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FINANCE & EXTENSION & COOPERATIVE DEVELOPMENT FOR GEORGIAN FARMERS

FinExCoop GEORGIA

Dear Reader,

Editorial

Georgia did not escape the pandemic. During the first wave of Covid-19, its number of cases and deaths was among the lowest in the world. But then came the second wave with a heavy toll: by February 2021 more than 262 thousand cases of contamination (nearly 7 percent of the population) and 3,300 fatalities. In December 2020, there was a peak with more than 5,000 cases per day. At that time, Government of Georgia (GoG) had reverted to tough measures to prevent the virus from extending. As of now, they seem to have paid off and GoG has been able to reduce restrictions, but much uncertainty remains even though Georgia has already access to its first doses of vaccines.

Apart from its human cost, Covid-19 has led to the worst economic crisis in Georgia since Independence. Mainly because of its large exposure towards tourism and transit trade which suffered most globally from Covid-19, Georgia's GDP contracted by 6.1% in 2020. These tough figures, the worst in the region, are probably an underestimate of the negative impact of Covid-19. But in any case, they put forward the necessity for Georgia to rebuild its economy on a more sustainable and diversified basis. Of utmost importance will be the future capacity of Georgia to revert to strong growth without the large current account deficits of the past.

Against this background, we expect the agriculture and agro-industry to play a cardinal role in the future. Until now, agriculture has underperformed both the agricultural performance of all countries in the region and the growth performance of all the other sectors of the Georgian economy. Despite excellent agronomic conditions, Georgian yields are much lower than those of its neighbours with some few exceptions like hazelnuts or wheat.

In 2020, Georgian GDP in agriculture proved quite resilient with a 3% real growth. Manufacturing, in which agro-industry has a 45% share, also performed better than the rest of the economy. This positive performance was partly linked to specific supporting policies introduced by the Government as part of its anti-Covid economic package. But much more can still be achieved. Even though sown areas have increased in 2020, they still make up for only two-third of acreage in 2013. With full use of its land resources and better yields, Georgia could potentially double its output in less than a decade as was achieved since FSU by Azerbaijan and Armenia.

FinExCoop is fully committed to contribute to making this goal a reality.

About FINEXCOOP

The 4-year FinExCoop project is funded by the European Union (EU) under the NIF Programme Trust Fund. Even though it is not stricto sensu an ENPARD project, it is fully coordinated with the ENPARD programme in Georgia. FinExCoop is managed by the Agence Française de Développement (AFD) and it is implemented by a consortium led by the Frankfurt School of Finance & Management, in partnership with Chambre d'Agriculture du Loiret, Mercy Corps and Rural Development for Future Georgia (RDFG). Through its subsidiary Proparco, AFD also provides credit lines for agriculture to two local financial institutions, Credo Bank and Microfinance Institution Crystal.

The main objective of FinExCoop Georgia is **to promote the sustainable emergence of a new generation of small and medium-scale family farm entrepreneurs able to be competitive** thanks to:

- Improved access to credit and other financial services including insurance **(Fin like Finance)**
- Higher productivity linked to better technical knowledge and appropriate use of better inputs and equipment **(Ex like Extension)**
- Their participation in market-oriented cooperatives or any other entities fostering their coordination in order to improve their access to inputs and equipment, to consolidate their output, and increase its value through better storage, processing and marketing **(Coop like Cooperatives)**.

HOW DO WE WORK?

FinExCoop combines two approaches:

Top-down approach: Think at horizontal national level. FinExCoop supports Partner Financial Institutions (PFIs Credo and Crystal) which have received dedicated credit lines from Proparco, extension services (Information Consultation Centres (ICCs) under the Ministry of Environmental Protection and Agriculture (MEPA) and its Rural Development Agency (RDA) and others including extensionists linked to input suppliers) and the RDA's Department for Cooperative Development

Bottom-up approach: Act at local level. Identification and implementation of development pilots in the selected strategic value-chains where FinExCoop is active across Georgia: beef-and-dairy, potatoes, modern apple orchards, goats for milk.

Both approaches are based on a constant interaction with AFD, the EU, RDA with which AFD has signed a FinExCoop's Partnership Agreement (MoU), and other development organizations and projects in Georgia. They include a large dimension of Public Private Partnership.

