and number of proposed Sheep Fattening scaling sites for 2018.



Fig 2: TAAT Stakeholder workshop on 29 August 2018 in Addis Ababa: *Photo credits - Apollo Habtamu, ILRI*

- Community-based breeding programmes cooperatives found at village level would be commissioned as overseers of activities of youth groups and champion farmers. Sub-committees from the Village-based CBBPs would appoint a 5-member committee for this purpose.
- Community of Practice (CoP) formations involving key stakeholders in the sheep value chain would be formed to enable coordinated approaches to promotion and support of issues on youth.
- Both CBBPs sub-committees and CoPs would be engaged in identification and selection of participating sub-villages, youth groups and champion farmers.
- Capacity building on improved sheep fattening technology and practices, strengthening and widening the delivery capacity of beneficiaries, technology promotional activities and M&E activities would be undertaken by the NARs in collaboration with ICARDA.

A [synthesis report](#) reviews views and perspectives of key stakeholders, the contributions that led to the approach and action plan for the 1st phase of the sheep fattening scaling project.

Output 2: Young Class of 'Agripreneurs' Supported

Selection and profiling of youth groups

Formation and empowerment of the youth groups involved several activities and formation of supporting structures. Activities were undertaken during the [month of September 2018](#). These included the following:

- Identification of existing youth groups, formation of new youth groups and identification of potential champion farmers.
- Mapping and profiling of youth groups, youth group members and champion farmers.
- The CBBPs and CoPs located in project target sites undertook identification of participating sub-villages, identification of youth, formation of youth groups and identification of champion farmers.

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

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
			Begedamu	Bera	1	7	3	10	1	0	1
Bonga	Adiyo	Boka-Shuta	Boka	Shena	2	25	0	25	2	0	2
			Boka-Shuta	Shaya	2	0	25	25	0	2	2
				Chifera	1	7	5	12	1	0	1
			Shuta-Alarigexa	Utera	1	7	6	13	1	0	1
				Mikira	1	7	5	12	1	0	1
			Alarigexa	Alarigexa Meduxa	Kera	1	7	6	13	0	1
		Gurta			2	12	13	25	1	1	2
		Meduxa	Yama	Geda	1	7	6	13	1	0	1
	Telo	Yama	Yama Modiyo	Buba	1	7	5	12	0	1	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 Tsehaysina	Sin-Anba	1	6	4	10	1	0
Biretafer					2	12	8	20	2	0	2
Dargegn					Merchet	2	11	9	20	2	0
Dargegn			Dargegn-Yecha 06	Tebab	2	13	7	20	2	0	2
				Ayzoreba	2	13	7	20	2	0	2
				Keyafer	2	9	11	20	2	0	2
Menz mama		Mollale	Yecha 06 Yecha 07	Zole	2	15	5	20	2	0	2
				07	2	12	8	20	2	0	2
Total	6	12	16	29	44	287	198	485	35	9	44

[Each youth member and champion farmer was mapped and profiled](#). Descriptive statistics (Table 3) show that the average age of youth is 25.59 ± 7.1 years. The majority (84.2%) have a formal education mostly between 5th- 8th Grade level of education. Youth in Doyogena have more years of experience in sheep fattening and apply improved practices in fattening compared to Menz and Bonga. It is evident that poor performance of fattening animals in Menz and Bonga arises from contamination of feed and water as well as health issues. This can be deduced from lower rates of deworming and vaccination before start of fattening and lower rates of utilization of feed troughs and water troughs during feeding (Table 3). Traditional practices involve placement of livestock feed directly on the ground. According to youth members, castration of rams before fattening is a common practice, however, castration is done locally by hitting the testicles with a 'stone or a metal' that causes death or poor growth of rams.

Table 3: Summary statistics of youth group member (n=485)

		Bonga (%)	Doyogena (%)	Menz (%)
Literate Main production	Married	61.1 _a	75.0 _b	62.5 _{a,b}
	Single	38.9 _a	25.0 _b	35.6 _{a,b}
		26.3 _a	5.8 _b	11.3 _b
	Both	75.4 _a	95.0 _b	80.0 _a
	Crop	2.3 _a	1.7 _a	10.0 _b
	Daily work	0.6 _a		0.6 _a
	Livestock	21.1 _a	3.3 _b	7.5 _b
	Merchant			1.3 _a
	None			0.6 _a
Do you use feed troughs (yes)		60.6 _b	99.2 _a	66.9 _b
Do you use water troughs		62.9 _c	100.0 _a	76.3 _b
Vaccinated/non-vaccinated (yes)		96.6	100.0	100.0
Do you vaccinate before (yes)		56.6 _b	89.2 _a	65.6 _b
Do you deworm (yes)		64.0 _b	90.8 _a	71.3 _b
Castrated (yes)		97.7	99.2	99.4
Do you castrate (yes)		73.1 _b	100.0 _a	76.9 _b
If yes, what kind of training?		1.1 _b	44.2 _a	3.8 _b
Age (years)		22.9 _b	31.1 _a	24.2 _b
HH size (No.)		4.9 _b	6.8 _a	4.5 _b
Land size_total (ha)		1.5 _a	0.4 _c	1.1 _b
Land size_crop (ha)		1.1 _a	0.3 _c	0.7 _b
Land size_grazing (ha)		0.4 _a	0.1 _b	0.3 _a
Years of keeping sheep		4.4 _c	9.7 _a	7.5 _b
Years of fattening rams		2.1 _b	5.1 _a	2.7 _b
Duration of fattening (months)		6.9 _a	5.6 _b	5.0 _b

Selection and profiling of champion farmers

A total of 44 champions were selected on the basis of at least 5 years in commercial sheep fattening and willingness to mentor youth groups. One champion farmer was selected from each *Got* (sub-village) that hosted one youth group. Champion farmers were given orientation on objectives and activities of the project. Profiling of champion farmers was undertaken by ICARDA and NARS researchers with assistance from project enumerators. A summary of their descriptive statistics is shown in Table 4. Majority of the champions are literate. In Bonga and Doyogena, majority are mixed crop-livestock farmers, unlike Menz where 50% are purely livestock farmers. Nevertheless, only 50% of the champions received previous training in sheep fattening. This emphasized the necessity of capacity building for champion farmers.

