



BENEFIT Partnership – 2017 Annual Report

Bilateral Ethiopian-Netherlands Effort for Food, Income and Trade Partnership

Dawit Alemu, Irene Koomen, Eyasu Elias, Remko Vonk, Geremew Terefe, Ted Schrader
Amsalu Ayana, Gareth Borman, Helen Getaw, Gertjan Becx , Monika Sopov



WAGENINGEN
UNIVERSITY & RESEARCH

BENEFIT Partnership – 2017 Annual Report

Bilateral Ethiopian-Netherlands Effort for Food, Income and Trade Partnership

Authors

Dawit Alemu & Irene Koomen¹

Amsalu Ayana & Gareth Borman²

Eyasu Elias & Remko Vonk³

Helen Getaw, Gertjan Becx & Monika Sopov⁴

Geremew Terefe & Ted Schrader⁵

1 PCU

2 ISSD Ethiopia

3 CASCAPE

4 ENTAG

5 SBN

This research was (partly) funded by the Dutch Ministry of Foreign Affairs.

Wageningen Centre for Development Innovation

Wageningen, February 2018

Report BENEFIT-18-004

Dawit Alemu, Irene Koomen, Amsalu Ayana, Gareth Borman, Eyasu Elias, Remko Vonk, Helen Getaw, Gertjan Becx, Monika Sopov, Geremew Terefe, Ted Schrader, 2018. *BENEFIT Partnership – 2017 Annual report; Bilateral Ethiopian Netherlands Effort for Food, Income and Trade Partnership*. Wageningen University & Research. Report BENEFIT-18-004. Wageningen.

© 2018 Wageningen Centre for Development Innovation, part of the Stichting Wageningen Research. P.O. Box 88, 6700 AB Wageningen, The Netherlands. T + 31 (0)317 48 68 00, E info.cdi@wur.nl, www.wur.eu/cdi.

The Wageningen Centre for Development Innovation accepts no liability for any damage arising from the use of the results of this research or the application of the recommendations.

Report BENEFIT-18-004

Photo cover: Mirjam Schaap

Contents

List of abbreviations and acronyms	5
Executive Summary	9
1 Introduction	15
2 Collaborative BENEFIT portfolio	17
2.1 Sesame: value chain development and integration of rotational crops	18
2.2 Malt barley: deploying improved varieties and grain market linkage	19
2.3 Soya bean value chain development	20
2.4 Wheat: increasing seed production and availability	22
2.5 Sorghum value chain development	23
2.6 Challenges, opportunities, lessons learned and way forward	24
2.6.1 Challenges	24
2.6.2 Opportunities	24
2.6.3 Lessons	24
2.6.4 Way forward	24
3 Increased quality and quantity of sustainable agricultural production	25
3.1 Outcomes achieved by BENEFIT programmes	25
3.2 Mainstreaming social inclusion and nutrition	27
3.2.1 Social inclusion	27
3.2.2 Nutrition	29
3.3 Challenges, opportunities, lessons learned and way forward	30
4 Improved markets and trade	33
4.1 Outcomes achieved by BENEFIT programmes	33
4.2 Mainstreaming social inclusion and nutrition	35
4.2.1 Social inclusion	35
4.2.2 Nutrition	35
4.3 Challenges, opportunities, lessons learned and way forward	36
5 Improved enabling environment for the agricultural sector	37
5.1 Outcomes achieved by BENEFIT and its programmes	37
5.2 Mainstreaming social inclusion and nutrition	40
5.3 Challenges, opportunities, lessons learned and way forward	40
6 Enhanced partnership for synergy	43
6.1 Alignment of programmes and collaboration	43
6.2 Collaboration and alignment with other projects and programmes	43
6.3 Mainstreaming social inclusion & nutrition	44
6.3.1 Gender mainstreaming	44
6.3.2 Nutrition mainstreaming	45
6.4 Fostering collaboration in BENEFIT portfolio	46

6.4.1	BENEFIT portfolio management	46
6.4.2	Finance and administration	47
6.4.3	Monitoring and Evaluation	47
6.4.4	Communication	47
6.5	Challenges, lesson learned & way forward	47
Appendix 1 Stories & Examples		49
Appendix 2 Detailed information key performance indicators		71
Appendix 3 ISSD Annual report 2017		75
Appendix 4 CASCAPE Annual report 2017		103
Appendix 5 ENTAG Annual report 2017		123
Appendix 6 Benefit-SBN Annual report 2017		139

List of abbreviations and acronyms

AAU	Addis Ababa University
AACCSA	Addis Ababa Chamber of Commerce and Sectoral Associations
ABSF	Agribusiness Support Facility
ACC	Agricultural Commercialization Cluster
ADPLAC	Agricultural Development Partners Linkage Advisory Council
AERES	Aeres Training Centre International (professional training agri-sector)
AGP	Agricultural Growth Program
Agriterra	Agri-agency established by Dutch farmers' organisations
ANRS	Amhara National Regional State
ARARI	Amhara Regional Agricultural Research Institute
Ardaita	Centre of Excellence for cooperative training in Ethiopia
ASCI	Amhara Savings and Credit Institution
ASMA	Appropriate Solutions for Mechanization of Agriculture in Ethiopia
ATA	Agricultural Transformation Agency
B2B	Business to Business
BDU	Bahir Dar University
BENEFIT	Bilateral Ethio-Netherlands Effort for Food Security; Income and Trade
BMGF	Bill & Melinda Gates Foundation
BoANR	Bureau of Agriculture and Natural Resources
C4C	Cooperatives for Change
CAADP	Comprehensive Africa Agriculture Development Program
CASCAPE	Capacity building for Scaling up of evidence based Practices in agricultural production in Ethiopia
CBO	Cooperative Bank of Oromiya
CDSF	Capacity Development Support Facility
CLPP	Community Level Participatory Planning
COC	Certificate of Competence
CommonSense	Project providing satellite sensor data to smallholder farmers in four regions in Ethiopia (G4AW project, aligned to AGP)
CPA	Cooperative Promotion Agency
CSA	Central Statistical Agency
DA	Development Agent
DECSI	Dedebit Savings and Credit Institution (Tigray)
DFID	Department for International Development
DGIS	Directorate General for International Cooperation
DLO	Stichting Wageningen Research
DLS	Diffused Light Storage
DSM	Direct Seed Marketing
ECX	Ethiopian Commodity Exchange
EGS	Early Generation Seed
EIAR	Ethiopian Institute of Agricultural Research
EKN	Embassy of the Kingdom of the Netherlands
EMDIDI	Ethiopian Meat and Dairy Industry Development Institute
ENLBA	Ethiopia Netherlands Business Association
ENTAG	Ethiopia-Netherlands Trade for Agricultural Growth
EPOSPEA	Ethiopian Pulses, Oilseeds and Spices Processors-Exporters Association
ERCA	Ethiopian Revenue and Customers Authority
ESA	Ethiopian Seed Association
ETB	Ethiopian Birr
ETC	Ethiopian Telecom Cooperation
FCA	Federal Cooperative Agency

FDOV	Faciliteit Duurzaam Ondernemen en Voedselzekerheid
FGI	Fertile Grounds Initiative
FP	Farmers' practices
F&S Ethiopia	Fair and Sustainable Ethiopia
FTC	Farmer Training Centre
G4AW	Geodata for Agriculture and Water
GALS	Gender Action Learning System
GARC	Gondar Agricultural Research Centre
GIS	Geographic Information System
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GoE	Government of Ethiopia
GTP	Growth and Transformation Plan
HAPP	Holland Africa Poultry Partnership
HU	Haramaya University
HuARC	Humera Agricultural Research Centre
HwU	Hawassa University
IFDC	International Fertilizer Development Centre
IFDC/2SCALE	Agribusiness development project '2SCALE' of IFDC
IF	Investor farmer
IFPRI	International Food Policy Research Institute
IICD	International Institution for Communications and Development
ILRI	International Livestock Research Institute
ISSD Ethiopia	Integrated Seed Sector Development in Ethiopia
IT	Innovation Team
ITC-SITA	International Trade Centre-Support Indian Trade and investment for Africa
ICT	Information and Communication Technology
KB	Kennis Basis
KIT	Royal Tropical Institute
LIFT	Land Investment for Transformation
LSB	Local Seed Business
M&E	Monitoring and Evaluation
MASP	Multi-Annual Strategic Plan
MFI	Micro Finance Institute
MoANR	Ministry of Agriculture and Natural Resources
MoLF	Ministry of Livestock & Fisheries
MoT	Ministry of Trade
MPC	Multi-Purpose Cooperative
MRR	Marginal Rate of Return
MRY	Marginal Rate of Yield
MU	Mekelle University
NABC	Netherlands Africa Business Council
NBE	National Bank of Ethiopia
NGO	Non-Governmental Organization
NHADIC	National Animal Health Diagnostics and Investigation Centre
NMA	National Meteorological Agency
NPMU	National Program Management Unit
NRM	Natural Resource Management
NVI	National Veterinary Institute
OSE	Oromia Seed Enterprise
P2P	Peer to peer
PAR	Participatory Action Research
PC	Primary Cooperative
PCU	Portfolio Coordination Unit
PED	Pre-Extension Demonstration
PGR	Plant Genetic Resources
PICS bags	Purdue Improved Crop Storage bags
PIM	Project Implementation Manual

PMU	Program Management Unit
PPP	Public Private Partnership
PPP-O	Public Private Partnership on Oilseeds
PRA	Participatory Rural Appraisal
PSA	Private Sector Association
PVS	Participatory Variety Selection
QDS	Quality Declared Seed
QUEFTS	Quantitative Evaluation of the Fertility of Tropical Soils
RARI	Regional Agricultural Research Institute
RPCA	Regional Cooperative Promotion Agency
RIAS	RABO International Advisory Services
RSE	Regional Seed Enterprise
RUSACCO	Rural Savings And Credit Cooperative Organization
SBC	Sesame Business Cluster
SBN	Sesame Business Network
SH / SHF	Small Holder / Smallholder Farmer
SHF	Small Holder Farmer
SLLC	Second Level Land Certification
SMEs	Small and Medium Enterprises
SMS	Subject Matter Specialist
SNNP	Southern Nations Nationalities and People
SNNPR	Southern Nations Nationalities and Peoples Region
SNV	Netherlands Development Organisation
SPC	Seed Producer Cooperative
SVC	Seed Value Chain
TA	Technical Assistance
TARI	Tigray Agricultural Research Institute
TC	Technical Committee
TGT	Tebebe General Trading
ToC	Theory of Change
ToT	Training of Trainers
VDFACA	Veterinary Drugs and Feed Administration and Control Authority
WCDI	Wageningen Centre for Development Innovation
WUR	Wageningen University and Research
WoA	Woreda Office of Agriculture
ZoDA	Zonal Department of Agriculture

Executive Summary

The bilateral project entitled “Bilateral Ethiopian Netherlands Effort for Food, Income and Trade Partnership (BENEFIT Partnership) supported by the Dutch Government through the Embassy of the Kingdom of the Netherlands (EKN) has, since 2016, been implementing four agricultural development programmes (ISSD, CASCAPE, ENTAG and SBN) with support from the BENEFIT partnership office. The Partnership aims at increasing food and nutrition security, brokering Dutch expertise, and stimulating trade. The focus of the 2017 activities has been enhancing the value chains of selected commodities through collaborative engagement, implementation of programme specific planned activities along with an attempt to catch up with some of the activities that were not implemented in 2016 due to the wide spread unrest in 2016, and considerable attempt to communicate the different demonstrated evidences for scaling and policy. These have been done together with the different respective BENEFIT programme regional partners (universities – Addis Ababa, Bahir Dar, Hawassa, Haramaya, Jimma, and Mekele, RARIs – ARARI, OARI, SARI and TARI, and Oromia Seed Enterprise).

Major accomplishments 2017

The major achievements of the BENEFIT partnership are summarized based on the result chain outputs, which are related with (i) enhancing portfolio collaboration among BENEFIT programmes, (ii) increasing quality and quantity of agricultural production, (iii) improving markets and trade, (iv) improving the enabling environment for the agricultural sector, and (v) enhancing partnership for synergy. The key partnership indicators have been amended in 2017 to bring them in line with the DGIS methodology for food security programmes.

Impact	Improved sustainable food, income, trade and nutrition security of rural households in Ethiopia			
outcome	Pillar 1: Increased quantity and quality of sustainable agricultural production		Pillar 2: Market Dynamics	Pillar 3: Improved enabling environment
outcome indicators	# of farmers reached with increased productivity (ISSD ,CASCAPE, SBN, ENTAG) (2017) 1,740,820 (2016) 910.745	# of hectares of farm land used more eco-efficiently (ISSD, CASCAPE, SBN) (2017) 564,858 (2016) 285,452	# of companies with supported plan to invest, trade or provide services (ISSD, SBN, ENTAG) 260	# of substantial policy changes/ reforms contributed to (ISSD, CASCAPE, SBN, ENTAG) (2017) 7 (2016) 5
	# of farmers reached with improved access to input markets (ISSD ,SBN) (2017) 1,340,439 (2016) 62,613		# of farmers reached with improved access to output markets (ENTAG) (2017) 1,736	
output	Improved stakeholders capacity in agricultural practices (knowledge and skills)			
output indicators	# of persons reached/ trained with improved technology and skills (ISSD, CASCAPE, SBN, ENTAG) (2017) 86,085 (2016) 5,282		# of trained farmers in sustainable agricultural production and practices (ISSD, CASCAPE, SBN) (2017) 241,228 (2016) 18,093	

Figure 1 key partnership indicators: 2017 and 2016 achievements

Collaboration between programmes

Selected priority commodities based on the importance at regional or national level and the possibility of demonstrating evidences for scaling were selected. Accordingly, the priority crops which the BENEFIT partnership targeted with due emphasis in addressing challenges related with their respective seed system, productivity, market and policy were sesame, malt barley and bread wheat in Amhara region; sesame and sorghum in Tigray region; soya bean and chickpea in Oromia and faba bean and malt barley in SNNPR. Several of these commodities, wheat, sesame and malt barley are major commodities for the agriculture commercialization clusters, while the pulses, soya bean, chickpea and faba bean are important rotation crops in the system as well as food security crops. The collaboration has for most crops resulted in (i) better access of seed of preferred varieties (sesame) and the establishment of seed producer cooperative with certificate of competence (malt barley), (ii) increased productivity (ii) close collaboration with the public extension programme and consideration of the demonstrated evidences like the 20 steps and financial literacy extension packages, (iv) improved market linkages through contract arrangements (malt barley) and commodity platforms and (v) addressing the key policy related challenges in value chains. These efforts have attracted key policy makers (Ministers and State Ministers of the MoANR and MoT) to a national field day organized together with the stakeholders' platforms in Humera and Gondar.

Increased quality and quantity of sustainable agricultural production



Almaz Berata: *"...as a result of this project, I can equally participate with my husband in producing and selecting our best varieties. This in turn empowers other females in our community to be actively engaged in agriculture. I have been participating in Participatory Variety Selection and crowd sourcing activities, where I selected my priority crop varieties which are the best adapted to our local conditions."*

Three of the four programmes, and to a small extend also ENTAG, contribute through various activities to the objective of increasing the quality and quantity of sustainable agricultural production.

- In general, the total number of farmers reached directly and indirectly was above the plan. In total, the four programmes reached over 1,519,656 farmers directly through their activities, and 184,379 indirectly (the plan was a total of 315,000 smallholder farmers). Of these programme beneficiaries, 27.6% were female and about 25% younger than 35 years of age;
- 4,123 experts (DAs, SMSs, value chain actors etc.) were reached through training, of which 16.3% were women;
- 15 platform meetings were organized by ENTAG that initiated discussion on pertinent challenges and opportunities in relation to improving quality and quantity of agriculture sustainability;
- In total, 235 varieties of 10 crops were deployed, tested and promoted at over 60 Farmer Training Centres (FTCs) and 51 technologies on cereals, pulses, vegetables and fruits were tested and validated;
- The support to 5,995 individual smallholder farmers, 149 seed producer cooperatives (SPCs) and 20 private seed producers (PSPs) that ensured the availability and use of quality seed of new, improved and farmer preferred varieties to 1,333,768 smallholder farmers;
- Ensuring the availability of best fit agricultural practices for dissemination, increasing the capacity of woredas to develop and implement agricultural development plans, including strategies for scaling; and developing nutrition-sensitive agricultural practices through the inclusion of pulses and leafy vegetables and fruits in the farming system;
- Integrated value chain approach for sesame sector development targeting (i) yield and quality improvement, (ii) harvest, transport and storage loss reduction, and (iii) improvement in formal financial services and input credit to farmers;

- The indirect effects of the provision of technical assistance, trainings and innovation funds to scale up the financial and technical capacity of private business companies, private sector associations, farmer unions, commercial farms, government agencies and research centres;

Improved markets and trade:



Tesfay Gidey: *“Comparing with the varieties we had, the newly introduced improved sorghum varieties seem superior quality. Especially Melkam, Meko, Dekeba and Tewzale are agro-ecologically fit varieties for our locality. They are early maturing varieties with encouraging amount of yield to cascade as best sorghum varieties. They seem more climate smart varieties than the old varieties.”*

Of the four programmes, three have activities targeting market improvement and trade, which are related with enhancing the performance of the seed value chain (ISSD), enhancing the performance of key sub-sectors and increasing B2B linkages (ENTAG) and development of sesame products and markets (SBN);

- In effort to empower the seed value chains: (i) 44 strategic linkages between seed producers and input and service providers were established for barley, maize, sorghum, teff, wheat dekoko (*Pisum sativum* var. *abyssinicum*), lentil, haricot bean, sesame, and potato; (ii) business opportunities for five Dutch/international companies in the Ethiopian seed sector have been facilitated, and (iii) eight bottlenecks specific to the 11 seed value chains were addressed;
- To strengthen the backward and forward market linkage, trade and investment integration among local and foreign agribusiness companies, ENTAG has (i) organized four trade missions in the areas of poultry, spices and aquaculture to Thailand, Rwanda, India and Egypt by involving representatives from private companies, farmers unions, government agencies, which allowed to share experience and create market linkages among participant companies; (ii) supported the private sectors in Ethiopia with supply and warehouse management, quality inspection and efficient Agro-logistics, (iii) supported 120 private companies on access to improved markets and trade through its front desk and hands on advisory service, (iv) established market linkages for 21 Ethiopian private companies with Indian, Dutch and other foreign companies, (v) facilitated contract and trade negotiations among local companies, farmers and foreign buyers and traders, and (vi) financed 14 innovative projects, among them the 13 projects are going to work on marketing and trade in agribusiness;
- In order to strengthen the development of sesame products and markets, SBN has (i) facilitated access to marketing credit and its management, which has strongly improved cooperatives presence in sesame spot markets, (ii) facilitated the investigation and development of improved cleaning machines contributes to quality improvement, (iii) facilitated market linkages for rotation crops (soya bean, sorghum) introduced into the sesame based production systems, and (iv) facilitated the policy engagement in improved traceability, market transparency, price information sharing systems, and ECX reforms;
- In total, 119 value chain actors were reached for improved market and trade.

Improved enabling environment for the agricultural sector:

Ato Etafa Merga, Amel Agro Industry PLC *"We hope the MoLF will soon implement the new policy with the necessary strategy and regulations, which I expect to solve most of our problems in poultry business"*



Activities were implemented through dialogue using different media on major issues, evidence based information sharing, and policy engagement with relevant stakeholders in the area of seed sector (ISSD); research and extension (CASCAPE), sub-sector policy development (ENTAG), and sesame sector development (SBN).

- In the area of seed sector, ISSD facilitated (i) about 17 policy changes to specific seed strategies, laws and regulations, directives, and guidelines for implementation, (ii) supported 21 evidence based policy options in 2017 in the areas of improving seed sector coordination and governance; developing a sustainable system of EGS supply; removing barriers to seed export and trade; clarifying criteria for entrepreneurship in seed production, distribution and retail; disposing of less viable seed carried over in store; promoting efficient utilization of certified seed supplied; popularizing newly released varieties; and improving the performance of seed regulatory bodies in seed inspection and certification, and (iii) supported the Ethiopian Seed Association in representing the interests of private sector, where the total number of members has become 32;
- In the area of research and extension, CASCAPE has generated policy options and engaged with relevant stakeholders on issues related with blend fertilizer recommendation, agricultural research and extension policy process, drivers for technology adoption including challenges for adoption of improved forage species, and determinants of sesame productivity in large-scale commercial farms vs. smallholder farm fields based on evidences from in-depth studies conducted;
- ENTAG has facilitated through different platforms at the national and regional policy reforms and drafting of new regulations on Ethiopian poultry, spices and pulses subsectors;
- Linked with the national field days organized in Gondar and Humera to share the key demonstrated sector improvement evidences, SBN organized a high level policy dialogue in the presence of Ministers and State Ministers of MoANR and MoT, Regional heads of Bureaus of Agriculture and other public and private actors, where key sector challenges and possible improvement options were agreed. In addition, it was realized the need to have a national sesame stakeholders' platform and a possible list of stakeholders are identified;
- At national level continued engagement by the PCU manager with the various ministries (MoANR and to a lesser extend the ministries of livestock as well as trade) has resulted in monthly meeting between the Minister of MoANR and the BENEFIT portfolio managers.

Lessons learned in 2017 and implications for 2018

The general key lessons learnt for BENEFIT and its programmes were:

- Engagement with wider stakeholders has facilitated demonstration and scaling of evidences, which was a key factor for better impact;
- Use of diverse tools for effective collaboration and alignment with relevant stakeholders and partners like signing of Memorandum of Understanding (MoU) with relevant actors, facilitation of the establishment and functioning of sector associations, and secondment of senior experts at the Ministry of Agriculture and Natural Resources (MoANR) played a key role for improved visibility and possible sustainability of demonstrated evidences;
- Balancing the extent of engagement with regional and federal actors was found to be very crucial for adequate communication and subsequent application of demonstrated evidences;
- Bottom up planning within a national programme framework continues to be a better approach in annual plan development of collaborative and programme specific activities;
- The extent of collaboration among BENEFIT programmes showed improvement linked with region specific planning workshops for collaborative activities and setup and sensitization of working procedures; and
- The signing of the MoU, granting the BENEFIT portfolio its legal status, followed by the approval and implementation of BENEFIT internal management guidelines and procedures supported clear decision making and alignment of the different BENEFIT programmes.

The programme specific lessons learned of 2017 and their implications for 2018 planning are summarized in the Table 1 below.

Table 1 *Lessons learnt and implications for 2017*

Programme	Key lessons learnt in 2017	Implication for 2018 annual plan
ISSD	Investment in participatory varietal selection (PVS) created demand for new, improved and adapted varieties	Strengthening the PVS activities by engaging wider actors in the sector
	gender and rural development experts facilitated the emergence of important new traits of crop varieties (colour, aroma, taste and nutrition; process- and cook-ability; and kernel weight)	
	The need for joint planning with all seed sector actors to meet the demand created through PVS and crowdsourcing	
	the intensive start to the informal seed systems intervention has resulted in less attention given to seed producer cooperatives and in scaling local seed business (LSB)	Support through training, coaching, supervision and monitoring of Seed Producer Cooperatives (SPCs) and LSBs
	The need to strategize further the functioning of the regional seed core groups	Promote linkage between regional core groups and the recently established national seed advisory group Further capacitate regional seed value chain experts in strategic approaches and to translate diagnoses of bottlenecks in specific seed value chains into action
	The need to strengthen and investment in communication for better impact	Manage public relations more strategically through a blend of print, audio/visual and digital media and the having a communication expert
CASCADE	On-farm trials on testing and validation, pilot scaling and Pre-Extension Demonstrations (PEDs) opened opportunities for farmers, extension workers and officials to identify and look for seeds of crop varieties adaptable to the local conditions	This has led to unexpected successful scaling in both current and previous CASCADE <i>woredas</i>
	Unavailability of seeds of the preferred varieties (e.g., potato, wheat, faba bean, food barley) remains a challenge	Closely working with ISSD both at federal and regional level
	Lack of budget to cascade training, which was given to subject matter specialists, to development agents (DAs)	The Agricultural Growth Programme (AGP) was expected to provide budget for cascading Training of Trainers (ToTs) given by CASCADE

	The need to incorporate best fit practices developed by CASCAPE into extension manual and packages being promoted by MoANR/BoANR for increased uptake	Secondment of senior extension expert at the extension directorate of MoANR to ensure the incorporation process
ENTAG	The sector approach and the selected sectors are paying off given the huge interest of all actors	Further support the sectors selected
	A rapid return of enthusiasm to do business in the country in 2017 following the 2016 political instability	More focus of the Business to Business (B2B) activities to create linkage with the Dutch private sector
SBN	The need to fully engage programme staff in to clearly identify challenges and opportunities faced and their consideration in the planning process	Strengthening the bottom up planning process
	The need for analysis of expected trends and important new developments	As an international crop and its market volatility, close follow up and flexibility in capturing emerging trends needs due attention
PCU	Collaborative engagement of the BENEFIT programmes in the form of field days and workshops has demonstrated better alignment and communication of demonstrated evidences	Identify and facilitate collaborative engagements at national and regional level
	Organization of regional planning workshops for collaborative activities and respective assignment of leads and collaborators facilitated smooth implementation of synergetic activities	Strengthening the application of the approach
	Flexibility and prompt utilization of strategic as well as emerging policy engagement opportunities are found to be very crucial at BENEFIT Portfolio and also BENEFIT programme levels to better link field activity results with policy	A need for close follow up of emerging opportunities
	Assignment of gender and nutrition focal persons at BENEFIT programme level and working groups at cluster level enhanced improved planning, mainstreaming and M&E of the gender and nutrition issues	Strengthening the role of focal persons in collaboration with respective programme and cluster managers
	Management and Portfolio meetings enhanced the collaboration among Managers in Ethiopia and Coordinators in Wageningen, which has played crucial role in joint decision making for improved outputs	Ensure regularity of portfolio meetings

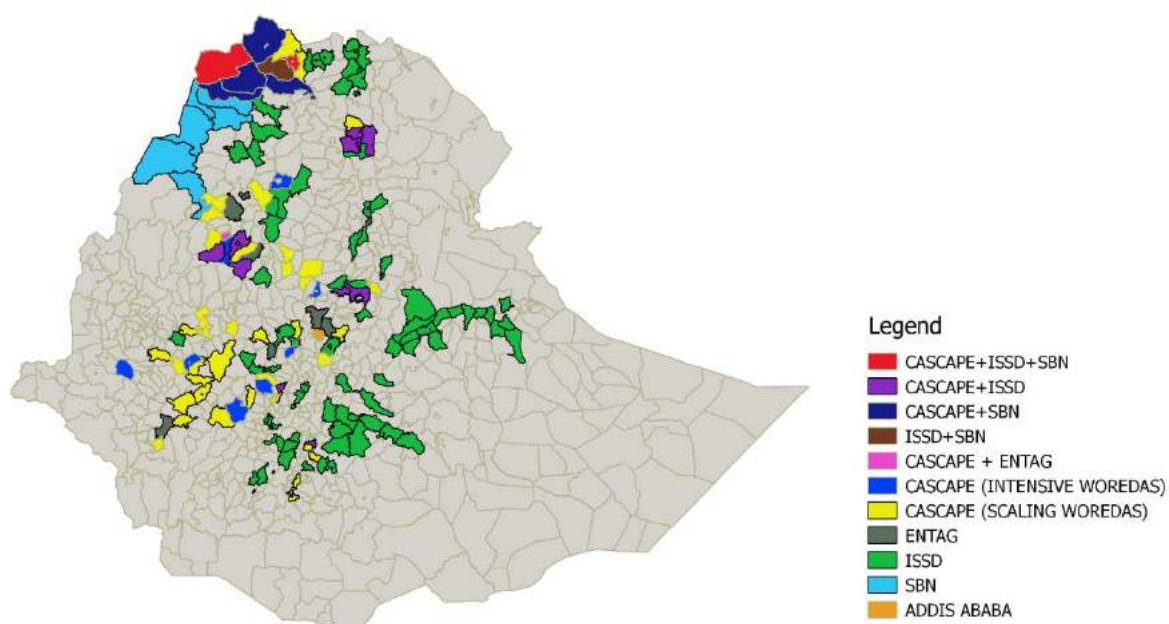


Figure 2 overview map implementation woredas of all BENEFIT programme

1 Introduction

The 2017 BENEFIT annual report presents the second year of implementation of the BENEFIT Portfolio, which unites four programmes namely ISSD, CASCAPE, ENTAG and SBN and PCU. The overall implementation of planned activities during the 2017 by the different programmes was smooth with considerable effort to implement a number of planned activities that were not implemented in 2016 due to the wider security challenges faced. Issues of gender, nutrition and capacity building were implemented through a mainstreaming approach and also implementation of specific activities by respective programmes. 2017 was a year, when the BENEFIT portfolio was invited by the MoANR to a number of policy dialogues related with seed sector development, promotion of agricultural mechanization, and market linkages in recognition to its staff expertise and demonstrated evidences at ground level.

In terms of enhancing internal efficiency, 2017 evidenced (i) the finalization of the organizational set-up of the BENEFIT Portfolio with a bilateral project legal status, (ii) operationalization of policies and guidelines including the financial and human resource management policies, and (iii) operationalization of the BENEFIT communication strategy. The set policies, guidelines and strategies have played crucial role in ensuring provision of standardized, transparent, and smooth financial and administrative services to the different BENEFIT programmes in centralized manner, which facilitated the implementation of planned activities in a relatively better manner.

This annual report is structured based on the programme result chain and considering the achievements made, challenges faced and lessons learned by the BENEFIT and its programmes. Accordingly, the report covers achievements in the areas of (i) BENEFIT portfolio collaboration, (ii) increasing quality and quantity of sustainable agricultural production, (iii) enhancing market dynamics, (iv) improving enabling environment, and (v) enhancing partnership for synergy. Selected stories of change documented by the different programmes, indicators and reach and the detailed annual reports of the respective programmes are annexed to the report.

2 Collaborative BENEFIT portfolio



“Collaboration enhanced sharing of knowledge and resources, it helped projects to complement each other. As a result, the sphere of influence of the BENEFIT projects is increasing. This fact has attracted attention of policy makers and thus the visibility of the projects is increasing. “

Dr Girmay W/ Samuel, Tigray Region Collaboration leader

Policy makers attending a National Field day at Humera jointly organized by BENEFIT, Tigray BoANR, ATA, and TARI

The BENEFIT partnership programmes work together in contributing to agricultural development in Ethiopia. This is, amongst other joint activities, done through the so-called product-place combinations. The product-place strategy aims at implementing diverse activities for a specific commodity in a specific target area by engaging the different BENEFIT programmes based in their respective areas of expertise and consideration of the whole value chain of the commodity. This strategy helps the partnership to achieve results and demonstrate evidences in an integrated and synergetic manner to farmers, practitioners and policy makers.

In 2017, there were seven product-place interventions in Amhara, Tigray, Oromia and SNNPR regions covering five priority crops. The priority crops which the BENEFIT partnership targeted with due emphasis in addressing challenges related with their respective seed system, productivity, market and policy were sesame, malt barley and bread wheat in Amhara region; sesame and sorghum in Tigray region; soya bean in Oromia and malt barley in SNNPR.

The 2017 overall performance in collaborative activities shows considerable improvement compared to 2016. This was done through better engagement and linkages in the areas of technology validation and scaling, creation of market linkages, joint monitoring and evaluation, and policy engagement for the prioritized commodities. This improvement is associated with (i) regional planning, (ii) the improvement in the ownership of collaborative activities, (iii) the improved activity management esp. in terms of assignment of individual responsibilities for the different activities, and (iv) the pro-active engagement of BENEFIT management.

2.1 Sesame: value chain development and integration of rotational crops

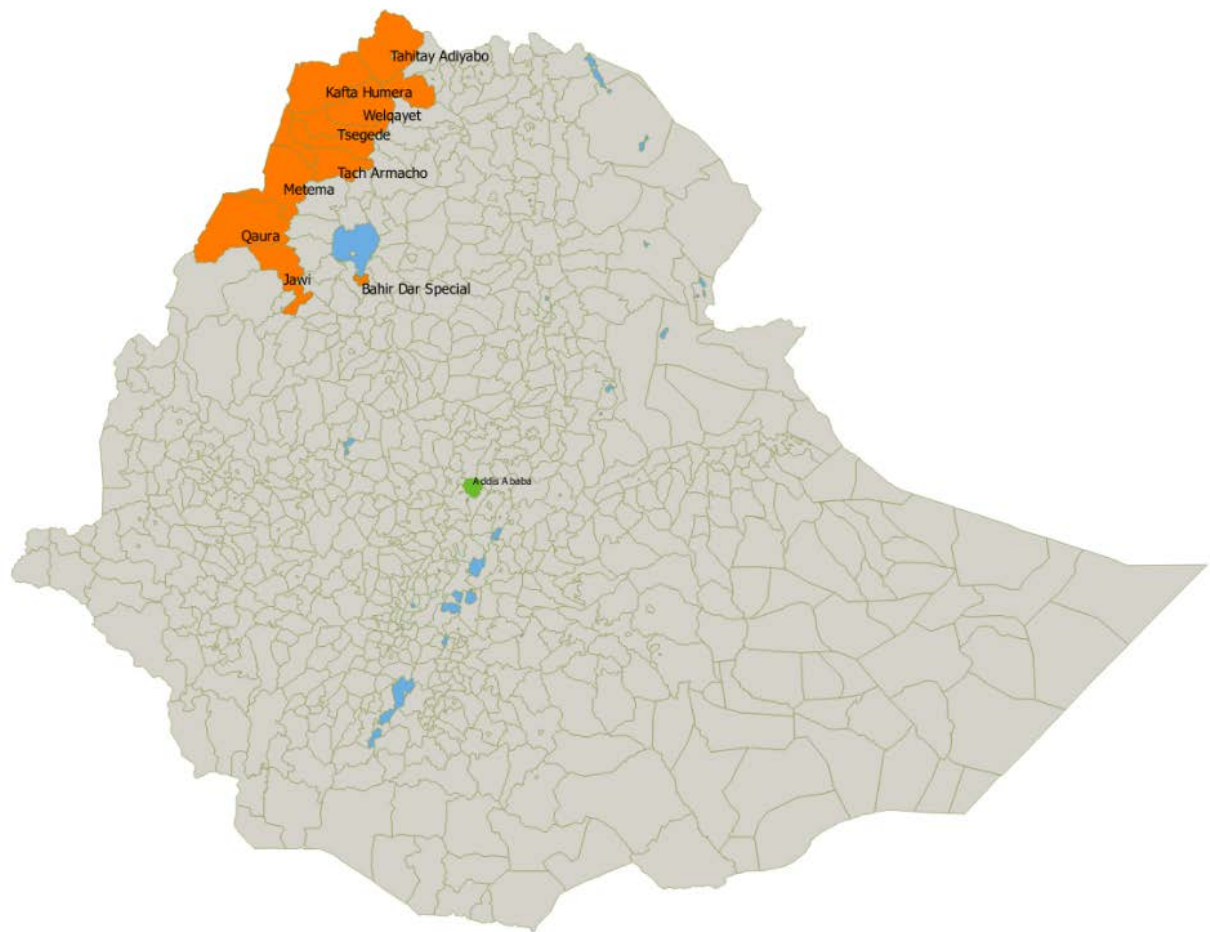


Figure 3 BENEFIT collaboration sesame

In Tigray and Amhara region, ISSD, CASCAPE, SBN and ENTAG collaborated to tackle major problems identified in sesame production and its value chain along with possibility of introducing rotational crops. The key problems were related to limited access to quality seed of demanded improved varieties, lack of awareness about available improved technology, lack of up-to-date soil information, lack of required capacity of actors in the sesame value chain, and sesame grain marketing problems. To address the mentioned problems collaborative activities were implemented by BENEFIT also engaging other stakeholders like HuARC, BoANR, NMU/WMU, TAMPA, TARI, MU, farmers, traders and cooperatives. Additionally, joint monitoring and evaluation was planned and conducted to follow up the implementation of the activities and this allowed for timely adaptation.

The joint activities conducted by BENEFIT programmes in Amhara region included training on sesame and rotational crops improved production packages, research on soil fertility improvement, strengthening of existing local seed business, create market linkage, training on sesame value addition, experience sharing visit and organizing sesame platform. The activities in Tigray (Kefta Humera *woreda*) were related with improving the capacity of stakeholders (ToT on sesame production package, grain and seed marketing and soil fertility management), improving farmers' access to quality seed (sesame and rotation crops), conducting participatory varietal selection, soil characterization and mapping of Kefta Humera *woreda*, facilitating grain and seed marketing, sesame seed treatment (pelleting), performing knowledge sharing and communication activities (organizing farmers' field day and establishing sesame platform).

The collaborative engagement in enhancing sesame production, productivity and marketing has resulted in (i) better access of seed of preferred sesame varieties, (ii) close collaboration with the

public extension programme and consideration of the demonstrated evidences like the 20 steps and financial literacy extension packages, (iii) improved market linkages, and (iv) addressing the key policy related challenges in sesame value chain. In this regard, the 2017 national field day organized together with the stakeholders' platform in Humera in the presence of key policy makers (Ministers and State Ministers of the MoANR and MoT) has played a crucial role in addressing the burning policy issues of sesame sector development.

2.2 Malt barley: deploying improved varieties and grain market linkage

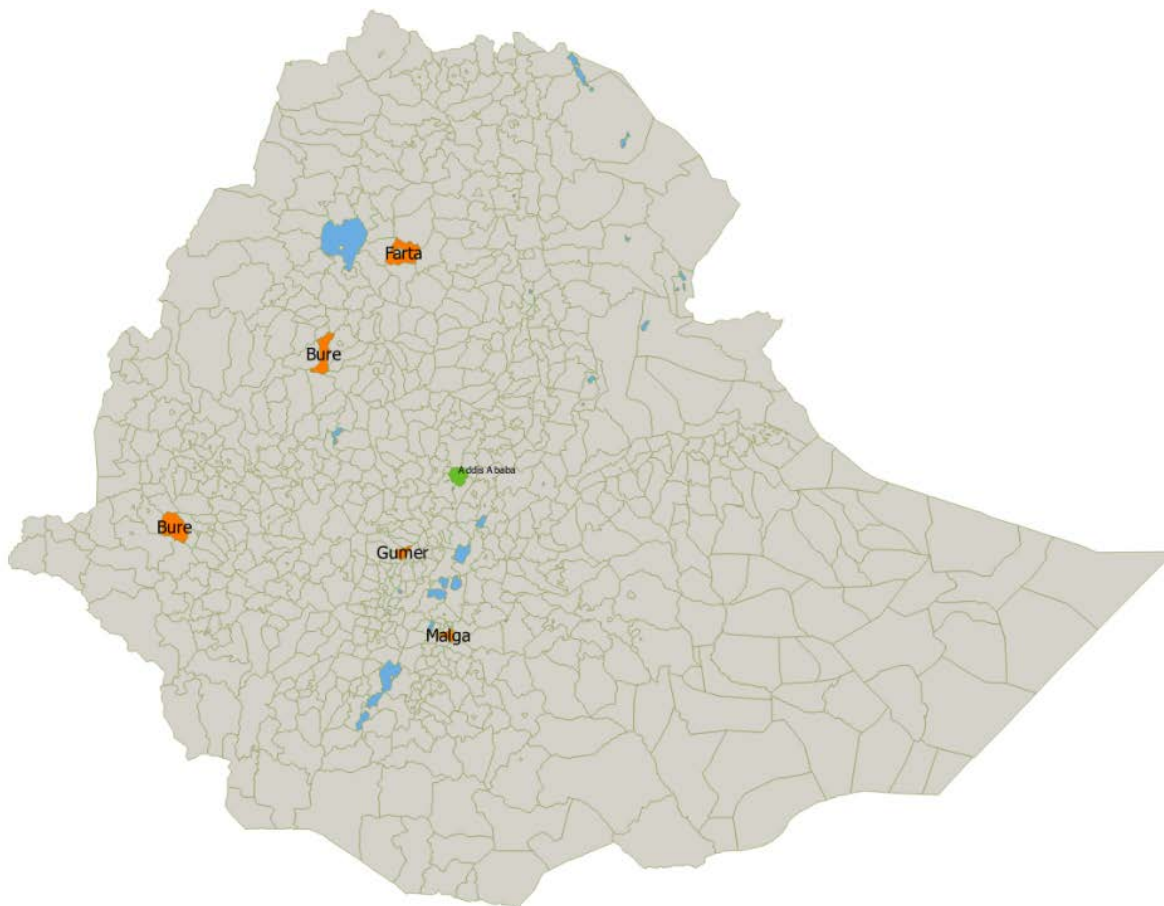


Figure 4 BENEFIT collaboration malt barley

BENEFIT programmes, CASCAPE and ISSD, have engaged in malt barley value chain developed at in selected woredas of Amhara and SSNPR regions. Linked with the respective areas of expertise, CASCAPE took the leading responsibility for testing, validating and demonstrating new technologies (variety and fertilizer rate trials on malt barley including best agronomic practices) and ISSD played a lead role in (i) provision of training of Subject Matter Specialists and DAs on malt barley seed pre and post-harvest handling, and seed marketing, (ii) improving access to seed through LSB as immediate solution to solve shortage of seed for scaling to more malt barley producers. As a result of these collaborative and aligned interventions, the following key achievements were recorded in both regions:

SSNPR

The seed producer cooperative established by CASCAPE and ISSD that mainly deals with malt barley seed production and marketing received a certificate of competence (CoC) and it has currently 900,000 ETB worth of assets and is growing tremendously. Linked with the supply of certified seed of malt barley by the cooperative, the malt barley productivity has increased to 3.8 t ha⁻¹, which is 172% higher than the average productivity level of malt barley in the southern region;

Farmers engaged in malt barley production using improved varieties are engaged in contracts to supply malt barley grain to Assela Malt factory, which has created a sustainable marketing option for smallholders. This is a win-win engagement where the malt factory is ensured of supply of quality malt barley grain and farmers on the other hand get guaranteed market access.

Amhara

The demonstrated evidences in few of the target *woredas* in terms of increased production and productivity linked with better use of quality seed of preferred malt barley varieties has facilitated the expansion of malt barley production to more *woredas* and improvement in the malt barley value chain functions;

As in the case of SNNPR, the role of CASCAPE and ISSD programmes were clearly identified, where CASCAPE's role was validation and testing of the new varieties and fertilizer rates, and enhancing the knowledge of Subject Matter Specialists and DAs on the best agronomic practice. ISSD conducted training on pre- and post-harvest seed handling for Subject Matter Specialists, training about the local seed business concept and organizing a seed producer cooperative. These activities have resulted in production and marketing of enough amounts of seed for scaling up of the technologies and coverage;

The establishment of a regional malt barley value chain platform has played a crucial role in addressing emerging issues and further development of the sector at regional level.

2.3 Soya bean value chain development

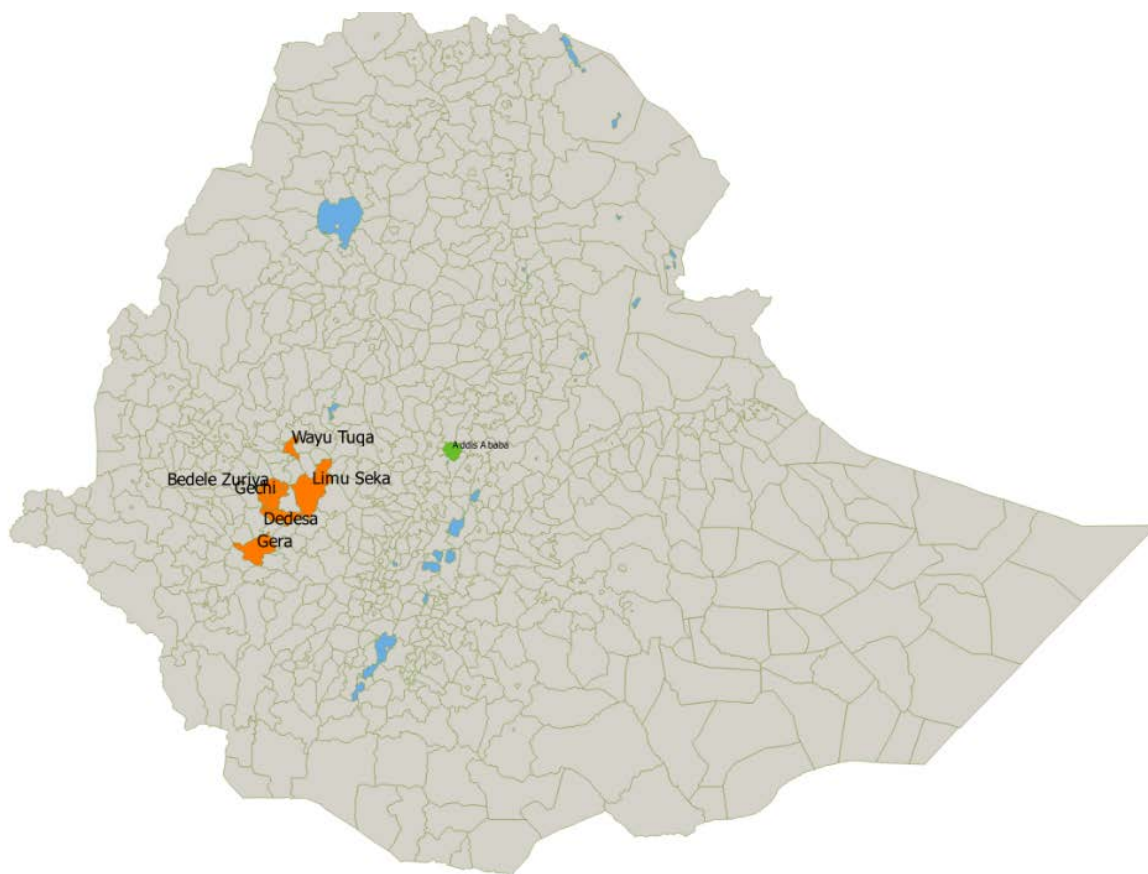


Figure 5 BENEFIT collaboration soya bean

This collaborative engagement in south-western part of the country was initiated in recognition to the importance of soya bean in the country in general and the target area in particular. The CSA data indicates that soya bean production by smallholder farmers has grown by 10 fold over the last ten years and currently, over 71,000 ha of land is covered by soya bean. A similar amount of acreage is

believed to be covered by commercial farmers. In terms of production, it is estimated that 150,000 tons of soya bean has been produced in Ethiopia in the 2016 production season.

CASCAPE, ISSD and ENTAG were involved in the initiative where the main target was increased production and productivity along with creation of market linkages. The key challenge faced for actors engaged in the sector was ensuring minimum bulk of production for economy of scale. In this effort, the following key achievements were:

- Establishment of a soya bean platform and organization of platform meetings: these successive platforms were designed and organized to facilitate and monitor the value chain development activities from production to marketing in the presence of all possible and relevant stakeholders, which were instrumental in addressing emerging issues and sharing of responsibilities among relevant stakeholders including BENEFIT programmes;
- According to the shared roles, testing of newly released improved variety of the soya bean and supporting of AGP mainly in scaling up of the improved variety where 1,424 farmers (134F, 1390M) participated in 27 of kebeles of four woredas namely Gera, Limu seka Wayu Tuka and Bedelle woreda;
- The adaptation trial for five newly introduced soya bean varieties by involving more than 16 farmers in two kebeles showed promising results; and
- The joint soya bean pre-extension demonstration field day organized by the AGP and CASCAPE in Gechi, Dhidhessa and Limuseka woredas played an instrumental role in creating awareness about existing technologies;
- To enhance the seed system, facilitation of access to EGS was done, and provided training to the individual farmers and groups of farmers on how to multiply the seed of soya bean, which ensured the production of relative good volume of quality seed of demanded variety (Ethio-Yugoslavia);
- The above achievements have resulted in improved access and production of seed at farmer's field, improved reach in terms of number of farmers through scaling and better relationship/understanding of value chain actors through the soya bean platform meetings held;
- Gender analysis on soybean conducted with the objectives to identify the differential roles, responsibilities and preferences of men and women in legume crops and/or seed production, explain the factors that can affect women and men farmers in legumes seed/ and or crop production and suggest the intervention areas on gender and nutrition for 2018 plan. Data of the analysis is already collected and analysis is ongoing;
- The key lessons learnt in 2017 are related with the importance of organizing platform meetings at a place close to the stakeholders and the important role of cooperative unions and primary cooperatives for improved performance of the soya bean value chain.