TOP DOWN: SUPPORT TO PFIs

#1

We are currently working with one FinExCoop Partner Financial Institution (PFI) on the **development of an agro-credit scoring system** relying on the systematic collection of gross margins in agriculture for all main productions and regions. This system will be based on the flagship ALES system used by the Turkish Credit Bureau, conceived and regularly upgraded by Frankfurt School.

#2

We are ***reinforcing capacities of PFIs in the field of agri-lending*** through dedicated trainings and consultancy. Our trainings and consultancy activities focus on enhancing agricultural sales and marketing through solid business models and delivery mechanisms, agricultural risk management, financing agricultural investments, cooperative financing, value chain finance, and human resource management.

#3

We are working on ***development of new financial products needed for Georgian farmers and cooperatives***. FinExCoop has prepared a system of warehouse finance for primary products (fruit, vegetables, grains, etc.) together with a leading international certification agency. This system, which is intended to put on track in summer 2021, could also be used for the financing of storage of processed products (for ageing of high-value cheese and wine in particular). We have conducted systematic analysis of monthly price variations from 2012 till 2020 to identify the most interesting segments. FinExCoop team has also identified **146 local stakeholders** with cold storage capacity for fresh products, most of this capacity being located in Shida Kartli.

#4

We are supporting the use of ***smart agriculture in agriculture finance***, such as through the use of satellite imagery. We have designed a preliminary programme for an international conference on Smart Agriculture and Agrarian Innovation together with RDA and GITA. This conference will inter alia build on many components of the EU Green Deal and will not only focus on smart agriculture for smart finance, but also on smart agriculture for improved productivity of farmers and increased environmental sustainability. The conference will be organized in Georgia as soon as Covid-19 makes it possible.

#5

We are working towards a strong acceleration of the financial component of our activities in 2021. We are supporting our PFIs – which have among the best experience in agriculture finance in Georgia – through the introduction of new financial methodologies often based on the digital economy, and of new financial products which would allow to mobilize new forms of collateral such as inventories in certified warehouses.

TOP DOWN: SUPPORT TO ICCS AND PRIVATE EXTENSION SERVICES

FinExCoop is active in:

- ***Strategic research on agriculture and our value-chains.***
- ***Trainings in extension methodology.***
- ***Technical trainings in our value-chains.***

We are conducting economic value-chain analyses on maize, cattle genetics and potential for the development of high-value cheese. We conducted similar research for potatoes, and also prepared benchmark business plans for apple orchards in Shida Kartli.

Moreover, we have been providing ICCs with trainings in extension methodology on organization and day-to-day practice of extension services in France, and on the calculation of gross margins in agriculture. The gross margin calculations are crucial to the sustainability of FinExCoop: they will be used by financial institutions to assess the capacity of farmers to repay their loans through their agricultural income, but also by extension services to evaluate and demonstrate the interest of new technologies.

Despite Covid-19, we have launched a large programme of training of extensionists, input suppliers and advanced farmers. When possible, our training programme combines classroom trainings with in-the-field or learning-by-doing trainings. However, due to Covid-19, we also have relied on on-line training technologies. Please check the project website for all training documents in Georgian (***www.finexcoop.com***).

For beef-and-dairy, we have organized 12 online training sessions in genetics and technologies of reproduction technologies with a leading international expert. Trainees were inseminators, veterinarians, students and farmers. The sessions were dedicated to topics including anatomy of the cow, from puberty to gestation, oestral cycle, fertilization and embryonic development, gestation, parturition, post-partum, heat detection, moment of insemination, thawing and preparation of semen, equipment of the inseminator, act of insemination, body conditions of the cow.

For small-scale dairy and cheese processing, FinExCoop has already organized with another international expert five learning-by-doing training sessions, in the small-scale dairy factories of some of its pilots. Trainings were dedicated to the production of Feta, of Mozzarella, of French-style Tomme, of Yoghurt and to the promotion of a specific type of Georgian cheese Tenili. (Please check www.finexcoop.com for trainings films.)

In parallel, we have established a **strategic partnership with the Franco-Georgian University** (FGU) which has launched in 2020 a twinning between the French University of Rennes II and the Georgian Technical University focused on new technologies of food processing and dairy processing.