Table 4: Summary statistics of selected champion farmers across Bonga, Menz and Doyogena (n=44)

		Bonga (%)	Doyogena (%)	Menz (%)
Sex	Female	35.7 _a	33.3 _a	30
Marital status	Married	71.4 _a	83.3 _a	100 _a
Educational status	Literate	64.3 _a	91.7 _{a, b}	100 _b
Main production	Both crop & Livestock	85.7 _a	91.7 _a	50 _a
	crop		8.3 _a	
	livestock	14.3 _{a, b}		50 _a
Pasture		92.9 _a	91.7 _a	100 _a
Crop residue		78.6 _a	100 _a	100 _a
Agro-industrial by-products		78.6 _a	100 _a	100 _a
Concentrate		78.6 _a	83.3 _a	50 _a
Hay			16.7 _{a, b}	50 _b
Use feed troughs		100	100	100
Source of Water	Pond		16.7 _a	
	River	21.4 _a	8.3 _a	
	Springs	78.6 _a	75 _a	
	Tap			100 _b
Vaccinated		100	100	100
do you vaccinate before		100 _a	91.7 _a	100 _a
do you deworm		100 _a	91.7 _a	100 _a
Castrated		100 _a	100.0 _a	100 _a
Do you castrate?		100 _a	100.0 _a	100 _a
Training access			75.0 _b	50 _b
If yes, what kind of training?	Sheep fattening		58.3 _b	50 _b

Output 3: Reach of Technology Delivery Capacity Strengthened and Widened

Enumerators, sub-committees of CBBP and teams of Community of Practice (CoP) in each site were formed to support the formation and functioning of youth groups and champion farmers, and to facilitate their coordination and technology delivery.

Enumerators

A total of 21 enumerators (6 female; 15 men) were employed across the project sites; Bonga (7 males), Doyogena (3 male, 3 female), Menz (5 male, 3 female). These are trained facilitators who have previously worked with National Agricultural Research Stations (NARS) researchers on various projects and are, therefore, familiar with their respective *Kebeles* (villages) and farmers. Their roles and responsibilities are as follows:

- Facilitate the mobilization of project beneficiaries for meetings and trainings.
- Collect data of ram weights, guide youth on feed formation, balancing and general feed resource utilization as well as treatment during disease occurrences.
- In collaboration with youth group leaders, ensure that communication and coordination within youth groups runs smoothly.
- Ensure communication and coordination between youth groups and champion farmers is regular and runs smoothly.
- Liaise between sub-committees of CBBPs with youth groups and champion farmers.

Formation of sub-committees with CBBP cooperatives

This project found it important to involve the existing CBBP cooperatives as overseers because i. ICARDA and the NARS partners have long-standing collaboration with these very established and actively functioning cooperatives; ii. Most sheep farming households in the target sites are members of the CBBPs; iii. Most rams fattened by farmers in the target sites are rams that are not selected for breeding by the CBBPs. Members of CBBPs are obliged by cooperative by-laws to sell off unselected rams to avoid them breeding within the communities. It is thus, normal for farmers to fatten these rams and sell them off. A total of 12 sub-committees with a total of 60 members (Table 5) were formed across the 12 CBBPs in the target sites.

Table 5: Distribution of CBBP sub-committees across Bonga, Menz and Doyogena

CBBP Sub-Committees	Sites		
	Menz	Doyogena	Bonga
Total No. of CBBP sub-committee	3	5	4
No of members in each committee	5	5	5
Total members/Site	15	25	20
Name of CBBP sub-committees	Negasi-amba CBBP	Serara CBBP	Boka-shuta CBBP
	Dargegn CBBP	Anicha Sadicho CBBP	Meduxa CBBP
	Yetcha CBBP	Hawora CBBP	Alarigexa CBBP
		Murasa CBBP	Yama CBBP
		Begedamu CBBP	

Formation of Community of Practice (CoP)

One CoP was formed in each region. During this project phase, the CoPs comprised of members from NARS, youth group leaders, champion farmers, CBBP sub-committees, Government officers and Development workers. The main role of the CoPs is to keep abreast of the developments in the sheep value chain and instigate integrated approach to develop actionable knowledge for innovations in sheep fattening and likewise inform project objectives and activities accordingly. It is intended that the CoP become more active and integrate additional members from amongst sheep value chain players. It is hoped that within 3 years, CoPs would have developed a life of their own, and move forward sustainably. Table 6 shows the current members of CoPs in each site.

Output 4: Appropriate Technologies Identified and Deployed

Key stakeholders reiterated the importance of supporting youth to take off, as majority of them were unemployed. Therefore, a starter package for each member of the youth groups was distributed during the [month of October 2018](#). Champion farmers also received a starter package as an incentive. The starter package comprised the following:

- One ram of up to 12 months of age. Each ram was weighed and ear-tagged (Fig. 3); castrated, vaccinated and dewormed (Fig. 4).
- One feeding trough
- One watering trough
- 1 saltlick block

Table 6: Members of the Community of Practice in Bonga, Menz, Doyogena during September - December 2018

