



KIT CASE STUDY

Pluralistic service systems

Sesame production and marketing in northwest Ethiopia

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Before the 1990s, extension services were seen as a service to be provided solely by governments. During the 1990s, however, confidence declined in the effectiveness of public-sector extension agencies. This led to the emergence of an alternative paradigm, where it was assumed that market-based solutions and the privatization of extension provision could become an effective and sustainable base for development. A large number of governments and aid agencies experimented with this. In many countries, however, privatization (often achieved merely by withdrawing funding for public-sector agencies) resulted in most farmers losing their access to any form of advice, let alone impartial and independent advice (Christoplos, 2010; Davis et al., 2012; Swanson et al., 2010).

Other organizations have jumped in to fill this gap, including the private sector, NGOs and farmer organizations. The result has been 'messy' systems, referred to as 'pluralistic service systems', in which farmers are supported by different actors, funded from different sources (Wongtschowski et al. 2013).

But how can such pluralistic systems operate successfully? Two major questions need further analysis in this regard:

1. To what extent do these service providers work together? In other words: what are – if at all – the coordination mechanisms in the pluralistic system?
2. To what extent are these emerging systems responding better to farmers' needs?

The Royal Tropical Institute (KIT), in collaboration with SNV, Common Fund for Commodities (CFC), Wageningen UR Centre for Development Innovation and Agri-ProFocus, have made a purposeful effort to answer these questions by documenting case studies in the vegetable oil seed sector, where a number of innovative projects have tried to strengthen different service providers and seed producers. Field work was conducted in Burkina Faso, Ethiopia, Mozambique and Uganda; this document presents the case of the sesame value chain in northwest Ethiopia.

As the fifth largest producer of sesame worldwide (FAOSTAT, 2011), sesame – 'white gold' – is not a new crop for Ethiopia. In the last two decades, production has risen significantly. From 1997 to 2007 total area under production increased over 200% (Kindie, 2007). This is in contrast to other African countries where production has only taken off over the last five years, as in the case of Burkina Faso and Mozambique.

Although the white Humera type of sesame is well-known in the world market, the largest part of the Ethiopian sesame is exported to China. The importance of sesame production and marketing can be observed in local towns such as

Humera, Dansha, Metema and Kokit, where the local economy is 'booming'. Increasingly the sector attracts investments in storage and processing, especially in the ECX market towns of Humera, Metema and Gonder.

In addition to this, the Ethiopian system serves as an interesting example because of the large involvement of the government, specifically through the establishment of the Ethiopian Commodity Exchange (ECX), a governmental body.

In Ethiopia, sesame has become a major source of income for farmers, ranging from small-scale to very large so-called

A local sesame spot market

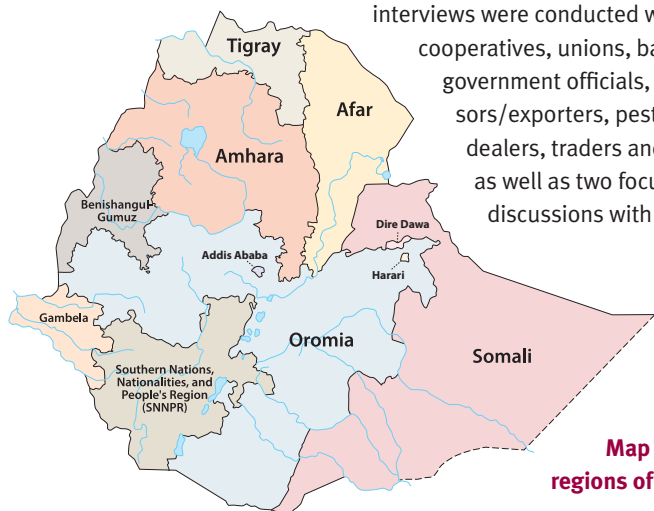


‘investor’ farmers, and prices have been steadily rising in the past years. But there is still a lot of room for improvement. Average productivity is still very low and marketing channels should be further developed. Lack of inputs, finance, infrastructure, transport and services are the main causes of these problems. This study focuses on service provision to farmers (technical training and coaching, organisation, market information), also known as agricultural advisory services.

This case-study aims to provide a brief overview of the various services offered with regard to sesame, how these cater to the demand of farmers and other actors down the value chain and the extent of coordination of activities between service providers. The geographical focus of this study is northwest Ethiopia where 70% of the Ethiopian sesame is produced. Field work was conducted in the Tigray and Amhara regions in

November 2013. Twenty semi-structured interviews were conducted with

cooperatives, unions, banks, government officials, processors/exporters, pesticide dealers, traders and NGOs, as well as two focus group discussions with farmers.



Map showing regions of Ethiopia

Chain description

Since the 1990s sesame has grown to become one of the major cash crops in Ethiopia. Global demand continues to grow and therefore prices have been steadily rising until the end of 2013, when prices went down. Some argue demand from China is particularly high since Ethiopia uses sesame to repay loans on Chinese-built infrastructure (Levitt, 2013).

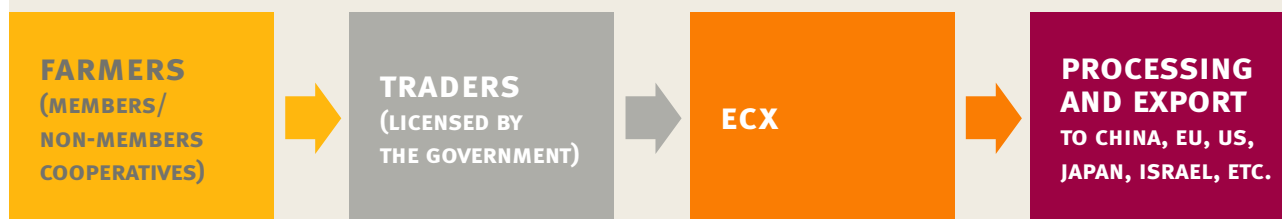
Sesame production is an activity pursued by small-scale, mid-scale and large-scale farmers. Small-scale farming usually involves plots of one or two hectares. However, in Amhara and Tigray, some commercial producers cultivate 500 hectares or more. There is no reliable data on productivity but average productivity levels are estimated by the local woreda offices at between 300 and 400 kg/hectare. Post-harvest losses are very high, harvesting, drying and threshing losses are estimated at 15% (SBN 2014).

Although there is a lack of reliable data it is clear that levels of productivity differ from farmer to farmer based on expertise and available resources (both tangible and non-tangible). Moreover, there is a clear trend towards decreasing levels of productivity with area size increase (SBN, 2013).

There is not one fixed value chain in Ethiopia. A workshop of stakeholders organized by the Sesame Business Network (SBN) identified 9 typical value chains, which have different variations and specificities. And while conducting the field-work new variations on these chains were identified. However the value chain most commonly used, by far, is the following¹ (figure 1):

¹ This statement is based on interviews with many stakeholders (NGOs, cooperatives, farmers, traders etc) and an assumption that most farmers are not members of a cooperative so will have to sell to traders.

Figure 1: Most practiced sesame value chain in northwest Ethiopia



Although cooperative membership is on the rise, the majority of Ethiopian farmers are not members of cooperatives. Only 9% of smallholders were members of agricultural cooperatives and only 40% of rural households had access to cooperatives within their *kebeles*, according to a study based on 2005 data (Bernard & Spielman, 2009). Even if membership has grown considerably over the last decade, many farmers are still left out. However, in the sesame value chain, the level of membership seems to be significantly higher than for most other crops. A study by SBN, using data from the Woreda Cooperative Promotion Agencies, found that, in the Amhara region, cooperative membership was 31%, while in Tigray it was estimated at 46%². Through bulking members' harvests, cooperatives reduce transport costs. Cooperatives provide an alternative to traders who keep margins between the farm gate price and ECX price to themselves and allegedly attempt to set up price agreements with other traders. Cooperatives aim to return most of that margin back to their members through dividends.

Whether a member or not, most farmers actually sell their produce at local spot markets to traders (hence not through cooperatives, see also Box 1) who, in comparison to many other sub-Saharan countries, are licensed by the government and are subjected to regulations and taxes. Hereafter, a negotiation unfolds resulting in a price lower than, but linked to, the ECX price (which in turn is decided by demand for the different grades of sesame).

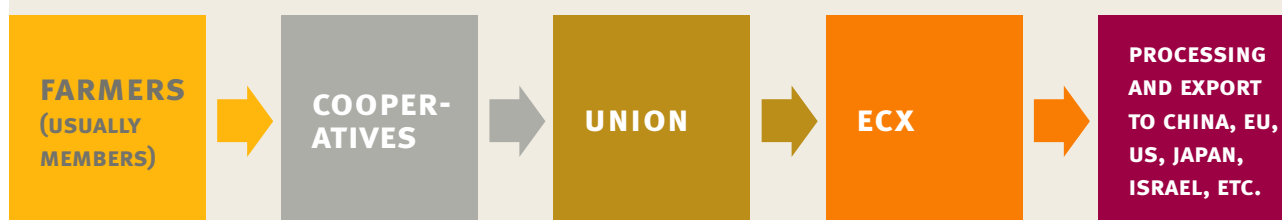
In addition to buying from farmers on spot markets, traders often own or rent small warehouses to store sesame to sell at a later time, since prices normally will start to rise during the beginning of the harvesting season in September. They also provide credit using different modalities. Some interviewed traders provided interest-free credit, but on the condition that the farmer in question commits to sell all their produce to the trader. Other traders demand high rates of interest (average of 250% a year and sometimes higher). Some traders also sell pesticides, sometimes on credit as well.

At some spot markets, digital billboards display the current ECX prices and a phone call to the telephone number 904 provides anyone with that same information. At these spot markets, government inspectors provide a first check on the quality/cleanliness of the sesame and verify safety procedures concerning transport. Traders then usually use rented trucks to transport the sesame to a local ECX collection point where they will sell it for the daily set price based on the grade awarded to it at the collection point. The grade is determined by four criteria: oil content, colour, moisture and inert material.

At the ECX auction, private processors then buy the sesame to process it further and export it through Port Sudan or Djibouti to China, India and, to a lesser extent, the Middle East, US, Japan and EU markets.

Another value chain that is often used is the following:

Figure 2: Sesame value chain in northwest Ethiopia through cooperatives



² These figures refer to farmers organized in primary sesame producers' cooperatives.

This is an option pursued by farmers that have a cooperative collection point relatively close to their farm³. In theory, there are, some advantages when selling to cooperatives:

- First, the profit margin between the negotiated price decided upon locally and the ECX market price is eventually meant to be returned to the farmer in the form of a dividend. However, under the most practiced scenarios (see Figure 1), traders keep most of the profit to themselves and, if no cooperative is located nearby and functioning, bring down the price through informal price agreements.
- Secondly, cooperatives often provide credit (for example, by using loans obtained through the union) and inputs on credit which they sometimes purchase from private input-dealers or from a union as well.

Usually after buying from farmers, cooperatives will either sell the sesame to ECX directly or to a union. Under the second scenario, a union functions as a bulk buyer after which it sells the sesame to ECX.

Some other but less used possibilities include:

Farmers → Cooperatives → Unions → Processing & export

Under this scenario, unions export directly without going through ECX. The small margin made by the Exchange is therefore kept by the unions, and possibly cooperatives and farmers as well. Moreover, some problems associated with ECX (see Box 1) are avoided. An example is the Selam Union in Amhara which secured contracts with Israeli and Chinese buyers in 2013, brokered by non-profit organization Agricultural Cooperative Development International/Volunteers in Overseas Cooperative Assistance (ACDI-VOCA). However, for this scenario, a strong union with strong member cooperatives is required, which is not always the case.

Farmers → Cooperatives → Private sector companies: processing & export (contract farming)

Currently private processors, Selet Hulling and Dipasa, are sourcing their sesame directly from a few selected, relatively well-functioning, cooperatives through a contract farming scheme. These schemes are often used when the quality of sesame needs to be high to access higher-value (organic) markets, usually in Europe. However, this scenario is still incipient because it takes larger investments from the private sector, well-organized cooperatives and bears the risk of farmers' side selling.

Farmers → Direct export through cooperatives

As opposed to the previous value chain model, processors/exporters no longer purchase sesame from the cooperative but the cooperative exports the sesame directly. An example of this value chain is the Kafta Humera Investor Farmers' Cooperative which processes the sesame around Humera town and directly exports to foreign countries without involvement of processing/exporting companies.

Farmers (investors) → Processing & export

Some individual investor farmers (usually with over a 100 hectares) are already exporting directly through Port Sudan.

Input supply

The main inputs used are pesticides. Pesticides are often supplied by a union. However, interviews with representatives of several cooperatives revealed they were often critical about this service. The pesticides are too expensive in comparison with market prices offered by traders or private dealers and arrive too late. In some towns/cities, private input dealers exist (several in Gonder, two in Humera Town) that sell to cooperatives or farmers individually. In addition, plenty of local traders sell pesticides to farmers, sometimes on credit.

Fertilizers are still rarely used. Most seeds used by farmers are still farmer-saved but can be traced back to Sudan. Setit 1, Humera 1 and Abasena are examples of officially released improved varieties. The adoption rate of these varieties is limited but increasing.⁴

Generally, the inputs supplied are not accompanied by services, with the exception of a few private pesticide dealers who give some limited advice on how to apply the chemicals (see section on service delivery).

Credit

Credit is essential and is one of the biggest problems among farmers⁵. Many small towns have at least one microfinance institution (MFI). ACSI and DECSI are the most important MFI's, respectively in Amhara and Tigray. Interest rates to individual farmers are 18%, and for group lending 13%, for these two banks.

Yet, according to interviewed stakeholders, loans are too small, ranging from 5,000 to 15,000 Ethiopian birr in total (US\$ 259-777), depending on the collateral of farmers. To pay for all the required inputs, as well as land preparation

³ Although cooperatives generally buy from their members, occasionally they buy from non-members as well. This is only possible when cooperatives have sufficient capital to purchase from farmers in the harvesting season. See Box 1 for more on this.

⁴ The availability of the improved varieties is increasing through collaboration of the Agricultural research centres (Humera and Gondar), Government seed enterprises, Bureaus of Agriculture and the SBN support program.

⁵ SBN's baseline among cluster members revealed that, in the Tigray region, finance is the number one constraint for farmers and other stakeholders in the sesame value chain. In the Metema region, it was ranked as the third most important challenge.



and harvesting, with labour being expensive, loan-size needs to be tripled to be effective⁶.

Commercial banks also offer loans but only against collateral which farmers usually do not have since cattle and land do

not qualify as such in Ethiopia. For this reason, the Sanja branch of the Commercial Bank of Ethiopia does not provide loans to individual farmers, although they will provide loans to the local union⁷.

Box 1: ECX system: an effective state intervention?

While conducting fieldwork it became apparent that, although a very interesting model, the cooperative-union-ECX value chain does suffer from some inefficiencies.

Cooperatives

The effectiveness of cooperatives varies greatly. Financial management and basic business planning skills are often lacking among cooperative management members. Also a lack of cash during the peak season, exactly the time when a cooperative needs to purchase sesame from their members, is a serious constraint. Moreover, interaction and exchange between cooperatives seems to be very limited. However, there are some positive examples of strong and thriving farmer cooperatives (see Box 2).

Unions

In theory, a union is a useful institutional arrangement to bundle the power of cooperatives, improve their communication and benefit from economies of scale. For example, a union could export directly, whereas a cooperative usually does not have the required amount of sesame nor expertise. Moreover, unions provide pesticides and loans to cooperatives. However, in practice, input and loan provision is often too little and too late. In fact, tensions exist between some unions and cooperatives. In 2013, several unions in the Metema region ordered cooperatives to sell through them instead of selling directly to ECX, in which they were supported by the zonal office of agriculture. In addition, cooperatives will be capped at a maximum amount of profit when selling to the union, which will be returned to farmers. Metema Union set a limit of 120 birr (\$6.2) per quintal (100 kg) for the 2013 harvesting season, which is only a small amount compared to previous years. With dividends for members decreasing as a result, cooperatives in Metema are already noticing farmers selling to traders at the spot market. The advantage of selling through cooperatives (dividends are returned to farmers which is not the case when selling to traders) is not delivered. As a result, the growth and strength of cooperatives is hampered.

ECX

ECX warehouses are often managed by a low number of staff. Consequently, delivery of sesame from ECX to processors/exporters might be too late, as was observed during the field work. One processor stated that they had been waiting for over a month for their sesame, which was stored in a warehouse only 15 minutes' drive away. Post-harvest losses, from using low quality bags, are also a problem.

However, taking all of this into account, in general value chain actors, including farmers, were said to be happy with the way the system was set up in comparison to pre-ECX times. Previously, traders could set the price and hence settle for low prices to make large profits. As such, market transparency and market conform pricing have greatly increased. Moreover, through ECX, there is now a guaranteed market for their produce, whereas before farmers would largely depend on traders showing up or not⁸.

At the same time it should be pointed out that since the establishment of ECX demand and thus prices have been increasing steadily, while at the same time sesame is used as commodity to finance Chinese-led infrastructure development projects in Ethiopia. This is a significant autonomous development that greatly benefits farmers and other sesame value chain actors and does not hurt the way the ECX-system is perceived.

⁶ According to a calculation of a local NGO employee.