2.4 Wheat: increasing seed production and availability

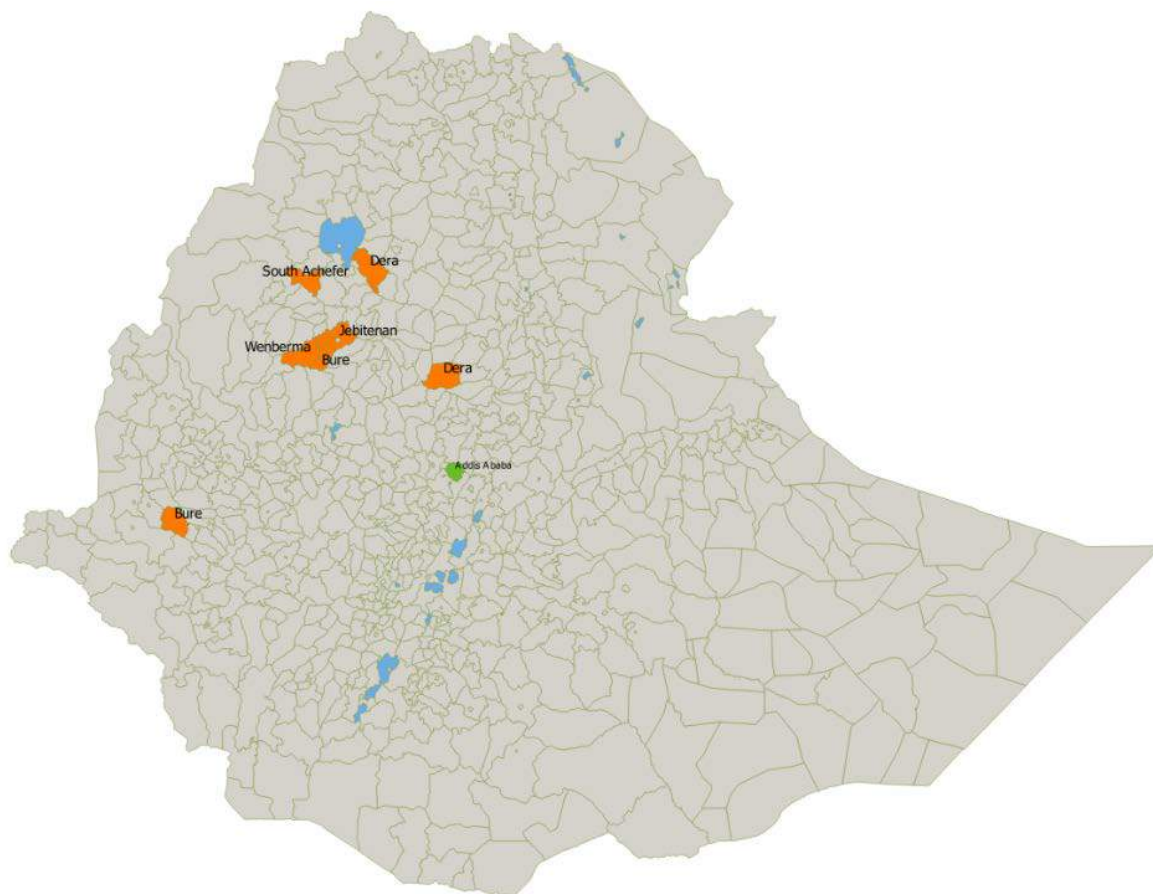


Figure 6 BENEFIT collaboration wheat

The initial idea for this collaboration intervention comes after PRA and scoping study. Farmers, development agents and experts raised that poor access to improved varieties particularly disease resistant variety was found to be one of the major wheat production constraints. Farmers are using a wheat variety called Kubsa (HAR-1685), which was introduced many years ago and recently has become susceptible to disease, particularly yellow and stem rusts. However, there are a number of recently released improved wheat varieties, which are disease tolerant and high yielding in different research centres. The overall objectives of this collaboration intervention was thus to improve productivity of wheat and income from bread wheat through introduction of newly released varieties, capacity building of DAs, Subject Matter Specialists and farmers, improve access to seed, and linkage to the market and establishing a bread wheat platform.

The major activities undertaken were different capacity building activities through training and organizing field days: training on bread wheat seed production, pest management and post-harvest handling, training for seed producer cooperative members on gender and the status of decision making power of women in seed producer cooperatives', and a field day at Serten Enideg seed producer cooperative. The cooperative has been supported by ISSD for the last years in the areas of infrastructure, capacity-building, and market linkages, produced a new wheat pre-basic seed variety called Ogelicho on 69.5 hectares of land. The field day attracted 42 participants drawn from research centres, BENEFIT collaborators, bureau of agriculture, partner universities, Cooperative Promotion Agency and other informal seed system implementing woredas.

Awareness has been created for women headed households and youths about gender issues in seed production. When the trained development agents work together with local seed businesses, obtaining a certificate of competence will be made easy for the local seed businesses. In this way the collaborative programmes will have a big impact on the seed production, marketing and dissemination specified crops.

2.5 Sorghum value chain development

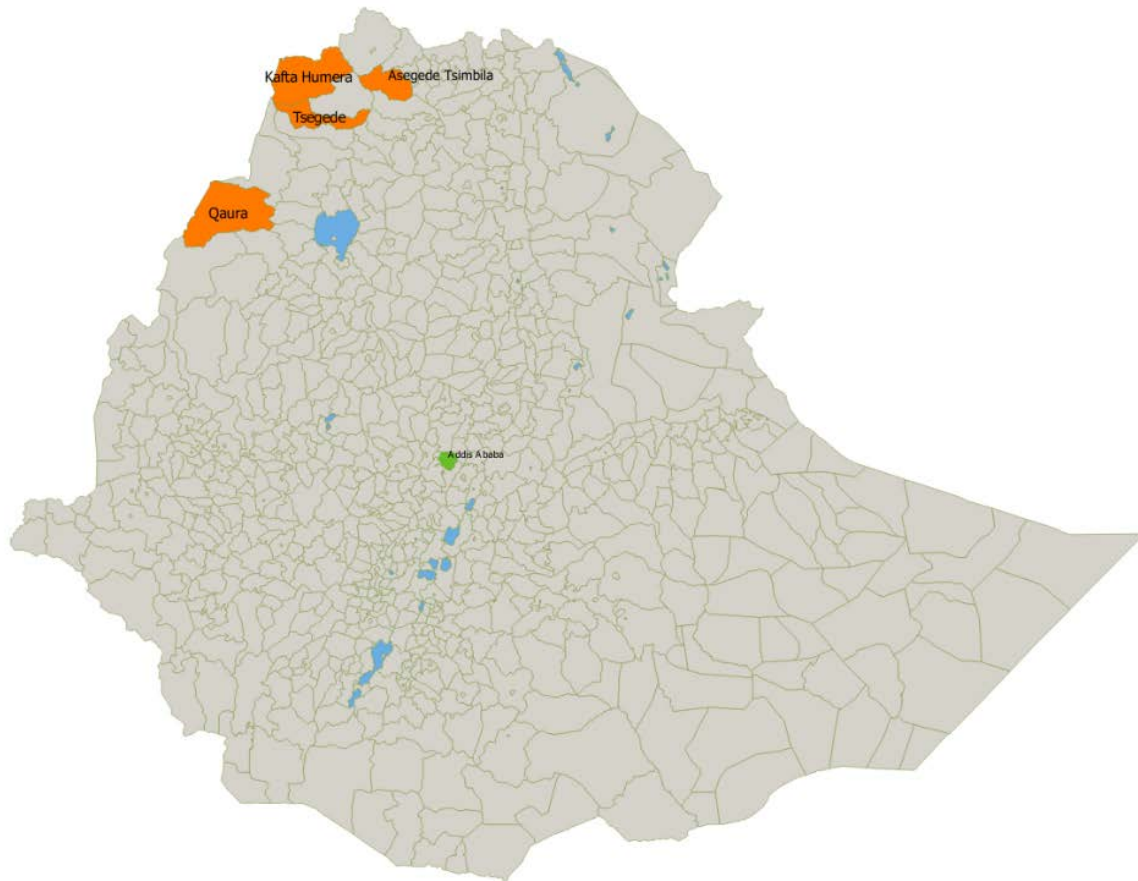


Figure 7 BENEFIT collaboration sorghum

The collaborative engagement of the BENEFIT programmes in Tigray targeted the development of the sorghum value chain. This was linked with addressing the key challenges which were lack of adequate improved varieties, striga infestation, lack of market and limited capacity of woreda Subject Matter Specialists in sorghum value chain development,.

To address the mentioned problems, in 2017, key interventions along the value chain were identified and HuARC, SMARC, BoANR, TAMPA, TARI, MU, farmers, cooperatives and cooperative unions were involved with clear roles and responsibilities.

Accordingly, the joint effort has resulted in (i) testing and validation of diverse sorghum technologies, (ii) demonstration of better performing varieties for scaling in the next season, (iii) improved access to quality seed of preferred varieties, and (iv) provision of training to direct beneficiaries (farmers), Subject Matter Specialists and DAs on technological options and value chain development.

2.6 Challenges, opportunities, lessons learned and way forward

2.6.1 Challenges

- Given the selection of priority commodities that have importance at national level either in terms of foreign currency generation from export (sesame), import substitution (malt barley), or food security (sorghum and pulses), there is a need to strengthen the engagement and alignment with other ongoing initiatives for more synergy. The challenge was the limited attention given, which is expected to be strengthened in the coming years;
- The planned collaborative activities for chickpea and faba beans were not implemented since the supply of seed of required improved varieties could not be ensured.

2.6.2 Opportunities

- The importance of commodities identified in terms of the attention given at national level for ensuring food security, import substitution and enhancing export, provides an opportunity to collaborate not only among BENEFIT programmes but also with a number of other initiatives for synergetic impact;
- Existence of diverse public and non-public actors including private ones along the target value chain provides an opportunity for the crucial role of stakeholder platforms that BENEFIT collaboration targets to facilitate for the identified commodities;
- The good working modalities of BENEFIT partnership with the MoANR at different levels is a good opportunity for better presentation of policy options with evidence.

2.6.3 Lessons

- The achievements of the collaborative activities among BENEFIT programmes were diverse across the different target commodities. Better performance was recorded for sesame, malt barley, soya bean and sorghum. This was highly associated with the extent of commitment of respective BENEFIT programmes at cluster level;
- Inadequate planning of the different required activities contributed to poor performance like the shortage of seed of demanded varieties for faba bean and late start of implementation for chickpea;
- Stakeholder platforms are found to be important vehicles in commodity value chain development. However, they demand better identification and engagement of relevant stakeholders, professional facilitation of platform meetings, and proper identification of platform meetings if key actors are to participate;
- The need for regular oversight by BENEFIT programme managers and coordinators was evident for better effectiveness of collaboration framework at cluster/regional level.

2.6.4 Way forward

- Support facilitation of joint intervention planning with clear roles and responsibilities, allocation of required budget, and implementation plan for the identified value chains in each of the clusters;
- Facilitate managers of the respective BENEFIT programmes to continue playing their active leadership and advisory role in collaboration interventions;
- Enhance the documentation of demonstrated evidences in the respective value chains for national level policy engagement together with other similar initiatives.

3 Increased quality and quantity of sustainable agricultural production

ISSD, CASCAPE, SBN and to a small extent also ENTAG, contribute through various activities to the objective of increasing the quality and quantity of sustainable agricultural production in 2017. ISSD works on increasing availability and use of quality seed of new, improved or farmer preferred varieties. CASCAPE does so through developing best fit agricultural practices and making these available for dissemination, working together with *woredas* to increase the capacity to develop and implement agricultural development plans, including strategies for scaling and a focus on diversification of agricultural production with attention to nutrition. SBN works on sesame production and cost reduction. For detailed information, please see the annexes for each of the programme reports.

Summary achievements



1,750,775 farmers reached with increased productivity (direct and indirect)

112,228 farmers reached directly: 18,598 ♀ and 93,720 ♂

1,340,439 farmers reached with improved access to input markets

86,085 persons reached/trained with improved technology and skills:

25,250 ♀ and 60,835 ♂

241,228 trained farmers in sustainable agricultural production & practices:

50,185 ♀ and 191,043 ♂



564.858 of hectares of farm land used more eco-efficiently (direct and indirect)

3.1 Outcomes achieved by BENEFIT programmes

ISSD – Increased availability and use of quality seed

The availability and use of quality seed of new, improved and farmer preferred varieties has increased from 733,288 smallholder farmers in 2016 to 1,333,768 in 2017. This has been made possible through ISSD Ethiopia's support to 5,995 individual smallholder farmers, 149 seed producer cooperatives (SPCs) and 20 private seed producers (PSPs). In 2017, SPCs and PSPs produced 22,394 t true botanical seed; 3,020 t seed potatoes; 13,000 disease free potato mini-tubers; and 18,720 papaya, orange and mango seedlings. Seed demand has increased for several new, improved and adapted varieties. In total, 235 varieties of 10 crops were deployed, tested and promoted at over 60 FTCs and on 5,995 smallholder farmers' fields. The business orientation and financial viability of four SPCs and two PSPs has been enhanced in 2017 by obtaining certificates of competence (CoCs) in seed production, marketing and distribution. Out of the 25 SPCs and 20 PSPs supported directly by the programme, respectively 13 and 17 have obtained CoCs. Of a sample of SPCs and PSPs taken in 2017, respectively 89% and all 10 were profitable in their business. Women have improved access to and use of quality seed of their preference compared with 2016 through their increased membership in SPCs and participation in the programme in general; 12% in the former and 118% in the latter case respectively. Crop and varietal diversity incorporated in the programme has increased tremendously, representing an important contribution to food and nutrition security. A total of 235 varieties of 10 crops were evaluated under farmers' conditions through PVS and crowdsourcing in 2017 and quality seed of 116 varieties of 27 crops was produced by SPCs and PSPs.



Getachew Dessalew is a progressive farmer from Kolbe SPC. His story tells that engaging in seed production is noble activity with a large benefit: *“The demand for certified seeds is growing every time. Farmers have realized the importance of using certified seed related with better yields as compared to the uncertified seed sources”.*

The benefits are evident in Obbo Getachew’s own household. Through his membership in Kolbe SPC, he says his family is now food secure. Further, the additional income he gets from selling higher-quality seed, enabled him to construct two small iron-sheet houses, helped him buy five new oxen, and a new solar power source. He’s also been able to build up a reserve in the bank for the future.

But for Obbo Getachew however, *“the most important outcome is that we can rent a house in town for our children to stay so they don’t miss out on their education”.*

CASCAPE - Best fit agricultural practices & Scaling and woreda capacity development

In 2017, CASCAPE tested and validated 51 technologies on cereals (maize, wheat, teff and barley), pulses (soya bean, faba bean), vegetables and fruits (potato, onions, papaya). The programme reached over 200,000 smallholder farmers; directly through our testing/validation pilot scaling trials and pre-extension demonstrations (4508 farmers) and indirectly through field days (53,692 farmers) and scaling support activities through woredas (130,687 farmers). About 2,500 extension experts and DAs were trained to train farmers in uptake and implementation of best fit practices. About 30,000 ha of agricultural land was planted with CASCAPE validated best-fit practices achieving higher yields. Compared to the regional CSA data, average yield increment was significant ranging from 67-167% for cereals with highest for malt barley in SNNPR, 252% for potato (Belete variety) and 21-42% for beans with the highest for soybean in Jimma. Twenty existing best fit practice manuals were promoted through PEDs and scaling support activities while five new ones were prepared in 2017. In collaboration with CDSF, two best-fit manuals (papaya in Tigray and food barley in Amhara) were translated into simplified extension manual for DAs in collaboration with CDSF. Nutrition-sensitive agricultural practices have been promoted by establishing 145 home gardens that are managed by female members of the households. Those home garden enable households to access a diversified diet in the form of leafy vegetables, fruits and other nutrient-dense products. These and other testing, validation and scaling/PED plots have been visited by over 52,000 farmers that were involved in field days in 2017 thereby creating awareness about the new innovations and best fit practices. Subsequent to the uptake of the best-fit technologies and enhanced agricultural productivity, livelihoods are being changed.



“Senate wheat variety is very productive and disease resistant, really I have never seen such amount of yield of wheat from such small “timads” of land using our own local varieties, now I have a potential to purchase enough amount of fertilizers, improved seeds of maize. I have no shortage of food in my house for my family member, and I have a plan to buy a cow by selling 4.00 quintals of wheat to about 5,000.00 birr to keep the continuation of the benefits I am getting from CASCAPE programme and to always remember the contribution of CASCAPE in my life. ”

ENTAG

Target beneficiaries of ENTAG are mostly companies, commercial farmers and farmer unions. However, through its activities the program, indirectly has been working on the quality and quantity of sustainable agriculture. To improve the quality and quantity of agricultural production in four of its

priority subsectors, ENTAG has been working on provision of technical assistance, trainings and innovation funds to scale up the financial and technical capacity of private business companies, private sector associations, farmer unions, commercial farmers, government agencies and research centres. These interventions of ENTAG, indirectly improve the quality and quantity of sustainable agriculture at small holder and commercial farmers level. The programme organized 15 platform meetings that initiated discussion on pertinent challenges and opportunities in relation to improving quality and quantity of agriculture sustainability. These platform meetings also highlighted nutrition and social inclusion issues in the Ethiopian poultry, aquaculture, legumes and spices sectors. Through its innovation fund component and capacity focused activities, ENTAG has enhanced the production potential of commercial farmers and small holders. In this reporting year, 14 companies operating in Ethiopia won the innovation fund. The total budget approved for this year's innovation fund is around €327.974. ENTAG has been working on competence development of private companies, commercial farmers and small holders by skills- and awareness building through exposure to new technologies and training programmes. Representatives of 270 women smallholder farmers producing spices in an IBM pilot project have been trained to increase the quality as well as quantity of spices they produce.

SBN – Sesame production cost price reduction

SBN works intensively with stakeholders to improve yield and quality. In collaboration with BoANR, 1,623 experts were trained on Good Agricultural Practices (GAP), who cascaded the '20 steps' to 92,395 farmers. Recommended practices were scaled on 88,985 smallholder and 29 investor farms. MRY/MRR studies ascertain an average 100% increase and reduction of production costs per quintal by >25%. As part of the pilot, weather forecast information was provided to 1,520 farmers who used it for field activity decisions. Rotation crops were broadly demonstrated. The production of malt sorghum and soya further boosted. Mung bean is coming up. Increase in area and volume is expected to attract more buyers, leading to income improvement and nutrition diversification. Evaluated Purdue Improved Crop Storage (PICS) bags can minimize weevil damage to sorghum and mung bean and sesame seed bug in sesame, but adoption needs further scaling. Financial literacy training supported close to 7,000 farmer households with financial record keeping and do cost-benefit analysis. There are clear signs that this is making farmers more eligible to credit. Internal cooperative on-lending of marketing credit improved farmers' access to affordable input credit, benefiting 2,995 farmers from 7 cooperatives. Farmers' credit costs reduced from more than 50% to 15%.



Mr. Gurshaw Yilma: *"The SMS message alerted me to do harvesting and threshing earlier as rain was expected. Just after finishing the activities it started raining as forecasted in the SMS."* Due to the received weather information Mr. Gurshaw was able to reduce post-harvest losses which might have occurred due to rainfall."

3.2 Mainstreaming social inclusion and nutrition

3.2.1 Social inclusion

ISSD plans to increase availability and use of quality seed of new, improved and/or farmer preferred varieties in informal system, which provides the major part of the seed in Ethiopia. Raising the access and use of quality seed by women in informal seed systems is a critical intermediate outcome in this pathway. Womens' membership in SPCs and participation in the programme in general have increased 12% and 118% respectively, since 2016. Women membership in the different SPC committees is also increasing as result of awareness creation. For instance, of the 76 positions available in SPC (sub) committees in Tigray, 18% are occupied by women.

The baseline surveys conducted for informal seed systems found that most women rely on informal networks of exchange as their main source of seed, but that not all women have equitable access to these networks. In 2017, 3,175 women farmers each obtained quality seed of three different varieties to evaluate against their preferences through crowdsourcing. They are expected to share the seed they have harvested with three to five other women or 9,525-15,875 in total.

Women farmers have also been strongly encouraged to participate in and host field days. In each *woreda* where crowdsourcing and PVS took place in 2017, plots owned by women were visited. In Tigray for example, 441 women farmers hosted visitors and demonstrated their crop at their fields.

The gender analysis conducted in the first phase of **CASCAPE** indicated that female farmers are involved in most agricultural activities besides their domestic chores, their contribution is not well recognized so that their access to extension services, training and finance is limited.

In order to reduce the work burden of female farmers and enhance their productivity in agriculture, CASCAPE tested labour saving technologies such as row weeder, milk churner and enset scraper and enset squeezer. For the row weeder, which was provided by ATA, it was found that the prototypes need modification. Taking lessons from this experience, an inventory of labour saving technologies available in the country, mainly from ATA and Melkasa Research Centre, was made. As a result several technologies were identified to be tested on farm in 2018.

The programme emphasized training on gender and the participation of female farmers in field days and stakeholder workshops organized as a means of sharing knowledge and experience to female farmers. Accordingly, in 2017 female farmers participation in the field days and stakeholder workshops reached 17% and 22% respectively, which is tremendous achievement over the past years. In 2017, a total of about 40,000 women have participated in the programme accounting for about 21% of the total. Remarkably, participation of women in extension led PEDs is much lower at 9.8% than participation of women in CASCAPE led scaling trials at 20.4%.

ENTAG has supported 3 female owned poultry farms to strengthen their production and encourage their participation in the poultry platform and association.

Preliminary finding of the gender analysis study conducted by **SBN** identified the different roles men and women play in male and female headed households, their access to various agriculture services, finance, control over resources and decision making. Results indicate that income is controlled and decision making is largely done by the man in male headed and the woman in female headed households. Similarly, women and youth have limited access to extension services and credit. More information is expected to be generated in social inclusion from the planned household survey in 2018. To ameliorate the current scenario specifically in the male headed household, awareness creation activities were conducted at various levels and events. The effort will further be extended through workshops and meetings in 2018 and onwards.

In 2017, targeted training sessions were organized to improve productivity of sesame and rotation crops under female headed households and young farmers fields, reaching approx. 17,000 youth and 16,000 women. Efforts will be made to reach more women and youth in collaboration with stakeholders. In the roll-out of financial literacy trainings, 14% of the trained farmers (6,843) were female. Husband and wife often record their costs and children often help them with reading, writing and calculations. This household and family farming perspective contribute to improved internal communication and transparency among family members. About 22% (2,995) of female farmers, members of the seven selected cooperatives in 2 unions (Setit and Metema) accessed input credit from the CBO facilitated guarantee fund. Benefit-SBN will pursue its effort to reach more female and youth sesame and rotation crop farmers in two more unions and 10 primary cooperatives.

Labour is a crucial input to sesame production, harvesting, threshing, and loading/unloading. Labourers work and live under poor and unhealthy conditions (absence of shelter, health services, clean water, nutritious food); very weak labourers and employers relationships; not clearly defined agreements and base only on trust; use very primitive tools; lack knowledge and skill to perform field activities professionally and efficiently. Due to the successful information campaign and the good security situation, many more labourers came to the sesame production zone than in 2016. This led to a strong decrease of wages per day or labour costs per harvested hilla (roughly 50% of costs of 2016). As labour costs make up the largest part of the production costs, this was of course good news

for the farmers, who are making higher profits. Although the wages were still above the (low) official minimum wage, the 2017 season was certainly deceiving for the labourers concerned.

The Ethiopian sesame zone is about to embark on broader mechanization. This will have consequences for labour: higher demand for skilled labour and lower demand for unskilled labour. The mechanization process design is an important challenge for finding the balance between a competitive and inclusive sesame sector. Benefit-SBN will favour inclusive mechanization options, for instance small tractors, machinery rental services and/or youth groups providing row planting services with a chest-held row planter.

3.2.2 Nutrition

Improved food and nutrition security of farmers through increasing crop and varietal diversity is the intermediate outcome for **ISSD** under this pillar. Crop and varietal diversity has increased tremendously in the full portfolio of seed products incorporated by the programme. This represents an important contribution to food and nutrition security. A total of 235 varieties of 10 crops were evaluated under farmers' conditions through PVS and crowdsourcing in 2017. Collectively, quality seed of 116 varieties of 27 crops was produced by SPCs and PSPs in 2017 (Figure 2), which is a 16% increase in varieties and 4% increase in crops over 2016. In 2017, SPCs produced quality seed of 98 varieties of 20 crops compared with 38 varieties of 19 crops by PSPs.

Among other crops in the portfolio are ten legumes, namely: dekokko; cowpea; chickpea; faba bean; field pea; groundnut; haricot bean; lentil; mung bean; and soya bean, which are crops relatively dense in vitamin-B, potassium, iron and magnesium, and are an important source of protein and dietary fibre. A total of 634 women and 766 men received seed of legumes through crowdsourcing trials in 2017, who are expected to share with 1,902 and 3,170 women and men respectively. The 18,720 seedlings of papaya, orange and mango produced in 2017 promise future harvests of micronutrient rich fruits.

More than 15 early maturing varieties of food barley were (re)introduced through PVS and crowdsourcing into local cropping systems in 2017. Since these varieties mature early and have the potential to escape terminal drought, they will continue to be promoted by the programme for climate smart agriculture and reducing food gaps. As many as 43 sorghum and 18 finger millet varieties were also deployed, which have the potential to boost farmers' resilience in the face of drought and climate uncertainty.

CASCAPE is contributing in diversifying agricultural products and improving access to the small holder farmers through conducting model home gardens, fruits and legumes. CASCAPE came to implement these interventions after seeing the results of DDS survey conducted in 2015 in 10 high intensive *woredas* of CASCAPE. The study found out among others vegetable, fruits and legumes are the major limiting crops in the diet and main causes of malnutrition in the areas. Accordingly, to help the households in diversifying their diet, CASCAPE piloted a home gardening activity in all 10 *woredas* in order to improve the access to such technologies, increase awareness of households to implement home gardens and cascade the knowledge to other farmers too. Out of 160 participants, 149 were female farmers managing home gardens (Table 2). Hawassa University assessed the proportion of sold and consumed vegetable produce at 34,6% and 65,4% resp. When comparing each vegetable consumed and sold: the percentage of head cabbage (36.8%) consumed is higher than that of carrot (29.75%) which made the latter a potential cash generating horticultural crop. Jimma University assessed women dietary diversity score for 10 food groups based on 24 hours recall (USAID/FANTA, 2014) on two groups (vegetable growing women participating in CASCAPE activities and a control group). The results showed that for the women participating in vegetable growing the mean dietary diversity was 5 ± 0.96 as compared to 3 ± 0.75 for the control group¹. The intake of vitamin A-rich dark green leafy vegetables and other vitamin A-rich vegetables was higher among beneficiary women as compared to control women.

¹ A DDS < 5 reflects an inadequate diet

Table 2 Home garden activities per university cluster

Cluster	No of home gardens	Nutrition dense crops promoted
AAU	32	Swiss chard, lettuce carrot and red beets, chickpea
BDU	18	papaya, mango and avocado fruits, faba bean, sweet lupine and potato, faba bean, haricot bean
HU	70	Faba bean, chickpea, field pea, haricot bean, head cabbage, carrot, mango, avocado and banana
JU	30	Faba bean, soybean, papaya and vegetables
MU	10	beetroot, carrot, cabbage, lettuce, potato, faba bean, mung bean and papaya
Total	160	

ENTAG's support to national legume processors and buyers through direct market linkage with suppliers (Unions, Primary Cooperatives, Commercial Farms), notably through the Soybean Trading Platforms, facilitates a business of commercially nutritious products on one hand. On the other hand, ENTAG supports small-holder farmers producing soya bean and other legumes by providing them with direct market and potentially a better price. Especially when further scaled up, this will help both small-holder farmers (through enhanced incomes) as well as consumers (through purchase of nutritious products of the domestic food processors) on increased social inclusion and nutrition mainstreaming through their businesses. The fifth aquaculture platform meeting and other sectoral meetings were organized to specifically address the issue of nutrition in this subsector, where participants from various institutions participated in the meeting and discussed the high nutritional benefits of fish and the need to promote its consumption within the community.

The promotion of rotation crops by **SBN**, such as cotton, soybean, mungbean and sorghum in the cropping system is anticipated to trigger interest of women to become involved in rotation crops production, processing, possibly marketing and improve income. The promotion of rotation crops diversifies farming activities and also reduces production and marketing risks. To support the endeavour, in collaboration with 2SCALE and PUM two women groups were organized in Tach Armachiho and Dansha *woredas* and trained on recipe preparation and marketing development for household nutrition improvement as well as potentially increasing their income. In collaboration with partners, preparations were started in 2017 to support home gardens in Metema and Tsegede.

3.3 Challenges, opportunities, lessons learned and way forward

During the implementation of the different activities targeted to ensure increased quality and quantity of agricultural production in a sustainable manner, there were a number of challenges, opportunities and lessons, which were considered for the 2018 planning processes. These are presented below, for the same for the specific programmes, we refer to the annexes.

Challenges

- Challenges related with ensuring sustainable supply of required inputs esp. quality seed of preferred varieties of crops; affordable early generation seed; pesticides for specific pest – crop combinations;
- Limited access to credit, funding support and thereby investment especially for small holder farmers and emerging entrepreneurs;
- A public service sector hampered by weak coordination and top-down approaches; limited engagement of relevant and senior public officials in the different platforms, which often resulted in slow reaction from government bodies in taking up points raised at platform meetings;
- The disconnect between suppliers and buyers hampers value chain development; difficulty related with contract enforcement and/or challenges faced to arrange contracts due to limited volume of

supply; at the production side, low productivity and poor quality are the major challenges i.e. of the Ethiopian sesame subsector. This requires a market system reform;

- The ETB devaluation and the low labour costs of 2017 are likely to reduce farmers' motivation to invest in mechanisation.

Opportunities

- Cooperation of local government, including AGP, and development agents in; PVS and crowdsourcing; mobilization of human, financial and logistic resources by partners (i.e. CDSF) for scaling; creation of institutional linkages;
- Emerging collaboration with other BENEFIT programmes has synergized engagement at regional level, which is demonstrated in for instance promoting soya bean value chains;
- The year 2017 was a good production season, leading to a significantly higher total production and higher average yields per hectare. At the close of the year, ECX prices for commodities such as sesame, were also relatively high;
- Linked with the good production season and better prices in 2017, farmers have enjoyed income improvement and loan reimbursement. This will help to encourage professional loan disbursement by financial institutions and responsible loan use by farmers, which in turn would help to raise adoption levels of good agricultural practices;
- Increased domestic demand for rotation crops (sorghum, mung and soya bean) is creating opportunities for food and nutrition diversification, soil fertility management, giving specific attention for women and youth and farmers' investment in GAP on their farms. Mung bean production is going to sufficient scale for raising external buyers' interest and ECX marketing;
- PVS and crowdsourcing created demand for several underutilized new, improved and adapted varieties in the country; and SPCs are more widely recognized by government as serious players in quality seed production and marketing.

Lessons learned

- Crowdsourcing approach demonstrated to be rapid means to deploy a large number of new and improved varieties cost-effectively to farmers; scaling crowdsourcing activities in 2018 requires an injection of new, nutrient dense and drought tolerant germplasm;
- Increased attention to gender generated new understanding of traits consumers appreciate such as: colour, aroma, taste, nutrition, process- and cook-ability, and kernel weight for the different crops;
- Joint planning was instrumental (i) to ensure organic scaling of demand driven technologies and institutionalization of innovations, (ii) saves both budget and time and (iii) helps to effectively utilize available human capital to realize the planned activities; there is a need to strengthening the linkage with input suppliers ahead of the planting season; and the farmer group approach can be well linked to kebele planning, financial literacy training, mechanisation, cooperative marketing and other topics;
- Value chain development, nutrition, gender inclusive, staple crop for food security, animal feed/forage crop, climate resilient approaches etc. needs to be commodity and site specific – a blanket approach does not work;
- Financial literacy training is well accepted by PCs, farmers and partners. Further scaling of financial literacy training requires more intensive collaboration with, and commitment from different stakeholders; financial literacy training could be scaled up (possible integration in extension strategy); the 20 steps approach for sesame production gets full institutional support at different levels, but it is only partially adopted because of insufficient input credit;
- Farm business record keeping makes farmers more eligible to loans. Tailored loan management training and farm record keeping practices help to develop trust between farmer, PC's and unions on the one hand and financial institutions on the other hand.

Way forward

- Enhance the business orientation of SPCs, PSPs, Amhara Seed Enterprise (ASE), Oromia Seed Enterprise (OSE), South Seed Enterprise (SSE) and Ethiopian Seed Supply (ESS, formerly ESE) through supported promotion activities and direct seed marketing (DSM);
- Shift away from testing and experimentation to scaling, capacity development and institutionalisation of: PVS and crowdsourcing approaches; best-fit practices; financial literacy training;

-
- Explore business models for vegetable seed supply to home gardening supported by the CASCAPE and SBN programmes;
 - Exercise more inclusive grant making for improving smallholder farmers' access to quality seed using a new grant making canvas and criteria with an additional focus on women;
 - Policy dialogue and thematic platforms will be strengthened by BENEFIT partnership; follow up on and support the pending policy reforms to improve the performance of priority sectors in terms of improved quality and quantity of production; in addition to the sesame expert and the seed expert, two senior experts in extension and soil will be seconded to the MoANR;
 - Facilitate efforts on demand and supply profiling to show the gap between the two and shed light to value chain actors where they should improve the performance of their operations; continue awareness creation of the private sector and its partners in sectors on the level of quality demanded by local and international buyers.

Facilitate: mechanization options through possible business models; the application of weather forecasting, climate adaptation and crop modelling.

4 Improved markets and trade

ISSD, ENTAG and SBN, contribute through various activities to the objective of improved markets and trade in 2017. ISSD does this through enhancing performance of the seed value chain. ENTAG aims to increase performance of key sub-sectors and B2B. SBN support the development of sesame products and markets. For detailed information, please see the programme specific annexes.



1736 farmers reached with improved access to output markets 30 ♀ and 1706 ♂



260 companies with supported plan to invest, trade or provide services

4.1 Outcomes achieved by BENEFIT programmes

ISSD – Enhanced performance of the seed value chain

The performance of the seed value chains of barley; both hybrid and open pollinated maize varieties; sorghum; teff; wheat; dekokko; lentil; haricot bean; sesame; and potato seed value chains has been enhanced by at least 44 strategic linkages between seed producers and input and service providers established and/or strengthened in 2017 and by 25 piloted demand driven interventions that were evaluated positively and are currently being scaled. At present, 50 demand driven interventions are being piloted, consolidated and/or scaled in collaboration with 25 or more partners at national and regional state levels. Eight bottlenecks are being addressed in these 11 seed value chains. Furthermore, business opportunities for five Dutch/international companies in the Ethiopian seed sector have been increased. Enza Zaden/GAWT successfully concluded a campaign to popularize three new hybrid onion varieties in collaboration with ISSD Ethiopia. Nunhems, Syngenta, Florensis and Bejo Zaden all benefited from ISSD Ethiopia's advocacy work on seed trade regulatory issues.



Nigussie Girma researcher at DzARC: *“This is a successful partnership; the centre has a shortage of land for seed multiplication, while Magartu SPC has a scarcity of improved quality seed for member farmers”. This is a new approach and amazingly the SPC manages their fields very well. We recognize now the capacity of the SPC to produce quality EGS as a local seed businesses. Hence, this collaboration is a remarkable approach to halt the challenges encountered the two organizations”.*

ENTAG – Enhanced performance of key sub-sectors and increased B2B

In 2017, the ENTAG programme worked on a range of activities on backward to forward market linkage, trade and investment integration among local and foreign agribusiness companies. The programme organized 4 trade missions in poultry, spices and aquaculture to Thailand, Rwanda, India and Egypt. These trade missions brought private companies, farmers unions, government agencies and experts from Ethiopian side as well as buyers, processors, traders, producers and government institutions from the side of visited countries, together, to share experience and create market linkages among participant companies. ENTAG has been supporting the private sectors in Ethiopia with supply and warehouse management, quality inspection and efficient Agro-logistics. More than 120 private companies were supported on access to improved markets and trade through its frond desk and hands on advisory service. As part of the trade missions and Business to Business (B2B) component, ENTAG has also been working on match making and market integration among Ethiopian and foreign agribusiness companies. In 2017, the programme successfully established market linkages for 21 Ethiopian private companies with Indian, Dutch and other foreign companies. In addition, the programme also established 10 backward integrations among Ethiopian private companies, commercial farmers and small holders. ENTAG has also been working on contract facilitation and trade negotiations among local companies, farmers and foreign buyers and traders. The annual sales turnover of four spices companies has increased by USD 1.27 million USD from ENTAG support to the companies resulting in 1,231 MT of turmeric production and export. The programme also financed 14 innovative projects, among them the 13 projects are going to work on marketing and trade in agribusiness.

Mr. Dejene G/Meskel, owner of Dejene G/Meskel General Export:
"Since we know ENTAG, our turmeric export market and backward integration with suppliers has been improving. Through ENTAG we are now able to find the trusted end users (buyers) and our visibility as an exporter has been enhanced. We took part in the trade mission to India, which helped us to link with three Indian companies and make of \$300, 000.00 from turmeric export in 2017".



SBN - Development of sesame products and markets

CBO provided 10.67 million ETB marketing credit, facilitated by a joint Agriterra/SBN guarantee fund, which strongly improved cooperative presence in spot markets. Cooperatives received capacity building trainings related to loan management and internal resource mobilization. High repayment rates and promising saving mobilization are attracting the interest of several banks to provide loans to cooperatives. Successful initiatives for capital generation included selling new shares and using an idle cleaning machine to provide cleaning services to private traders (50,000 quintal, turnover of one million ETB for Metema Union). Investigation and development of improved cleaning machines contributes to quality improvement. Other value adding processes (e.g. oil extraction) still face several challenges: processing inefficiencies, lack of infrastructure and limited market demand to achieve considerable scale and realize profits. For product and market development, the key challenge is the establishment of direct supplier-buyer market relations, which are now largely absent, and the production of sesame-based products for the domestic market. Continuous efforts will focus on improved traceability, market transparency, price information sharing systems and ECX reforms. In collaboration with IFDC/2SCALE, market linkages for rotation crops were facilitated, boosting Deber malt sorghum acreage (670ha) and production (15,636 quintal) and soybean acreage (364ha) and production (6,620 quintal).



The major lesson from Metema union case was that union management staff should take into account local realities, as well as built on the spirit of internal capitalisation. Therefore, skill development training in resource management, use of funds and conditions is so important which will enable them to stand by themselves as competent business enterprises.

4.2 Mainstreaming social inclusion and nutrition

4.2.1 Social inclusion

The assessments of 11 seed value chains conducted in 2016 by **ISSD** took a gendered perspective at how labour is divided in specific activities of the main operations in the value chain, when decisions are taken, who owns the resources that are consumed in these activities, and who benefits as a result. In the process of grant making in 2017, the mandatory criteria of having to justify how application of ISSD Ethiopia funds is not gender blind was set. ISSD Ethiopia aims to practice gender sensitive grant making in this way. Investments also aim to be smallholder farmer inclusive. An example is how ISSD Ethiopia has promoted sales of seed in small packages, suitable for those with a quarter of a hectare of land or less. One of the major bottle necks identified from the seed value chain analysis is gender imbalance in the seed value chain operations and low role of women in decision making and benefit sharing. To alleviate the problem of gender imbalance in the seed value chain, appropriate coping strategies were devised. Nutrition and gender inclusiveness is one criterion in evaluating pilots and in providing scaling up grants.

Despite women have significant role in seed production; their participation in membership and management of SPCs is low. Therefore, ISSD pays attention to increase the participation of women in SPCs to enhance access seed inputs and services, as well as women to be benefited from seed income. Agreement has been also made with executive committee members to in force the bylaw to incorporate at least one woman as executive committee member.

Most of the activities of the **ENTAG** programme involved women and youth who are owners of private companies, commercial farmers and small holders. Thus, in most of the activities, directly or indirectly, youth and women have been involved in a significant proportion. In the innovation fund component of the programme, among the total 274 new employments created, the portion of new employees younger than 35 years old is 58% and 38% of them were women.

Social inclusion is an important consideration in relation to the newly demonstrated cleaning machines for sesame (**SBN**) as it interferes with currently provided manual cleaning services, mainly by young labourers. To ensure inclusive market growth, specific attention must be given to the opportunities for these labourers to run the machine together and increase their income per hour through efficiency and quality improvements. The internal on-lending of marketing credit to members, which facilitates the final stages of the production period especially harvesting, is based on cooperatives' assessment of the creditworthiness and reliability of members. In 2017, 22% of the internal loan receivers were female farmers, which is encouraging as it is commensurate with the proportion of female membership.

4.2.2 Nutrition

A mandatory criteria for grant making in **ISSD** is that across the grants, investment in informal, intermediary and formal seed systems takes place. This ensures that a wider diversity of crops and varieties receive attention. To date, grants have been awarded for investment in the seed value chains of three major and two minor cereals, three legumes, an oilseed and a root and tuber crop. The collaboration with Dutch/international companies promises improved access to high quality vegetable seed as well. In 2017, three onion hybrid varieties were popularized and in 2018, we expect to accomplish that for hot pepper and papaya as well. Fruits and vegetables contain micronutrients important for nutrition.

To stimulate the use and marketing of nutritious rotational crops by **SBN**, groups of women received training on recipe development for soy-bean, sorghum and mung-bean. This was done in collaboration with PUM. Recipe development and trainings will be continued and adoption in communities and at household level will be monitored. Specific attention will be given to the marketing of soya and mung bean as income generating activity for women. In 2018, a new point of attention will be the use of home garden products.

4.3 Challenges, opportunities, lessons learned and way forward

During the implementation of the different activities targeted to ensure improved markets and trade, there were a number of challenges, opportunities and lessons, which were considered for the 2018 planning processes. These are presented below, for the same for the specific programmes, we refer to the annexes.

Challenges

- Limited financial, physical and human capacity of regional seed regulatory bodies for adequately providing seed quality inspection and certification services;
- Communication and negotiation skills of some of the suppliers seem to be limited, hampering direct supply from them to the buyers; slow progress of some of the associations to take up market linkage activities;
- Mismatch of demand and supply to boost trade selected commodities;
- The current sesame trading system does not encourage value chain operators, from farmers to exporters, to collaborate and invest with the aim to offer traceable quality products to the market;
- Insufficient flow of innovative ideas from and through the regional value chain experts for intervening in and improving the performance of selected value chains in the country.

Opportunities

- Greater attention is being given to bottlenecks including the limited supply of EGS; inefficiencies in seed marketing and high rates of carryover seed; and weak control of seed quality, which creates the need for intervention;
- The increased demand for B2B linkage creation from the public organizations;
- The possibility of expanding the experiences of management of stakeholder platforms promoted by ENTAG (aquaculture, species, legumes and dairy) to the different platforms supported by the other BENEFIT Programmes;
- Establishment of Agro-industrial park, focussing on agricultural products of the regions, increases interest and attention for in-country value addition and may attract foreign investors.

Lessons learned

- Regional unit value chain experts need: to be more strategic with what is put on the agenda of regional core group meetings to make efficient use of precious time; need coaching in order to inject new and innovative ideas for intervention in seed value chains into discussion;
- Many hurdles have to be taken to be able to embark on real value chain development and to develop a trading system that is based on quality and traceability;
- A successful activity, such as the spot market price information system, does not easily make the transition to scaling and institutionalization, mainly because of bureaucratic/governmental reflexes.

Way forward

- Match supply with demand by facilitating joint planning among farmers, seed producers, agricultural research centres (ARCs), NGOs and BoANR in each region for the production of quality seed;
- Explore and invest in digital systems for seed market information sharing that help connect supply with demand efficiently as well as a sesame information system;
- Facilitate experience sharing and learning between the regions and to partners such as to inject new ideas for interventions in and strengthening of value chains and promotion of agribusiness;
- Diversify trade and investment support to the agribusiness sector in Ethiopia, supporting more and different companies; strengthen platform meetings and trade missions to build upon the business relationship among Ethiopian and Dutch companies as well as companies from other countries;
- More intervention is needed in awareness creation, extension (mobilization), skill development and financing of the private sector, small holder farmers and professionals;
- The need to facilitate marketing credit to cooperatives through guarantee fund.

5 Improved enabling environment for the agricultural sector

In this chapter achievements and challenges of each BENEFIT partnership programme and the BENEFIT portfolio in contributing to enabling institutional environment for agricultural sector are explained explicitly. The main activities performed in the area of enabling environment are related with (i) identification relevant policy issue for further discussions, (ii) conducting different forums mainly workshops to communicate the identified policy issues with demonstrated evidences, and (iii) contributing in the design of new directives and regulation.



Contributed to 7 substantial policy changes/ reforms

5.1 Outcomes achieved by BENEFIT and its programmes

ISSD – Improved enabling environment for enhanced performance of seed value chains

The enabling environment of the seed sector has been improved by the endorsement of no less than 17 policy changes to specific seed strategies, laws and regulations, directives, and guidelines for implementation. The establishment of the national seed advisory group, seed coordinating unit within MoANR, the national seed platform, delegation of seed quality inspection and certification authority to Haramaya University, and recent ISSD Ethiopia-led consultations around task division and cooperation in EGS supply illustrate successful changes to government's strategy. Amendments to the Plant Breeders' Right Proclamation were recently endorsed by the House of Peoples' Representatives, representing successful change in law. Three ministerial directives await official stamp of MoANR and four implementation guidelines are pending publication. ISSD Ethiopia supported 21 evidence based policy options in 2017 for improving seed sector coordination and governance; developing a sustainable system of EGS supply; removing barriers to seed export and trade; clarifying criteria for entrepreneurship in seed production, distribution and retail; disposing of less viable seed carried over in store; promoting efficient utilization of certified seed supplied; popularizing newly released varieties; and improving the performance of seed regulatory bodies in seed inspection and certification. The position of the Ethiopian Seed Association (ESA) in representing the interests of private sector has been strengthened. One new member joined ESA in 2017, bringing the total number of members to 32.



After several years of piloting, experience sharing and advocacy, ISSD Ethiopia has earned the confidence of the Ministry of Agriculture and Natural Resources (MoANR) to be given the lead in developing a more sustainable system of quality early generation seed (EGS) supply in Ethiopia. Already, the programme has succeeded in building consensus among key stakeholders on three major policy positions for sustainable EGS supply in the country.

CASCAPE - Strengthened enabling institutional environment for the agricultural sector

One of the result areas in CASCAPE is to assist policy makers to make informed decisions at national and regional levels about research and extension, while at the same time seizing the existing opportunities. In order to provide demonstrated evidence for policy, the programme implemented 16 in-depth studies on strategic issues such as blend fertilizer recommendation, agricultural research and extension policy process, drivers for technology adoption including challenges for adoption of improved forage species by smallholder farmers in Amhara region, determinants of sesame productivity in large-scale commercial farms vs. smallholder farm fields (Humera), etc. The findings of these studies and broader programme results are shared in eight thematic platforms (two at national level) and eight stakeholder workshops at regional and national levels. The platforms and workshops have enabled the programme to widely share and discuss the results with AGP, research and extension actors at federal and regional levels. In addition, two policy briefs – one on technical and agronomic issues of blend fertilizer recommendation and another on participatory research and extension approach – are being prepared. The plan is to share the policy briefs with the agriculture standing committee of the members of Parliament. In parallel, technical reports and briefs are being prepared for sharing with research and extension experts at federal and regional levels. Further, panel data on the drivers for adoption study is being collected so as to produce a comprehensive report on the factors that inhibit or promote the adoption of agricultural best practices by farmers. Again, the results will be shared with higher officials for their informed decision in technology transfer and uptake efforts. Two recommendation maps were prepared as pilot exercise in terms of recommendation domains based on biophysical (soil, agro ecology, climate, pests, disease) and socio-economic (market, labour and input supply dimensions). Starting from 2018, we are to conduct training on recommendation mapping and sharing the tool with research and extension partners.



Prof. Fikre (Jimma University President and Senior institutional advisor of CASCAPE): *“Ethiopia has benefited a lot from the project CASCAPE in the past many years through generating practices, good approach and being a model linking the research, extension and academia practically and linking various cross cutting activities into the agricultural production system. Additionally, it has helped the universities in strengthening in their community linkage activities.”*

ENTAG – Strategies to solve selected sector-wide issues are developed and implemented

The ENTAG program, through its platform meetings and other high-level engagements, has been serving as a catalyst for some of the national and regional policy reforms and draft of new regulations on Ethiopian poultry, spices and pulses subsectors. The lack of poultry policy on production, processing and marketing has been identified by many of the stakeholders in the sectoral poultry platform. In this reporting year, national poultry policy, which is expected to address many poultry issues in the country, has been under development by the Ministry of Livestock and Fisheries (MoLF). In its spices subsector ENTAG has also managed to advocate and lobby the government to launch spices market regulation. The draft regulation is now under development. ENTAG, through its sectoral platforms, also contributed to the inception of ideas to establish national level research and training institutions on both poultry and spices sectors. Currently, the institutional set up and strategies are in progress by the relevant government agencies and respective private sector associations. The idea of establishing a national pulse council was initiated during legumes sectoral platform meetings. The likely Ethiopian Pulse Council is intended to bridge the existing gap in export barriers, food safety & hygiene and standard & regulations. A task force to push this mission has already been established and activities in relation to launching the council are in progress. The establishment of the task force is a result of the last three soybean business platform meetings and trading events that attracted several producers, processors and supporting service actors. ENTAG, along with other BENEFIT programmes and N2Africa and EIAR, has been tasked to bring this to the attention of the Ministry of Agriculture Natural Resources (MoANR) and respective regional bureau heads. ENTAG will backstop the process by monitoring and providing inputs that represent the private sector. A study on Aflatoxin and Mycotoxin in legumes and spices has been conducted in order to solve challenges regarding mycotoxin in spices and legumes destined primarily for export but also for domestic market.



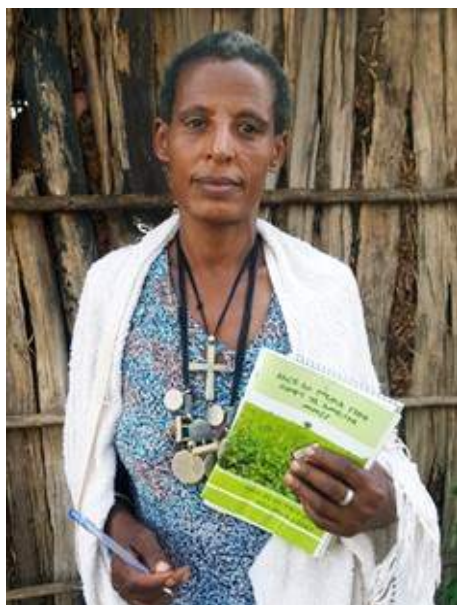
First National Poultry Policy established

Until very recently, strong institutional and legal frame work specifically for the poultry sector has been lacking in Ethiopia. In addition to this vacuum, technical challenges, also hindered the development of the sector. As part of efforts to advance the sector, the first National Poultry Policy has been drafted by the Ministry of Livestock and Fisheries (MoLF) with the support of ENTAG and of the poultry platform managed by ENTAG.

“We hope the MoLF will soon implement the new policy with the necessary strategy and regulations, which I expect to solve most of our problems in poultry business” Ato Etafa Merga, Amel (Agro Industry PLC).