Site: Menz			Site: Bonga	
	<i>Name</i>	<i>Job title</i>	<i>Name</i>	<i>Job title</i>
1	Asfaw Bisrat	Debre B. ARC	Muluken Zeleke	Bonga ARC
2	Tesfa Getachew	Debre B. ARC	Zelalem Abate	Bonga ARC
3	Girmish Tsigemelak	Job Opportunity Creation	Meseret Bekele	Women and Children
4	Adefrs W/meskel	Livestock Agency	Kochito Yebo	Livestock Agency
5	Samuel Kebede	Youth and Sport	Melese Wodajo	Youth and Sport
6	Hasabe Tefera	Gender office	Mulugeta Tadele	Cooperative Office
7	Abera Belete	Livestock Agency	Hasabu Abebe	CBBP (Boka)
8	Demisse Tsegaye	Job Opportunity Creation	Million Mengesha	DA (Boka)
9	Melese Getachew	Gender office	Tamiru Bekele	DA (Shuta)
10	Solomon Hailu	Youth and Sport	Gero Ayele	DA (Alarigexa)
11	Asfeye Asalf	CBBP* (Negasi Amba)	Adimasu Kero	DA (Meduxa)
12	Netsanet Melese	DA* (Negasi Amba)	Damitew Demisse	DA (Yama)
13	Befikad Desalew	DA (Tsehaysina)	Fikre W/Mariam	DA (Modiyo)
14	Aschenaki Gebrsh	CBBP (Dargegn)		
15	Genzeb beletew	DA (Dargegn)		
16	Kochew Belete	DA (Dargegn)		
17	Habtamu Guchale	CBBP (Yetcha)		
18	Beself Gashaw	DA (Yetcha)		
Site: Doyogena				
	<i>Name</i>	<i>Job title</i>		
1	Tesfaye Abiso	Areka ARC		
2	Tessema Erchafo	Areka ARC		
3	Mesele Markos	Job opportunity creation		
4	Markos Obola	Cooperative Office		
5	Temesgen Alemu	Extension Worker		
6	Birehane Wachamo	Women and Children		
7	Michael Desalegn	CBBP (Serara)		
8	Bekele Shamebo	DA (Serara)		
9	Genet Yakob	DA (Anicha)		
10	Mekides Tafese	DA (Hawora)		
11	Genet W/Mariam	DA (Murasa)		
12	Mesfin Megebo	DA (Bege damu)		

*¹CBBP: Community -based breeding programme; *²DA: Development agent



Fig. 3: Weighing of rams in Doyogena and a tagged Doyogena ram.



Fig. 4: Vaccination of rams after distribution to youth group members.

Inputs purchase, distribution and service rendering

A total of 537 rams between 6-12 months of age were purchased directly from 12 CBBP cooperatives within the project's target villages. Rams that were procured were those culled during CBBP ram selection for breeding. Prior to ram purchase, discussions were held with CBBP officials on the overall ram purchase and distribution process. The price range was ETB 1800-2200 (\$64-79) in Bonga and ETB 900-1300 (\$32-46) in Menz and was estimated based on weight. In Doyogena, the price of rams was fixed at 70 Ethiopian ETB (\$2.5) per kg body weight.

Inputs purchased by the project are shown in Table 7. Troughs for feeding and watering were very robust and stable; farmers have expressed preference for these type (Fig. 5-6) as compared to the normal rubber tyre types which wear out very fast and are subject to tilting and spilling feed and water. Dewormers and vaccines were bought according to recommendations from veterinarians in respective sites. Subsequently, deworming and vaccinations were administered by NARS Researchers in collaboration with *Kebele* and *Woreda* veterinarians.



Fig. 5: Female youth group members from Doyogena



Fig. 6: Project youth beneficiary feeding rams using distributed feeding troughs in his homestead in Menz

Table 7: Inputs purchased for youth groups and champion farmers

Item	Quantity purchased
Ear-tags	1540
Salt lick blocks	770
Water troughs	710
Feed troughs	710
Vaccines - Pen-strep	20 vials
Vaccines - Oxytetracycline 10%	85 vials
Multi-vitamin Injections 100ml	85 vials
Dewormers - Fasinex 250mg	37 Packs
Dewormers - Albendazole 300mg	32 packs
Dewormers - Ivermectin 50ml	69 vials
Tag applicator	18
Burdizzo	18
Syringes	1540

Dissemination of improved sheep fattening technologies

Capacity building for youth group members and champion farmers was carried out in 2 phases.

- Phase 1: Sheep fattening technologies and practices
- Phase 2: Entrepreneurship/Group/cooperative structure and management.

The [month of November](#) focused on Phase 1.

Capacity building: Improved Sheep fattening technologies and practices

The main components of trainings in sheep fattening technologies and practices were short-term fattening; ram selection for fattening; feed resource identification, processing and optimal utilization; importance of clean drinking water; improved husbandry practices which encompasses ear-tagging, castration, vaccination, deworming, use of feeding troughs, housing especially on sewage disposal, disease prevention and disease control in view of parasites and deworming; record keeping of weights and financial records.

Trainings were offered to individual youth groups at *Kebele* level (Fig. 7). Therefore, in most cases 2 youth groups (20-40 members) received training at the same time. Trainings were undertaken by researchers from the National Agricultural Centres and by Development Agents (DA) from the District and/or zonal ministries. Participating government ministries were the Bureau of Agriculture, Gender Office and Cooperative Office. In all sites, representative Development Agents (DA) from the 3 Ministries either at Village or District level were always present.



Fig. 7: Training on improved sheep fattening technologies at Yama, Bonga.

Youth group members and champion farmers trained in improved sheep fattening are shown in Table 8.

A total of 5 trainings were carried out on 10 days in Doyogena. 12 youth groups with a total of 120 members and 12 champion farmers participated in the trainings. Trainings were well attended by stakeholders who included 32 local administrators and officials from Government ministries as follows:

- Kembata-Tembara Zone Animal and Fisheries office head- 1 participant
- Kembata-Tembara Zone cooperative office head- 1 participant
- Doyogena District administration office head and rural politics sector- 2 participants
- Doyogena District cooperative office and sector coordinator- 2 participants
- Doyogena District Animal and Fisheries office head and small ruminant coordinator- 2 participants
- Doyogena District youth and sport office head, youth league sector coordinator and female and children sector coordinator- 3 participants
- Doyogena District job creation sector- 1 participant

- Doyogena District five *Kebele* data collectors- 10 participants
- Each *Kebele* leader- 5 participants
- Each *Kebele* cooperative leader- 5 participants

Trainings in Bonga involved 7 youth groups and a total of 226 members (167 males and 59 females) 14 champion farmers and 41 extension workers.

In Menz, a team led by Researchers from Debre Berhan Agricultural Research Centre trained a total of 18 youth groups with a total of 120 members, 12 champion farmers and 31 extension workers.