In the field of ***modern intensive apple orchards,*** our international experts delivered a mix of 15 class-room trainings, on-line trainings and in-the-field trainings. Most on-site trainings were organized with RDA in Gori and Kaspi. Trainees were fruit specialists from ICCs and farmers. The training sessions were dedicated to apple orchard work cycle and pruning, protection from pests and diseases, crop load management methods, picking management methods, knowledge of conservation principles. Practical trainings were mainly focused on pruning.

FinExCoop will keep on providing trainings in the field as the knowledge base for modern intensive orchards in Georgia remains poor. Nearly all new modern orchards visited by FinExCoop are only producing part of their potential yields.

For ***dairy goats,*** our international team has provided 5 on-line training sessions to local specialists, potential investors in goat farms and existing goat farmers. These sessions were dedicated to: General introduction to goat farming, health, welfare and housing in goat farming, reproduction management in goat farming, genetic improvement of goats and nutrition of dairy goats.

All in all, since its launching in October 2019, and despite the hardships linked to Covid-19, FinExCoop was able to organize 38 training sessions in technical management of its value-chains with 945 trainees/days. Women accounted for more than 25% of trainees.

In 2021, we will keep on developing trainings with RDA/ICCs and other development organizations. For trainings which were made on-line or in class-room, the focus will be on in-the-field practical trainings. For others, there will be systematic combination of theoretical training in class-rooms and on-line with in-the-field trainings. All training materials will be made available in Georgian on FinExCoop's website.

Trainings will focus inter alia on:

- Production, harvesting and conservation of the fodder crops
- Potatoes and seed potatoes
- Fodder, nutrition and milk quality
- Putting more value on milk.

TOP DOWN: SUPPORT TO THE DEVELOPMENT OF COOPERATIVES

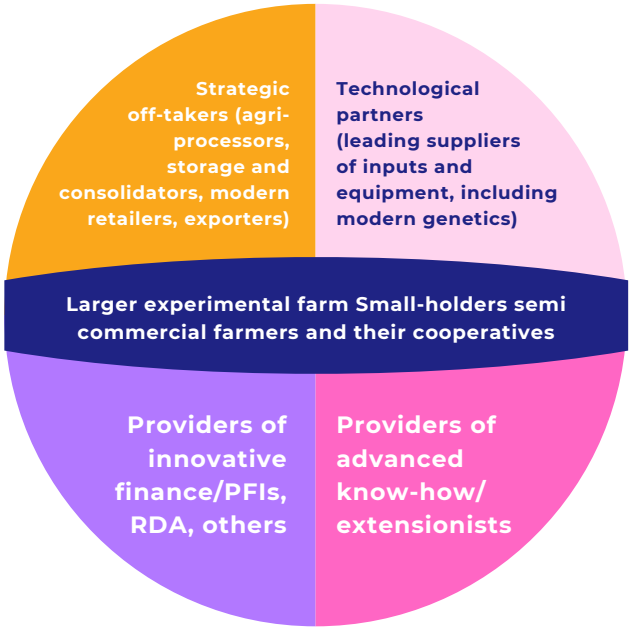
Since the beginning of FinExCoop, we have been closely working with many cooperatives supported by RDA to identify the main bottlenecks they are faced with and try to solve them. We have also held many exchanges with other stakeholders in cooperative development, including the EU team of experts involved in the evaluation of the cooperative component of previous ENPARD projects.

Within FinExCoop, we are cooperating with various counterparts for setting-up Cooperatives of Use of Agricultural Machinery based on the transfer of the experience of French CUMAs.

There are contradictory views in Georgia regarding the development prospects of cooperatives even though international experience shows that it is difficult to develop an efficient agriculture of small and medium farmers without them. To create a fruitful discussion around the topic, we will organize an online international conference on cooperatives gathering local and international stakeholders. To prepare this conference and build shared views on what should be done, we have launched a **multi-stakeholder Working Group** on cooperatives together with RDA. We have already organized two online workshops in October and December 2020 attended by the key institutions involved in cooperative development of Georgia. Please check our website for further conference material.