SBN – Strengthened enabling environment for the Ethiopian sesame sector

Relevant statistical, farming and market information has been shared via different communication channels. The ‘dream’ of having a stakeholder based planning, monitoring and evaluation system is getting closer by the transfer of the Benefit-SBN database to *woredas*. More than 90,000 farmers (23% women and 18% youth) were trained on improved sesame and rotation crops production, and over 113,000 farmers (21% women) were reached via field days. Field days, meetings and workshops were learning and exposure events for farmers and other stakeholders. And they served as platforms to meet with high level government officials and discuss strategic and practical challenges. Nearly 7,000 farmers (14% women) recorded their costs and did cost benefit analysis. Participating farmers take this most seriously and start to perceive farming as a business. Innovative action has been taken for supporting bottom-up *kebele* agro-economic planning, availing market information and cooperative capacity development. Relevant authorities will be approached to get their support for making work at grassroots level a success. The proposal for a national sesame platform is at the Prime Minister’s desk. A decision is expected soon and it is likely that the first official national platform meeting will be held in the first semester of 2018.



Farmer Emebet Bekele: *“Previously, I tried to remember my costs and compare them with what I gained, but I often got confused. Since I am busy with different farm activities, I forget things. This year, from the lessons I have learnt, I now record all my costs and it will be easier to calculate profitability at the end.”*

5.2 Mainstreaming social inclusion and nutrition

ISSD's inclusive approach to pluralism applies to all levels at which the programme operates. Advocacy at policy level aims to enable the innovations on the ground. Accordingly, it is evidence of the success of innovations at seed producer and seed value chain level that feeds dialogue at policy level. Women's improved access to and use of seed of their preference and improved food and nutrition security through increased crop and varietal diversity are intermediate outcomes pursued by the programme. 2017 has seen improved performance against both these outcomes' respective indicators.

CASCADE is striving to create enabling environment in ensuring balancing male and female representation in all its activities and help the government bodies mainstream through the system by hosting forums, including the Ethiopian Network for Gender Equality in Agriculture (ENGEA) The forum helped to take the labour saving technologies to the next discussion at national level. Minute of the discussion, the gender analysis report and presentations are found on the network website: <https://agriprofocus.com/gender-in-agriculture>.

ENTAG conducts platform meetings to identify value chain bottlenecks in key subsectors and develop strategies to solve the problems. ENTAG based on the intensive in house field checks to assess the aflatoxin level of turmeric and red pepper where high levels were observed and a research has been contracted to find out the cause, the extensiveness of the challenge and which actors may be involved in addressing the challenge. We expect policy level interventions will follow from this study in 2018. ENTAG has also done a lot in awareness creation of the severity of the aflatoxin problem in red pepper on several medias including Capital newspaper and FM 97.1.

Inclusiveness is one of the major issues that **SBN** set in its major goal and strive to achieve it. The support programme has been working hard to increase the involvement of women, young sesame farmers and labourers. Farmer organisations, different public offices and other stakeholders were encouraged to include more women and young farmers during training sessions, workshops and meetings. This helped to increase women and youth participation on agronomic, financial literacy and other training sessions; field days, and workshops. Apart from including women and youth in the regular training sessions, separate training sessions were organised for women and youth. In Amhara 253 women and 232 young farmers were trained on '20 steps'. Similarly, 280 women and 300 young farmers were trained in Tigray. In Tigray, microfinance institutions pitched their products and tried to create awareness on the credit service that they provide. Along with the production techniques, farmers were trained on nutritional values of sesame and rotation crops.

Also, sensitisation and awareness creation events were organised for over 2,000 labourers at Kokit, Dansha and May-kadra towns. Information on demand for labour and on facilitation of transport, resulted in more labourers during the production season.

5.3 Challenges, opportunities, lessons learned and way forward

During the implementation of the different activities targeted to ensure an improved enabling environment for the agricultural sector, there were a number of challenges, opportunities and lessons, which were considered for the 2018 planning processes. These are presented below, for the same for the specific programmes, we refer to the annexes.

Challenges

- Limited implementation capacity of MoANR to address systemic challenges of the sector, and a tendency to focus instead on routine activities including a lack of understanding and task division between the regional Bureaus of Agriculture and Natural Resources (BoANRs);
- Even though there were fewer troubles in the intervention areas in 2017 than in 2016, the volatile security issues throughout the country hinder implementation of planned activities as per schedule;
- When collaborating with stakeholders, the programmes have to align to their plans and ways of doing things. This often affects quality. With regards to training: top-down training approach, late

planning and insufficiently clear responsibilities for training and workshops, selection of participants, large number of participants in trainings, field days and workshops limiting the participation and interaction level; difficulty to cascade ToT trainings to DA level due to lack of funding; AGP funding previously promised was not made available.

Opportunities

- Strategic and structural changes including for instance, the establishment of the national seed advisory group and national seed platform may create more opportunity for collaborative governance;
- Secondment of a senior sector experts, seed, sesame, extension, and soil, to MoANR to support sector transformation is a privilege extended to the BENEFIT partnership in recognition of good faith of the ministry;
- High interest and motivation of most relevant government offices to consider suggested solutions to solve sector problems;
- The demand from the MoANR for technical backstopping through expertise is expected to enhance the consideration and scaling of financial literacy, best fit practices in the national extension system;
- There is interest in bottom-up planning (*kebele* level and up) and in improved data recording and management (*woreda* and up), but this has to be explicitly confirmed and supported at higher levels;
- More shared awareness on sector strategic challenges and the need of research, extension, farmers' organizations, financial institutions, companies and others to work together, as witnessed by the proposals for national and regional sesame business platforms, joint organisation of field days and workshops and high level participation to these events.

Lesson learned

- The link between regional core groups and national seed advisory group is indirect, which needs to be thought about for ensuring their regular input in agenda setting and problem solving;
- Regional annual review workshop should be conducted ahead of the national review workshop to include views and opinion of regional stakeholders;
- Working closely with relevant public and private actors is found to improve the implementation of planned activities;
- Support to sector associations and stakeholders' platforms is found to be important tool in understanding key challenging and designing possible improvement options including policy options;
- Increased collaboration with stakeholders and partners improved and facilitated the organization of trainings, workshops and field days, reduced costs and improved visibility and impact.

Way forward

- Regular meetings with HE minister of MoANR which are expected to be extended to the minister of MoFL and MoT;
- Support seed sector transformation by facilitating active involvement of national seed advisory group, seed coordination unit within MoANR, and regional core groups in coordination;
- Facilitate dialogue between MoANR and Dutch/international companies invested in the Ethiopian sectors for regulatory reform, the development of directives, and the implementation of instruments that are trade-friendly i.e. seed, food safety etc.; follow up on and support the pending policy reforms to improve the performance of priority sectors in terms of improved quality and quantity of production;
- Policy dialogue and thematic platforms will be strengthened;
- Compiling the lessons and results for the past year and channelling them into regional and federal decision support system will be important activity in 2018 as well as publications of results and sharing outputs with stakeholders through national and regional stakeholder workshops;
- Strengthening the consideration of social inclusion and nutrition aspect at policy level.

6 Enhanced partnership for synergy

The BENEFIT Partnership coordination union (BENEFIT – PCU) has been responsible for coordination of the partnership for synergy among BENEFIT programmes mainly through facilitation of:

- Alignment of programmes and their collaboration;
- Collaboration and alignment with other projects and programmes;
- Mainstreaming social inclusion and nutrition, and
- Fostering collaboration in BENEFIT portfolio in terms of (i) BENEFIT portfolio management; (ii) provision of centralized administrative services (Finance, human resource management etc.) to the four BENEFIT programmes; and (iii) communication and use of evidence-based information through an effective M&E system linking the four BENEFIT programmes and other partners.

6.1 Alignment of programmes and collaboration

Enhancing partnership for synergy has been promoted in 2017 through institutionalized fostering of collaboration, alignment, learning and joint planning among the BENEFIT programmes (ISSD, CASCAPE, SBN and ENTAG). This was implemented through (i) facilitation of the communication and use of evidence-based information through established M&E system linking the four BENEFIT programmes and other partners, (ii) provision of centralized administrative services (Finance, human resource management etc.) to the four BENEFIT programmes, (iii) promotion of effective collaboration and collective learning among the four programmes, and (iv) facilitation of mainstreaming of social inclusion & nutrition in the four BENEFIT programmes.

In effort to enhance collaboration, regional collaborative activities planning workshops were organized and list of collaborative activities around priority commodities (soya bean, chickpea, malt barley, faba beans, and wheat) were identified. The regional and national level coordinators were assigned for each of the identified collaborative activities to ensure accountability.

6.2 Collaboration and alignment with other projects and programmes

Ensuring collaboration and alignment with other initiatives were made through different approaches (i) signing of MoU with partners, (ii) engagement in different platforms as BENEFIT, (iii) technical backstopping and sharing of experiences.

MoUs with partners

This approach is realized to ensure collaboration with full responsibility and accountability. Accordingly, BENEFIT Partnership has assigned MoU with ATA considering clearly the collaboration of ISSD with ATA seed program, CASCAPE with ATA soil fertility program, SBN with ATA in the area of mechanization and climate adaption and mitigation, and overall joint organization of seminars and workshops. Similarly, in addition to the clear alignment of CASCAPE and AGP of the MoANR, MoU was signed with AGP to ensure alignment in the areas of seed sector development (ISSD).

Engagement in different platforms

The main platform used in ensuring alignment and collaboration was the membership of the different programme managers and experts in the different technical committees of RED&FS. This has helped in sharing demonstrated evidences in the form of presentations, technical report sharing, and informal discussions. The other engagement is the participation of BENEFIT programme managers and experts in different invited platforms like maize stakeholders' platform, chickpea stakeholders' platform, National Rice R&D technical committee etc, where relevant evidences and experiences of BENEFIT

programmes are often reflected that have considerable impact in ensuring further alignment and sharing of experiences. The third approach is promotion of platforms that are supported by the different BENEFIT programmes, where relevant stakeholders running diverse initiatives are invited. In this regard, the four platforms supported by ENTAG and the Ethiopian Seed Association supported by ISSD have played crucial role in strengthening the alignment and collaboration not only with the respective BENEFIT programmes but also with other initiatives.

6.3 Mainstreaming social inclusion & nutrition

Mainstreaming of gender and nutrition with the BENEFIT Partnership was done through specific planning of activities and follow up and technical backstopping of implementation along with sharing of experiences. In terms of institutional arrangement, in addition to the gender and nutrition expert at BENEFIT level, each programme has assigned gender and nutrition focal persons at national and cluster level (where relevant). Also, gender and nutrition working groups at regional were established with the aim to share experiences, conduct joint planning and learn from implementation of gender and nutrition activities. In the following section the details of the implemented activities and outcomes in gender and nutrition mainstreaming are presented.

6.3.1 Gender mainstreaming

In 2017, the PCU focused its gender mainstreaming activities in the area of (i) internal capacity building and development of guideline and manuals, (ii) gender analysis, and (iii) collaboration with other gender programmes.

Based on the identified needs in the gender audit which was conducted in 2016, a gender training and planning workshop was organized in partnership with EKN for all national level BENEFIT programme managers, regional level managers and coordinators, gender advisers, experts and gender focal persons. The key results of the workshop were (i) sensitisation of participants about concept of gender mainstreaming and required steps to integrate gender in a program, and about the importance of gender analysis, and (ii) development of gender action plans at cluster, programme and BENEFIT level.

To facilitate joint planning, implementation and learning at regional level, an innovative institutional arrangement was established: regional gender and nutrition working group with clear Terms of Reference (ToR) and composed of individuals from the different BENEFIT Programmes in each region. As example of outputs of these regional working groups, the Oromia region (ISSD and CASCAPE programmes) decided to jointly conduct a gender value chain analysis on soybean, which is currently being implemented. and for sesame, SBN, ISSD and CASCAPE plan to conduct the gender and nutrition assessment jointly in 2018 in sesame growing areas (Tigray and Amhara) and technical backstopping was also given.

To create enabling environment to work on gender, the HR policy is revised from gender perspective and approved. The anti-discrimination and harassment issues are included in the HR policy. The guideline entitled: Gender Mainstreaming in Agricultural Research and Extension and Gender Mainstreaming in Private Sector Development and other relevant materials have been shared with BENEFIT staff. To ensure alignment and improved sharing of information, there was a functional collaboration with other gender related initiatives. The main one was the regular engagement with the Ethiopian Network for Gender Equality in Agriculture (ENGEA). In addition to the participation in the regular meeting ENGEA, BENEFIT hosted the third meeting, where the BENEFIT CASCAPE experiences in mainstreaming gender and empowerment of women were shared based on the gender specific activities related with the introduction and testing of home garden practices, enset processing, row weeder technologies, and milk churners. This has resulted in identification of possible collaboration areas and exchange of experiences among the different initiatives participated in the meeting.

6.3.2 Nutrition mainstreaming

Nutrition mainstreaming activities implemented in 2017 were related with assessment of plans of each of the BENEFIT programmes for their nutritional sensitivity and follow up of the implementation of planned activities.

The assessment made for nutritional sensitivity of different BENEFIT programmes was made in a participatory manner using the ten FAO recommendations. Accordingly, a meeting was organized with the manager of each of the programmes in August 2017. During this meeting, then nutrition expert sought to understand the activities currently being implemented, and discuss potential areas where the programme might be able to increase its nutrition sensitivity. Following the meetings, a set of specific recommendations were developed for each of the BENEFIT (see table 3). This has allowed respective programmes to reconsider planned activities to ensure nutritional sensitivity.

Table 3 Recommendations for improved mainstreaming of nutrition in BENEFIT programmes

Programme	Recommendations
ISSD	<ul style="list-style-type: none"> • Raise awareness of potential trade-offs between women engagement in the seed business and household nutritional outcomes; • Consider opportunities to improve nutrition through targeted access to quality seed of nutritious crops; • Consider opportunities for women active engagement in the commercial aspects of ISSD without increasing their work burdens; • Consider promoting OFSP vines in some Southern areas; • Explore increased use (and consumption) of grain legumes, increased production diversity; • Support in veg seed for home gardens (although not a focus area of the programme). But maybe able to support or collaboration with CASCAPE to help them map vegetable seed sources or provide other ideas for increasing access to vegetable seeds; • Facilitated linkages between ISSD and CASCAPE to support CASCAPE to map vegetable seed distribution systems as well as explore other distribution channels for vegetable seeds.
CASCAPE	<ul style="list-style-type: none"> • Documentation of home gardening experiences and development of guidelines; • Support the linkage of agriculture and health extension workers in delivering messages around nutrition; • Engagement to ensure uptake of lessons learned in public programmes • Ensure that CASCAPE is monitoring potential negative effects if interventions especially in terms of women's time use (and potential negative effects in terms of care practices); • Potential for CASCAPE to develop and systematize an effective process to link up the nutrition and agricultural extension officers, which could be integrated in the AGP process (building on the process started in the first phase of CASCAPE); • Ensure women's engagement in programmes is compatible with safe pregnancy and optimal infant and young child feeding; • Identification of vegetable seeds as a key limiting factor in terms of sustainability of home gardens, potential to explore how ISSD can support; • Report on improve agronomic practices and lessons learned about home gardens from the first phase of CASCAPE 1 that can be applied to current activities;
ENTAG	<ul style="list-style-type: none"> • Ensure the consideration of nutrition mainstreaming in the different activities of ENTAG; • Working directly with companies (or through the ENTAG supported platforms) to have a session explaining what nutrition is and the importance of good nutrition for employees from a business perspective (increased productivity of the labour force, reduced absenteeism); • Explore potential of having association members to work together and co-produce a marketing/ promotional campaign that focuses on the nutrition benefits for particular foods. ENTAG could have a role in suggesting this idea to the association members.

SBN	<ul style="list-style-type: none"> • The need to strengthen promotion of home gardening in the sesame production areas to ensure the possibilities of increasing dietary diversity; • Identification of three areas where SBN seeks to address nutrition objectives: 1) increase dietary diversity 2) Additional income sources (a second pathway in terms of increasing dietary diversity) 3) Change culture/ perception of agrobiodiversity and dietary diversity (people only growing the crops that they are used to growing and reluctance to try to grow new crops); • SBN is undertaking a DDS survey in SBN region to inform programme and provide a baseline for home garden interventions.; • Lesson learning from CASCAPE on how to effectively introduce a new crop into people's diets in a sustainable way; • One key recommendation includes managing the natural resource base. In line with that, there is a focus on integrated soil fertility management (fertilizer type and rate determination, crop rotation and soil characterization), water harvesting/ drainage, increased planting of rotational crops; • Exploring biofortified sorghum as an option to improve micronutrient intakes.
-----	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

6.4 Fostering collaboration in BENEFIT portfolio

6.4.1 BENEFIT portfolio management

While maintaining their focus and independence and experience gained 2016, the BENEFIT portfolio management was facilitated using approaches related with (i) management meetings of managers and coordinators, (ii) facilitation of the development of collaborative activity plans; (iii) communication with external stakeholders and advisory board; (iv) regular reporting; (v) information sharing about BENEFIT. The achievements in respective areas are presented in Table 4.

Table 4 Achievements in BENEFIT Partnership Management in 2016

Coordination approach	2017 achievements
Management meetings	<ul style="list-style-type: none"> • A management workshop was given to managers, both national as well as regional, and coordinators. This resulted in the agreement on the BENEFIT governance structure as a portfolio structure; • 2 joint meeting of the portfolio board, both managers and coordinators are part of this board; • Nine management meetings were held with the programme managers or their representatives; • Three meetings of Wageningen based coordinators to align activities; • Four meetings of managers with EKN to update and share information.
Development of collaboration framework and collaborative activity plans	<ul style="list-style-type: none"> • Two planning meetings for 2018 have been organized. One in Mekele bringing together programme staff from the Amhara and Tigray regions, and the other in Debre Zeit bringing together programme staff from the Oromia and SNNPPR regions. These collaborative priorities have been incorporated into the 2018 work plan.
Communication with external stakeholders and advisory board	<ul style="list-style-type: none"> • The first advisory board meeting was held where key achievements and plans of activities were shared, feedback and suggestions made; • The PCU manager and managers have been actively involved in engaging with external stakeholders such as MoANR, ATA, AGP, Bilateral directorate of the MoFEC, IAIPs office of the MoI, ESA etc.
Regular reporting	<ul style="list-style-type: none"> • Through the M&E system, tracking progresses and achievements have been made • Financial reporting using the Peach Tree system was made as per the planned reporting period and depending up on request from managers; • Regular exchange of information between managers and coordinators has taken place. • Required reports as per the MoU were shared to MoANR
Information sharing about BENEFIT	<ul style="list-style-type: none"> • The BENEFIT communication strategy was developed; • The BENEFIT Portfolio website was made operational early 2017 (www.benefitethiopia.org)

6.4.2 Finance and administration

One of the key sources of synergy for collaboration within the BENEFIT Partnership was establishing a centralized finance and administration system setup in 2016. Subsequent to this, the appropriate support function of finance and administration activities that support the smooth flow of operation to the programmes have been made in 2017.

- The BENEFIT Partnership office has exerted to ensure the operationalization of all its activities as per the signed MoU and associated rules and regulations. However, the expansion of BENEFIT in terms of hosting programmes like DairyBiss, LIFT and also the ISSD top up requires attention of EKN especially in relation to informing MOFEC;
- Financial management: the four programmes and the BENEFIT PCU have established a centralized financial management & procurement system, which is guided by the BENEFIT financial management & procurement guide approved in 2017;
- Human resource management: the human resource management at BENEFIT Partnership level is managed centrally guided by the HRM guideline, which was approved by BENEFIT Portfolio board and became operational in 2017.

6.4.3 Monitoring and Evaluation

The monitoring and evaluation function at the BENEFIT portfolio level targeted ensuring aligning of the M&E framework, system and strategies of the four programmes by using the concept of keeping individual programmes identity and searching for entry point for collaboration and synergistic effects, supported by facilitation of the documentation of evidences for effectiveness of the collaborations among the portfolio programmes and sharing lessons from collaboration efforts.

- Strengthening overall BENEFIT Portfolio M&E strategy;
- Ensuring the use of similar standards for studies /evaluations across BENEFIT partnership programmes, such as the DGIS food security indicators;
- Ensuring the implementation of BENEFIT Partnership programmes output and activity monitoring tools;
- Assisting effective participation in BENEFIT collaborative activities as joint partnership monitoring system;
- Introduction of Appreciative Inquiry technique and discussion among BENEFIT Partnership monitoring team members for its implementation.

6.4.4 Communication

The implemented activities in 2017 targeted enhancing both in the internal and external communication of effective sharing knowledge, experiences and lessons learnt. These were related with (i) regular updating of with news articles of the BENEFIT Portfolio website (www.benefitethiopia.org) and (ii) use of event sharing calendar.

6.5 Challenges, lesson learned & way forward

The challenges faced in 2017 in terms of enhancing partnership for synergy among BENEFIT programmes were related with (i) ensuring the regularity of management meetings, (ii) observed limitations in full implementation of agreed collaborative activities and acceptance of the BENEFIT concept, (iii) the limitation to give attention in application of the diverse M&E and communication tools document sharing on wiki, effectively sharing of events on Google calendar and M&E think-thank meetings, (iv) the need for intensive follow up to ensure collaboration and alignment with other public and development partner supported initiatives.

- Regularity of management meetings: management meetings are found to be effective tools in addressing emerging issues, ensuring alignment and collaboration and also monitoring and evaluation of progresses made. Though, the about nine management meetings were conducted, there were challenges to have them at planned time and some of the planned meetings were

cancelled. This was not due to unwillingness but due to overlap of urgent engagements of some of the managers and their deputies. This implies the need to further work to ensure regularity in management meeting;

- Limitations in full implementation of agreed collaborative activities: the reason, which was considered as a lesson was the lack of assigned full accountability for each of the agreed collaborative activities. In this regard, assignment of overall responsibility at programme level and cluster level was made during the planning process of collaborative activities for 2018;
- Limited attention in application of the diverse developed M&E and communication tools: though a number of M&E and communication tools have been put in place, their application among all the BENEFIT programmes were somehow limited. The key reasons, which were considered as lessons were related with the limited awareness created among staff and the limited attention given by the different programmes. In this regard, attention was given in the 2018 planning to address this limitation;
- The need for intensive follow up to ensure collaboration and alignment with other public and development partner supported initiatives: most of the initiatives the different BENEFIT programmes collaborate are with different programmes, departments, and projects run by MoANR, ATA and development partners. In order to deduce the burden that emanates from the intensive follow up to ensure alignment and collaboration, the strategy followed with development of agreements in the form of memorandum of understanding (MoU). Accordingly, BENEFIT Partnership has signed MoU with ATA and AGP in 2017 to ensure effective alignment and collaboration. This effort will continue in 2018 to implement alignment and collaboration in an effective ways with all initiatives working with BENEFIT Partnership programmes.

Appendix 1 Stories & Examples

Introduction

For the BENEFIT Partnership, Stories of Change are one of Monitoring and Evaluation tools used to illustrate the results of the various (collaborative) activities. For the year 2017 all programmes shared their stories of change in alignment with the three BENEFIT partnership major result areas: increased quantity and quality of agricultural production, improved market dynamics and improved enabling environment. With the stories we try to capture changes in people lives (such as farmers, service providers, committee members, etc.), reporting improved practices due to project interventions (by government officials, managers, companies, partner organization etc.) and explaining evidence-based contributions to stimulate Government bodies for creating an enabling environment in the Agricultural sector. This document contains 20 stories of change representing the 4 programmes and the collaborative activities.

Matching seeds for needs through crowdsourcing and Participatory Variety Selection

How can we enable men and women farmers to equally participate in on-farm research and make use of improved technologies and knowledge? This is a puzzle not yet solved in rural Ethiopia. The work led by the ISSD (Integrated Seed Sector Development) Project, the Oromia East unit used a gender responsive research approach known as Crowdsourcing and Participatory Variety Selection (PVS) and challenged this continuous story. Crowdsourcing is an approach to citizen science that involves ordinary citizens in recording data which is of interest to researchers, applied to farmer's variety selection. PVS is research led by scientists in partnership with men and women farmers for the evaluation and selection of the most preferred varieties. Both approaches give voice to both men and women, recognizing that they can each have valuable but different experiences, preferences and knowledge. PVS aims to enhance access of both men and women to preferred crop varieties. Using crowdsourcing 1200 farmers, of which 600 women, were supported to conduct trials on their own fields in collaboration with partners. While using PVS, about 57 varieties of sorghum, teff, wheat, common bean and potato were evaluated by 450 stakeholders (farmers, DAs, experts) at 15 Farmer Training Centres and model farmers' fields. The approach enables experts and researchers to learn from farmers, through their participation and knowledge sharing, while evaluating varieties and their specific traits. It is an effective approach for providing large numbers of farmers with diverse germplasm for evaluation and selection. The approach advocates

gendered variety selection and management. The crowdsourcing trial has been conducted in East and West Hararghe zones, in six woredas (Doba, Chiro, Oda Bultum, Kurfachale and Fedis). The PVS trials have been conducted in the same woredas at 15 Farmer Training Centres and model farmer's fields. The overall objective of the trials was to enhance farmer's access to new varieties that fit their needs. Many of these new varieties are preferred over old ones and are good for rapid technology diffusion especially for poor farmers. The approach has allowed a large number of farmers to try out and identify superior crop varieties. Both men and women participated in variety selection and gained access to different crop varieties with different traits such as early maturity, drought tolerance, and improved productivity. The approach has resulted in increased women's access to varieties of their preference; improved social networks and increased interaction among men and women farmers, DAs and woreda experts in the field. The crowdsourcing and PVS approaches are found to be cost-effective and a rapid means to deploy a large number of new and improved varieties to farmers. Farmers' choices in variety selection are an interesting data source. Women and men farmers have different criteria for crop and variety selection based on their preference in relation to production practices, post-harvest management, food quality and market potential. This data can help researchers to look for specific traits of crop varieties when analysing technology/product value chains, which otherwise would have resulted in the rejection of the technology/product by end users.



Mrs. Shamsi Ibro from Doba woreda is one of the women farmers who participated in the crowdsourcing trials. As part of the trial she received three different varieties of Common bean. Mrs. Shamsi tells: *"I planted the three common bean varieties given to me side by side and gave them a code, A, B, C. Currently the varieties have reached their maturity stage. I have been evaluating each variety at their different growth stages to identify the best one, as I was trained. I am very happy to be involved in this trial, as it gives me an opportunity to get to know about different Common bean varieties, which are others than the ones I used to plant for many years. If we had known about these different varieties before; we wouldn't be using the local varieties which give us only little harvest. I would like to thank ISSD project and Development Agents (DAs) who give me the opportunity."*

Cooperation in Kolbe yields long term family security

Since 2012, Kolbe Seed Producer Cooperative (SPC) has tried to support its members to overcome their shared challenges in selling seed in the market. In 2013, the SPC started working with BENEFIT-ISSD. Support has ranged from training on financial and organisational management, to the provision of grants to purchase office materials. As a result of ISSD support, the SPC has seen greatly improved production and financial figures. Because of this success, members are able to invest in their business, invest in their children and save for future needs. Kolbe SPC deals with a range of challenges that confront their members, especially the small holder farmers. With fragmentation of holdings due to the high population in the area, Kolbe SPC offers a form of aggregation, irrespective of the land-titles of individual producers. The SPC uses the strength of collective planning for production, procurement and marketing to add value to members' produce.

ISSD-OSE aims to strengthen SPCs so that these cooperatives contribute to sustainable quality seed supply at village level. To do this, ISSD-OSE provided initial technical capacity support as well as training on organisational, financial and business management. Further, ISSD-OSE facilitated linkages with other actors in the seed sector, including decision-makers, support organisations and service providers. Innovation grants enabled the purchasing of materials to support the SPC's effective operations.

Before the intervention of the BENEFIT-ISSD programme through Oromia Seed Enterprise (ISSD-OSE), Kolbe produced seed on 82 ha of land, had only 44 members and a working capital of just 26,000 ETB. As of 2017, the SPC has 87 members, produces seed on close to 270 ha of land, and manages close to 1.8 million ETB of capital. The SPC has seen profit rise from 23,400 ETB in 2014 to just under 200,000 ETB in 2017. The SPC now also works on twice as many crops as before the ISSD-OSE intervention. Female farmer participation is now a major target, with only modest growth in the last number of years.

Support from BENEFIT-ISSD has enabled the cooperative to purchase a small, but quality seed store, a new weighing balance as well as an office and office materials. Through



"When I was farming grain my total income was never enough to feed and care for my wife and children, and I had to moonlight additional activities just to make ends meet. Farming old local varieties that stay in my hand for a long time and uncertified crops are just holding me back".

Getachew Dessalew is a progressive farmer from Kolbe SPC. His story tells that engaging in seed production is noble activity with a large benefit:

"The demand for certified seeds is growing every day. Farmers have realized the importance of using certified seeds, with their yields increasing as compared to the uncertified seed sources".

The benefits are evident in Obbo Getachew's own household. Through his membership in Kolbe SPC, he says his family is now food secure. Further, the additional income he gets from selling higher-quality seed, enabled him to construct two small iron-sheet houses, helped him buy five new oxen, and a new solar power source. He's also been able to build up a reserve in the bank for the future.

But for Obbo Getachew however, *"the most important outcome is that we can rent a house in town for our children to stay so they don't miss out on their education".*

collaboration with ATA, a new, New Holland tractor was purchased and technical training was provided to SPC members. Kolbe SPC's development confirms that farmers who are effectively organized can benefit from improved links to inputs, services and markets, which helps them to achieve higher yields and incomes. By speaking with a collective voice and jointly advocating for their needs, members are able to strengthen their current position and build for the future. ISSD-OSE support has successfully focused on facilitating the members' to achieve their own shared ambition and offering insights and guidance along the way.

Building resilient and gainful livelihoods through Malt Barley

W/ro Azenegash Tilhun: "From the outset, we were skeptical about working with CASCAPE because throughout our life we were small-sized consumable food producing farmers and our customary practice was stuck on producing potatoes and other varieties of food Barley. But after further discussions, it became clear that Malt Barley through CASCAPE represents ideal farm cooperation. Since our involvement in Malt Barley, we are directly connected with the Malting industry while also increasing our income and diversifying our crop plans. It is a very exciting opportunity for Guguma farmers. The project gave us the opportunity to engage with agriculture experts, Woreda agriculture bureau officials and CASCAPE mentors which was an added bonus.

We used to produce other varieties Barley for generations, but now, thanks to CASCAPE, we are introduced to a crop that is more profitable and hugely market guaranteed. Malt Barley provided us a niche market through our local cooperative and Asela Malt factory.

The introduction of Malt Barley in my farming life is innovative and has multi-dimensional impact. For instance, it got rid-off the middle men (the delalas) in our value chain as the factory directly purchases from the farmers. As a result my income substantially improved; I am able to renovate my house and I am able to send two of my daughters to a private college in Hawassa."



Farmer W/ro Azenegash Tilahun (55):

"The introduction of Malt Barley in my farming life is innovative and has multi-dimensional impact."

"The most significant change in our life is: CASCAPE helped us to open our eyes and improve our livelihoods. It certainly has also impacted hand-to-mouth farmers to diversify their income streams by participating in Malt Barley production. Thanks to CASCAPE, Malga district has been making the case for locally grown niche grains in Sidama zone since 2013."

Cashing in grains for progress: Malga farmers' story of change in malt barley production

Melaku Tebeje: "Daily life in Guguma (a small village in Malga district), was treacherous and a challenge in many ways. But, I had the drive for something better. My humble, poor and tumultuous life was solely dependent on Enset and this made my life hand-to-mouth because we had to wait for seven years for the Enset to be harvested for consumption. Malt Barley fundamentally changed my narrative. In 2013, when CASCAPE introduced us with this Endeavour, it became a wake-up call and a game changer to my economic life, livelihood and social status.

In terms of economic life, my disposable income increased substantially and I am able to send my children to better schools in Hawassa. All their daily subsistence, house rent and school fees are covered by the income I obtained from Malt Barley. Now, three of my eight children are in the University attending their under-graduate and post-graduate studies. In my 74 years of existence I never experienced such a financial success thanks to Malt Barley and CASCAPE.

I have my own innovative way of producing Malt Barley. Before sowing the Barley into the whole field, I check the yield out-put of the various varieties in my own trial plot which I prepared specifically for this purpose. So far, I learned that Ebon and HB 163 varieties introduced by CASCAPE are the best which I envision to grow at a bigger scale in the future.



Melaku Tebeje: "CASCAPE introduced us to the most profitable and market guaranteed grain production system and has changed our farming mind-set"

The Malt Barley cooperative we founded helped us to secure quality seed and a stable buyer and higher prices for our malt grain because we can offer high quality produce to a dependable buyer. For example, if the market price for Malt Barley is 600 birr, Asella Malt Factory would buy us at 1,000 birr/quintal. As a result, my income has substantially increased due to direct marketing that avoids market intermediaries and better price offer. Furthermore, the CASCAPE funded storage facility in my village has greatly increased profits and efficiency, now we can offer Asella Malt factory large quantity of Barley. Most recently AGP has bought us a power tool that threshes our grain from straw and for that I am grateful to the programme.

The social model in this community was to be a subsistent farmer, to be married and die. Malt Barley saved our lives and livelihoods. This brilliant endeavour changed the confines of our conventional wisdom, our social model and livelihood. Our passion to grow is eminent and the dawn of hope is breath taking. Everybody in this community has a story of ingenuity and endurance.

Recognising women's contribution to sustainable seed sector development in Humbro Woreda

The gender role division in agriculture has been influencing the contribution of female farmers in agricultural development. Especially the roles of women who live in male headed households have not been considered and appreciated in our community. In general, our society gave the position and work of farming to our male community members. The intervention of ISSD has been making visible her role in agriculture, and we are achieving together" Humbo Woreda agriculture office.

BENEFIT-ISSD Ethiopia's focus on gender highlights the until now hidden contribution of women to seed sector development in Humbro Woreda, where Almaz's leadership in introducing new, improved and farmer-preferred varieties in the woreda is having a real impact.

Gender mainstreaming in BENEFIT-ISSD Ethiopia's activities has highlighted the specific roles and contributions of women and men in the farming community of SNNPR.

Female and male farmers are now accessing new, improved and preferred varieties, introduced through the programme's Participatory Variety Selection and crowd sourcing activities.

These activities have given special attention to women's roles in seed sector activities, enabling learning on their variety preferences and the traits considered as key seed selection criteria.

This allowed for the provision of more appropriate varieties, which are more acceptable to higher numbers of community members and which have a greater impact on household-level food security in Humbro Woreda.

Informing ISSD's informal seed system strategy, previous studies in Humbro Woreda have shown a high level of involvement of

female farmers in the seed sector, particularly in the community seed system.

Activities like seed cleaning, harvesting and transportation are predominantly completed by women. However this important role and contribution was not widely recognised and somewhat hidden behind the roles of male farmers, who maintain a higher decision-making capacity in terms of accessing agri-inputs and what is produced on the land. This restricted the ability of women to access the inputs they required and the ability to farm their preferred produce.

To address this, ISSD targeted equal numbers of male and female farmers in six woredas of the region, assessed their preferences and (including Humbo woreda) enabled equal access to new, improved and preferred varieties.

This began a process of recognition of the unique demands and contributions of the female farmers among their male counterparts, with an emerging recognition of women as equal farmers.

Almaz Berata, aged 40, lives in Abela Sipa Kebele and she is a mother of four children. She is one of the female farmers who were selected to participate in ISSD's informal seed sector development activities in the kebele. Here, Almaz reflects on how the programme designed and implemented a gender inclusive seed sector development strategy and implementation process and how she has benefitted:

"I am one of the female farmers in Abela Sipa Kebele who have been targeted by the ISSD project since January 2017. In the past, women farmers were entirely excluded from the farm as they were considered inefficient and incapable of carrying out farming activities. Due to these deep-seated beliefs and attitudes, the role of women was only limited to household chores.

But now as a result of this project, I can equally participate with my husband in producing and selecting our best varieties. This in turn empowers other females in our community to be actively engaged in agriculture. I have been participating in Participatory Variety Selection and crowd sourcing activities, where I selected my priority crop varieties which are the best adapted to our local conditions.

I will continue introducing and selecting new varieties which will contribute to our food



security. I am not yet satisfied with what I have achieved until now, but our female group members will continue working in our kebele so as to enable other women farmers to learn from our best practices.”

The gender focused activities completed by the programme include:

- Gender sensitive informal seed sector assessments which looked at farmers’ identification and selection criteria and priorities;
- Participatory Variety Selection and crowdsourcing to discover and introduce new, improved and preferred crop varieties;
- Cooking quality testing and voting to further understand variety preferences and priorities;
- Training of Trainers on gender issues in seed sector development was provided to *woreda* implementing partners who in turn provided training to targeted *woreda* farmers;
- Gender awareness and sensitisation discussions, both with partner offices and in communities.
- Monitoring the progress of the activities in the field and evaluating in gender sensitive way;
- Incorporating female farmers’ fields as destinations for farmer field days.

For Almaz and her peers, their contributions to the seed sector and their personal priorities have been highlighted and recognised. They now have increased access to new, improved varieties that they, rather than their husbands, prefer. Male farmers now accept the benefits and potential development that increased decision-making capacity among women can have for household and *woreda* food security in SNNPR.

Closing the existing socially-constructed gender role division in agriculture and enabling female farmers to access agricultural inputs and preferred varieties with priority traits has created the space for wider agricultural development and an overall increase in food security in the rural community.



Almaz Berata: “...as a result of this project, I can equally participate with my husband in producing and selecting our best varieties. This in turn empowers other females in our community to be actively engaged in agriculture. I have been participating in Participatory Variety Selection and crowd sourcing activities, where I selected my priority crop varieties which are the best adapted to our local conditions.”

Desho Grass: From feed to food security

Jemal Mohammed: "When Desho grass was first introduced to our *Woreda*, we thought they have ulterior motives, but later on, after a thorough deliberation with CASCAPE, people started to believe in the process and start to queue-up. CASCAPE stepped in at the right moment in this village because our land holding in Gurage zone is very small and the population is very huge which made it difficult to get a feed to our livestock.

At the beginning when we first piloted the grass, it was disillusion to some and hallucination to others, given our small land size. However, very soon it became evident

that, Desho grass became a sought out commodity in our village. I was trained on how to grow the grass and was one of the pioneer farmers who planted Desho grass in my village. The novelty of this grass is; its productivity in a small plot of land, it increased our milk yield, we are able to produce our cattle feed in tandem with our food in our backyard and also alleviated our cattle feed shortage which was a grave concern for small-size land holding farmers in Gurage highlands. Due to this grass, our milk yield per cow is more than doubled. In addition to feeding my livestock, if proper market linkage is created, I have a grass seed which worth more than 60,000 birr.

"Beyond the increase in our disposable income, the profit point of this endeavour is; it became an inspiration to others, filled our cattle feeding gap and became a model that resonated throughout our woreda."



Alleviating cattle feed depletion through Desho grass

Prior to my involvement in Desho grass, we never knew about cut and carry feeding. Our livestock were roaming around grazing what is available in the village. We all face cattle feed problem in this community. CASCAPE introduced us this godsend one of a kind variety of grass. From other fodder varieties I tried thus far, Desho grass has the highest yield potential. When mixed with other livestock feeds the milk yield of our cows increased from 1 litter to 4 litters a day.

Desho grass did not only alleviate our feeding woes, but we are selling it to our neighbours and also sharing the split to our relatives. We have doubled our income, tripled our livestock milk yield and able to provide stable quality life to our children. Recently, I managed to open a tailor shop to keep myself busy and sustain my income.

I see such a bright future in the grass that I am fearlessly expanding my lots and many people in my village are doing the same. In fact, my neighbour took a split from me and planted a grass two times bigger than my total growing area.



"My financial success has made me to be more confident, motivated, and empowered where I now have prioritized goals to reach them!"

Sesame farmers: heading towards mechanisation

Most of sesame production field activities such as planting, weeding and harvesting, which are quite cost intensive are still done by manual labour. Farm mechanization could benefit the farmer by making farm work less labour intensive, paying lower production costs per and getting higher yields per hectare. Benefit-SBN together with other stakeholders and partners conducted farm mechanization trials and demonstrations, in order to explore if mechanization leads to significant yield increases per hectare compared to conventional manual labour practice. Three investor farmers already bought the SFOGGIA seed driller in 2017 and started using it, Mr. Getachew Mamu is one of them.

This farmer from May-Kadra is among the first few commercial farmers who bought the Sfoggia row planter with seven rows. He has learnt on the importance of row planting through trainings given by different stakeholders in May-Kadra kebele. He had the chance to see the row planter while planting in the neighbouring farm in the Sudan. He borrowed the row planter from a Sudanese neighbour and planted ten hectare of land. After looking at the result, he secured an investment loan from Development Bank of Ethiopia (DBE) and bought the planter and planted sesame, sorghum and sunflower on 20 hectares of each. He harvested 5 quintals per hectare sesame from row planted instead of the 3 quintals with the conventional practice.

Mr Getachew preferred the row planter due to its easiness to operate; dropping the seed uniformly; the capacity of planting one hectare between 45 – 75 minutes; pulled by a tractor with horse power ranging from 90 to 120; plants 7 rows at once; reduce production costs as application of weeding and fertilizer is becoming easier; it results in yield increase (5 quintals per hectare instead of 3 quintals per hectare) and can be easily maintained locally. However, as he owns 326 hectare of land and the planting time of sesame is short it is difficult to cover the whole area with only one row planter. He plans to buy an additional row planter with 14 rows; he started already discussing with DBE about access to credit.

Mr Getachew has been creating awareness to neighbouring farmers. For the coming year he is planning to demonstrate the row planter to voluntary investor farmers. Besides, he also has

a plan to give rental service to other farmers in the future. His vision is to transform his farming system to a full mechanized system by purchasing an additional row planter, deep plough, cultivator and harvester within the next two years. This cannot be realized without the support of public organizations; he hopes to see establishment of a road, availability of electricity around his farm and access to a long-term credit service.



“The vision of Mr. Getachew Mamu is to transform his farming system to a full mechanized system by purchasing an additional row planter, deep plough, cultivator and harvester within the next two years.”

Papaya gardening for improved income and nutrition

The low lands of western zone of Tigray grows sesame as commercial crop and sorghum as staple crop. Where there is irrigation facility, farmers grow onion, tomato and leafy vegetables. Papaya, which is highly suitable for the area, good source of income and nutritious (high content of vitamin A and C), gets limited attention by the farmers and other stakeholders. CASCAPE initiated the production and management of improved papaya variety so as to improve the income and nutrition, especially women and children, of small scale farmers. At this short time, very promising results have been observed.

CASCAPE project introduced improved papaya variety, Maradol, in all woredas of Western zone and Asgede Tsimbla woreda of Northwestern zone of Tigray in 2016. In Tsegede woreda, 1360 papaya seedlings were distributed to 36 beneficiaries in Alem-genet and Zuria-dansha kebeles. Ato Zafey Gebremeskel, one of the beneficiaries from Zuria-dansha kebele, took 40 papaya seedlings and planted these in his garden. Initially, all the seedlings survived but 12 plants died gradually during the last rainy season due to water logging problem. From the remaining papaya plants his income doubled and the papaya fruits contributed to the improved health of his children.

Ato Zafey Gebremeskel, who is 40 and a father of 6, has 28 papaya trees in his garden. The papaya trees bear 60-160 fruits per tree per year and the fruit size ranges from 2-4 kg. Before CASCAPE's intervention, Ato Zafey used to grow chili pepper at the spot where papayas are growing. At that time, his gross annual income from the same plot was less than 5000 birr. But now, his income has increased to more than 10,000 birr per year. Compared with chili pepper, papaya, obviously, is fetching more income. However, according to Ato Zafey, what made papaya more beneficial than pepper is not only the amount of income he is getting from it but also the regularity of the income he is getting. Ato Zafey has almost daily income from the sale of papaya fruits. Additionally, papaya is consumed at his home. His children are enjoying papaya, one fruit per day, and other fruits and vegetables (guava and tomato) growing at the garden. The crops are also healthy, Ato Zafey said that his children have never seen the door of a hospital.

Woizero worknesh Gashe, Ato Zafey's wife, has also expressed her view on the advantages of

the introduced papaya. Most of the house-wives in their kebele are economically dependent on their husbands. Growing papaya has freed her from such condition. She herself sells papaya fruits and gets income. As a result, she covers most of the household expenses like food seasoning items.

Based on the experience gained in southern zone of Tigray, CASCAPE project demonstrated the production of improved papaya variety in Western and Northwestern zones of the region. In 2016, the production of improved variety was demonstrated in Asgede Tsimbla woreda of Northwest and all woredas of Western zones of the region. Similarly, in 2017, the production of this papaya was demonstrated in all woredas of the two zones. As it is shown in the story of Ato Zafey Gebremeskel, the beneficiary farmers have started improving their income and nutrition. Currently, the demand for papaya seedling is increasing radically. For instance, Ato Habte Azenaw, influenced by his neighbor, Ato Zafey, has planted 2500 papaya seedlings in 2017.



“Ato Zafey has almost daily income from the sale of papaya fruits. Additionally, papaya is consumed at his home. His children are enjoying papaya, one fruit per day, and other fruits and vegetables (guava and tomato) growing at the garden.”

SMS connects farmers with weather information

Sesame producing farmers in the Sesame Business Network (SBN) have long relied on traditional weather forecasting methods to decide when to plant their sesame crops and when to perform their farm activities. Because of this, they have incurred severe losses when the weather changed unexpectedly. This is now changing thanks to the pilot project, jointly run by National Metrological Agency (NMA), CommonSense and Benefit-SBN. The aim of the pilot project is to help farmers working in sesame production zones in Northwest Ethiopia to reduce their risk of crop failure from heavy rainfalls or recurring dry spells by providing accurate weather information via Short Message Service (SMS).

One of the main problems in the sesame production zone of Northwest Ethiopia is a lack of weather forecasts. Every year, the area experiences different weather conditions (i.e. small – heavy (erratic) and early - late rainfall). Due to this, huge amounts of yield losses have been recorded. To address these challenges, Benefit-SBN in collaboration with CommonSense and NMA have provided localized weather forecast services to more than 1600 farmers and agricultural professionals via SMS. From recipient farmers the living area and production zones GPS coordinates were taken. The SMS was sent to registered farmers and professionals twice a week, from number 8338. The provided weather information contained the next three days expectations in rainfall, temperature and wind. The message was sent in local languages. With the help of this weather information, sesame farmers and agricultural professionals were able to better plan their farm activities to mitigate risks and increase resilience.



Due to received weather information Mr. Gurshaw was able to reduce post-harvest losses which may have occurred due to rainfall.

Mr. Gurshaw has been using weather forecast text messages to plan his farm activities. Rainfall forecasts are most important to him. According to his explanation, his sesame was harvested, stalked and ready for threshing. He has two permanent laborers who normally perform the threshing activity. This year, he received a SMS which indicated that there was a high chance of rain in the coming three days. This made Mr. Gurshaw decide to hire six additional labourers. They were able to thresh the sesame within a day. Right after they finished threshing, during the evening of that same day, heavy rain occurred. By hiring additional labourers, Mr. Gurshaw was able to reduce the risk of post-harvest losses (seed falling from the capsule) due to the rain. If threshing would have only been done by two labourers, it would have taken several days and the sesame stalks would have been damaged by the unexpected rainfall.

In addition to this, his millet was harvested and piled until it was dried for threshing. On September 25, 2017, Mr. Gurshaw received a message which indicated very high chances of rain for the next three days. Therefore, he covered the pile with a plastic sheet to protect it against rainfall and prevent damage. Similarly, he had harvested the forage and left it in the field to dry. With a plastic sheet he protected the forage from fungal disease development, which is favoured by high moisture and temperature levels and consequently affects the health of the animals.

Effective weather information delivery services can improve farmers' decision-making and their management of related agricultural activities. Such services can help develop sustainable and economically viable sesame value chains, improve sesame and rotation crops production and quality and reduce losses and risks.

Field and survey results confirmed that the weather forecast SMS service has significant effect on the performance of farmers' farm activities, especially to avert risks related to weather conditions. To augment its importance some specific recommendations were mentioned. Taking into account these recommendations, the SMS service will be improved and delivered to around 3000 farmers and experts in the coming production season.

Improved agricultural practice resulted in improved productivity of wheat for surplus household consumption and market supply

Glaring achievements have been registered by JU-CASCAPE in increasing farmers' productivity from previously very low wheat productivity with poor agronomic packages to a threefold increase by implementing good agricultural practices together with improved seed. The livelihoods of many farmers are improving. CASCAPE-Programme case farmers are getting better experience and income from the activities implemented on their farms. The success story of one of our highland wheat adaptation trial and pilot scaling farmer in Omo Nada woreda, Chahalaka Donga kebele, Alfiya Abasharaf in 2016 and 2017 cropping seasons is a good indicator to understand how the productivity gain of resource poor farmers is changing farmers' livelihood. Alfiya Abasharaf is a female household head having six family members and she has 1.5 hectare of land for her farming activities which has very low productivity. Previously her agricultural activity on cereal production (wheat, maize and barely) only cover household consumption and every year she used to sell her cattle to purchase seed and fertilizers during sowing time, and used very low rate of fertilizer with no improved seed for wheat and other crops. After receiving on spot trainings on wheat production techniques from JU-CASCAPE programme team in 2016 cropping, she showed greatest interest included as test farmers on 2016 wheat variety adaptation trial. She grew different varieties of wheat on a total of 800m² of land and got 6.5 quintal of wheat grain as a result of proper utilization of recommended wheat crop production packages and technical backstopping by JU-CASCAPE programme staff. She saved 3.5 quintals for seed and household consumption, and sold 3 quintals of the harvested grain to 4,320.00 Ethiopian Birr (3Qt*1440.00birr) to other farmers as a seed source and prepared herself for 2017 cropping season by purchasing improved maize seed, and recommended rate of fertilizers for both wheat and maize with full agronomic packages as per the experience she gained during previous season from CASCAPE experts. During 2017 cropping season JU-CASCAPE supplied her with another 13 kg of improved wheat seed for senate wheat variety pilot scaling activity on 0.125ha of land, and Alfiya purchase recommended rate of NPSB and UREA for the plot and she produces 7.50 quintal of wheat, and using her last years own seed, fertilizer and

experience she also produced 5.50 quintals of wheat on another 1000m² plot of land and totally she harvested a total of 13.00 quintals of wheat which will be estimated to current wheat price of 14,300.00 (13.00qt*1100.00birr).