Table 8: Youth groups and champion farmers who received a total of 16 trainings in improved sheep fattening

Dates		No. of Youth groups	Champion farmers
<i>Doyogena</i>			
6-7 Nov	Serera	4	4
10-11 Nov	Ancha	2	2
13-14 Nov	Murasa	2	2
17-18 Nov	Hawora	2	2
21-22 Nov	Begedamu	2	2
TOTAL		12	12
<i>Bonga</i>			
5-6 Nov	Boka	4	4
7-8 Nov	Shuta	2	2
10-11 Nov	Alarigexa	2	2
13-14 Nov	Meduxa	2	2
17-18 Nov	Yama	2	2
20-21 Nov	Modiyo	2	2
TOTAL		14	14
<i>Menz</i>			
3-4 Nov	Negasi-amba	4	4
7-8 Nov	Tsehaysina	2	2
10-11 Nov	Dargegn	6	2
14-15 Nov	Yecha-06	4	2
17-18 Nov	Yecha-07	2	2
TOTAL		18	12

Dissemination of a suite of improved sheep fattening management practices

Training of the improved sheep fattening technologies and practices was guided by a sheep fattening manual for Ethiopia. During the project, Bonga Agricultural Research Center researchers tailored the training manual to their site-specific scenarios and developed a [training manual in Amharic language specific to the Bonga sheep breed](#). Likewise, researchers from Areka Research Center in Doyogena developed a [manual in Amharic language specific to the Doyogena breed](#). The manuals were used during group trainings as well as during individual farmer on-farm training.

Capacity building: Entrepreneurial Skills Development

Training on entrepreneurship skills development and group formation was carried out during the [month of December 2018](#).

Two categories of ESD trainings were organized and conducted by a consultant, Esayas Mulatu, a Business Development Advisor. One was a Training of Trainers while the other was a youth group training at village level. The main objectives of the ESD included:

- Familiarize trainees on fundamental entrepreneurial skills.
- Enable participants to understand, learn and practice business models of the TAAT project.
- Trainees to understand the basic terms of business and business plan development.
- Familiarize trainees on entrepreneurial behaviour.

Experiential and adult learning techniques were applied. The [training content](#) was designed to enable participants to bring their wisdom to the stage. The facilitator used training aids such as audio-visual, games, and PowerPoint presentations to increase the learning outcome. Topics covered in each session were concise and contributed to experiential learning as they gave time to the facilitator to interact and coach each trainee. The training emphasized a change in mindset towards market orientation. Other highlights were on the power of goal setting, opportunity seeking, risk taking, collective action, planning, persistence and determination.

The [ToT training](#) (Fig. 8) targeted the Community of Practice (CoP) members. Twenty seven participants from 6 different organisations participated. The current CoPs comprise NARS researchers, Government workers and Development agents. The [training programme](#) was held in Debre Berhan over a period of 3 days (31st Dec 2018-2 January 2019). At its conclusion, the programme engaged the participants in the development of business models (Fig. 9) for each site.



Fig. 8: Training of Trainers in Entrepreneurial Skills Development in Debre Berhan, 31 December 2018
Photo credit: Nahom Ephrem



Fig. 9: Development of business models by participants during the Training on Entrepreneurial Skills Development training in Debre Berhan, 2 January 2019

The youth groups and champion farmers participated in ESD training at village level across villages in the 3 sites, Menz, Doyogena and Bonga between 17 December 2018 and 7 January 2019 (Table 9). Forty youth groups with a total of 433 youth (154 female; 279 male) youth and 41 champion farmers (34 men, 7 female) attended day-long entrepreneurship training in their respective villages. In attendance were also enumerators and development agents from various Government offices. The emphasis of the training motivational. None of the participants had previously received entrepreneurial training to such detail. Therefore, it was important for this initial [entrepreneurial training](#) to be motivational (Fig 10). The trainer listed potential challenges in the operationalization of youth groups in the areas of group dynamics, animal feed and fodder, market linkage, finance and weak partnerships among development actors. Challenges and potential solutions as echoed by trainees are listed in Table 10.

Table 9: Entrepreneurial Skills Development training in Menz, Bonga and Doyogena

Project Site	Location (<i>Kebele</i>)	No. of participants	Training dates
Menz	Negasi-amba	66	17-12-2018
	Dargegn	66	18-12-2018
	Yetcha (Molale)	66	19-12-2018
Doyogena	Serara	44	23-12-2018
	Begedamu	44	24-12-2018
	Anicha/Murasa	44	25-12-2018
Bonga	Boka	81	4-1-2019
	Shuta	81	5-1-2019
	Telo-Yama	22	6-1-2019
	Modiyo	22	7-1-2019
TOTAL		536	



Fig. 10: Entrepreneurial skills Development training to youth groups in Hawora, Doyogena

Table 9: Recommendations to foster growth of youth groups and youth entrepreneurial potential in sheep fattening.

Area of focus	Observed challenge	Potential solution/ are of interventions
Group dynamics	Unregistered groups: this limits group access to formal financial services and credits.	<ul style="list-style-type: none"> ▪ Training in group dynamics ▪ Facilitate formal registration of groups
Animal feed and fodder	Rainfed pasture: this limits sheep fattening business to the rainy season. Costs are increased if they choose to fatten sheep using commercial concentrate.	<ul style="list-style-type: none"> ▪ Train youth to formulate feed ▪ Facilitate training and access to forage seed for the youth groups to grow additional fodder and conserve it for off-season feeding. ▪ Link youth groups to factories that have by-products that could be used as animal feed.
Market linkage	Lack of linkage with central markets and inadequate market intelligence.	Facilitate access to market information; conduct market intelligence that can be shared with youth groups.
Finance	<ul style="list-style-type: none"> ▪ Youth have no group or individual bank accounts. This constrains the ability to save and increase the working capital. 	<ul style="list-style-type: none"> ▪ Training in financial literacy. ▪ Training and transitional support to form Village Level Saving and Lending Associations (VSLA). ▪ Link the youth and their groups to formal financial institutions such as microfinance institutions (MFIs). ▪ Training and technical assistance to prepare bankable business plans.
Strengthen partnership	Coordination among partners within the Community of Practice is not strong enough.	<ul style="list-style-type: none"> ▪ Better coordination and synergy among partners by strengthening Community of Practices.

Output 5: Technologies Promoted to Non-Participants

Open days (field days)

A total of 14 field days were organized by youth groups across the three sites. The total attendance was 1530 farmers (1025 male, 505 female) and 119 experts. The main activities included: discussions with guests and farmers; experience sharing between youth, champion farmers and sheep fatteners; free castration, deworming and vaccination services for other farmers.

Youth group members and champion farmers in all villages were the main facilitators for the open days, sharing their experiences and knowledge learned from TAAT project trainings with the farmers. They demonstrated the use of locally available feed resources in appropriate rations, improved husbandry practices (clean and dry housing, use of feed troughs and water troughs) as well as deworming, vaccination, castration and treatment of general ailments freely delivered courtesy of the TAAT project, which they carried out along with the veterinary officers.

In Menz, youth groups together with Debre Berhan TAAT team organized 3 field days on December 20-21, 2018 in Menz Mama (Mollale) and in Menz Gera (Mehal Meda) districts. Several stakeholders were invited and attended. They were attended by 269 farmers (214 male; 55 female). Youth group members and champion farmers mingled with farmers and exchanged experiences. Several sheds were set up to display and communicate different technologies to farmers. Farmers expressed a lot of interest particularly in formulating and balancing feed resources for optimal weight gain (Fig. 11-13).

Table 10: Summary of open day participants across villages in Menz

Institution Participants	Position	Total No. of participants
Agricultural office	Livestock experts	11
Agricultural office	Head	2
Each District youth and sport office head	Head	2
Each District job creation sector	Head	2
Data collectors	Data collector	9
Each <i>Kebele</i> leader	Head	4
Each <i>Kebele</i> (CBBP) cooperative leader	Head	3
DB ARC Researchers		5
Veterinary technicians		3
Youth members		180
Champion Farmers		18
Farmers		269



Fig. 11: Farmers attending the field day at Yecha, Menz area



Fig. 12: Field day in Mollale site, Menz.



Fig. 13: Youth group members of Dargegne Kebele showcasing their fattened rams during the field day in Menz

Youth groups in Doyogena organized 5 field days, one in each village. Table 11 summarizes attendance of 36 experts who consistently visited each field day. Farmers overwhelmingly turned up for the field day recording 482 in total (309 male; 173 female) as shown in Table 12. Youth groups wore promotional T-shirts and caps so that they were easily identified by the farmers (Fig. 14-15).

Table 11: Summary of open day participants across villages in Doyogena

Institution Participants	Position	Total No. of participants
Doyogena District cooperative office and sector coordinator	Head	2
Doyogena District Animal and Fishery office head and small ruminant coordinator	Head	2
Doyogena District Job Creation sector	Head	1
Doyogena District five <i>Kebele</i> data collectors	Data collector	12
Doyogena District five cooperative formation support and followers	expert	3
Each <i>Kebele</i> leader	Head	5
Each <i>Kebele</i> cooperative leader	Head	5
Areka ARC Researchers		3
Veterinary technicians		3

Fig 12: A summary of farmer attendance at across TAAT project villages in Doyogena

<i>Kebele</i>	Participants		
	Male	Female	Total
Serara	60	39	99
Anicha	72	31	103
Begedamu	58	37	95
Hawora	62	29	91
Murasa	57	37	94
Total	309	173	482



Fig. 14: 1 Youth group members and champions during the open field days at Serera, Doyogena



Fig. 15: Female youth group member assists in vaccination of rams during the field day at Hawora, Doyogena.

Youth groups and champion farmers from 6 villages in Bonga in collaboration with Bonga Agricultural Research Center researchers, Livestock office agents and CoP members organised field days to disseminate improved methods of sheep fattening. Six field days were organised between 11-15 December 2018 in Boka, Shuta, Alarigexa, Meduxa, Modiyo and Yamain. The youth groups and champion took the lead in mobilizing farmers from their respective *Kebeles*. They also actively partook in deworming, vaccinating and castrating rams (Fig 18). Several sick sheep were brought to the field day and treated by veterinary officers in attendance (Fig. 16-17). This created an opportunity for farmers, experts and other stakeholders to come together and discuss the performance of sheep under traditional *vis a vis* improved fattening. There was an overwhelming turn-out of District-level and Village-level Administrators and Government experts (Table 13) who attended all field days. A total of 779 farmers (502 male, 277 female) attended. Attendance of sheep farmers per village is shown in Table 14. 2414 rams across the 5 *Kebeles* were dewormed and vaccinated. The field days presented opportunities for local leaders to call upon the youth to undertake market-oriented sheep fattening. They emphasized the importance of collective action. ICARDA received several requests from youth (both male and female) on the possibility of supporting additional youth groups through backstopping.

Table 13: Summary of open day participants across villages in Bonga

Institution Participants	Position	Total no. of participants
Each district cooperative office and sector coordinator	Head	2
Each district Animal and Fishery office head	Head	3
Each district youth and sport office head	Head	3
Each district job creation sector	Head	3
Data collectors/project enumerators	Data collector	14
Each <i>Kebele</i> leader	Head	7
Each <i>Kebele</i> (CBBP) cooperative leader	Head	4
Bonga ARC Researchers		3
Veterinary technicians		3
Community of Practice members		6
Youth members		175
Champion Farmers		14
Sheep farmers		779

Table 14: A summary of farmer attendance at across TAAT project villages in Bonga

<i>Kebele</i>	Participant farmers		
	Male	Female	Total
Boka	95	44	139
Shuta	88	48	136
Alarigexa	68	48	116
Meduxa	86	35	121
Modiyo	70	47	117
Yama	95	55	150
Total	502	277	779



Fig. 16: Ram vaccination during field day in Modiyo, Bonga.



