

Agricultural Innovators in Ethiopia

Lessons from the Food Security and
Rural Entrepreneurship Innovation Fund



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Rural Entrepreneurship Innovation Fund

Desta Damena Heyi, Gizaw Legesse,
John Belt and Wim Goris

Photo on cover

Eco-Coffee PLC (see page 6)

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The Embassy of the Kingdom of the Netherlands (EKN) in Addis Ababa has chosen food security as a priority in its development cooperation programme, considering that food security will remain a major issue in the coming decades in Ethiopia. The website www.foodsecurityethiopia.nl gives an overview of all supported activities. For the coming 10–15 years, the Embassy will continue its development cooperation programme in Ethiopia, while at the same time intensifying activities in the economic domain in order to gradually switch from aid to trade. <http://ethiopia.nlembassy.org>

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Foreword

The growth strategy of the government of Ethiopia emphasizes agricultural transformation. The policy calls for an intensification of production and processing, necessary to feed the growing population and necessary for export. The Embassy of the Kingdom of the Netherlands (EKN) is supporting the Ethiopian ambitions for food security and agricultural growth. With its project partners in agriculture, it supports small-scale farmers and the commercial sector by filling the apparent gaps in financing services and business know-how for innovations in agriculture and agribusiness in Ethiopia.

The Food Security and Rural Entrepreneurship (FSRE) Innovation Fund contributes to this by supporting Ethiopian innovators in agriculture and agribusiness. EKN has financed this innovation fund, which is managed by ICCO Cooperation on behalf of the AgriProFocus network. We do this because innovators are key in developing new technologies and new business arrangements. An invention becomes an innovation when it improves how things are done, when it is economically viable and when it is applied by a significant number of early adopters. In due course, it may become the new convention or accepted practice – that is, until a new invention is introduced and the cycle starts again.

The spark for the FSRE Innovation Fund was a business contest that took place at the end of the Ethiopia Learning Alliance. This was a joint programme between Agriterra, Cordaid, ICCO Cooperation, the Royal Tropical Institute (KIT), SNV, International Institute for Rural Reconstruction (IIRR) and Facilitating Farmers' Access to Remunerative Markets (FFARM). It was coordinated by AgriProFocus. It aimed to empower organized farmers in Ethiopia by training them about agricultural value chains. The culmination of this process was a contest to write a business plan; the process was therefore one of learning, followed by action. The FSRE Innovation Fund works in the opposite way: it supported the 75 innovations first and then provided a learning and linking facility to the innovators.

The FSRE Fund management have shown agility and flexibility in supporting the proposals of these innovators. Also, the FSRE learning facilitators created a learning agenda for these innovators to help them grow their ambitions. The latter inspired the set-up of joint learning activities between the programmes supported by EKN and/or the Ministry of Foreign affairs.

We understand that there is no straight road from invention to new convention. The agricultural innovators who have provided input for this publication have shown determination and endurance in pursuit of their propositions.

Jan Willem Nibbering

First Secretary Food Security

Embassy of the Kingdom of the Netherlands in Ethiopia

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We also thank the members of the FSRE advisory board and the people who participated in the three feedback workshops that we organized in June 2016 in Addis Ababa to gather input for this book. The contributions from a selection of FSRE-supported projects and from some key stakeholders in the Ethiopian agricultural landscape were very valuable in shaping the chapter on results and lessons.

Thanks also go to the Embassy of the Kingdom of the Netherlands in Addis Ababa for supporting the FSRE Fund, not only by providing financial resources but also by actively engaging in its development.

Finally, we pay tribute to all the innovators who took part in the FSRE Fund. They allowed us a unique insight to the complex process of taking a promising idea and making from it an innovation that works in the context of rural Ethiopia. We learned a lot from them and admire their creativity, positivism and perseverance.

Addis Ababa, 25 June 2016

Desta Damena Heyi, Gizaw Legesse, John Belt and Wim Goris

Abbreviations

ABB	Agribusiness Booster
ASA	Africa Sustainable Aquaculture
BENEFIT	Bilateral Ethiopian-Netherlands Effort for Food, Income and Trade
DEC	Development Expertise Center
EECMY	Ethiopian Evangelical Church Mekane Yesus
EKN	Embassy of the Kingdom of the Netherlands
ELA	Ethiopia Learning Alliance
ENTAG	Ethiopian-Netherlands Trade Facility for Agribusiness
FC	Facilitator for Change
FFARM	Facilitating Farmers Access to Remunerative Markets
FSRE	Food Security and Rural Entrepreneurship
ICCO	Interchurch Organization for Development Cooperation
iDE	International Development Enterprise
IG	Innovation Grant
IIRR	International Institute for Rural Reconstruction
ISSD	Integrated Seed Sector Development
KIT	Royal Tropical Institute
LLF	Learning and Linking Facility
MFI	Microfinance institution
MG	Matching Grant
NABC	Netherlands Africa Business Chamber
ODA	Organization for Development Association
SAPP	Seyoum and Abebayehu Poultry Partnership
SEDA	Sustainable Environment and Development Action
SMEs	small and medium enterprises
SNNPR	Southern Nations, Nationalities, and Peoples Region
UG	Upscaling Grant

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Silk production – Bere Sericulture Production PLC (see page 4)

Chapter 1: Introduction

The Food Security and Rural Entrepreneurship (FSRE) Innovation Fund is a competitive fund that supports rural innovations in Ethiopia. The Fund supports initiatives with promising ideas that will develop into innovations that work in practice and that have the potential to boost food security and rural entrepreneurship. The Fund started in 2012 and will close in 2016.

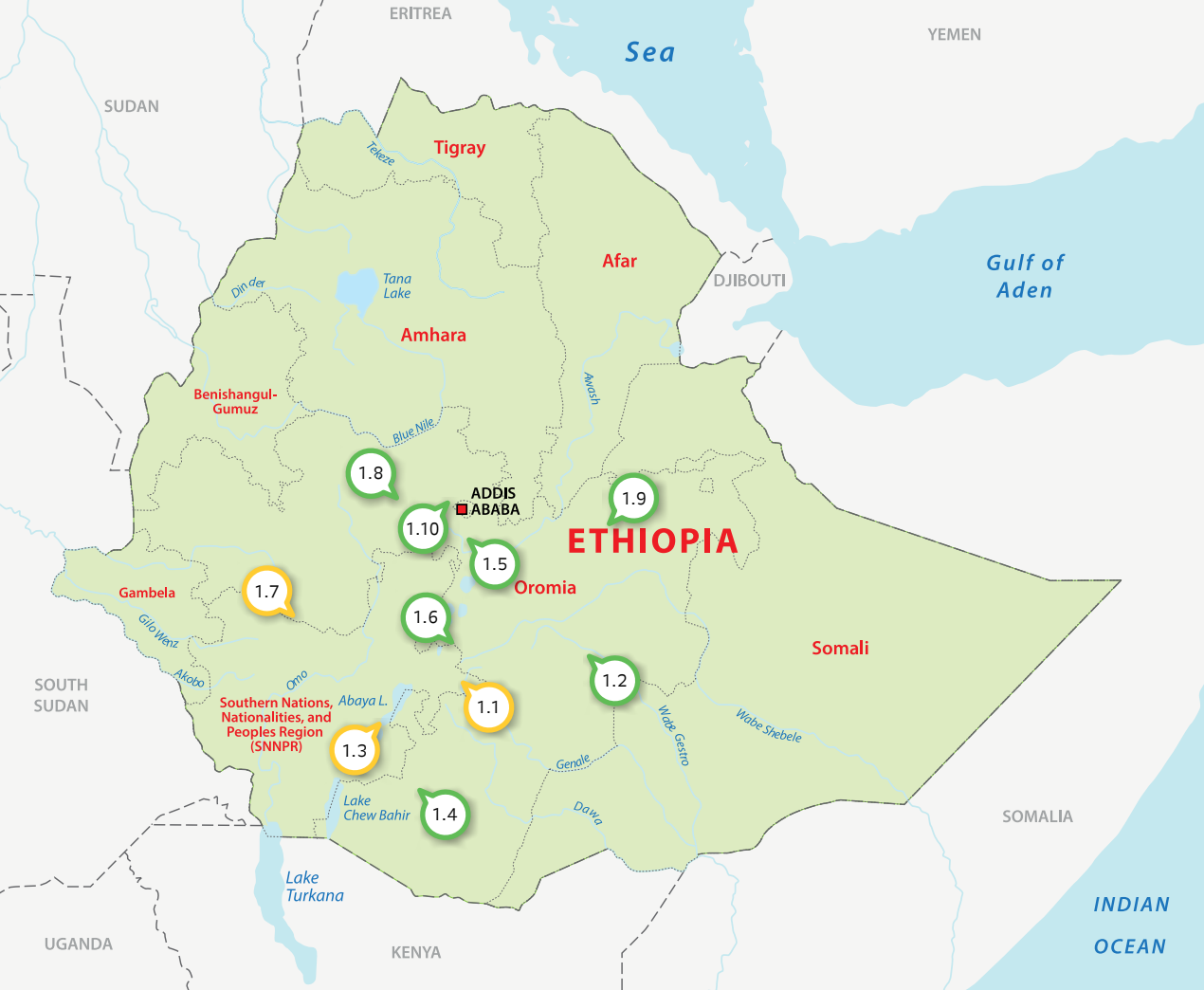
In four years, the fund organized four calls for innovation proposals, leading to four rounds of projects approved for Innovation Grants. Similarly, there were five calls for Matching Grants and one call for Upscaling Grants.

The FSRE is financially supported by the Embassy of the Kingdom of the Netherlands (EKN) in Addis Ababa. The Fund is managed by ICCO Cooperation on behalf of AgriProFocus.

This publication introduces what the FSRE Fund does, how it is organized, how it contributes to rural innovation in Ethiopia, what its challenges are and what it has achieved. The document also draws some lessons from the experiences gained by the people involved in the FSRE Fund.

The main goal of the publication is to inform people interested in how a competitive fund such as the FSRE Fund can promote rural innovations in the Ethiopian context. We expect readers will include development practitioners, policymakers, donors, lecturers and students of agricultural colleges. To cater for the needs of a time-strapped audience with multiple tasks on their hands and minds, we have opted for a short book, written in accessible style and, where possible, illustrated with relevant images. More details are to be found on the AgriProFocus Ethiopia online platform which is accessible at <http://agriprofocus.com/fsre-fund>.

The set-up of the book is simple: it has four chapters and between each of these there are short descriptions of the innovations that have been supported by the FSRE Fund. Chapter 2 presents how the FSRE looks at the process of innovation, showing where it is contributing in this process. The third chapter gives an insight to the background of the FSRE Fund and how it is organized. The final chapter summarizes the main results of the FSRE Fund and draws some lessons for people who are interested in supporting agricultural innovation.



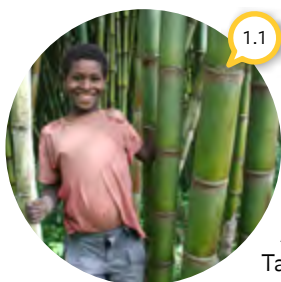
Map 1 Locations of innovators funded in the first round of FSRE Innovation Grants

- 1.1 African Bamboo PLC | Prefabricated Bamboo
- 1.2 Agri Service Ethiopia | Black cumin
- 1.3 Bere Sericulture Production PLC | Silk
- 1.4 Christian Aid | Aloe soap
- 1.5 Development Expertise Center | Animal production
- 1.6 Dorcas Aid Ethiopia | Biomass briquette
- 1.7 Eco-Coffee PLC | Coffee
- 1.8 Facilitator for Change | Chickpea
- 1.9 GOAL Ethiopia | Grain storage technology
- 1.10 HUNDEE | Dairy

Q : Private sector
 Q : NGO
 Q : Knowledge institute

Innovation Grants – Cases from the first round

The complete stories, can be found on www.agriprofocus.com/innovators



1.1

Innovator: African Bamboo PLC
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Focus: Bamboo
More info: www.agriprofocus.com/organisation/ab



African Bamboo PLC has been operating in Ethiopia since 2012. Taking advantage of the country's 1 million hectares of bamboo forest, the company is setting up an industrial processing unit to produce compressed panels and outdoor decking for export. The innovation supported by the FSRE Fund was producing prefabricated bamboo housing suitable for refugees. The company was requested to explore this by an organization dealing with emergencies and aiding refugees in central and southern Africa. Bamboo was the material of choice because it is abundant, renewable and light in weight, which makes it easy to transport. Experiments were set up with some farmer cooperatives to manage bamboo forests to increase yields. The cooperatives were also involved in transporting the culms. Mr. Duri of African Bamboo PLC enthusiastically organized demonstration plots to test his assumptions, try out different practices and to attract the interest of farmers. There were some challenges, such as making sure the culms collected were of the right quality, transporting the culms quickly to the factory and overcoming large distances in areas that lack transport. But the main problem, and the one that meant the innovation did not succeed, was the fact that the purchasing contract was never signed. The company had to abandon the idea, having invested considerable resources in it. In compliance with its commitment to FSRE Fund, the company returned its innovation grant to FSRE Fund management. Although in the end no culms were bought by African Bamboo, interest in bamboo increased immensely, traditional buyers now need to deal with better-informed farmers and the price of bamboo got a boost. African Bamboo PLC is still pursuing its plan to produce bamboo panels and decking for export.



1.2

Innovator: Agri Service Ethiopia
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Black cumin (*Nigella sativa*) is an annual herb that produces tiny black seeds used in curries, pastries and cheese. The oil from the seeds is also used as a medicine and fetches a high price. The area around Goro in the Bale Mountains is famous for its black cumin. Agri Service, a civil society organization, has been working in this area for many years. It received support from the FSRE Fund for a package of activities to improve the production and processing of the herb. First, good quality seeds were acquired and distributed to farmers. Secondly, four ordinary, common purpose threshing machines were bought locally, from a provider called Selam Technical and Vocational Center. Thirdly, canvas sheets were to be introduced to collect the cumin during threshing. Fourthly, an oil press was to be acquired to process cumin seeds into oil. The testing of the conventional thresher under field conditions resulted in two important findings: too much seed remained in the straw, and the seed cover did not break. Agri Services and the cumin farmers are now focusing on how to fix the technical problems before investing in the other two activities. In the meantime, black cumin has increased in popularity: the estimated production area around Goro almost tripled from 130 to 360 hectares.



1.3

Innovator: Bere Sericulture Production PLC
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Focus: Silk
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Geleta Hailu is a self-made entrepreneur who started trading agricultural produce during his school days in Arba Minch. In 2005, Mr. Hailu acquired 20,000 silkworm eggs and a manual on how to produce silk. Today, he employs 42 staff in his company Bere Sericulture Production PLC. The company owns three hectares of castor and mulberry, as well as units for worm-rearing and silk production. The silk is sold to Sabahar, a manufacturer in Addis Ababa that produces high quality shawls for export. The FSRE innovation grant was used to improve both quality and quantity of silk production. A new silk-reeling machine was bought to produce longer threads that fetch a better price. To satisfy the higher production capacity, the grant also helped to develop an outgrower scheme with surrounding farmers. But growing mulberry and keeping silkworms are delicate operations, which not all the trained farmers managed to master. The worms need close supervision, including feeding every few hours, day and night; in the dry season, the mulberry cuttings die easily; and collecting castor leaves from the wild is a lot of work. Nevertheless, a dozen outgrowers managed to overcome the challenges, creating an income for themselves and helping the company to satisfy a growing demand. In the meantime, Bere Sericulture Production PLC itself continues to innovate in its quest to improve the business, engaging with its farmers but also with universities and its equipment suppliers in Asia.



1.4

Innovator: Christian Aid
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Focus: Aloe soap
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Aloe is a common plant in the Borena Zone of southern Ethiopia. Using aloe plant extracts in the production of soap was pioneered by SOS Sahel in 2008. So when Christian Aid introduced it with the help of the FSRE Fund among 200 women in Borena, it was actually emulating an innovation from elsewhere. For the women, soap-making was new. In principle, soap-making can be very profitable, with a possible margin of 50 per cent depending on the price of vegetable oil, the main ingredient. Christian Aid organized the women into four cooperatives and provided them with the necessary inputs, packaging materials, equipment and training. Local gender relationships required Christian Aid to leave the administration and leadership of the cooperatives to the men. It was, however, possible to set up informal women's savings groups where the women would meet and combine and mobilize their savings. It appeared the women dedicated just one day a week to the soap production due to a lack of inputs, limited sales and because they have many other household tasks. Accessing markets appeared to be a major bottleneck for the remote, resource-poor area that Christian Aid works in. According to the organization, this innovation is not so much about financial return and income generation but more about pursuing social objectives, the women's savings groups being one example.