BOTTOM-UP DEVELOPMENT: FINEXCOOP PILOT DEVELOPMENT PROJECTS

FinExCoop's pilot development projects aim at connecting Georgia with best agricultural technologies through a two-arch bridge approach using existing larger modern farms to **Test** new technologies and **Train** a new generation of specialists prior to **Transferring** them to smaller farmers. Within the pilot projects, we use the **pull force of the market in a holistic value-chain approach** from the fork of the consumer back to the fork of the farmer.



Our pilot projects aim at setting up integrated development platforms involving multi-stakeholders able to generate agri-clusters. They include the three dimensions of FinExCoop: better access to **Finance**, better access to technologies and know-how through improved **Extension**, better coordination of farmers through the development of their **Cooperatives**.

As of February 2021, FinExCoop has 4 operational pilot projects in beef-an-dairy and 8 in potatoes. Partners in the pilot projects have been chosen through a rigorous selection scoring process by a dedicated Committee for Pilots under the joint leadership of AFD and RDA. The scoring of pilots is based on a combination of economic, social, environmental and institutional criteria. FinExCoop does not provide any kind of grant to its partners in pilots. Our role is to help them design and implement smart development strategies with a collective dimension and to Test with them innovative technologies. When these technologies have never been experimented, we provide the inputs for free as the partners bear a large technical risk of innovation. When these technologies have already been experimented, its contribution has a cost. For instance, farmers who have received in April 2020 elite or A-Class potatoes must deliver the next year two kg of reproduced seeds for each kg provided by FinExCoop (except in case of force majeure) to nearby farmers validated by FinExCoop so as to create micro-clusters.

The approach of FinExCoop vis-à-vis our pilots is step-by-step. First, we build trust through concrete experimental work which does not require large investments like demo plots or new types of processing using existing equipment, and then focus on longer term approaches such as the setting-up of cooperatives of machinery.

Demo plots for wheat, barley, triticale and winter forage mixture

We have launched our first trials of wheat (soft and durum), barley and triticale just few days after beginning our operations in October 2019. Seeds for experimentation were provided for free by a global leader. It also made trials with winter forage mixture used for intercropping with seeds provided for free by another global leader. All seeds were imported through local distributor. Trials were made in through local distributor in Arkhiloskalo, Dedoplitskaro, in rainfed areas of the Shiraki Valley. Agronomic conditions turned out to be very poor: after an extremely dry winter, spring was very cold. They negatively impacted yields in Kakheti. Nevertheless, results of the trials were fair. Winter fodder mixture was harvested in April as hay, prior to seeding maize. For cereals, as expected, triticale tended to be more resilient to adverse climatic conditions as well as durum wheat for which there could be positive further development in the Shiraki Valley provided local processors of pasta would be interested to contract with Georgian farmers.

In July 2020, a demo day was organized by the farmer upon harvest. Yields were calculated as well as germination rates for further use for seeds. For each type of seeds, FinExCoop also calculated gross margins and economic returns for the farmer. More information could be accessed through ***www.finexcoop.ge*** and ***www.finexcoop.com***.

Demo plots for peas

One of the main problems for feeding livestock in Georgia is access to good and cheap proteins. Today, modern dairy farms in Georgia heavily rely on imported soymeal whose price in GEL has increased by 50% in the recent past. We believe that leguminous crops like peas can both help substitute costly imports of soymeal and also play a positive agronomic role in crop rotations. We organized two experimental trials with seeds of peas one in Arkhiloskalo with winter peas and one in the village Sakdrioni located in Tsalka municipality at an altitude of 1,450 m for spring peas. As for wheat, barley and triticale, very tough climatic conditions in Kakheti in the 2019 winter season led to poor yields (1.4 t/ha). But with spring peas, results were good to excellent (2.8 t/ha and 4.5 t/ha).

Peas were a new product in Kvemo Kartli and Kakheti, and FinExCoop team was able to convince its pilot farmers to keep on growing this crop in the future. Consequently, a new cycle of experimental plots was put on track in Autumn 2020. Meanwhile, we established experimental trials for another crop which could also potentially substitute soymeal imports, rapeseed (rapeseed meal has a 36% protein content, nearly as high as soymeal). This plant, while not fixing nitrogen like legumes, has a deep-rooting system which has positive agronomic impact as it opens the soil. It can therefore play an important role in new crop rotations. Rapeseed can also be planted as a green cover in wintertime to protect the soil against erosion and generate green mass. Rapeseeds are largely cultivated in the EU for edible oil and feed-meal as well as for bio-diesel. Seeds for the trials were provided for free by another global leader through a local distributor.