Fig. 17: Sick and infected animals during the field day at Yama *Kebele*, Bonga



Fig. 18: Free Deworming Service by youth group members at Meduxa Kebele field day in Bonga

Media advocacy

In Doyogena, the TAAT project was broadcasted twice on the regional Radio Station, South Radio Hossana branch, in [Amharic](#) and 'Kamibategna' languages. This was aired at 7.30 pm. The station reaches approximately 800,000 listeners in the SNPPR Regional State.

In Bonga, the trainings were broadcasted both on radio and television stations. Southern Television <https://www.youtube.com/watch?v=k8egBnzhB3A> aired the project in Amharic language and Kaffa Television <https://youtu.be/XCWj2gqiEgo?t=129> featured the project in Kaffigna Language. Both were aired during Prime-Time News at 7 pm. Southern TV and Radio Station broadcasted the trainings in five local languages; *Kaffigna*, *Chara*, *Nao*, *Mexenger*, and *Shakigna* and in Amharic (national language). Other radio stations that broadcasted the trainings were:

- Dehub Radio that broadcasted in Amharic. It's audience is 16,412, 892 persons within SNNPR Regional State.
- Kafi TV that broadcasted in Kafficho language. Its audience with SNPPR is aprpx. 14,000,000 persons.
- Local Radio Stations that target loclities of Kaffa, Sheka, Benchi, Maji and Jimma, each area with a different local language. Overall audience is approx. 1,499,908 persons.

The stations introduced TAAT and ICARDA as well as their mission and goals, during the boadcast and communicated the project's progress on scaling sheep fattening. Practical information on improved fattening practices and technologies was communicated.

According to the radio stations, there was overwhelming response from call-ins by youth. Majority enquired on how they can be part of the project while others sort further information of feed resources, veterinary inputs and market linkage for fattened rams.

In Menz, the TAAT project was broadcasted on Radio Fana at 7.30 pm. Radio Fana ranks first in radio in Ethiopia with an audience share of 23%.

Promotional material

ICARDA designed a project logo as shown below. The logo will henceforth be placed alongside the ICARDA and TAAT logos. A total of 600 caps and 600 T-shirts were printed and distributed to youth group members, champion farmers and CBBP sub-committee officials. (Menz 220 of each; Doyogena 205 of each; Bonga 170 of each). Youth groups and champion farmers were encouraged to wear them particularly during field days.

The logo, caps and T-shirt are shown below:



[Three designs of banners in Amharic language](#) were produced, specific for each site. Each banner bore corresponding sheep breeds and feed resources of individual sites. Each site received 5 copies of each banner, which were placed outdoors in the different project *Kebeles*. In addition, 3 [roll-up posters in English language were printed to be placed in various NARS offices for promotional purposes](#). A sample of the posters is shown below (Fig. 19).

Deviation from Proposed Deliverables

Three deliverables could not be achieved during the project duration:

- *Youth coops to stock feed supplements and sell to sheep smallholder fatteners*
Youth groups still need additional training, particularly in entrepreneurship. According to the entrepreneurship trainer, the youth groups, particularly, require more training and mentorship to turn around their attitudes and mindsets towards a business-orientation. Majority are still at a stage whereby, they would squander their first earnings without consideration for re-investments.
- Facilitation of collective action for sheep marketing and inputs acquisition by youth cooperatives
Ram fattening is ongoing until Easter season, 2019. Trainings on marketing will be ongoing during January to May, 2019 to facilitate collective action.
- Mobilization of smallholder farmers to register as affiliated members of youth cooperatives.
Majority of the youth groups were newly formed; therefore, they still require time to organize themselves as pertaining to group management before they can attract affiliate members. However, at least 27 champion farmers are already actively playing a mentoring role, both to youth group members and farmers within their respective sub-villages.



Earn more income by improving your sheep fattening practices

Using good sheep fattening practices improves the appearance and weight of your sheep and will help generate higher income from sales.

Make sheep fattening a business

- Have short fattening cycles of 3-6 months.
- Fatten sheep at least three times or more per year.
- Reduce your costs by doing the following:
 - Use locally available feeds optimally.
 - Use concentrates and agro-industrial feeds in correct proportions.
 - Buy feeds collectively.
- Negotiate for higher selling prices by selling your sheep collectively.

Use good management practices



- Vaccinate your sheep to protect them from diseases.
- Deworm your sheep to improve their feed utilization and productivity.
- Castrate male sheep to enhance weight gain.
- Use clean troughs for feeding and watering to prevent food and water-borne diseases.



Forages



Enset



Store the straw in a shed



Desho grass

Use nutritious feed resources

- Provide good quality straw.
- Provide salt licks.
- Supplement with wheat bran, noug cake, atela, faba bean and enset.
- Grow forages in your homestead.

Supplements



Vetch and oats



Noug cake



Wheat bran



Salt lick



Atela



Fababeans grain and straw



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Fig. 19: TAAT banner for Doyogena.

Monitoring and Evaluation

The 21 enumerators across the three sites collected data on ram weights from Day 1, and fortnightly thereafter. The [dataset](#) shows gradual improvement in average daily weights in all sites, although it is evident that further training on feed resource utilization needs intense focus so as to obtain heavy rams during Easter.

Sustainability

Collective action by the youth will be sustained in the subsequent phases of TAAT through:

- Strengthening of Community of Practice teams
- Networking of youth groups within districts.
- Development of training manuals for Entrepreneurial Skills Development in local languages to facilitate trainings by local resources to reach many more persons.
- Youth group need to start saving with financial institutions, so as to obtain financial services.

Scalability

The project has proved scalable. The vision is clear and shared by key stakeholders, target beneficiaries were actively engaged, drivers of change do exist in the communities, there is legitimacy and sheep fattening is well aligned and embedded. Necessary partnerships exist and are fully engaged, though coordination issues need strengthening, decision making processes are relatively simple. Monitoring and evaluation of sheep performance is robust but that of beneficiaries needs strengthening.

Credibility

The scaling framework is clear, logical with a complete theory of change. It is designed in light of agreed upon key stakeholder (NARS, local administration, CBBP, government experts) expectations for where and to what extent interventions are to be scaled.