1.5

Innovator: Development Expertise Center
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Mount Chukala is an extinct volcano reaching almost 3,000 metres, located in East Shewa Zone. Rainfall at the eastern slopes is below average and most of it falls in three months; this is not enough for most crops. The farmer communities have adapted to this environment by planting various crops, but people are still vulnerable to food shortages. In many households, people do casual labour but still depend on food aid. The civil society organization Development Expertise Center (DEC) has been working in the region since 2012, focusing on youth employment. The FSRE innovation grant was used to set up farmer cooperatives for producing animal feed and for raising poultry, goats and pigs. In this context it is sensible to diversify, so DEC opted to spread the risks by integrating different farming activities. DEC worked closely with district authorities in the areas of agriculture and livestock. The young farmers welcomed DEC's efforts, but no one had experience with intensive animal production; they were more comfortable growing irrigated maize, alfalfa and sweet potato. DEC learned that when you set up cooperatives, it cannot be assumed that most work will be done on a voluntary basis. A business model needs to include the opportunity cost of labour. DEC learned valuable lessons and is committed to continue working in this challenging environment.

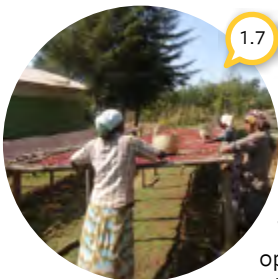


1.6

Innovator: Dorcas Aid Ethiopia
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Focus: Biomass briquettes
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Mr. Fikru Tarekegn, from Dorcas Aid Ethiopia, learned two things from the briquette project in Shashemene that was supported by the FSRE Fund: innovations do not happen overnight, and innovators thrive when they can interact with peers. Pottery-making is a low-esteem activity and is generally performed by women, most of them illiterate and poor. Dorcas proposed an alternative to these women: the production and marketing of briquettes made from waste materials. Such briquettes are clean, smoke-free and made from paper, sawdust, straw and other waste. This mix is cut, soaked in water, then pounded. A press gets the briquettes in shape and squeezes out the water, and then they are dried. In testing out the process, it was soon discovered that the wooden press was too heavy for the women to operate. First they used the press at half capacity, greatly reducing production volumes. Fortunately, technicians from Dorcas and the local equipment manufacturer Selam Awassa Business Group designed an alternative press using an old car jack, which was much easier to operate. Selam also made a thresher to cut the waste material, replacing the manual labour of this step. The initial idea was to sell the briquettes to households in the community. But the quick-burning briquettes appeared not to be suitable for home cooking, which requires moderate heat for a longer time. More likely clients are bakers, restaurants or local brewers. But these businesses need a regular supply of larger quantities, which will require strict production planning. The innovation in this case evolved from sorting out technical issues to figuring out the right business model.



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Focus: Coffee
More info: www.agriprofocus.com/organisation/eco-coffee



The demand for specialty coffees is on the rise, leading to new opportunities for the Ethiopian coffee sector. Eco-Coffee PLC operates in the Gera coffee district, Jimma Zone. The FSRE Fund supported two innovations: multiplication of specialty coffee seedlings and the purchase and installation of a water-efficient coffee processing unit from Colombia. The latter is particularly important because conventional coffee washing stations use a lot of water, which is extremely scarce in the area. The machinery has arrived and the company will test the claim that it uses 98 per cent less water than the traditional equipment. Improved coffee seedlings from Jimma Research Centre are being multiplied at Ayetu's farm to be supplied to outgrowers. Coffee takes four years to mature, so it is too soon to tell how much better the new varieties are performing. The company wants to develop a strong relationship with its outgrowers and aspires to buy large quantities of high quality specialty coffee from them. They decided to start with a small group of 20 farmers to be able to follow them closely, training and supervising them intensively to ensure they get the best out of their coffee plots. With this small group of farmers being successful, the company is confident it will attract more farmers who are interested in growing coffee for them.



Innovator: Facilitator for Change
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Focus: Chickpea
More info: www.agriprofocus.com/organisation/fc



Facilitator for Change (FC) is doing community development work in the Becho, Dawo and Seden Sodo woredas about 80 km south-west of Addis Ababa. The FSRE innovation grant supported FC in their efforts to improve chickpea production in the area. First of all, FC introduced a new, improved variety of the legume to the producers. After the harvest, the farmers returned the quantity of chickpea seed they had received, which can be supplied to new farmers. This approach has been working remarkably well: 99 per cent of the farmers have fully "repaid" their seeds. Secondly, FC contracted the Debre Zeit Agricultural Research Center to train farmers in improved agronomic practices. Finally, FC supplied rhizobium bacteria, also known as biofertilizer, to almost 1,250 farmers. This proved a great success: it was calculated that the biofertilizer increased productivity from an average 1,200 kg per hectare to 1,900 kg per hectare. More farmers started to ask for rhizobium. A private company in Addis Ababa is now supplying biofertilizer, supplementing the limited supply coming from the National Soil Laboratory. Having seen the substantial increase in production volumes in the area, FC is now investigating how it can replicate and upscale this approach in the other areas it is active.



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Focus: Grain storage
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The Irish aid organization GOAL has been working to reduce post-harvest losses for more than a decade. In Ethiopia the organization works in West Hararghe Zone, an area that was hit with drought and food shortages in 2016. GOAL has introduced a number of technical innovations, such as using canvas sheets for collecting grain, equipping stores with rat guards, installing an outlet at the bottom of the store so people can take what they need without exposing the whole store to dust and moisture, and plastering the stores to avoid cracks where insects can enter. The FSRE Fund supported GOAL's latest innovation: installing plastic liners to cover the inside of a grain store. Such liners can be welded to any shape, which is needed because each store is different. GOAL estimates that losses in traditional grain stores are typically between 16 and 18 per cent. With existing innovations mentioned above, this can be reduced to 9 per cent. The lining technology is expected to further reduce the loss to not more than 4 per cent. The liner is therefore not a stand-alone solution; it complements the other improvements. With the FSRE Fund support, GOAL successfully tested the technology and will continue to work on it. From the experiment, the staff learned they need to tackle two more critical factors: the cost-benefit ratio for the farmers and creating the business case to make and install the liners.



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Region: Oromia
Focus: Dairy
More info: www.agriprofocus.com/organisation/hundee



Dairy production in Welmera, a district 25 km west of Addis Ababa, benefits from easy access to a large urban market. Dairy farmers bring their milk to the roadside and collectors buy it there from them. There is stiff competition during the non-fasting seasons, but it is difficult for farmers to sell their milk during fasting. The civil society organization Hundee has been supporting the dairy sector in the area for about a decade. The FSRE Fund supported Hundee's innovation project to test promising upgrades for the dairy sector. Cooled milk collection centres were installed for two cooperatives. In addition, youth groups were organized around specific business opportunities, such as fodder production, veterinary services and bull services. The groups received training and support to set up their businesses. The local government was closely involved in this initiative. The business cases for the youth groups still require more attention, as markets for the selected products and services might be less promising than expected. The organizational set-up of the groups needs attention to ensure they are commercially sustainable enterprises. The cooled milk collection centres are operating well, creating a much-needed stable outlet for the cooperative's members.



Kifle Bulu Apple Seedling Producer (see page 19)

Chapter 2: From invention to convention

This chapter is mainly based on “Agricultural Innovation Cycle, FSRE Fund Linking and Learning Agenda”, an unpublished document by Gerrit Holtland, AgriProFocus Ethiopia.

The FSRE Fund supports ideas that have the potential to become innovations that can be upscaled, improving food security and strengthening rural entrepreneurship. Helping an idea to mature is one part of an overall innovation cycle that starts with “invention” and ends with “convention”. In this cycle, five stages can be identified:



Figure 1: From invention to convention

Invention

An invention is a new and unique idea, method, technology, product or process. It is not simply an improvement on existing practice: it differs from the conventional ways of doing things. It leads to changes in the overall work process, or “how things are being done”, and creates substantial gains for those involved.

In this stage the focus is on experimentation. The idea is tested under controlled conditions. For example, a new wheat-threshing machine will be tested in a workshop where the mechanics can continue to make small modifications to the design.

While the inventor might be convinced that her or his invention is useful, others will need some evidence or objective proof that this is the case. Therefore, data need to be collected about the effectiveness and efficiency of the idea.

Innovation

Innovation is applying the idea under real-life conditions (see also Box 1). The number of people involved is limited, and the focus is on assessing and measuring the effectiveness and efficiency of the invention, while it can still be modified further.

To continue the example of the new wheat thresher, in this stage the equipment will be tested in the field with farmers who use conventional threshers. Some of the key questions that emerge are:

- Is the idea technically feasible? How much of the produce is lost in the threshing process, and how much grain is broken? How much better is this compared to conventional threshers?
- Is the alternative thresher economically attractive, meaning that benefits substantially outweigh the costs? What are the costs and benefits in comparison with conventional ways of threshing?
- Do people have the skills and resources to operate the thresher? Does it need other equipment to operate, such as a tractor? Is such equipment available at an acceptable cost?

- Is the idea socially acceptable? Is it gender sensitive? Can women operate it? Does it lead to more jobs? Are the new jobs for men, women or youth?
- What is the environmental impact of using this type of thresher?

As an innovation is an idea that has not yet proven effective, subsidy from either private or public sources can help take it to the next stage. The FSRE Innovation Fund provides such a subsidy.

Innovation in Africa

The book *Innovation Africa: Enriching Farmers' Livelihoods* provides more insight to agricultural innovation processes in Africa. As well as introducing theoretical concepts and practical methods to promote innovations, it includes various practical cases. The book brings together the work of leading researchers and practitioners in the field of innovation and is structured around five themes: innovation concepts and methods; strengthening social capital in innovation systems; policy, institutional and market-led innovation; enhancing local innovation processes; and building innovation capacity. The cases from Ethiopia are about farmer innovation, pastoralist livelihoods and knowledge systems in the potato sector. Sanginga, P., A. Waters-Bayer, S. Kaaria, J. Njuki and C. Wettasinha (eds.), 2009. *Innovation Africa: Enriching Farmers' Livelihoods*. Earthscan, London.

Box 1

Upscaling

When an idea has proved to be effective and efficient under field conditions, it can be scaled up, making it available for use to many more people in a particular area. The aim is to create a critical mass of people who will use the innovation. The focus shifts from small-scale experiments towards reaching as many people as possible with the lowest possible costs. As the idea has proved to work in practice in technical terms, is attractive in economic terms and fits within the social-cultural context, chances will be high that the innovation will indeed be used by many people.

For the scaling up to be successful, farmers need to have access to:

- Inputs: is there a reliable supply of the necessary inputs?
- Technology: is there a reliable supply of the technology? Can people who want to buy it obtain it easily in their locality? Is there a support system to turn to when needed?
- Markets: is there a sufficient market created by all the adopters of the innovation?
- Support services: do people who adopt the innovation need additional knowledge and skills? Where can they obtain these? Who can offer these to them? How can this service be made sustainable?
- Finance: can farmers or entrepreneurs who want to invest get the loans they might need to invest in the new technology?

At this stage, the innovation no longer qualifies for public subsidies. Support will focus on embedding the innovation in the value chain in a financially sustainable way. In the case of a new wheat thresher, agro-dealers could be supported to sell and maintain threshers, or financial institutions could be supported to open a credit line or a lease system to help farmers buy threshers. Uptake can be stimulated by interest-free loans or guarantees.

Adoption

Once a critical mass of people are using an invention, and the support systems are robust, more people are likely to adopt. Obviously, not all people will do this at the same time and at the same pace. Which enterprises and farming households will adopt depends on many factors. Important ones are access to inputs, finance and markets; the resources farmers have, including land, capital and labour; and the context they work in. Their ability and willingness to take risks is important, but unfortunately most small and medium farms and small and medium enterprises (SMEs) have too few resources to take any risk. Many have such little cash that they only invest when the expected return on investment is very high. This limits the number of innovations that are spontaneously adopted in a short time.

In the adoption phase, the supply of inputs and technologies has to be organized in a commercial way, through market-driven enterprises. Any assistance from donors or governments should be oriented to create support systems that offer access to knowledge, skills and finance. For example, strengthening of public or private extension systems is often instrumental to increasing adoption rates. Access to finance can be improved by designing and guaranteeing targeted loans to farmers from microfinance institutions (MFIs), or even commercial bank loans for formal, larger scale enterprises. In the case of the wheat thresher, private companies could sell the equipment and promote it; public and private extension agents could explain how to use it; and MFIs could help farmers finance its purchase.

Convention

Once an invention has been adopted on a large scale, it becomes the standard way of doing things. It becomes the norm, the custom or the conventional wisdom until a new idea or technology is introduced that is even better suited to the particular circumstances.

In the case of the wheat thresher, all farmers are using the same type of thresher. Until new equipment comes out that proves superior, wheat producers will continue to work with this thresher.

Critical factors in upscaling innovations

The FSRE Innovation Grant (IG) focuses on supporting the process of taking an invention to the innovation stage. The FSRE Matching Grant (MG) helps to upscale the innovations that have proved to work in practice. Since the FSRE Fund specifically wants to support inventions that become innovations that can be upscaled, assessing the chances for upscaling are crucial. Through the work of the Learning and Linking Facility (LLF), the innovators were actively assisted to review the determining factors for upscaling (the IG, MG and LLF are further described in Chapter 3). From the perspective of the FSRE Fund, the most influential factors in the potential of an innovation to be upscaled and to contribute to improved food security and rural entrepreneurship are:

- technical feasibility
- farm economics
- access to markets
- organizational set-up
- food security
- rural entrepreneurship
- gender, environment and social-cultural aspects.

Technical feasibility

Many innovations in the agricultural sector are about introducing a new technical device or technique. It is obvious that such innovations need to work in practice, in the particular contexts they are expected to work. It is surprising how often technologies that are designed and tested under laboratory conditions fail when applied in the field.

Important questions that have to be addressed before an innovation can be scaled up relate, for instance, to:

- Effectiveness and efficiency: what is the proof that the technology is effective and efficient under field conditions? How sustainable is it? Can it survive tough circumstances?
- Risks: how certain is the innovation to deliver the expected results? What happens if certain “ideal conditions” are no longer met?

Farm economics

With regards to the economics of an innovation, two issues need to be addressed: is the innovation profitable and do households have access to the required financial resources? Innovations will only be scaled up when the innovators make a solid profit on their investment. Profit is calculated as the total income minus the total costs, which may not be as easy to determine as it sounds. Depending on the case, some of the data that might be relevant are:

- What is the total investment cost?
- What working capital is needed?
- What are the running costs?
- What are the costs of any loan to finance the investment and working capital?
- What is the depreciation cost of the investment?
- What is the additional income that will be generated?

In practice, few of these data are readily available. All too often the productivity of the innovation is insufficiently known, the running costs are unclear and prices fluctuate. So collection of reliable data on this kind of parameters should be a key aspect of any innovation effort.

It should be noted that some elements of smallholder farm economics are often overlooked. Typically, these are labour costs, payback time, cash flows and interconnectivity of the farm business with household needs. Many innovations fail because they underestimate the labour situation of smallholder farmers. Ignoring the opportunity costs of labour leads to the promotion of labour-intensive innovations that will never be adopted: farmers simply focus on other activities with a better return on labour.

Another factor is that poor farmers cannot afford to wait too long for results. They only invest when they receive quick returns. An additional feature is that poor families that earn cash are under enormous pressure to use this for urgent family needs. Even when an investment or innovation is profitable and generates a positive cash flow all the time, it can be very hard for a household to save the money earned to re-invest it the next season. This phenomenon can seriously hamper the continuity of a business.

Access to markets

Many innovations seem to focus on existing markets, by simply trying to produce the same product more cheaply. In such a case, the question is whether the market can absorb the increased production and whether and when prices will drop. When a new product is developed for which there is no existing market, the demand needs to be developed. This can be a daunting task, particularly for organizations with limited commercial experience.