She has got a full knowledge and experience of wheat production techniques for more productivity, she started supplying the market with her surplus grain after satisfying the household consumption and her interest of using improved seed, fertilizer, improved cultural practices for cereal production is highly increased. Starting from 2016 Alfiya and other farmers got practical training on wheat production technologies and they select promising and adaptive wheat variety to their agro ecology and started getting high yield, knowledge on good agricultural practices. Alfiya witnessed that "today, the outputs from my wheat plots is reliable, adequate and significantly reduce food shortage we have been facing during summer season". She said, producing wheat on large area following the recommended package is a real promise for our *kebele* and beyond in ensuring household food security. Finally, I recommend the scaling up of this success to other fellow smallholder farmers in other *woredas* by concerned body.



"Senate wheat variety is very productive and disease resistant, really I have never seen such amount of yield of wheat from such small 'timads' of land using our own local varieties, now I have a potential to purchase enough amount of fertilizers, improved seeds of maize. I have no shortage of food in my house for my family member, and I have a plan to buy a cow by selling 4.00 quintals of wheat to about 5,000.00 birr to keep the continuation of the benefits I am getting from CASCAPE programme and to always remember the contribution of CASCAPE in my life. "

Unleashing the Export Potential of Ethiopian Turmeric

Though Ethiopia has suitable agro-ecology for cultivation of turmeric as well as very good potential for export market, until 2014 the production of turmeric never exceeded 10, 000 Mt annually. But since the last couple of years the volume and quality of turmeric production has been increasing. Currently, the annual turmeric production of Ethiopia has already reached 20 000 Mt. In 2017, through the support of ENTAG and the effort of other public and private actors the quality, production volume and export volume of turmeric in Ethiopia has increased by 25%, 30% and 38% respectively. As a result, in 2017 the ENTAG programme, contributed 22.6% to the total turmeric export of the country, both in value and volume, by providing inclusive trade support to four Ethiopian turmeric exporters. These exporters are linked with two unions, two commercial farmers and six suppliers.

The Ethiopian spice sector in general and turmeric in particular is characterized by use of primitive production technologies and agronomic practices, long value chain & illegal brokers, adulteration and quality deterioration, improper post-harvest handling, high market volatility and lack of access to better market.

Dejene G/ Meskel, the owner of Dejene G/Meskel General Export, said that their turmeric market has been constrained by poor quality of product from suppliers. He has also mentioned the challenge they have been facing in connection with access to export market and



Mr. Dejene G/Meskel, owner of Dejene G/Meskel General Export: *"Since we know ENTAG, our turmeric export market and backward integration with suppliers has been improving. Through ENTAG we are now able to find the trusted end users (buyers) and our visibility as an exporter has been enhanced. We took part in the trade mission to India, which helped us to link with three Indian companies and make of \$300, 000.00 from turmeric export in 2017".*

knowing the needs of buyers from other countries. The owner said that the whole value chain has been running based on traditional knowledge and practices, which has significantly constrained the competitiveness of Ethiopia on the international turmeric market.

To arrest these challenges and unleash the potential of the commodity, the ENTAG program, as part of its support to the spices sector in Ethiopia, has been working with Ethiopian and foreign private companies engaged in turmeric trade as well as turmeric producer farmers in South and South West of the country. The ENTAG program through its technical and financial supports: capacity development activities, trade missions to abroad, platform meetings, backstopping and helpdesk services, backward & forward market integration, efficient coordination of agri-logistics, facilitation of sales & purchase contract and introduction of improved technologies has made substantial contribution to the increasing turmeric production and export in Ethiopia. In doing so, ENTAG has been collaborating with national and regional agencies for Spices, Coffee and Tea; the Ministry of Investment, UN-ITC/ MoI; research centres and the Ethiopian spices, herbs and aromatics private sector association.

The program supported Ethiopian turmeric exporting companies in improving the quality and volume of their products. It has brought about an increase of annual sales turn over, which worth \$1.2 million, involving four Ethiopian private companies. It has facilitated the 1283.93Mt turmeric sale, which involved six local traders, two commercial farmers and 1728 smallholders.

The major conclusion of this story is that an inclusive trade support on forward and backward integration as well as collaboration of important private and public sectors across the whole value chain is very crucial for alleviation of the major bottlenecks of the spices sector in Ethiopia. Thus, activities of the ENTAG program should be strengthened and the best practices in turmeric production and marketing should be scaled out to other spices, herbs and aromatic products.

Adaptation trial: A green light for sorghum renaissance

For the past so many years Asgedetsimbla *woreda* farmers had been used Sorghum varieties introduced by their forefathers. Due to the lack of improved and farmer preferred alternative varieties, poor harvest became one of the major challenges for them. Aiming to solve these critical problems BENEFIT-ISSD, deployed different sorghum varieties starting from last June 2016 for farmers and now start to solve their problems by possessing agro-ecological adaptable varieties. Most of the farmers participated in the experience sharing showed an interest to use those varieties. Asgedetsimbla *woreda* is located in the north western zone of Tigray. It is one of the sorghum potential areas in the region. For the past many years, farmers themselves were source of sorghum varieties. They keep seed of different varieties and exchange in kind during plantation season. However, due to agro-ecology adaptability problems and repeated climate change occurrences, the performance of local varieties declined from time to time. In 2017 fiscal year, an action plan among BENEFIT partners (ISSD, CASCAPE & SBN) was facilitated to provide farmers with new varieties. As part of this partnership, a pilot collaboration based on adaptation trial accomplished on sorghum in Asgedetsimbla *woreda* at tabia level. In these three tabias Dedebeit, Selam and Hitsats there are nine farmers engaged in the adaptation trial on sorghum varieties. Among them are three womenheads of households. At



Tesfay Gidey: *“Comparing with the varieties we had, the newly introduced sorghum varieties seem superior quality. Especially Melkam, Meko, Dekeba and Tewzale are agro-ecologically fit varieties for our locality. They are early maturing with encouraging amount of yield to cascade as best sorghum varieties. They seem more climate smart varieties than the old varieties.”*

the end of June 2017, each farmer was provided with 150 gram seed of six different sorghum varieties [25 gram for each variety] for demonstration. Using the same technique acquired through practical training, all of them planted those sorghum varieties on six equal plot sizes.

Tesfay Gidey, 52 years old, is one of those farmers who are engaged in the adaptation trial on sorghum seed multiplication. From the given six different sorghum varieties, Tesfay observed four varieties performed well and two failed due to late maturity. Tesfay told that more than 200 individual farmers visited his farm level adaptation trial at different times. The *woreda* office of agriculture organized a farmers' field day and invited 182 farmers [123 male & 59 female] to visit Tesfay's plot. Split into groups, the farmers came from different tabias of the *woreda* and observed the adaptation trial mechanisms Tesfay used. Farmers asked him about the management practice he followed specially plowing, weeding and inputs application procedures. In addition to the experience sharing visit conducted at *woreda* level, some farmers in the neighbourhood were attracted by the performance of the varieties deployed.

Regarding the farmers visit, Tesfay stated: *“while passing through the trial site farmers stop for a while and talk among one another about the varieties and their source. I explained to them BENEFIT provided the varieties. Before planting, I tilled the land three times and weeded three times. Most farmers want to have Meko variety due to its early maturity trait. However, I myself rather prefer Melkam due to its big spike, short height and its quality for forage. I planned to distribute the seed to five farmers.”* So as to scale up the pilot sorghum varieties already deployed and harvested, farmers who grew the varieties promised to share seed for another five new farmers. During the farmers' field days, farmers learnt how to multiply and then own those varieties in the next season. Tesfay for instance ready made three varieties to give for 15 farmer i.t. one variety at least for five farmers.

Finally, Metema Union uses its cleaning machine: it cleans 50,000 quintals of sesame

Metema Farmers' Cooperative Union was established to strengthen its member primary cooperatives by pooling their scarce resources and increasing their bargaining power. Metema union owns a cleaning machine which has been idle for almost the last two years. Ever since it is planted in Gendewuha, the cleaning machine cleaned not more than a total of ten thousand quintals. Recently, the union has started to provide cleaning (50,000 quintals) service to a private company called Warka which will result in fetching an extra 1,000,000 ETB income. As part of its effort to strengthen the capacity of stakeholders, Benefit-SBN supported Metema union reach the deal to help its internal capitalisation effort.

The cleaning machine has a cleaning capacity of more than 6-7 tons per hour with 99% purity level. However, for a long time the machine was almost idle because the union did not purchase high volumes to run the machine. Benefit-SBN advised the union to demonstrate the machine to stakeholders and give cleaning services. As part of strengthening internal capitalisation of unions, Benefit-SBN supported Metema and Selam unions to organise mobilisation workshop and demonstrate their cleaning machine to stakeholders. Warka PLC became interested in making use of the cleaning service and approached the union. Warka agreed to clean 50,000 quintals of sesame for 20 ETB per quintal. Thus far, the union cleaned 22,000 quintals. Metema union has bought 15,440 quintal sesame this year. This means, in total the machine will clean more than 65,000 quintals.

Membership fees and retained earnings are the primary source of income for farmer cooperative unions. Fee payments are important for internal capitalisation, but not enough to strengthen unions. Without sufficient capital, cooperatives cannot function properly. To overcome this challenge, Metema and Selam unions have been looking for solutions to get the necessary working and investment capital. They approached Benefit-SBN for support to realise their objectives.

Benefit-SBN has been supporting the unions in many respects. It facilitated guarantee fund to Metema union for two years which helped the union to get more than 6 million ETB credit. In its effort to capacitate the union Benefit-SBN has given trainings to member cooperative

management staffs and member farmers on different topics. The support programme does all these things on a cost sharing base. Besides, the support programme helped the union to mobilise its internal resources. It was proposed to demonstrate and promote the machine which resulted in service provision deal with a private company called Warka.

Warka PLC is a sesame exporting company. The company discussed with the union and agreed to use the cleaning service under the following circumstances: cleaning of 50,000 quintals of sesame for 20 ETB per quintal which means a total of 1,000,000 ETB income for Metema union. Apart from benefiting the union the deal created job opportunities for more than 30 individuals.

Farmer cooperative unions in the region are operating with varying degrees of performance. Some are performing well while some others need external support to pursue their goals. Their ability to maximise member profits is limited by shortage of capital and limited access to credit services. They typically do not possess the management skills and organisational structures necessary to realise their full potential. Internal capitalisation of cooperative unions is mostly overlooked and unions most of the time look for external support. Reducing the challenges unions are facing and strengthening their potentials can help them realise their goals.



The major lesson from Metema union case was that union management staff should take into account local realities, as well as built on the spirit of internal capitalisation. Therefore, skill development training in resource management, use of funds and conditions is so important which will enable them to stand by themselves as competent business enterprises.

Enhancing EGS supply through partnerships in Oromia

Lentil is a key crop in East Shewa Zone of Oromia. However, a serious lentil seed shortage is causing wide inefficiencies in the sector and is affecting livelihoods among low income rural communities in the East Shewa zone of Oromia. ISSD-OSE initiated a project entitled “Enhancing lentil EGS supply through alternative systems” in Lume and Ada’a Woredas in order to overcome severe EGS shortages, capacity gaps and institutional challenges. Through a mutually beneficial partnership with Debre Zeit Agriculture Research Centre (DzARC), SPCs developed the capacities to enhance the value chain functioning and received access and support to vastly more EGS. This has resulted in chain-wide improvements in quality and quantity, and better livelihoods for producers. Farmers in Oromia like farmers everywhere in the world depend on seed as a fundamental input to crop production. Lentil is one crop widely produced in the highland and semi-highland regions of Oromia, with close to 100,000 ha, producing circa 1.4 million quintals of yield. This crop is a protein dense and has the ability to fix nitrogen to augment the soil nutrients. In the East Shewa zone of central Oromia areas, lentils production is main cash crop of the farming community. BENEFIT-ISSD implementing partner Oromia Seed Enterprise, (ISSD-OSE) conducted a seed value chain (SVC) analysis in 2016. Major bottlenecks discovered during the analysis included weak collaboration and linkages among actors in the chain, widespread limited capacities of operators, a severe shortage of lentil early generation seed (EG) and an entrenched lack of accountability. The woredas Lume and Ada’a Woredas of East Shewa zone of Oromia were selected due to their suitability to produce lentil seed, as well as the fact that their close proximity to DzARC enables collaboration on coaching and mentoring the activity. Magartu Seed Producer Cooperative (SPC), in Ada’a Woreda, is one of the SPCs that implemented this project with the collaboration of DzARC. ISSD-OSE financial support enabled Magartu SPC to participate in the project.

Magartu SPC has started implementing activities with DzARC and has signed a MoU jointly undertake tasks aimed towards sustainable Lentil EGS production and Supply. Together, DzARC and Magartu’s aim is that of enhancing the productivity of lentil produce in Oromia by alleviating the shortage of seed

through provision of EGS to produce certified seeds.

Alemu Tessema chairman of Magartu SPC also stated that:

“We were facing shortages of improved lentil seed during each growing season. We are very happy to work jointly with DzARC; they offered us 5 quintal of lentil EGS, equipped us with technical training on seed management and conducted close supervision of our activities.

Our cooperative cultivated the seed on more than six hectares of our member farmers’ land and the crop performed well on the field. We are now expecting more than 250 quintals of EGS lentils yield. This amount of EGS will help us in the coming cropping season, when we will further cover more than three hundred hectares of land with quality seed. This is a real boost to the quality and quantity of our harvest. It will help us and our members to improve our income and our livelihood”.



Nigussie Girma researcher at DzARC: *“This is a successful partnership; the centre has a shortage of land for seed multiplication, while Magartu SPC has a scarcity of improved quality seed for member farmers”. This is a new approach and amazingly the SPC manages their fields very well. We recognize now the capacity of the SPC to produce quality EGS as a local seed businesses. Hence, this collaboration is a remarkable approach to halt the challenges encountered the two organizations”.*

Enhancing supply of disease free seed potato using screen house

Potato is the most important root and tuber crop in Ethiopia. It is one of the most productive food crops in terms of yields of edible energy and good quality protein. It is an ideal crop for smallholder farmers in the highlands of the region, as it yields more calories per unit area compared to other crops with a short growing cycle, and is nutritious. The Amhara region has good climatic and environmental conditions for high potato production and productivity.

Even though the region has potential to produce potato in a wider scale, the vast majority of smallholder farmer's productivity is very low due to lack of supply of quality seed and occurrence of disease. As a result farmers use farm-saved seed potatoes obtained from local markets. In this farmer-based informal seed system is generally unable to maintain seed quality or eliminate diseases such as bacterial wilt, or viruses.

In order to solve the problem of supplying disease free quality seed, ISSD in collaboration with Amhara Regional Agricultural Research Institute (ARARI) has been working to produce and supply disease free quality potato mini tuber using the newly built screen house at Addis Alem seed producer cooperative in Farta woreda.

The ISSD Amhara unit allocated and transferred Birr 320,000.00 for ARARI to build the capacity of tissue culture laboratory, to purchase the screen house for the cooperative, to buy other implements for the screen house and to provide trainings. Accordingly, ARARI in collaboration with ISSD undertook site selection and discussed with the Adisalem cooperative to understand the motivation of the cooperative to produce potato mini tubers. The cooperative agreed with ARARI to supply local material like forest soil, wood, compost and other materials which are required for screen house construction. ARARI purchased and supplied the other inputs for the screen house construction. As the result, 15 m X 8m X 3 (Length, width and height) screen house was constructed with the involvement of ARARI, ISSD and the cooperative.

Following the construction of the screen house, other screen house facilities like 1000 growing pots, a water container with 500 litre capacity and watering cans were supplied. The plantlets from the tissue culture laboratory could now be planted in the screen house growing pots.

To manage the screen house, practical training on potato early generation seed multiplication and green house management was provided for 13 cooperative members by the researchers. The training included a practical demonstration on handling, planting of plantlets and watering. Based on the training the cooperative prepared wood, compost, forest soil, sand and hand dug well to start installing the screen house.

Finally 1000 acclimatized plantlets developed from tissue culture laboratory have supplied to the cooperative by ARARI. 954 plantlets were planted in pots in the screen house.

To improve the performance of screen house management frequent monitoring was undertaken by ISSD in collaboration with ARARI. They also provided coaching and technical support. Following this support, the cooperative is has been managing the screen house properly. As the result, the cooperative has harvested 13000 different size tubers which are sufficient to cover around half hectare of land. The result have been shared and documented by Amhara media organisations in collaboration with Bahir Dar University.



Seed producer cooperatives are able to produce disease free potato seed. ISSD and ARARI's support in constructing the facilities and training cooperative members has empowered the cooperative to manage the screen house and produce 13000 different size tubers which are sufficient to cover around half hectare of land.

Because of its success, CASCAPE and ISSD have decided to collaborate in looking into opportunities to scaling this technology to more locations in 2018.

Formulation of Poultry Policy

Until very recently, strong institutional and legal frame work specifically for the poultry sector has been lacking in Ethiopia. In addition to this vacuum, technical challenges, also hindered the development of the sector. As part of efforts to advance the sector, the first National Poultry Policy has been drafted by the Ministry of Livestock and Fisheries (MoLF) with the support of ENTAG and that of the poultry platform managed by ENTAG.

In 2017, the ENTAG program, through its three sectoral platform meetings brought government agencies, private sector and other relevant actors together to brainstorm on the pressing challenges and possible solutions of the poultry sector. As a result, currently the first National Poultry Policy is being drafted by the Ministry of Livestock and Fisheries (MoLF). The draft policy paper was reviewed during the third platform meeting, and input from the private sector has been incorporated. The policy is now expected to be presented to the next level of governmental body for ratification in 2018.

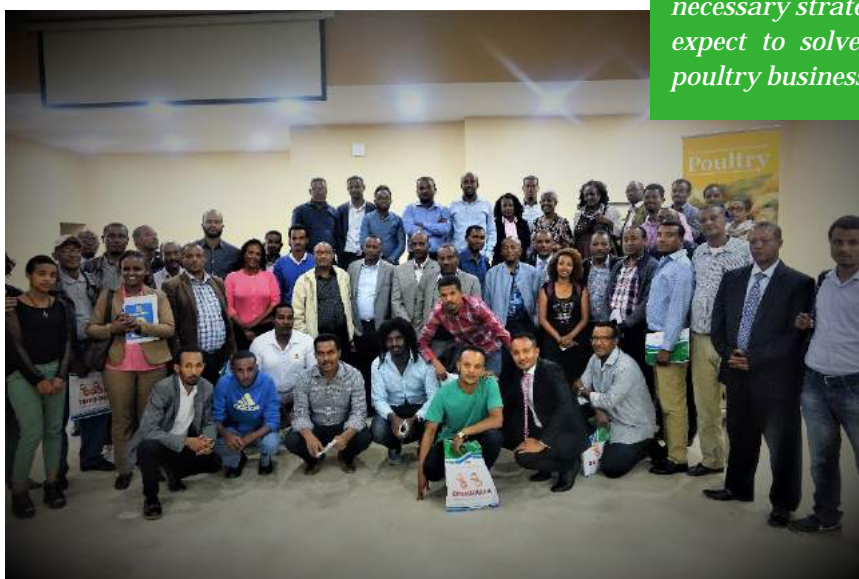
The poultry sector in Ethiopian is characterized by insufficient level of co-ordination, absence of well-established institutional and legal frameworks and scientific standards. Lack of standards and inspection in production, disease control and biosafety practices as well as market and investment privileges are still the main bottlenecks of the sector; subsequently, discouraging chicken producers from production, and contributing to reduced chicken productivity.

Ato Etefa Merga, the owner and manager of Amel Agro Industry PLC, which is found around Wonji area, said that absence of government incentives is not attracting for new investors to join the sector. He mentioned that problem of access to land, absence of standard, inspection on vaccination and medications are affecting their business.

ENTAG, through its poultry subsector platform and support to the association, convened the venue for the private sector, research institutions and the MoLF to discuss issues and potential solutions. It facilitated the process for the actors to collaborate and integrate their individual efforts to create better enabling and policy environment in the sector.

National policy is under ratification which is expected to address land, tax, medication, feed and market issues of poultry business in Ethiopia.

The major lesson drawn out of this story is that increased involvement of the government is a paramount importance to bring about the desired change at sectoral level.



Ato Etefa Merga, Amel Agro Industry PLC *"We hope the MoLF will soon implement the new policy with the necessary strategy and regulations, which I expect to solve most of our problems in poultry business"*

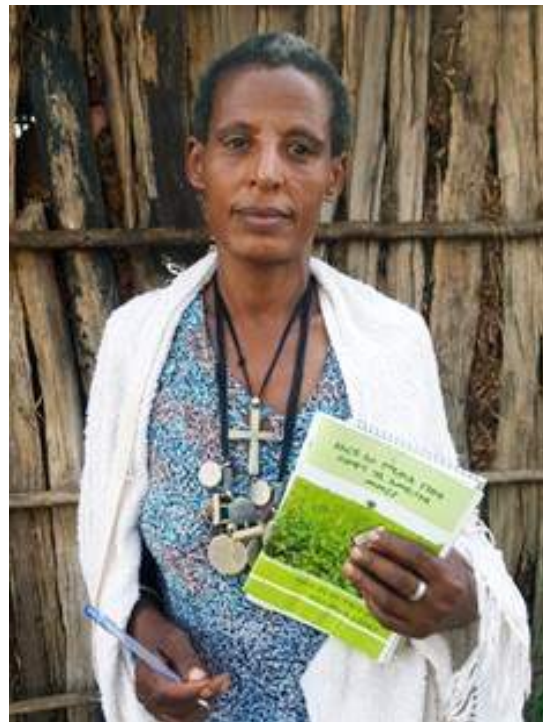
Calculating for better income

Recording costs and income helps farmers to see their farm as a business, and conducting cost-benefit analyses helps them make better informed decisions on future farm activities. This also helps farmers prepare accurate financial overviews of their farm business that loan providers require, to shorten the loan review process.

However, most farmers in North-western Ethiopia do not habitually record their income and expenses, nor carry out any cost-benefit analyses of farm activities. Some try to calculate profitability without written records, but tend to forget input costs, do not consider depreciation or to include family labour costs, resulting in incomplete financial pictures. To address this, the Benefit-SBN support programme in collaboration with nine farmer cooperative unions, rolled out financial literacy training in 12 sesame-producing woredas (districts) in Amhara and Tigray regions and reached about 7,000 sesame farmers, of which 969 are women farmers. In 2017, changes were made to the financial literacy training, drawing lessons from previous years. Programme staff improved the books and manuals, producing 7,750 cashbook manuals and 15,500 cash recording books in Amharic and Tigrigna languages. Then, 220 cooperative members were trained to teach financial literacy. Topics included cost recording, farm cash inflow and outflow, end balance, profit or loss, credit costs and stocks, decisions for next season, and in-depth farm analysis. Subsequently, the newly trained trainers spread this knowledge to more than 7,000 sesame farmers from 71 cooperatives, followed by farmer-to-farmer discussions to support financial recording. This significantly increased the number of farmers receiving financial record training, compared to the 1,040 farmers reached last year. Farmers gave positive feedback on the training and farmer-to-farmer discussions. Unfortunately, very few women were involved in 2017. Cooperatives selected only 969 women to take part, out of the 7,000 trainees.

As more and more women are showing interest, it is essential that cooperatives to select more women in future for scaling out financial literacy training.

Evaluation of last year's performance and the planning and implementation of 2017 activities was conducted together with farmer cooperatives, unions and woreda Cooperative Promotion Offices. This collaboration



Farmer Emebet Bekele: *"Previously, I tried to remember my costs and compare them with what I gained, but I often got confused. Since I am busy with different farm activities, I forget things. This year, from the lessons I have learnt, I now record all my costs and it will be easier to calculate profitability at the end."*

contributed to effective implementation, but not all relevant stakeholders were equally committed. There was limited participation and involvement of some unions, cooperatives and agriculture offices. In some woredas, the union did not transfer funds on time resulting in delayed training sessions, and some unions did not perform as expected due to lack of commitment and high staff turnover. It was also a challenge for farmers to attend training as they were busy with farm activities, with complaints about the timing of the training of trainers' workshop and other sessions.

To improve this situation, discussions led to the appointment of Cooperative Promotion Office focal persons, with a small budget to motivate trainers. Staff from Benefit-SBN closely monitored progress and provided support to focal persons and trainers in all woredas.

National seed advisory group and national stakeholders' platform for steering seed sector development in Ethiopia

Until the recent establishment of the national seed advisory group to the Ministry of Agriculture and Natural Resources (MoANR) and seed sector stakeholders' national platform, seed sector interventions at the national level tended to focus on the routine management of regulatory activities. Instead of focusing on systemic challenges in order priority, interventions acted, in almost firefighting fashion, on addressing the symptoms of these underlying causes of the problem.

Applying the lessons learned from the contribution of multi-stakeholder partnerships in the seed sector at regional level, ISSD Ethiopia has advocated for the establishment of structures in the collaborative governance of the seed sector at national level. These include the national seed advisory group and stakeholders' platform. Through the establishment of these structures, ISSD Ethiopia aims to replicate at the national level the successes of dialogue, collaboration and partnership steered by the seed core groups within the regions.

ISSD Ethiopia now has over seven years' experience on the effectiveness of steering seed sector development at the regional level in four agriculturally very important states of Ethiopia. Having established and facilitated regional seed core groups – select committees of key decision makers from government, research, civil society and industry – systemic challenges in the seed sectors of Amhara, Oromia, SNNPR and Tigray are being addressed in a systematic and collaborative way. Regional seed sector stakeholders' platform meetings and workshops contribute to the identification and prioritization

of complex challenges to be addressed in partnerships. The regional seed core groups develop strategies for solving these challenges by assigning tasks to competent organizations, encouraging the development of proposals and action plans and monitoring and evaluating progress. ISSD Ethiopia value chain experts and their colleagues facilitate the process in part by making the funds available to pilot strategic interventions, thereby sharing the risks of stakeholders to experiment with and adopt new ways of working.

ISSD Ethiopia, together with its partners including ATA, supported MoANR to establish the national seed advisory group and national platform of seed sector stakeholders. The latter is convened at least twice a year to discuss achievements, challenges and opportunities in the Ethiopian seed sector, while the national seed advisory group advises MoANR technically on any issue whenever the need arises. Additional to their role is giving guidance to the regional Bureaus of Agriculture and Natural Resources (BoANRs) in the implementations of strategies.

Through their facilitation, ISSD Ethiopia and ATA help build consensus among stakeholders on the definition of problems and stimulate an enhanced sense of ownership for strategies that aim at solving these. The national seed advisory group advises MoANR on the order of priority that should be given to the challenges identified, strategies for addressing these and on which organization(s) are most competent to lead assignments.

MoANR has reoriented its focus towards uncovering underlying challenges to seed sector development and finding sustainable solutions to these problems as opposed to routine activities in governance. To maintain such a focus, MoANR has set up a special coordinating unit on seed, to which ISSD Ethiopia's senior seed sector expert belongs.

This is positive recognition by high level policy makers of ISSD Ethiopia's experience and tested approaches to seed sector governance and coordination. Admittedly it has taken some time, but such are the fruits of our labour.



National seed sector stakeholders' platform, attended by (front and left-centre) H.E. Dr Eyasu Abraha, Minister of Agriculture and Natural Resources, and (front and right-centre) Ato Khalid Bomba, CEO Ethiopian Agricultural Transformation Agency.

Cooperation is the basis for sustainable supply of early generation seed in Ethiopia

After several years of piloting, experience sharing and advocacy, ISSD Ethiopia has earned the confidence of the Ministry of Agriculture and Natural Resources (MoANR) to be given the lead in developing a more sustainable system of quality early generation seed (EGS) supply in Ethiopia. Already, the programme has succeeded in building consensus among key stakeholders on three major policy positions for sustainable EGS supply in the country.

The production and supply of sufficient quantities of quality EGS of all varieties in demand continues to prevail as one of the most pressing challenges to the efficient functioning of the seed sector in Ethiopia. ISSD Ethiopia and its partners have been piloting interventions to address the bottleneck for several years, and as a result of their hard work, experience sharing and advocacy efforts, the task has finally been given to ISSD Ethiopia to lead the process towards the development of a more sustainable system of quality EGS supply in the country. This is the mandate given to ISSD Ethiopia by MoANR.

One of the most important and common bottlenecks limiting the supply of quality seed of a diverse range of crops and varieties to farmers is the insufficient supply of EGS. Improving the performance of agriculture in Ethiopia depends upon farmers' access to and use of quality seed of improved varieties. This is key to achieving the goal of the second Growth and Transformation Plan (2015/16-2019/20) to double Ethiopia's agricultural yields and attain middle income status by 2025. Investments in crop improvement cannot result in significant productivity gains on farmers' fields without quality EGS supply playing a crucial linking function in the seed value chains of several important crops and varieties. ISSD Ethiopia and its partners have been piloting innovative ways of improving EGS supply for several years.

Having been assigned the task by MoANR, ISSD Ethiopia facilitated a series of meetings aimed at building consensus behind a renewed strategy of supplying quality EGS in the country. Researchers and organizations in the national agricultural research system, including the federal and regional state agricultural research institutes and selected universities,

and both public and private producers of certified seed in Ethiopia came together to agree on policy positions for sustainable EGS supply in Ethiopia.

Firstly, in this specific case, MoANR has adopted a more open position towards strategy development for agriculture than what is customary. The ministry has invited a third party being ISSD Ethiopia to lead a consultative process in which the ministry itself participates and gives input for building consensus on the strategy going forward. Secondly, the strategy itself involves cooperation between governmental and non-governmental private actors. The following two points of consensus have been generated: First, the production and maintenance of breeder and pre-basic seed is the responsibility of the national agricultural research system including selected universities and federal and regional agricultural research institutes in Amhara, Oromia, SNNPR and Tigray, respectively EIAR, ARARI, OARI, SARI, and TARI. Second, basic seed is to be produced by public seed enterprises and capable private seed companies and seed producer cooperatives. Lastly, it was also agreed that seed research units, which operate under each research institute both at federal and regional level, and the regional BoANRs are responsible to collect, analyse and forecast EGS demand data and coordinate the production of the two classes of breeder and pre-basic seed in the country. Fundamental to the strategy is cooperation between multiple actors in EGS supply and accordingly effective differentiation of roles, responsibility and accountability, which were lacking to date.



Policy workshop on the sustainable supply of quality early generation seed in Ethiopia, chaired by H.E. Ato Tesfaye Mengiste (not in picture), State Minister of Agriculture and Natural Resources

Appendix 2 Detailed information key performance indicators

In line with the Guideline for reporting results in the thematic area Food and Nutrition security, the four BENEFIT programmes report on the following key performance indicators.

Impact	Improved sustainable food, income, trade and nutrition security of rural households in Ethiopia			
outcome	Pillar 1: Increased quantity and quality of sustainable agricultural production		Pillar 2: Market Dynamics	Pillar 3: Improved enabling environment
outcome indicators	# of farmers reached with increased productivity (ISSD ,CASCAPE, SBN, ENTAG) (2017) 1,740,820 (2016) 910.745	# of hectares of farm land used more eco-efficiently (ISSD, CASCAPE, SBN) (2017) 564,858 (2016) 285,452	# of companies with supported plan to invest, trade or provide services (ISSD, SBN, ENTAG) 260	# of substantial policy changes/ reforms contributed to (ISSD, CASCAPE, SBN, ENTAG) (2017) 7 (2016) 5
	# of farmers reached with improved access to input markets (ISSD ,SBN) (2017) 1,340,439 (2016) 62,613		# of farmers reached with improved access to output markets (ENTAG) (2017) 1,736	
output	Improved stakeholders capacity in agricultural practices (knowledge and skills)			
output indicators	# of persons reached/ trained with improved technology and skills (ISSD, CASCAPE, SBN, ENTAG) (2017) 86,085 (2016) 5,282		# of trained farmers in sustainable agricultural production and practices (ISSD, CASCAPE, SBN) (2017) 241,228 (2016) 18,093	

In total the four projects reached over 112,228 farmers directly. Of these project beneficiaries, 18,598 were female and about 25% younger than 35 years of age. The majority of land holdings were less than 5 ha (just over 94%), 5% was between 5 and 20ha of size, and 0.5% larger than 20ha. The four programmes reached over 1,638,457 farmers indirectly, the total farmers reached is 1,740,820.

Disaggregated data partnership key performance indicators 2017

Indicator	ISSD	CASCADE	SBN	ENTAG	Total 2017
Indicator P1 EKN 1.1: Number of farmers reached with increased productivity (direct)	18,403	3,202	88,895	1,728	112,228
women	4,753	467	13,348	30	18,598
men	13,650	2,735	75,637	1,698	93,720
Indicator P1 EKN 1.1: Number of farmers reached with increased productivity (INDirect)	1,315,365	200,872	121,520	700	1,638,457
Indicator P1 EKN 1.1: Number of farmers reached with increased productivity (TOTAL)	↗1,333,768	204,074	210,505	2,428	1,750,775
Indicator P1 EKN 1.2: Number of hectares of farmland used more eco-efficiently (direct + indirect)	260,365	29,565	274,928	-	564,858
Indicator P1 EKN 1.3: Number of farmers reached with improved access to input market (direct + indirect)	1,245,713	-	94,726	-	1,340,439
women	372,326	-	11,759	-	384,085
men	873,387	-	82,967	-	956,354
Indicator P2 EKN 2.1: Number of companies with support plan to invest, trade or provide service	51	-	100	109	260
Indicator P2 EKN 2.2 :Reached # of farmers with improved access to output markets	-	-	-	1,736	1,736
women	-	-	-	30	30
men	-	-	-	1706	1706
Indicator P3 EKN 3.1 : Number of substantial policy changes/reforms contributed to	2	2	1	2	7
Indicator EKN O 1.1: Number of persons reached/trained with improved technology and skills	71,544	6,200	8,242	99	86,085
women	21,843	1,837	1,548	22	25,250
men	49,701	4,363	6,694	77	60,835
Indicator EKN O 1.2: Number of trained farmers in sustainable agricultural production & practices	8,640	18,196	214,392	-	241,228
women	2,714	10,176	37,295	-	50,185
men	5,926	8,020	177,097	-	191,043

- The programme's activities do not contribute to this indicator.

↗Based on the proxy amount of available seed produced by farmers reached directly, and the # of farmers that actually plant this seed. Hence the actual number of farmers reached is much higher than originally anticipated.

Partnership key performance indicators 2017 & 2016

Number of farmers reached with increased productivity (TOTAL)



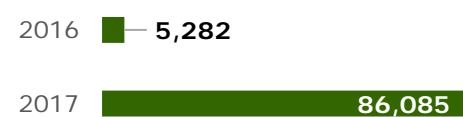
Number of hectares of farmland used more eco-efficiently (TOTAL)



Number of farmers reached with improved access to input market (TOTAL)



Number of persons reached/trained with improved technology and skills



Number of trained farmers in sustainable agricultural production & practices



Number of companies with support plan to invest, trade or provide service



Reached # of farmers with improved access to output markets



Number of substantial policy changes/reforms contributed to





Appendix 3 ISSD Annual report 2017

Introduction

ISSD Ethiopia works to ensure the sustainable increase of agricultural productivity due to improved access to and use of quality seed of new, improved, and/or farmer preferred varieties by men and women smallholder farmers. Increased availability and use of quality seed; enhanced performance of seed value chains; and an improved enabling environment for the seed sector are outcomes that contribute to this impact. The availability and use of quality seed of new, improved and/or farmers preferred varieties is increased by providing support to informal seed producing groups largely through the deployment of a large number of improved and local varieties; by strengthening seed producer cooperatives, public, and private seed producers to become more market-oriented in their seed production, marketing and distribution; and by facilitating conditions for Dutch/international seed companies to invest in Ethiopia. Collaboration with other BENEFIT programmes and other seed programmes has been one of the key approaches to achieve scale and contribute to integration and alignment of seed sector initiatives. In so doing, ISSD Ethiopia has been operating in four agriculturally important regional states of Ethiopia. The implementing partners of ISSD Ethiopia are Bahir Dar University in Amhara, Haramaya University and Oromia Seed Enterprise in Oromia, Hawassa University in SNNPR and Mekelle University in Tigray. Technical and administrative assistance to the programme is delivered by the Wageningen Centre for Development Innovation.

Major achievements

- The availability and use of quality seed of new, improved and farmer preferred varieties has increased from 733,288 smallholder farmers in 2016 to 1,333,768 in 2017. This has been made possible through ISSD Ethiopia's support to 5,995 individual smallholder farmers, 149 seed producer cooperatives (SPCs) and 20 private seed producers (PSPs);
- Seed production by both SPCs and PSPs has increased 49% compared with 2016, from 15,777 tonnes (t) to 22,394 t for true botanical seed. Although small in comparison to the quantities produced by SPCs and PSPs, seed harvested from on-farm participatory variety selection (PVS) and crowdsourcing trials in 2017 will be shared with 17,985-29,975 farmers. SPCs and PSPs also produced 3,020 t seed potatoes and 18,720 papaya, orange and mango seedlings in 2017. In addition, 13,000 disease free potato mini-tubers were produced in Amhara;
- Seed demand has increased for several new, improved and adapted varieties. In total, 235 varieties of 10 crops were deployed, tested and promoted at over 60 farmer training centres (FTCs) and on 5,995 smallholder farmers' fields, more than half of which are managed by women, through PVS and crowdsourcing trials in 29 woredas of the country. A total of 13,600 participants have observed the performance of PVS trials during field days. Farmers' preferences for varieties and specific traits have been crowdsourced. Interest among farmers to participate in variety evaluation and selection in 2018 of an even greater diversity of crops is high and thousands of requests for larger quantities of seed are being received;
- ;The business orientation and financial viability of four SPCs and two PSPs has been enhanced in 2017 by obtaining certificates of competence (CoCs) in seed production, marketing and distribution with support of the programme. Out of the 25 SPCs and 20 PSPs supported directly by the programme, to date, respectively 13 and 17 have obtained CoCs. Of a sample of 52 SPCs across Amhara, Oromia and Tigray regions, including those supported both directly and indirectly by the programme, 89% were profitable in 2017 according to audit and income statements. All of the PSPs sampled generated profits in 2017;
- Women have improved access to and use of quality seed of their preference. Women's membership in SPCs and women's participation in the programme in general have increased 12% and 118% respectively, since 2016. In 2017, 3,175 women farmers each obtained quality seed of three different varieties to evaluate against their preferences through crowdsourcing. They are expected to share the seed they have harvested with three to five other women or 9,525-15,875 in total;
- Crop and varietal diversity has increased tremendously in the full portfolio of seed products incorporated by the programme. This represents an important contribution to food and nutrition security. A total of 235 varieties of 10 crops were evaluated under farmers' conditions through PVS and crowdsourcing in 2017. Collectively, quality seed of 116 varieties of 27 crops was produced by

SPCs and PSPs in 2017, which is a 16% increase in varieties and 4% increase in crops over 2016. Among these are eight legumes, namely: dekokko; chickpea; faba bean; field pea; haricot bean; lentil; mung bean; and soya bean, which are crops relatively dense in vitamin-B, potassium, iron and magnesium, and are an important source of protein and dietary fibre. A total of 634 women and 766 men received seed of legumes through crowdsourcing trials in 2017, who are expected to share with 1,902 and 3,170 women and men respectively. The 18,720 seedlings of papaya, orange and mango produced in 2017 promise future harvests of micronutrient rich fruits for Ethiopians;

- The performance of 11 seed value chains has been enhanced, namely: barley; both hybrid and open pollinated maize varieties; sorghum; teff; wheat; dekokko; lentil; haricot bean; sesame; and potato. Eight bottlenecks: neglect to plant genetic resources management and variety maintenance; limited supply of early generation seed (EGS); constrained support to seed producers; inefficiencies in seed marketing and high rates of carryover seed; inaccessibility of credit for farmers; weak control of seed quality; ineffective coordination and governance of the seed sector; and a lack of attention to gender in seed value chains, are being addressed;
- At least 44 strategic linkages between seed producers and input and service providers have been strengthened. A total of 35 linkages have been established between SPCs and PSPs and providers of basic seed; finance; and processing and inspection and certification services. Six SPCs and 3 PSPs have been linked to new markets in 2017, the Dutch-linked Senselet Food Processing for ware potato production and processing in the latter case;
- Business opportunities for five Dutch/international companies in the Ethiopian seed sector have been increased. In 2017, Enza Zaden/GAWT successfully concluded a campaign to popularize three new hybrid onion varieties in collaboration with ISSD Ethiopia. ISSD Ethiopia teamed up with ENTAG to conduct a market study in order to advise 100 onion growers where they can access higher value markets for these hybrid varieties and on how to market them directly to wholesalers and retailers by-passing middlemen who shave margins off their profits. Nunhems, Syngenta, Florensis and Bejo Zaden all benefited from ISSD Ethiopia's advocacy work on seed trade regulatory issues. Proposals for partnerships with East-West Seed and De Groot & Slot are currently under negotiation and expected to initiate activities in 2018;
- 25 piloted demand driven interventions were evaluated positively by seed value chain actors in 2017 and will be scaled in 2018 due to the success of these innovations. Seven of these innovations are being institutionally embedded in practice. At present, 50 demand driven interventions are being piloted, consolidated and/or scaled in collaboration with 25 or more partners at national and regional state levels;
- The enabling environment of the seed sector has been improved by the endorsement of no less than 17 policy changes to specific seed strategies, laws and regulations, directives, and guidelines for implementation. The establishment of the national seed advisory group, seed coordinating unit within MoANR, the national seed platform, delegation of seed quality inspection and certification authority to Haramaya University, and recent ISSD Ethiopia-led consultations around task division and cooperation in EGS supply illustrate successful changes to government's strategy. Earlier investments have finally come to fruition in the recent approval of amendments to the Plant Breeders' Right Proclamation, representing successful change in law. Three ministerial directives await official stamp of MoANR and four implementation guidelines are pending publication, including: outsourcing basic seed production, producing different classes of seed, and popularizing newly released varieties in Oromia region; and seed inspection and certification according to the standards and protocol of quality declared seed;
- ISSD Ethiopia supported 21 evidence based policy options in 2017 for improving seed sector coordination and governance; developing a sustainable system of EGS supply; removing barriers to seed export and trade; clarifying criteria for entrepreneurship in seed production, distribution and retail; disposing of less viable seed carried over in store; promoting efficient utilization of certified seed supplied; popularizing newly released varieties; and improving the performance of seed regulatory bodies in seed inspection and certification. Just in the case of the latter, 29 concrete recommendations have been made for the organization; logistics; field inspection; laboratory testing; labelling and tagging; and inspection in storage and at point of retail of the seed regulatory bodies;
- Position of the Ethiopian Seed Association (ESA) in representing the interests of private sector has been strengthened. One new member joined ESA in 2017, bringing the total number of members to 32. ISSD Ethiopia supported ESA in responding to a request of the minister to identify key

challenges constraining private participation and investment in the seed sector for the attention of MoANR. Four challenges were prioritized including weak incentives for private investment in seed processing, a description and analysis of which will be presented to the minister in the first months of 2018. In 2018, a secretariat officer be hired by ISSD Ethiopia on secondment to ESA to help strengthen the association's management.

Key challenges

- Continued lack of an effective and efficient system for sustainable supply of affordable quality EGS for all varieties in demand;
- Systematically responding to the demand created by PVS with sufficient supply of quality seed of a diverse range of adapted and preferred varieties;
- Difference of opinion, interest and vision among stakeholders as to the role and contribution of SPCs in the seed sector, thereby limiting and threatening their autonomy in seed business;
- Limited access to credit, funding support and thereby investment of emerging seed entrepreneurs in seed production, marketing and, most markedly noticeable, value addition;
- Limited financial, physical and human capacity of regional seed regulatory bodies for adequately providing seed quality inspection and certification services;
- Busy agendas of the members of regional seed core groups hindering regular consultation, decision making and follow up;
- Insufficient flow of innovative ideas from and through the regional value chain experts for intervening in and improving the performance of selected seed value chains in the country;
- Limited implementation capacity of MoANR to address systemic challenges of the seed sector, and a tendency to focus instead on routine activities;
- A lack of understanding and task division between the regional Bureaus of Agriculture and Natural Resources (BoANRs) and MoANR in addressing systemic seed sector challenges.

Opportunities

- Cooperation of local government and development agents in PVS and crowdsourcing has surpassed expectation, which indicates potential for increased collaboration in scaling activities;
- PVS and crowdsourcing created demand for several underutilized new, improved and adapted varieties in the country, which SPCs and PSPs can capitalize upon in the absence of competition;
- SPCs are more widely recognized by government as serious players in quality seed production and marketing, emerging in some locations as the strong competitors to public seed enterprises;
- Greater attention is being given to bottlenecks including the limited supply of EGS; inefficiencies in seed marketing and high rates of carryover seed; and weak control of seed quality, which creates the need for intervention;
- Strategic and structural changes including the establishment of the national seed advisory group and national seed platform may create more opportunity for collaborative governance;
- Secondment of a senior seed sector expert to MoANR to support seed sector transformation is a privilege extended to ISSD Ethiopia in recognition of good faith of the ministry;
- Closer collaboration with and support to MoANR has never had more promise than now;
- Having an audience with the minister and his highest officials in MoANR is a pragmatic way to resolve policy implementation challenges and the concerns of Dutch/international companies invested in and trading with Ethiopia.

Lessons learnt

- We have discovered a rapid means to deploy a large number of new and improved varieties cost-effectively to farmers in the approach called crowdsourcing;
- Scaling crowdsourcing activities in 2018 requires an injection of new, nutrient dense and drought tolerant germplasm;
- Increased attention to gender generated new understanding of traits consumers appreciate, such as: colour; aroma; taste; nutrition; process- and cook-ability; and kernel weight;
- Regional unit value chain experts need to be more strategic with what is put on the agenda of regional core group meetings to make efficient use of precious time;
- Regional value chain experts also need coaching in order to inject new and innovative ideas for intervention in seed value chains into discussion;

- The link between regional core groups and national seed advisory group is indirect, which needs to be thought about for ensuring their regular input in agenda setting and problem solving.

The way forward

- Enhance the business orientation of SPCs, PSPs, Amhara Seed Enterprise (ASE), Oromia Seed Enterprise (OSE), South Seed Enterprise (SSE) and Ethiopian Seed Supply (ESS, formerly ESE) through supported promotion activities and direct seed marketing (DSM);
- Scale PVS and crowdsourcing to an additional 108 kebelles in the country on a total of 12,000 smallholder farmers' fields with an even greater diversity of crops and varieties to choose from;
- Explore business models for vegetable seed supply to home gardening supported by the CASCAPE and SBN programmes;
- Exercise more inclusive grant making for improving smallholder farmers' access to quality seed using a new grant making canvas and criteria with an additional focus on women;
- As soon as possible, plan activities with our new BENEFIT partner REALISE and help strengthen its staff capacity for robust seed system security in chronically food insecure woredas;
- Match supply with demand by facilitating joint planning among farmers, seed producers, agricultural research centres (ARCs), NGOs and BoANR in each region for the production of quality seed;
- Explore and invest in digital systems for seed market information sharing that help connect supply with demand efficiently;
- Pilot seed demand assessment by multipurpose cooperatives (MPCs) and unions, making them more accountable owners of the seed they distribute through the conventional system of supply;
- Ensuring the long awaited transition from pilot to practice, we have set as an outcome of its Memorandum of Understanding (MoU) with AGP that DSM take place in the majority of AGP woredas;
- Facilitate experience sharing and learning between the regions and inject new ideas for interventions in seed value chains, starting with a national workshop to meet this objective;
- Ensure that outputs to collaboration activities with BENEFIT partners CASCAPE, SBN, ENTAG and REALISE are delivered and that collaboration with MoANR, ATA, AGP, CGIAR institutes, GIZ, Heineken, and others is enhanced, with the view to strengthen the value chains of chickpea, malt barley, potato, sesame and soybean;
- Support seed sector transformation by facilitating active involvement of national seed advisory group, seed coordination unit within MoANR, and regional core groups in coordination;
- Address the challenge of EGS production and supply by delineating roles and responsibilities of actors and supporting them during the transition;
- Facilitate dialogue between MoANR and Dutch/international companies invested in the Ethiopian seed sector for regulatory reform, the development of directives, and the implementation of plant variety protection instruments that are trade-friendly.

Quality and quantity of sustainable agricultural production

The availability and use of quality seed of new, improved and farmer preferred varieties has increased from 733,288 smallholder farmers in 2016 to 1,333,768 in 2017. This has been made possible through ISSD Ethiopia's support to 5,995 individual smallholder farmers, 149 seed producer cooperatives (SPCs) and 20 private seed producers (PSPs). In 2017, SPCs and PSPs produced 22,394 t true botanical seed; 3,020 t seed potatoes; 13,000 disease free potato mini-tubers; and 18,720 papaya, orange and mango seedlings. The business orientation and financial viability of four SPCs and two PSPs has been enhanced in 2017 by obtaining certificates of competence (CoCs) in seed production, marketing and distribution. Out of the 25 SPCs and 20 PSPs supported directly by the programme, respectively 13 and 17 have obtained CoCs. Of a sample of SPCs and PSPs taken in 2017, respectively 89% and all 10 were profitable in their business. Women have improved access to and use of quality seed of their preference compared with 2016 through their increased membership in SPCs and participation in the programme in general; 12% in the former and 118% in the latter case respectively. Crop and varietal diversity incorporated in the programme has increased tremendously, representing an important contribution to food and nutrition security. A total of 235 varieties of 10 crops were evaluated under farmers' conditions through PVS (60 FTCs) and crowdsourcing (5995 farmers) in 2017 and quality seed of 116 varieties of 27 crops was produced by SPCs and PSPs.

Improved markets and trade

Using value chain analysis of 2016, at least 44 strategic linkages between seed producers and input and service providers established and/or strengthened in 2017 and by 25 piloted demand driven interventions that were evaluated positively and are currently being scaled. At present, 50 demand driven interventions are being piloted, consolidated and/or scaled in collaboration with 25 or more partners at national and regional state levels. Furthermore, business opportunities for five Dutch/international companies in the Ethiopian seed sector have been increased. Enza Zaden/GAWT successfully concluded a campaign to popularize three new hybrid onion varieties in collaboration with ISSD Ethiopia. Nunhems, Syngenta, Florensis and Bejo Zaden all benefited from ISSD Ethiopia's advocacy work on seed trade regulatory issues.

Improved enabling environment

The discussions at national and regional levels continued to improve enabling environment of the seed sector in terms of specific seed strategies, laws and regulations, directives, and guidelines for implementation. The establishment of the national seed advisory group, seed coordinating unit within MoANR, the national seed platform, delegation of seed quality inspection and certification authority to Haramaya University, and recent ISSD Ethiopia-led consultations around task division and cooperation in EGS supply illustrate successful process of changes. Amendments to the Plant Breeders' Right Proclamation were recently endorsed by the House of Peoples' Representatives, representing successful change in law. Three ministerial directives (removing barriers to seed export and trade; clarifying criteria for entrepreneurship in seed production, distribution and retail; disposing of less viable seed carried over in store) are pending publication. ISSD Ethiopia is also working towards improving seed sector coordination and governance; developing a sustainable system of EGS supply; promoting efficient utilization of certified seed supplied; popularizing newly released varieties; and improving the performance of seed regulatory bodies in seed inspection and certification. The position of the Ethiopian Seed Association (ESA) in representing the interests of private sector has been strengthened. One new member joined ESA in 2017, bringing the total number of members to 32.

Partnership and collaboration

In 2017, collaboration with BENEFIT partner programmes focused on strengthening the value chains of sesame, soybean, faba bean, malt barley and wheat, where the role of ISSD Ethiopia has been to improve the availability and quality of seed of these crops. Reports from the field on these collaborative activities in product and place are high in frequency, positively appraised and promising results. This is a stark contrast from 2016. Collaboration with MoANR, AGP, ATA and regional BoANRs focused on addressing systemic challenges including short supply of EGS, inefficiency in seed marketing and distribution, and seed sector coordination and governance. No need to reiterate, but our partnership with Bioversity International in crowdsourcing has been an obvious source of enthusiasm in 2017. Collaboration with CIMMYT on the introduction of small seed packs to the market in Ethiopia is another success worth mentioning.

Quality and quantity of sustainable agricultural production

In ISSD Ethiopia we target the following outcomes for contributing to increased quality and quantity of sustainable agricultural production:

- 1.1 Increased availability and use of quality seed of new, improved and/or farmer preferred varieties
 - 1.1.1 Increased production and dissemination/marketing of quality seed
 - 1.1.2 Increased demand for and availability of new, improved and/or farmer preferred varieties
 - 1.1.3 Enhanced business orientation and financial viability of seed producers
 - 1.1.4 Women have improved access and use of quality seed of their preference
 - 1.1.5 Improved food and nutrition security of farmers through crop and varietal diversity

Increased availability and use of quality seed of new, improved and/or farmer preferred varieties

The availability and use of quality seed of new, improved and farmer preferred varieties has increased from 733,288 smallholder farmers in 2016 to 1,333,768 in 2017. This has been made possible through ISSD Ethiopia's support to 5,995 individual smallholder farmers, 149 seed producer cooperatives (SPCs) and 20 private seed producers (PSPs). Support includes:

- Building the technical capacity of seed producers to produce, process, package, store, market and distribute quality seed by providing and/or organizing tailor-made training; monitoring, supervision and coaching in the field; and experience sharing through practical demonstration, field and exchange visits, meetings and workshops that promote learning;
- Enhancing organizational and financial management in seed business in a likewise fashion.
- Providing innovation grants (contingent upon co-funding) for upgrading physical assets and infrastructure in a socially responsible way;
- Facilitating seed producers' strategic linkages to input and service providers and building these relationships, for example for reliable and cost effective access to newly released and adapted varieties, basic seed, credit, seed quality assurance and financial auditing services;
- Sharing information and facilitating learning about promising innovations in seed production, marketing and distribution through strategic communication for scaling and institutionally embedding them in practice.

In addition, ISSD Ethiopia lends its support to the four public seed enterprises: Amhara Seed Enterprise (ASE); Oromia Seed Enterprise (OSE); South Seed Enterprise (SSE); and Ethiopian Seed Supply (ESS, formerly the Ethiopian Seed Enterprise) in the form of consultancy and training. The programme also engages with Dutch/international companies to explore and identify business opportunities in Ethiopia.

Increased production and dissemination/marketing of quality seed

In 2017, ISSD Ethiopia supported SPCs and PSPs produced 22,394 t of quality seed of grain crops; 3,020 t of seed potato tubers; 13,000 disease free potato mini-tubers; as well as 16,000 papaya, 420 orange and 2,300 mango seedlings. Production of true botanical seed, hence with exclusion to seed potato and seedlings, has increased 49% over 2016. Addis Alem SPC in Farta woreda of Amhara

region has produced 13,000 disease free potato mini-tubers in 2017 under strict phytosanitary conditions in a screen house that was conducted with support of the programme in 2016-17. ARARI cultures potato plantlets in vitro for supplying Addis Alem with the starting material required for mini-tuber production. Although the quantity of seed harvested from crowdsourcing and PVS trials in 2017 is small relative to what SPCs and PSPs produce, it is expected that this will be shared with 17,985-29,975 farmers.

SPCs and PSPs, supported directly by programme staff members, and our partners in scaling local seed business achieved the following results in 2017:

- 3,869 members of SPCs and PSPs and 460 experts from partner organizations are knowledgeable on best practices in quality seed production, post-harvest seed handling, seed marketing, seed business plan development and organizational and financial management;
- 15 SPC management committee members, 18 managers and/or agronomists from 18 PSPs, and 37 agronomists from the four public seed enterprises are knowledgeable apply more stringent internal seed quality control procedures, observable by the decreased incidence of seed rejected during field and laboratory inspection by respective seed regulatory authorities in the regions and increased volume of certified seed produced in 2017;
- 439 SPC members and experts from local partner organizations have shared experience in quality seed production and organizational management with each other through exchange visits organized by the programme;
- 65 seed producers and seed quality assurance inspectors and officials in Amhara region have a better understanding of how standards and procedures of quality declared seed should be applied in assuring seed quality;
- 134 seed producers and seed quality assurance inspectors and officials in Amhara region are more aware of the contents of the seed proclamation, regulations and different directives;
- All 149 SPCs have obtained small amounts of co-funding for investing in physical asset and infrastructural upgrades to their business;
- Of the supported PSPs, 12 obtained innovation grants that were used for setting up mini laboratories for seed quality control, processing and packaging seed in small packs for retail, and purchasing pumps and related hardware for irrigation;
- SPCs and PSPs in Oromia (south & west) have improved their scores against key performance indicators (KPIs) for seed business since 2016 by 13% and 5% respectively;
- Assessments in 2017 reveal improved performance in the KPIs of: The producer has the capacity required to produce quality seed products; The producer's products are in demand; The producer is well managed in general; and The producer is linked to all required input and service providers;
- However, SPCs in general still lack the capacity required to add value to their seed products; strategy required for marketing their products; and are not yet financially well managed.

Increased demand for and availability of new, improved and/or farmer preferred varieties

To increase the demand for new, improved and/or farmer preferred varieties among farmers, ISSD Ethiopia used PVS and crowdsourcing as an approach to deploy improved varieties from different research centres and local varieties collected in the field. Accordingly, 235 varieties of 10 crops were demonstrated at over 60 FTCs and on 5,995 smallholder farmers' fields (Figure 8), more than half of which were managed by women.

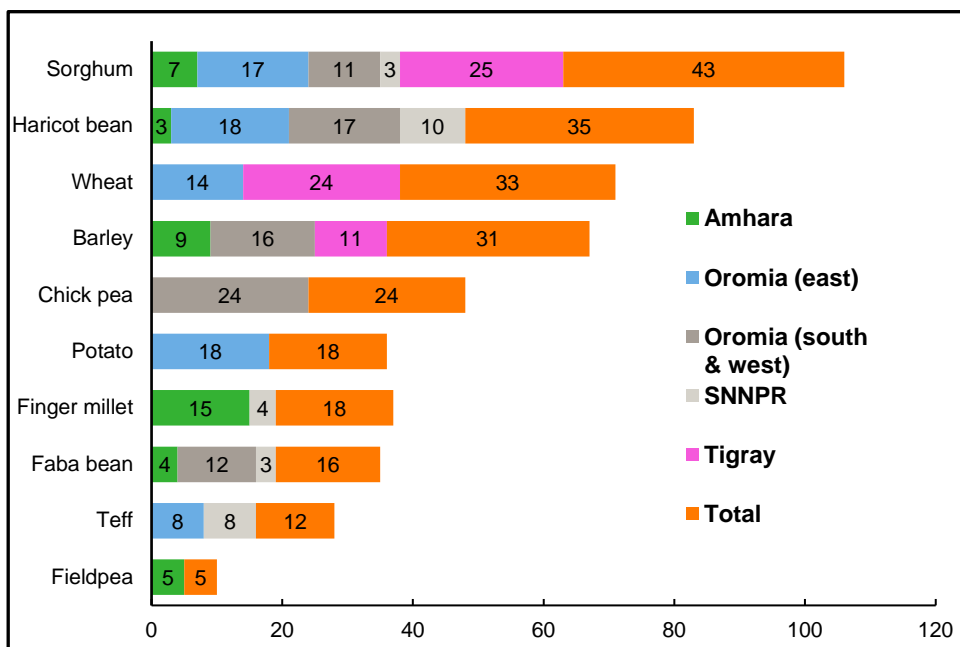


Figure 8 Crops and varieties demonstrated through PVS and crowdsourcing in 2017

We have discovered a rapid means to deploy a large number of new and improved varieties cost-effectively to farmers in the approach called crowdsourcing. Distributed over 29 woredas in four regional states, 5,995 smallholder farmers, of which 53% were women, each received and evaluated three varieties of one of nine crops according to the criteria they helped determine. Increased attention to gender helped bring specific traits of crop varieties that end users pay attention to into view, such as: colour, aroma, taste and nutrition; process- and cook-ability; and kernel weight.

In addition to the exposure neighbouring farmers had to crowdsourcing trials, field days at farmers' fields and FTCs attracted 13,600 participants. Seed exhibitions and multimedia coverage have helped broadcast experiences to thousands more. A diversity of activities are supported for promoting the use of quality seed produced by ISSD Ethiopia target groups. Field days, exhibitions, seed fairs, radio and television programmes as well as other print and electronic media are widely used by seed producers and programme knowledge sharing and communication experts.

Enhanced business orientation and financial viability of seed producers

Four SPCs, including one in Amhara, two in Oromia (south & west), and one in SNNP, and two PSPs, one each from Amhara and Tigray, obtained CoCs in 2017. Kolbe SPC, Tuga Katara SPC, and Homa Seed PLC in Oromia (south & west) have made the shift from growing seed on contract to marketing their own seed products. To date, with support of the programme, 13 and 17 of the 25 SPCs and 20 PSPs supported directly by the programme respectively, have obtained CoCs. Moreover, 10 multipurpose cooperatives in SNNPR were supported in obtaining CoCs exclusively for the distribution of seed in order to participate as agents in the piloting of direct seed marketing in the region.

Of a sample of 52 SPCs across Amhara, Oromia and Tigray regions, including those supported both directly and indirectly by the programme, 89% were profitable in 2017 according to audit and income statements. All of the PSPs sampled generated profits in 2017. Subsequent to trainings on business plan development and financial management to 810 members of the 25 SPCs supported directly by

the programme and 112 experts from partner organizations in scaling local seed business, 16 SPCs in the region have finalized their preparation of business plans consolidating those of their individual members. PSPs across the country have been trained on principles and practices of seed marketing. Resulting from finance fairs arranged in Amhara and Tigray regions, financial products for seed business have been developed and a few SPCs in Amhara have already submitted their applications for loans.

In order to increase the business orientation of the four public seed enterprises, guidance and coaching has been given to 12 experts in the development of financial strategies for each of their respective enterprises. This was a follow up on a training given in 2016 on marketing strategy development complementing their already developed seed production plans for 2017.

Women have improved access and use of quality seed of their preference at household and community level in informal seed systems

Women have improved access to and use of quality seed of their preference. Women's membership in SPCs and women's participation in the programme in general have increased 12% and 118% respectively, since 2016. Women's membership in SPCs has increased to 11.8% in Amhara; 24.8% in Oromia (east) and 11.3% in Oromia (south & west); 16.5% in SNNPR; and 30% in Tigray. Women membership in the different SPC committees is also increasing as result of awareness creation. For instance, of the 76 positions available in SPC (sub) committees in Tigray, 18% are occupied by women.

The baseline surveys conducted in launching the informal seed systems component found that most women rely on informal networks of exchange as their main source of seed, but that not all women have equitable access to these networks. In 2017, 3,175 women farmers each obtained quality seed of three different varieties to evaluate against their preferences through crowdsourcing. They are expected to share the seed they have harvested with three to five other women or 9,525-15,875 in total.

Women farmers have been strongly encouraged to participate in and host field days. During field days arranged by development agents and local offices of agriculture in each woreda where crowdsourcing and PVS took place in 2017, plots owned by women were visited. In Tigray for example, 441 women farmers hosted visitors and demonstrated their crop at their fields.

Improved food and nutrition security of farmers through increasing crop and varietal diversity

Crop and varietal diversity has increased tremendously in the full portfolio of seed products incorporated by the programme. This represents an important contribution to food and nutrition security. A total of 235 varieties of 10 crops were evaluated under farmers' conditions through PVS and crowdsourcing in 2017. Collectively, quality seed of 116 varieties of 27 crops was produced by SPCs and PSPs in 2017 (Figure 9), which is a 16% increase in varieties and 4% increase in crops over 2016. In 2017, SPCs produced quality seed of 98 varieties of 20 crops compared with 38 varieties of 19 crops by PSPs.

Among other crops in the portfolio are ten legumes, namely: dekokko; cowpea; chickpea; faba bean; field pea; groundnut; haricot bean; lentil; mung bean; and soya bean, which are crops relatively dense in vitamin-B, potassium, iron and magnesium, and are an important source of protein and dietary fibre. A total of 634 women and 766 men received seed of legumes through crowdsourcing trials in 2017, who are expected to share with 1,902 and 3,170 women and men respectively. The 18,720 seedlings of papaya, orange and mango produced in 2017 promise future harvests of micronutrient rich fruits.

More than 15 early maturing varieties of food barley were (re) introduced through PVS and crowdsourcing into local cropping systems in 2017. Since these varieties mature early and have the potential to escape terminal drought, they will continue to be promoted by the programme for climate smart agriculture and reducing food gaps. As many as 43 sorghum and 18 finger millet varieties were

also deployed, which have the potential to boost farmers' resilience in the face of drought and climate uncertainty.

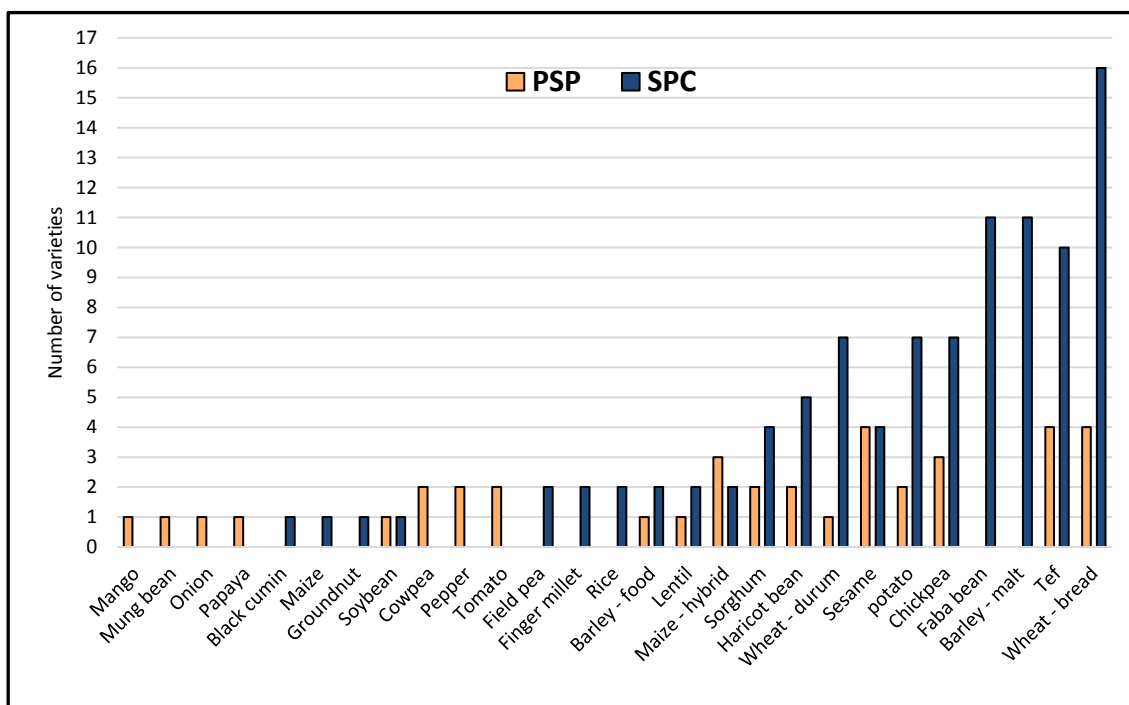


Figure 9 Number of varieties produced per crop by SPCs and PSPs in 2017

Mainstreaming social inclusion and nutrition

Gender and nutrition are mainstreamed in ISSD Ethiopia interventions. In fact, as is presented in the above sections, intermediate outcomes of the programme are respectively, that women have improved access and use of quality seed of their preference at household and community level in informal seed systems, and Improved food and nutrition security of farmers through increasing crop and varietal diversity.

In January of 2017, five gender and rural development experts were hired, one at each of the regional units. In May they were trained in Wageningen, the Netherlands, on gender in integrated seed sector development and jointly developed guidelines with the training's facilitators on training trainers on gender. These guidelines were applied foremost in training their colleagues at each regional unit and thereafter representatives of the organizations with which ISSD Ethiopia partners in its activities.

Conclusions and recommendations

Achievements

- The availability and use of quality seed of new, improved and farmer preferred varieties has increased from 733,288 smallholder farmers in 2016 to 1,333,768 in 2017. This has been made possible through ISSD Ethiopia's support to 5,995 individual smallholder farmers, 149 seed producer cooperatives (SPCs) and 20 private seed producers (PSPs);
- Seed production by both SPCs and PSPs has increased 49% compared with 2016, from 15,777 tonnes (t) to 22,394 t for true botanical seed. Although small in comparison to the quantities produced by SPCs and PSPs, seed harvested from on-farm participatory variety selection (PVS) and crowdsourcing trials in 2017 will be shared with 17,985-29,975 farmers. SPCs and PSPs also produced 3,020 t seed potatoes and 18,720 papaya, orange and mango seedlings in 2017. In addition, 13,000 disease free potato mini-tubers were produced in Amhara;
- Seed demand has increased for several new, improved and adapted varieties. In total, 235 varieties of 10 crops were deployed, tested and promoted at over 60 farmer training centres (FTCs) and on

5,995 smallholder farmers' fields, more than half of which are managed by women, through PVS and crowdsourcing trials in 29 woredas of the country. A total of 13,600 participants have observed the performance of PVS trials during field days. Farmers' preferences for varieties and specific traits have been crowdsourced. Interest among farmers to participate in variety evaluation and selection in 2018 of an even greater diversity of crops is high and thousands of requests for larger quantities of seed are being received;

- The business orientation and financial viability of four SPCs and two PSPs has been enhanced in 2017 by obtaining certificates of competence (CoCs) in seed production, marketing and distribution with support of the programme. Out of the 25 SPCs and 20 PSPs supported directly by the programme, to date, respectively 13 and 17 have obtained CoCs. Of a sample of 52 SPCs across Amhara, Oromia and Tigray regions, including those supported both directly and indirectly by the programme, 89% were profitable in 2017 according to audit and income statements. All of the PSPs sampled generated profits in 2017;
- Women have improved access to and use of quality seed of their preference. Women's membership in SPCs and women's participation in the programme in general have increased 12% and 118% respectively, since 2016. In 2017, 3,175 women farmers each obtained quality seed of three different varieties to evaluate against their preferences through crowdsourcing. They are expected to share the seed they have harvested with three to five other women or 9,525-15,875 in total;
- Crop and varietal diversity has increased tremendously in the full portfolio of seed products incorporated by the programme. This represents an important contribution to food and nutrition security. A total of 235 varieties of 10 crops were evaluated under farmers' conditions through PVS and crowdsourcing in 2017. Collectively, quality seed of 116 varieties of 27 crops was produced by SPCs and PSPs in 2017, which is a 16% increase in varieties and 4% increase in crops over 2016. Among these are eight legumes, namely: dekokko; chickpea; faba bean; field pea; haricot bean; lentil; mung bean; and soya bean, which are crops relatively dense in vitamin-B, potassium, iron and magnesium, and are an important source of protein and dietary fibre. A total of 634 women and 766 men received seed of legumes through crowdsourcing trials in 2017, who are expected to share with 1,902 and 3,170 women and men respectively. The 18,720 seedlings of papaya, orange and mango produced in 2017 promise future harvests of micronutrient rich fruits for Ethiopians.

Challenges, opportunities and lessons learnt

Challenges

- Continued lack of an effective and efficient system for sustainable supply of affordable quality EGS for all varieties in demand;
- Systematically responding to the demand created by PVS with sufficient supply of quality seed of a diverse range of adapted and preferred varieties;
- Difference of opinion, interest and vision among stakeholders as to the role and contribution of SPCs in the seed sector, thereby limiting and threatening their autonomy in seed business;
- Limited access to credit, funding support and thereby investment of emerging seed entrepreneurs in seed production, marketing and, most markedly noticeable, value addition;
- KPI assessments reveal that SPCs in general still lack the capacity required to add value to their seed products; strategy required for marketing their products; and are not yet financially well managed;
- Insufficient accountability shown in contractual agreements between seed companies and outgrowers leading to distrust, disagreement and default;
- Frequent emergency of diseases and insect pest incidences, increasing the risk for seed production in the absence of crop insurance coverage.

Opportunities

- Presence of diverse and favourable agro-ecologies that support the seed production of different crops and varieties;
- Cooperation of local government and development agents in PVS and crowdsourcing has surpassed expectation, which indicates potential for increased collaboration in scaling activities;
- PVS and crowdsourcing created demand for several underutilized new, improved and adapted varieties in the country, which SPCs and PSPs can capitalize upon in the absence of competition.

-
- SPCs are more widely recognized by government as serious players in quality seed production and marketing, emerging in some locations as the strong competitors to public seed enterprises.

Lessons learnt

- We have discovered a rapid means to deploy a large number of new and improved varieties cost-effectively to farmers in the approach called crowdsourcing;
- Scaling crowdsourcing activities in 2018 requires an injection of new, nutrient dense and drought tolerant germplasm;
- Increased attention to gender generated new understanding of traits consumers appreciate, such as: colour; aroma; taste; nutrition; process- and cook-ability; and kernel weight;
- Promotional tools such as field days, demonstrations, seed exhibitions as well as printed and electronic media are effective in promoting quality seed among seed users;
- On-site training for SPCs is not only cost effective but also helps to ensure participation of large numbers of SPC members and local partners;
- Training on internal seed quality control reduces seed rejection rate and enhances better understanding between seed producers and seed quality control and certification authorities.

Way forward

- Strengthen the internal quality control mechanisms of seed producers;
- Strengthen financial management skills of seed producers and facilitate their linkages to financial institutes and grant providers;
- Scale PVS and crowdsourcing to an additional 108 kebeles in the country on a total of 12,000 smallholder farmers' fields with an even greater diversity of crops and varieties to choose from;
- Enhance the business orientation of SPCs, PSPs, Amhara Seed Enterprise (ASE), Oromia Seed Enterprise (OSE), South Seed Enterprise (SSE) and Ethiopian Seed Supply (ESS, formerly ESE) through supported promotion activities and direct seed marketing (DSM);
- Explore business models for vegetable seed supply to home gardening supported by the CASCAPE and SBN programmes;
- Ensure that programme interventions first do no harm to the already disenfranchised position of women and are gender responsive in terms of content and participation;
- Exercise more inclusive grant making for improving smallholder farmers' access to quality seed using a new grant making canvas and criteria with an additional focus on women;
- Increase the awareness of SPCs members to capacitate women members in leadership;
- As soon as possible, plan activities with our new BENEFIT partner REALISE and help strengthen its staff capacity for robust seed system security in chronically food insecure woredas.

Improved markets and trade

In ISSD Ethiopia programme we target the following outcomes for contributing to improved markets and trade:

2.1 Enhanced performance of seed value chains

2.1.1 Strengthened strategic linkages between seed producers and input and service providers

2.1.2 Increased business opportunities for seed and seed related services provided in Ethiopia by Dutch/International seed companies

2.1.3 Piloted demand driven interventions to address seed value chain bottlenecks

Enhanced performance of seed value chains

The performance of 11 seed value chains has been enhanced, namely: barley; both hybrid and open pollinated maize varieties; sorghum; teff; wheat; dekokko; lentil; haricot bean; sesame; and potato. The programme achieved this through convening multiple stakeholders at meetings, workshops and in learning trajectories that resulted in problem definition and agenda setting in seed value chain intervention. Regional unit value chain experts facilitated partnerships for piloting demand driven interventions in seed value chains. Innovation grants made available by the programme have co-funded pilot activities. A total of 25 piloted demand driven interventions were evaluated positively by seed value chain actors in 2017 and will be scaled in 2018 due to the success of these innovations. Seven of these innovations are being institutionally embedded in practice. At present, 50 demand driven interventions are being piloted, consolidated and/or scaled in collaboration with 25 or more partners at national and regional state levels.

Eight bottlenecks, namely: neglect to plant genetic resources management and variety maintenance; limited supply of early generation seed (EGS); constrained support to seed producers; inefficiencies in seed marketing and high rates of carryover seed; inaccessibility of credit for farmers; weak control of seed quality; ineffective coordination and governance of the seed sector; and a lack of attention to gender in seed value chains, are being addressed. These were revealed and prioritized, along with the seed value chains to which they correspond, in 2016 during seed value chain assessments conducted by the value chain experts with the full participation of stakeholders in the sector, including the members of the regional seed core groups. Seed core groups play an important role in governing the process outlined here above.

At least 44 strategic linkages between seed producers and input and service providers have been strengthened. A total of 35 linkages have been established between SPCs and PSPs and providers of basic seed; finance; and processing and inspection and certification services. Six SPCs and 3 PSPs have been linked to new markets in 2017, the Dutch-linked Senselet Food Processing for ware potato production and processing in the latter case. Business opportunities for five Dutch/international companies in the Ethiopian seed sector have increased. To date, the programme has engaged with 11 Dutch/international companies, namely: Bejo Zaden; De Groot & Slot; East-West Seed; Enza Zaden; Florensis; Koppert Biological Systems; Nunhems; Rhea Composites; Solynta; Syngenta; and Tradecorp. In the course of the year in 2017, engagement was taken up more intensively with five of those. The negotiation of partnership projects with two more also commenced in 2017, the activities of which we hope to get underway in 2018.

Strengthen strategic linkages between seed producers and input and service providers

In 2017, 44 strategic linkages between seed producers and input and service providers have been strengthened. These include 35 linkages between SPCs and PSPs and providers of basic seed; finance; and processing and inspection and certification services, six linkages between SPCs and three between PSPs and different market segments.

- In Oromia (east), selected SPCs have been linked with Haramaya University's Seed Unit as a source of basic seed;
- In Oromia (south & west), four SPCs were linked to Debre Zeit Agricultural Research Centre (DZARC) for access to basic seed of selected chickpea and lentil varieties; another two SPCs were linked to Oromia Seed Enterprise in order to access basic seed of three different bread wheat varieties and one variety of teff; and one SPC was even linked to another as a source of basic seed of chickpea, which is produced under contract and supervision of DZARC;
- In SNNPR, six SPCs were linked with Admas Union to get basic seed and other inputs for their seed production;
- In Tigray, three SPCs were linked to Alamata, Mekoni and Humera Agricultural Research Centres (ARCs) for basic seed of selected dekokko, sorghum and sesame varieties respectively;
- In Amhara and Tigray a number of SPCs have been linked to financial institutes with the aim of eventually obtaining loans, and in certain cases loan applications are currently being processed;
- One PSP in each of the regions Amhara and Tigray has been linked with ENTAG to compete for innovation grants in order to obtain the financial capital to construct potato mini-tuber screening houses for the propagation of disease free seed potatoes;
- Three SPCs in Oromia (east) were linked to Fedis ARC, Haramaya University and Chercher Oda Bultum Cooperative Union in order to procure threshing, cleaning and transport services;
- Haramaya University is now providing seed inspection and certification services to 14 SPCs in Oromia (east) under authorization of Oromia BoANR to provide these services;
- In SNNPR, six SPCs were linked with Admas Union to sell their seed in bulk;
- Three PSPs, one each from Amhara, SNNPR and Tigray regions, have been linked to Senselet Food Processing as a customer for their quality seed potatoes, which in turn supplies these seed tubers to its growers in the production of ware potatoes for potato chips and fries processing.

Increased business opportunities for seed and seed related services provided in Ethiopia by Dutch/International seed companies

In 2017, the Enza Zaden/GAWT project successfully concluded its campaign to popularize three new hybrid onion varieties in collaboration with ISSD Ethiopia. Variety demonstrations were combined with an ENTAG supported market study that advised 100 Ethiopian onion growers on where they can access higher value markets for these hybrid varieties. The market study also informed onion growers on how to market their produce directly to wholesalers and retailers by-passing middlemen that shave significant margins off their profits.

Other projects unfortunately did not materialize despite many discussions with those interested, namely: De Groot & Slot (DGS); East-West Seed; and Nunhems. The main reasons behind the failure to launch activities in partnership with these three companies were the civil unrest and political demonstrations throughout several locations in the country; a change in local distributor; and delays experienced in obtaining land lease agreements and in navigating other regulatory hurdles in the cases of DGS; East-West Seed and Nunhems respectively. It is anticipated that through continued support to these companies, activities on the ground will get underway in 2018.

Three updates were provided directly to several Dutch/international companies on phytosanitary directives of the government, the establishment of the Ethio-Dutch Seed Committee, variety registration issues and the recent approval of the Plant Breeders' Right Proclamation in Ethiopia. The first Ethio-Dutch Seed Committee meeting took place on 1 December 2017, chaired by the minister of MoANR, with both the Dutch ambassador and agricultural counsellor present. ISSD Ethiopia advisor, Joep van den Broek acts as secretary to these meetings. During the meeting three key regulatory issues were discussed and for all three solutions have been identified, one solving the problems faced

by Nunhems in getting a consignment of its seed out of the country. Bejo Zaden, Florensis and Syngenta, will also benefit from this fix.

Piloted demand driven interventions to address seed value chain bottlenecks

A summary of the 11 seed value chain assessments conducted in 2016 was made and presented to national stakeholders with the aim of dividing tasks in addressing the bottlenecks that these identified. Eight bottlenecks, namely: neglect to plant genetic resources management and variety maintenance; limited supply of early generation seed (EGS); constrained support to seed producers; inefficiencies in seed marketing and high rates of carryover seed; inaccessibility of credit for farmers; weak control of seed quality; ineffective coordination and governance of the seed sector; and a lack of attention to gender in seed value chains, are being addressed. At present, 50 demand driven interventions are being piloted, consolidated and/or scaled in collaboration with 25 or more partners at national and regional state levels. A total of 25 piloted demand driven interventions were evaluated positively by seed value chain actors in 2017 and will be scaled in 2018 due to the success of these innovations. Seven of these innovations are being institutionally embedded in practice.

ISSD Ethiopia supported three private seed companies to pilot marketing their seed products in small packages. Small seed packs contain sufficient seed to sow up to a quarter of a hectare, ideal for smallholder farmers. Over 10,000 were sold in 2017. ISSD Ethiopia has collaborated with CIMMYT to extend the support to ASE, OSE and Meki Cooperative Union in convincing them of the virtues of small seed packs. There is encouraging feedback from farmers, seed dealers and seed producers regarding the volume of seed transacted in this way. Evidence suggests that delivering seed in small packs increases sales' volumes.

In 2017, a screen house was constructed at Addis Alem SPC in Farta woreda, Amhara, using an innovation grant from the programme. In collaboration with ARARI, Addis Alem SPC propagates disease free potato mini tubers in its screen house. ARARI cultures plantlets of potato in vitro at their facilities in Bahir Dar and delivers these to the SPC by pick-up truck. Using strict quarantine procedures in this arguably sterile environment, Addis Alem SPC nurtures these plantlets and harvests potato mini tubers as the breeder seed for future generations. In scaling this project in 2018, marginal rate of return on investment analyses for different business models of seed multiplication will be conducted.

Currently, an ongoing innovation project in Oromia (east) involves consolidating the capacity of Haramaya University's Seed Inspection and Certification Centre by investing in knowledge and equipment to conduct seed health tests at the centre's laboratory. In 2017, the capacity of the centre was strengthened by an innovation grant from ISSD Ethiopia to upgrade equipment and the training of technicians and field inspectors. The centre has been authorized to play this role under the auspices of the seed regulatory directorate of the BoANR in Oromia region.

An innovation project in Oromia (south & west) has demonstrated that SPCs are capable of producing quality basic seed when provided with the necessary pre-basic seed and technical support. The project was conducted in partnership with Debre Zeit ARC on selected varieties of lentil and chickpea. OSE also piloted outsourcing quality basic seed production to SPCs under contractual agreement in 2017. In 2018, we expect to institutionally embed these innovations in practice. Similarly, ASE and Avalo International successfully piloted the production of basic seed of hybrid maize in Amhara. In 2018 we plan to scale these innovations to more crops in larger geographic area involving SPCs, PSPs and ARCs.

In SNNPR, seed producers are reluctant to invest in developing marketing networks and outlets. In 2017, ISSD Ethiopia has been piloting an innovation whereby multipurpose cooperatives (MPCs) serve as agents to public seed enterprises and Ediget Seed Union. Through the programme's support, 10 out of 12 participating MPCs have obtained CoCs to distribute seed. In 2018, we expect to strengthen the capacity of these MPCs in conducting seed demand assessment and forecasting for improving efficiency in marketing and to reduce the rate of incidences of needless and expensive seed carryover in store.

For certain crops in certain parts of the country, local or farmers' varieties are still superior to what has been improved and released by researchers. This is especially true under the agronomic practices of farmers and against their own criteria of preference. Bearing this in mind, Mekelle University and Shire Mytsibire ARC made use of an innovation grant from ISSD Ethiopia to collect, characterize and enhance local elite varieties of sorghum. To this effect, three sorghum varieties have been submitted to the national variety release committee for registration. In 2018, two or more varieties are expected to be submitted for registration as well, creating opportunities for entrepreneurship in the production and marketing of seed of sorghum, a commercially underutilized crop in Ethiopia.

The regional core groups are meant to play an important role in guiding seed value chain investments and developments in the region. This process is facilitated by the regional value chain experts. However, it has at times been difficult to convene all members around the table. The value chain experts need to be more strategic with what is put on the agenda for discussion, as time is precious. Furthermore, value chain experts also need coaching in order to inject new and innovative ideas for intervention in seed value chains into discussion.

Mainstreaming social inclusion and nutrition

The assessments of 11 seed value chains conducted in 2016 took a gendered look at how labour is divided in specific activities of the main operations in the value chain, when decisions are taken, who owns the resources that are consumed in these activities, and who benefits as a result. In the process of grant making in 2017, the mandatory criteria of having to justify how application of ISSD Ethiopia funds is not gender blind was set. ISSD Ethiopia aims to practice gender sensitive grant making in this way. Investments also aim to be smallholder farmer inclusive. An example is how ISSD Ethiopia has promoted sales of seed in small packages, suitable for those with a quarter of a hectare of land or less.

Another mandatory criteria for grant making in ISSD Ethiopia is that across the grants, investment in informal, intermediary and formal seed systems takes place. This ensures that a wider diversity of crops and varieties receive attention. To date, grants have been awarded for investment in the seed value chains of three major and two minor cereals, three legumes, an oilseed and a root and tuber crop. The collaboration with Dutch/international companies promises improved access to high quality vegetable seed as well. In 2017, three onion hybrid varieties were popularized and in 2018, we expect to accomplish that for hot pepper and papaya as well. Fruits and vegetables contain micronutrients important for nutrition.

Conclusions and recommendations

Achievements

- The performance of 11 seed value chains has been enhanced, namely: barley; both hybrid and open pollinated maize varieties; sorghum; teff; wheat; dekokko; lentil; haricot bean; sesame; and potato. Eight bottlenecks: neglect to plant genetic resources management and variety maintenance; limited supply of early generation seed (EGS); constrained support to seed producers; inefficiencies in seed marketing and high rates of carryover seed; inaccessibility of credit for farmers; weak control of seed quality; ineffective coordination and governance of the seed sector; and a lack of attention to gender in seed value chains, are being addressed;
- At least 44 strategic linkages between seed producers and input and service providers have been strengthened. A total of 35 linkages have been established between SPCs and PSPs and providers of basic seed; finance; and processing and inspection and certification services. Six SPCs and 3 PSPs have been linked to new markets in 2017, the Dutch-linked Senselet Food Processing for ware potato production and processing in the latter case;
- SPCs linked with ARCs are able to produce quality basic seed, including basic seed of commercially underutilized crops, such as dekokko, finger millet, sorghum, lentil and chickpea
- Shared understanding has been generated between seed producers and financial institutions, leading to the development of financial products for seed business;

- Linking seed producers with seed inspection and certification entities for timely services and thereby reducing the seed rejection rates;
- Business opportunities for five Dutch/international companies in the Ethiopian seed sector have been increased. In 2017, Enza Zaden/GAWT successfully concluded a campaign to popularize three new hybrid onion varieties in collaboration with ISSD Ethiopia. ISSD Ethiopia teamed up with ENTAG to conduct a market study in order to advise 100 onion growers where they can access higher value markets for these hybrid varieties and on how to market them directly to wholesalers and retailers by-passing middlemen who shave margins off their profits. Nunhems, Syngenta, Florensis and Bejo Zaden all benefited from ISSD Ethiopia's advocacy work on seed trade regulatory issues. Proposals for partnerships with East-West Seed and De Groot & Slot are currently under negotiation and expected to initiate activities in 2018;
- 25 piloted demand driven interventions were evaluated positively by seed value chain actors in 2017 and will be scaled in 2018 due to the success of these innovations. Seven of these innovations are being institutionally embedded in practice. At present, 50 demand driven interventions are being piloted, consolidated and/or scaled in collaboration with 25 or more partners at national and regional state levels.

Challenges, opportunities and lessons learnt

Challenges

- Limited financial, physical and human capacity of regional seed regulatory bodies for adequately providing seed quality inspection and certification services;
- Busy agendas of the members of regional seed core groups hindering regular consultation, decision making and follow up;
- Insufficient flow of innovative ideas from and through the regional value chain experts for intervening in and improving the performance of selected seed value chains in the country;
- Low levels of commitment and accountability of partners implementing pilot projects;
- Weak integration and alignment of projects and organizations working in the seed sector;
- Limited understanding of the underlying causes of seed sector challenges by major actors.

Opportunities

- Greater attention is being given to bottlenecks including the limited supply of EGS; inefficiencies in seed marketing and high rates of carryover seed; and weak control of seed quality, which creates the need for intervention;
- The potential for collaboration is high due to the presence of many projects working on seed;
- Establishment of seed units at regional BoANR and regional research institutes;
- Ethio-Dutch Seed Committee meeting, chaired by the minister of MoANR, with both the Dutch Ambassador and Agricultural Counsellor present.

Lessons learnt

- Regional unit value chain experts need to be more strategic with what is put on the agenda of regional core group meetings to make efficient use of precious time;
- Regional seed value chain experts also need coaching in order to inject new and innovative ideas for intervention in seed value chains into discussion.

Way forward

- Match supply with demand by facilitating joint planning among farmers, seed producers, agricultural research centres (ARCs), NGOs and BoANR in each region for the production of quality seed;
- Explore and invest in digital systems for seed market information sharing that help connect supply with demand efficiently;
- Pilot seed demand assessment by multipurpose cooperatives (MPCs) and unions, making them more accountable owners of the seed they distribute through the conventional system of supply;
- Ensuring the long awaited transition from pilot to practice, we have set as an outcome of its Memorandum of Understanding (MoU) with AGP that DSM take place in the majority of AGP woredas;

-
- Facilitate experience sharing and learning between the regions and inject new ideas for interventions in seed value chains, starting with a national workshop to meet this objective;
 - Ensure that outputs to collaboration activities with BENEFIT partners CASCAPE, SBN, ENTAG and REALISE are delivered and that collaboration with MoANR, ATA, AGP, CGIAR institutes, GIZ, Heineken, and others is enhanced, with the view to strengthen the value chains of chickpea, malt barley, potato, sesame and soybean.

Improved enabling environment

In ISSD Ethiopia we target the following outcomes for contributing to an improved enabling environment for the agricultural sector:

3.1 Improved enabling environment for enhanced performance of seed value chains

3.1.1 Evidence-based innovations advocated and implemented

3.1.2 Strengthened position of the Ethiopian Seed Association (ESA)

Improved enabling environment for enhanced performance of seed value chains

The discussions at national and regional levels continued to improve enabling environment of the seed sector in terms of specific seed strategies, laws and regulations, directives, and guidelines for implementation. Towards this achievement, ISSD Ethiopia supported 21 evidence based policy options in 2017 for improving seed sector coordination and governance; developing a sustainable system of EGS supply; removing barriers to seed export and trade; clarifying criteria for entrepreneurship in seed production, distribution and retail; disposing of less viable seed carried over in store; promoting efficient utilization of certified seed supplied; popularizing newly released varieties; and improving the performance of seed regulatory bodies in seed inspection and certification. In its approach, ISSD Ethiopia pursues close partnership with MoANR, the Ethiopian Agricultural Transformation Agency (ATA), the Federal Cooperative Agency (FCA), and regional state BoANRs of Amhara, Oromia, SNNPR and Tigray.

In 2017, a senior seed sector expert, Ato Abdo Woyema, was hired on secondment to MoANR to support the ministry in realizing its transformation agenda for the seed sector. As such, his terms of reference are to advance a sector strategic agenda, focussing on identifying, prioritizing and addressing systemic bottlenecks through improved seed sector governance, coordination and stakeholder collaboration. Duties do not include routine activities in management. He joins a select few others in the seed coordinating unit of MoANR and facilitates the meetings of the national seed advisory group. Abdo contributed to the formulation of immediate action points for the seed coordinating unit and to the establishment of a national seed advisory group, which will advise the MoANR on key seed sector challenges and opportunities, and will meet at least quarterly.

On June 29th, a high level delegation from Ethiopia including the Minister of Agriculture and Natural Resources, H.E. Dr. Eyasu Abraha, and State Minister Ato Tesfaye Mengist, (deputy) Heads of the Bureaus of Agriculture and Natural Resources from Amhara, SNNPR and Tigray; and Ato Khalid Bomba, CEO of ATA, visited the Netherlands. The Minister has welcomed our collaboration and Ato Khalid Bomba praised ISSD Ethiopia as an example of how development cooperation can contribute to sustainability.

Evidence-based innovations advocated and implemented

ISSD Ethiopia supported 21 evidence based policy options in 2017.

- For improving seed sector coordination and governance, the programme advocated the establishment of a national seed advisory group; installing a specialized seed unit within the Ministry of Agriculture and Natural Resources (MoANR); and regularly convening seed sector stakeholders, including those at regional state level, in a national seed platform for informing decision making;
- Towards the development of a sustainable system of EGS supply in the country, ISSD Ethiopia advised that: the national agricultural research system (NARS) be responsible for breeder and pre-basic seed production; regional agricultural research institutes coordinate its supply; public seed enterprises take up responsibility to produce basic seed; and that this task be shared with licensed private companies and seed producer cooperatives;

- Three ministerial directives, advocated and drafted by ISSD Ethiopia, are still on the table of the Minister of Agriculture and Natural Resources pertaining to: exemption of export-only varieties from registration; criteria for obtaining certificates of competence for seed producers, distributors and retailers; and disposal of less viable seed carried over in store;
- Together with the Ethiopian Institute for Agricultural Research (EIAR) and MoANR, the programme studied the rates and reasons for farmers utilization of certified seed in Amhara and Oromia. ISSD Ethiopia advocates the further expansion and embedding of direct seed marketing in practice, as the evidence of its improvement to the efficiency of seed marketing under certain circumstances is unequivocal. Further, the programme advocates that more accountability of MPCs and unions in the assessment and forecasting of seed demand take place in the conventional system of government led seed distribution, and the establishment of a seed market information system for connecting supply with demand;
- ISSD Ethiopia commissioned a study on the performance of regional regulatory bodies in their provision of seed quality inspection and certification services. A total of 29 concrete recommendations for improvement to service provision were presented to and discussed among national and regional stakeholders;
- Furthermore, ISSD Ethiopia has contributed to the elaboration of institutional guidelines for example for the outsourcing basic seed production, producing different classes of seed, and popularizing newly released varieties in Oromia region; and seed inspection and certification according to the standards and protocol of quality declared seed in SNNPR.

Strengthened position of the Ethiopian Seed Association (ESA)

In response to advocacy of ESA, the minister requested that they identify and present evidence of the key challenges constraining private companies investment and increased participation in the seed sector. Supported by ISSD Ethiopia, ESA organized a national policy meeting during which priority challenges that require the attention of MoANR were presented. The minister himself participated in this meeting. Four key challenges were presented: (1) the absence of exclusive user rights for public varieties; (2) insecure land tenure agreements; (3) disincentives for the private sector to engage in seed marketing; and (4) disincentives to invest particularly in seed processing. It was agreed that a thorough analysis of the fourth challenge be conducted and presented to the minister early in 2018.

In 2017, one new member joined ESA, bringing the total number of members to 32. In response to their request for capacity, ISSD Ethiopia agreed to hire a secretariat officer to improve how the association is managed. The vacancy was announced in 2017, and the position has subsequently been filled.

Mainstreaming social inclusion and nutrition

ISSD Ethiopia's inclusive approach to pluralism applies to all levels at which the programme operates. Advocacy at policy level aims to enable the innovations on the ground. Accordingly, it is evidence of the success of innovations at seed producer and seed value chain level that feeds dialogue at policy level. Women's improved access to and use of seed of their preference and improved food and nutrition security through increased crop and varietal diversity are intermediate outcomes pursued by the programme. 2017 has seen improved performance against both these outcomes' respective indicators.

Conclusions and recommendations

Achievements

- Policy makers are increasingly active in their participation in ISSD Ethiopia facilitated meetings and forums;
- Appreciative recognition is given to the work of ISSD Ethiopia by MoANR, ATA, public seed enterprises, ESA, and the regional BoANRs, among other stakeholders in the sector;
- ISSD Ethiopia supported 21 evidence based policy options in 2017 for improving seed sector coordination and governance; developing a sustainable system of EGS supply; removing barriers to seed export and trade; clarifying criteria for entrepreneurship in seed production, distribution and retail; disposing of less viable seed carried over in store; promoting efficient utilization of certified seed supplied; popularizing newly released varieties; and improving the performance of seed regulatory bodies in seed inspection and certification;
- Just in the case of the latter, 29 concrete recommendations have been made for the organization; logistics; field inspection; laboratory testing; labelling and tagging; and inspection in storage and at point of retail of the seed regulatory bodies;
- ISSD Ethiopia's senior seed sector expert has been seconded to the ministry to support seed sector transformation;
- Recognition has been given by MoANR to the legitimacy of the regional seed core groups;
- Seed coordinating units have been, or are in the process of being established at MoANR and regional BoANRs;
- The national seed advisory group and platform have been inaugurated;
- EGS production and supply challenges have become a key priority on the agenda of both regional and federal governments;
- ISSD Ethiopia has been given the responsibility to facilitate the process of the establishment of a sustainable EGS supply system;
- Position of the Ethiopian Seed Association (ESA) in representing the interests of private sector has been strengthened;
- One new member joined ESA in 2017, bringing the total number of members to 32;
- ISSD Ethiopia supported ESA in responding to a request of the minister to identify key challenges constraining private participation and investment in the seed sector for the attention of MoANR;
- Four challenges were prioritized including weak incentives for private investment in seed processing, a description and analysis of which will be presented to the minister in the first months of 2018;
- In 2018, a secretariat officer will be hired by ISSD Ethiopia on secondment to ESA to help strengthen the association's management;
- Ethio-Dutch Seed Committee meeting, chaired by the minister of MoANR, with both the Dutch Ambassador and Agricultural Counsellor present and several Dutch companies, took place late in 2017.

Challenges, opportunities and lessons learnt

Challenges

- Limited internalization to date by MoANR of the desired roles and responsibilities of the national seed coordinating unit, national seed advisory group and the national seed platform;
- Limited implementation capacity of MoANR to address systemic seed sector challenges, and focusing instead on routine activities;
- Poor understanding and sharing of tasks and responsibilities between the regional BoANR and the MoANR in addressing systemic seed sector challenges;
- Lack of independent seed regulatory agency in Oromia, Tigray, and federal and limited implementation capacity of the same authority in Amhara and SNNPR;
- Lack of awareness on seed law and regulations by all key actors.

Opportunities

- Seed has become a top priority for policy making at regional and federal government levels;
- Appreciative recognition is given to ISSD Ethiopia by top offices of administration in Ethiopia;
- Strategic and structural changes including the establishment of the national seed advisory group and national seed platform may create more opportunity for collaborative governance;
- Secondment of a senior seed sector expert to MoANR to support seed sector transformation is a privilege extended to ISSD Ethiopia in recognition of good faith of the ministry;
- Closer collaboration with and support to MoANR has never had more promise than now.

Lessons learnt

- The link between regional core groups and national seed advisory group is indirect, which needs to be thought about for ensuring their regular input in agenda setting and problem solving;
- Having an audience with the minister and his highest officials in MoANR is a pragmatic way to resolve policy implementation challenges and the concerns of Dutch/international companies invested in and trading with Ethiopia.

Way forward

- Support seed sector transformation by facilitating active involvement of national seed advisory group, seed coordination unit within MoANR, and regional core groups in coordination;
- Address the challenge of EGS production and supply by delineating roles and responsibilities of actors and supporting them during the transition;
- Facilitate dialogue between MoANR and Dutch/international companies invested in the Ethiopian seed sector for regulatory reform, the development of directives, and the implementation of plant variety protection instruments that are trade-friendly;
- Ensuring the long awaited transition from pilot to practice, we have set as an outcome of its Memorandum of Understanding (MoU) with AGP that DSM take place in the majority of AGP woredas;
- We don't foresee complete substitution of the convention system of seed distribution for DSM, but rather aim for system's overhaul by piloting seed demand assessment by MPCs and unions and making them more accountable owners of the seed they distribute;
- Continue engagement with the MoANR to approve several pending directives;
- Support Oromia and Tigray BoANR and the MoANR to establish independent regulatory entities;
- Strengthen the organizational capacity of ESA and facilitate trust building between the government and the private seed sector.

Collaboration

In the BENEFIT partnership, we target the following outcomes for collaboration:

- 4.1 Evidence-based information is used and communicated by effective M&E in the partnership
- 4.2 Financial and narrative reports are accurate, compliant and submitted on time
- 4.3 The four programmes demonstrate effective collaboration and alignment of activities
- 4.4 Social inclusion and nutrition are mainstreamed

ISSD Ethiopia continued to partner and collaborate with BENEFIT partner programmes, (non) governmental organizations as well as other seed related projects. ISSD Ethiopia has become one of the key focal points with regards to knowledge and information on the Ethiopian seed sector.

M&E and communication

ISSD Ethiopia uses participatory approaches for project planning, monitoring, evaluation and learning. The ISSD Ethiopia monitoring and evaluation (M&E) matrix guides the process of tracking progress with regards to targeted intermediate and primary outcomes of the project. In 2017, ISSD Ethiopia has invested in supporting their own staff in keeping track of the progress. Quarterly monitoring is being supported by the data manager from PMU and throughout the year support visits are being paid to regional ISSD units by PMU. A team of WCDI and PMU travelled to the regions in October 2017 and supported the ISSD units in the planning for next year. In 2017, an increased number of ISSD regional experts have received tailor-made trainings to enhance their implementation capacities.

Moreover, ISSD Ethiopia uses different communication tools for sharing and learning. In 2017, the following communication products have been developed:

- 2 national newsletters sharing articles and features;
- 13 newsletters (Amhara =2; Oromia southwest = 2; Oromia east = 3; SNNPR =2; Tigray =3; ISSD-PMU = 1). The regional newsletters included of press releases, descriptions of events such as trainings, field days, workshops and success stories;
- 9 Brochures and flyers (Amhara =1; Oromia southwest = 4; Oromia east =1 and SNNPR =3);
- 5 Workshop proceedings in SNNPR;
- 2 Radio programmes (1 Amhara; 1 SNNPR);
- 1 TV programme in Amhara;
- 1 documentary video in Oromia southwest, focusing on informal seed system and farmers views about the varieties included in PVS and crowdsourcing trials;
- 1 song and entertainment about seed in Oromia (east).

During regional stakeholder workshops in October 2017, seed fairs as a means to promoting use of quality seed was applied with great success. ISSD Ethiopia will ensure that the positive experience will be replicated through training seed producers in seed promotion activities in 2018.

ISSD Ethiopia also uses its website (www.issdethiopia.org) to share information with a wider range of audiences. The knowledge and information shared through the different communication means so far is believed to have created awareness about the challenges in the seed sector, the different activities being implemented by ISSD Ethiopia and the achievements. The overall outcome of using different communication tools is increased visibility and recognition of ISSD Ethiopia inter/nationally.

Collaboration

ISSD Ethiopia closely collaborates with other BENEFIT partner programmes (CASCAPE, SBN, ENTG, and REALISE) as well as with other organizations having a stake in seed sector development in Ethiopia. The latter include, among others, the federal MoANR, regional BoANR, EIAR and RARIs, ATA, CGIAR centres (CIMMYT, Bioversity International, ICARDA), FAO, CRS, GIZ, Senselet Food Processing, and Heineken-EUCORD Project. Examples of these collaborations are given in the paragraphs below.

Collaboration with BENEFIT programmes

The collaboration between ISSD Ethiopia and the other programmes under the BENEFIT Partnership are outlined in terms of product and place combinations and also in terms of important thematic areas of intervention: gender; nutrition; scaling; capacity strengthening; access to finance and monitoring and evaluation as well as communication. The BENEFIT national planning workshop was conducted with the aim to review plans, celebrate success, discuss challenges and share learning collaborative activities implementations from 2016; have better common understanding of collaborative activities/collaborative interventions as well as to share tasks responsibilities under the leadership of BENEFIT PCU.

The major product and place collaborative activities in 2017 are described below:

- Soybean value chain development, involved ISSD, CASCAPE, and ENTAG in western Ethiopia. Major activities undertaken under this collaboration are the mapping of key stakeholders and organizing the soybean platform, capacity building on techniques of quality seed production and market orientation, facilitating collaboration with other stakeholders and undertaking gender analysis with specific to soybean. In this regard ISSD Ethiopia started by reviewing available technologies and identified gaps. ISSD Ethiopia established a soybean seed production and supply system involving one SPC and two PSPs. About 4.5 t of certified seed of one variety (Ethio-Yugoslavia) of soybean was produced and sold to farmers for grain production. ISSD Ethiopia has also played a vital role in establishing and leading the soybean platform. The overall outcome of the soybean value chain development is better linkage and information exchange among the soybean value chain stakeholders.;
- Sesame value chain development in Amhara and Tigray involved ISSD, SBN, and CASCAPE. The three BENEFIT Partnership programmes contributed their respective professional expertise to enhance sesame value chain development. ISSD Ethiopia's contribution focused on increasing the availability of quality sesame seed by SPCs and PSPs and their joint involvement in trainings and field days. The field day attracted a large number of participants, including policy makers from the federal MoANR and Ministry of Trade as well as members of the parliament;
- Strengthening malt barley value chain development by ISSD and CASCAPE in SNNPR and Amhara. The SPCs producing malt barley seed have been supported to obtain a certificate of competence for malt barley seed production and marketing. Seed production has been linked with grain malt barley production and grain producers have been linked to the market at Assella Malt Factory in SNNPR.
- Strengthening faba bean value chain development by ISSD and CASCAPE in SNNPR and Amhara. ISSD Ethiopia contributed to the PVS trials, facilitation of seed production by SPCs, and market linkages; while CASCAPE has developed good agronomic practices;
- Strengthening bread wheat value chain development, involving CASCAPE and ISSD in Amhara, including wheat seed value chain development.

Collaboration with other projects and partners

The collaborations of ISSD Ethiopia with other projects and partners are described below:

- ISSD Ethiopia has recently strengthened its partnership with the federal MoANR as is well described in the previous chapter;
- ISSD Ethiopia worked closely with ATA in scaling direct seed marketing (134 DSM woredas in 2017) and improving the infrastructural capacity of SPCs;

- ISSD Ethiopia signed an MoU with AGP, with the main objectives of scaling direct seed marketing and strengthening community-based seed producers in AGP woredas;
- At regional level, ISSD Ethiopia collaborates with EIAR (e.g. Debre Zeit and Kulumsa ARCs) and RARI centers particularly in linking SPCs with research centers to access basic seed and newly released varieties. ISSD Amhara collaborates with ARARI to setup mini potato tuber screening house at Addis Alem SPC to produce disease free planting materials;
- ISSD Ethiopia partners with Bioversity International, who provided technical advice on the crowdsourcing approach to reach a large number of farmers with small quantities of seeds of improved and local varieties;
- ISSD Ethiopia collaborates with CIMMYT/Ethiopia to promote the use of small seed packs and exchange of information;
- ISSD Ethiopia collaborated with ICARDA in producing a conference paper on legume seed production in Ethiopia as well as in promoting and sharing information on the seed production of barley, faba bean and chickpea by SPCs and other community-based seed producers;
- In Tigray, Amhara and Oromia, ISSD Ethiopia collaborates with GIZ in strengthening SPCs in the seed production of wheat, barley and faba bean;
- In Oromia (east), the programme's regional unit collaborates with Dryland Coordination Group (DCG) project and demonstrated climate smart potato seed varieties and jointly provided training on potato food recipes in 2017. Collaboration with CARE-Ethiopia in this region has also led to availing hermetic bags (PICs) for 800 smallholder farmers involved in conducting crowdsourcing trials;
- ISSD Ethiopia collaborated with CRS in producing a conference paper on new models of producing seeds of grain legumes and in information exchange, focusing on informal seed system interventions;
- Collaboration with FAO achieves information exchange as related to emergency seed provision.

Collaboration with Dutch private sector

ISSD Ethiopia collaborates with the Dutch private sector. In 2017, in the Heineken-EUCORD project in promoting malt barley value chain development, ISSD Ethiopia supported SPCs from Oromia and SNNPR in the production of large quantities of malt barley seed. PMU participated in the malt barley platform which is spearheaded by Heineken. Similarly, ISSD Ethiopia collaborates with Senselet Food Processing in promoting potato value chain development in Amhara, SNNPR and Tigray. ISSD Ethiopia supported SPCs who are producing seed potatoes to be sown by ware potato suppliers to Senselet. ISSD Ethiopia serves as a source of information and future partner in scaling for the FDOV Seeds2Feed project, which tries to introduce seed related technologies into Ethiopia in partner with Oromia Seed Enterprise, Oromia Agricultural Research Centre and CHEMTEC. As is outlined in Chapter 2 above, ISSD Ethiopia engages with, at present, 11 Dutch/international companies in seed related product and service provision in Ethiopia.

Thematic collaboration

Needs specific details of what we do with BENEFIT partner programmes in Gender, nutrition, climate smart agriculture and M&E.

Mainstreaming social inclusion & nutrition

ISSD is a member of Ethiopian network for gender equality in agriculture under the leadership of MoANR and ATA. Refer to thematic collaboration activities above in relation to gender and nutrition.

Conclusions and recommendations

Achievements

- Improved monitoring and planning support to regional units provided by PMU and WCDI;
- Several product and place collaborative activities implemented by ISSD Ethiopia in collaboration with other BENEFIT partners, supporting value chain development of soybean, sesame, malt barley, faba bean and bread wheat;

-
- Production of large quantities of malt barley seeds by SPCs from Oromia and SNNPR as part of the Heineken-EUCORD project in promoting malt barley value chain development;
 - Participation of PMU in the malt barley platform spearheaded by Heineken;
 - Inclusion of 10 grain legumes in the collective portfolio of ISSD Ethiopia supported seed producers for improved soil fertility management and nutrition.

Challenges, opportunities and lessons learnt

Challenges

- Misunderstanding and disagreement between BENEFIT partner programmes in the allocation of resources to collaborative activities.

Opportunities

- Presence of many seed projects to collaborate with in the country.

Lessons learnt

- Commodity platforms have good potential to facilitate market linkages;
- Different communication tools and channels are useful in different contexts to help in promoting use of quality seed to specific audiences;
- Seed fairs are excellent media for promoting the use of quality seed and for facilitating sales;
- Participatory and practical promotion tools are more influential than publications to promote quality seed;
- Collaboration of BENEFIT programmes and other projects helps in complementing and synergizing ISSD Ethiopia activities.

Way forward

- Establish clear roles and responsibilities, with adequate budget and staff time allocation in product and place collaborations;
- Ensure that outputs to collaboration activities with BENEFIT partners CASCAPE, SBN, ENTAG and REALISE are delivered and that collaboration with MoANR, ATA, Agricultural Growth Programme (AGP), CGIAR institutes, GIZ, Heineken, and others is enhanced, with the view to strengthen the value chains of chickpea, malt barley, potato, sesame and soybean;
- As soon as possible, we aim to plan activities with our new BENEFIT partner REALISE and help strengthen its staff capacity for robust seed system security in chronically food insecure areas;
- Explore business models for vegetable seed supply to home gardening supported by CASCAPE and SBN;
- Collaborate with BENEFIT partners and others in integrated pest and disease management, value addition, post-harvest loss reduction and the introduction of labour-saving technologies.



Appendix 4 CASCAPE Annual report 2017

Executive Summary

Introduction

Aligned with AGP, CASCAPE is set out to support the Ethiopian government to achieve food security through increased agricultural productivity in the high potential highland woredas of the country. The expected outcome of CASCAPE is 'Enhanced capacity of the research and extension system to generate demand-driven best-fit technologies and deliver these to farmers and conditions for uptake of these technologies is in place'. In order to achieve this outcome, the program targets the following key outputs: (1) best fit agricultural practices developed and made available for dissemination to achieve increased quantity and quality of agricultural production; (2) the capacity of the agricultural research and extension institutions are enhanced; (3) results and demonstrated evidences are actively shared with policy makers in order to enhance knowledge exchange between woreda, regional and federal actors; (4) Beneficial synergistic activities implemented in selected product-place combinations taking into consideration regionally prioritized agricultural commodity clusters of ATA/AGP. The programme target for 2017 was to achieve, 30% productivity increase through its activities. Five university clusters (Mekelle, Bahir Dar, Addis Ababa, Jimma and Hawassa) have been implementing the programme activities in four regions in collaboration with the Regional Research Institutions (RARIs) and Bureaus of Agriculture (BoAs) in four regions (Tigray, Amhara, Oromiya and SNNPR). In total 65 woredas are included out of which 10 are high intensity woredas for testing and validation while 55 are scaling woredas.

Major achievements

- A total of 204,074 smallholder farmers were reached directly and indirectly directly through testing and validation, pilot scaling and PED, indirectly through field days and scaling support activities. Of the total;
- A total of 51 new best-fit practices were tested and validated on-farm while 20 existing best-fit practices (produced from previous years) were promoted through PEDs and scaling support activities. In addition five new best-fit manuals were prepared for use by the extension system;
- About 30,000 ha of land was covered with CASCAPE validated best-fit practices enabling the achievement of significantly higher crop yields compared to the regional CSA data;
- About 2000 smallholder farmers and about 2500 extension experts were trained in improved practices;
- About 150 home gardens were established benefiting 150 households to access diversified diet through vegetable and fruit home gardens; These are managed and used by female farmers and the produce was used for home consumption and income generation;
- Nine regional stakeholder workshops were organized to disseminate programme results and to discuss issues and constraints in alignment, priority setting with key regional and woreda officials. In addition, all clusters participated and/or supported woreda, zonal and regional ADPLAC meetings;
- Seven thematic platforms (2 national) were organized/ strengthened; commodities for thematic platforms include malt barley, wheat, sesame, papaya, soya bean while at national level support was given to soil fertility and extension platforms;
- Six in-house trainings were organized mainly for CASCAPE experts along with some participants from research and extension stakeholders. In total 103 experts were trained in 6 rounds. Topics covered include integrated protocol for validation of best fit practices, scaling, M&E, experimental design and data analysis, bottom up planning, drivers for adoption panel data analysis and MonQIt tool implementation backstopping;
- At national level, four in-depth studies were conducted: on constraints and issues on blend fertilizer recommendation, agricultural policy landscape analysis, identification of gaps in methods and linkage of research and extension, and uptake of best fit practices of CASCAPE by extension. Farm monitoring using MonQIt tool and study on drivers for adoption were implemented to generate long term data;

- Soil characterisation and mapping was conducted for Farta woreda - woreda level soil-landscape maps are being prepared by ISRIC;
- Two guidelines were prepared on M&E and establishment of home gardens.

Major challenges, opportunities, lessons learned and way forward (exec summary)

Challenges

- Public unrest in some regions (Amhara & Oromia) created movement of staff difficult to monitor field activities and cascading trainings to woreda level;
- Sustainable supply of seed mainly linked with the overall national challenges of early generation seeds supply for CASCAPE priority crops (malt barley, faba bean, field pea) and quality related challenges in the supply of vegetable seeds associated with the lack of quality assurance in the vegetable seed value chain;
- Lack of full time gender and nutrition expert at cluster level while the interventions require mainstreaming of social inclusion and nutrition;
- Difficulty related with timely cascading of ToT trainings at lower level (DA level) mainly associated with the requirement of joint financing between CASCAPE and AGP;
- At PMU level, limited staff capacity to conduct gender and nutrition and difficulty in managing external consultants.

Opportunities

- Presence of AGPII-CDSF to support the scaling up of certain commodities through training and supply of simplified Amharic version manuals in the up-coming years;
- Strong linkage created between WoA, AGP, RARIs, BoA and CASCAPE Programme;
- Increasing interest and commitment among the higher officials at federal and regional levels; this gives great opportunities to plough-in validated best practices. Examples are spontaneous uptake of malt barley and maize innovations in the southern region. Institutionalization of CASCAPE best fit practices into regular extension and expansion into many more AGP woredas than just scaling woredas of CASCAPE;
- The increased collaboration with ISSD is creating an opportunity in addressing seed related challenges faced by CASCAPE.

Lessons

- Joint planning with the WoA allows organic scaling and institutionalization of innovations. Demand driven technologies, which generated/adapted through participatory research, are easily taken up by the smallholder farmers. It saves both budget and time and helps to effectively utilize human resource to realize the planned activities;
- The need to consider the dynamism of farmers' practices in the different CASCAPE planned activities. For example, in fertilizer related validation trail, we learnt that there is no need to consider a plot without fertilizer as control because all cereal producing farmer apply fertilizer;
- Strengthening the linkage with input suppliers ahead of the planting season contributes for successful implementation of scaling trials;
- Value chain development, nutrition, gender inclusive, staple crop for food security, animal feed/forage crop, climate resilient approaches etc. needs to be commodity and site specific – a blanket approach does not work;
- Technology alone is not a sufficient condition for successful uptake of practices – market and input supply (e.g., seed and agrochemicals) are also important for uptake by farmers. Sharing programme results to stakeholders strengthens uptake of technologies and practices;
- Timing of planning process was found to be importance and we learnt that regional annual review workshop should be conducted a head of the national review workshop to include views and opinion of regional stakeholders (Regional BoAs, RARIs) and also for adequate consideration of collaborative activities among BENEFIT programs.

Way forward

- Assessing the outcome level results and impacts of the programme is an important element;
- Compiling the lessons and results for the past year and channelling them into regional and federal decision support system will be important activity in 2018;
- Shift away from testing and experimentation to scaling, capacity development and institutionalisation. To this effect, plans are underway to place two senior experts at the extension and soil information directorates of the MoANR;
- Publications of results and sharing outputs with stakeholders through national and regional stakeholder workshops;
- Policy dialogue and thematic platforms will be strengthened in collaboration together with the other BENEFIT programmes; two policy briefs produced in 2017 will be used as input. Organizing and training farmers to produce improved seeds in their respective villages using the cluster approach of production will be strengthened. In addition, establishment of seed producer cooperatives with the help of ISSD will remain a priority for selected commodities (e.g., potato, wheat, soya bean);
- Increased alignment with AGP/MoANR to facilitate the inclusion of CASCAPE validated best fit practices into the framework package.

Quality and quantity of sustainable agricultural production

In 2017, CASCAPE tested/validated 51 technologies on cereals (maize, wheat, teff, and barley), pulses (soya bean, faba bean), vegetables and fruits (potato, onions, papaya) (Table 1). As shown in Table 2, the programme reached over 200,000 smallholder farmers; directly through our testing/validation pilot scaling trials and pre-extension demonstrations (4,508 farmers) and indirectly through field days (53,692 farmers) and scaling support activities through woredas (130,687 farmers). About 2,500 extension experts and DAs were trained to train farmers in uptake and implementation of best fit practices. About 30,000 ha of agricultural land was planted with CASCAPE validated best-fit practices achieving higher yields. Compared to the regional CSA data, average yield increment was significant ranging from 67-167% for cereals with highest for malt barley in SNNPR, 252% for potato (Belete variety) and 21-42% for beans with the highest for soya bean in Jimma. Twenty existing best fit practice manuals were promoted through PEDs and scaling support activities while five new ones were prepared in 2017. Large number of scaling activities was carried out by the extension system with support from the AGP in input supply while CASCAPE provided scaling support in terms of training, M&E and other follow up activities. All testing/validation activities were implemented in close collaboration with RARIs. In collaboration with CDSF, two best-fit manuals (papaya in Tigray and food barley in Amhara) were translated into simplified extension manual for DAs in collaboration with CDSF. Plans are underway to translate these into local languages as well. Nutrition-sensitive agricultural practices have been promoted by establishing 145 home gardens that are managed by female members of the households. And home garden training manual is prepared for DAs to support farmers. Large number of model home gardens (145) was established enabling households to access diversified diet in the form of leafy vegetables, fruits and other nutrient-dense products. These and other testing, validation and scaling/PED plots have been visited by over 52,000 farmers that were involved in field days in 2017 thereby creating awareness about the new innovations and best fit practices.

Improved enabling environment

One of the result areas of CASCAPE is to assist policy makers to make informed decisions at national and regional levels about research and extension, while at the same time seizing the existing opportunities. In order to provide demonstrated evidence for policy, the programme implemented 16 in-depth studies on strategic issues such as blend fertilizer recommendation, agricultural research and extension policy process, drivers for technology adoption including challenges for adoption of improved forage species by smallholder farmers in Amhara region, determinants of sesame productivity in large-scale commercial farms vs. smallholder farm fields (Humera), etc. The findings of these studies and broader programme results are shared in eight thematic platforms (two at national level) and eight stakeholder workshops at regional and national levels (Table 2). The platforms and workshops have enabled the programme to widely share and discuss the results with AGP, research and extension

actors at federal and regional levels. In addition, two policy briefs – one on technical and agronomic issues of blend fertilizer recommendation and another on participatory research and extension approach – are being prepared. In parallel, technical reports and briefs are being prepared for sharing with research and extension experts at federal and regional levels. Further, panel data on the drivers for adoption study is being collected so as to produce a comprehensive report on the factors that inhibit or promote the adoption of agricultural best practices by farmers. The results will be shared with higher officials for their informed decision in technology transfer and uptake efforts. Two recommendation maps were prepared as pilot exercise in terms of recommendation domains based on biophysical (soil, agro ecology, climate, pests, disease) and socio-economic (market, labour and input supply dimensions). Starting from 2018, we are to conduct training on recommendation mapping and sharing the tool with research and extension partners.

Partnership and collaboration (exec summary)

CASCAPE is collaborating and aligned with AGP stakeholders at federal and regional level. The collaboration is based on the annual implementation agreement between AGP, RARIs, BoAs and implementing university per cluster. With the aim of scaling CASCAPE validated best-fit practices in suitable agro-ecological zones outside of CASCAPE intervention areas (but within AGP woredas), a strategic partnership was entered with CDSF. This enabled the translation of some best-fit manuals into simplified extension materials to be used by DAs and in local languages. Within BENEFIT partnership, CASCAPE is working closely with ISSD, and SBN but to a limited extent with ENTAG according to programme scope and focus. To mention some examples of product and place based partnership within BENEFIT, CASCAPE, ISSD & SBN were working on sesame value chain in Amhara and Tigray regions. BENEFIT synergy in Hawassa cluster shows close collaboration between CASCAPE and ISSD on malt barley and faba bean. Chickpea value chain development in woredas close to Addis Ababa is addressed by CASCAPE, ISSD and ENTAG. In all cases, CASCAPE deals with agronomic aspects including variety screening and best fit practices package recommendation, ISSD deals with seed system development. ENTAG is working on linking chickpea to market/traders. Mekelle University CASCAPE achieved the identification of high yielding, locally adaptive and farmers preferred sesame and sorghum varieties which SBN promotes through 20-steps extension package.

Quality and quantity of sustainable agricultural production

In CASCAPE we target the following outcomes for contributing to increased quality and quantity of sustainable agricultural production:

- Best fit agricultural practices developed and made available for dissemination
- Increased capacity of woredas to develop and implement agricultural development plans, including strategies for scaling
- Diversified agricultural products are made available

Increased quantity and quality of sustainable agricultural production

In order to contribute to the achievement of this outcome, we have tested/validated and demonstrated best fit agricultural practices, and the capacity of extension and research stakeholders for successful up scaling and implementation of these practices. The capacity of were tested and validated to make the practices available for dissemination. A number of intermediary results were attained in order to achieve this primary outcome.

Best fit agricultural practices developed and made available for dissemination

Testing and validation

In 2017, a total of 51 new best-fit practices were tested in different agro ecological zones and farming systems (Table 5). On-farm field comparison of best practice against research recommendation and conventional farmer practice was conducted. These directly involved 4508 smallholder farmers who worked hand-in-hand with researchers and extension workers. Through joint experimentation, their knowledge and skills in adapting technologies to their local realities has been enhanced. Integrated validation approach that was developed by the programme was used for testing and validation of the practices. The protocol provides practical guidelines for an integrated approach in best-fit practice assessment including agronomic effectiveness (productivity), economic profitability, social acceptability, gender and nutrition and environment sustainability. Regionally prioritized crop commodities (e.g., Sesame and wheat in Tigray, Malt barley in the south, soya bean in Jimma, etc) were considered for technology validation. RARIs are actively involved in the validation process while farmers' preference and gender and nutrition aspects played important role in the screening process. In addition, blend fertilizers were evaluated against conventional NP fertilizers on different crops and soil types with the objective of advising on site, soil and crop specific fertilizer recommendations. Currently, this has become important agronomic and policy issue in Ethiopia.

Table 5 Number of testing and validation trials

Cluster	No. of activities			
	Crops (cereals & pulses,	Fertilizers/ISFM	Livestock (forage)	Total
AAU	6	0	0	6
BDU	2	4	5	12
HawU	6	3	1	14
JU	5	3	0	8
MU	8	3	0	11
Total	27	13	6	51

The on-farm demonstration and testing plots have achieved a substantial yield increment for all commodities tested that ranged between 60% and 150% over the regional CSA data for 2017 (Table 6). In the pre-extension demonstration and scaling activities where large plots are used and farmers are managing fields yield increment of 47%- 167% was achieved for cereals (wheat, food barley, and maize and malt barley) with average increment of 85% (Table A5.2). Yield increment for wheat ranges from 47% in Amhara to 103% in southwest Oromia while it ranges from 57-77% for maize. For pulses (faba bean, soya bean and haricot bean) the yield increment over CSA yield ranges from 19-42% with an average of 29%, showing less yield increment than the cereal crops considered. Yield of horticultural crops such potato, carrot and head cabbage showed yield increment of 240-510%.

Table 6 Yield and increment PEDs/scaling activities trials as compared to CSA data

Region	Crop/variety	PED/scaling trial (t ha ⁻¹)	Regional CSA (t ha ⁻¹)	Increment over CSA (%)
Oromia-Central Oromia & Amhara-North Shewa	Bread wheat	4.18	2.79	50
Oromia-central	Potato (Belete)	47.0	12.39	279
Amhara	Food barley (HB-1307)	3.2	1.64	95
Amhara	Wheat	3.83	2.6	47
Amhara	Potato (Belete)	33.7	16.4	105
SNNPR	Maize (BH661)	5.27	3.36	57
SNNPR	Malt barley	3.74	1.4	167
SNNPR	Faba bean	2.23	1.85	21
SNNPR	Haricot bean	1.85	1.56	19
SNNPR	Head cabbage	21.73	6.34	243
SNNPR	Carrot	25.92	4.23	513
Oromia southwest	Maize (BH661)	7.3	4.13	77
Oromia southwest	Wheat	4.4	2.16	103
Oromia southwest	Soya bean	2.7	1.9	42
Tigray	Wheat	3.8	2.07	84
Tigray	Faba bean	2.4	1.81	33
Tigray	Potato (Belete)	38.2	8.1	372
Tigray	Garlic	9.65	4.8	101

Enhancing capacity of EIAR/RARIs in best-fit technology testing

RARIs and EIAR are institutions mandated to develop demand-driven technologies to farmers through the extension system. CASCAPE works closely with the RARIs on testing and validation activities as written in the AGP implementation manual. In 2017, the programme supported 10 joint research activities (4 with ARARI, 2 with TARI, 2 with OARI & 2 with SARI). This involved joint planning, implementation and M&E where feedback between research, extension and university was enhanced. In addition to joint activities, CASCAPE strives to enhance the capacity of the RARIs in problem identification, priority setting and joint experimentation with farmers. In other words, we are promoting Participatory Action Research (PAR) that empowers farmers and researchers to continuously adapt to changing farming conditions. In order to capture the capacity gaps in conceptualisation and implementation of the PAR approach, the programme conducted a gap identification assessment among the EIAR and RARI staffs and officials in 2017. Gap identification in agricultural research methods and linkage with extension, training and joint research activities with the RARIs were carried out to enhance capacity of RARI researchers. The results have clearly shown that there is limited knowledge and skills in PAR approach among researchers at all levels. Therefore, capacity building training will be promoted in 2018 fiscal year. In addition, there has been request for training on GIS and mapping skills. Combined with the recommendation mapping exercise, the programme will organize training on basics of GIS application. As part recommendation domains, integrated technology, best practice validation, MonQIt and QUEFTS was given to 62 TARI researchers in 2017. CASCAPE integrated validation and research protocol is institutionalized by the Tigray

regional research centres. With the support of CACSAPE Tigray, regional research system has documented research outputs.

Delivering demand-driven technology to the extension department at regional and woreda level

In addition to testing and validation, the programme has successfully promoted 20 best-fit practices that were produced from phase 1 implementation, through scaling support and pre-extension demonstration plots. In these activities, the role of AGP and extension is pivotal as they own the process while CASCAPE provided technical assistance and M&E follow up. Moreover, five new best fit practice manuals, on use of lime for wheat production, garlic production, rice production, maize-haricot bean intercropping, and wheat production, are under preparation. Two guidelines, on M&E and nutrition mainstreaming through home gardens, were prepared at national level. Several guidelines were also prepared by the clusters and shared with regions; for example, Mekelle University CASCAPE prepared 12 different training manuals and shared with AGP stakeholders in the Tigray region. AGPII-CDSF translated two best fit practice manuals, on food barley in Amhara and papaya in Tigray, developed by CASCAPE into simplified extension materials. An important exercise initiated in 2017 was the follow up of the uptake by the extension system of the best-fit practices delivered by CASCAPE. Assessing how well the extension system is mainstreaming the new best fit practices and capturing the capacity gaps and M&E support needs is important to provide the necessary assistance at different levels.

Research priorities and results are discussed between RARIs, Universities and Extension Department at federal and regional level

In addition to joint research activities conducted with RARIs, each region has conducted review and planning workshops to discuss the priority research agenda and facilitate feedback between research and extension. Seven platforms on malt barley value chain (both in Amhara & SNNPR), on sesame, soya bean, wheat and papaya were established or strengthened to enhance feedback between research and extension. Besides, CASCAPE made an effort to strengthen the soil platform at national level, which created an opportunity to share results from the study made on blend fertilizer recommendations. All clusters participated in ADPLAC meeting at woreda, zone and region levels in their regions.

In-depth research and surveys

Twelve in-depth studies have been conducted by the clusters on topics that require more detailed insight in cause-effect relations. Some examples include challenges in the adoption of improved forage species by smallholder farmers in Farta and Burie districts (Bahir Dar University); determinants of sesame yield difference between farm fields of the investors and small holders farms in Humera (Mekelle university); food deficiency, production, marketing and processing in CASCAPE Woredas of Central Highlands of Ethiopia (Addis Ababa University); panel data on inhibitors vs. promoters of technology adoption among others. In addition, PMU has coordinated a number of policy-related in-depth studies including issues and constraints in blend fertilizer recommendation; policy landscape analysis; gaps in implementation of PAR methods; and follow up of uptake of best-fit practices by the extension system. The findings of these studies have been actively shared with regional and federal policy makers. Baseline and PRA surveys were conducted in the two new woredas (K/Humera and Farta) while focused PRA exercise was implemented in the new scaling woredas across all clusters. Policy briefs are being prepared on technical and agronomic aspects of blend fertilizer recommendation. The national and regional research institutions are actively working on the types of blend fertilizers but rate of application has not been studied. In order to fill these gaps, CASCAPE initiated a nationally coordinated experiment on blend fertilizers comparing different rates and types of blends with NP fertilizers and the QUEFTS recommendations. These are implemented on regionally prioritized crops (e.g., wheat, teff, maize, potato, beans) and on dominant agricultural soils (e.g., Nitisols, Luvisols, Andosols, etc.) according to the woreda soil-landscape map. The results will be compiled and analyzed to refine and issue site crop and soil specific recommendations. In addition, in support of scaling best-fit technologies from sites of testing to sites of implementation, a similarity in soil types is important biophysical variable. For this reason, soil characterization and soil-landscape mapping was initiated for Farta worda; fieldwork has been completed and mapping will now be done by ISRIC.

Increased capacity of woredas to develop and implement agricultural development plans, including strategies for scaling

Capacity of extension to disseminate best-fit technologies through implementing scaling strategies enhanced

In 2016, a training need assessment (TNA) was executed to identify priority needs of extension experts, DAs and subject matter specialists (SMSs). Based on the findings, a series of ToT and cascaded training activities were implemented in 2017. Over 2000 extension personnel have received ToT training by the CASCAPE experts some of which was organized by AGP (Table 7). Topics included adult learning, communication and facilitation skills, participatory bottom up planning, monitoring and evaluation, integrated soil fertility management, integrated pest management and analysis and reporting and others. Additionally, training was provided to extension experts (regional experts, SMSs and DAs) when requested by AGPII and MoANR/regional agricultural offices. Six in-house trainings (ToTs) for the programme's experts were organised. Some of the topics included integrated validation protocol of best practices, scaling, M&E, experimental design and data analysis, bottom up planning and MonQIt. The capacity building senior expert at NPMU made rounds of backstopping for methodological support for the cascaded trainings by CASCAPE experts at woreda level. In addition, in response to written request from the federal extension directorate, a training was organized for senior agricultural extension experts from Benshangul Gumuz and Gambella regions and Dire Dawa City Administration. The training topic covered identification, validation and scaling of best practices. Upon request by the Oromiya regional state Bureau of Agriculture, financial support was given to organize best practice identification and scaling training for extension experts drawn from all zones of Oromiya regional state in addition to devotion of resource person's time from NPMU. Jimma University provided training on request of AGPII on gender and nutrition mainstreaming in agriculture, best practice identification, documentation, validation and scaling up strategy and climate smart agriculture for four woreda extension experts.

Table 7 Number of extension experts and DAs trained in 2017

Cluster	No. Trainees			Total
	No. of ToTs	AGP organized training	On-spot training	
AAU	102	-	73	175
BDU	78	-	92	170
HU	197	-	267	464
JU	31	612	38	681
MU	456	-	89	545
Total	864	612	559	2035

Support development and implementation of agricultural woreda plans

Support to the bottom up planning and woreda development plan preparation has been highlighted in the AGP PIM to which have committed resources particularly in the first and second level intervention woredas – i.e., testing and scaling woredas. In 2017, the programme has provided supported woreda development plan preparation in 47 woredas. The nature of support takes different forms in different regions including priority setting using participatory rural appraisal (PRA) and community level participatory planning (CLPP) tools; training in the bottom up planning process, revision of budget and plans prepared by woreda experts, participation in the plan preparation workshops, etc. In the case of Mekelle CASCAPE cluster, the team prepared guidelines for woreda plan preparation and conducted training using the guideline used it to provide training. The guideline is designed to guide Woreda officials as tools to implement CLPP methods. The regional team shared experiences with AGP and BoANR how to conduct focus group discussion, problem identification and prioritization strategies. The support given to the AGP and BoANR ranges from creating conceptual clarity on the agricultural development plan to field level practical training. During the support, the incorporation of best fit practices into woreda development plan was facilitated as well..

Pre-extension demonstration (PED)

According to the innovation pathways adopted by CASCAPE (see work plan 2016), practices that have proven to be best fitting to a given agro-ecology, soil and socio-economic conditions in the testing/validation phase are pushed up to the PED phase. The purpose of PED plots is to exchange information on extension methods with DAs and extension experts, and to sensitize farmers who are the end users of the practices. It is a strategy to facilitate observation, create awareness, carry out evaluation and decision making regarding the demonstrated practices. Larger plots of 0.5 ha and large number of farmers are included in PEDs so that the success of the practices can be easily assessed by stakeholders including input, especially seed, suppliers. In 2017, the programme executed about 2600 PED plots as an effective strategy to facilitate field level verification, create wider awareness, evaluation and decision making regarding the demonstrated practices (Table 8). Special arrangement (20/80) has been made to finance and manage 20% of the PEDs by CASCAPE and 80% PEDs by AGP. In South, AGP financed and managed scaling instead of doing further PEDs.

Table 8 Number of pre-extension demonstrations on farm fields

Cluster	No. of farmers			FTC
	Male	Female	Total	
AAU	74	6	80	5
BDU	499	36	535	10
HU	228	118	346	0
JU	268	23	291	0
MU	1258	70	1328	0
Total	2327	253	2580	15

Enhanced capacity of the woredas to implement effective woreda agricultural development plans including strategies for scaling

CASCAPE is primarily mandated not to do scaling but to provide scaling to the extension system and the AGP which take scaling as their mandate. In the scaling activities training, methodological backstopping and M&E was supported. With technical support from CASCAPE and seed provision from AGPII and follow up of implementation it was possible to reach 173,457 smallholder farmers with improved technologies and best fit practices in 2017 (Table 9). These farmers achieved significantly higher crop yields compared to regional CSA average data for 2017 (Table 6).

Table 9 Number of farmers reached through scaling support

Cluster	No. of farmers			FTC
	Male	Female	Total	
AAU	13,443	1,439	14,882	
BDU	20,315	1,053	21,368	51
HU	48,430	17,809	66,239	
JU	20,207	3,036	23,243	
MU	15,885	6,888	22,773	
Total	118,280	30,225	148,505	51

Having been impressed by the increased productivity through applying best fit practices, the AGP and WoA did provide the necessary resources for inputs and assign devoted extension experts to implement the scaling trials and PEDs.

Diversified agricultural products are made available

Several attempts to develop nutrition-sensitive agricultural practices through the inclusion of pulses and leafy vegetables and fruits in the farming system have been made. The choice of commodities in our testing and validation pre-extension demonstration as well as scaling support checked against nutritional and trade-offs that may exist at the household level between selling products for income or consuming them for nutritional diversity. In 2017, the focus was the establishment of home gardens with nutrient dense leafy vegetables (e.g., vegetable crops such as head cabbage, Swiss chard, lettuce, carrot and beetroot) and fruits (e.g., papaya, mango, guava and avocado) near the homesteads. In addition to vegetables and fruits planted in the backyard fields, the programme supports in the incorporation of pulses such as faba bean, field pea, chickpea, haricot bean and soya bean in the farming system. Considering the backyard vegetable gardens, the programme supported the establishment of 145 home gardens in 10 woredas of which 134 are female-headed households. The objectives of these activities was to promote diet diversification by shifting away from cereal-based diet alone to increased consumption of vegetables, fruits and pulses in the household diet. Awareness creation training was given to participating farmers on the importance of vegetables, fruits and pulses in the diet intake of particularly for children, pregnant women and lactating mothers. These model home gardens are used as training ground for experience exchange and lesson sharing among neighbouring households and the extension system at woreda level. The water harvesting structures and small-scale irrigation activities supported by AGP provided a fertile ground for the promotion of the home gardens. The programme and DAs provided regular training on home garden establishment and management for participating women. A home garden management guideline is being prepared and validated in two woredas; this will be finalized for implementation in 2018.

Table 10 Home garden activities per university cluster

Cluster	No of home gardens	Nutrition dense crops promoted
AAU	32	Swiss chard, lettuce carrot and red beets, chickpea
BDU	18	papaya, mango and avocado fruits, faba bean, sweet lupine and potato, faba bean, haricot bean
HU	70	Faba bean, chickpea, field pea, haricot bean, head cabbage, carrot, mango, avocado and banana
JU	30	Faba bean, soya bean, papaya and vegetables
MU	10	beetroot, carrot, cabbage, lettuce, potato, faba bean, mung bean and papaya
Total	160	

Home gardens are meant primarily for household consumption; this has been emphasized in the awareness creation training with participating households. As part of the training, participating households are encouraged to use the products of home gardens. Hawassa University cluster carried out a preliminary assessment of the proportion of garden products consumed at home vs. marketed. The result showed that out of a total of 1532 qt of vegetable harvested from 70 backyards garden of which 530 qt (35%) consumed at home and the rest was sold in local market. Similarly, Jimma University cluster assessed women dietary diversity score from 10 food groups based on 24 hours recall and the results showed that the mean of women beneficiary dietary diversity was 5 ± 0.96 as compared to 3 ± 0.75 of control women. The intake of vitamin A-rich dark green leafy vegetables and other vitamin A-rich vegetables was the highest among beneficiary women as compared to control women. In addition, in households that participated in home garden food production, 70% of women consumed produce from five food groups. While this provided important source of income for women, much work needs to be done to popularize vegetable consumption at home.

Mainstreaming social inclusion and nutrition

We are working in increasing the role of women in agriculture, food security and nutrition, and gender equality. The programme focused in increasing participation of women in testing and validation, PED, scaling, field days and trainings as well as including gender parameter as part of validation protocol. Female farmers participate in testing and validation activities, pilot scaling, pre-extension demonstration, scaling and capacity development of the programme across regions targeting 30% female farmers. In 2017, a total of about 40,000 female farmers have participated in the programme accounting for about 21% of the 190,000 total farmer reach. Although the female farmers reach is below the targeted 30%, it is still significant number according to Ethiopian standards. Remarkably, participation women in extension led PEDs is much lower (9.8%) than participation of women in CASCAPE led scaling trials (20.35%).

In addition, there are activities such as home gardening of vegetables and fruits and labour saving implements (enset processing device included in PED) that focused primarily on women. The home gardens were established in 10 intervention woredas to diversify the diet and enhance the knowledge in implementing home gardens by female farmers. Out of 160 participants, 149 were female farmers managing home gardens (Table A4.6, see section above for details).

In the same line, women focused activities and gender issues in chick pea value chain, Addis Ababa cluster was carried out in collaboration with ISSD. In doing so, the programme follows whole family targeting approach bringing all family members in the activities to create better environment in decision making and shared responsibilities.

Gender focused in-house ToTs were organized to enhance capacity for gender mainstreaming in programme activities. There was a one day training organised for the gender focal persons before the annual planning workshop to familiarise the gender focal persons with the key concepts of gender and discuss how they could mainstream gender in their daily work. During this workshop it was proposed for all gender focal persons to implement one or two labour saving technologies as part of the technology testing. Also, several of the clusters indicated to be organising trainings for BoANR staff on how they could mainstream gender concerns during their work on promoting agricultural innovation in their respective woreda. In addition, programme staff participated in and contributed to the third Forum of the Gender Equality in Agriculture network meeting which had as topic labour saving technologies. A presentation was given on the programme's experience with labour saving technologies (with examples from the four clusters and a particular focus on Hawassa University). The contribution was appreciated because it showed real life examples and lessons learned. Furthermore, the programme emphasized the participation of female farmers in the field days and stakeholder workshops organized as a means of sharing knowledge and experience to female farmers. Accordingly, in 2017 female farmers' participation in the field days and stakeholder workshops reached 17% and 22% respectively, which is tremendous achievement over the past years.

Conclusions and recommendations

Achievements

Large number of yield increasing best-fit practices validated and made available for dissemination. Significant productivity increment has been achieved and if these practices are scaled out widely reaching more farmers, they would contribute towards food security of the regions. The WoA and kebele level experts and SMSs appreciative of the practices while the national extension package does not recognize them. The bottom up planning process is being used for ploughing-in locally specific practices into the agricultural development plan. The scaling support activities have assisted the promotion of 20 best-fit practices some of which have been up taken in the regional plan (e.g., malt barley in SNNPR, papaya in Tigray). In SNNPR, the regular extension with the support of AGP has reached scaled out CASCAPE validated best-fit practices reaching 37,000 farmers and covering 7,000 ha of land. The productivity reported in malt barley production range from 3.0 to 4.1 t ha⁻¹, which is double the average productivity level in the region. To maintain such increase in adoption of improved practices, one needs to address the capacity gaps for implementation on the part of the experts, SMS and DAs. The programme tried to address through the challenge through tailor-made training

activities. They appreciate the ToTs given but they lack financial resources to cascade the training at kebele level with DAs and farmers. AGP resources have not been made available for cascaded trainings. For increased impact and enhanced capacity of the DAs, continuous dialogue, discussion and alignment with AGP is required. This will also be taken up in the senior institutional advisors meeting at national level.

Challenges, opportunities and lessons learnt

Challenges

The programme faced a number of challenges that can be categorized as (1) agronomic including plant disease and pest infestation (army worm on maize), late onset of rains; (2) weak input supply system including lack of good quality seed particularly early generation seed of potato, faba bean, vegetables; shortage recommended blend fertilizer types and herbicides; market failure particularly for wheat in the central highlands; fragmented landholdings causing experimental error as farm fields are used as replicates for experiments; woreda officials are busy with political meetings and difficult to discuss agricultural development issues; (3) problems pertaining stakeholders include problems frequent turnover of DAs and woreda experts; mismatch between CASCAPE and AGP planning process hindering cascaded training; weak coordination and staff linkage between woreda and kebele structures; training topics cascaded by the Woreda Office of Agriculture are designed from the region on certain thematic areas as top down approach; and (4) Absence of dedicated gender and nutrition expert in the team at NPMU and cluster levels; the mismatch between BENEFIT planning and reporting calendar and cropping calendar of the trials.

Opportunities

In 2017, the programme seized numerous opportunities presented to it. Among the numerous opportunities were (1) adequate and fair rainfall distribution were convenient for the implementation of testing validation trails and PED and scaling support cropping activities; (2) CASCAPE regional partners were committed in mobilizing their human, financial and logistic resources to implement the scaling of best fit practices handed over to them; (3) high demand for high yielding, locally adaptive and disease resistant varieties and the presence of regional and federal research centres in CASCAPE interventions areas for joint experimentation; (4) BENEFIT and other partnerships such as AGP-CDSF that support the scaling up of best-fit practices through capacity building training and supply of simplified extension manuals for DAs; (5) the merging institutional linkage created among WoA, AGP and CASCAPE programme at university clusters; also we have good connections with higher officials at federal level including the agriculture standing committee of the parliament; (6) strong commitment and support of the senior institutional advisors at federal and regional levels along with increasing interest of higher officials in CASCAPE activities; and finally the support of the AGP technical committee at federal and regional levels that facilitate alignment and oversight of the programme activities; readiness of the regional AGP and the regional bureau to contribute budget for capacity development plans of the programme (e.g., Tigray).

Lessons learned

The programme learned a number of programme management and partnership lessons for successful implementation. These include (1) validated and demonstrated technologies are necessary but not sufficient conditions for the for successful uptake and implementation of best-fit practices unless it is reinforced by market linkages, institutional innovation, political commitment, genuine participation and beneficiaries and stakeholders; (2) location-specific recommendations and scaling pathways (validation, demonstration, PED, scaling support) creates strong momentum on technology uptakes and improvement of agricultural productivity primarily in the target woredas and AGP woredas; (3) provision of basket of choices and layering and sequencing of activities proved appropriate and game changer in smallholder conditions; (4) successful partnerships have to be supported with clear objectives, budget, division of roles and responsibilities to sustain mutual initiatives; (5) addressing capacity gaps at different level also contribute significantly for the programme success as well as to strengthen sustainability and institutionalization of programme outcomes; (6) in the process of capacity development of Woreda SMS, cascading of the trainings to DAs and further to farmers should

be seen as one area that needs focus in 2018 and discuss with relevant stakeholders for proper implementation of the scaling activities by CASCAPE.

way forward

Policy level engagement needs to be enhanced presenting demonstrated evidences on blend fertilizer recommendation, research and extension approaches and scaling of existing best-fit practices. The policy briefs prepared in 2017 will be used for dialogue. Technical papers on selected topics based on in-depth studies will be disseminated among experts. More importantly, the good work and approaches piloted by CASCAPE and the successful experiences and results need to be communicated nationally and internationally through various forms of publications. In addition, To this effect, the follow up assessment of best practices uptake by the extension system and its challenges and areas for improvement was studied and results were communicated to the regional clusters and research extension stakeholders.

Emphasis has to be given to find ways and means of incorporating some if not all the best fit technologies into the extension package. In addition to increased alignment with extension and AGP, the national institutional advisors representing AGP, EIAR and MoANR extension are committed to ensure that the best performing practices emanating from PED plots will be incorporated in the national extension package.

The mid-term review exercise is eagerly awaited to document most significant changes in the livelihoods of smallholder farmers as result of adoption of the best-fit practices. The programme will continue enhancing linkage between the farmers and input suppliers to enhance access to agricultural inputs and success of scaling up/out of the best fit practices; and strengthen thematic platforms on regionally prioritized commodities. Stakeholder meetings and workshops including engagement of agriculture development partners' linkage advisory councils (ADPLACs) at woreda, regional and national levels will be important strategic direction in the future.

Improved enabling environment

In CASCAPE we target the following outcomes for contributing to an improved enabling environment for the agricultural sector:

3.1 Strengthened enabling institutional environment for the agricultural sector

3.1.1 Regional and national policy makers make informed decisions about agricultural research and extension opportunities and challenges

3.1.2 Programme results, in-depth studies, and policy briefs are actively shared with stakeholders for uptake of agricultural technologies & practices is strengthened

Strengthened enabling institutional environment for the agricultural sector

One of the result areas in CASCAPE is to strengthen the enabling institutional environment for the agricultural sector development. In order to attain this strategic objective, the programme assists policy makers to make informed decisions at national and regional levels about research and extension, thereby addressing the agricultural production constraints while at the same time seizing the existing opportunities.