The sheep fattening model using youth groups and champions is credible. The response seen at field days when youth groups and champions took lead of the events seems to synch very well with the communities. Project beneficiaries had youth male and female representatives, as well as male and female older champions, thus wider caliber of farmers could find space where they felt comfortable to interact. Interactions were relaxed and farmers, both male and female were relaxed and felt more confident to ask questions and seek clarification. Group cohesion was displayed by the manner the group leaders assigned members oversight roles in activities such as deworming, castration, feed resources, feed formulation and husbandry.

Moving forward: Formation of youth groups is recognized and appreciated by local authorities, however, formal registration of the groups is important to lend credence to their cohesion. and earn recognition from local authorities and other institutions. The law in Ethiopia requires a minimum of 50 members to form a cooperative. Currently youth groups are registered at local village level, however, there is need to register them at district level. This may require project intervention to see through the process of institutionalizing the youth groups.

Relevance of the innovation

Sheep fattening as a business has a triple-win potential; It addresses unemployment, development of entrepreneurial skills and enhances sheep productivity. The project has delivered observable benefits to the youth by of creating awareness to the importance of an entrepreneurial culture to the youth, imparting basic knowledge and skill. This certainly is beyond basic education that most of the youth have

attained. An entrepreneurial mindset will be necessary to undertake “sheep fattening as a business”. The improved practices are being scaled in 3 different social, cultural and geographical settings.

Moving forward: It aims to promote collective action to strengthen negotiating power of the youth at the market place (input and sales markets) by facilitating market linkages and facilitating provision of market information to youth group members. Training on collection SMART marketing would be useful and ICARDA has in-house expertise on this.

Alignment

The project is aligned with Ethiopia’s Ministry of Livestock’s strategy to improve farmers’ incomes through livestock fattening (Ethiopian Livestock Master Plan 2015-2020) and the Ministry of Cooperative Promotion’s strategy to harness youth employment. Ministry of Women, Youth and Children’s Affairs to empower women, youth, people with disability and other vulnerable groups. The project was open to participation of youth without imposing any biases.

Moving forward: To fully engage these Ministries in the CoP to enable them forge forward their mandates in the context of sheep fattening. Nevertheless, this project if scaled further contributes to achieving relevant government goal of poverty reduction.

Legitimacy

Project activities were socially and politically acceptable and consistent with existing cultural practices of fattening sheep for sale. Sheep sales outside festive seasons are acceptable and ongoing. The culture of collective action is not widespread in Ethiopia although the project sites are already aware of its benefits thanks to CBBP. The superiority of improved fattening methods as compared traditional methods are widely evident in view of better sheep growth and performance.

Moving forward: The project will prefer to scale out horizontally replicating the intervention in neighboring villages and districts which are at least aware of the benefits of collective action by virtue of knowing about the success of CBBP, a pillar of successful collective action.

Potential for impact

The project has high potential to mitigate unemployment, idleness, rural-urban migration and foster opportunities along the sheep value chain. It has potential to promote mutual learning and knowledge exchange within and between youth groups. The package of improved technologies and practices are simple.

Drivers

Formation of Community of Practice (CoP) under the leadership of the NARS has been identified as appropriate to scale up activities. CoP involves NARS bring in technical expertise, Government, CBBP bringing in expertise in group/cooperative formation, local administration, eventually value chain actors, youth representatives. gives youth an avenue to be heard, provides an opportunity for the participation of a wider and more diverse audience of young women and men in the design and implementation of policies and programs thus ensuring that their needs and aspirations are taken into account.

Moving forward: The CoPs need to be strengthened and given a thrust. Facilitating take off will be important. This will be through further ToT trainings, organizing dialogue days in villages, organizing cross-regional CoP meeting, exchange visits and engaging value chain actors into the CoP.

Local Champions

Local champion are part and parcel of the project. They are well known successful sheep fatteners. They were selected by opinion leaders of the communities therefore, they are useful as influencers to advocate for issues of sheep fattening youth groups. Youth groups are encouraged to interact closely with champions.

Moving forward: Champions will be first point of contact in matters relating to their affiliate youth groups so that they remain relevant and further trained as ToTs. Elite youth groups, i.e those that are well performing in each district will be identified and strengthened with closer follow-ups.

Constituencies

Media advocacy was made through TV and radio. Personal communication with the stations revealed overwhelming calls from youth on two issues; i. those wishing to join the youth groups ii. those seeking technical backstopping to support them in group formation, entrepreneurial skills development and improved sheep feeds and feeding techniques.

Moving forward: There will be systemic use of rural and regional radio to spread messages about rural entrepreneurship through sheep fattening as well as spur the media houses to feature the project's sheep fattening youth groups periodically.

Management capacities

The project has the advantage of having few decision points; Youth groups and stakeholders who are consolidated in the CoP. Thus, there are few actions and partners who need to be coordinated.

Financial viability

The cost of adopting improved sheep fattening technologies is low. Landlessness which is considered a major challenge to majority of youth in rural Ethiopia is not a constraint to participation in sheep fattening. Emphasis is on the optimal use of locally available feed resources, thus alleviating the normal constraint of access, cost and adulteration of feed concentrates. In this project, the criteria to participate was ownership of at least one sheep.

Moving forward: Further training on entrepreneurial skills development for youth groups will emphasize a saving culture to beef up capital for further investment. Ownership of even one ram at start-up is no constraint to growth potential. Saving culture is a prerequisite to eligibility to credit providence, therefore linking youth groups to Micro-finance Institutions and encouraging group saving will be a priority step towards access to credit and/or loans which are critical for further investment. Meanwhile a review of the landscape of Ethiopia Microfinance institutions is underway in order to enable assessment of the different sheep value chain finance products related with the project that would be potentially available to the youth groups as well as identify gaps and barriers in the sector relevant to sheep fattening youth groups.

Monitoring and Evaluation

Systematic evaluations were included in the design and resources were allocated accordingly, however, there was a bias towards data collection on sheep performance. The project needs a more robust M&E system to capture more information and data on performance of champions and youth groups.