The following issues have to be addressed to understand the potential market of an existing or new product:

- **Customers:** Who are the customers? What kind of budget do these customers have? What kind of product do they like? What are the trends: towards cheaper or towards better quality products?
- **Channels:** What are the existing market outlets: street markets, supermarkets, processors? Is there any trend? Can new market relationships be established via new channels?
- **Competitors:** What are the competing products and competing companies? What are their strengths and weaknesses? What can be learned from them? What is the best way to position the product against its competitors?

Based on the outcomes of this market analysis, a strategy needs to be designed covering the following elements:

- **Product:** which product has the best market in terms of demand and profit?
- **Price:** what will be the price?
- **Place:** should the product be sold to rural markets, to processing factories or to a supermarket?
- **Promotion:** what publicity campaigns, advertising, temporary discounts and other type of promotions should be developed?

Organizational set-up

Innovation is about testing an idea under field conditions. Sometimes the idea might be viable, yet the way things are organized is suboptimal. The people who do the work might not be sufficiently qualified, or they might not have any incentive to perform. Some innovations involve setting up a new SME or organizing farmers into a new producer organization or cooperative. The following questions need to be addressed to assess the capabilities of such organizations to handle the tasks they need to perform:

- **Management and organization:** what are the existing and new functions of the SME or cooperative? What new responsibilities and tasks have to be taken up? Is there sufficient relevant experience available? Who will do what? How will the functions be organized, supervised and managed?
- **Human resources:** what extra staff are needed? What kind of knowledge and skills do existing or new employees need to have? What kinds of training will they need?
- **Incentive system:** what incentives are needed to ensure staff will perform well?

Food security

The ultimate aim of the innovations supported by the FSRE Fund is to improve food security. The impact on food security can be at the level of the farm household or at the community, but may even include the society as a whole. Often, innovations that are economically sound will lead to lower production costs, and many innovations lead to higher production levels. Both factors will ultimately lead to cheaper food for the consumers, which is likely to improve their food security situation.

Food security can be improved through increasing food availability and by improving access to food. For food availability, the key questions to address are:

- Does the innovation lead to an increase or a decrease in the physical availability of food?
- Will the nutritional value of the food be improved?

Key questions to address about access to food are:

- In which food markets will the impact of the innovation be felt: low-end rural markets or high-end supermarkets? Which people will benefit from the increased availability: rural families or urban dwellers? Rich or poor families? Children, women, men, youth?
- If the innovation replaces food production that is for household consumption with cash crops, is the increased income sufficient to buy at least the same amount of nutritious food? Who in the household decides how to use the additional income?
- How will the innovation influence the distribution of food in the family? Is there a risk that the access to food will increase for some members and not for others, such as children and women?

Rural entrepreneurship

Enhancing rural entrepreneurship is the other main objective of the FSRE Fund. Rural entrepreneurship is often linked to value addition through post-harvest handling such as grading, bulking, processing, packaging, transporting and marketing. These are all important elements to make farming a business, which is often regarded as a prerequisite to generating rural growth. One aspect of an entrepreneurial approach is to separate the business from the household, creating a clear distinction between decision-making for business interests and household needs. Another factor is to access loans to increase investments and working capital to improve profits and overall sustainability of the business.

For the FSRE Fund, the question of whether the innovation enhances rural entrepreneurship relates to two aspects: is the innovation based on the ideas of entrepreneurs, and to what extent does it lead to more entrepreneurial behaviour?

When entrepreneurs are driving the innovation, the relevant questions are:

- To what extent are the innovators private companies? To what extent are entrepreneurs in control of the innovation project? When NGOs or universities promote an innovation, have entrepreneurs been consulted? Is the innovation based on a realistic assessment of the commercial priorities and constraints of entrepreneurs?
- Is the innovation based on an in-depth understanding of the constraints and opportunities in post-harvest handling and other value addition? Are the time and costs involved in searching for suppliers, quality control, grading and packing, searching for markets, managing a processing facility, transport and losses and the cost of working capital incorporated in the planning of the innovation?

For an innovation to enhance rural entrepreneurship, the relevant questions are:

- To what extent will the innovation contribute to better access to business development services, financial services and entrepreneurial and business skills?
- Does the innovation lead to better market access and a stronger position in the value chain for rural SMEs, cooperatives and farmers? Does it lead to more added value and a more commercial attitude in rural areas?

Gender, environment and social aspects

Gender roles are a social construct. They define the access to and control over a range of resources for men and women; in rural areas in Ethiopia, the role of women is often subordinate to that of men. Innovations can promote or obstruct gender equality in different contexts. In value chains, this is manifested in access to finance, skills, technology and markets. Within cooperatives, it refers to rules for membership and access to the decision-making process. Within households, it relates to access to and control over resources such as labour, land, income, food and health services. Some innovations explicitly focus on improving the position of women, for instance, by enabling them to generate their own income. Other innovations can undermine the position of women, even though this is unintended. A typical example is when men start to sell the products that were made and previously sold by women. Some relevant questions to consider include the following:

- Should a distinction be made between the technology itself and the socioeconomic aspects related to its introduction: who owns the equipment, who does the work and who gets the benefits?
- Will the innovation have a direct impact on the lives and incomes of women?
Will they be able to benefit from owning the new equipment or materials, from any reduction in labour requirements or from any increase in income?
- Will the innovation assist women in strategically improving their social position?
Will it help to improve their role? Will it give women more control of resources?
Will it help women to more actively participate in decision-making processes?
Will they get better access to finance, markets, inputs and technologies?

Regarding the environment, some innovations explicitly focus on improving the environmental sustainability of a farming system or an agricultural value chain. Other innovations might have a negative environmental impact or do not significantly change the situation. Some of the issues to be addressed are:

- Does the innovation lead to a better utilization of natural resources such as land and water?
- Does the innovation lead to less pollution or less environmental damage?
- Does the innovation depend more or less on non-renewable resources?
- How does this innovation affect farmers' and workers' health?

In relation to social aspects, it can be observed that although innovations rarely solely focus on social aspects, they are likely to have a considerable impact on social issues, with effects that can be either intentional or unintentional. Questions that have to be addressed include:

- Is the innovation pro-poor? Do poor households benefit at least as much as rich ones? If this is not the case, can mitigating actions be designed?
- Does the innovation lead to empowerment of farmers based in rural areas in comparison to town-based entrepreneurs? Does the innovation lead to a stronger position of smallholder farmers in the value chain?



Map 2: Locations of innovators funded in the second round of FSRE Innovation Grants

- 2.1 Apinec Agro-Industry PLC | Honey and beeswax
- 2.2 Bale Green Spice and Grain Development PLC | Chickpea
- 2.3 Bora Integrated Commercial Farm | Poultry
- 2.4 Development Expertise Center | Animal fattening
- 2.5 iDE | Durum wheat, lentil and dairy
- 2.6 Kifle Bulo Apple Seedling Producer | Apple
- 2.7 Menagesha Integrated Organic Farm | Mushroom
- 2.8 Nati Coffee and Spices | Ginger and turmeric
- 2.9 Sacramento Farming PLC | Coffee
- 2.10 Send a Cow Ethiopia | Taro

○ : Private sector
 ○ : NGO
 ○ : Knowledge institute

Innovation Grants – Cases from the second round

The complete stories, can be found on www.agriprofocus.com/innovators



2.1

Innovator: Apinec Agro-Industry PLC

Contact: Mr. Wubishet Adugna

E-mail: wubhoney@yahoo.com

Region: SNNPR

Focus: Honey and beeswax

More info: www.agriprofocus.com/organisation/apinec



Apinec Agro-Industry PLC was established by an Ethiopian entrepreneur and a Dutch entrepreneur in 2005. The company exports certified organic honey and beeswax to the European Union. In 2015, it exported 60 tons of honey. The FSRE Fund supported Apinec's innovation to buy and install a foundation sheet machine. Improved foundation sheets are a key element in modern beekeeping. These thin sheets of beeswax have a pattern of hexagonal cells embossed on each side which helps the bees to quickly develop their colonies and store more honey. The sheets are recycled after harvesting the honey. Few of Apinec's suppliers are using improved sheets, mainly because of limited availability and high cost. The new foundation sheet machine will supply sheets at a lower cost. Their use will lead to higher production and more income for the beekeepers, while increasing the supply of honey to Apinec. The company plans to produce 260,000 sheets a year, which is enough to equip around 9,000 beehives. The beekeepers like the new foundation sheets; although they do not have the cash to pay for them, the company allows them to pay back through the honey they supply to Apinec. The equipment works well, although supply has been limited by the erratic electricity supply. To further boost productivity, Apinec invests in providing training and inputs to their suppliers.



2.2

Innovator: Bale Green PLC

Contact: Mr. Million Bogale

E-mail: inf@balegreen.com

Region: Oromia

Focus: Chickpea

More info: www.agriprofocus.com/organisation/balegreen



Ethiopia is the largest producer of chickpea in Africa and the sixth largest chickpea exporter in the world. As well as the export demand, there is a growing local demand as chickpea is a high quality, healthy, affordable source of protein. The market opportunity was recognized by Bale Green Spice and Grain Development PLC, a private company from Bale Zone that produces cereals, spices and pulses. Company owners Mr. Legesse Muleta and Mr. Million Bogale reached out to smallholder farmers, seeing that they could use their idle land to produce chickpea. With support from an FSRE innovation grant, the company was able to buy improved Kabuli variety from Ethiopian Seed Enterprise, multiply the seed and supply it to almost 50 farmers. In the future, the company wants to buy the harvest for export markets. The company also did some experiments in harvesting chickpea with a wheat combine harvester, normally used for grains. It took time to test and modify the machinery. In these first experiments, 20 per cent of the chickpea broke and the harvester did not lift the crop off the ground before cutting it and feeding it into the crusher. It was the first time chickpea had been harvested mechanically in Ethiopia.



2.3

Innovator: Bora Integrated Commercial Farm
Contact: Mr. Efrem Delessa
E-mail: efrem_40@yahoo.com
Region: Oromia
Focus: Poultry
More info: www.agriprofocus.com/organisation/bicf



Mr. Efrem Delessa is a self-made entrepreneur who raised his first chickens when he was 14. His family business, Bora Integrated Commercial Farm, grew steadily over the years. Today it has a feed mill, several broiler sheds and a slaughter unit. Among its customers are restaurants and shops in Addis Ababa. Bora Farm works with 50 small poultry keepers supplying broilers to the company. The majority of the poultry keepers are women, with most of the work being done by young girls. While he was in the Netherlands in 2013 to visit poultry companies with a group of Ethiopian entrepreneurs, Mr. Delessa was impressed by the parent stock he saw. He was ready to place his order, but the outbreak of bird flu banned any exports from the Netherlands, and instead he had to import day-old chicks from Kenya. The irregular supply of day-old chicks remains a key constraint for his farm and for his outgrowers. The FSRE Fund supported the company to establish a breeder farm unit to produce fertilized eggs and a hatchery producing day-old chicks. The import paperwork took much more time than expected, and the equipment has not yet been imported. Mr. Delessa is committed to his plan to provide at least 100 female poultry keepers with feed, day-old chicks and an outlet to sell their broilers.

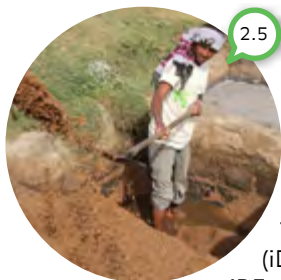


2.4

Innovator: Development Expertise Center
Contact: Mr. Aniley Amentie
E-mail: anileya@decethiopia.org
Region: Oromia
Focus: Animal fattening
More info: www.agriprofocus.com/organisation/dec



Bedele is a small town some 500 km west of Addis Ababa. The place is well known in Ethiopia because of its brewery, which the state sold in 2011 to Heineken. The civil society organization Development Expertise Center (DEC) proposed to convert spent barley, a waste product from the beer-brewing process, into a component of animal feed due to the barley's remaining high sugar content. The FSRE Fund supported DEC in this plan and in the proposal to set up a bull-fattening farm employing local youth. DEC constructed a shelter for the young bulls, organized the youth groups and trained them to manage the business. To optimize feeding practices, making the best use of the freely available spent barley, DEC wanted the advice of a feed expert. With the help of the Dutch organization PUM (see Box 6), the feed specialist Mr. Pieter Boons visited DEC and recommended the bulls' diet be balanced by adding more roughage. This meant that the youth groups had to start collecting grass, straw and other feedstuffs to be added to the spent barley. He also advised covering the feed with plastic sheets, to avoid moulds and to maintain quality. Feed kept in the open air easily gets damp, which bulls will refuse to eat. DEC is now exploring how its experiences with spent barley can be shared more widely.



2.5

Innovator: iDE
Contact: Mr. Kebede Ayele
E-mail: kaye@ideorg.org
Region: Oromia
Focus: Durum wheat, lentils, dairy
More info: www.agriprofocus.com/organisation/ide-ethiopia

iDE Ethiopia
 Enabling Rural Prosperity

The civil society organization International Development Enterprise (iDE) focuses on testing low-cost technology. In North Shewa Zone, iDE worked on treadle pumps and other irrigation equipment for small-holder horticulture. With support from the FSRE Fund, it is now expanding to other crops such as rain-fed durum wheat, lentils and dairy. iDE is convinced smallholders can earn much more money by improving productivity, accessing financial services, adding value to their products and creating market linkages with buyers. This led to various experiments involving different farming activities. A disease-resistant wheat variety called Kubsa was introduced among nearly 500 farmers. Around 400 farmers received improved lentil seeds. Some farmers received rhizobium, also known as biofertilizer. Some were trained in integrated pest management. Around 60 dairy farmers were trained in irrigated fodder production and silage making. The results were mixed. Some of the newly introduced varieties were susceptible to pests or did not taste good. But the durum wheat farmers increased their production and were able to arrange a good deal with a flour mill in Bishoftu, resulting in a 10 per cent higher price than the going market rate. Lentil farmers gained more insight in how their value chain works, including the price and price structures. With their better knowledge of the market, they were able to confront price-setting tactics by traders and negotiate a 3 per cent price increase.

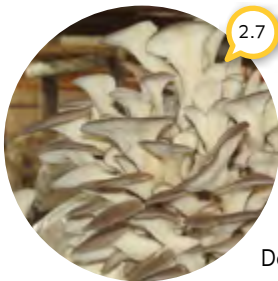


2.6

Innovator: Kifle Bulo Apple Seedling Producer
Contact: Mr. Kifle Bulo
E-mail: kiflbul@yahoo.com
Region: Oromia
Focus: Apple seedlings
More info: www.agriprofocus.com/organisation/kbasp



Mr. Kifle Bulo has dedicated his life to producing top quality apple tree seedlings. More than 10 years ago, he founded his own private company to pursue his dream. He soon noticed that the available tree seedlings in Ethiopia are of low quality, so he went as far as Spain in his quest to get the most appropriate planting material. He learned that propagation via open air pollination is not the best way to multiply apple seedlings. He needed a greenhouse that would allow him to work under controlled conditions. With the help of the World Bank, ICCO Cooperation, the Spanish Development Cooperation and loans from a commercial bank, he was able to build his own greenhouse. The FSRE innovation grant supported Mr. Bulo in installing sprinkler equipment to optimize humidity in the greenhouse, which will considerably speed up the growth process. This has taken away an important bottleneck in producing apple seedlings. Through the FSRE learning events, he also took a fresh look at his business model. He realized his business is not just about supplying excellent seedlings but also about following up on his customers. To be successful, he needs to make sure customers plant and maintain his seedlings in the proper way, so they will enjoy a good apple harvest. As well as the investment in the much-needed equipment, Mr. Bulo valued the FSRE learning opportunities that gave him some practical ideas to further improve his business.