Demo plots for maize

Maize is the first crop in Georgia by acreage and it is probably the one for which the upside potential is the biggest. Georgia benefits from excellent soils, warm summer temperatures and large availability of water through rain or irrigation: All pre-conditions for achieving high yields in maize which can be used either for grain, or green for silage for livestock. Unfortunately, Georgia has not yet been able to exploit is comparative advantages. In 2018, its yields were a miserable 2.7 t/ha, against 5.5 t/ha in Armenia, 7.8 t/ha in Azerbaijan, 9.6 t/ha in Turkey and 11.9 t/ha in Spain. In Georgia itself, in particular in more advanced Kakheti, some farms get 15 t/ha with pivot irrigation, hybrid seeds and effective crop management. So, the potential for increase is just massive.

Despite the hardship linked to Covid-19, we managed to convince cooperative Limagrain, the third biggest producer of seeds worldwide, to launch experimental trials both for maize as a first crop and as a second crop after harvesting of wheat or barley. Seeds were provided for free through a local distributor. We established demonstration plots in Kakheti, Kvemo Kartli, Shida Kartli and Samtskhe-Javakheti. In the latest region, a partnership was established with the association of farmers Ertoba supported by the NGOs Fert and GBDC.

The results of most plots were good – but we still have much work to better control weeds. Also, the choice of varieties can be better fine-tuned, especially when maize is used as a second crop. Irrigation must generally be better managed and so is fertilization which must contain micro and macro elements to maximize the yield. Finally, the question of harvesting equipment for silage is a critical one. To solve it, we will push for the development of cooperatives of use of machinery based on the French model of CUMAs.

Demo plots for fodder beets

As maize, fodder beets are an excellent source of energy for livestock. But contrary to maize, they do not require heavy and costly equipment for harvesting and storage. If the crop is well managed, yields can reach100 t/ha, which makes beets the most productive fodder crop. Fodder beets can be cultivated both by larger-scale farmers in open fields or by villagers in kitchen garden. They can be included in crop rotations with other crops, including potatoes, as they are not impacted by the same pathogens. For high productivity cattle which often suffers from acidosis, fodder beets play a positive prophylactic role combined with silage maize.

Seeds were provided for free by a global leader for fodder beets through its local distributor. During the seed distribution, all experimental farmers were given booklets detailing the main issues for fodder beet cultivation developed by FinExCoop's experts who regularly visited the fields and provided recommendations from the seed bed preparation until harvesting. In general, results were quite good, except when the farmers, for lack of appropriate seeding equipment, planted the seeds too deep, which resulted in germination problems.

On October 2nd 2020, we organized a demo-day in the plot of its pilot farmer Murtaz Tsulukidze in Artevani village, Tsalka municipality, Kvemo Kartli, where potato seeds and seeds for fodder beets had been tested. It was attended by representatives of the EU and FAO ENPARD, by other FinExCoop's pilot farmers, neighbor farmers and input suppliers. Participants could see the impressive results of five varieties of fodder beets which yielded 80 t per ha. Participating farmers plan to dedicate next year part of their fields, including kitchen gardens, to these productive varieties.

Demo plots for potatoes

In FinExCoop, we operationalized 8 pilot projects in Kvemo Kartli (Tsalka) and in Samtskhe-Javakheti (Akhalkalaki, Aspindza, Akhaltsikhe and Adigeni). In our first year of work, we decided to concentrate on experimental and demo plots. Agronomic conditions in all pilots were analyzed via gathering climatic data and sending soil samples to France, which allowed to make precise recommendations for the use of fertilizers and micro and macro elements. Our international technological partner and its local distributor supplied 20 t of seeds to the pilots. FinExCoop also provided technical assistance from first works until harvesting both on field and through online channels.

On September 2, 2020, the demo plot of Merujan Ezoyan in Akhalkalaki municipality, in Samtskhe-Javakheti was visited by the representative of Delegation of European Union together with the FAO. