A blink of transformation

Building trust and collaboration in Ethiopia's malt barley value chain

A case study by Beyene Tadesse for

INNER WORK *for* SOCIAL CHANGE

Fetzer Institute

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Building trust works

Contents

The Inner Work for Social Change Project

Synergos and the Fetzer Institute began the project on Inner Work for Social Change in 2018 to demonstrate how Inner Work and Bridging Leadership can make social action towards a better world more effective. Through six commissioned case studies and in dialogue with thought leaders, development practitioners, and others, the project aims to spark a global conversation on how reflective practices can make social action more aware, more ethically attuned, and more sustainable.

Within the project, *inner work* is any form of reflective practice that increases awareness of self, others, and the systems in which complex social problems arise. Inner work is core to *bridging leadership,* which is the capacity and will to build trust and tap the fullest contributions of diverse stakeholders, helping them to come together across divides to work in concert for the common good.

About this case study

The case study focuses on multi-stakeholder collaboration in cluster commercialization in the malt barley value chain in the regional state of Oromia, Ethiopia. Two questions guided the study. How have Inner Work and Bridging Leadership strengthened multi-sectoral collaboration to address systemic weaknesses and improve the lives of small-scale farmers? How has collaboration within a cluster approach helped to transform practices and productivity in the malt barley value chain?

Content for the case was built through in-depth interviews and focus groups with key value-chain actors. The case writer held detailed discussions with leaders and experts from the Federal Ministry of Agriculture, the Oromia Bureau of Agriculture, the Oromia Cooperative Agency, the Oromia Farmers' Union Federation, the Federal Cooperative Agency, and the Agricultural Transformation Agency. Visits to malt processing plants and breweries provided an opportunity for observation. Site visits to farmers' cooperatives opened the way for conversations with smallholder farmers and cooperative officials.


Agricultural Inputs Share Co.
Synergos Photo

Girma's Story

Girma Kebede is a farmer and trader with five children. He and his family live in Tuqa, a village in the Bokoji district of the Arsi zone, a major barley producing region of Ethiopia.

Life has not always been easy for Girma and his family. For years, he grew mainly subsistence food crops and eked out a living like many other smallholder farmers in Ethiopia who struggled to feed their families. However, since 2013, things have been changing for Girma. He has been multiplying improved malt barley seed, which he sells to other farmers, and is now also a businessperson, collecting malt barley and supplying to the Assela Malt Factory and the breweries of BGI and Heineken.

Girma reflects on the changes in his life and livelihood:

> ***Where there are challenges, there are also opportunities. In everyday life, we will be faced with challenges such as lack of enough food, enough cash, and so on. But we should also understand that taking on such challenges is a part of a life process, which is an important part of developing as a person. Learning from the agricultural extension experts, I started my business with a loan of 3,000 birr[1] from Wasasa Micro Finance. I decided to practice a new farming, producing improved seeds of malt barley, and to commercialize. I bought a share from Assela Malt Factory for 100,000 birr, and have a working capital of 500,000 birr. I am now a rich farmer, feed my family well, and have cash to run my farm business. I've also constructed a modern house in the nearby town of Boqoji…The challenge has now become an opportunity for me.[2]***

Introduction

What has enabled Girma, and other smallholders, to turn a challenge into an opportunity? He mentions the supportive roles of agricultural extension experts and micro-financing. But there is a bigger story – of how a collaborative cluster approach is contributing to agricultural transformation, and opening the way to better lives and more productive farming for smallholders like Girma.

Agriculture is the backbone of Ethiopia's economy and the government recognizes that agricultural development is vital for poverty reduction, food security, and economic growth. For centuries, Ethiopia was mainly an agrarian society. Peasant farmers made their living through traditional methods of tilling and herding for food production.[3] Until recent times, little had been done to integrate smallholders into the mainstream economy or improve their productivity.

Consider malt barley, the crop at the heart of Girma's story. Small farm households produce food barley for home consumption. In contrast, malt barley is predominantly grown as a cash crop, and so market access is very important. Food barley has been cultivated in Ethiopia for some five centuries. The cultivation of malt barley has a much shorter history and its production has taken off only since the 1970s. The demand for malt barley derives entirely from the establishment and expansion of malt factories, and the production and consumption of beer, with malt barley constituting about 90% of the value of the raw materials used for producing beer. The growth of Ethiopia's cities in recent decades has brought with it growing demand for the drink, and so has opened up the market for the crop.

The country's first malting plant opened in Addis Ababa in 1974, followed by the Assela Malt Factory in 1984, under government ownership. Under the socialist regime in the 1980s, the factory got most of its malt barley from state farms and producer cooperatives. Smallholder farmers had little opportunity for malt barley production and marketing. Only with the end of socialism in the 1990s did the government begin to promote production by small farmers.

Synergos photo

With economic reform in the 1990s, the socialistic model of state farms and producer cooperatives gradually disappeared. Small-scale farmers came into the picture to eventually become the major suppliers of malt barley to the Assela Malt Factory. But still, a large part of the malt barley from the fields, and malt from the malt factories, had to be imported.

A turning point came in 1994 when Ethiopia launched the Agricultural Development-Led Industrialization, which gave farming a central place in advancing the economy and dealing with poverty and food insecurity. Several prominent, complementary government strategies followed in the next decade.[4] These strategies aimed to attain food self-sufficiency at national level by increasing the productivity of smallholders through research-generated technologies; increasing the supply of industrial and export crops; and rehabilitating and conserving the natural resource base.

For the strategies to work, Ethiopia needed an integrated system of linkages among key actors to enable the coordinated efforts of individuals, groups, institutions, and organizations at various levels. In 2008, the government established the Agriculture and Rural Development Partners Linkage Advisory Council to serve this purpose. The Council chose malt barley as a focal point for development. It encouraged national agricultural research institutions (in collaboration with the Oromia Agriculture and Natural Resource Bureau) to generate improved malt barley technologies domestically to boost local production and curb dependence on imported malt barley. Although the Council paved the way for coordinated efforts, the agricultural sector remained fragmented.

Then came Ethiopia's two Growth and Transformation Plans (2011–2015 and 2015–2020), which presented a bold, integrated vision for the country's economy. Agriculture was to be the main driver of economic growth, with a central role for small farmers. To assure effective implementation of the plans, the government followed a recommendation from a Gates Foundation diagnostic report and, in 2010, established the Agricultural Transformation Agency (ATA) to address two major obstacles to achieving the national targets for growth and transformation: poor coordination and alignment among the many efforts to transform the agricultural sector, and low implementation and technical capacity within the Ministry of Agriculture.

It is in this context that we present the case of an initiative in agricultural transformation, which Synergos helped to spearhead in partnership with the newly established ATA, the Ministry of Agriculture and Rural Development, the Ministry of Livestock and Fisheries, and the Regional Bureaus of Agriculture, among others.

Since its inception in 2011, Synergos Ethiopia has worked to improve individual and institutional capacity for innovation in the agricultural sector. Bridging Leadership, reflective practice (also called "Inner Work"), systemic thinking, and collaboration are central elements of the Synergos approach. In Ethiopia, the approach aims to enable leaders to recognize and overcome their individual and collective obstacles to collaboration, to identify systemic bottlenecks, and jointly develop solutions to improve the lives and livelihoods of small-scale farmers. The approach is iterative and depends strongly on personal and collective learning.[5]

Clusters and value chains: Key concepts in agricultural innovation

Two concepts – clusters and value chains – are crucial to this story about malt barley and agricultural transformation.[6] Clusters and value chains are overlapping concepts; both concern the range of activities needed to create a product or service. A cluster is geographically delimited; it concentrates on synergies between core and supporting enterprises in specific locations.

Generally speaking, clusters are geographic concentrations of interconnected enterprises, with linkages to related organizations such as government agencies, trade associations, and institutions of education and research. In agriculture, the cluster approach begins by delineating agro-ecological zones that have high potential for producing particular commodities. For a delineated zone to fulfill its production potential, research and development institutions and government agencies need to work in an integrated way to develop and provide improved technologies, seed and fertilizers, and producers need access to markets. Because so many interdependent elements contribute to clusters, we can think of a cluster as an economic ecosystem.

Ethiopia's Agricultural Cluster Commercialization initiative involves clearly defined geographic clusters specializing in priority commodities across the four major agricultural regions. Malt barley is one of nine priority crops that the government has identified for cluster commercialization, an approach that aims to "maximize production and productivity while integrating commercialization activities."[7]

Farmers, who are the primary producers, are central stakeholders in an agricultural cluster. In Ethiopia, groups of farmers with adjacent plots form a cluster to plough the land together, plant the same crop at the same time, apply the same technology, and harvest together. They amalgamate their plots of land so that they can share the costs of hiring or buying farm machinery such as tractors and combine harvesters. They also share the cost of production in proportion to their land size.