2.7

Innovator: Menagesha Integrated Organic Farm PLC
Contact: Mr. Dejene Woldemariam
E-mail: dejenewm@yahoo.com
Region: Oromia
Focus: Mushrooms
More info: www.agriprofocus.com/organisation/miof



At his farm in Menagesha, about 20 km west of Addis Ababa, Mr. Dejene Woldemariam grows various fruits and vegetables for restaurants and grocery shops. He also multiplies fruit and tree seedlings and keeps some livestock. Some years ago, he and his field manager, Mr. Tilahun Zegey, started to cultivate mushrooms in response to growing demand, particularly from restaurants in Addis Ababa. The FSRE innovation grant supported him to equip his spawn laboratory, upgrade operations and develop an outgrower scheme. During one of the learning events organized by the FSRE Fund, Mr. Woldemariam was introduced to representatives from PUM (see Box 6) and he requested the organization's assistance. This led to a visit by mushroom expert Mr. Theo van den Boogaard to Menagesha Farm in 2015. In the words of Mr. Woldemariam and Mr. Zegey, this visit was a "game changer". They came to realize that the low productivity and poor quality they were experiencing were due to contamination caused by the poor design of their facilities and improper handling of spawn and substrate. They quickly understood that their existing mushroom-growing venture would not be profitable. They made a bold decision: they took down the existing mushroom barns to make way for a completely new construction that will provide the right conditions for growing mushrooms, such as optimal ventilation, humidity and darkness. Thanks to the FSRE learning event, they were able to convert their business from one that was certain to fail into one that has a promising future.

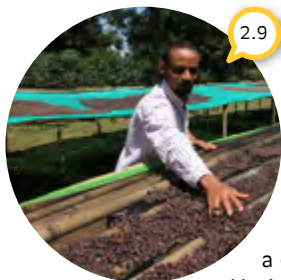


2.8

Innovator: Nati Coffee and Spices PLC
Contact: Mr. Getachew Mamo
E-mail: gmhefh@yahoo.com
Region: SNNPR
Focus: Ginger, turmeric
More info: www.agriprofocus.com/organisation/ncas



Mr. Kiros Gebremichael Abera established Nati Coffee and Spices PLC in 2010. The company is located in the western part of Ethiopia, in Sheka Zone. Mr. Abera is keen to develop the production on his own farm as well as establish a network of outgrowers who will supply him with turmeric and ginger. The FSRE innovation grant was used to acquire seeds of improved turmeric and ginger varieties from the Teppi National Spices Research Center. With the help of a group of 25 small-scale producers, these seeds were multiplied and supplied to almost 150 other small-scale producers. The smallholder farmers received training in improved farming practices, covering not only production but also harvesting and post-harvest management. To create value addition, the company introduced new technologies for cleaning, peeling and slicing ginger and turmeric. The new equipment was imported successfully from India and the first tests were particularly promising for ginger, but less so for turmeric. Unfortunately, problems with electricity supply hampered the installation and operation of the machinery. That was a hard lesson for the company: a good, practical idea to uplift a sector may be held back by one bottleneck. Mr. Abera's continued lobbying for reliable electricity supply in his area has paid off; they experience few power cuts now.

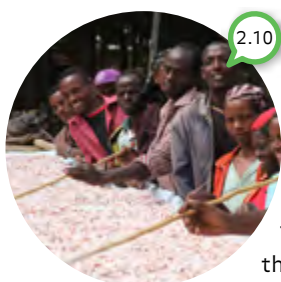


2.9

Innovator: Sacramento Farming PLC
Contact: Mr. Derebew Ashebir Azage
E-mail: sacramentopl@gmail.com
Region: SNNPR
Focus: Coffee
More info: www.agriprofocus.com/organisation/sacramento



In 2010, Mr. Derebew Ashebir Azage started Sacramento Farming, a coffee company located in Kaffa Zone in SNNPR, the Southern Nations, Nationalities, and Peoples Region. The company secured 270 hectares of forest land near Bonga, of which almost 200 hectares were planted with specialty coffee. The company wanted to work with outgrowers to increase its production volumes. The idea was to develop a sustainable coffee value chain, particularly to benefit the Medja people, a local ethnic minority. Linking them to both local and international markets would give them a better income and supply the company with more specialty coffee. Sacramento planned to construct their own processing factory to roast the coffee. Government authorities supported the project, and international buyers were interested. An FSRE innovation grant allowed the company to give coffee seedlings to smallholders and train them in basic aspects of coffee growing, including planting, pruning and harvesting. Although the ideas were promising at the start, unfortunately the business model appeared not to be sustainable. Losses started to pile up, and the farm had to be sold. The FSRE Fund management has asked the company to return the grant.



2.10

Innovator: Send a Cow Ethiopia
Contact: Mr. Kinde Teshome
E-mail: kinde.teshome@sendacow.org
Region: SNNPR
Focus: Taro
More info: www.agriprofocus.com/organisation/sace



Taro is a perennial root crop grown by many farmer households in the Wolayta area. It is a staple crop during seasons when other foodstuffs are becoming scarce. Fresh taro needs to be processed to get rid of its oxalic acids. Preparation is done at the family household and includes peeling, chopping the roots into cubes and soaking these in cold water overnight. The FSRE Fund supported an innovation by Send a Cow Ethiopia to make flour out of taro. This meant some steps were added to the process such as chopping, drying, grinding and packing. The 225 farmers included in the experiment continue to produce taro flour. It helps them to overcome periods of food shortages, diversify their diet and gain some additional income. Other farmers also adopted the innovation, and more people are now selling taro flour at local markets. Consumers appreciate that the taro flour is cheap, can be stored for a long time and is easily mixed with other flours. What helped is that Send a Cow promoted the taro flour through organizing public meetings, demonstration events and radio advertisements and through distributing tasty taro flour recipes. Currently, the manual labour needed for washing, peeling and chopping is the main limiting factor in the flour-making process. Send a Cow is trying to reduce this, for instance by introducing improved stainless steel choppers. Seeing that taro flour has such a positive impact on local food security, Send a Cow wants to repeat the approach in other areas. In the meantime, they enthusiastically encourage people to start making taro flour.



Menagesha Integrated Organic Farm PLC (see page 20)

Chapter 3: The set-up of the FSRE Innovation Fund

Background to the FSRE Innovation Fund

The FSRE Innovation Fund supports agricultural innovators in Ethiopia. It is a competitive fund that is financially supported by EKN in Addis Ababa. The FSRE Fund is managed by ICCO Cooperation on behalf of AgriProFocus.

The initiative emerged in 2011 from the members of the AgriProFocus Ethiopia network, particularly from three organizations active in the Ethiopia Learning Alliance (see Box 2). Building on that initiative, AgriProFocus, KIT and ICCO Cooperation decided to further support rural innovators in Ethiopia through a business-minded approach.

Ethiopia Learning Alliance

In a way, Ethiopia Learning Alliance (ELA) is a forerunner to the FSRE Fund. Between 2007 and 2010, the ELA helped 18 farmer organizations to improve their position in the value chain. ELA provided training, coaching and homework assignments to the farmer organizations linked to Dutch development organizations Agriterro, Cordaid, ICCO Cooperation and SNV. The knowledge partners involved in ELA were KIT, International Institute for Rural Reconstruction (IIRR) and Facilitating Farmers Access to Remunerative Markets (FFARM).

Box 2

AgriProFocus coordinated the learning activities combining two perspectives: business and development. From a business perspective, a value chain is often most vulnerable at the level of production: the farmers and their organizations. From a development perspective, preparing to engage in value chains was a relatively new strategy to improve farmer income in Ethiopia. The ELA activities focused on four topics: mapping the chain, strengthening chain actors, finance and business services and business planning. The last activity culminated in a farmer business competition, which was won by a teff cooperative, Ifa Bari. The publication *Learning and earning*¹ has more details on this experience.

The EKN was supportive of the FSRE concept, not only because food security is among the top priorities of Dutch development cooperation policy (see Box 3), but particularly for the focus on innovations and entrepreneurship combined with an open call inviting a wide range of stakeholders to submit proposals. This set-up also complemented its other Dutch food security programmes (see Box 4). The FSRE Fund was launched in August 2012 and was designed as a four-year programme.

1 Belt, J., W. Goris, S. Debela, F. Kefyalew, E. Smulders and P. Visser, 2011. *Learning and earning: How a value chain learning alliance strengthens farmer entrepreneurship in Ethiopia*. KIT Bulletin 395, KIT Publishers, Amsterdam.

Food security and Dutch development cooperation policy

Box 3

Food security is a priority focus within Dutch development cooperation policy. The policy follows the internationally accepted description of food security, but includes nutrition. Food and nutrition security is achieved if adequate food, measured in terms of quantity, quality, safety and sociocultural acceptability, is available and accessible for and satisfactorily utilized by all individuals at all times to live a healthy and happy life. The Dutch development cooperation policy addresses food security in a number of ways, mainly focusing on four areas: increase sustainably produced food and access to nutritious food; make markets more efficient by removing barriers; invest in a better business climate; and invest in worldwide research into agriculture, nutrition and management of natural resources.

The main purpose of the FSRE Fund is contained in its name: enhancing food security and promoting rural entrepreneurship. It implicitly connects both subjects, hinting at improving food security through strengthening entrepreneurship in rural areas. This is obviously not uncontested, as food security is more often seen as a social phenomenon, while entrepreneurship is seen as a commercial phenomenon. The Fund finances innovative approaches that have the potential to improve food security of farming families by increasing production, income, jobs and investments. It explicitly focuses on benefiting smallholder farmers, their organizations and the SMEs linked to them.

Contribution to food security in Ethiopia by EKN

Box 4

The amount of food-relief beneficiaries in Ethiopia has decreased considerably in recent years. However, 2.7 million Ethiopians still rely on food assistance for their survival, and the lives of another 25 million are considered highly vulnerable to malnutrition. Given the country's unstable environmental and climatological conditions, it is expected that food security will remain a major issue in the coming decades in Ethiopia. For this reason, it is one of the priorities of the Dutch Embassy's development cooperation programme. The current EKN Food Security programme has three focus areas: reduce household vulnerability in food-insecure areas, increase agricultural productivity and market access in surplus areas and increase the competitiveness of specific agribusiness subsectors. The first area supports the Productive Safety Net Programme, a multi-donor programme that provides food and cash support to 6.9 million people. The second includes support to the Ethiopian Government's Agricultural Growth Program and to its Agricultural Transformation Agency. The last area supports development of the horticulture, dairy, seed and sesame subsectors.

For more information, see www.ethiopia.nlembassy.org and www.foodsecurityethiopia.nl.

Organizations eligible for support from the FSRE Fund include a wide range of actors involved in the agricultural sector in Ethiopia. These can be SMEs, producer organizations, cooperatives, providers of business development services, civil society organizations, international NGOs accredited in Ethiopia, microfinance institutions (MFIs), universities and research institutions, chambers of commerce and business associations.

ICCO Cooperation is legally responsible for the FSRE Fund. It opened a fund management office in Addis Ababa to organize the application and selection process, the financial administration and the monitoring and evaluation process. The Fund has an advisory board that assists the Fund management on strategic issues, such as the thematic focus for the calls for proposals, linkages with other programmes supported by the EKN and

embedding within the AgriProFocus Ethiopia network. This advisory board has six members, consisting of representatives of the EKN, ICCO Cooperation, AgriProFocus and two organizations belonging to the AgriProFocus Ethiopia network. SNV and Hundee previously represented the network in the FSRE Board; the network is now represented by ISSD Ethiopia (now part of the BENEFIT partnership) and Clinton Health Access Initiative (CHAI).

The Fund has three mechanisms to support agricultural innovators: the Innovation Grant (IG), Matching and Upscaling Grants (MG & UG) and the Learning and Linking Facility (LLF).

The Innovation Grant

The IG is able to finance all types of agricultural innovations. These cover designing, testing, adapting and disseminating new inputs, technologies, products or markets, financial products, new skills and knowledge. The FSRE Fund considers innovation a process of getting an invention into use (for more background, see Chapter 2). That is, an invention refers to a new business idea or a new piece of equipment or new organizational set-up that is tested. It becomes an innovation when it improves how things are done, when it is economically viable and when there is uptake by a significant number of people and organizations. The IG is set up to create an opportunity for innovators to test an invention and translate it into an innovation.

The IG invites proposals with a budget ranging from €30,000 up to €100,000. The FSRE fund management office has set up a thorough application and selection process of proposals guaranteeing transparency, impartiality and unbiased decisions. The process involves five steps.



Figure 2: The application and selection process for Innovation Grants

Step 1

A call for IG proposals was advertised through various media. The announcement included clear application guidelines, the eligibility criteria for the applicant and the requirements for the proposal. All documents are available online (see <http://agriprofocus.com/fsre-fund>). Public seminars were organized in the major cities in Ethiopia, including Addis Ababa, Hawassa, Harar/Dire-Dawa, Bahir Dar and Mekelle. These public seminars informed potential applicants about the FSRE Fund, its application and selection process. They gave potential applicants the opportunity to raise questions and gather additional information.

Step 2

Applicants sent a five-page concept note describing their innovation to the Fund management before the deadline. The Fund management formally acknowledged the receipt of the concept note.

Step 3

The Fund management sent the concept notes it received for review to three independent professionals. These are people with all-round expertise in matters related to development and business and who have long experience working in the agricultural sector in Ethiopia. They have the highest level of integrity, underwritten by a formal declaration that they

will refrain from any potential conflict of interest. The three experts appraised and scored the concept notes individually and sent their results to the Fund management office. The Fund manager compiled a list of the top 20 applicants based on the sum of the three scores. When scores differed widely, he consulted the evaluators for additional input.

Step 4

The 20 applicants with the highest score were contacted with the request to submit a full proposal. These proposals were assessed again by the same experts who had evaluated the concept notes. At the same time, the Fund management conducted its own assessment, mainly reviewing the organizational capacity of the shortlisted applicants. With the analyses completed, the Fund management office held a face-to-face meeting with each applicant. During the meeting, the innovator presented the proposal, endorsed the commitment of the organization to implement it and responded to any questions the Fund management had. Based on the opinions of the evaluators, the organizational scan, the interview and the judgement of the Fund management team, the Fund management decided which innovations to support.

Step 5

The Fund management announced the proposals that were selected. The winners signed a contract with ICCO Cooperation. The contracting phase was concluded with a workshop explaining administrative issues, finance, monitoring and reporting. The innovator started the project.



Figure 3: The funnel model of the Innovation Grants application process

As stated above in Chapter 1, there have been four rounds of IGs. The interval between the calls was on average nine months. In this period, all the steps mentioned above were followed. The first two IG calls were open, with no limitation to geographical, value chain, sector or thematic focus. This led to a large variety in approved innovations projects. In the third IG call, only innovations in the field of horticulture, aquaculture, potatoes and poultry were accepted. This was maintained for the fourth call. Following a recommendation by the mid-term review, in the fourth call a 15 per cent own contribution was requested.

The Matching Grant

The MG mechanism was designed to support the upscaling of innovations. Applications could include but were not limited to those supported by the IG. The MG required the applicant to invest the same amount of money as it was requesting from the FSRE Fund. In other words, an MG financed a maximum of 50 per cent of the budget required to upscale the innovation, with the rest covered by the applicant. The MG had to be used exclusively for investments; it could not be used for expenditure such as administration, travel or any other overhead costs.

The selection process for the MG was similar to that for the IG, with some exceptions. There were no public seminars organized; the marketing of the MG was focused on the earlier applicants of the IG and on the network of AgriProFocus Ethiopia. No concept notes were written; the applicants had to submit full proposals. Compared to the IG, the MG application process was less complex.

The calls for proposals for the MGs followed the calls for the IGs, on average, six months later. The response to the MG calls was much lower than to the IG calls. Measures were taken to increase the response. Initially the maximum MG was set at €20,000, but for the third call, the ceiling was increased to €40,000. This did not help much. Possibly the requirement of 50 per cent own contribution to match the grant amount discouraged applications. Potential applicants also did not like that administration and other overhead costs could not be covered by the MG. Some may have preferred to apply for the IG instead.

In 2016, an additional call was organized inviting all organizations benefiting from earlier IGs or MGs. To distinguish this call from the MG, it was called the Upscaling Grant (UG). To be eligible, applicants needed to have implemented a successful IG or MG project. Timely reporting to FSRE Fund management, effective communication and good collaboration were scored positively. The proposal had to clearly demonstrate a large potential for scaling up the innovation. And, to make sure the upscaling would be completed before the FSRE Fund finished, the investment was to take not more than six months to be implemented.

From the received 10 upscaling proposals, 9 were selected following the usual MG evaluation method. All nine were also invited for a face-to-face interview. At the end of the process, seven proposals were selected and received up to €100,000. The UG was created to provide an extra opportunity for those innovators who had proved effective in improving food security and strengthening rural entrepreneurship. It gave them and their innovations an extra push.