⁷ A recent credit and production cost study by SBN led to some of the following findings: Average of 1.5 loans per farmer, 49% of production costs are borrowed, informal money lenders provide about half of the credit for small-scale farmers and timely credit supply mainly needed for (first and second) weeding and harvesting.

⁸ At the time of the research, independent data and studies on the efficiency of the ECX system were lacking. According to an ECX study, producers improved their earnings from 30% to more than 60% of free on board value (ECX, 2013). However, interviews with a large number of stakeholders (ranging from farmers to NGO staff) revealed that, albeit not functioning perfectly, the ECX system was perceived as a considerable improvement to the previous situation.

Advisory service providers

Public extension services

Extension workers provide technical assistance and are based at the woreda level. However their reach is limited. Farmers throughout the production cycle receive one or two visits, and some are not visited at all. There is evidence that at times extension workers tend to focus on emerging/advanced farmers, thereby leaving out small-scale farmers (the official policy is to work with 'model farmers' who in turn should reach out to surrounding farmers).

Cooperatives

The main non-tangible service provided by cooperatives is to organize farmers in order to bulk their produce. Through this, they provide opportunities to create an alternative to traders, who keep margins to themselves, and to set up price agreements with other traders, reduce transport costs, obtain loans, and offer storage space (thereby opening up the possibility of selling at a later time against higher prices) and inputs (namely pesticides, often on credit). See Box 1 and 2 for more information on the problems and opportunities faced by cooperatives.

Some cooperatives are stronger than others but most cooperatives interviewed dealt with the following problems:

- **Lack of capacity in finance, business planning and organizational management**
Most cooperatives lack these basic skills which prevent them from designing a clear strategy for the next production season or establishing partnerships with buyers or processors directly. The various financial institutions interviewed (both microfinance and commercial banks) complained, for example, about the lack of professionalism among cooperatives, which hampered their ability to give out loans.
- **Lack of working capital in peak season**
Finance is a big constraint as cooperatives often do not hold enough capital to purchase all of the harvest from their members. Hence members sell to traders who benefit from their monopolistic position and lower the price paid to farmers. Moreover, traders make an extra profit which would otherwise go to the farmers.

Of course the organizational and financial capacity and strength of cooperatives varies significantly (see also Box 2).

ECX

The ECX provides market information through electronic billboards at some spot markets, through their website, newspapers and through a telephone number (904). Another non-tangible service is grading of the sesame before it is exported abroad. This grading occurs at ECX collection

Box 2: Egri Mitkal cooperative

An example of a seemingly strong cooperative is the Egri Mitkal cooperative (1,160 members).

The cooperative faced some adversity in previous years when it had a problem of competition with traders, which brought down the price since they did not hold enough capital. To prevent this from happening again, the cooperative leadership sat down with their members and discussed their preferences for the sale of their production in the forthcoming season. Members shared three preferences:

- a) Selling at current market price and receiving cash in hand three days later from ECX through the cooperative.
- b) Cash at a set date in the future. On the international stock exchange, this would be called a 'future'. Farmers with a long-term vision and enough resources opt for this, since towards December or January the price is usually much higher than at the beginning of the harvesting season. This option spreads the time of payment for the cooperative thereby freeing up some working capital. This option is rather advanced since farmers can also choose to sell only a certain share of their sesame at a future date.
- c) Farmers receive cash on credit at a predetermined price, before they actually sell their sesame.

In addition, the funds used for the cooperative's working capital were diversified using:

- a) the cooperatives own capital (profit made in previous years);
- b) money from the savings and credit cooperative of which cooperative members are also a member; and
- c) a loan obtained from the municipality (on a banking interest rate).

As a result, the cooperative expects to buy 98% produce from its members. What has helped throughout this whole process is their transparency, the cooperative leaders said. In addition, Egri Mitkal's history partially explains their approach; the cooperative is made up of former militia fighters who were awarded 2.5 hectares of land each by the government after the war. As such, their internal cohesion is strong in comparison with other cooperatives.

Not only do such cooperatives provide essential services to their members, they could also function as potential service providers to other cooperatives.

Well organized and financially solvent cooperatives like Egri Mitkal could, for example, provide or assist in training for other cooperatives for a small fee. This could be a new source of income for Egri Mitkal (for which they actually showed an interest) and an effective way to train other cooperatives since they might be more likely to listen to colleagues than to independent trainers.

points and is both a service for the first buyers as part of the transaction like traders, cooperatives and unions (depending on the value chain) but mostly to sesame end-buyers (exporters and processors). The ECX is preparing to introduce online trading soon and establish remote trading centres across Ethiopia (allAfrica.com, 2013).