A value chain comprises all the steps involved in bringing a product from conception to distribution, such as procuring raw materials, the manufacturing functions, and the marketing activities. The main goal of a value chain is to deliver the best value at the least cost. For this, the function of value-chain actors at each segment of the chain is paramount. The key value chain actors are the producers (in this case, the small farmers), middle value chain actors, and the consumers (in this case, beer drinkers). Farmers' cooperatives and cooperative unions, traders, and processors (the malt factories and breweries) are the middle actors in the malt barley value chain; they are the business linkages between producers and consumers.

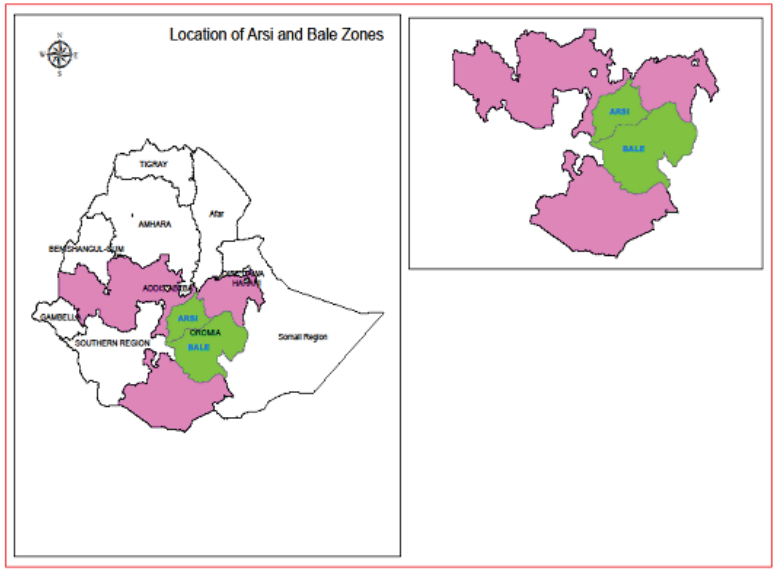
A cluster approach plays an important role in strengthening a value chain, especially when a special effort may be necessary to build trust among stakeholders. A culture of trust enables formerly antagonistic or weakly connected stakeholders to act in concert to overcome obstacles and meet shared objectives. The value chain can then become a chain of trust.[8]


Synergos Photo

The mounting demand for malt barley: A challenge and a blessing

> ***…over many decades, the problem of shortage and quality of local malt has been an agenda of the brewing companies, but only a few agricultural experts could understand it as an opportunity for change and growth. When factories complained that local malt barley was not meeting the quality standard and rejected to buy from our farmers, the Bureau of Agriculture advised the farmers to shift to the production of food barley or wheat. (extract from an interview with a 75-year-old man, retired from the Ministry of Agriculture)***

This comment suggests that despite the demand from the brewing companies, farmers had received little encouragement or support to improve the quality and productivity of malt barley. Ethiopia's malt barley productivity[9] had been unimpressive at 2.1 metric tons per hectare, compared with 2.93 metric tons in South Africa, 3.26 in Kenya, and more than 6 metric tons in France, Germany, and the Netherlands.



Barley is a cool-season crop, well adapted to high altitudes. In Ethiopia, barley production is concentrated in the highlands of the Arsi-Bale zones of Oromia regional state. Productivity here is higher than the national average, at 4.0 metric tons per hectare. The highlands of these areas are historically known as the best barley production sites in Ethiopia, and encompass the cluster of barley and wheat production and markets.

Table 1: Current Malt Factory Capacity and Demands for Malt and Malting Barley (2019)[10]

Malting factory	Production capacity (mt/year)	Malting barley demand (mt/year)
Assela Malt Factory	36,000	60,000
Gondar Malt Factory	16,200	21,000
Total	52,200	81,000
Beer Breweries	**Production capacity (hectoliter/year)**	**Demand for malt (mt/year)**
BGI + zebider	3,600,000	41,960
Heineken	3,000,000	35,000
Dashen	2,750,000	32,000
Diageo	1,700,000	20,000
Habesha	650,000	7,500
Total	11,700,000	136,460*
* 1mt of malt needs 1.55mt of malt barley (thus, 136,460mt of malt needs 211,500mt of malt barley)		

Over the last decade in particular, in response to the burgeoning demand created by the growth in beer breweries since 2009, small-scale farmers in the highlands of Arsi have become much more involved in malt barley production. Even so, the breweries' demand continues to exceed local supply (Table 1).

Abera Mekonnen joined the Assela Malt Factory in 2011, where he is now managing director. In his view, for a long time the factory had been neither efficient nor profitable, and had never been able to meet the local demand for malt. Factory documentation confirms this. For instance, the total estimated demand for malt barley in 2012/13 was around 72,000 metric tons, of which only 35% could be supplied by local farmers. Imports from Belgium and France were necessary to meet the demand. A critical cause of the poor performance of the factory, in Mekonnen's view, was the local supply shortage of malt barley.

During the focal period for this case study (2011–2017), and in subsequent years, much has changed at the Assela Malt Factory. Most notably, it is no longer government owned. The Oromia Agricultural Cooperative Union Federation took ownership of the factory in May 2018.

Malt barley farmers have a high potential market opportunity that is expected to grow with the increased investment in breweries to meet the rising demand for beer that has resulted from urbanization and a burgeoning hospitality industry. An adequate supply of locally produced malt barley, of an appropriate quality, to meet the demand is crucial for sustainable agro-industrial development of this sector.

An ongoing question for government, and one to which experts have turned their attention, is why the nation should import malt when it has suitable agro-ecologies to produce and process malt barley locally. The other question is whether Ethiopia has a comparative advantage in malt barley production. The answer is yes, as several studies have shown.[11] Accordingly, the government of Ethiopia has prioritized enhancing malt barley production as part of its development agenda. Synergos has been a helpful companion and guide in this journey.

Among the Synergos supports

Since its establishment in 2011, Synergos Ethiopia has been supporting the nation in its different development agendas, specifically in helping to build a common vision and collaboration between stakeholders to enhance agricultural transformation. Synergos has played a vital enabling role in efforts to remove systemic barriers to agricultural transformation, to reach a common vision, and to change prevailing mindsets that deterred collaboration among stakeholders in Ethiopia's agro-economy.

With financial support from the Bill and Melinda Gates Foundation, Synergos partnered with the ATA to support institutions most relevant to agriculture and address the problem of poor coordination and alignment among stakeholders and government partners involved in efforts to transform the country's agricultural sector. Phase I of the project took place from 2011 to 2014 during the first Growth and Transformation Plan, and Phase II took place from 2015 to 2017 during the first three years of the second Growth and Transformation Plan.

Focusing on the role, nature, and quality of leadership and collaboration among key stakeholders in the agro-economy, the project aimed to

- address weak collaboration and loose alignment among partner institutions
- introduce the cluster approach for agricultural transformation so as to induce commercialization and then enhance specialization and market integration
- improve the implementation of the agricultural sector strategy by shifting the mindsets of leaders and stakeholders to systems thinking and collaborative problem solving, and
- create market alliances for value chain development to enhance market linkages and encourage the use of mechanized farming.

Although Inner Work was not boldly reflected in the project, there was strong emphasis on transforming the thinking, values, and attitudes – generally the

mindset – of individual leaders to overcome these inner obstacles that hindered their performance.

Phase I focused on building capacity and synergies within the ATA, while Phase II included other relevant institutions in the agricultural sector. The project was implemented in the four big regional states of Oromia, Amhara, Tigray, and the Southern Nations, Nationalities, and Peoples' Region. This case study focuses on implementation in the malt barley value chain in Oromia.

The project began with a quick study to identify gaps and needs for capacity building in participating institutions. The study showed that weak institutional linkages, poor synergies, duplicated efforts, and poor leadership with undesirable qualities were hampering the agricultural development.[12]

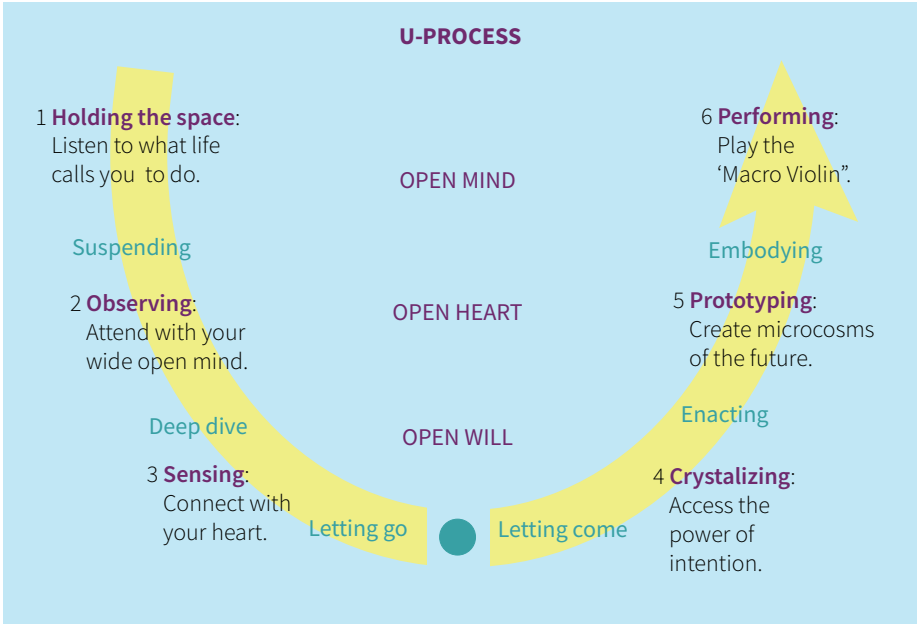
To address these weaknesses, the project used a two-pronged approach. One prong involved strengthening the capacity, synergies, and collaboration among the ATA, Ministry of Agriculture, Ethiopian Institute of Agricultural Research and the Federal Cooperative Agency, and among the different units and departments within these institutions. The other prong involved building effective Agricultural Cluster Commercialization to enhance agricultural transformation.

Strengthening capacities, synergies, and collaboration

The project commenced with a facilitated process for stakeholders to identify gaps and needs in leadership, alignment, common visions, and actions both within and across institutions. Based on this gap analysis, Synergos assisted in organizing a series of capacity building workshops, tailored training, and experience-sharing forums.

Two senior international consultants for the Presencing Institute, Reola Phelps and Manish Srivastava, facilitated the initial set of workshops, following a process known as Theory-U to enable institutional leaders to better understand themselves and their roles in the agricultural system, to analyze systemic problems collectively, and to explore possible solutions (Figure 1).[13]

Figure 1: Theory-U Process



The U-process passes through several movements (Figure 1). It begins, at the top of the U on the left, with opening up and dealing with resistant thoughts and emotions, connecting us to the world outside our institutional bubble. Moving to the bottom of the U, we connect to the world within – to the self. Here is an inner gate that calls on us to let go of everything that is not essential. This process of letting go of the old self and welcoming a new self of higher purpose connects us to a deeper source of knowing. Moving up the right side of the U, with a new level of energy and sense of possibility, we reintegrate the intelligence of head, heart, and hand in the context of practical applications, bringing forth the new into the world.[14]

Learning journeys are a Theory-U tool for opening hearts and minds, enabling leaders to see with fresh eyes and better sense the complexity of the systems in which they work. Early in the project, Synergos arranged a learning journey to the Rift Valley area for 49 staff members of the Agricultural Transformation Agency

(ATA).[15] Agency staff spent 48 hours in a home stay with smallholder families, many of whom were still engaged in subsistence farming. Synergos had been introduced to these families through a community-based organisation. To prepare for the learning journey and ensure that the selected families were willing to host guests, Synergos spent several days meeting with the families, explaining the larger project objectives, and getting their input and feedback on the project.

Through the home stays, agency staff were able to sense the challenges of poverty facing smallholders and their families. In a reflective session after the learning journey, participants shared moments of truth as well as moments of inspiration from their home stay experiences. Most of them had never before spoken to a farmer or been inside a farmer's house. The learning journey helped them understand the purpose of the ATA and why its work was so crucial. They also came to recognize that farmers are knowledgeable about their farming needs.

Although the ATA was created to support the Ministry of Agriculture in catalyzing action for agricultural transformation, many misunderstandings around roles and responsibilities created tension between different departments in the Ministry and with the ATA. It became clear to the leadership in the ATA and the Ministry that they needed to build trust and alignment so as to achieve a common sense of purpose. At their request, Synergos organized a series of workshops for collaborative learning, problem identification, and the co-creation of solutions. Workshop participants included senior leadership in the ATA, the Ministry, and the Federal Cooperative Agency, as well as staff working on specific issues (such as agricultural research and extension).

Following the Theory U process, the workshop facilitators guided participants – individually and collectively – to reflect on their own personal leadership journeys, to recognize what was blocking them from being innovative, and to identify leverage points to initiate change and envisage a desired future. Listening, candid conversation, and dialogue walks with colleagues helped participants to see themselves and others from new angles, to recognize which of their long-held assumptions needed to subside to let new ways of thinking and doing emerge. By modeling with toy blocks and other craft materials, participants built representations of the current situation and explored new possibilities. Difficult and candid conversations – about people's doubts and fears, about their distrust and judgments of one another, about their lack of belief in new possibilities –yielded an agreement to work more closely.

The work of collective learning, trust building and collaboration then moved to regional level, where Synergos organized similar workshops and activities to enable stakeholders to create a joint vision for alignment and to better understand the challenges they faced.

In case study interviews, several leaders who participated in the Theory U process testified to how it transformed their ways of working:

> ***Learning from the Theory U approach, we found that giving adequate time for listening to ideas, views, and opinions of others with positive perspective is extremely useful.***
>
> Mr Tigistu, Ministry of Agriculture

> ***After the [Theory U] trainings, we have been giving due attention to hearing from all staff from bottom up.***
>
> Dr. Adugna, Ethiopian Institute of Agricultural Research

> ***I found that I was completely wrong as a manager. I assumed my idea is always right and used to give only direction to subordinate staff members, but have never been successful, and my organization was at risk of failure. From the workshop I learnt that "mine is always right" is wrong. Now I am always giving stakeholders opportunities to express their ideas and opinions. Now I am completely different. I am open-minded for changes that are making real differences in my organization.***
>
> HE Usman Suru, Federal Cooperative Agency

All three of these men share an understanding that listening to one another and working together for a common goal is imperative, that an individual or an institution alone – no matter how much effort they exert – cannot give a complete solution to developmental problems.

Building effective agricultural cluster commercialization

The cluster approach creates an opportunity for crop specialization within agro-ecologically suitable areas. This in turn opens opportunities for service providers to concentrate their efforts on providing technical advice, and to introduce new technologies (such as mechanized farming and improved seeds) and links to markets. Although smallholder farmers still produce multiple types of crops, large areas of highlands in Arsi and Bale specialize in wheat and barley, and in malt production. This area comprises Ethiopia's Wheat and Barley Cluster.

The cluster approach emerged from a request in 2014 by the prime minister at the time to identify a means through which geographically targeted interventions could be integrated for the rapid, sustained, and inclusive development of priority agricultural commodity value chains. The idea matured through a developmental dialogue between the ATA and Synergos.

Abera Tola, country director of Synergos-Ethiopia, says the agricultural cluster model in Ethiopia is based on life experience in the country and on lessons from successes around the world where countries have used geographically focused strategies to transform their agricultural sector. Ethiopia practiced similar initiatives from the 1960s to the 1990s, although these are not considered to be a cluster-based development approach.

To build a common understanding of the cluster concept and its relevance to transformation, Synergos and the ATA convened a series of workshops for stakeholders in different agricultural value chains. In 2015, an inception workshop for stakeholders in the malt barley value chain brought together representatives from all segments of the chain: farmers, primary cooperatives and unions, breweries, malt factories, microfinance institutions, traders, and government institutions. The workshop led to the establishment of the Malt Barley Transformation Cluster.

Stakeholders also agreed to the formation of a Malt Barley Value Chain Alliance. A value chain alliance is an agreement between actors across the value chain. Its purpose is to improve market functioning and speed up transactions for inputs and products and Ethiopia now has value chain alliance for each of its main agricultural products. The Bureau of Agriculture and Natural Resources chairs the value chain alliances.

The government has established secretariats for Agricultural Cluster Commercialization to guide and coordinate the transformation agenda, while Synergos provided support for the establishment of regional secretariats based in ATA branch offices. In order to revitalize the analytic capacity of the Agency, Synergos also brought in international consultants for high-level strategic planning, development, and performance management.

Synergos Photo

Outcomes: Changing mindsets, engendering trust, strengthening the malt barley value chain

Many organizations – governmental and non-governmental, local and international, as well as the ATA – have played a part in Ethiopia's efforts to transform its agro-economy. The unique contribution of Synergos lies in its approach, which supports leaders to overcome their inner obstacles to fulfilling their purpose, to build trust and bridge divides, to think systemically, and to collaborate with others to address complex problems. Participation in the Theory U process helped leaders to move away from old ways of thinking and narrow states of mind to listening from the heart (inward reflection) and towards structural change. A personal transformation enabled some senior leaders to bridge differences and bring about organizational transformation.

Applying their collective learning, leaders in the Federal Cooperative Agency and its corresponding regional, zonal, and district offices have reformed the Agency's structure and approach to human resources. Restructuring has extended down to the farmers' primary cooperatives and unions. The cluster approach has helped to build trust among malt barley value chain actors to the mutual benefit of farmers, malt factories, and breweries.

Emergence of a bridging leader

His Excellency (HE) Usman Suru, a General Director of the Federal Cooperative Agency, gives rich testimony to the changes in motivation, commitment, and leadership style that resulted from his participation in the Theory U process and his ongoing reflective practice. In an in-depth interview, he reflected on how the process had transformed him. His testimony is a story of a bridging leader in the making, of how he came to see himself and his organization with new eyes.

> ***I was just appointed as a Commissioner of the Federal Cooperative Agency when the project was launched. I attended training on the Theory-U approach for leadership for about 2.5 days. The training was so inspiring. It was all about the mindset of leaders to listen to people to establish a common understanding for a common vision and towards a common goal.***
>
> ***I opened my eyes to see the situation of my organization both from internal and external relations. By then, I was frustrated as my organization was literally about to collapse. The Federal Cooperative Agency had historic leadership and management problems. It had nine directorates, which were totally independent, lacked common vision and had absolutely no common understanding.***
>
> ***After the training, I decided to first focus to identify and solve the internal problem. The top leaders, the management staff, and senior experts (about 32 individuals) conducted the problem identification in 2016. Through the internal assessment, we learnt that about only 15% of [our] staff …had a positive perception of their organization and that internal alignment among the Federal Cooperative Agency directors was absent. This problem further caused the Agency to have poor alignment and harmonized working relationship with the Regional Cooperative Agency, Agricultural Transformation Agency, Ministry of Agriculture, etc. In conclusion, the root cause of the problem of the Federal Cooperative Agency was primarily the top managers and the directors, partly associated with corruption and personal conflicts. Based on the result of the first assessment to identify the cause of the problems, remedial measures were taken with the support of the Ministry of Agriculture …and strong internal alignment of the directorates and working relationships was forged.***

In early 2017, after restructuring, HE Usman Suru initiated a second assessment, with some 70 participating staff members. The assessment found that no staff member or manager was working independently; they had aligned their action plans to common objectives. Trust among the leaders and staff was well developed, and 85% of the respondents had shifted their attitude from counteracting the organization to building it.

A sense of ownership of the problems was crucial to changes in the Federal Cooperative Agency. HE Usman Suru explains:

> ***The project helped us clearly identify our problem and find the remedies by ourselves (the staff and the management) by applying the Theory-U approach. The impact of the project's capacity building has been enormous – from the internal challenges to being led by good leaders and with transparency.***

Reflecting on the process of change at the Agency, he commented:

> ***The capacity building by Synergos has contributed the biggest share to the Agency's success! Finally, we proved the Theory-U is a modern witch doctor [wizard] that redeemed our Agency (in the vernacular – Federal Cooperative Agencyn yetadege zemenawi tenquay)."***

The process also helped to create a common vision and a stronger culture of collaboration and trustful relationships among multiple stakeholders.

Trust and collaboration among value chain actors

Trust is the social glue that holds families, communities, organizations, and societies together. Without it, reaching any agreement can become a fraught negotiation.[16] Bridging Leadership is all about engendering the trust that enables different stakeholders to collaborate in tackling complex problems. The workshops and training Synergos organized in partnership with the ATA not only helped to change leaders' mindsets and improve their systemic thinking; they also helped to build trust, strengthen relationships and enable greater coherence and collaboration within and among the participating institutions.

Dr. Adugna Wakjira was a deputy manager at the Ethiopian Institute of Agricultural Research who participated in the series of capacity building workshops. He reflects on how weak synergies and poor collaboration had undermined transformation efforts:

> ***There are many institutions working to improve the agricultural sector and the livelihood of the small farmers… However, these institutions had weak links and lacked a culture of working together for the common goal … For instance, while there were a number of technologies on the shelf of the Ethiopian Institute of Agricultural Research, the Ministry of Agriculture and Federal Cooperative Agency complained about lack of technology for the small farmers. In a parallel process, the ATA was also undertaking research to generate technologies. Likewise, it was not uncommon to see the same or similar experiments by the Ethiopian Institute of Agricultural Research and the ATA on farmers' fields – a duplication of effort and wastage of resources.***
>
> ***The big challenge was a communication gap between the federal and regional institutions, where the former had no role in the latter and vice versa. Every institution was planning independently and evaluating its work separately. Reading through each progress report shows that good work had been done, but the problems with the small farmers in particular, and the society in general, persisted.***

"Now, it is quite different," says Dr. Teshome Wale, Director for Crop Production at the ATA. He explains that stakeholder platforms, such as the agricultural cluster councils[17] and value chain alliances, have enhanced collaboration, integration and common understanding of the agricultural transformation agenda at federal, regional, zonal, and district levels. This common understanding has strengthened the synergies between the ATA, the Ministry of Agriculture, the Ethiopian Institute of Agricultural Research, the Federal Cooperative Agency, and the Bureau of Trade, thus opening the way for a coherent approach to agricultural transformation. Tigistu G. Meskel, a director for inputs in the Ministry of Agriculture, agrees. In his view, having a common platform has improved joint problem identification and problem solving, planning, implementation, monitoring, and evaluation.

Trust is pivotal to these changes. Leaders who opened themselves to the Theory U process became more trusting of themselves and others, more aware of the purpose

and importance of collaboration, more willing to reach across divides for more coherent efforts towards achieving the country's goals for agricultural transformation. These forms of personal trust were crucial for strengthening relationships and good will, and building collaboration among the government institutions relevant to agriculture.

However, for value chains to become chains of trust, additional trust-building devices are proving to be vital. In Ethiopia's malt barley cluster, contractual arrangements play a significant role in fostering trust in different segments of the value chain. They also help to build confidence between buyers and sellers. This, in turn, enables farmers' access to market-related and fair prices for their products. It also encourages the adoption of production boosting technologies, such as improved seed varieties, fertilizers, and crop protection inputs, which contribute to growth in a marketable surplus of selected crops.

The ultimate goal of the cluster approach is to build trust among the value chain actors to enable effective and efficient marketing linkages and value chain development. Value chain alliances play an important role in identifying and prioritizing problems, eliciting solutions from members, providing advisory services to the value chain actors, and distributing information for policy makers. Alliance members include farmers, private traders, primary cooperatives, cooperative unions, financial institutions, processors, non-governmental organizations, research and extension institutions, trade and industry, and various other public and private institutions.

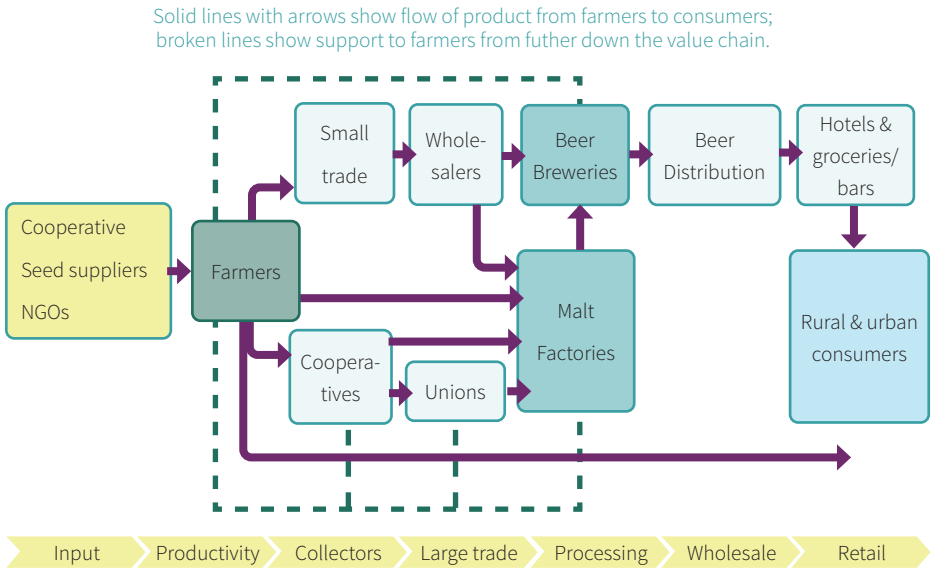
The alliances at the zonal and district levels conduct market surveys annually and establish floor prices for selected commodities such as malt barley. To determine the floor price, alliances consider the cost of producing a product, the prevailing market price for the product, and prices of imported substitutes. The floor price, which the Malt Barley Value Chain Alliance usually declares after harvest, helps to safeguard farmers against loss and motivate production. Although the floor price varies with quality grading and is open to negotiation, setting a minimum protects farmers from the risk of falling prices.