The Learning and Linking Facility

The LLF of the FSRE Fund was the responsibility of AgriProFocus Ethiopia. The work of the LLF, also called the learning agenda, started after contracting of successful IG applicants. It focused on the learning from the innovation and linking the innovators to other relevant entities and initiatives.

The inclusion of learning and linking activities in a competitive fund is a unique feature of the FSRE Fund. The LLF did not limit its focus to the innovations projects, but also placed strong attention on the need for a proper design of the experiments, interpretation of the results and learning from the successes and failures. Being aware of what others are doing and what they know and linking with them is thus of key importance. Similarly, linking up with peers and other interested entities is important for sharing the results of an innovation.

The idea was to create a safe environment where people can share openly what went well and what did not. It is difficult for innovators to admit when things do not work. They feel pressure to claim success, to please a donor or to attract an investor. Yet the failure rate of innovations is high: some claim that in the world of business it could be as high as 80 per cent.² To reflect why an innovation did not work is arguably as important as reflecting why it did work. The LLF aimed to create the space for this open reflection.

2 Campbell, A. 2004. *Stop kissing frogs*. Harvard Business Review, July–August 2004. <https://hbr.org/2004/07/stop-kissing-frogs>.

The LLF was purposefully separated from the typical administrative and financial responsibilities that come with using grant money. It was the responsibility of AgriProFocus, whereas the administrative and management responsibility for the FSRE Fund was with ICCO Cooperation.

The LLF had three objectives: facilitate the learning of and between innovators, link innovators to other parties and document and disseminate the lessons learned. The learning agenda with the innovator was built around five steps:

- 1. Learning questions
- 2. Kick-off workshop
- 3. Field visits
- 4. Learning and training workshops
- 5. Linking activities



Figure 4: The learning and linking agenda

1. Learning questions

The first step was formulating learning questions with the innovators. This was done by screening the innovation proposal, particularly reviewing the critical factors of an innovation (see Chapter 2).

A specific set of questions was agreed with each of the innovators. Once agreed, the questions guided the individual learning process in the next steps.

As an example, the learning questions for GOAL are given in Table 1. The innovation is the use of plastic liners to improve traditional grain storage (see page 7).

Table 1: Learning questions for GOAL’s innovation to improve grain storage

Factors	What will GOAL measure?
Technical feasibility	Number of modified plastic grain storage designs produced? What will be the durability of the plastic liners? How can the cost of production be reduced?
Farm economics	How to convince farmers to invest in plastic liners?
Access to markets	How to establish a commission system for village agents? How much will the commission be?
Organizational set-up	How will village agents effectively promote the plastic grain storage liners? Are MFIs interested in providing small individual loans for liners? Can MFIs design a special, longer term product for liners?
Food security	What will be the gains in terms of quality of stored grain?

2. Kick-off workshop

The innovators were invited to address the learning questions in a kick-off workshop with all innovators of that same IG round. In these workshops the overall framework was explained, and participants were challenged to think beyond the innovation stage: How can the innovation be upscaled? If the innovation is successful, how can we convince others to adopt it? What information needs to be collected at this stage in order to be able to tell a convincing story to a potential adopter of the idea? Under which conditions can the innovation be scaled up? At the end of the kick-off meeting, the innovators make an action plan describing how to respond to their learning questions.

3. Field visits

The learning questions and the action plan generated the agenda for field visits conducted by AgriProFocus Ethiopia. Discussions with the innovators, and with the farmers with whom they work, will reveal both the successes and the bottleneck in the innovation project. When needed, action plans were changed as a result of the field visits.

In the first round, a second field visit to all innovators took place in the course of the project implementation. These visits were found to be less productive, as many issues had already been raised previously. The time and cost investment of these follow-up visits was significant, especially for innovations in the more remote areas.

So in the second round, innovators could apply for specific further support. Five innovators were selected and offered more intensive, more tailor-made support. In later rounds, the planning for each innovator included one field visit.

4. Learning and training workshops

Based on the main issues identified during kick-off workshops and field visits, follow-up workshops were designed to support the innovators in dealing with their main critical issues. Both the set-up and the programme of these workshops differ. In the first workshop, members of the AgriProFocus Ethiopia network were also invited, sharing experiences with the innovators. On-site company visits were sometimes part of the workshop. Also other organizations, such as PUM (see Box 6) presented themselves and their services.

Subsequent workshops brought together the innovators from different rounds. Some were ending their project, other were just starting. As the number of innovators grew, the learning questions from innovators became more diverse. At the request of the innovators, more specific training was given in workshops about marketing and contract farming. Also, a presentation on value chain finance was included in the activities, and ICCO Cooperation organized sessions on results-based management and corporate social responsibility.

In mid-2015, the FSRE fund started with learning events specific to each value chain. As most of the poultry innovators are based around Bishoftu, the poultry learning events were held there (see Box 5). As expected, learning among innovators benefited from the single context and the similarity between proposals. Learning events in horticulture and potato followed soon after.

Learning with commercial poultry farms

Box 5

Most innovators were either setting up a hatchery or a slaughter line with freezers or both. Having their own hatchery meant innovators could reduce their dependency on sourcing day-old chicks from an external supplier. The slaughter lines and freezer help to match the production cycle with the ever-changing demand.

All innovation proposals included outgrower schemes with small poultry keepers. In April 2016, FSRE Fund organized a survey among 74 of these small poultry keepers, of which 34 are females. Most of them were peri-urban young graduates from university. The majority kept around 1,000 layers or broilers. They became involved in the poultry industry without any training or background, expecting good profits. In reality, they faced issues with poultry disease, input supply and marketing.

The survey found no indications that women are better poultry keepers, although this is their traditional role. Men were keeping more birds than women. Most respondents were living with more than five household members. This could mean that poultry keepers rely on family labour. The majority of households surveyed are food secure; most have additional sources of income.

5. Linking activities

Linking is designed both as a last step in the process and something meant to happen throughout all the steps.

All learning activities with the innovators followed this linking perspective: field visits included talks with local parties linked to the innovation project; the learning workshops included guest speakers and visits to agribusinesses such as Dutch-led Solagrow and Alema Koudijs. Guest speakers presented their life story as entrepreneurs, without glossing over the challenges faced. Most innovators are not in a position to meet these entrepreneurs or visit these kinds of advanced companies. The learning assignments for the visits focused on analysing the linkages these agribusinesses have with clients and suppliers.

The learning facilitators also encouraged the innovators to actively engage in the AgriProFocus network. The innovators were given a profile in a printed catalogue and also on the online platform. This was done to improve their visibility for potential clients. A number of innovators were referred to PUM for their advisory services on specific issues (see Box 6).

Innovators also linked among themselves, which worked best within the sector meetings of people working in poultry, horticulture and potato. In the poultry sector, stakeholders such as the relevant Ethiopian ministries, the Netherlands Africa Business Chamber (NABC) and the Ethiopia–Netherlands Trade Facility for Agribusiness (ENTAG, part of BENEFIT partnership) were invited to the sector meetings.

In the potato learning event, there was participation from the International Potato Center, African Potato Association, SNV and the expert Gebremedhin Woldegiorgis (better known as the ‘Father of Potato’).

In the horticulture learning event, guest speakers included Ato Solomon Dagne, Special Advisor to the Ministry of Agriculture and Natural Resources. Participants included Green Life Trading, Meki Batu Union, Oxfam GB, SEDA and SNV’s Horti-LIFE programme.

Linking the innovators to PUM

Box 6

PUM is a non-profit organization established in 1978 by the Dutch employers' federation, with financial support from the Dutch Ministry of Foreign Affairs. PUM shares, through its network of Dutch professionals, hands-on knowledge with private sector operators in developing countries. These senior specialists, who are all volunteers, provide business advice and technical assistance to companies and other organizations in developing countries and emerging markets. Ethiopia is among the 70 countries that have a PUM representative. As a result of the FSRE LLF event where PUM presented their services, five of the innovators received support from a PUM expert: Development Expertise Center, Menagesha Integrated Organic Farm, Kifle Bulo Apple Seedling Producer, Bora Integrated Commercial Farm (poultry) and Bere Sericulture Production PLC.

The poultry survey mentioned in Box 5 identified a strong demand for poultry training on general management, feed and health. In response, FSRE Fund and PUM piloted a poultry learning event with 3 innovators and some 60 poultry keepers.

The concluding step in the learning process is an innovation finance fair. This is scheduled for September 2016 in Addis Ababa. The main purpose of the fair is to create a meeting space where innovators can pitch their case to interested investors, researchers and policymakers. The current experience with ICCO Cooperation's Agribusiness Booster (see Box 7) is the kind of linkage needed to upscale innovations.

Linking to AgriBusiness Booster

Box 7

The AgriBusiness Booster (ABB) is a programme of ICCO Cooperation that supports agribusinesses in emerging markets. The approach is unique in that it proposes to co-invest in the agribusiness, thus sharing risks and recovering costs. Both investments and costs for business development are recovered by the added value created in the agribusiness.

In 2015, ABB and FSRE Fund selected eight innovators (all SMEs) for a first assessment. Further investment analysis led to proposals for co-entrepreneurship with three SMEs: Bora Poultry Farm, Bere Sericulture and Apinec. According to ABB, these offered the best conditions for growth and cost recovery.

Even when linkages have been made and support is forthcoming, the process of upscaling can still be fraught with difficulties. Some of these SMEs need to resolve issues with land tenure and registration before investments can take place. Agri-Business Booster also noted that Ethiopia allows international joint ventures only when the Ethiopian company is registered as a PLC. Changing the official registration is a time-consuming matter.



Map 3: Locations of innovators funded in the third round of FSRE Innovation Grants

- 3.1 Bahir Dar University | Fish, poultry, feed
- 3.2 Bilisuma Mia Plant Seed Supplier | Mushroom
- 3.3 Concern Worldwide Ethiopia | Potato
- 3.4 Elere Farm | Poultry
- 3.5 GOAL Ethiopia | Potato
- 3.6 Haramaya University | Poultry, fish, vegetables
- 3.7 Seyoum and Abebayehu Poultry Partnership | Poultry
- 3.8 The Well Foundation | Poultry
- 3.9 The Well Foundation | Aquaculture

● : Private sector
 ● : NGO
 ● : Knowledge institute

Innovation Grants – Cases from the third round

The complete stories, can be found on www.agriprofocus.com/innovators

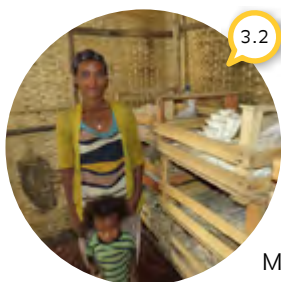


3.1

Innovator: Bahir Dar University
Contact: Dr. Berhanu Gizaw
E-mail: berghail23@gmail.com
Region: Amhara
Focus: Poultry, fish, feed
More info: www.agriprofocus.com/organisation/bahuni



With its focus on combining research and development to technology transfer and sharing knowledge, the Bahir Dar University has created a special position within the academic community in Ethiopia. The FSRE Fund supported Bahir Dar University in experimenting with a solar dryer to turn poultry and fish remains into animal feed. These remains can be picked up for free from city abattoirs and fish-processing plants. Instead of being thrown into the lake or rivers, where they will pollute the water and harm the environment, they are used as a protein-rich ingredient for animal feed. Protein is the most expensive component of animal feed, which is why feed is so often poor in protein. By producing locally and using local resources of protein, the University expects that the price of animal feed can be reduced by as much as 50 per cent. The currently available feed is expensive because it is being transported from Bishoftu, nearly 600 km away from Bahir Dar. The University expects to supply the new feed to around 100 small-scale and 15 commercial poultry farms operating in and around Bahir Dar city. The idea is to also establish a poultry demonstration farm in the University premises. In the community, nine fish ponds and another nine poultry farms will be established. For the latter, the FSRE learning events were useful for establishing contacts with other innovators active in the poultry business.



3.2

Innovator: BMPSS
Contact: Mr. Bilisuma Mia
E-mail: bilisuma@gmail.com
Region: Oromia
Focus: Mushroom
More info: www.agriprofocus.com/organisation/bmpss



Mr. Bilisuma Mia from Bishoftu is the owner and manager of Bilisuma Mia Plant Seeds Supplier (BMPSS). He grows fruit and vegetables and multiplies tree seedlings on his farm. Noticing that the increased demand for mushrooms in Addis Ababa was being met by imports, he saw a new business opportunity for himself and his community. The FSRE innovation grant supported him to improve his own mushroom production facilities and develop an outgrower scheme with 30 farmers. With the grant, mushroom-growing houses were built for each outgrower and supplied with the necessary equipment and materials. The outgrowers were trained, and the company conducts regular visits to supervise their production. The major constraint to producing mushroom in Ethiopia has been the lack of spawn, the vegetative "seed" of mushrooms. In Bishoftu, there are no spawn suppliers, and obtaining quality spawn from elsewhere is difficult and expensive. Therefore, the company wants to set up its own laboratory to produce spawn, for its own mushroom production and to supply to its outgrowers. The company learned that critical factors for good mushroom production are keeping the darkroom clean and regularly watering the substrate and the floor to create the moisture that the mushrooms need to grow. Many outgrowers mention that fetching water and bringing it to their farms is the main challenge of cultivating mushrooms.



3.3

Innovator: Concern Worldwide Ethiopia
Contact: Mr. Abraham Bongassie
E-mail: Abraham.wanta@concern.net
Region: Amhara
Focus: Irish potato
More info: www.agriprofocus.com/organisation/concern



The international NGO Concern Worldwide has been active in Ethiopia since 1973. Apart from providing emergency aid, it works on themes such as health, nutrition, gender and food security. The FSRE Fund supported Concern to introduce improved seed-potato varieties into two woredas in the Amhara Region. It organized 350 smallholder farmers into four potato producer cooperatives and provided them with training. It also constructed four diffused light stores, a low-cost method for storing seed potatoes. At the start, it appeared difficult to obtain seed potato, a common problem in Ethiopia. A solution was found by contracting a group of farmers that were included in a previous potato project. They multiplied seed potatoes for Concern, benefiting from the additional training and supervision given by the NGO. Local sourcing was the appropriate way to guarantee a sustainable supply of seed potato; to guarantee that the potatoes were top quality, a reliable certification process was set up through the local seed-potato cooperatives. This worked remarkably well. The farmers in two woredas increased their income and improved their food security. The farmers and their cooperatives played a vital role in upgrading the potato value chain by a providing a reliable local source of seed potato in the area.



3.4

Innovator: Elere Farm
Contact: Mr. Fanta Terefe
E-mail: fanta_elere@yahoo.com
Region: Oromia
Focus: Poultry
More info: www.agriprofocus.com/organisation/elere



Elere Farm is located in Bishoftu, some 45 km south-east of Addis Ababa. Its owner, Mr. Fanta Terefe, is a well-known poultry expert in Ethiopia. He has been in the poultry business for more than 15 years and is currently the Chairperson of the Ethiopian Poultry Producers Association. Elere Farm integrates four poultry activities: parent stock production, hatchery, feed processing and commercial rearing. It sells some inputs to the many small-scale poultry farmers that operate in and around Bishoftu. But Mr. Terefe wants to do more for them, helping the smallholders to overcome their main challenges: high price of feed, recurrent shortages of day-old chicks and lack of a reliable market. The FSRE Fund supported him in finding innovative solutions. Elere Farm will work with 200 female poultry farmers, supplying them with day-old chicks, feed and other inputs. To create a new end market for them and other smallholders, the plan is to establish a slaughterhouse and a mortadella processing unit. The land has been acquired, and the equipment for the slaughterhouse will be installed in December 2016. Elere Farm is already buying broilers from the smallholders, linking them to large buyers such as government institutions, universities and NGOs. Mr. Terefe is sharing his experiences within his wide network of researchers, entrepreneurs and policymakers.