Traders

Traders provide limited advisory services. When traders buy sesame from farmers and sell pesticides at local spot markets they give advice on how to use pesticides, but this information is marginal since traders' knowledge of pesticide use is limited.

Private pesticide dealers

In some villages and towns (like Gonder and Humera) private pesticide dealers provide limited advisory services to their clients on how to use the products.

Microfinancers

Microfinance banks, like ACSI or Dedebite, provide training on savings' culture to farmers, in addition to their core business of providing loans.

Processors/exporters

Processing companies in the sesame sector usually export as well. Examples include Warka Trading, Kaleb, Dipasa and Selet Hulling. The degree to which processing is carried out differs among the various companies. Generally they do not provide direct services (in the non-tangible sense), but Dipasa and Selet Hulling have set up outgrower schemes, each with two separate cooperatives. In these outgrower schemes, the companies typically provide technical assistance. In addition, there is some degree of control on the supply and quality of sesame (through quality of inputs used and agricultural practices), which is necessary since the harvested sesame is sold by Dipasa and Selet Hulling to high-value and sometimes organic markets in Europe.



Two farmers conducting post-harvest cleaning of sesame

NGOs

At present, the main NGOs involved in the sesame sector in northwest Ethiopia are ACIDI-VOCA and SBN, the latter partnering with the International Fertilizer Development Center (IFDC) and Cooperatives for Change (C4C).⁹

- **AMDe, implemented by ACIDI-VOCA**, consist of two programmes in the Amhara and Tigray regions relevant to the sesame sector. These are larger programmes since multiple value chains are targeted, not just sesame. The first, Cooperative Development Program, supports two unions and six cooperatives by providing advisory services like brokering (e.g. the Selam Union managed to establish a link to buyers in Israel and China through ACIDI-VOCA) and trainings in financial and business management. The second, Agricultural Growth Program-Agribusiness and Market Development (AGP-AMDe), targets farmers in the Tigray region in six value chains, including sesame. Yet at the time of this research, the specific list of activities and their reach was not clear.
- **SBN** was officially launched at the beginning of 2013 and will be operational for at least 2.5 years, with the possibility of an extension of another 2.5 years. It is supported by Dutch funding (Netherlands Embassy in Addis Ababa, DGIS The Hague and the 2SCALE project, also supported by DGIS). After workshops with stakeholders, back in 2013, 19 clusters were established in 2013. The number of local cluster will increase to 35 in 2014. Clusters are networks of all the relevant local actors in a certain area that participate in the sesame value chain. This includes cooperatives, banks, government extension offices, processors, and traders, as long as they are in relative proximity to each other (see section on the coordination of service provision for more details on how these clusters operate).

In addition, 24 demo-plots have been established in the recent production season, providing training and demonstration of best agricultural practices. The plan is to increase the number of demo-plots to close to 1000 in 2014, by utilizing Farmer Training Centres (100) and farmer plots (>800). Seed multiplication both of sesame and rotation crops, will be continued. Training in financial management and business planning have been provided to cooperatives and SBN field staff are currently conducting research on the exact amount of post-harvest losses and how to prevent them. About one third of the project budget is reserved for matching grants in which local value chain actors can receive support to successfully develop and execute planned activities, which can range from assisting an informal pesticide dealer to obtain a license, to providing training to a cooperative to write a business plan in order to secure a loan.

⁹Not much information was gathered on the C4C project, hence it is not discussed in this paper