During the period of this case study, there has been a notable growth in the number of contractual market agreements between processors and farmers, or with their cooperatives and unions, in all target regions but especially for malt barley. Market linkages between farmers and processors have thus increased. Farmers' organizations play a crucial role in bridging these linkages.

Dynamics in the functions of value chain actors

The cluster approach is bringing about crucial changes in the marketing and dynamics of actors in the malt barley value chain. Farmers' organizations are becoming more supportive and business oriented; breweries are working with farmers to expand production for mutual benefit; productivity has increased; and local farmers are helping to reduce reliance on imported malt barley.

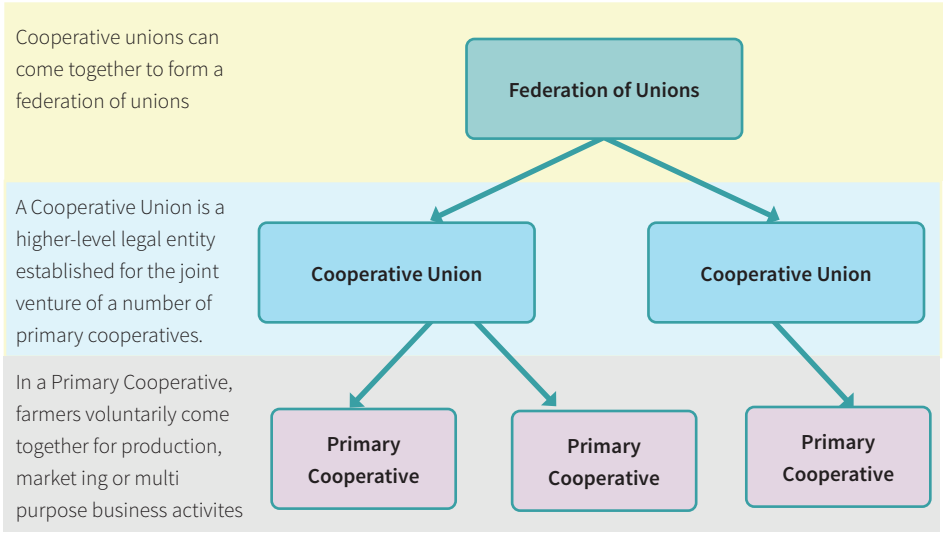
Figure 2. Malt barley value chain map



The malt barley value chain map (Figure 2) illustrates some of these changes. Solid lines show the flow of malt barley from the farmers to the other value chain actors. Broken lines indicate backward linkages and show that the malt factories and breweries are becoming prime actors in supporting the farmers. Support includes credit for input purchases, production technologies, and advisory services.

The forward linkages show that farmers now have three outlets for their malt barley: cooperatives, malt factories, and small traders. The first and second outlets are developments that have emerged from opportunities for small farmers to have direct market linkages. Farmers who are members of the local cooperatives sell to their cooperatives, which also collect from non-members; the product then goes through the cooperative union or directly to the malt factories. Those farmers who are able to produce large quantities supply the malt factories directly. A few small farmers sell malt barley directly to local consumers (urban or rural).

Figure 3. Farmers' organizations



In a third, conventional market channel, small traders collect from the farmers, aggregate and supply to the wholesalers who then channel in bulk to the breweries or malt factories. Although many farmers now sell to their cooperatives or directly to the malt factories, private traders continue to be strong buyers and suppliers to both the factory and the breweries. There was a time when the malting factories complained that traders were supplying adulterated malt barley or that the product had deteriorated before reaching the malting factory or breweries. Through improved communication and advice from the brewers, traders now have a better understanding of quality standards and of how their product is graded and priced. Their conscious communication with farmers and the breweries has contributed dramatically to more trusting and trustworthy relationships. Many smallholders prefer to sell malt barley to traders because they offer competitive prices, can make immediate payment, and can pick up at the farm gate on a more flexible basis than the primary cooperatives. Some brewers involve traders as agents in contract farming models.

Farmers' organizations become more supportive and business oriented

Farmers' organizations are important middle value chain actors (Figure 3). The Federal Cooperative Agency is responsible for building their capacities, promoting their market share, and confirming their registration in terms of the Cooperative Law of Ethiopia.

Since 2016, cooperatives and unions in the Arsi-Bale zones of the Oromia region have been active agents for agricultural transformation. Most malt barley smallholders belong to new malt barley primary cooperatives, which serve as economic agents for members, but also as agents of the government in implementing its transformation agenda, helping to ensure that smallholders can access necessary farming inputs, such as seed and fertilizer. Large multipurpose unions support the primary cooperatives, which in turn support the member farmers.

Union support for the cooperatives includes loans for the purchase of seed, chemicals, grain (output market) and consumable goods; farm machinery rental (tractors and combine harvesters) at fair and affordable rates; training in financial management, marketing, and cooperative development; agronomic advice; and

support for constructing cooperative warehouses and other infrastructure. The primary cooperatives distribute improved seeds, fertilizer, chemicals, and consumable goods to the farmers. Using union loans, the cooperatives also purchase grains to aggregate (assemble) malt barley from farmers.

The cooperative unions are playing an important role in advancing cluster commercialization by facilitating contracts between primary cooperatives and high value chain actors to secure a reliable market and attractive prices for contract farms. As the primary cooperatives are the units closest to the small farmers, these farmers are – by implication – also signatories to the contract market agreement, which establishes quality standards and respective prices. At the same time, the Assela Malt Factory has signed contracts with malt buyers, namely, the beer breweries such as Heineken and BGI. As a result, there are clear and strong market linkages between the farmers, the breweries, the Assela Malt Factory, the cooperatives, and unions. Contract farming has also led to the rapid specialization and commercialization of malt barley and other agricultural commodities.

A favorable environment and bridging leaders within the organizations have enabled the Federal and Regional Cooperative Agencies to introduce fundamental structural change –from a politically oriented structure towards professionalism. This has cascaded down to the primary cooperatives and the cooperative union at grassroots level, creating fertile ground for organizational reform in these organizations, as witnessed during the fieldwork for this case study. The cooperative unions have hired professionals in finance management, marketing, agriculture, and other key functions. Primary cooperatives now also tend to hire a salaried manager and professional accountant to run their day-to-day activities properly. In conversations with the case writer, cooperative members and officials showed a new and high level of understanding of the quality standards and grading for their products.

With guidance from the Federal Cooperative Agency, the unions and primary cooperatives have become more vibrant business makers and are able to provide services to support small farmers. This has attracted many more farmers to join.

Three examples – the Galema Union, the Lencha Primary Cooperative, and the Licha-Hadiya Cooperative Union – illustrate how collaboration and trust are helping to strengthen the malt barley value chain and serve the interests of smallholder farmers.

Breweries and malt factories are supporting farmers for mutual benefit

The limited supply of locally grown malt barley has spurred the breweries to work with the farmers to expand production for mutual benefit.

This common aspiration has been crucial in the friendly relationships that have developed between breweries and farmers. The breweries are playing a key role in motivating and supporting the farmers to improve their productivity and increase their production of malt barley. Through the intervention of value chain actors, the breweries have taken the initiative to introduce better quality seeds. In 2016, the Heineken Beer Company introduced two high-yielding and better malting quality varieties – called Traveler and Grace – to Arsi-Bale farmers, with recommended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The Galema Union

In 1992, seven cooperatives formed the Galema Union, with a membership of 13,000 farmers and a capital of 160,000 birr. For many years, the Union was ineffective in supporting the farmers. Following the establishment of the Federal Cooperative Agency, the Union has made structural changes, according to Tsegaye Kebede, the union manager since 2016. Board and staff members are no longer politically affiliated, but elected from candidates nominated by cooperative members. For key staff positions, the union recruits professionals in such areas as marketing, engineering, agricultural extension, and accounting.

Membership now stands at 124 cooperatives, comprising 85,000 farmers, drawn from four districts. Its capital has reached more than 56 million birr. Among the Union's many assets are three combine harvesters and one tractor; a seed cleaner and a packing machine; an animal feed processing machine; a generator; a laboratory for seed germination; offices for its staff; and a warehouse that can accommodate as much as 3,000 metric tons of seed and 8,000–10,000 metric tons of fertilizer.

As a shareholder in the Assela Malt Factory, the Union has a contractual agreement to supply malt barley to the factory. Apart from supplying farmers with seeds, fertilizer and herbicides, the Union provides combine harvesters and tractors for rental, and does grain marketing and seed multiplication. It also offers a financial audit service to cooperatives. In a new development, the ATA is working with the union to establish a farm mechanization service that provides garage services, training, and spare parts. The ATA is also facilitating conditions for the Union to buy additional farm machinery through a loan from the Development Bank of Ethiopia.

The Lencha Primary Cooperative

The Lencha Primary Cooperative belongs to the Galema Union. Cooperative chairman Haji Hussien Abdi sketches the history of the Cooperative. In 2013, 75 farmers joined hands to establish the Cooperative, with capital of 7,500 birr. Over the first few years, the Cooperative's economic activities were sluggish; its total capital reached only 60,000 birr. Abdi says that the capital has grown to about 450,000 birr and the Cooperative now has 350 farmer members.

In 2017, in line with structural reforms, the Cooperative elected a new committee, comprising a chairperson, an accountant and a cashier, to run the Cooperative. Except for a per diem payment, committee members serve voluntarily for at least three years. One of their roles is to purchase malt barley from members and non-members to sell to Assela Malt Factory as per their contractual agreement. They rent farm machinery such as combine harvesters (from the Galema Union) and tractors (from traders). However, although the demand and prices for malt barley are increasing, the Cooperative suffers from a shortage of improved seed and fertilizer, and has insufficient cash to hire professionals.

The Licha-Hadiya Cooperative Union

The Licha-Hadiya Cooperative Union has developed trusting, collaborative business relations with its members and other small farmers. During the field study period, it collected more than 10,000 metric tons of quality barley and wheat from farmers for its factory and some to supply the wholesaler, Ethiopian Grain Trade Enterprise. The Union has linked its market with universities, international humanitarian organizations (such as the World Food Program), bakeries, shops, and wholesale traders. Through the World Food Program, the Union provides haricot beans, maize, and wheat spelt for 72 schools in the region.

agronomic practices.[18] Under farmers' management, the Traveler variety gives an average yield of 4.5 mt/ha. If well managed, it can yield from 5 to 7 mt/ha, which doubles farmers' productivity and related income.

The Assela Malt Factory supports malt barley farmers by providing its own trucks to transport barley from cooperatives and cooperative unions to the factory. It also offers extension services to producers and cooperative purchasing committees to help them procure a product that meets the quality requirements.

An important development is the widely accepted practice of contract farming as a means of modernizing market transactions. Contractual agreements help to mitigate market risk for all parties concerned by securing the quantity to be supplied and fair pricing. This helps to strengthen trust between the producers, malt processors, and brewers. The unions play a facilitation role between cooperatives, malt processors, and breweries. Every brewery has a market agent in the contractual arrangement, either nucleus farmers or individual traders. Nucleus farmers are usually large-scale farmers who have influence in the farming community. The government is trying to facilitate further growth through legislation designed to provide greater transparency and predictability in implementing contract farming models.

Nearly all breweries are moving towards contract farming. Breweries' interest in the malt barley market is driven, in part, by a commitment to improving smallholders' productivity, incomes, and livelihoods. But there is also a business imperative for breweries to hedge against price fluctuation and the availability of foreign exchange for importing malt and other inputs. The long-term target of the contractual arrangement is to enable local farmers to meet 100% of the demand for malt barley.

Diageo and Heineken are most important examples from the case study area. Diageo introduced a contract farming model as part of a broader domestic procurement initiative in 2012, followed by Heineken.[19] Each model provides a package of support for smallholders to help them become better, more reliable suppliers of malt barley.

Diageo's model emphasizes collaboration with cooperatives as key intermediaries, while Heineken's focuses on relationships with larger, lead farmers. Diageo's contract farms are mainly in South West Shoa, Arsi and West Arsi, with around 6,000 smallholders. Thirty-one malt barley cooperatives and five unions serve as the interface between the farmers and Diageo. Heineken started with 3,000 contract farmers; the number of participating farmers currently stands at 10,000.[20]

In 2018, the Assela Malt Factory entered into contract farming with 17 unions and two cooperatives to harvest 561,000 quintal (56,100 metric tons) of malt barley. This contractual arrangement is believed to benefit all of the contracted parties. The factory has provided a total of 64 million birr loan (without interest), of which 31 million is for input and the remaining 33 million is for output financing. In addition, the factory provides extension services through its agronomists. To date, it has managed to collect about 61% of the contracted amount.

The impact of contract farming has been remarkable. In particular, the productivity and quality of smallholder malt barley have improved significantly. For example, representatives from Heineken report improvements in the yield of malt barley from their contracted farmers, from around 3.5 mt/ha to over 6.5 mt/ha.

Heineken credits its success in introducing the Traveler seed variety to collaboration with regional research and seed multiplication enterprises, specifically Oromia Seed Enterprise, Holeta Research Centre, and Ethiopia Seed Enterprise. The contract with smallholders, though loosely structured, has been effective in limiting side selling; the input package appears to attract and sustain farmer engagement.

Features of the contract farming scheme

- Direct contracts with each smallholder, with a commitment to a guaranteed market price.
- Transactions based on quality assurance by formal legitimate companies and quality-related pricing.
- Interest-free loans to participating farmers to support input purchases (seed and fertilizer) and mechanized farming.
- Capacity building for farmers to improve their skills and collective buying power.
- Provision of improved varieties of malt barley seed (such as Traveler) after adaptation tests by the research institutions.
- Provision of bagging and packaging equipment for partner farmers, and centralized collection points.
- Agricultural extension support and general business advice.

Increased productivity and contribution to import substitution

Clustering has helped the agricultural sector to concentrate on improving the commercialization of high value crops with a strong value chain for the export market, import substitution, and raw materials for local manufacturing and agro-processing. Access to input and output markets and technical advisory services has significantly improved in cluster areas. The approach has also facilitated mechanization and farming on a vast area, with farmers producing the same crops and organized as a cluster.

Experts in the ATA in Oromia regard the barley cluster as central to agricultural transformation. Tirfu Hedeto, a deputy manager, and Girma Kanani, agribusiness expert (both of the ATA-Oromia), concur that if agriculture is to transform, barley should come first and wheat should follow. In their view, clustering has been well adopted and effectively implemented in Arsi-Bale for barley and wheat farming.

In Arsi-Bale, the cluster approach has increased the productivity and production of malt barley, and improved the livelihoods and food security of smallholders, especially those in contract farming arrangements.

As one farmer put it:

> ***Durii akkumaa sangaa wajjiin oollee galla turre, amma garuu calla guurree galla. [In the past, we were simply following after the oxen the whole day, but now we are harvesting a great deal of grain.***[21]

Case study interviews with cooperative and union managers, and a focus group discussion with small farmers in the Arsi-Bale zone, for this study, indicate that land productivity increased from an average of 2.5 metric ton/ha to 3.5 metric ton/ha. This represents a growth of about 40%. The growth in productivity, coupled with a 50% rise in price, more than doubled malt barley farmers' income in 2018.

Today, food security is not an issue for small farmers who are actively participating in malt barley farming and marketing. Their concerns now revolve around making farming a business and their shift in lifestyle. Groups of small farmers growing malt barley were asked: Are you still food insecure? How often do you eat per day? Their typical response was that food was no longer an issue: "…we eat whenever we want. The problem is rather, we do not have time to cook. Women are running after farming and getting children to school." However, community farmers with small land or no land at all remain poor and food insecure, as they have not been able to benefit from the technology.

The combined efforts of the value chain alliance have quickly activated new production practices and drawn the government's attention to the prospects of malt barley for exploiting local potential. Farmers, the prime value creators, have come to understand the use of improved farm practice and its economic benefits.

Eager to seize the opportunity created by the burgeoning beer industry, they are demanding advanced technologies and support from government and other actors in the malt barley value chain.

More than at any other time, farmers look for quality information on markets for the inputs and outputs. Many have moved away from subsistence production to become market-oriented and profit-maximizing farmers, albeit on a small scale. They are using all the available high-yielding technologies (new seed varieties and agronomic practices). Unlike farming practice in other parts of the country, farming in the Arsi-Bale area is mechanized, although the high demand for mechanized production has yet to be met by local suppliers. Farmers now also demonstrate a business mentality, for example by calculating the costs and benefits of agricultural production. The resulting change in their income and livelihood is immense. This has motivated farmers to increase production further through a reallocation of their land and capital.

The cluster approach and the formation of a Malt Barley Value Chain Alliance have contributed significantly to import substitutions. However, while the nation has a huge potential to produce locally and to meet the demand for quality malt, it still needs to import from abroad. At the same time, a lack of foreign exchange constrains the importation of raw materials. The recent increase in productivity has helped to address this problem. Increased productivity reflected immediately in an increased marketable surplus of local malt barley, particularly in the Arsi-Bale area.

Transforming farming, transforming livelihoods

There was a time when small farmers in the Arsi-Bale area practiced subsistence farming in which nearly all of the crops they grew helped to feed the farmer and the farmer's family, leaving little, if any, surplus for sale or trade. Feeding family was the first priority; profit seeking was secondary and rarely imagined. The adoption of a cluster approach and the formation of the Value Chain Alliance have done much to change this. Advisory services have led to an increased adoption of technologies and the consolidation of fragmented small plots into large-scale cluster farming has increased the demand for mechanization. At the time of this case study, in the Arsi-Bale area more than 35% of barley and wheat was cultivated by tractor, and harvested and threshed by combine harvesters. In the malt barley cluster, the demand for mechanized farming is growing, partly as a result of increasing awareness and partly as a response to a rural labor shortage.

Two stories from the field illustrate how malt barley farmers are reaping the benefits of agricultural cluster commercialization. These men have come to realize what once seemed to be an impossible a dream.

Asha Haji is a 45-year-old farmer with a family of 10 members. He lives and farms in the Garmama kebele, Kofele district of west Arsi zone. He never attended formal schooling. According to the perceptions of the community, Haji is a middle-class rural farmer, not rich or poor. He owns a total of 22 livestock: two oxen, 15 cows, and five horses. He started farming malt barley years ago but only for home consumption. In 2017, he began changing his farming methods:

> ***After close advice from the agricultural extension workers, I started a modern form of farming in 2017. I started to use improved varieties of malt barley, fertilizer and rental tractors. For example, in 2018, I used 3***

hectares of land, harvested 11 metric tons of malt barley, and sold it for 143,000 birr to traders. I found this is huge money in my life. Then in 2019, I increased the area to 4 hectares renting from the neighbors, harvested 14.5 quintals [1.45 metric tons], and sold it for 189,000 birr. I earned a net profit of 78,500 birr in the first year and 85,000 birr in the second.

Now, food for the family is not an issue. We have enough, thanks to God. With the income from the sale of malt barley, I managed to build a new house in the nearby town. I plan to gradually move … and get my children closer to school.

In the future, I know I can make more profit. But the problem is a shortage of improved seed and increases in fertilizer price. Now everybody needs to hire a tractor and combine harvesters, but there are too few renters.

Hussien Abdi is a more advanced farmer. Although he can hardly read or write, he is a chairman of the Lencha Cooperative Association, in the Boqoji District of Arsi. He tells his story:

I am over 65 years. I am not old, and even if I get old, farmers never retire. I have a big farm, about 10 hectares. For a long time, I've been curiously looking for new technologies. I dominantly produce wheat and barley, and also beans, linseed, and other crops. I started using improved seeds of wheat and barley more than 10 years ago. But my farming over the last three years is much different. I am well connected to the Heineken Company and I have a new variety of malt barley called Traveler, which is highly productive.

The extension experts of the Galema Union and those of the Bureaus of Agriculture are advising me. I produce 20 to 30 metric tons of malt barley every year and sell to our cooperative association for over 300,000 birr every year. The cooperative association sells much of it to the Assela Malt Factory and some to Heineken.

I never dreamed I could earn this much money! I have to dream now for my community – buy a tractor or combine harvester and supply the service to the community. The demand for this farm machinery is sky-rocketing.

Synergos photo

Challenges and opportunities

Much has been achieved by way of changing leaders' mindsets and enabling greater collaboration among key actors in the malt barley chain, but these changes do not reach down to all layers of the system. Cluster commercialization is proving successful to the mutual benefit of all actors along the malt barley value chain, but still faces challenges in matching local supply to ever-growing demand. Ongoing support to key actors in the malt barley value chain is crucial for enhancing production and marketing efficiency. The coordinating roles of the Value Chain Alliance and the Secretariat of the Agricultural Cluster Commercialization remain vital.

Changing mindsets and values

While the Value Chain Alliance has done much to cultivate trust between various actors in the malt barley value chain, trust and collaboration between regional and federal institutions remain fragile, largely because of political instability and the frequent reshuffling of leaders.

Together with the ATA, Synergos has made a remarkable contribution to multi-stakeholder collaboration and leadership development in Ethiopia's malt barley sector, and more widely in the country's agro-economy. However, capacity building and leadership training were restricted to executives and senior leaders at the federal and regional levels, with no cascading to the lower levels of leadership closer to the grassroots. With some rare exceptions, stakeholders at the grassroots level, especially experts in government institutions at zonal and district levels, still lack the desired degree of motivation and accountability to provide farmers with advisory services. To complement government extension services, breweries and malt factories are deploying their own extension workers to advise malt barley farmers and align with contract farming schemes, but with limited reach.

The prevalent political instability also severely affects the working environment of key actors in the malt barley value chain. Sudden shifting and reshuffling of experts and leaders of higher and local institutions happens frequently. Experts who were interviewed commented on how these changes depress their interest in actively providing support to the malt farmers. In addition, the frequent turnover of trained personnel may compromise the capacity-base built through the Synergos approach. Reflective practice (Inner Work) and Bridging Leadership have not yet become institutionally embedded practices.

This situation calls for intensive and continuous capacity building for the lower levels of leadership, with adequate scope particularly for the district experts and extension agents at the grassroots level.

Ongoing challenges in cluster commercialization

Keeping pace with rising demand

Despite considerable improvements in production and productivity, the local supply of malt barley has not kept pace with the growing demand.

Together, the existing malting factories currently meet only 38% of the breweries' malt demand. Even if they operate at full capacity, these malting factories meet only about 59% of the breweries' total malt demand. With the growth in the population and the economy, and a burgeoning culture of beer consumption, Ethiopia is experiencing a sharp increase in beer demand. In trying to exploit this situation, most breweries are undergoing further expansion.[22]

An adequate supply of locally produced high quality malt is crucial. To this end, existing malting plants are expanding, and new plants have been established. The Assela Malt Factory, which the Oromia Cooperatives Union bought from the government in May 2018, is set to triple its malt production. A new malt barley plant, Boortmalt, has recently entered business, established through an agreement between the CEO of Boortmalt, based in Belgium[23] and the commissioner of the Ethiopia Investment Commission (EIC).The agreement results from the collaborative

effort between the EIC, the ATA, and the Ministry of Agriculture and Natural Resources (MoNAR) to facilitate land permits for nucleus farms, a malting plant, and satellite silos.[24] The new malting factories are expected to boost total national malting capacity considerably.

These increased investments in breweries and malting plants present a major market opportunity for malt barley farmers. If these farmers are to meet the ever-growing demand, they need not only high-yielding, good-quality seed but also access to farm machinery and finance. For each of these needs, there are supporting institutions, yet many challenges persist.

Seeding growth

Productivity depends on the quality and availability of seeds and fertilizers, among other things. The seed distributed to farmers often arrives late and is not always of the right quality. Local research institutions have not brought forward new higher-yielding malt barley varieties suited to Ethiopia's market needs. Until recently, smallholders had access to supposedly high-yielding seed varieties like Holker. But these old varieties have lost their vigor. Heineken's introduction of new high-yielding varieties such as Traveler and Grace has been vital to the rise in productivity. However, it is risky for farmers to rely too heavily on one variety. Risks include monopolistic behavior by the seed owner and the seed distributor, as well as vulnerability to pests and disease. Also, replanting the seed decreases productivity. Although extension officers warn farmers against replanting seed, there is no prohibition on this.

There is also a vibrant informal, unregulated local seed system. Seeds are self-saved or passed from farmer to farmer. Many smallholders depend primarily on the informal seed system because it is cheaper, and seeds are locally available when needed. However, the informal seed system does not guarantee the quality of the seeds. In interviews for this case study, smallholders reported the shortage of quality seed as a key constraint in their willingness to expand malt barley production.