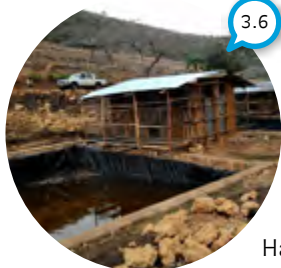


3.5

Innovator: GOAL Ethiopia
Contact: Mr. Fitsum Teshome
E-mail: fitsumt@et.goal.ie
Region: SNNPR
Focus: Irish potato
More info: www.agriprofocus.com/organisation/goal-ethiopia



The international NGO GOAL is active in different regions in Ethiopia, working on areas such as rural development and food security. Since 2010, it has been supporting farmers to produce seed potatoes through its Sidama Rural Development Programme. The FSRE Fund supported GOAL in upgrading the potato value chain in two very different but adjacent woredas: Boricha and Hula. The first is a very food insecure, low altitude area. Hula, however, is in the highlands and has very favourable conditions for producing seed potatoes. GOAL assists farmers and their cooperatives in Hula to produce and sell high quality seed potatoes for the farmers in Boricha. These farmers and their cooperatives grow potatoes for consumption. They can sell their potatoes to groups of potato chip processors that have been selected and are supported by GOAL. These people produce and sell chips in Hawassa. The project includes distribution of improved seed-potato varieties, a rotating fund supplying loans to farmers, support for organizing farmers into cooperatives, training smallholders in improved agronomic practices, post-harvest handling and integrated pest management. Getting the high quality seed-potato varieties from the agricultural research centres proved to be difficult and is causing delays in the execution of the project. Technically, economically and socially, the innovation seems very promising, but access to quality seeds remains the main limiting factor.



3.6

Innovator: Haramaya University
Contact: Mr. Dandena Gelmesa
E-mail: dandenagalmesa@gmail.com
Region: Oromia
Focus: Poultry, fishery, vegetables
More info: www.agriprofocus.com/organisation/haramaya-university



Haramaya University is one of the oldest educational institutes in Ethiopia and it has long been implementing community outreach programmes in rural eastern Ethiopia. The University is particularly strong in agronomy and agrotechnology. The FSRE Fund supported its College of Agro-industry and Land Resource to introduce integrated agribusiness activities among rural households. The farmers will be organized into small and medium enterprises (SMEs) that will set up integrated poultry, fishery and vegetables farms. These businesses will be supported with inputs, including young chicks and tilapia fingerlings, and with equipment. Training and supervision will be intensive. The idea is to use and reuse the limited available farming resources in the most effective way and thereby reduce cost, maximize income and improve nutrition. The experiment will focus on nutrient recycling. The fish and vegetable farms will provide feed to the poultry farms. The waste from poultry will feed the fish and provide manure for the vegetables. Through this integrated farming, the households will produce more than one product and have access to different foodstuffs throughout the year. More variety in production and an expected higher production levels will lead to higher incomes. Major recent occurrences, including drought and protests in the region, have caused some delays in the implementation of the project.



3.7

Innovator: SAPP
Contact: Mr. Seyoum Girma
E-mail: seyoumlib@yahoo.com
Region: Oromia
Focus: Poultry
More info: www.agriprofocus.com/organisation/sapp



Mr. Seyoum Girma established his poultry business in 2013 with his wife, Mrs. Ababayehu Abera. The company is called Seyoum and Ababayehu Poultry Partnership (SAPP) and is located close to Bishoftu, the centre of the poultry business in Ethiopia. It mainly focuses on producing broilers. The FSRE Fund supported the company to establish a breeding farm for layers. Layers have proved to be less of a business risk than broilers because the price of eggs is much more stable, even showing a steady increase over the last few years. As a result, the demand for pullets is large, and they are not always available. To realize SAPP's business goal, the company needed to import a hatchery and parent stock to produce day-old chicks. These chicks would then be sold to small and medium enterprises (SMEs), which would sell pullets to the many smallholder poultry farmers in the area. Progress of the project was slow, because it was very difficult to get the foreign currency and finalize the required paperwork for importing the equipment. SAPP finally managed to get the machines through another importer. Importing parent stock would have resulted in further delays, so it was decided to use fertile eggs as the best available alternative. Plans had to be revised several times. Mr. Girma sees this as part of doing business and insists the search for alternatives helps the company to find the most feasible business model.



3.8

Innovator: The Well Foundation
Contact: Mr. Girma Tsige
E-mail: girma_tsige2007@yahoo.com
Region: Tigray
Focus: Poultry
More info: www.agriprofocus.com/organisation/wf



The Well Foundation started working in Ethiopia in 2003, digging wells and providing pumps to produce clean drinking water for people living in drought-prone areas. Its founders, the Dutch Jansen family, are poultry farmers who have been assisting Alema Farms in Bishoftu, currently one of the largest poultry companies in Ethiopia. Some years ago, the Well Foundation did a small project in western Tigray, introducing improved laying breeds. With the innovation grant from the FSRE Fund, it stepped up its efforts and established a parent layer house and a hatchery and trained 150 smallholder poultry farmers in improved husbandry. To be able to finance the construction of an improved poultry barn, the farmers were connected to the local microfinance institution Dedit Micro Finance. The demand for eggs in Shire town is high, and many farmers are interested in starting to produce. Unfortunately, the project is facing some delays. It took months to import and install the hatchery equipment. The modern poultry feed-processing factory that the Well Foundation is building is not operational yet. As a result, there is no continuous supply of quality feed to the poultry farms. These problems will be resolved, but the delays present a risk to farmers who have invested, some of them by taking out a loan. To respond to this, the Well Foundation supplied these farmers with an initial set of 30 layers so they could start earning some income.



Innovator: The Well Foundation
Contact: Mr. Girma Tsige
E-mail: girma_tsige2007@yahoo.com
Region: Tigray
Focus: Aquaculture
More info: www.agriprofocus.com/organisation/wf



The Well Foundation has been working around Shire, in western Tigray, for more than 10 years, introducing improved agricultural technologies and practices to smallholder farming communities. For a long time, Mr. Girma Tsige, Country Representative of the Well Foundation in Shire town, has wanted to work on fish as well. People in Shire like fish, but it is scarce and expensive because it comes from several hundred kilometres away. However, not too far from Shire is a dam which has created an artificial lake that covers about 70 hectares. Its water is used for irrigation. The FSRE Fund supported the Well Foundation to introduce fish production among a group of young unemployed men and women from the two communities alongside the dam. The idea was that they would supply their own communities with fish and sell the surplus to Shire town. They were trained in fishing techniques and in how to prepare fish. A fish cooperative was set up and equipped with two small boats and fishing nets. Fishing has started, and the diets of the fishers' families have improved, with more protein. Some have sold fish in Shire town. Mr. Tsige realizes the importance of having a network of professional technical experts who can advise the project and train and coach the cooperatives. Resolving technical issues and developing business skills are equally important.



Send a Cow Ethiopia (see page 21)

Chapter 4: Results and lessons

Some results of the FSRE Fund

The FSRE Fund has supported 75 initiatives, 39 through Innovation Grants (IGs) and 36 through Matching Grants (MGs) and Upscaling Grants (UGs). For the IGs, of the 524 concept notes that were submitted, 39 received a grant. This means that 7 per cent of the proposed ideas were funded. For the MGs, 148 proposals were received and 29 of these were awarded funds. In other words, 20 per cent of the proposed ideas for MG were funded. For the UGs, 10 proposals were submitted and 7 were awarded. This was an additional call, inviting only those innovators that had received an IG and were successful in taking their invention through to being an innovation.

Table 2: Overview of submitted and awarded Innovation Grants

Call	Date	Number of concept notes	Shortlisted	Full proposals	Awarded	Contracted
1	March 2013	150	20	20	10	10
2	June 2014	140	22	21	10	10
3	April 2015	139	20	19	9	9
4	October 2015	95	20	19	10	10
	Total	524	82	79	39	39

Table 3: Overview of submitted and awarded Matching Grants and Upscaling Grants

Call	Date	Full proposals	Shortlisted	Awarded	Contracted
1	September 2013	16	16	5	5
2	June 2014	36	12	9	9
3	March 2015	34	9	6	6
4	August 2015	23	7	4	4
5	November 2015	39	14	5	5
UG*	February 2016	10	9	7	7
	Total	158	67	36	36

* This was a call for Upscaling Grants

In total, 10 of the innovators that received an IG also obtained an MG. All 7 UGs went to successful projects that had earlier received IGs or MGs.



Map 4: Locations of innovators funded in the FSRE Matching Grants and Upscaling Grants

1st round

1. Bere Sericulture Production PLC | Silk
2. Zerubabel Briquette Factory | Briquette
3. Ayetu Agriculture & Trading (Eco-Coffee) | Coffee
4. Gadissa Gobena Commercial Farm Products PLC | Seed
5. Handhura Becho Farmers Marketing Service Cooperative Union | Chickpea

2nd round

6. Bale Green Spice and Grain Development PLC | Chickpea
7. Abaynesh Teklemariam Animal Production | Poultry
8. Kifle Bulo Apple Seedling Producer | Apple seedling
9. Abdi Gudina Animal Feed Producer Cooperative | Animal feed
10. Emebet Commercial Beekeeping for Environment | Honey
11. Menagesha Integrated Organic Farm PLC | Mushroom
12. Nati Coffee and Spices PLC | Spice
13. Bora Integrated Commercial Farm | Poultry
14. Apinec Agro-Industry PLC | Honey, beeswax

3rd round

15. Atnafu Meseret Ena Lijochachew | Poultry
16. Acts of Compassion with Oxfam Intermon | Horticulture
17. Ethiopian Kale Heywet Church Kuriftu Center | Poultry
18. Jimma University | Aquaculture
19. Seblewongel Sedessa Botanical Garden | Poultry
20. Yala Farmer Fruits and Vegetables Marketing Cooperative | Horticulture

4th round

21. ALEBE Partnership Cooperative | Potato
22. Atnafu Meseret Ena Lijochachew | Poultry
23. Green Way Farms (GreenPath Food) | Horticulture
24. Oromo Self Reliance Association | Horticulture

5th round

25. Abraham Mulu Poultry Farm | Poultry
26. Baraki Berhe Poultry Enterprise | Poultry
27. Jemma Agro-Tech PLC | Horticulture
28. New Millennium Hope Development Organization | Horticulture
29. The Well Foundation | Aquaculture

Upscaling

22. Atnafu, Meseret Ena Lijochachew | Poultry
14. Apinec Agro-Industry PLC | Honey, beeswax
1. Bere Sericulture Production PLC | Silk
30. Christian Aid Ethiopia | Aloe soap
31. Facilitator for Change | Chickpea
18. Jimma University College of Agriculture and Veterinary Medicine | Poultry, fish
32. Send a Cow Ethiopia | Taro flour

Of all the 75 supported proposals, just over half were submitted from the private sector (see Figure 5). It must be noted that these only refer to the organization that submitted the proposal; nearly all the innovation projects were collaborations involving different type of organizations. For example, an international NGO would work with a local civil society organization, engage producer organizations and private sector operators and obtain support from government research institutions and extension agencies.

FSRE grants by sector

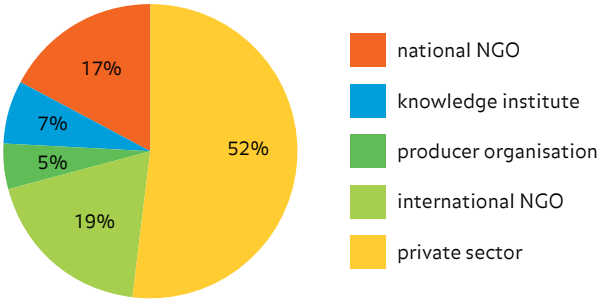


Figure 5: FSRE grants by sector

Of the 75 awarded projects, 60 per cent were located in Oromia, 21 per cent in SNNPR, 11 per cent in Amhara and 8 per cent in Tigray (see graph 6). The last two calls for proposals showed a larger geographical spread than the first two calls. By design, the FSRE Fund had no geographical limitation for applications. Public seminars were organized in various regions, and information was published in major newspapers, relevant newsletters and shared through social media. Some anecdotal evidence suggests that some regions had less access to the internet and were less connected to the AgriProFocus network.

FSRE grants by region

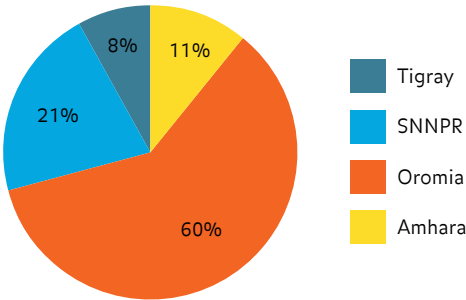


Figure 6: FSRE grants by region

Of the awarded projects, 32 per cent focused on horticulture, 21 per cent on poultry, 8 per cent on potato, 7 per cent on aquaculture and 32 per cent fell in the “other” category. The latter category was rather diverse and included sectors such as beekeeping, silk production, soap-making, dairy and taro (see graph 7). The first two IG calls were open to any innovation, with no limitation on sectors. The third and fourth calls, however, were limited to horticulture, potatoes, aquaculture and poultry. This is reflected in the relatively large representation of these sectors.

FSRE grants by product

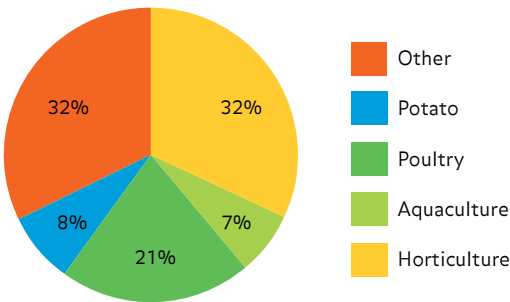


Figure 7: FSRE grants by product

The budget spent by June 2016 was close to 6 million euros. The resources were used as shown in Table 4; with the programme ending in December 2016, the funds expended by June 2016 are close to but not quite the full amount budgeted.

Table 4: Budget and allocation of resources up to June 2016

Category	Budget (€)	% of total budget	Spent, to June 2016 (€)	% of total spent
Overheads	265,000	4%	196,305	3%
Fund management office	879,000	13%	723,395	12%
Innovation Grants	3,759,000	57%	3,414,142	58%
Matching Grants	1,288,000	19%	867,010	15%
Upscaling Grants			382,001	6%
LLF	354,000	5%	260,000	4%
Evaluation	70,000	1%	59,521	1%
Total	6,615,000	100%	5,902,374	100%

Midterm review and final evaluation

Box 8

The midterm evaluation in December 2014 recommended a narrowing of the focus in the FSRE Fund: subsequent calls for proposals were dedicated to poultry, potatoes, horticulture and aquaculture. The advisory board disagreed with recommendations that meant higher overhead costs, such as analysing discarded proposals. In a sample of nine innovation projects, five were considered truly innovative; the others were new for the participants but innovative only in the context of their district.

The final evaluation in June 2016 focused on impact. In a new sample of 10 innovation projects, 9 were reported to have direct impact in terms of food security and rural entrepreneurship. The evaluation also elaborated on the conditions where investment capital should be the financial instrument of choice rather than grants. Related to this, the evaluation found that the project period of one year is too short to test an innovation and to assess its economic feasibility and potential for upscaling.

The end evaluation estimated that around 22,100 people have directly benefited from the initiatives supported by the IGs and around 10,300 people from the MGs and UGs. This means that in total 32,400 people, mainly farmers and their families, have benefited.

Some lessons from the FSRE Fund

A lean and mean approach implies limited follow-up

The FSRE Fund management has been able to run the Fund with low overhead costs, meaning that a large amount of the funding has supported the innovators in the field and was not spent at the fund management office. The reason is that innovators know their business, their context and how to manage their innovations; a small Fund management office will never be able to support all aspects of all sectors. The FSRE Fund has been supporting innovations from a bottom-up rather than a top-down approach.

However, this also means that applicants and innovators were not assisted by a strongly equipped and well-funded management office in matters related to proposal writing, administration and technical advice. As a result, some of these costs were taken up by the applicants and innovators themselves. Some innovators shifted some of the costs to consultants who were hired to produce proposals on a “no cure, no pay” basis.

The lean and mean approach also meant that the FSRE Fund had a clear role. FSRE Fund management refrained from helping promising innovators by improving badly written proposals. During implementation, regular monitoring and technical assistance was available for the innovators. But FSRE Fund did not go to great lengths to rescue innovation projects, even requiring a few innovators to return the grant because they did not resolve operational issues. The FSRE Fund was keen not to compromise the idea of competitive funding.

The lesson is to strike a balance between having low overheads and putting complete trust in the capabilities of the applicants and innovators to solve their problems and find solutions, versus helping excellent ideas towards a clearly formulated proposal, closely monitoring projects, assisting in overcoming hurdles and finding alternative routes when projects get stuck.

Creation of a Learning and Linking Facility

The innovators valued the LLF because it created an opportunity to meet peers, reflect on the design of their innovations and the related learning questions, receive tailor-made support on-site, get training in specific areas of interest and be introduced to relevant organizations and people. As one innovator put it, “the learning facility helped us to think more”. An innovation process is not just about getting access to the financial resources.

The Ethiopia Learning Alliance, an earlier initiative of the AgriProFocus Ethiopia network (see Box 2) put the capacity-building activities before the business plan competition. The FSRE Fund puts the action up front: it selects the best innovations, and while innovators are busy testing their ideas, invites them to be part of a learning agenda.

It is important to mention that the learning and linking agenda is not part of the Fund’s overhead costs; it directly supports the innovators and therefore its expenditures form a separate budget line.

As mentioned in the previous chapter, the learning agenda was separate from the standard project monitoring, which is more administrative in character and responds to accountability and transparency requirements that are obviously part of any public funding. Keeping the learning activities separate from the monitoring created a safe learning environment where innovators were able to express themselves openly and share their successes and failures. Nobody wants to admit to a donor that a project has failed; however, lessons are learned and need to be shared to improve practice.

Instead of going straight from one project to another, participants were able to use the LLF for such reflection. Also, the LLF created opportunities to link to results from other organizations and meet new partners.

The lesson is that linking and learning improves the relation with the innovators. At the same time, it allows fund management to maintain a lean and mean profile.

A flexible approach: the FSRE Fund as an innovation itself

The instruments of the FSRE Fund were adapted continually during the process, based on the results achieved, the challenges confronted and solutions found. It is about adaptive management, not rigidly adhering to the procedures. This created room for experiments, demanding flexibility of the people involved. For example, the learning agenda was adapted in order to be more efficient and effective; the IG mechanism changed from an open call for proposals to having a focus on a few subsectors; after written proposals were received, interviews were done with most promising applicants to get a good idea of the innovation; the rules for the MGs were adapted to attract more applicants; and the UGs were introduced to produce another boost to the most promising innovations. These were some of the changes that were implemented along the way. Not all ideas came from within the FSRE: the midterm review team gave some valuable input into changing strategies (see Box 8). There is no single fix to setting up and running an innovation fund such as the FSRE Fund.

The lesson is that the path of innovations is winding, as is the road to find the best way to support innovation processes. Hence, a level of flexibility and room for experimentation is needed. The stakeholders involved should be aware of and agree to this philosophy.

Testing inventions versus achieving direct impact

There are two ways to look at the performance of the FSRE Fund, and they are conflicting. From one angle, the FSRE Fund helps to finance experiments that can take a promising invention through to being an innovation. These experiments need to be well designed, which the Fund management assesses in its screening process, but it means an idea can be accepted or rejected by its intended users. Therefore, the outcome for improved food security and rural entrepreneurship is unknown from the start; the proof of how useful it could be and what its impact might be lies in the future.

The other angle is evaluating how much the FSRE Fund has directly contributed to improve food security and rural entrepreneurship in Ethiopia. This perspective has been suggested by the external evaluators of the FSRE Fund (see Box 8). In this view, a competitive fund to support innovations should be compared and measured against other instruments that have direct impact on food security and rural entrepreneurship.

Either the FSRE Fund is about promoting the process of innovation, indirectly aiming to improve food security and rural entrepreneurship through innovations that have passed the test and that create impact, or the Fund is judged on its direct impact on improving food security and rural entrepreneurship.

The lesson is that both objectives cannot be met at the same time; they are subsequent phases, corresponding to different stages of the “invention to convention” model introduced in Chapter 2. It also means that the different stakeholders involved in the FSRE Fund should agree on one or the other objective, avoiding misunderstanding about what each can achieve. A choice needs to be made, communicated to and supported by the parties involved.

Need for speed but no unnecessary hurry

Testing an invention should not be an endless process; in principle, it is about testing it under field conditions in a new environment. The process should be relatively fast and the answer about whether it works or not should be generated in a relatively short amount of time. It is not the same as implementing a development project, which obviously takes more time, involves more dimensions and is more complicated.

To maintain momentum, the FSRE Fund has given a maximum period of one year for inventions to be tested. This has proven to be difficult for many innovators, partly because many of them are more used to managing development projects than innovation initiatives.

The funnel process of selection has also been a quick process. Announcement, date for submitting concept notes, invitation to submit full proposal, final approval; these phases all followed each other in a relatively short time. This has surprised many applicants; they are used to much longer and more bureaucratic selection processes, and they appreciated the fast decision-making.

Although speed is needed, nevertheless it must be noted that inventions differ and so does their implementation time. And for some, forced hurry is unwise. Many inventions depend on one or more agricultural seasons. For others, field staff needed to be hired and a team formed to get the work done. Other innovators need to go through the necessary paperwork to import machinery; yet others were dealing with land issues. Such critical issues cannot be sped up.

The lesson is to be flexible: look at the character of the innovation and organize the time frame around that. But innovation should never lose speed, as it requires an entrepreneurial spirit of problem-solving and opportunity-seeking. Delays in delivery or continuous emergence of new problems could well be strong signals that the invention does not work or that the innovator cannot take it through to innovation.

The performance of companies versus NGOs

Innovators from the private sector proved to be more focused on the innovation process itself, having a keen direct interest in the invention being successful and able to be directly implemented in their business. They also had a strong focus on sustainability: they wanted to maintain their business, looking at the longer term of supplying a certain product or service to generate income from it. NGOs focused on development and were not always overly concerned with a specific sector the innovation would be applied in; sometimes they did not have a lot of experience or affinity with a particular sector, and they easily shifted from one sector to another.

Obviously, social concerns dominate the civil society perspective, and commercial objectives dominate the private sector perspective. Consequently, NGOs were rather weak in organizing the commercial aspects of innovations, including looking at the balance of costs and benefits and how to access markets, make deals with business partners, develop business-minded solutions and stimulate grassroots organizations to operate as a business. They differ from most companies, because they do not have direct involvement in the innovation; the innovation is generally implemented by the people they work with. Also, they do not derive direct benefit, such as an income stream, when innovations are being used. NGOs search and secure money from donors, shaping their programmes around their needs and not around consumer demand.

Experience with the FSRE Fund has shown that when some assumptions for a particular innovation are not met, companies can easily become stuck, whereas NGOs are faster in finding alternative ways to move forward and suggest alternative uses of the available resources. Some companies even returned the funding, because the whole experiment came to a complete standstill and there were no indications that matters would improve in the foreseeable future. NGOs are also excellent at proposal writing, reporting and monitoring and evaluation. All these qualities are highly valued by donors, including grant suppliers such as the FSRE Fund. In general, companies struggle to meet the expectations and conditions set by the funder.

The lesson is that companies are generally highly focused on their innovation, seeing it as part of sustaining their business. But if they strike significant problems, the whole experiment is likely to fail. Also, they are often not very experienced in administering donor projects. Civil society organizations are excellent project administrators, good at finding alternatives to allocate the money. But they are less committed to one innovation or one sector and, in general, possess less business acumen.

An open call leads to surprises; a closed one facilitates learning

The IGs and MGs both started off with open calls for proposals. The Fund management and advisory board were not sure about what the response rate would be and opted not to limit the call to specific products or subsectors. This meant they received a wide variety of ideas; this variety was also reflected in the projects that were selected. The second call remained open too for any product or sector, yet in the selection process a stronger focus was put on involving private sector actors, including farm organizations and cooperatives and the organizations that support them.

The last two calls for proposals of the IG were limited to horticulture, potatoes, aquaculture and poultry. Even with the narrowed focus, there were still more than enough proposals to choose from. The positive aspects about a closed call are that a network of similar projects is created and that innovators have much more to share in the learning agenda. The Fund management is able to connect to a group of specialized sector specialists with the right expertise, and it is able to develop a deep insight into the sector at hand, making selection of projects easier and quicker. The downside is that there are fewer surprises: Fund management might not have the opportunity to support less obvious inventions, the more “out of the box” ideas that could potentially have far-reaching impact.

The lesson is that the selection process is made easier by focusing on specific products or sectors. Expertise is built up within the Fund management, developing a network of relevant sector specialists and consultants. This will limit overhead costs. Information exchange among innovators is much easier, facilitating the learning agenda. The downside is that radically new ideas involving sectors or products other than those selected may be disregarded. In the case of the FSRE Fund these could be new breakthroughs that could bring a much-needed new perspective to old, persistent problems of food insecurity and constrained entrepreneurship.

Linking to be enforced

Linking in the context of the FSRE Fund is about meaningful encounters with potential partners in Ethiopian business, research or policy circles. Virtually all innovation projects have elaborated on these linkages. Applications included, for instance, links with research stations to get the improved seed that is part of the package for farmer entrepreneurs. Others linked to farmers to carry out production and to traders to market the produce. In most cases, local authorities have had key support roles in providing space to test the inventions under real-world conditions.

The learning activities with the innovators followed this linking perspective. Field visits included talks with parties linked to the innovation project; learning events included guest speakers and excursions to innovative agribusinesses; innovators linked among themselves. These events were also used to present the advisory services of PUM (see Box 6). Having the innovators' profiles on the online AgriProFocus Ethiopia platform helps to create more visibility.

The next step in linking is an innovation finance fair, scheduled for September 2016 in Addis Ababa. The main purpose of the fair is to create a meeting space where innovators can pitch their case to interested investors, researchers and policymakers. In this way, the FSRE Fund supports networking and linkages for successful upscaling.

The lesson from these innovations is that they emerge and grow from the interaction between two or more actors. A network environment is conducive for accelerating an innovation process.

Spin-off to a wider innovation landscape

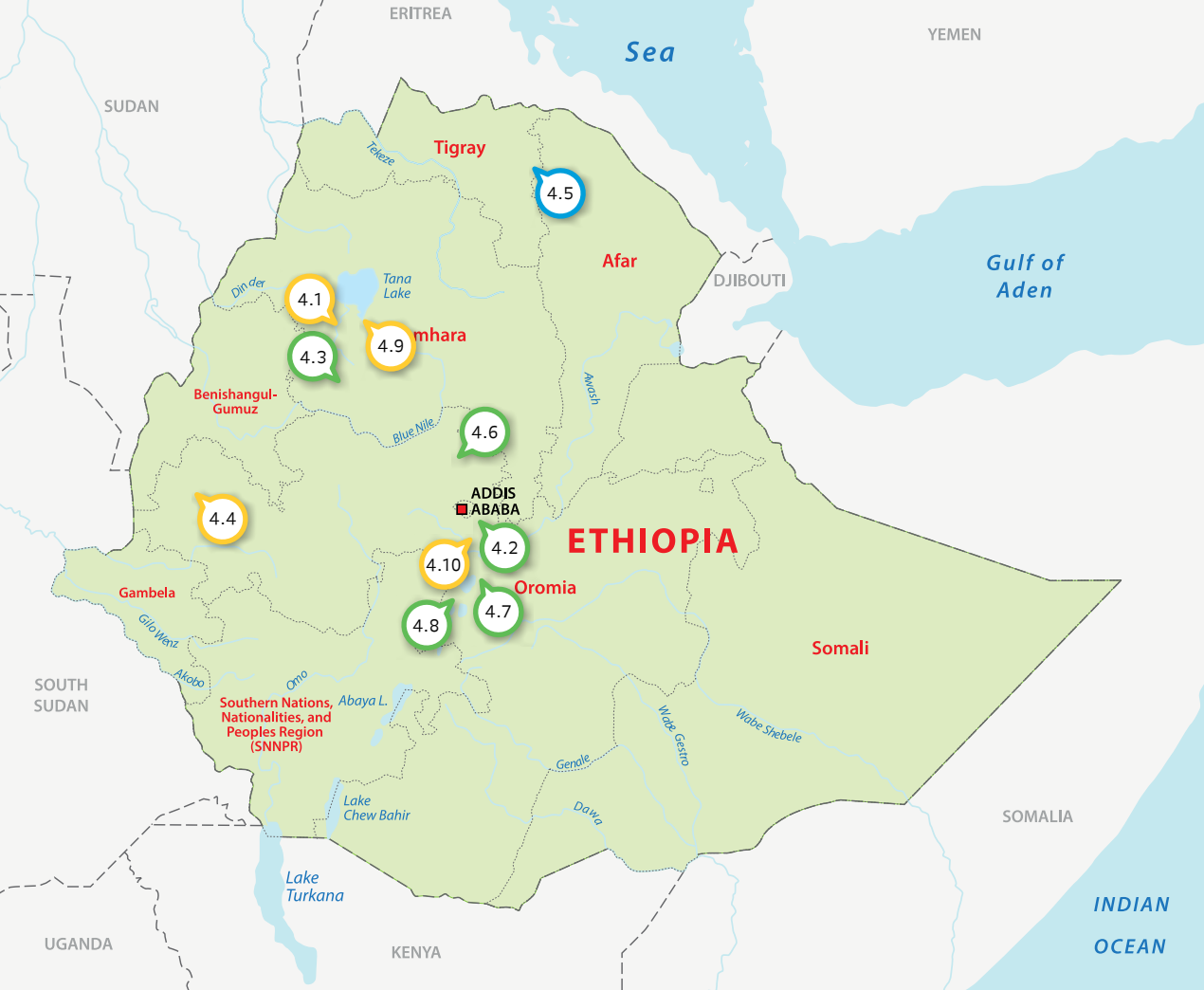
In financial terms, the FSRE IGs have been valuable for the winning innovators and a disappointment for those who were not selected. Some innovators improved their initial proposals and were selected in a subsequent round. Others may have dropped the whole idea or taken it elsewhere for alternative funding. There are some anecdotes, but there is no systematic review of what happened to the concept notes and the full proposals that were not selected by the FSRE Fund.

The learning activities focused on the selected innovators. As described earlier, the approach changed over time, with the facilitators tailoring their activities to each new call. The learning activities led or contributed to some unexpected results for AgriProFocus Ethiopia. As a first result, it led to more traffic on the online platform and more interest in joining the network in Ethiopia. This was measured by the peaks in page views on <http://agriprofocus.com/fsre-fund>. Second, the learning facilitators gained insights and knowledge about specific issues, which were transformed into new activities with network partners. The field visits to cooperatives influenced policy debate with the Netherlands Embassy on the role of cooperatives.

But the best example of unexpected results was to do with contract farming. It was a topic relevant for many of the innovators supported by the FSRE Fund. A specific contract farming training session was held with the innovators in January 2015. Unexpectedly, other network members also wanted to attend the session and were willing to pay for it, so a separate session was organized in May 2015. In July 2015, Agricultural Transformation Agency (ATA) requested an in-house training session for its staff. The interest inspired AgriProFocus and network partners SupHort, LandAc, Agriterra and SNV to prepare a publication with case studies on this topic.

Another spin-off is that in 2015, the Netherlands Embassy invited AgriProFocus Ethiopia to organize the learning and communication activities between all Netherlands-funded programmes. Since then, regular meetings have been organized, leading to an exchange of information and learning among Netherlands-funded food security projects.

The lesson is that an innovation fund such as the FSRE Fund is not limited to supporting its innovators alone. It contributes to a landscape where innovations take shape, get supported and get further disseminated. Fund management should allocate time to assist in developing such a landscape, responding to the opportunities that emerge.



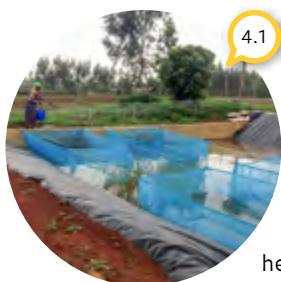
Map 5: Locations of innovators funded in the fourth round of FSRE Innovation Grants

- 4.1 Africa Sustainable Aquaculture | Aquaculture
- 4.2 EECMY-DASSC | Aquaculture
- 4.3 Facilitator for Change | Potato
- 4.4 Hena Farm PLC | Fruit trees
- 4.5 Mekelle University ISSD Program | Potato
- 4.6 Organization for Development Association | Potato
- 4.7 Oxfam GB | Vegetables (onion and tomato)
- 4.8 Send a Cow Ethiopia | Red pepper
- 4.9 Tsige Poultry Farm | Poultry
- 4.10 Baro Flower PLC | Fruit and vegetables

4: Private sector 3: NGO 5: Knowledge institute

Innovation Grants – Cases from the fourth round

The complete stories, can be found on www.agriprofocus.com/innovators



4.1

Innovator: Africa Sustainable Aquaculture PLC
Contact: Mr. Alwin Quispel
E-mail: a.quispel@asanl.com
Region: Amhara
Focus: Aquaculture
More info: www.agriprofocus.com/organisation/asa



Mr. Alwin Quispel is an entrepreneur from the Netherlands. In 2014 he established Africa Sustainable Aquaculture (ASA), a private aquaculture farm that is both commercial and sustainable. As a Board Member of the Ethiopian Aquaculture Association and a Co-Chair of the Fisheries and Aquaculture Workgroup of the Ministry of Agriculture and Natural Resources, he actively promotes aquaculture in Ethiopia. Although a large number of fish ponds have been constructed in the country, many are left idle, mainly due to a shortage of fingerlings, lack of technical expertise and the expense of quality feed. The FSRE Fund supported ASA to help 40 smallholder farmers in western Amhara to revive their fish ponds. ASA supplied them with tilapia fingerlings from its own farm and provided on-site technical assistance. To decrease feed costs, the company helped them create a mix of locally available feed with the specialized fish feed sold by suppliers such as Alema Koudijs Feed. The ultimate objective of the project is to create successful microenterprises, turning aquaculture farmers into thriving entrepreneurs. The original plan was to import a fast-growing tilapia species from the Netherlands, but ASA discovered that this is not allowed in Ethiopia. Instead, the company started its own breeding programme with locally available tilapia. Although it will take several breeding seasons to improve the growth and feed conversion of this species, ASA is confident it will succeed.



4.2

Innovator: EECMY - DASSC
Contact: Mr. Aman Ababu
E-mail: amanababu@gmail.com
Region: Oromia
Focus: Aquaculture
More info: www.agriprofocus.com/organisation/eecmy



The Development and Social Services Commission of the Ethiopian Evangelical Church Mekane Yesus (EECMY) has been implementing numerous rural development programmes throughout Ethiopia. In their search to become less dependent on donor funding, they developed a range of income-generating activities. Among the most successful is a vocational training centre for furniture-making in Arba Minch. With this experience in training centres and recognizing the potential of aquaculture in Ethiopia, Mr. Aman Ababu of the Central Branch Office of EECMY developed a plan to establish a training centre in fish farming. The FSRE Fund provided support for this innovation. The compound of an abandoned orphanage in Bishoftu was turned into the first aquaculture training centre in Ethiopia. An aquaculture expert from the Netherlands, Mr. Bert Schuilenberg, helped to design the facilities. The main idea of the concept is that the centre will be self-sustainable. Its primary income will come from the production and sale of fish and fish fingerlings. A poultry unit will also be established on the premises to produce eggs, and fruit and vegetables will be grown on the land next to the fish ponds. The generated income will pay for the centre's running costs. It is expected that the training centre will encourage the development of aquaculture in as well as outside of Ethiopia.



4.3

Innovator: Facilitator for Change
Contact: Mr. Gelaye Hailu
E-mail: fce@ethionet.et
Region: Amhara
Focus: Seed potato
More info: www.agriprofocus.com/organisation/fc



For more than 20 years, Facilitator for Change (FC) has supported smallholder farmers in Amhara and Oromia regions. Its main focus is on improving food security among rural communities. The FSRE Fund gave an innovation grant to FC for promoting sustainable potato production among 200 smallholders in one woreda in Amhara Region. FC has been working in the area, establishing two small-scale irrigation schemes of nearly 600 hectares involving two cooperatives and 10 community-based organizations. The first activity for the FSRE innovation was to acquire pre-basic seed potatoes from Holeta Agricultural Research Center and Amhara Regional Agricultural Research Institute. Next, FC trained a group of 80 farmers in multiplying seed potato and distributed the pre-basic seed material among them. Then the produced basic seed potatoes were distributed to other farmers for further multiplication. Promotion of post-harvest management techniques and construction of diffused light storages were an integral part of FC's approach. FC engaged farmer self-help groups and cooperatives to supervise distribution and production, closely monitoring quality issues. This innovation enabled farmers to multiply their own seed potatoes, overcoming two major problems: frequent shortages and high prices for seed potatoes. As well as the participating farmers benefiting from an increased income, which can be as much as 65 per cent, the producers of consumption potatoes will also benefit from this innovation.



4.4

Innovator: Hena Farm PLC
Contact: Dr. Jiregna Gindaba
E-mail: jgindaba@gmail.com
Region: Oromia
Focus: Fruit trees
More info: www.agriprofocus.com/organisation/hf



Dr. Jiregna Gindaba is the general manager of Hena Farm PLC, a private company located in West Wolega Zone of Oromia Region. On its farm of 230 hectares, the company grows coffee, cereals and fruit. Each year it produces as much as 100,000 coffee seedlings for its own use. When Dr. Gindaba wanted to establish some fruit orchards on his farm, he noticed that in the area there are no nurseries that produce good quality planting materials. The FSRE Fund supported Hena Farm to address this challenge by setting up a propagation centre serving farmers in the area. The centre includes greenhouses and nurseries that will produce grafted planting materials for fruit such as avocado, mango and orange. Dr. Gindaba believes that his farm can produce quality fruit seedlings for half the price of those supplied from Bishoftu. The centre will also serve as a demonstration site and training facility. Hena Farm expects to serve around 600 men and women farmers. Key in the approach is training in agronomy, harvesting and post-harvesting techniques. Together with government extension officers, Hena Farm will run a promotion campaign to encourage farmers to plant fruit. This will help them to diversify their farm, create an alternative source of income and have a positive impact on their diet.



4.5

Innovator: Mekelle University
Contact: Yirga Haileselassie
E-mail: yirgah6932@yahoo.com
Region: Tigray
Focus: Seed potato
More info: www.agriprofocus.com/organisation/mekuni



The Shewit Seed Producer Cooperative is the only certified seed potato producer in the Tigray Region. The cooperative has been receiving support from the Integrated Seed Sector Development Programme at Mekelle University. The innovation grant of the FSRE Fund supports Mekelle University to upgrade the whole potato value chain. Members of the Shewit Cooperative will be trained in further improving the production of seed potatoes, particularly focusing on post-harvest handling, and new storage facilities will be constructed to minimize loss of quality. The seed potatoes will go to the producers of consumption potato; these farmers will also be assisted by agronomists from Mekelle University to improve their production. A new market will be created for these farmers by constructing a processing unit for making French fries and potato chips. The unit will be owned and managed by Shewit Cooperative, supported by engineers and business economists from Mekelle University. Establishing formal contractual arrangements with potato producers will ensure that the cooperative will have sufficient potatoes to process. The cooperative has already secured the land on which the processing unit will be built and is confident that adding value to potatoes will generate a steady flow of income additional to that already gained by selling seed potatoes. The whole innovation is driven by a value chain approach, covering all the steps and actors in the potato value chain.



4.6

Innovator: ODA
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Region: Oromia
Focus: Potato
More info: www.agriprofocus.com/organisation/oda



The Organization for Development Association (ODA) has been active in and around North Shewa Zone of the Oromia Region since 2002. Its main focus is on improving the lives of low income households. It does this through running projects in the areas of education, health, gender, emergency relief and income generation. The FSRE innovation grant helped ODA to improve the production and marketing of seed and consumption potato by 200 smallholder farmers in one woreda of Oromia. ODA worked in partnership with the Holeta Agricultural Research Center and the government agricultural and rural development offices. Potato farmers have been trained in areas such as seed-potato multiplication, cultivation of consumption potatoes and prevention of post-harvest losses. Diffused light stores were built to create proper conditions for storing the seed potatoes. A solar pump is in the process of being installed to get groundwater for irrigation. Around 50 farmers will produce and sell seed potatoes to nearly 150 producers of consumption potatoes. ODA has created a market linkage for the latter by linking them to the Biftu Selale Farmers Cooperative Union. The Union will take care of the sales of the consumption potato. It plans to set up sales points in five surrounding towns enabling it to sell directly to consumers. One unique element of this innovation is that ODA has engaged a variety of local stakeholders in the initiative.



4.7

Innovator: Oxfam GB
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Region: Oromia
Focus: Vegetables
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The central Rift Valley is the main supplier of horticultural crops in Ethiopia. However, its producers have not been able to improve their lives in a sustainable manner. Some of the factors that hold them back are unavailability or expense of quality seeds and farm inputs, lack of appropriate farming technology, limited training opportunities and weak market linkages. The international development organization Oxfam GB has been supporting smallholder horticulture farmers in the central Rift Valley with its local partner the Rift Valley Children and Women Development Organization. The FSRE innovation grant is supporting Oxfam GB to experiment with improving smallholder production and sales of onion seed, onions and tomatoes. About 25 farmers are assisted in producing quality onion seed and 125 farmers in increasing their production of onion and tomatoes. The farmers are given technical support and help installing irrigation equipment and inputs, and ample attention is also given to transforming their farming operations into businesses. Training therefore includes leadership, business development and marketing. The idea is to improve farmers' entrepreneurial skills, which will help them create strong market linkages with existing and new business partners. Stakeholder meetings are organized with the main actors in the value chains, including input suppliers, traders, cooperative unions and government offices. This will facilitate the development of a sustainable value chain, which will directly benefit the farmers.

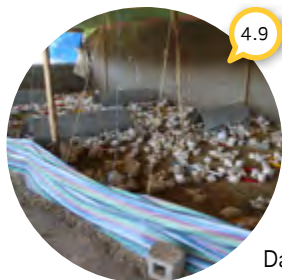


4.8

Innovator: Send a Cow Ethiopia
Contact: Mrs. Sofanit Mesfin
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Region: Oromia
Focus: Red pepper
More info: www.agriprofocus.com/organisation/sace



Send a Cow Ethiopia received support from the FSRE Fund for its initiative to create value addition for red pepper, involving women cooperatives in East Shewa Zone in the Oromia Region. To do this, Send a Cow partnered with the local civil society organization Sustainable Environment and Development Action (SEDA). Red pepper powder, or "Berbere" as it is known in Amharic, is a main element of any Ethiopian meal. The women realized the process of making Berbere could be improved and asked for help from Send a Cow. Instead of drying the pepper in the sun, which is the common practice, a solar dryer was introduced. Apart from being faster and requiring less labour, solar drying is more hygienic and produces a better, more homogeneous quality product. Also, a new Berbere mix was developed by adding 20 different spices to the red pepper, including garlic, ginger and rosemary. This created a new, unique product. To improve the production process, the members of the participating women cooperatives were trained by Hawassa University in processing, sorting, packaging and labelling. The women cooperatives were successfully linked to producers who agreed to supply high quality red pepper to them. They developed a marketing campaign to promote the new Berbere among consumers, speeding up the market uptake of the product. The cooperatives are planning to open shops to sell their product directly to consumers.



Innovator: Tsige Poultry Farm
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Region: Amhara
Focus: Poultry
More info: www.agriprofocus.com/organisation/tsigepf

TSIGE
POULTRY FARM

Mrs. Tsige Girma started her own poultry business in 2011 in Bahir Dar. Starting with just 100 chickens, her Tsige Poultry Farm is now among the top companies in the Amhara Region. Poultry farming in the area faces two main challenges. Firstly, the existing multiplication centres do not have the capacity and resources to satisfy the growing demand for day-old chicks. Secondly, feed and other inputs are expensive because they come from Bishoftu, 600 km away. The FSRE Fund supported Tsige Farm to install a hatchery, with a capacity of 3,000 eggs per cycle, and a feed-processing unit. The experiment includes 20 poultry companies and 400 smallholder poultry keepers. The ultimate goal is to ensure a regular supply of day-old chicks so that poultry production in Bahir Dar is not interrupted. In addition, Tsige Farm strives to produce sufficient quality feed for poultry farmers in and around Bahir Dar. The initiative is supported by poultry trainers from the Amhara Livestock Resources Development and Promotion Agency and local government offices. Seeing a bright future, Mrs. Girma has already changed the original plan and will now install a hatchery with a much larger capacity: over 19,000 eggs per cycle. The price of the larger hatchery was not much different from the smaller, and Mrs. Girma was able to secure some additional funds. With this capacity, she may have to look for markets beyond Bahir Dar. Access to land is the main challenge now, but she is in the final process of acquiring a suitable piece of land.



Innovator: Baro Flower PLC
Contact: Mr. Addisu Nurbeza
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Region: Oromia
Focus: Fruit and vegetables
More info: www.agriprofocus.com/organisation/baro



In 2014, Mr. Addisu Nurbeza established Baro Flower PLC in Ada'a worda in Oromia Region. His original idea was to grow flowers, but he realized he did not have enough land. Instead, he shifted his attention to producing vegetable seeds and fruit seedlings. The FSRE Fund supports Baro Flower in its innovative approach to producing quality seeds and seedlings in partnership with smallholder farmers. The experiment focuses on producing onion and watermelon seeds and multiplying avocado and mango seedlings. Baro Flower will provide around 130 smallholder farmers in its neighbourhood with seeds and planting material, fertilizers and agrochemicals. To avoid water shortages, a common problem in the area, several boreholes will be constructed. The company will provide training to its outgrowers and will closely supervise the whole production process, from planting to harvesting. A seed-packaging machine was bought with the FSRE innovation grant to improve presentation and quality of the produced vegetable seeds. Mr. Nurbeza believes this will improve the market position of his company. He aims to develop a continuous and sustainable business relation with its farmers. He will always buy the seed and seedlings produced by his outgrowers, guaranteeing a good price. If this approach is successful, it can be upscaled and replicated elsewhere, contributing to the overall development of the horticultural sector in Ethiopia.



Apinec Agro-Industry PLC (see page 17)

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John Belt is an agricultural economist with the Royal Tropical Institute (KIT) in the Netherlands, where he mainly focuses on inclusive value chain development. He has lived abroad for about 15 years, working for multilateral, research and non-governmental development organizations. John was one of the facilitators of the Ethiopia Learning Alliance initiative and helped write *Learning and earning: How a value chain learning alliance strengthens farmer entrepreneurship in Ethiopia*. Recently, he co-authored the book *Commercial and inclusive value chains: Doing good and doing well*.



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Wim was trained in tropical animal husbandry and worked in north-eastern Brazil. Later he joined Cordaid and worked in food security and agricultural development in Brazil and other countries in Latin America. As a network facilitator for AgriProFocus, his job is to promote farmer entrepreneurship and joint action among professionals from research, NGOs, private and public sectors in Ethiopia, Tanzania and Zambia. Wim is a member of the advisory board of the FSRE Fund.

Agricultural Innovators in Ethiopia

Lessons from the Food Security and Rural Entrepreneurship
Innovation Fund

The Food Security and Rural Entrepreneurship (FSRE) Innovation Fund is a competitive fund that supports agricultural innovations in rural Ethiopia. It supports promising ideas that will develop into innovations that work in practice and that have the potential to boost food security and rural entrepreneurship. The FSRE Fund started in 2012 and has supported 75 innovation projects so far.

The FSRE fund is financially supported by the Embassy of the Kingdom of the Netherlands (EKN) in Addis Ababa. The Fund is managed by ICCO Cooperation on behalf of AgriProFocus.

The Fund supports the development of the innovations, and AgriProFocus Ethiopia organizes learning and linking activities with the innovators. The inclusion of these activities is a unique feature of this Fund. The learning activities emphasize the need for proper design of the innovation experiments, interpretation of the results and learning from successes and failures. Similarly, linking up with peers and other interested entities is important for sharing the results of an innovation.

This publication introduces how the FSRE Innovation Fund is organized, how it contributes to rural innovation in Ethiopia, what its challenges are and what it has achieved. The document also draws some lessons from the experiences gained by the people involved in the FSRE Fund. The main goal of the publication is to inform people interested in how a competitive fund such as the FSRE Fund can promote agricultural innovations in the rural Ethiopian context. This publication will be valuable to development practitioners, policymakers, donors, agricultural researchers and lecturers and students of agricultural colleges. We have opted for a short book, written in an accessible style.

More details on the FSRE Fund are to be found on the online platform <http://agriprofocus.com/fsre-fund>.

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