Table 1: Service provider description

Name of service provider and number of field staff	Type	Who pays for services provided?	Target group	Services provided	Number of farmers and/or volume of production sold with support of provider
Extension service - government. Constituted by: Bureau of Agriculture (focusing on agricultural production and best practices) and Cooperative Promotion Agency (focusing on cooperative capacities).	Public.	Government (free).	Small to medium farmers. BoA can in principle reach all small and medium farmers through their network. CPA can reach the organized farmers (around 40%).	Production, some marketing but very limited. Some training in forming cooperatives is provided through the Cooperative Promotion Agency.	-
Cooperatives.	Private.	Members.	Anybody. Two exceptions: many farmers live in very remote areas and do not have access; the Kafta Humera Investors Cooperative is only meant for investor farmers.	Organization of members which makes the provision of pesticides, loans, and brokering to find buyers (marketing channels) possible.	Max. 40% of farmers are members of cooperatives.
Traders.	Private.	Embedded services to farmers.	Anybody.	Limited advice on use of pesticides.	Data unavailable but probably vast majority (> 80%) of sesame farmers.
Banks.	Private.	Bank (free-of-charge for farmers).	Farmers (often through cooperatives).	Trainings on saving and loans.	Unknown.
Pesticide dealers (in town, through shops).	Private.	Embedded services to farmers.	Cooperatives or individual farmers.	Limited advice on the use of pesticides.	Unknown but most pesticides are sold through traders or a union.
ECX.	Public.	Unclear to what extent public expenditure compensates for some of the costs made or whether ECX is actually (through taxes) financially sustainable or even profitable. Handling and storage costs have to be paid for. I do not know whether this covers costs.	Unions, traders, investor farmers, processors/exporters, cooperatives.	Price market information, bulking and brokering for marketing channels (export overseas). The latter service is directly targeted at their suppliers.	95% of sesame goes through ECX so indirectly the large majority of farmers.
SBN (partners with C4C and IFDC).	Support program, based on tripartite collaboration agreement (Universities, BoA and Agricultural Research Institutes).	Free coaching services of SBN staff. Co-funding mechanism for supporting local initiatives will start in 2014 (SBC fund). Fund for addressing strategic issues will also be operational in 2014 (SBN fund). SBN is funded by the Netherlands Embassy in Addis Ababa, DGIS The Hague and the zSCALE project (also funded by DGIS).	Farmers, mostly those who are members of cooperatives, and other value chain actors (processors, banks, input-dealers etc.).	15 demo-plots for technical assistance. Training on financial management and business planning have been provided to cooperatives.	Mostly farmers who are part of cooperatives (max 40%). Right now reaching 18 clusters, aim to go up to 30 Reach of 70,000 farmers in close to 100 kabeles.
ACDI-VOCA.	NGO.	Free services for farmers funded by the US Agency for International Development (USAID). Cost-sharing for investments in storage and machinery (but not an advisory service).	Cooperatives unions, and farmers.	Brokering (Selam Union was linked to markets in Israel and China), and financial and business management training to cooperatives.	Unknown.

Demand side

With the introduction of the ECX-system in 2009 some basic services became available to actors in the sesame value chain. Although not always functioning optimally (Box 1), it is an example of how public service providers can enhance the accessibility and inclusiveness of the chain through service provision. The ECX provides services like price and market information, grading and brokering for marketing channels (to stimulate export overseas).

Usually farmers living closer to economic hubs like villages and towns benefit from their relative proximity to other actors. Farmers located in more isolated areas do not. For example, farmers who are not members of cooperatives (probably over 60%) are often excluded from the kind of advantages cooperatives offer, like provision of inputs via the Government through cooperatives and direct marketing of Unions. They depend on local traders who benefit from their monopolistic position. The same goes for services provided by NGOs since they tend to focus on working through cooperatives, thereby leaving out the majority of farmers.

Another issue is the accessibility of services for women. In Ethiopia, as in many other sub-Saharan African countries, men tend to dominate the more profitable crops, which include sesame. This automatically means some of the services provided are less accessible to women. Moreover, women tend to have less information and time to access and benefit from potential services offered. Indeed, research shows that technical advice – one of the services high in demand – rarely reach female farmers.

Within cooperatives there is also a clear gender bias, with women's participation constituting only 20% (Woldu et al., 2013).

In terms of general demand by farmers, most of them said they required hardware, like mechanization or finance, more than agricultural advisory services. When mentioning advisory services they especially stressed the need for technical assistance (production and yield improvement, harvest loss reduction, pest control) and financial/business management.

Coordination of service provision

Coordination of services and coordination between service providers is limited. Although the bureau of agriculture or zonal office could potentially play a role here, until recently there was no regional platform in place where sesame stakeholders exchange thoughts and knowledge, discuss challenges and set goals to overcome these challenges. However, by May 2014 two coordination meetings were held in Amhara and Tigray, accompanied by an annual sesame business meeting in Gondar. There are also plans for an sesame business council.

A prominent example of the lack of communication and the negative effects that derive from it can be found between cooperatives. While interviewing three cooperatives on their disagreements with a union (Box 1), which were ongoing for about a month, none of them had considered taking up the issue jointly with one or more of the 14 other cooperatives that are union members.

SBN provides the only sector-wide coordination in northwest Ethiopia. On a cluster level, organization of and coordination between actors is arranged. Two cluster meetings have already been held during the last six months, in addition to a regional commencement meeting open to stakeholders from all regions. The first meetings of the clusters, held in February and March 2013, were organized to conduct a baseline study. The second, in June 2013, was used to formulate economic objectives, strategies, actions and activities for the clusters to cover the 2013-2015 period.

More cluster meetings will take place in the near future, yet it is not exactly clear how often and which topics will be covered. It is most likely that in the next meetings the action plans will be evaluated and discussions will be held on the current state of affairs within the cluster and beyond.

Another topic of discussion for upcoming cluster meetings will be that of matching grants. One-third of the programme's budget is reserved for grants to which cluster members may apply. In order to do so, they have to submit a proposal for

Table 2: Service demand and supply by various actors

Which services are needed?	Services provided by public sector	Services provided by private sector	Services provided by civil society
Financial/business management (cooperatives).	Some by the Cooperative Promotion Agency, but limited.	Some by MFI's and banks.	ACDI-VOCA, SBN.
Technical (including pest management).	Limited number of farmers reached, through public extension.	Very limited. Two processing companies targeting the organic market in Europe (Dipasa Agriprom and Selet hulling) provide technical assistance in a contract arrangement with cooperatives, but this is an exception (4 cooperatives involved out of a total of 100 cooperatives in NW Ethiopia).	SBN has assisted through demo-plots and technical assistance and is providing informal advice on postharvest loss.

partial funding of activities they want to upscale or to support new business activities. A guiding principle for SBN is that applicants themselves have to commit considerable resources and time to qualify for a grant. Examples of SBN-supported activities could include receiving support in writing a business plan to obtain finance, train emerging member farmers of cooperatives to provide training to other members, extend the number of trainings on savings culture by microfinance institutions, etc.

The cluster meetings have been facilitated by SBN staff. Yet a sense of shared responsibility and structural communication among cluster members (a cluster ‘feeling’ as it was described by SBN) still needs to be strengthened further, if not only to guarantee some sustainability when the project ends.

More generally, NGOs do coordinate their activities to some extent. For example, SBN partners with IFDC and C4C. The larger 2SCALE project (extending to more regions and commodities) has integrated with the SBN project for the sesame value chain. The contributions in human and financial resources are integrated in one budget and the partners have one work plan and M&E system. The activities of Agriterra and SNV (C4C) are aligned to the overall sesame sector support activities. C4C especially focuses on strengthening unions, whereas SBN’s focus is more on cooperatives.

Trends

With the introduction of the ECX system, the role of the public sector in the sesame value chain has clearly been strengthened. However, with an increasing role for cooperatives the picture is mixed.

Although, strictly speaking, cooperatives are farmer organizations (and as such not part of the public sector) their role is strengthened through government policies (like ECX providing price information) and institutions like the Cooperative

Promotion Agency. The absolute number of cooperatives is rising as well as the level of membership of existing cooperatives. The role of unions is somewhat similar. When functioning well, unions bundle together the forces of cooperatives creating economies of scale, thereby creating opportunities for obtaining loans, providing possibilities for direct export abroad, etc.

Hence it appears as if a playing field has been established in which the state plays a strong role through the ECX system, occurring alongside increased cooperative entrepreneurship.

However, it is difficult to predict how this is going to develop in the next few years. Stakeholders that were interviewed did mention that there are a number of inefficiencies that should be resolved. Union-cooperative relations are not always optimal, some cooperatives are still much weaker than others and the majority of farmers are not even a member of a cooperative. Moreover, supply of pesticides by the private sector seems to be more dynamic (including the embedded services on how to use them) than unions providing pesticides through cooperatives. Although this argument goes beyond the mere provision of advisory services, this is a clear example that more space for the private sector, next to a strong ECX and cooperative system, can at times be beneficial for farmers and the further development of the sesame value chain.

However, the gap between supply of services and demand, mostly by farmers, is considerable. Therefore, there is still plenty of room for increased service provision by the public sector (several organizations), private sector (several types of companies) and supporting projects. Since the Ethiopian sesame sector is more developed than in other African countries, cooperatives and advanced farmers are occasionally fulfilling a role as service provider as well. This type of service provision could be scaled up and is a possible entry point for intervention. With increasing demand and rising prices for sesame, it is likely that service provision will also rise through NGOs or the private sector, all of which will require effective coordination.

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