Constraints on seed supply mean that brewers and malting factories face significant challenges in realizing a viable domestic supply chain. Over time, a reliance on imports results in foreign exchange shortages, which in turn delays the flow of imports. These concerns explain the vital role of national and regional research institutions in introducing new, high-yielding seed varieties.

Regarding fertilizer, the other crucial input for farming, the Agricultural Input Supply Enterprise is the central procurement body and government monopoly tasked with importing chemical fertilizer into Ethiopia. Federal cooperative unions and primary cooperatives distribute the fertilizer to members. However, delays and inefficiencies in the input supply system persist, with associated adverse effects on farm productivity for most agricultural commodities, including malt barley. To address the problem, several government initiatives aim to attract private investment in the provision of inputs for smallholder farmers. However, price regulation can deter investment.

Mechanizing farming

With the growing demand for malt barley, barley farmers in the Oromia cluster are using tractors and combine harvesters more aggressively than ever before. However, farm machinery is in short supply relative to the mounting demand. At present, only a few individuals and unions supply farm machinery on a rental basis. Research and investment in mechanization remain very limited.[25] Leases of the available machinery are expensive and rising. As understood during the case study fieldwork, many small farmers have already shown an interest in buying tractors and the other machinery, and have the capacity to do so. The Farmers' Union Federation has been negotiating with the government for wider access for farmers to agricultural machinery.

Financing growth

The recent establishment of the Value Chain Alliance has alleviated the problem of access to input and marketing finance for barley. Through contractual agreements between the small farmers, malt factories and/or breweries, the factories and breweries make credit available to contracted farmers. Cooperatives are also able to access credit for grain marketing through their respective unions.

However, while government has long tried to encourage banks to develop agriculture-based lending products, the sector is underserved with credit, with the exception of

the contract farming models. All actors – the small producers, traders, processors, and manufacturers of all sizes – face gaps in access to financial services. The constraints arise from two interdependent elements of the agricultural finance ecosystem. First is the limited capabilities of financial institutions that lack the agricultural knowledge required to assess feasibilities and the risk-averse behavior of the farmers. Second is the vulnerability of the agricultural sector to the risks of drought, floods, and pests, as well as to risks associated with high transaction costs due to diseconomies of scale in operation and geographical location (physically dispersed clients, difficult to reach). As a result, financial institutions often opt for lending practices based on short-term trade finance and higher collaterals that farmers do not have.

Given the availability of suitable land, there is immense potential to involve more farmers, increase productivity, and harvest more crops locally. This investment opportunity could create stronger backward and forward linkages between agriculture and industry and improve the income of small-scale farmers (through better market opportunities). It could also free up Ethiopian foreign currency reserves that are currently being used to purchase malt in the world markets.

Conclusion and lessons learned

The cluster approach in Ethiopia's malt barley value chain offers great growth potential, especially considering the rapid increase in demand and the advantages of import substitution. Already the benefits are reaching a wide range of actors, improving the income and livelihoods of the farmers and spurring faster growth in the processing industries. Once the sector achieves its potential to fully meet the demand for locally produced malt barley, this should result in a significant saving in foreign exchange, an important advantage for Ethiopia's economy.

Processes of Inner Work and trust-building have enabled the emergence of several bridging leaders in government agencies, and promoted a sense of common purpose among leaders. This has led to the growth of synergy among actors involved in the sector, including practical procedures for cooperation and accountability.

This broadening vision has done much to strengthen the cluster approach to agro-industrial development. This approach has led to improved relations among value chain actors, and has strengthened many of the actors, notably farmers and their organizations, thereby building their ability to contribute to the economy.

Whatever the challenges to agricultural transformation in Ethiopia, the benefits of collaboration through a cluster-commercialization approach are clear. So, too, is the promise of sustained reflective practice (or Inner Work) for changing mindsets and supporting the emergence of leaders – at all levels, from grassroots upwards – who can bridge differences and bring key actors together to articulate and work towards a common purpose.

Synergos Photo

Notes

[1] Exchange rate: 1 USD = 29.2460 birr, on August 21, 2019.

[2] Extract from an interview for this case study.

[3] Temesgen Gebeyehu Baye, "Poverty, Peasantry and Agriculture in Ethiopia," Annals of Agrarian Science 15(2017).

[4] For example, the Sustainable Development and Poverty Reduction Program (2002/03–2004/05) and the Plan for Participatory and Accelerated Sustainable Development to Eradicate Poverty (2005/06–2009/10).

[5] See Synergos, "Trust, Collaboration, and Collective Learning Synergos Experience in Namibia and Ethiopia," in Harnessing the Power of Collective Learning: Feedback, Accountability and Constituent Voice in Rural Development, eds Roy Steiner and Duncan Hanks (Routledge, 2016).

[6] Both concepts have their roots in Michael Porter's model of business development. Michael E. Porter, Competitive Advantage: Creating and Sustaining Superior Performance (New York: Free Press, 1998).

[7] Ethiopian Agricultural Transformation Agency, "Agricultural Commercialization Clusters", accessed April 17, 2020, www.ata.gov.et/our-approach/agricultural-commercialization-clusters-2/.

[8] USAID, "Value Chains and the Cluster Approach: Best Practices in Transforming Relationships to Increase Competitiveness and Focus on End Markets" (USAID Micro Report no. 148, 2008).

[9] Productivity is a measure of efficiency. It refers to the yield or quantity of product harvested from a hectare of land cultivated and measured as an amount of metric tons (tonnes) per hectare. Production is the total quantity of produce harvested from total land cultivated, measured in metric tons.

[10] Source: Interviews conducted at breweries and malt factories.

[11] See, for example, Getachew Legese, Tolosa Alemu and Tesfaye Zegeye, "Unexploited Opportunity in Agro-processing: The Case of Malt Barley in Ethiopia", in Barley Research and Development in Ethiopia. Proceedings of the 2nd National Barley Research and Development Review Workshop. 28-30 November 2006, eds B. Mulatu and S. Grando (Holetta, Ethiopia: HARC, 2011).

[12] Information from an interview with Techane Adugna, former program manager of Synergos, currently employed by the Agricultural Transformation Agency.

[13] Theory-U is a change management method developed by the Presencing Institute. See https://www.presencing.org/aboutus/ accessed July 30, 2019.

[14] This paragraph draws from a description by the Presencing Institute. See https://www.presencing.org/aboutus/theory-u accessed July 30, 2019.

[15] See Synergos, "Trust, Collaboration, and Collective Learning Synergos Experience in Namibia and Ethiopia" for a description of the learning journey and other methods for deepening understanding and trust.

[16] See Peggy Dulany, Building Trust Works (New York: Synergos, 2017).

[17] An agricultural cluster council is a council responsible for the effective implementation of the Agricultural Cluster Commercialization initiative.

[18] The Community Revenue Enhancement through Agricultural Technology Extension Project (CREATE) of Heineken and its partners played a crucial role in introducing and distributing the new high yielding seed varieties. For a description of CREATE and its contribution to the malt barley value chain in Ethiopia, see: EUCORD, "CREATE Ethiopia: Community Revenue Enhancement through Agricultural Technology Extension (CREATE), 2013–2019", https://eucord.org/projects/create-ethiopia/.

[19] The CREATE project of Heineken and its partners supported the development of the contract farming model. See, for example: Addisu Bezabeh Ali, "Malt Barley

Commercialization through Contract Farming Scheme: A Systematic Review of Experiences and Prospects in Ethiopia", African Journal of Agricultural Research 13, no. 53 (December 31, 2018): 2957–2971.

[20] G. Holtland, ed., Contract Farming in Ethiopia: Concept and Practice (Arnhem, The Netherlands: AgriProFocus, 2017).

[21] Extract from focus group discussion with farmers who have access to the new cultivar, Traveler.

[22] This information was gathered from interviews with experts.

[23] Boortmalt, with headquarters in Antwerp, is a subsidiary of Axéréal, France's largest grain cooperative.

[24] "Boortmalt Malting Set to Open Malt Factory in Ethiopia," New Business Ethiopia, November 26, 2017, https://newbusinessethiopia.com/manufacturing/boortmalt-malting-set-to-open-malt-factory-in-ethiopia/.

[25] As part of the Ethiopian government's barley strategy, there are plans to amend the nationwide regulatory framework on mechanization, develop industry standards, and establish testing and certification facilities for agricultural machinery. The strategy also focuses on developing, testing and promoting business models for providing effective agricultural mechanization services to the smallholders.

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