Regional and national policy makers make informed decisions about agricultural research and extension opportunities and challenges

A number of in-depth studies were conducted to support policy brief preparation for engagement with higher officials at national and regional levels. The results of policy landscape analysis and gaps in the implementation of agricultural research and extension policies have shown that this is more problem on the implementation side of policies than with the content of the policies. The results also showed limited knowledge of researchers on participatory research. It is found that in the extension system the strongly pushed full package limits options for farmers. The obvious platform ADPLAC to link research and extension suffers from lack of clear accountability and budget. The extension system is partially using best fit practices of CASCAPE; crop varieties tested and recommended for local adaptation by the programme are being used. However, when it comes to practices, the extension system follows strict procedure to enforce the use of full package prepared by public research and extension institutions.

Based on the results, the NPMU prepared two policy briefs and two technical papers focusing on technical and agronomic issues and constraints concerning blend fertilizer recommendations; and agricultural research and extension policy formulation process and its impacts at farm level. In the absence of adequate in-house skills in preparing of policy briefs, F&S, a Dutch registered firm, was contracted to produce the policy briefs and technical papers for policy engagement at national level. Plans are underway to organize a one-day workshop with technical and economic issues related to blend fertilizer recommendations that have recently been promoted in the country. In the regional clusters a number of policy dialogue for a were organized including policy dialogues on seed delivery system and human-wild life conflict (Jimma) and series of stakeholder workshops involving AGP, RARI and BoANR joint research and planning workshops (Hawassa, Bahir Dar).

Programme results, in-depth studies, and policy briefs are actively shared with stakeholders for uptake of agricultural technologies & practices is strengthened

At national and regional levels, CASCAPE is well-aligned with AGP and attends AGPTC meetings using it as form for sharing experiences and lessons learned in programme. Based on the results of in-depth studies (e.g., blend fertilizer recommendation, participatory action research and extension approach), two national stakeholder workshops and one platform meeting was organized involving AGP, BoANR, EIAR, RARIs and universities (Table 11). In the regions, university clusters have organized eight regional workshops to share results of in-depth studies and other results of the programme at federal, regional and woreda levels (Table 11). In addition, seven platforms meetings were organized, some together with other BENEFIT programmes, on regionally prioritized commodities including malt barley value chain (both in Amhara & SNNPR), sesame (Tigray), soya bean (Jimma), wheat, chick pea and papaya (Tigray). The objective was to create and strengthen commodity platforms to enhance feedback between research and extension. Sixteen regional stakeholder workshops have addressed a number issues pertaining best practice development and dissemination, research review and joint planning, but more importantly on sharing key findings and experiences of programme implementation (Table 11). In addition, regional teams have participated in regional, zonal and woreda ADPLAC meeting taking this as opportunity to share programme results and experiences with wider stakeholders. In these meetings, heads of WoA, AGP focal persons, and Regional AGP coordination, BoANR extension heads are RARIs were in attendance. CASCAPE supported ADPLACs platform meetings in creating institutional linkages and synergies among actors operating in the Woreda; in identification and prioritization of existing critical challenges and their possible interventions; and in sharing programme results and outputs that are relevant to ARDAPLAC's priority interest. The ADPLACs platform at Woreda levels is operating as per the guideline of the woreda council. CASCAPE is one of the partners attending the quarterly meetings held at Woreda and regional level. In Tigray alone, this council has conducted 4 meeting to discuss priority issues relevant to the intervention woredas Relevant actors, namely research, extension, university-CASCAPE team, seed enterprises, local cooperatives/Unions and the farmers were requested to yellow rust resistant wheat varieties available to farmers are members of the woreda ADPLACs.

Table 11 List of platforms strengthened and stakeholder workshops organized by cluster

Cluster	Platform organised	National/regional stakeholder workshop organized
AAU	Established chickpea platform	Simplified extension manual on Hidase wheat innovation Scaling technical working group meeting
BDU	Established malt barley platform	Annual regional planning and review workshop (priority setting) Joint research, capacity building and scaling workshop Sharing experiences, lessons and achievements of trials and demonstrations Regional stakeholder workshop on opportunities and challenges to scale up controlled grazing (shift away from free grazing)
HU	Strengthen malt barley platform: early generation seed supply issue discussed	SARI-HU joint research planning and review workshop AGP woreda planning support workshop – agree on needs priorities at regional level (AGP)
JU	Soya bean value chain development platform supported – all BENEFIT stakeholders involved Wheat value chain platform organized	Stakeholder workshop on joint planning and result sharing Attended six zonal and woreda ADPLAC meeting and shared CASCAPE experiences

MU	Re-established papaya platform at woreda level (Raya Azebo)	Annual review and planning workshop with AGP, research and extension stakeholders (regional)
	Sesame platform strengthened (Humera)	Workshop on soil resource information for agricultural transformation (zonal) involving TARI, 5 WoA, MU
		Regional workshop on vegetable best practice promotion
		Attended regional and woreda ADPLA meetings
NPMU	Strengthen soil fertility platform	National stakeholder workshop on participatory extension involving MoANR, BoANR, AGP, EIAR, RARIs
		National stakeholder workshop on Blend fertilizer recommendation: issues and constraints involving MoANR, BoANR, AGP, EIAR, RARIs

Mainstreaming social inclusion and nutrition

BENEFIT-CASCAPE is striving to create enabling environment in ensuring balancing male and female representation in all its activities and help the government bodies mainstream through the system by hosting forums and also sharing lessons in various national and regions workshops, meetings and working groups.

Conclusions and recommendations

Achievements

The programme achieved quite a lot in strengthening enabling environment for agricultural sector development by providing field demonstrated evidence for decision support system. The programme successfully supported the establishment and strengthening of national, regional and woreda level commodity platforms that have significant influence for wider agricultural sector development (e.g., malt barley, soya bean, and papaya). Policy briefs and technical papers are being prepared for actively sharing among regional, and national policy makers. This takes up important issue concerning blend fertilizer recommendation that is currently a big policy issue in Ethiopia.

Challenges, opportunities and lessons learnt

BENEFIT-CASCAPE is striving to create enabling environment in ensuring balancing male and female representation in all its activities and help the government bodies mainstream through the system by hosting forums and also sharing lessons in various national and regions workshops, meetings and working groups.

way forward

More needs to be done in 2018 in terms of picking the issue up with the agriculture standing committee of the parliament. Programme engagement with ADPLAC for needs to be encouraged at all levels. In particular, the programme needs to align with national level ADPLAC which we have not contact with at the moment. In terms of research experts and national/international audience, the experiences and lessons gained so far in the programme need to be synthesised and published into peer reviewed journals. Some classic example in this connection is the MonQIT data and the drivers for adoption survey results. Synthesis report on MonQIT data taking into consideration farming systems and agro ecological zone gradients would contribute in terms of improved understanding of nutrient balances, economic performance and environmental sustainability of our interventions.

Collaboration

M&E and communication

CASCAPE-BENEFIT has been actively engaged in the M&E process of the whole partnership in order to consolidate the programme impact pathways. To this effect, the programme has been contributing to the development of indicator tracking table (ITT) and recording them in line with the programme's result chain. M&E focal persons are paying careful attention to record data as per the ITT capture the results of programmes in the past reporting year with support and methodological backstopping from NPMU. In addition, have contributed in ensuring the cross cutting issues of gender and nutrition are captured within the M&E framework and has also contributed to the learning process as well. In 2017, tools and guides for M&E were refined and also were communicated to the regional clusters to amend and harmonize their system accordingly and therefore, the M & E data for 2017 was collected in a similar manner.

In collaboration with BENEFIT PCU, CASCAPE organized a national M&E ToT based on the training needs assessment conducted in 2016. The objective of the training aimed at enhancing the knowledge and skills of trainees in selected M&E topics to enable them handle the M&E tasks in the BENEFIT-CASCAPE context and with better understanding. Participated in the M&E training were CASCAPE M&E focal persons, LIFT AAU staff as well as some representative of PCU and BENEFIT partner programmes. A M&E training guideline was prepared for use in the cascaded trainings with woreda SMSs, experts and DAs. The same training has been cascaded to SMS and experts at Woreda level in different clusters within the same planning year.

Important lesson learned in 2017 was that M&E data are much broader than what is required for the annual report. Hence M&E data collection and reporting has to be encouraged on regular basis per cluster and then synthesized at national level. This is important to make sense of the M&E data, analyse, and visualize change beyond numbers at household level. To this effect, the follow up assessment of best practices uptake by the extension system and its challenges and areas for improvement was studied and results were communicated to the regional clusters as well as government bodies.

Collaboration

Collaboration with BENEFIT programmes

Within BENEFIT CASCAPE is collaborating with ISSD, SBN and ENTAG product place-based synergistic activities. Some of these include CASCAPE-ISSD and SBN collaboration on Sesame production in Humera and metama; CASCAPE-ISSD collaboration on enhancing malt barley and potato value chains in Farta woreda; CASCAPE-ISSD-ENTAG collaboration on soya bean and chick pea in Bedelle (Jimma) and Becho (Addis Ababa); CASCAPE-ISSD collaboration on malt barley and faba bean value chains in Malga and Enamore woredas (Hawassa). Regional annual planning meetings among BENEFIT partners were organized in Bahir Dar for Mekelle and Bahir Dar clusters and in Hawassa for Oromiya and SNNPR clusters to agree on budget, leadership and division of roles and responsibilities in the product place based collaboration. Whereas CASCAPE is responsible to test and screen suitable high yielding and disease resistant varieties on the selected priority crops, ISSD works on seed system development and ENTAG takes the responsibility for market linkage (mainly on soya bean and chick pea so far). The CASCAPE-ISSD-SBN collaboration on sesame agronomy (integrated soil fertility management, rotational crops, etc), participatory variety screening etc., has attracted the attention of high officials at regional and national levels. For example, the minister of MoANR and head of agriculture standing committee of the parliament attended field days in Humera and were very much impressed by the achievements. The reports on the achievements, challenges and lessons learned on the BENEFIT synergistic activities per cluster are separately presented.

Collaboration with other projects and partners

CASCAPE is a collaborative programme by its nature and design. At higher level, Wageningen university with five Ethiopian universities (Mekelle, Bahir Dar, Hawassa, Addis Ababa and Jimma). National and regional structures are in place in order to ensure alignment and coordination of programme implementation among stakeholders. These include national and regional technical committees, senior institutional advisors, working groups, and tripartite agreements. Each university cluster in turn collaborates with BoANR, RARI and regional AGP and MoUs exist for annual programme implementation. Two-three part-time experts from regional stakeholder institutions work on the programme along with the full-time staff housed under the university clusters. Cluster managers serve as secretaries for the regional AGP technical committee meetings where annual plans, progress and results of the programme discussed. Closer collaboration at woreda level takes the form of CASCAPE focal persons assigned from each intervention woreda (high intensity) while woreda AGP focal persons and experts work on the programme as collaborators. Regional senior institutional advisors are drawn from hosting university (president or vice president for research), Director General of RARI or delegate and head of extension directorate of BoANR, are responsible for oversight of the programme implementation as per the tri-partite agreement. At national level the programme collaborates with AGP-FCU, extension directorate and EIAR. The programme manager is a regular member of the AGP - TC at national level where alignment and collaboration issues are discussed. In addition, the programme launched senior institutional advisory committee supports the alignment with AGP and extension and uptake and implementation of the programme results. The committee is composed of the heads of Director General of EIAR, head of AGP-FCU and Director General of MoANR extension directorate that meets on quarterly basis. On thematic issues such as soil fertility (blend fertilizer recommendation), soil characterisation, mapping, and be the programme collaborates with institutions such as ATA and soil resource information and soil fertility directorate of MoA.

The collaboration with the capacity development support facility (CDSF) is based on the bilateral MoU signed between CDI and AGR-Team – a Canadian based consultancy firm. In 2017, CASCAPE-CDSF collaboration enabled the preparation of simplified extension training materials on two of the many CASCAPE validated best practices. The simplified extension training materials are prepared in local languages for papaya in Tigray (Trigna) and food barley in Amhara (Amarigna) while materials on malt barley in Amharic in SNNPR and bread wheat (Hidasse variety) in Afan Oromo with Hawassa and Addis Ababa University clusters. In addition, for each of these best-fit practices, technical manual and facilitators guide is being prepared in English and Afan oromo for use by the regional, zonal and woreda SMS and experts and kebele level DAs. More importantly, simplified pictorial posters and laminated charts are being prepared for farmers in the scaling woredas. For papaya and food barley in Amhara all these materials are pretested by stakeholders and farmers in regional validation workshops; they are now at printing and dissemination stage. In all regions, these materials are prepared with CASCAPE's regional capacity development experts chairing the technical working groups with backstopping from the senior capacity development expert from NPMU.

Collaboration with [Dutch] private sector

Hawassa University has entered into a collaborative agreement with Asella malt factory to support malt barley growing cooperatives established by CASCAPE and by the grain from them at premium price and cooperatives on malt barley marketing. The Assela malt factory is a member of the malt thematic platform along with BoANR, SARI, SSE, ISSD, head of WoANR, regional cooperative agency. As shown in the story of change report, farmers' livelihoods are being changed as result of this collaboration.

Mainstreaming social inclusion & nutrition

BENEFIT-CASCAPE is striving to create enabling environment in ensuring balancing male and female representation in all its activities and help the government bodies mainstream through the system by hosting forums and also sharing lessons in various national and regions workshops, meetings and working groups. At national level, a gender thematic discussion workshop of the Ethiopian Network for Gender Equality in Agriculture (ENGEA), as part of the networks series, was hosted. This forum is devised to raise awareness on gender in agriculture issues. On the same event, the programme approach in gender mainstreaming, challenges and gender analysis result was presented and discussed. Among which female friendly technologies with specific to Hawassa cluster was discussed in detail. The forum helped to take the labour saving technologies to the next discussion in making a better registration, standardization and approval policy by the relevant bodies and help in forming a group that take those technologies forward. As a result, list of labour saving technologies was gathered from the research centre of Melkasa and two more forums and discussion platforms were organized by ATA to better refine the labour saving technologies appropriateness and availability in Ethiopia.

In addition at cluster level, AAU organized a 'Gender in Agriculture' training to help Woredas address gender in their plans, activity implementation and decision making. Furthermore, all clusters are part of the BENEFIT gender and nutrition working group and are working towards collaborative efforts in mainstreaming both resulting in a collaborative work of gender analysis study which is underway with ISSD Oromia. Besides, the programme is also active in sharing knowledge and experience in nutrition by being part of the EU facilitated agri -to-nutrition community platform.

Conclusions and recommendations

Structural arrangements and agreements are in place to ensure alignment and institutional collaboration at national and regional levels. However, incorporation of the validated best-fit practices into the extension package still requires continued engagement with the extension directorate of MoANR. For this reason, plans are under way to recruit and place a senior agricultural extension expert at the extension directorate in order to strengthen programme linkage particularly when it comes to formulation of the framework extension packages. We are also initiating the placement of soil resource information expert at the soil directorate of MoANR to ensure the legacy soil profile and analytical data will be used to promote optimum site and soil specific blend fertilizer recommendations. Bringing commodity value chain actors in a collaborative agreement such as the case of malt barley platform in Hawassa is important to bring the intended change and impact; other clusters and national themes need to emulate this experience. Simplified extension training manuals, technical and facilitator guides are being prepared by CASCAPE and CDSF but cascading these activities by AGP is yet to be seen and seems a challenge.



Appendix 5 ENTAG Annual report 2017

Executive Summary

Introduction

The Ethiopia- Netherlands Trade for Agricultural Growth (ENTAG) Program has been supporting agribusinesses & entrepreneurs operating in Ethiopia. At impact level, ENTAG aims for improved sustainable food, income, and trade among rural households in Ethiopia. ENTAG Ethiopia's goal is: To increase agribusiness productivity, trade and foreign direct investment by strengthening the private sector in working more effectively with smallholders in applying new technologies and accessing finance for investment purposes. The ToC of the Program is based on the following three primary outcomes:

1. Increased demand for and use of ENTAG's market information services, and provision of hands on support to both domestic and foreign entrepreneurs/investors in selected sub-sectors;
2. Enhanced performance of selected sub-sectors; raise the volume and value of trade in domestic and high-value international markets;
3. Attracted and engaged companies to pursue more inclusive and sustainable value chain development

ENTAG has chosen few priority sectors for its intervention. These sectors are Aquaculture, Legumes, Poultry, Spices, Sesame, Dairy and Potato. The main components of Program activities namely are: Front Office & hands on technical support; Inclusive Business Models; Subsector platforms; Agribusiness Innovation Fund; Support of Private Sector Associations (PSA) and B2B linkage & Match making.

Major achievements

- Approximately, 300 business linkages were created between Ethiopian agri-business companies and international companies (to a large part to Indian companies during the spices-mission and to international poultry companies during the VIV's in Thailand and Rwanda);
- More than 200 private farms, entrepreneurs, associations and NGOs were given sector based information on production and productivity of sustainable agribusiness;
- 55 Ethiopian companies and 4 government agencies participated in 4 trade missions organized and coordinated by ENTAG;
- 30 B2B linkages between Dutch and Ethiopian Companies;
- Several hundreds of business linkages were created among Ethiopian companies;
- ENTAG lobbied (variety of activities) to solve the problems facing the Ethiopian Poultry, Spices, Aquaculture and Legumes sectors. Some of the critical issues in these sectors have been brought to the attention of respective government agencies and other relevant stakeholders by ENTAG. As a result of this effort,
 - poultry policy
 - spices market regulations and
 - establishment of pulses council are under way;
- The program has advised the Amhara Regional Government on the highest level on its investment support policies and activities.
- 15 ENTAG platform meetings discussed topics on urgent issues in its four main value chains. Participants have indicated sound commitment to take those issues up with respective bodies;
- ENTAG market linkage contributed 22.6% of the total turmeric export earning of the country per year;
- 14 Production, processing and market focused innovative projects, have been financed through the Innovation Fund component of ENTAG. The average matching fund per these projects is around €23,305.

Major challenges, opportunities, lessons learned and way forward

Challenges

- ENTAG's intervention is oriented towards buyers and processors, which makes it difficult for the program to generate impact data on production and productivity at small holders level;
- Motivate the right government officials to participate at sectoral business platform
- Slow reaction from government bodies in taking up points raised and delegated at platform meetings;
- Mismatch of demand and supply trade and marketing. For example, soya bean supplies during the Soya Bean Trading Platforms by the Unions and Cooperatives, and also by Commercial Farms have been low compared to the demand of big buyers like FAFFA, Alema Koudijs Feed, etc.;
- Slow progress of some of the associations to take up lobbying activities and recommendations that come out during the ENTAG platform meetings;
- In general, some of the associations have been slow to truly take off as valuable and sustainable associations providing needed services for their members;
- Volatile security issue throughout the country hinder implementation of planned activities as per schedule, and erode the confidence of foreign investors to communicate, collaborate and work with Ethiopian counterparts.

Lessons and Opportunities

- It is vital to invite concerned government bodies to ENTAG platforms as it increases take-up of action points by the government;
- Increased government commitment and support is required to promote agribusiness sector in Ethiopia;
- High interest and motivation of most relevant government offices is needed to consider suggested solutions to solve sector problems;
- South-South missions maybe have more impact than mission from Netherlands to Ethiopia or vice versa; mostly for Ethiopian private sector development, but indirectly even for Dutch private sector interests. The Ethiopia – South-India mission is a clear example of this.

As the way forward ENTAG plans to

- Follow up on and support the pending policy reforms to improve the performance of priority sectors in terms of improved quality and quantity of production;
- Continue awareness creation of the private sector and its partners in these sectors on the level of quality demanded by local and international buyers;
- Facilitate efforts on demand and supply profiling to show the gap between the two and to support removing bottlenecks in order to achieve balance between supply and demand;
- Work more on strengthening the Private sector associations, as they can be the agents to sustain activities of ENTAG and therefore are part of ENTAG's exit-strategy.

Quality and quantity of sustainable agricultural production (exec summary)

Target beneficiaries of ENTAG are mostly companies, commercial farmers and farmer unions. However, through its activities the program, indirectly has been working on the quality and quantity of sustainable agriculture. To improve the quality and quantity of agricultural production in four of its priority subsectors, ENTAG has been working on provision of technical assistance, trainings and innovation funds to scale up the financial and technical capacity of private business companies, private sector associations, farmer unions, commercial farmers, government agencies and research centres. These interventions of ENTAG, indirectly improve the quality and quantity of sustainable agriculture at small holder and commercial farmers level. Some of the achievement of the program in this regard are:

1. Platform meetings

The program organized 15 platform meetings that initiated discussion on pertinent challenges and opportunities in relation to improving quality and quantity of agriculture sustainability. These platform meetings also highlighted nutrition and social inclusion issues in the Ethiopian poultry, aquaculture, legumes and spices sectors.

2. Innovation fund

Through its innovation fund component and capacity focused activities, ENTAG has enhanced the production potential of commercial farmers and small holders. In this reporting year, 14 companies operating in Ethiopia won the innovation fund. The total budget approved for this year's innovation fund is around €327.974.

3. Competence development

- Skills and awareness of private companies, commercial farmers and small holders has improved through exposure to new technologies and training programs;
- 1728 turmeric and black pepper producer small holders have been supported to enhance their competencies and capacities of production in this reporting year.

Improved markets and trade (exec summary)

In 2017, the ENTAG program worked on a range of activities on backward to forward market linkage, trade and investment integration among local and foreign agribusiness companies.

Trade missions -The program organized 4 trade missions in poultry, spices and aquaculture to Thailand, Rwanda, India and Egypt. These trade missions brought private companies, farmers unions, government agencies and experts from Ethiopian side as well as buyers, processors, traders, producers and government institutions from the side of visited countries, together, to share experience and create market linkage among participant companies.

Technical support and market profiling for four of the major subsectors -It has been supporting the private sectors in Ethiopia on supply and warehouse management, quality inspection and efficient Agro-logistics. In this reporting year, ENTAG supported more than 120 private companies on access to improved markets and trade through its front desk and hands on advisory services.

Matchmaking - As part of the trade missions and Business to Business (B2B) component, ENTAG has also been working on match making and market integration among Ethiopian and foreign agribusiness companies. In 2017, the program successfully established market linkages for 21 Ethiopian private companies with Indian, Dutch and other foreign companies.

Value chain integration - In addition, the program also established 10 backward integrations among Ethiopian private companies, commercial farmers and small holders. ENTAG has also been working on contract facilitation and trade negotiations among local companies, farmers and foreign buyers and traders.

Sales increase - The annual sales turnover of four spices companies has increased by USD 1.27 million USD from ENTAG support to the companies resulting in 1,231 MT of turmeric production and export.

Innovation fund - The program also financed 14 innovative projects, among them the 13 projects are going to work on marketing and trade in agribusiness.

Improved enabling environment (exec summary)

The ENTAG program, through its platform meetings and other high-level engagements, has been serving as a catalyst for some of the national and regional policy reforms and draft of new regulations on Ethiopian poultry, spices and pulses subsectors. ENTAG has provided support to

Develop the national poultry policy - The lack of poultry policy on production, processing and marketing has been identified by many of the stakeholders in the sectoral poultry platform. In this reporting year, national poultry policy, which is expected to address many poultry issues in the country, has been under development by the Ministry of Livestock and Fisheries (MoLF).

Develop spices market regulations - In its spices subsector ENTAG has also managed to advocate and lobby the government to launch spices market regulation. The draft regulation is now under development.

Establish national level research and training institution - ENTAG, through its sectoral platforms, also contributed to the inception of ideas to establish national level research and training

institutions on both poultry and spices sectors. Currently, the institutional set up and strategies are in progress by the relevant government agencies and respective private sector associations.

Launch Ethiopian Pulses Council - The idea of establishing a national pulse council was initiated during legumes sectoral platform meetings. The likely Ethiopian Pulse Council is intended to bridge the existing gap in export barriers, food safety & hygiene and standard & regulations. A task force to push this mission has already been established and activities in relation to launching the council are in progress.

Establish national task force to incorporate soya bean in the national extension package - The establishment of the task force is a result of the last three soya bean business platform meetings and trading events that attracted several producers, processors and supporting service actors. ENTAG, along with other BENEFIT projects and N2Africa and EIAR, has been tasked to bring this to the attention of the Ministry of Agriculture Natural Resources (MoANR) and respective regional bureau heads. ENTAG will backstop the process by monitoring and providing inputs that represent the private sector.

Solving challenges regarding mycotoxin in spices and legumes destined primarily for export but also for domestic market - It has commissioned a study on Aflatoxin and Mycotoxin in legumes and spices products of the country. The study was commissioned late 2017 and is currently under way. The outcomes should provide important input on the solutions to tackle this serious problem at sector level.

Partnership and collaboration (exec summary)

A National Sesame Business Platform was organized on January 21, 2017 in cooperation with the SBN. The key topics addressed were a collection of the main bottlenecks in the sector right now and how the National Sesame Business platform can be organized in the future.

Soy bean Trading Platform meetings were organized in collaboration with ISSD and CASCAPE-Jimma University. The latter two programs facilitated the invitation of the Primary Cooperatives and Unions and some other key stakeholders, while ENTAG was mostly responsible for getting the buyers and the commercial farmers. This collaboration has been very successful, as the direct market linkages between suppliers and buyers without brokers in between were appreciated by all participants of the meetings.

CASCAPE and ENTAG worked together on a joint publication on Contract Farming, which was published in April 2017.

Market research for premium onions - In cooperation with ISSD and on behalf of the Dutch-Ethiopian cooperation between Enza Zaden, a Dutch hybrid seed company, and GAWT International, an Ethiopian input supplier for the horticulture sector, SYS conducted an ENTAG-financed market research in Addis Ababa and Djibouti for premium onions. These onions are being produced in demonstration sites throughout Ethiopia, notably around Debre Zeit, Upper Awash, Dire Dawa and Haramaya. Market research was done around Addis on premium markets and two supermarkets in Djibouti. The key findings were presented to the onion-producing farmers at their location and the report was developed.

Clients and staff of the BENEFIT partner programs participated in various ENTAG activities, notably in the Business Plan Development Trainings, Business Platforms and Innovation Fund. Several also made use of the ENTAG Front Desk Service.

Quality and quantity of sustainable agricultural production

The ENTAG program has limited interventions on production and productivity of small holders. In ENTAG, we mainly work on private sector, commercial farmers and farmer unions, to develop market linkage and trade of these actors in Ethiopia, and hence most of our outcomes towards quality and quantity of production are indirect. As a result, the program has no major outcome statements on this pillar. However, some of our activities contributed to production and productivity of small holders and commercial farmers indirectly. The section below states some of these activities that ENTAG contributed to this pillar.

ENTAG organized several platform meetings where by discussions and research findings were presented to inform sector actors including ministries and other relevant government bodies. Accordingly, the Ministry of Livestock and Fishery (MoLF), poultry directorate, has been working on developing a national poultry disease surveillance program which would highly increase the quality of poultry production.

ENTAG also provided farming training to representatives of 270 women smallholder farmers producing spices in an IBM pilot project to increase the quality as well as quantity of spices they produce.

ENTAG introduced a high standard poultry slaughterhouse for increased quality poultry meat.

ENTAG organized experience sharing visits to high standard farms, within and outside Ethiopia, to demonstrate the management of these companies towards high quality and production in spice and poultry. Private companies from poultry (34), spices (16) and aquaculture (9), have taken part in missions where they gained experience in high production standards being implemented by companies in other countries.

ENTAG presented the business opportunity and simple and cheap technology for black paper production in a forum which helped companies increase production of the spice.

The technical support provided by sector coordinators of ENTAG improved the quality of production by target private companies and commercial farmers.

Mainstreaming social inclusion and nutrition

ENTAG's support to national legume processors and buyers through direct market linkage with suppliers (Unions, Primary Cooperatives, Commercial Farms), notably through the Soya bean Trading Platforms, facilitates a business of commercially nutritious products on one hand. On the other hand, ENTAG indirectly supports small-holder farmers producing soya bean and other legumes by providing them with direct market and potentially a better price. Especially when further scaled up, this will help both small-holder farmers (through enhanced incomes) as well as consumers (through purchase of nutritious products of the domestic food processors) on increased social inclusion and nutrition mainstreaming through their businesses. In addition to this the market linkage created will verify the existence of a promising market for Soya to the smallholders and commercial farmers which would motivate them to increase production of the crop. The actual impact on increased production is a result to be assessed in the coming year.

The fifth aquaculture platform meeting and other sectoral meetings were organized to specifically address the issue of nutrition in this subsector, where participants from various institutions participated in the meeting and discussed the high nutritional benefits of fish and the need to promote its consumption within the community. This brought in the outcome of higher awareness created on nutritional benefit of aquaculture towards increasing nutrition of the community hence promoting higher and quality production.

Conclusions and recommendations

Achievements

- More than 120 NGOs, private farms, entrepreneurs and associations were given sector based information on production and productivity of sustainable agribusiness;
- 15 platform meetings were organized to bring light to challenges and opportunities in poultry, spices, aquaculture and legumes subsectors production and productivity;
- 3 soya bean trading platforms were organized in collaboration with ISSD and CASCAPE-Jimma University to create network between soya producers and processors which also served as a B2B linkage;
- 4 trade missions were organized to Thailand, Rwanda, Egypt and India with a total of 59 private farms, entrepreneurs and associations drawn from the spices, poultry and aquaculture sectors. The missions helped the actors of these sectors to access new and latest technologies that would improve the quality and quantity of production in their respective subsectors;
- 1 farmers union and 10 commercial farms improved the quality of their turmeric production through the support of ENTAG;
- Black pepper production and the number of companies involved in the spices sector are also increased thanks to ENTAG's support;
- The knowledge and skills, on production and productivity, of business owners/managers, farmer unions, extension workers and research centres have improved through exposure to new technologies, on farm trainings and experience sharing platforms;
- More than 500 farmers training manuals on turmeric and ginger postharvest handling, posters and leaflets were distributed for extension workers, traders and unions.

Challenges, opportunities and lessons learnt

- ENTAG's intervention is limited to buyers and processors, that makes it difficult for the program to generate data on the impact it has regarding production and productivity on smallholder farm level;
- Slow reaction from government bodies in taking up points raised and delegated at platform meetings;
- Soya bean supplies during the Soya bean Trading Platforms by the Unions and Cooperatives, and also by Commercial Farms, have been low compared to the demand of big buyers like FAFFA, Alema Koudijs Feed, etc. This is partly associated with the poor quality product supply;
- It is vital to invite concerned government bodies to ENTAG platform meetings as it increases up-take of action points by these relevant bodies.

Way forward

ENTAG plans to follow up on the pending policy reforms to improve the priority sectors performance in terms of improved quality and quantity of production. The project will also continue awareness creation of the private sector and its partners in these sectors on the level of quality demanded by local and international buyers. It will also facilitate efforts on demand and supply profiling to show the gap between the two and shed light to value chain actors where they should improve the performance of their operations.

Improved markets and trade

In ENTAG we target the following outcomes for contributing to improved markets and trade:

- 1: Increased demand for and use of ENTAG's market information services, and provision of hands on support to both domestic and foreign entrepreneurs/investors in selected sub-sectors;
- 1.1: Agribusinesses operating in Ethiopia are solving bottlenecks in selected subsectors
- 1.2: Individual company performance is improved
- 2: Enhanced performance of selected sub-sectors; raise the volume and value of trade in domestic and high-value international markets;
- 2.1: Selected subsectors have an operating stakeholders' network
- 3: Attracted and engaged companies to pursue more inclusive and sustainable value chain development
- 3.1: More companies are engaged in inclusive business models resulting in sustainable value chains (increased uptake)

Increased demand for and use of ENTAG's market information services, and provision of hands on support to both domestic and foreign entrepreneurs/investors in selected sub-sectors

Technical Support and Trainings

In this reporting year, ENTAG supported more than 120 private companies in four of its subsectors on sector specific technical expertise and provision of market and investment information. The technical supports that were provided to these private companies were mainly related to quality, supply and warehouse management of products to enhance the competitiveness of the companies in their backward and forward business linkages. On farm technical trainings have been given in the poultry and spices subsectors of the program to commercial farmers and small holders. The trainings were aimed at forward and backward market integration of companies through improving the quality and quantity of production.

As a result of these technical supports, the backward and forward integration of producers, suppliers, traders and processors has increased in the four priority value chains of the program. Commercial farmers and small holders have improved their production and post-harvest handling. The awareness of traders and suppliers has improved regarding local and international standards and requirements in supplying products. Private Ethiopian companies and commercial farmers are now aware of issues hindering their international trade competitiveness from growing despite the potential of the country. The export market of spices sector in particular has improved greatly because of ENTAG's support.

Dutch, Indian, Swiss, German and Ethiopian companies received, through the front desk advisory service of the program, latest information about market trends and investment opportunities in Ethiopia in the subsectors of ENTAG. The support provided improved the capacity of the target companies in their operations as well as helped them establish market linkages.

Market profiling and Business Opportunity Reports

The ENTAG business opportunity report is intended to highlight some of the most promising business opportunities in its focus subsectors ranging from input to processing and marketing. ENTAG, in this reporting year, produced one market profile and one business opportunity report in the legumes subsector. The market profiling addressed 4 important end-markets in soya bean-edible oil processing, nutritious food processing, export and animal feed which is expected to promote the soya bean sector. The report will be co-published together with ISSD and CASCAPE-Jimma University once the production profiling component has been finalized.

The program also worked on company profiles in its four subsectors (15 each). 60 company profiles are now under review for publishing. The profiles will provide information about who is doing what in four of the main subsectors of ENTAG.

Enhanced performance of selected sub-sectors; raise the volume and value of trade in domestic and high-value international markets

Trade missions, B2B and Match making

ENTAG, in 2017, organized 4 trade missions on poultry, spices and aquaculture to Indonesia, Rwanda, India and Egypt. In its poultry sector, the program organized 2 trade missions to Indonesia and Rwanda; 1 to India in its spices sector and 1 to Egypt in its aquaculture sector. These trade missions brought private companies, farmers unions, government agencies and experts from Ethiopia as well as buyers, processors, traders, producers and government institutions from the visited countries together to share experiences and create market linkages among participant actors.

As part of the trade missions, ENTAG has also been working on match making and market integration (B2B linkage) among Ethiopian and foreign agribusiness companies. In 2017, the program successfully established market linkages for 21 Ethiopian private companies with companies in India, Netherlands and other countries. In addition, the program also established 10 backward integrations among Ethiopian private companies, commercial farmers and small holders.

ENTAG has also been working on contract facilitation and trade negotiations among local companies, farmers and foreign buyers and traders. As a result, the annual turnover of 4 spices companies increased by 1.27 million USD due to increase of turmeric production to 1231 MT.

Innovation fund and Support to Sectoral Associations

A total of € 327,975 was approved and disbursed as grant to 14 Ethiopian based projects by ENTAG in 2017. The maximum grant was € 25,000 per project, which is a matching fund for a one year innovative project on agribusiness. All of them, except for one, which is involved in technology transfer to small holders, are working on marketing in addition to production and processing. Accordingly, the program through its innovation fund, is supporting private agribusiness companies, commercial farmers and small holders in their local and international market competitiveness, which eventually adds value to Ethiopian agribusiness and commercialization.

Sector platform meetings and International conferences

ENTAG has also organized 15 national sectoral platforms that were focused, among many others issues, on the challenges and opportunities of market and trade in four of the focus subsectors of the program. The platform meetings initiated discussions on challenges that the export and local market are facing as well as production of spices, aquaculture, legumes and poultry subsectors. The meetings served as channels for private sector associations and companies to discuss their trade and finance issues with the relevant governed agencies such as the MoLF, customs authority, coffee, tea and spices agency and Ministry of Trade. Market challenges in relation to mycotoxin and other fungi problems on spices and legumes products as well as lack of market information and linkage were identified as critical challenges of the export market. ENTAG created, through the platforms, the venue for actors to also discuss possible solutions and strategies for these markets, investment, finance and trade problems. Adoption of the Pulses National Council, spices market regulation and poultry policy at national level are some of the results of the different platform meetings supported by ENTAG.

Support to Private Sectoral Associations

The program also supported private sector associations by provision of trainings on trade negotiations and marketing as well as B2Bs and trade mission linkages to their members, who are private companies, commercial farmers and small holders.

Attracted and engaged companies to pursue more inclusive and sustainable value chain development

This component of the ENTAG program focuses on developing inclusive and sustainable business models which entails the incorporation of out-growers scheme and contract farming which supports smallholder farmers to develop and the sector at large. Under the Inclusive Business Model, ENTAG has been providing support to businesses by strengthening the value chain from the smallholders training to market linkage.

In 2017, two Inclusive Business Model contract has been signed, namely with Damascene Essential Oils and Africa Sustainable Aquaculture. Through its out grower scheme, both companies are engaged in activities that aim to increase income of targeted local communities through identification and development of herb and tilapia products respectively. The general objective of the projects is to establish effective ways and systems in order to enhance production, processing, marketing and utilization technologies for herbs and tilapia through capacity development of outgrowing farmers and promotion of agro-based industrialization to improve the livelihood of the local communities and then to maximize the return on investment. This should consequently lead to an increased supply of products and help local community members enhance their production.

Damascene has been involved in farmer mobilization, identification of high potential Kebeles for the cultivation and semi-processing of spices and herbs in Kafa Zone and the consequent training schemes of the herb growers in these Kebeles. Furthermore, the company facilitated the establishment of farmers' cooperatives in Decha and Gimbo Woredas of Kafa Zone and enabled the legalization of five cooperatives in five Kebeles involving a total of 271 women farmers. In addition, Damascene will provide technical support to the cooperatives to safeguard the quality of spices and herbs and to ensure existence of financially and organizationally viable farmers' cooperatives.

Apart from the Inclusive Business Models (IBM) with the above two companies, a total of 20 companies and two farmer unions have made a contact with ENTAG to be involved in inclusive business model support of the program. Appraisal and demand assessment of these 20 private companies and two farmer unions has been done. Some experiences exchange meetings were also held with Agricultural Transformation Agency (ATA) on contract farming and out-grower schemes. The companies and the unions are drawn from the spices (17), herbs (1) and aromatic (4) subsectors. A book on some case studies of contract farming and out-grower scheme was also published with support of ENTAG in collaboration with Agri-Pro focus, and the softcopy of the book has been disseminated to stakeholders in the spice, herbs and aromatic sector.

Mainstreaming social inclusion and nutrition

Most of the activities of the ENTAG program involved women and youth who are owners of private companies, commercial farmers and small holders. Thus, in most of the activities described above, directly or indirectly, youth and women have been involved in a significant proportion. In the innovation fund component of the project, among the total 274 new employments created, the portion of new employees younger than 35 years old is 58% and 38% of those employed are women. This would increase the experience of women and youth in the production and marketing of the priority sectors products.

Conclusions and recommendations

Achievements

- The annual sales turnover of 4 companies increased by \$1.27 million USD and they were able to export a total of 1231 MT of turmeric;
- ENTAG market linkage contributed 22.6 % of the total annual turmeric export earnings of Ethiopia;
- Income of 6 local turmeric traders, 2 commercial farmers and 1728 turmeric producing smallholder farmers (through their unions) was increased by selling a total of 1283.93MT(77MT is bulb) of turmeric, which is worth ETB 25,071,403;
- Rapeseed, as a substitute of soya bean for poultry feed market, was introduced and the pilot is to continue to the next reporting year;
- 13 market focused innovative projects were financed through the innovation fund component of ENTAG. The average matching fund per these projects was around € 23,305.

Challenges, opportunities and lessons learnt

- Communication and negotiation skills of some of the suppliers seem to be limited, hampering direct supply from them to the buyers. Collaboration with other programs could be explored to work on this issue;
- Slow reaction from government bodies in taking up points raised and at platform meetings by the multi-stakeholders attendants;
- Mismatch of demand and supply of trade and marketing;
- Slow progress of some of the associations to take up market linkage activities.

Way forward

- ENTAG should when possible diversify its trade and investment support to the agribusiness sector in Ethiopia, supporting more and different companies;
- Platform meetings and trade missions should be strengthened and more work should be done to build upon the business relationship among Ethiopian and Dutch companies as well as companies from other countries;
- More intervention is needed in awareness creation, extension (mobilization), skill development and financing of the private sector, small holder farmers and professionals;
- Government commitment and support is required to promote agribusiness sector in the focus subsectors of the program hence, ENTAG should ensure its participation in subsector platform meetings to take up tasks like implementation of market regulation;
- Strengthening the Private sector associations is essential as they are going to be agents to sustain activities of ENTAG in market linkage;
- There is a clear need for continuing provision of technical support and sector based information to new and existing businesses to bridge the gap between demand and supply.

Improved enabling environment

In ENTAG we target the following outcome for contributing to improved enabling environment in our priority sectors:

- 3.1 Strategies to solve selected sector-wide issues are developed and implemented

Strategies to solve selected sector-wide issues are developed and implemented

ENTAG has been working on improved enabling environment by convening the venue for sectoral actors to come together and discuss the challenges of each priority sector and to propose solutions to be taken up by responsible government bodies. Accordingly, three of the poultry platform meetings, in 2017, pointed out the lack of strong legal framework on poultry production, processing or marketing as a critical bottleneck of the subsector. As a follow-up to this, the MoLF drafted a poultry policy, which is currently under review for validation. The likely policy is believed to solve multi-faceted problems of the subsector in relation to regulatory, legal and institutional deficiencies.

The ENTAG program, along with the poultry association, created awareness on the high supervision needed on imported chicken meat, and pushed for a quarantine system to be put in place and to be included in the policy. Initiations made in the platform meetings led to the start of a national poultry disease control strategic plan by MoLF, where ENTAG is currently supporting the ministry in developing the document.

ENTAG provided advisory support to Amhara National Regional State (ANRS) and the aquaculture sector bureaus of the region to smoothen procedures followed in aquaculture investment, research and provision of support.

Due to the advocacy and lobby work that ENTAG did during platform meetings, trainings, trade mission and use of mass media, the first spice market regulation is being drafted by the relevant government agency as well as the idea of setting up the first coffee and spice research institute already received attention by the government.

In 2017, the legume platform participants raised the export challenge of trade ban by Pakistan due to fungal infestation and trade barrier from India. These countries are importing 65% of Ethiopian legume. Hence, a legumes task-force team was elected and concept paper was submitted to the Ministry of Trade, and is now under follow-up.

Hands-on support was provided to Amhara Investment Commission in the re-organization of their investment office with the request from the regional commissioner. Four offices in Addis Ababa, Arerti, Debrebirehan and Kombolcha are to be opened so that the commission can provide services to investors much faster.

A national task force was established to have a high level meeting with H.E. Minister of Agriculture to incorporate soya bean in the national extension package. The Bureau of Agriculture does not have a consistent extension package and planning for soya bean, which may have contributed to the erratic production of the crop.

A Pulses Council was established to address issues such as export barrier, food safety and hygiene, standards and regulations. A task force of four active companies were assigned to push for the Pulse Council. A first meeting with H.E. MoT was held and concept note was shared. The results of the discussions are currently under review.

Mainstreaming social inclusion and nutrition

ENTAG's business platforms in general and the Soya bean trading platform in particular are intended to facilitate access to smallholder production. During two of the Soya bean trading platforms over 40,000 Mt of product was demanded. Farmer organizations were linked with processors for potential trading; among the members of these organizations, the majority were women and young farmers. As well as, in the legume business opportunity report that ENTAG is going to publish, potential businesses suitable for women and youth have been highlighted.

Conclusions and recommendations

Achievements

- Government started to draft the first spice market regulation and set up the first coffee and spice research institute;
- The spice, herbs and aromatic sector is incorporated in the loan policy of private and government banks through the technical assistance given by ENTAG to the spice association;
- Poultry directorate is developing a poultry policy structuring production, processing and marketing along with regulations on import of poultry products;
- The national poultry disease control strategic plan development is under consideration by MoLF based on the initiation of ENTAG on platform meetings;
- Concrete recommendations were given to the Amhara Regional Government to improve the business climate, especially on new agricultural investments and they have been taken up;
- The formation and organization of national Pulses Council has already received critical attention by private exporters and the ministry of trade. The process is under way.

Challenges, opportunities and lessons learnt

- Volatile security issue throughout the country hinder implementation of planned activities as per schedule, and erode the confidence of foreign investors to communicate, collaborate and work with Ethiopian counterparts;
- High interest and motivation of most relevant government offices to consider suggested solutions to solve sector problems;
- The lesson learnt on this aspect is the fact that there is a lack of well-defined and structured enabling environment for investment and private businesses operating in the four ENTAG priority sectors. But the relevant bodies are increasingly becoming keen to address issues that have been raised by the private sector.

Way forward

These policy and strategies under development need further regulations and standards to address specific issues of the sectors-poultry, spices and legumes. As a way forward, ENTAG will follow up on the ratification of the draft policy and strategies, as well as their corresponding specific implementation regulations and standards. This will be done by strengthening its platforms that will aware relevant government bodies further more on specific challenges within the sectors and giving support on how detailed implementation plans can be developed.

Collaboration

M&E and communication

It is only since July 2017 that ENTAG has been working on M&E and Communications in a full force. Since the second half year of 2017, ENTAG produced many communication materials to enhance its visibility and communicate its impact to its stakeholders and partners including the EKN. The program produced four quarterly newsletters and videos of case studies & innovation fund winners. It has also prepared three especial issues on the poultry as well as the aquaculture subsector and on the innovation fund.

Regarding M&E, the baseline for 14 innovation fund winners has been conducted. The baseline was one of the requirement for the release of first round of the innovation fund as it facilitates future follow ups and monitoring of the grantees. ENTAG, as part of BENEFIT, also has taken part in the regional monitoring of the collaborative activities.

The program has also been working on profiles of its target private companies. In 2017 the design and data entry of 15 profiles is completed in each of the four priority subsectors. The program website is now integrated with functional Youtube channel, Flickr page and social media pages, which has received around 102,426 views in 2017. The website of ENTAG has also served as a source for some news and updates on the BENEFIT website. In 2017, ENTAG co-organized the bi-monthly business drinks together with AgriProFocus and communicated its impacts and brand through invited winners of the innovation fund and its own team members. These business drinks also helped facilitate business linkages.

In relation to public relation activities, ENTAG has been working with the national print and broadcasting media to enhance the visibility of its brand, the BENEFIT office and the general development assistance of the EKN in Ethiopia. The national broadcasting and print media covered most of the sectoral platform meetings. The state media also produced news and special coverages on the activities of ENTAG in relation to aflatoxin in the spices subsector. A feature article on Capital and Daily Monitor newspapers was published about ENTAG's innovation fund component and its first round winners.

Collaboration

Collaboration with BENEFIT programmes

A National Sesame Business Platform was organized on January 21st 2017 in cooperation with the SBN. The key topics addressed were a collection of the main bottlenecks in the sector right now and how the National Sesame Business platform can be organized in the future.

Soya bean Trading Platforms were organized in strong collaboration with ISSD and CASCAPE-Jimma University. The latter two programs facilitated the invitation of the Primary Cooperatives, Unions and some other key stakeholders, while ENTAG was mostly responsible for getting the buyers and the commercial farmers. This collaboration has been very successful, as the direct market linkages between suppliers and buyers without brokers in between were appreciated by all participants of the meetings. Production and market profiling for the community is under progress.

In cooperation with ISSD and on behalf of the Dutch-Ethiopian cooperation between Enza Zaden, a Dutch hybrid seed company, and GAWT International, an Ethiopian input supplier for the horticulture sector, ENTAG conducted a market research in Addis Ababa and Djibouti for premium onions. These onions are being produced in demonstration sites throughout Ethiopia, notably around Debre Zeit, Upper Awash, Dire Dawa and Haramaya. Market research was done on premium markets in Addis and supermarkets in Djibouti. The key findings were presented to the onion producing farmers and report was developed.

Staff of the BENEFIT partner programs participated in various ENTAG activities, notably in the Business Plan Development Trainings, Business Platforms and Innovation Fund. Several also made use of the ENTAG Front Desk Service. ENTAG also involved actively in product place collaboration meetings and field visits.

ENTAG finished its product and market scan for mung bean, one of the most promising (and actual) export crops from Ethiopia and an important potential rotation crop for the sesame belt in North-West Ethiopia. The mung bean market scan is an activity that came up after various consultations with SBN about the commodity as a rotation crop for sesame and with the ISSD program about the commercial seed supply and access to quality seed, including mung bean.

Collaboration with other projects and partners

ENTAG collaborated with WorldFish Center, in Egypt, in its aquaculture training mission. As well as for its fish feed trial research, the program is collaborating with Debre Birhan University, Ziway Fisheries and Aquatic Life Research Centre, Business France (French Embassy), BioMar (France), and Addis Ababa University;

ENTAG has collaborated with GD Animal Health, Hollan Africa Poultry Partnership (HAPP), Netherlands Africa Business Council (NABC), Advance Consult, Ministry of Livestock and Fisheries (MoLF), Ethiopian Meat and Dairy Industry Development Institute (EMDIDI), National Animal Health Diagnostics and Investigation Centre (NHADIC), National Veterinary Institute (NVI), Veterinary Drugs and Feed Administration and Control Authority (VDFACA), Renew Invest and FAO for poultry sector development, specifically poultry health, vaccination, marketing and general sector challenges;

ENTAG has actively participated in the NICHE-EMBA program between Jimma University and Maastricht. ENTAG's network was used for marketing and selection of advisory committee. Case studies of ENTAG supported companies was also conducted and ENTAG provided backstopping to the program from the perspective of private sector.

ENTAG legumes and spices business platforms have actively been working with ICT-SITA in resolving the potential trade barrier to export destinations. SITA and MoANR have presented a national pulses strategy on ENTAG's legume platform meeting. In addition, SITA was involved in the concept development and discussion with H.E. Minister of trade to resolve the trade barrier to India and Pakistan. UN-ITC-SITA and ENTAG have also been working on aflatoxin issues on turmeric production and export.

ENTAG and N2Africa, together with ISSD and CASCAPE-Jimma University, conducted a joint demonstration of soya bean thresher in Ano-Nekmete during the last soya bean trading platform. The thresher is a response to earlier request of commercial farmers who indicated lack of mechanization is a serious bottleneck to boost soya bean production.

ENTAG has taken part in four major pulse events in Ethiopia: common bean platform-Melkasa, Chickpea Platform-Deberziet, Soya bean Lab-Jimma and EPOSPEA international conference on pulses and oilseeds.

Collaboration with Dutch private sector

Onion market research for Enza Zaden - GAWT - On behalf of the Dutch-Ethiopian cooperation between Enza Zaden, a Dutch hybrid seed company, and GAWT International, an Ethiopian input supplier for the horticulture sector, ENTAG-financed a market research in Addis Ababa and Djibouti for premium onions. These onions are being produced in demonstration sites throughout Ethiopia, notably around Debre Zeit, Upper Awash, Dire Dawa and Haramaya.

Market research was done among the major retailers and markets in Addis Ababa and the major supermarket chains in Djibouti. This led to a 4-pager report describing the features of the market and the opportunity for sales to these major retailers. The market research was validated by farmers in Debre Zeit and Upper Awash areas.

Support of the flying swans project- On behalf of the Dutch Embassy consultants were hired to assess the suitability of different production areas for the production and processing of different high value crops that require cool transport and storage. The final report will be completed in January.

Mainstreaming social inclusion & nutrition

Grazeland Social Impact Assessment - Based on the request of EKN and the Grazeland company, ENTAG financed a social impact assessment for a new investment site in Wolkite area. The report analysed the existing opportunities and risks from a community perspectives in a series of dialogue with the local community members, elders and authorities. It advised Grazeland not to take the land as there are high risks of farmers' displacement. The report was submitted to the company and it has positively contributed towards the decision of the investor. The assessment also served as learning for EKN in advising companies going forward.

Conclusions and recommendations

Achievements

- Soya bean Trading Platforms were organized in strong collaboration with ISSD and CASCAPE-Jimma University;
- ENTAG finished its product and market scan for mung bean, one of the most promising (and actual) export crops from Ethiopia and an important potential rotation crop for the sesame belt in North-West Ethiopia. challenges, opportunities and lessons learnt

Challenges

- The financial support policy of ENTAG and the financial need of government sectors, research and professional associations has limited the extent of collaboration between ENTAG and some subsector stakeholders.

Way forward

To enhance efficiency and avoid duplication of efforts, ENTAG will strengthen its partnership with existing and new partners that work on its priority subsectors. Some of the outcomes that have been achieved so far need further collaborative interventions that consolidates the results and maintain sustainability. To this end, ENTAG will increasingly work on new and existing collaborations within the BENEFIT umbrella as well as other actors from outside.



Appendix 6 Benefit-SBN Annual report 2017

Executive Summary

Introduction

The Benefit-SBN Theory of Change, which is aligned to the three main pillars of the overall BENEFIT result chain, is that the combined effect of three primary programme outcomes induce the overall project goal. The three primary outcomes reflect the project strategy to combine production-push and market-pull value chain development, with strong stakeholder collaboration, both at local and strategic level. This is at the heart of the network approach that Benefit-SBN applies for sesame sector development. The project goal, the three primary outcomes and the 10 intermediary outcomes, of which one is cross-cutting, are summarized in the figure below.

Goal	Competitive, sustainable and inclusive sesame sector development for farmers' income improvement and spill-over effects		
Primary outcomes	1. Production cost price reduction	2. Product and market development	3. Strengthened enabling environment for the Ethiopian sesame sector
Intermediary outcomes	1.1. Yield and quality improvement	2.1. Post-harvest value creation	3.1. Evidence-based information and sharing
	1.2. Harvest, transport and storage loss reduction	2.2. Improved market linkages and sales	3.2. Stakeholder capacity development
	1.3. Improved farmers' access to input credit	2.3 Improved access to marketing credit	3.3. Enhanced stakeholder collaboration
	3.4 Strategic sesame sector innovation		

Major 2017 achievements and review of performance indicators

Sustainable production – production cost price reduction

- On 50% of the cultivated sesame area, 40% of the farmers partially adopt innovative agronomic practices. Full adoption is still limited because of limitation in input credit;
- Farming system is being diversified; rotation crops are expanding and contributing to food and nutrition security, income improvement and ISFM;
- The MRY/MRR plots confirmed that sesame yields can double as compared to targeted 50% increase, leading to >25% lower production costs;
- Recommended practices have high MRR, contributing to farmer income improvement;
- The target of 50% of the farmers improving access to input markets is still far away, but there are promising results for improving access to input finance;
- There is clear evidence that sesame quality can improve through use of improved storage and PH operations. However, quality is not rewarded in the current market context;
- Mungbean, sorghum and sesame can be stored in hermetic bags without weevil infestation for more than 9 months. Adoption analysis for the 4A's is needed;
- 10% of the HH farmers keep financial records and doing cost-benefit analysis;
- Internal on-lending of marketing credit helps financing the last stages of the production season, thereby reducing credit costs from 50 to 15%;
- Doubling value of input credit is far away, but, clearing outstanding loans, making system change at high level and MFIs & farmer capacity development can change the situation.

Product and market development

- In collaboration with Agriterra. four million ETB guarantee fund encouraged CBO to provide 10.67 million ETB loan to 7 cooperatives of 2 Unions;
- The cooperatives increased their presence at spot markets, ensuring that farmers get a decent price, which contributes to the goal of farmer income improvement;
- Through internal on-lending of the marketing credit, 2,995 farmers received input credit, allowing them to cover weeding and harvesting costs;
- Efforts were made to support business development cases, but so far with limited success;
- The target of 50% increase of traded volume of value added products is possible, if there are breakthroughs for cleaning, oil extraction and use of by-products;
- The 8 spot market price information shared, but needs institutionalization for sustainability;
- Sourcing organic sesame by Selet Hulling extended from 2 to 4 cooperatives and provide advisory services to the organic farmers of these cooperatives;
- The production and marketing of malt sorghum for Diageo increased from 700 to 1,900 ton;
- Direct exporting of sesame by farmers /organizations remains under 5% and is thus still far away from the target of 10%;
- Encouraging trends observed in purchasing tractors, row planters and other machines.

Strengthened enabling institutional environment for the Ethiopian sesame sector

- A policy document in rural financing and sesame marketing submitted to PM for policy decision. As decision received the national platform will be organized;
- The developed SBN database will be transferred to woredas in the 1st quarter of 2018;
- Information and experiences were shared via website, newsletters, training sessions, field days, regional and thematic workshops;
- More than 90,800 farmers were reached via trainings and farmer-to-farmer sessions. Of which 23% women and 18% were young farmers;
- 113,600 farmers, experts and officials participated in field days organized at various levels, of which 21% were women;
- Field days served as platforms to meet with high level government officials and discuss on the strategic and practical challenges faced by the sesame subsector;
- 6,843 farmers (14% women) trained in financial literacy and cost recording. This is liked by partners and stakeholders;
- Almost all DAs in kebeles involved in the scaling of GAP both for sesame and rotation crops;
- 1,520 farmers and experts received information on weather and used for farm decision;
- Benefit-SBN facilitated piloting 2 of cooperative management modules for the Ardaita cooperative college;
- For addressing the financing challenge;
 - Farmers record costs properly and this help them to see their farm as a business;
 - cost recording and cash books may become part of the eligibility criteria by MFIs;
 - Trilateral committee (farmers/cooperatives, MFI's, kebele administration and DA) credit approval is expected to increase repayment efficiency.

Challenges

- Low productivity and poor quality in areas with erratic rainfall and pest infestation;
- Inefficiency of the current trading system to encourage value chain operators to collaborate and invest for traceable and quality product development;
- Lack of periodic market system reform and delay in taking measure on strategic issue may result in loss of competitive position of the country in the world market;
- Exporting mediocre sesame in bulk for the purpose of earning hard currency is the major driver of exporters. This leads to inflated domestic market (ECX) prices. In that context, product differentiation and price incentives for quality are hardly possible;
- Insufficient sector financing hamper the adoption of GAP that double yield and limit presence of cooperatives at spot markets reducing farmer income improvement
- The public top-down approaches negatively affect effective uptake of innovations in some cases;
- The security situation in the country is still worrisome, even though there were less troubles in the SBN intervention zone in 2017 than in 2016.

Opportunities

- The high sesame seed demand in the world market, the high ECX prices and the 15% Birr devaluation is expected to encourage investment, loan repayment and boost production;
- Promoting voucher systems for input supply, organizing agricultural service centres, machinery supply and rental services are anticipated to improve production and productivity of crops;
- Willingness of the Ethiopian government to make policy changes to promote marketing of traceable, high quality and branded sesame;
- Establishment of Agro-industrial parks that use agricultural products for in-country value addition may attract foreign investors;
- Increased domestic demand for sorghum and world market demand for mung and soybean;
- Improved stakeholders collaboration in sharing responsibilities, organising workshops and field days and regional platforms;
- Interest of other regions in the SBN approaches for agricultural extension, financial literacy training, stakeholder ownership, information sharing and communication.

Major lessons learned

1. Although the 20 steps approach gets full institutional support at different levels, it is only partially adopted because of insufficient input credit;
 2. Increased collaboration with stakeholders and partners improved the organization of trainings, workshops and field days, reduced costs and improved visibility and impact;
 3. Farmers working together easily apply GAP, learn from each other, joint use of mechanization and uniform seed, planning of rotations, coordinated storage and marketing;
 4. The farmer group approach can be well linked to kebele planning, financial literacy training, mechanisation, cooperative marketing and other subjects;
 5. Kebele level agro-economic planning and effective implementation requires the buy-in and commitment from decision making levels (FIs, BoANR, Unions and coops);
 6. Scaling of financial literacy training requires more intensive collaboration with and commitment from CPO, BoANR, Unions, financial institutions;
 7. Tailored loan management training and farm record keeping practices helped to develop trust between farmer, PC's and unions on the one hand and financial institutions on the other hand;
 8. Row planting induces a process of mechanization, leading to interest for ploughs, cultivators and harvesters, calling for an integrated approach;
 9. Weather forecasting information helped farmers to take the necessary operational decisions during the season and mitigate climate changes;
 10. Contract farming is a possible solution for accessing input finance, allows for buyer-supplier interaction and better guarantees market access;
- The current ECX market system does not encourage the production of quality sesame, nor does it encourage domestic value creation, direct marketing or contract farming.

Way forward – orientations and priorities for 2018

Based on the achievements, lessons learned, expected trends and important new developments, the top ten priorities for 2018 are:

1. Availing marketing credit to cooperatives through guarantee fund;
2. Scaling financial literacy and other trainings to 13 woredas and 162 kebele and other regions;
3. Kebele agro-economic planning and stakeholder owned M&E;
4. Mechanization options and business models;
5. Hands-on support to practical cases of value addition and market linkages;
6. Weather forecasting, climate adaptation and crop modelling;
7. Social inclusion and nutrition;
8. Providing training, extension and communication services;
9. Facilitation of regional and national sesame platforms; and
10. Facilitating strategic sesame sector innovation.

Quality and quantity of sustainable agricultural production (Benefit-SBN)

In collaboration with BoANR, 1,623 experts were trained on GAP, who cascaded the '20 steps' to 92,395 farmers. Recommended practices were scaled on 88,985 smallholder and 29 investor farms. MRY/MRR studies ascertain an average 100% increase and reduction of production costs per quintal

by >25%. Weather forecast information was provided to 1,520 farmers who used it for field activity decisions. Rotation crops were broadly demonstrated. The production of malt sorghum and soybean further boosted. Mung bean is coming up. Increase in area and volume is expected to attract more buyers, leading to income improvement and nutrition diversification. Evaluated PICS bags can minimize weevil damage to sorghum and mung bean and sesame seed bug in sesame, but adoption needs further scaling. Financial literacy training reached >6800 farmers with financial record keeping and do cost-benefit analysis. There are clear signs that this is making farmers more eligible to credit. Internal cooperative on-lending of marketing credit (see 2.1.3) improved farmers' access to affordable input credit, benefiting 2,995 farmers from 7 cooperatives. Farmers' credit costs reduced from more than 50% to 15%.

Improved markets and trade (Benefit-SBN)

Cooperative Bank of Oromia (CBO) provided 10.67 million ETB to 2 unions for marketing credit, which improved cooperative presence in spot markets. Loan management and internal resource mobilization training was provided to cooperatives. High repayment rates and promising saving mobilization are attracting the interest of several banks to provide loans to cooperatives. Successful initiatives for capital generation. Value adding practices face processing inefficiencies, lack of infrastructure and limited market demand to achieve considerable scale and realize profits. For product and market development, the key challenge is the establishment of direct supplier-buyer market relations, which are now largely absent, and the production of sesame-based products for the domestic market. Continuous efforts will focus on improved traceability, market transparency, price information sharing systems and ECX reforms. In collaboration with IFDC/2SCALE, market linkages for rotation crops were facilitated, boosting Deber malt sorghum acreage (670ha) and production (15,636 quintal) and soya bean acreage (364ha) and production (6,620 quintal).

Improved enabling environment (Benefit-SBN)

Relevant statistical, farming and market information has been shared via different communication channels. The 'dream' of having a stakeholder based planning, monitoring and evaluation system is getting closer by the transfer of the Benefit-SBN database to woredas. More than 90,000 farmers (23% women and 18% youth) were trained on improved sesame and rotation crops production, and over 113,000 farmers (21% women) were reached via field days. Meetings, workshops and field days beyond being learning and exposure events, they served as stakeholder platforms to meet with high level government officials and discuss strategic and practical challenges. Innovative action has been taken for supporting bottom-up kebele agro-economic planning, availing market information and cooperative capacity development. National sesame platform will be organized as decision is made on strategic issues by the Prime Minister.

Partnership and collaboration (Benefit-SBN)

BENEFIT collaboration for sesame and rotation crops in NW Ethiopia is improving. Benefit-SBN, ISSD and CASCAPE staff communicate and collaborate better, especially at Tigray side. Unavoidably, the distance of sesame production zones from Mekelle and Bahir-Dar translates in high transaction costs for ISSD and CASCAPE. Considering the opportunities for value creation and market linkages for sesame and pulses, the collaboration with ENTAG is not at the level where it can be. Benefit-SBN collaborates with many other partners, especially Agriterra, IFDC/2SCALE, CommonSense, ATA, Aeres, and F&S. Collaboration with the private sector is expanding and will develop further in 2018. Benefit-SBN collaborates with many public institutions that have official mandates for: agricultural extension (BoANR), agricultural research (ARARI and TARI), cooperative promotion (RCPA), cooperative training (Ardaita), weather forecasting (NMA), financial services (ACSI and DECSI). The financial literacy training and guarantee fund facilitated marketing credit narrowing the gap between financial institutions, especially CBO, and farmers and cooperatives.

Quality and quantity of sustainable agricultural production

Benefit-SBN target the following primary outcome for contributing to increased quality and quantity of sustainable agricultural production: "Farmers applying innovations reduce farm-level production cost price with 25% per quintal (cost-benefit ratio for farmers)"

Three, related intermediate outcomes, each with specific KPI's are expected to contribute to the achievement of the primary outcome: (1.1) Yield and quality improvement (8 indicators); (1.2) Harvest, transport and storage loss reduction (2 indicators) and (1.3) Formal financial services and input credit to farmers (3 indicators).

Sustainable production – production cost price reduction Yield and Quality improvement

Adoption levels

In the 2017 production season, sesame was cultivated on 559,963ha in the SBN intervention 5 zones and 12 woredas, Amhara 6 and Tigray 6. The number of small holder farmers was 210,505 while large scale farmers were 3,083. Improved sesame production package was applied by 88,985 farmers, out of which, 11,688 were full while 77,297 were partial adopters. The area covered by full and partial adopters was 16,816 and 266,135 ha, respectively, 3% and 47% of the cultivated area. The '20 steps' were scaled-out on 29 commercial farmers' fields of 5-20 ha, both in Tigray and Amhara regions, in collaboration with woreda offices of agriculture, ATA, Gondar, Humera and Shire-Mytsebri research centres. Productivity varied from 0.3 to 0.9 t ha⁻¹. A point of attention is the low adoption rate of recommended practices for sesame harvesting and drying (large hillas and plastic sheets). Higher labour demand and relatively low marginal rate of return are most likely the major bottlenecks.

Weather forecasting and climate adaptation

To support farmers in dealing with the unpredictability of weather conditions, Benefit-SBN, in collaboration with CommonSense, Apposit Plc, Weather impact and the National Meteorology Agency of Ethiopia (NMA), have provided localized weather forecast service to farmers. Selected weather information recipients received a text message (SMS) in Amharic and Tigrigna languages twice a week (1,520 recipients in total, 526 in Amhara and 994 in Tigray). The SMS contained the probability of rain in the next three days and prediction on amount; maximum, minimum and average temperature and wind speed specific to the farmers' kebele. The weather information assisted farmers and agricultural professionals to take appropriate measures for field activities and reduce losses.

Marginal rate of yield (MRY) and Marginal Rate of Return (MRR)

The MRY/MRR plots were designed to determine the contributions of different components of the GAP package to yield increase and to assess if the extra costs lead to extra profit, respectively. The goal was to determine the minimum extra yield a farmer should get to cover his additional production cost. Combinations of the three major components, fertilizer application, row planting and thinning, were tested. The plots included treatments with or without fertilizer; row and broadcast sowing; thinned and not thinned plus the full package and the farmer practice making a total of 8 plots for each MRY/MRR plot. The study was conducted in 52 locations (FTCs, research sites and model farmers' fields), 22 in Tigray and 30 in Amhara. Actual farmer costs were recorded throughout the season. Twelve sites were discarded from analysis due to poor establishment, biased field management favouring only the full package and lost plots due to DA turnover. To determine the marginal rate of return for each treatment and their combinations, yield data was adjusted according to CIMMIT, 1988 and calculated using the formula $MRR = (\Delta I)/(\Delta C) \times 100$. Revenue was calculated taking an average farm gate price of 29.6 ETB/kg seed. Results of the adjusted mean yield for 40 sites over two regions is shown in Table 12).

Yield difference were observed between the full package and farmers practice. The full package almost doubled yield, 739 and 387 kg/ha for the full package and farmer practices, respectively. Average production costs for the full package was 11,502 ETB/ha, while it was 8,093 ETB/ha for the farmer practice. The additional costs of fertilizer application, row planting and thinning were largely offset by additional revenues (calculated with farm gate price of 29.6 ETB per kg sesame seed. With an average sesame market price of 3,000 ETB per 100 kg, a farmer needs a marginal yield of 143 kg sesame to cover all extra costs of the full package. All treatments that included fertilizer application gave higher yields over the treatments without fertilizer, indicating its importance for increased sesame yields. Row planting induces an additional cost of 1000 ETB, but leads to an additional yield of 75kg, which is equivalent to 2,220 ETB revenue. Applying thinning increases yield by 68kg/ha, but the additional cost is only 400 ETB/ha, which is equivalent to 13.5 kg sesame seed.

Table 12 Adjusted yield, production cost, revenue and marginal rate of return over the two regions

Treatment	Yield (Kg ha ⁻¹)		Revenue (ETB)	Production cost (ETB)	Net benefit	MRR
	Adjusted	Advantage over FP				
Farmer practice	387	0	11447	8093	3355	-
Thinning only	455	68	13475	8523	4951	371
Package minus fertilizer	478	91	14155	9227	4929	139
Package minus row planting	579	192	17147	9308	7838	369
Fertilizer only	527	140	15618	9449	6169	208
Row planting only	525	75	15557	9545	6011	183
Package minus thinning	634	247	18770	10534	8236	200
Full package	739	352	21887	11502	10385	206

Row planters

The major challenge in adopting 20 steps was the inaccessibility of row planters. To address this challenge, Benefit-SBN has tested different types of row planters (Balden and Sfoggia seed drillers, Sfoggia and NARDI precision row planters) for small, medium and large scale farmers. The precision row planters, NARDI and Balden were of low preference. The 'Sfoggia' mechanical seed driller was found effective. Five planters were purchased by investor farmers from western Tigray. Five cooperatives: 2 from Welkayt (Tsebri and Mogue); 2 from Tahtay Adyabo (Lemlem and Sheraro) and 1 from Kafta-humera (Meabale) are on preparation to purchase the planter.

Three types of row planters, Rhea from the Netherlands; Belay and Aybar engineering (local made and chest-carried), targeting medium and small scale farmers were tested. Good result was obtained for the Aybar hand held row planter. This planter will be scaled by organizing youth into groups giving planting service. The Rhea seed driller is also promising and will be scaled to medium scale farmers who can afford 30hp tractors. For this purpose two 30hp tractors with attachments (plough, ripper, cultivator, planter and trailer) were purchased. The 'Belay' seed driller needs technical improvement.

Soil fertility management

Rotation crops were integrated in the farming system; different fertilisers and their combinations; and organic products were tested. Soil mapping and tailored fertilizer recommendations for sesame was planned in collaboration with CASCAPE, but not done. Evaluation of blended fertilizer NPSZnB against recommended 100kg DAP + 50kg Urea and testing of organic fertilizer (orga, eco-green, compost tea) for sesame yield and quality improvement is on-going in collaboration with RARIs. The Rhizobium bacteria strain B-12 was recommended for soya and haricot bean yield improvement in Amhara.

Rotation crops

Demonstration and popularization of grain and malt sorghum, soya bean, mung bean, haricot bean, cotton continued for income improvement, food security and soil fertility management. They were demonstrated and scaled in 83 FTCs and on >7,000 farmers' fields. Soya bean seeds were purchased by 2scale from seed producing company while sorghum was from farmers. Mungbean seed was produced by HuARC as part of innovation development. Farmers in Metema, Tsegede and Kafta Humera are in contract agreement with Diageo for producing malt sorghum, Deber variety. In Amhara

soybean was sown on 364 ha and produced 662 tonne, whereas sorghum covered 670 ha and harvested 1,563 tonne. In Tigray, mung bean was scaled-out on 8,398 ha, which is a significant expansion of the crop. In Tigray, the newly demonstrated soya bean variety Gisham performed poorly. This calls for further testing and/or introduction of new varieties suitable for the area.

Harvest, transport and storage loss reduction

To minimize post-harvest losses and maintain the quality of the stored products under different storage conditions, hermetic bags (known as 'Purdue Improved Crop Storage or PICS bags') were evaluated against the traditional, polypropylene bags. Preliminary results of trials in eight kebeles (4 each in Tigray and Amhara) reveal that after more than 6 months of storage, PICS bags are effective in controlling weevil in sorghum and mung bean, and sesame seed bug in sesame. The use of PICS bag reduced physical damage, improved germination percentage and longevity of the grain. The in-depth study and quantification of losses due to various pests is on-going as part of a PhD thesis. Despite the good results recorded, adoption of PICS bags is still very limited. This requires more attention for adoption dynamics.

Formal financial services and input credit to farmers

Farmers' access to affordable formal credit sources is key for realizing higher adoption levels of good agricultural practices (GAPs). Financial institutions regard loans to farmers as risky, since most do not possess sufficient material guarantees, lack records and have limited financial management capacity. In collaboration with unions, PC's and woreda CPO's, Benefit-SBN is addressing this challenge by providing financial literacy training and support cash flow recording and cost-benefit analysis. In 2017, 6,843 farmers have been reached by financial literacy training. ToT was given to 161 participants from 71 cooperatives of 9 unions. MoU was signed with CPO and 19 focal persons were assigned to supervise and support cooperatives with coordination and coaching through P2P sessions & 255 eventually organized. 2,955 farmers received input credit ranging from 250 to 51,000 ETB per farmer.

Mainstreaming social inclusion and nutrition

Separate training sessions were organized for youth and women on improved agricultural practices reaching 17,000 youth and 16,000 women (see 3.1.2). 22% female farmers benefited from the facilitated guarantee fund. Awareness creation events were organized for labourers on labour conditions, rights, health and nutrition in localities where labourers offer their services. The effort to mechanize the production will have consequences on labour, but inclusive mechanization options needs to be explored. Piloting home garden in Metema and Tsegede is anticipated to generate income for women and children and improve nutrition status of households. 14% of the financial literacy trained female farmers are recording their costs as husband and wife. Children are often helping with reading, writing and calculations.

Conclusions and recommendations

Achievements

- The 1,623 experts who took ToT, trained 92,395 farmers (16,000 youth & 17,000 women) on GAP;
- '20 steps' was scaled on 88,985 farmer plots;
- Fourfold increase of demonstrations of GAP and machinery on commercial farmers plots (200 ha);
- Weather forecast information provided to 1,520 users via SMS helped for field operation decisions;
- Demonstrated row planters boosted interest and attention for other mechanization options;
- Scaling-out of rotation crops significantly increased in No. of farmers involved and area covered;
- 1,563 tonne malt sorghum and 662 tonne soybean seed produced for marketing;
- Mungbean, sorghum and sesame seed storage improvement seen with use of PICS bags;
- Promising results in farmers' access to input finance with reduction of interest from 60% to 15%.

Challenges, opportunities and lessons learnt

- Key challenges are: 1) low adoption levels of GAP for sesame production because of lack of row planting technologies 2) limitations in finance, 3) repayment of outstanding loans;
- Limited resources (staff, devices, ICT) and high staff turnover are however serious challenges;

-
- Opportunities to work on and lessons learned include: improving professionalism of farmers, financial institutions and public service providers and tailored loan management training develops trust between cooperatives and financial institutions;
 - Among major lessons learned, there is clear evidence that sesame yield and quality can improve through better field operations like soil fertility management, improved storage and PH operations.

Way forward

- To improve the adoption of GAP the focus will be on offering technically and economically interesting row planting and soil fertility management options;
- Specific attention will be given to the training and monitoring of local groups of farmers for improving smallholder access to machinery, credit and intensified technical support;
- The financial literacy training will be further expanded, with attention for high level buy-in.
- Strongly support availing finance for input and output marketing (cf. 2.1.3).

Improved markets and trade

In Benefit-SBN we target the following primary outcome for contributing to improved markets and trade: "Sesame farmers and SME's involved in product and market development initiatives fetch a 10% higher price, as compared to spot market and ECX prices.

Three, related intermediate outcomes, each with specific KPI's, are expected to contribute to the achievement of the primary outcome: (2.1) Post-harvest value creation (3 indicators); (2.2) Improved market linkages and sales (4 indicators) and (2.3) Improved access to marketing credit (1 indicator).

Product and market development

Post-harvest value creation

An assessment of cleaning machines and storage facilities for sesame has been made, as part of the Benefit-SBN's post-harvest value creation activities. Several cleaning machines that can cater for different market demands are available, but most of them operate below capacity. Metema union own almost ideal modern cleaning machine. Benefit-SBN staff advised to provide cleaning service to traders and generated income. Then it is leased to Warka trading PLC for cleaning 5,000 tonnes, worth 1 million ETB. An entrepreneur demonstrated a locally developed cleaning machine at 4 spot markets for more than 270 participants. Traders and cooperatives showed interest in buying or using the cleaning service. The initiatives to extract oil and produce briquette were assessed for profitability and will be supported.

Improved market linkage and sales

To improve market transparency, spot market prices were collected and shared with stakeholders via SMS and Interactive Voice Record (IVR) messages. International market information, obtained via AGlook and EPOSPEA have been shared with stakeholders during regional meetings. In collaboration with Selet Hulling 4 cooperatives were supported to produce organic sesame through contract farming. With IFDC/2scale, Diageo and Ambasel trading companies were linked to source sorghum and soybean from 4 unions, which boosted production of sorghum from 700 to 1,900 and soybean to 2,000 tonnes.

Improved access to marketing credit

Agritera and Benefit-SBN deposited 4 million ETB, 50% each as a guarantee fund at the Cooperative Bank of Oromia (CBO). This encouraged CBO to provide marketing credit of 10.67 million ETB to Metema and Setit unions and through them to 7 cooperatives. CBO increased its proportion of risk taking to 70% for Setit because of the zero defaults in previous years and for Metema the risk level is 50%. In collaboration with Agritera and F&S a 3 day loan management training was given to 52 staffs from selected cooperatives to strengthen their documentation and eligibility criteria capabilities. Follow up visits were organized to ensure proper loan disbursements and collection. The repayment rate reached 92% and is expected to full repayment within the given period.

The advantages of marketing credit are: 1) 2,955 farmers receiving loan varying from 250 to 51,000 ETB paid for weeding and harvesting costs. This reduced interest rate from 60% to 15% and eased from dependency on informal money lenders. 2) Farmers repay the credit in kind and sell sesame to the cooperatives, tightening the bond between members to the cooperative. 3) Increased marketing activities of coops and unions; 4) encouraged more than 1,884 farmers to open new bank accounts; 5) Unions and coops mobilized 104,060 ETB by selling 2,448 additional shares. 6) Improved CBO-union-coop-farmer relationship and helped to know each other better, farmers understand FIs better, and CBO does understand sesame production and marketing better. 7) Enhanced banks' interest to provide loans to unions and cooperatives.

Mainstreaming social inclusion and nutrition

To stimulate the use and marketing of nutritious rotational crops, groups of women received training on recipe development for soya bean, sorghum and mung-bean. In collaboration with PUM new recipe development and trainings will continue; adoption in communities and at household level will be monitored. Specific attention will be given to the marketing of soya and mung bean products and inclusion of home garden and its products as income generating activity for women. The internal on-lending of marketing credit benefited 22% women members. The newly demonstrated cleaning machines may interfere with manual cleaning services provided by women and youth. Specific attention must be given to the opportunities for these labourers to run the machine together and increase their income per hour through efficiency and quality improvements.

Conclusions and recommendations

Achievements

- Metema union earning 1 million ETB from cleaning service agreement with private trader;
- Demonstration of locally developed cleaning machine at 4 spot markets;
- Profitability assessment made using 'Cigar Box' tool for value adding activities;
- Shared spot market information via SMS/IVR messages and international market through websites;
- Supported organic sesame and rotational crop marketing;
- Policy change suggestions for sesame marketing system (ECX) change and rural finance;
- Facilitated 10.67 million loan to 7 cooperatives of 2 unions with Agritera benefiting 2,995 farmers.

Challenges, opportunities and lessons learnt

The competitive advantage of Ethiopia in the international market and the role of ECX are key strategic challenges. 1) Exporting sesame in bulk for earning hard currency is the major driver for exporters. 2) The inflated domestic market price and marketing system does not encourage value addition and collaboration of value chain operators. 3) Product differentiation and price incentives for quality are hardly possible.

Among opportunities, its competitive position in the world market which base on most preferred sesame seed types for tahini making with much liked natty taste and aroma.

An important lesson learned is that 1) profitable business case development is difficult due to high sesame seed costs, infrastructural challenges and price dynamics. 2) The inflated ECX price make sesame expensive for value addition and developing high quality products for export. 3) Transition to scaling and institutionalization of successful innovations (spot market price information system) is not easily because of bureaucracy. Reforms should create new opportunities for both sesame trading and new value adding processing activities.

Way forward

To improve product and market development:

- Support policy reforms that enable quality based and traceable marketing system;
- Introduce and pilot a sesame information system that support sources, diversification and traceability of sesame products in collaboration with Selet Hulling in 4 cooperatives;
- Expand the guarantee fund scheme with new banks willing to take high risk coverage (>60%).

Improved enabling environment

Benefit-SBN targets the following primary outcome for contributing to an improved enabling environment for the sesame subsector: “The Ethiopian sesame sector enhances its performance as a result of a more enabling environment”.

Four, related intermediate outcomes, each with specific KPI's are expected to contribute to the achievement of this primary outcome: (3.1) Evidence-based information gathering and sharing (2 indicators); (3.2) Stakeholder capacity development (5 indicators); (3.3) Enhanced stakeholder collaboration (2 indicators) and (3.4) Strategic sesame sector innovation (3 indicators).

The next paragraphs highlight recorded achievements, challenges faced, opportunities and the way forward (see detail in Annex 4).

Strengthened enabling environment for the Ethiopian sesame sector

Evidence-based information gathering and sharing

Woreda database

Basic information on population, households, land use, market prices, weather, ... etc. has been collected. To develop woreda databases, 12 desktops were purchased for the 12 woredas. Their staff will be trained on data recording, processing and information sharing in 2018.

Kebele planning

24 Kebele level agro-economic development planning was piloted in 2 kebeles per woreda. Tripartite committees, composed of representatives from Government (kebele administration and DA), farmers (cooperatives) and financial institutions (ACSI/DECSI) were formed, trained and subsequently developed their kebele plan. The plans were not implemented because of MFIs failure to avail credit. Discussions will be held with higher officials and implemented in a larger scale in 2018.

Market price information

Benefit-SBN continued to gather local, national and international sesame market information from different sources (websites, blogs, ECX market, Ethio-export platform, EPOSPEA, AGlook) and share the information to stakeholders. In 2017, in collaboration with North Gondar zone Trade and marketing development (TIMD) office and APPOSIT LLC, collected 8 spot market price information and shared via SMS and IVR messages. The plan to scale to over 30 spot markets was not realized because of delay in signing the MoU by the TIMD bureau. Information on production, marketing and access to input and output credit were broadcasted through radio programmes.

Training and extension materials

Easy to understand and attractive extension materials play an important role in fostering farmers adoption of good agricultural practices. The use of multiple extension and communication materials (training modules, production guides, posters and banners, brochures radio programmes, short movie and documentary) contributed to increase farmers awareness, knowledge and skills on improved practices.

Stakeholder capacity development

Long-term HuARC and GARC staff training

One HuARC and one GARC staff member are doing their PhD.

Training approach

Efforts have been made to improve the training delivery methods and tools. Benefit-SBN staffs were trained on designing, training sessions facilitation, active learning methods and the principles of adult learning. The training helped to change the top-down/trainer centred tradition.

Agronomic training

Large numbers of farmers were reached through the cascaded training system and the organisation of farmer-to-farmer sessions at different levels. In collaboration with BoANR, HuARC, GARC and ATA 533 experts (240 in Amhara and 293 in Tigray) were trained as main trainers of improved sesame and rotation crops production technologies at region level. WoA organised the training sessions at woreda and kebele levels. In both regions, the trained professionals went to their woredas and trained 1,623 agricultural professionals. The later ones in turn trained 90,852 farmers at kebele level, of this 23% (20,724) women, 16,483 young farmers and 53,099 were adult farmers. Specific training sessions were organized on quality sesame seed production and management, pest and disease control and on the set-up and management of the MRY plots.

Field days and farmers exchange visits

Field days prove to be important for changing farmers' attitudes, create awareness, and develop skills on improved production technologies. Several field days were organised at kebele, woreda, zone and regional level. Kebele and woreda field days were organised at different plant development stages. These and other field days helped farmers to have both formal and informal interactions on their experiences and therefore play an important role in the adoption of improved technologies. In total 115,669 individuals attended the field days of which 113,662 (98%) were farmers and 2007 (2%) were experts. Among farmers 68,010 (59%) adult male, 21,732 (19%) youth, 23,571 (20%) female and 349 were investor farmers.

Economic training

The 2017 financial literacy training programme was adapted after having thorough discussions with participants and relevant stakeholders, including cooperatives, unions, CPOs, MFIs and offices of agriculture. Drawing lessons from previous year experiences, the cash book manual and cost recoding book were improved. 7,750 manuals and 15,500 cost recording books were printed in Amharic and Tigrigna languages. In collaboration with nine unions, cost recording and calculating training sessions were organised for 6,843 farmers drawn from 71 cooperatives of which 14% (969) were women, while 5,864 were male.

As input for further development of the financial literacy training the 'Cigar Box' tool was introduced, a tool for making business calculations easy and to discuss with cooperatives, unions and microfinance institutions. Further discussions will be made on the use of this ICT tool, which can also be used for business planning and bank loan requests of small and medium enterprises.

Cooperative capacity building

A start has been made for institutional delivery of cooperative training, via collaboration with Ardaita cooperative college, RCPA and woreda CPOs. Two modules ('Cooperative marketing' and 'Cooperative organisation and management') were tested with the participation of 8 cooperatives (4 from Tigray and 4 from Amhara) and representatives of RCPA Tigray, woreda cooperative promotion offices, Benefit-SBN focal points for Amhara and Tigray, F&S, Aeres Wageningen and three trainers of Ardaita cooperative college. The piloting training was evaluated and action points for 2018 were identified so as to scale out the Ardaita training modules, in collaboration with Aeres and F&S. Cooperative self-assessment is considered to be implemented with the FORCE tool.

Training on loan management

To prepare the Agriterra-SBN guarantee fund modality for CBO marketing credit to 7 cooperatives of 2 unions (see 2.3), training sessions were organised on loan management. In collaboration with F&S, 52 leaders and staff from seven primary cooperatives of Metema and Setit unions were trained in Gendewuha and Humera, with the objective of enhancing their loan management capacities, credit risk management and better financial record keeping.

Enhanced stakeholder interaction and collaboration

Benefit-SBN uses two approaches to enhance stakeholder interaction and collaboration. In many cases there is direct collaboration with others in the organization of specific activities. A few examples are: Agriterra for guarantee fund, Cooperatives for roll out financial literacy, ENTAG and F&S for cooperative training, Selet Hulling for organic farming. The other approach is the organization of multi-stakeholder meetings for discussion and information sharing such as field visits and regional meetings.

Local sesame stakeholder collaboration

At the local level, to strengthen the collaboration among agricultural professionals, microfinance institutions, kebele administration and farmers cooperatives, committees were formed in some selected kebeles and the committees were supported to design kebele level agro-economic planning (see 3.1).

Regional platform and coordination

In 2017 in Amhara and Tigray annual regional workshops were organised in December in collaboration with ATA, BoANR, GARC and HuARC. In Tigray 120 and in Amhara 110 participants participated. Stakeholders reviewed the achievements, discussed on the major challenges and put way forward for 2018. A regional stakeholder consultative and mobilisation workshop was also organised together with BoANR, GARC and ATA in Amhara region with participation of 500 experts and officials.

Regional field days also served as platforms to discuss the main challenges with government officials/policy makers. Benefit-SBN organised regional level field days together with BoANR, GARC, ATA, ISSD and CASCAPE in Metema and Mirab Armachiho woredas in Amhara, and Kafta Humera and Asgede Tsimbla in Tigray. In addition to the 500 participants (250 in Amhara and 260 in Tigray) convened from federal to woreda level government organisations, private companies, large and small-scale farmers, cooperatives, unions and universities, the field days were also attended by high government officials including Dr. Eyasu Abraha, Minister of Agriculture and Natural resources (MoANR), Dr Bekele Bulado, Minister of Trade (MoT), Mrs. Almaz Mesele from House of peoples representatives, state ministers for MoANR and MoT and high officials from the regions. The strong representation of the Ministries allowed to review and address the key challenges within the sesame sector with all stakeholders.

National sesame platform

Benefit-SBN, together with ENTAG organised a meeting for sesame value chain stakeholders including exporters, unions and processors and mechanised farms, during which major challenges for production, access to finance, processing and marketing were identified. Soon after this meeting, the Minister of Agriculture and Natural Resources requested Benefit-SBN to prepare a White Paper, sketching key challenges of the sector in an evidence based manner, and suggesting orientations for solutions. Benefit-SBN participated in several committee meetings to prepare strategic proposals for sesame sector reforms and the establishment of a nation sesame platform. A document was prepared and submitted to the Prime Minister office. After the approval, the first official national sesame platform is expected to be organised in the first semester of 2018.

Strategic sesame sector innovation

Four subjects for strategic sesame sector innovation were mentioned in the 2017 work plan: Rural finance, Fertilizer carry-over stock and union debts, ATA collaboration and ECX marketing system and the quality/traceability challenge.

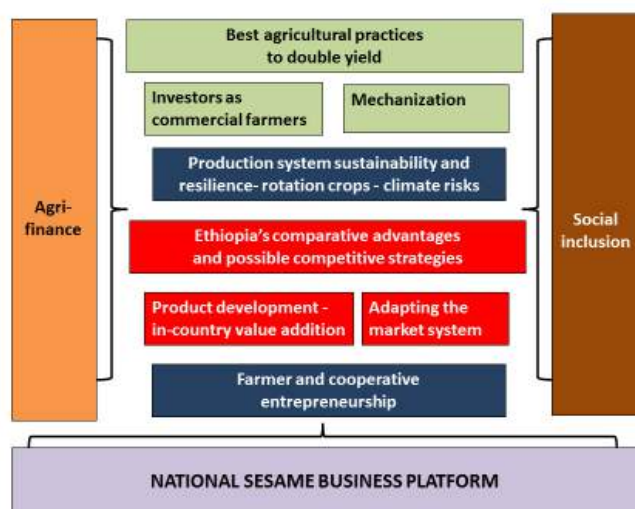
For farmers, 2017 was a bad rural finance year. Mainly because of limited loan repayment (after 2 years of low sesame prices), many farmers did not access to formal credit at all. For addressing the financing challenge, there are however some positive developments: (i) farmers take cost recording seriously and this helps them to see their farm as a business; (ii) financial institutions appreciate the cost recording and farmers' cash books may become part of the eligibility criteria; (iii) first experiences with kebele agro-economic planning show that trilateral collaboration between farmers/cooperatives, local branches of MFI's and kebele administration and DA's is possible. The second year of the guarantee fund modality that supports CBO marketing credit to cooperatives is showing good results, which are raising the interest of many other banks, and unions and cooperatives.

The subject of fertiliser carry-over stock and union debts was prepared for union lobby and advocacy, but was not brought to the next level, because of the sensitivity of the subject.

Compared to the previous years there was better collaboration with ATA in 2017. Benefit-SBN organised different events with the Amhara ATA team (stakeholders' mobilisation and consultative workshop, ToT training, regional field days and exchange visit, annual regional workshop and joint field follow up and monitoring). Collaboration on these activities contributed to better results and deeper impact. However, collaboration with ATA needs to be further improved.

The ECX marketing system and procedures are among the top issues that sesame sector stakeholders raise during meetings and workshops. Issues of quality assessment, traceability, lot size, waiting time. Decisions have been taken on some of the issues, but in actual practice there is no significant change.

For the proper implementation of kebele agro-economic planning, availing market information and cooperative capacity development further discussions are needed with relevant authorities to get their buy in and work with lower level representatives.



Key subjects suggested in the White Paper for the national sesame platform are shown in the figure to the right.

The proposal for the national sesame platform is at the desk of the Minister, ministry of agriculture awaiting decision from the PM on strategic sesame subsector challenges.

It is therefore likely there soon will be a national sesame platform, at which level the sector stakeholders discuss necessary reforms.

Mainstreaming social inclusion and nutrition

Inclusiveness is one of the major issues that Benefit-SBN set in its major goal and strive to achieve it. The support programme has been working hard to increase the involvement of women, young sesame farmers and labourers. Farmer organisations, different public offices and other stakeholders were encouraged to include more women and young farmers during training sessions, workshops and meetings. This helped to increase women and youth participation on agronomic, financial literacy and other training sessions; field days, and workshops. Apart from including women and youth in the regular training sessions (see 3.1.2), separate training sessions were organised for women and youth. In Amhara 253 women and 232 young farmers were trained on '20 steps'. Similarly, 280 women and 300 young farmers were trained in Tigray. In Tigray, microfinance institutions pitched their products and tried to create awareness on the credit service that they provide. Along with the production techniques, farmers were trained on nutritional values of sesame and rotation crops.

Also, sensitisation and awareness creation events were organised for over 2,000 labourers at Kokit, Dansha and May-kadra towns. Information on demand for labour and on facilitation of transport, resulted in more labourers during the production season.

Regarding nutrition, recipes of different kinds of food items were prepared from rotation crops such as mung and soya bean. This was demonstrated to several people in different workshops and meetings. Information on the nutritional values of sesame and rotation crops was provided through the SBN Newsletter and other communication tools.

Conclusions and recommendations

Achievements

- Trainings, workshops, meetings and field days have been organised as planned in collaboration with stakeholders and partners. This led to better coordination, reduced costs and high number;
- Agronomic training sessions were organised in time and included practical training sessions;
- Improving the training approaches by using participatory, learner-centred approaches. Another good start was the collaboration with Ardaita, F&S and Aeres for cooperative training;
- Attention was given to social inclusion- in many of the training sessions a considerable number of women and youth farmers were included. Though still too limited, some women and young sesame farmers were linked to microfinance institutions;
- Labour sensitization and awareness creation events were organised; this contributed to raise farmers' and other stakeholders' awareness on the labourers working and living conditions;
- Spot and international market price information has been gathered and shared to stakeholders;
- Regional field days and meeting with participation of high government officials.

Challenges, opportunities and lessons learnt

- The main challenge in evidence-based information sharing is acquiring reliable, consistent and up-to-date local and international market price information;
- Institutionalization of data collection and information dissemination is difficult due to lack of motivation from major partners;
- Aligning to stakeholder plans and approaches has affected quality of training, selection of participants, organizing field days, workshops and limited interaction level;
- Improved collaboration with stakeholders and partner projects seen as opportunity and contributed for a better implementation of activities and yielded in better results;
- A lesson learned is that top-down instructions are needed for kebele agro-economic planning, market information collection and sharing, cooperative capacity building and rural finance availing.

Way forward

- Developing woreda database further and transferring the available data to woredas;
- Discussion with BoANR, DECSI and ACSI for kebele-level agro-economic planning;
- Continue collaborating with stakeholders and partner programmes and projects;
- Publish manuals on sorghum, mung and soya bean production, and cashbooks;
- Pursue interactive training delivery approaches at all levels;
- Special attention to social inclusion and nutrition;
- Intensify collaboration with FCA and RCPA, Ardaita, F&S and Aeres for cooperative capacity building;
- Realization of a national sesame platform to institutionalize collaboration between stakeholders.

Collaboration

M&E and Communication

The intention of having a stakeholder based planning, monitoring and evaluation system is getting closer by the transfer of the Benefit-SBN database to woredas and the testing of a kebele agro-economic planning tool. Sesame information on farmer households, farming activities, training, marketing is already based on woreda sources. Benefit-SBN seeks to support woredas, cooperatives and other local actors to improve the quality of their data collection, management, analysis and sharing.

The Benefit-SBN M&E system has three main sources of information: MRY/MRR studies, household survey and continuous field presence, observation and story harvesting. The MRY/MRR informs about yield and farmer income improvement, which are key indicators for success. The main objective of the household survey is to know and learn about adoption dynamics. Stories which show outputs, outcomes and impacts; information and experiences are shared through website, newsletters, training sessions, field days, regional and thematic workshops; posters, brochures, movies and other extension and communication tools. The national sesame platform is anticipated to discuss on the challenge of sustaining the SBN newsletter, website and radio programmes.

Collaboration

Collaboration with BENEFIT programmes

BENEFIT collaboration for sesame and rotation crops in NW Ethiopia is improving. Benefit-SBN, ISSD and CASCAPE staff communicate and collaborate better, especially at Tigray side. The collaboration with ISSD concentrates on seed production and marketing. With CASCAPE it concentrates on soil fertility management. Despite immense opportunities for collaboration with ENTAG in value creation and market linkages for sesame and pulses, it is not at the level where it can be. A good development is the joint organisation of trainings on training module development and training delivery in Lalibela for staff of BENEFIT programmes.

Collaboration with other projects and partners

- Agriterra for joint facilitation of guarantee fund for CBO, to promote input and marketing credit;
- IFDC/2SCALE collaborate in rotation crop production and marketing, cooperative capacity development, support to local women groups for local agro-processing activities;
- CommonSense and Apposit for spot market price information sharing and collaboration with Weather Impact and NMA is for weather forecasting; for crop modelling it is with WUR;
- ATA: Sesame stakeholders' mobilisation, organizing workshop, ToT trainings, field days and exchange visits, joint field follow up and monitoring;
- With Aeres and F&S in cooperative module development and support to Ardaita College;
- F&S in provision of loan management training, roll-out of Ardaita training modules, staff hosting.

Collaboration with [Dutch] private sector

Collaboration with Dutch partners from the private sector is expanding and will develop further in 2018:

- Weather Impact develop, sharing and assessing farmers' use of weather forecast information;
- Selet Hulling (Dutch-Ethiopian joint venture) collaborate in Sesame Open project with partners such as Trading Organic, Jan Hak & partners and Royal Duyvis Wiener;
- RHEA support in selecting and testing of row planter and mechanization package for small and medium holder farmers.

Collaboration with the public sector

- Benefit-SBN collaborates with public institutions (BoANR, ARARI, TARI, cooperative promotion offices (RCPA), NMA, financial institutes (ACSI, DECSI, banks) that have mandates for agricultural and market development.

Mainstreaming social inclusion & nutrition

For Benefit-SBN the priority subjects for social inclusion are:

- Seasonal labour, its importance, and working conditions in sesame producing areas;
- Support to women and youth to participate in production and marketing activities of sesame;
- Mainstreaming of nutrition and home gardening activities.

Conclusions and recommendations

Achievements

- Good implementation of MRY studies, but steady progress towards stakeholder-owned M&E system;
- Stories showing outputs, outcomes and impacts have been reported and shared with stakeholders;
- Improved collaboration with CASCAPE and ISSD, especially in Tigray and with ATA, in Amhara;
- Successful collaboration with Agriterro, IFDC/2Scale, CommonSense, F&S and Aeres;
- Increased collaboration with public and private sector.

Challenges, opportunities and lessons learnt

- The major challenge with ENTAG is competitiveness of the innovation fund for supporting companies willing to engage in value addition. However, there is perspectives for scaling-out rural finance.

Way forward

- Implementation of the BENEFIT collaboration action plan;
- Pursuing successful collaboration with Agriterro, IFDC/2Scale, CommonSense, F&S and Aeres, Selet Hulling and Weather impact;
- Expanding collaboration with Ethiopian and Dutch private sector actors;
- Pursuing institutional collaboration via collaboration agreements with BoANR, RCPA, NMA, CBO, ASCI, DECSI and financial institutions, cooperatives and unions.

Wageningen Centre for Development
Innovation
Wageningen University & Research
P.O. Box 88
6700 AB Wageningen
The Netherlands
T +31 (0)317 48 68 00
www.wur.eu/cdi

Report BENEFIT-18-004

The mission of Wageningen University and Research is "To explore the potential of nature to improve the quality of life". Under the banner Wageningen University & Research, Wageningen University and the specialised research institutes of the Wageningen Research Foundation have joined forces in contributing to finding solutions to important questions in the domain of healthy food and living environment. With its roughly 30 branches, 5,000 employees and 10,000 students, Wageningen University & Research is one of the leading organisations in its domain. The unique Wageningen approach lies in its integrated approach to issues and the collaboration between different disciplines.