Lessons Learned

Several farmers were disappointed because they did not receive commercial concentrates. When asked why they preferred concentrates, they said that is one item they cannot afford. That went to show how the farmers still have short term visions, they are still in a stage of satisfying immediate needs without looking into the future. That was a reminder that the strategy of the project should continuously emphasize the importance of sustainability, particularly optimally using locally available feed resources and aiming to grow the number of rams.

Annex 1: Outputs, Activities, key Performance Indicators and Deliverables: ICARDA-TAAT Sheep Fattening Project in Ethiopia August 2018-January 2019

Output	Activity	Key performance Indicator	Status	Achieved Jan 2019
Component 1: Creation of Enabling Environment (EE)				
Output 1.1: Policies for deployment and adoption of small ruminant production technology policies harmonized across the 3 regions	1.1.1 Knowledge exchange workshop with policy makers and key stakeholders	8.6.1 Report of meeting held with regional policy makers (Government ministries and National Agricultural Research Centers) from 2 regional states (Amhara, SNNPR)	completed	https://dx.doi.org/20.500.11766/9563
		8.6.2 Submission of synthesis paper arising from the workshop with stakeholders.	completed	https://dx.doi.org/20.500.11766/9638
Output 1.2 Technology activities promoted	1.2.1 Open days (field days) organized by each youth coops during each fattening cycle	8.6.3 Report of at least eight open days meeting with a minimum of 150 farmers in attendance. 8.6.4 Minimum of 1,000 farmers attending sheep fattening open days in 3 regional states; disaggregated by gender and youth cooperative.	completed completed	14 field days 1530 farmers (1025 male; 505 female) https://dx.doi.org/20.500.11766/9637
	1.2.2 Youth coops to offer services such as castration, vaccination, deworming, ear-tagging	8.6.5 Report of 1000 households or youth group member receiving training and delivering service such as deworming, vaccination etc.	completed	

	1.2.3 Radio announcements made to reach the farmers	8.6.6 At least 6 radio announcements conducted at district level during fattening cycles (in 2018).	completed	9 radio programs; 2 TV programs
	1.2.4 Extension material prepared	8.6.7 At least 10 knowledge communication posters made to inform beneficiaries about the ICARDA led sheep fattening project activities.	completed	15 banners placed in the field; 3 roll-up posters for NARS offices
Output 1.3: Input & output markets accessed	1.3.1 Youth coops to stock feed supplements (site specific) and sell to sheep smallholder fatteners	8.6.8 Linkage of youth groups or 10 youth cooperatives facilitated to input providers to promote access to livestock feed resources and fattening inputs.	not done	youth groups not ready
	1.3.2 Facilitation of collective action for sheep marketing and inputs acquisition by youth cooperatives	8.6.9 At least 750 farmers involved in collective action (inputs, marketing, capacity development activities) facilitated by youth coops in each kebele; disaggregated by region and gender	completed	As above 1530 farmers (1025 male; 505 female)
Component 2: Regional Technology Delivery Infrastructure (RTDI)				
Output 2.1: Networks and partnerships organized to disseminate best bet technologies	2.1.1 Stakeholder mobilization	8.6. Report of At least 1 sensibilisation sessions of key stakeholders in each region.	completed	https://dx.doi.org/20.500.11766/9563
Output 2.2: Crop/Livestock technology delivery compacts convened	2.3.1 Formation of Community of Practices (CoP)		unplanned, completed	3 CoPs formed; one in each region

Output 2.3: Young class of 'Agripreneurs' supported	2.4.1 Identification, profiling and mapping of existing and registered sheep fattening youth cooperatives in each village within jurisdiction of CBBPs	8.6.11 At least 10 interested youth cooperatives are trained and technically backstopped by the TAAT project.	completed	44 backstopped
	2.4.2 Building capacity of youth cooperatives	8.6.12 At least 4 trainings held; 1 training for youth coops on improved sheep fattening technologies, entrepreneurial skills and cooperative management in each region, in a total of 3 regions.	completed	16 trainings across 3 regions
Output 2.5: Strengthening and widening the reach of technology delivery capacity	2.5.1 Progressive expansion of champion farmers	8.6.13 Demonstrated support to at least 50 champion farmers supported in 3 regions.	completed	Trained along youth groups; 38 trained.
	2.5.2 Formation of sub-committees within CBBP management to oversee dissemination activities of youth cooperatives.	8.6.14 At least 10 actively functioning sheep fattening sub-committees in CBBPs in 2018.	completed	12 (3 Menz; 5 Doyogena; 4 Bonga)
	2.5.4 Capacity development of extension workers	8.6.15 At least 75 public and private extension agents trained on improved sheep fattening technologies and practices through a training of trainer's approach.	completed	104 across 3 regions (32 Doyogena; 31 Menz; 41 Bonga)

Component 3: Deployment of Appropriate Technologies (DAT)				
Output 3.2: Appropriate technologies identified and deployed	3.2.1 Dissemination of improved sheep fattening technologies	8.6.16 Demonstrated benefits of appropriate fattening technologies e.g. improved feed troughs, reduced feed wastage, improved animal weight gains etc. reported from sheep fattening activities.	Data will be collected until Easter, 20 April 2019	https://dx.doi.org/20.500.11766.1/0PVF9Q
Output 3.3: Crop and livestock outreach campaigns	3.3.1 Mobilization of smallholder farmers to register as affiliated members of youth cooperatives	8.6.17 Demonstrated mobilization of at least 1000 smallholder farmers registered as affiliated members of youth cooperatives.	not done	Youth groups not mature enough to begin registering farmers
Component 4: Project Management				
Output 4.1 Functional TAAT Program Management	4.1.1 Development of M+E framework	8.6.18 Project progress reports for each fattening cycle from every youth cooperative and at least 2 SF sub-committees of CBBP in 2018.	completed	Consolidated into single monthly reports: Aug 2018: https://dx.doi.org/20.500.11766/9563 Sept 2018: https://dx.doi.org/20.500.11766/9559 Oct 2018: https://dx.doi.org/20.500.11766/9561 Nov 2018: https://dx.doi.org/20.500.11766/9562 Dec 2018: https://dx.doi.org/20.500.11766/9637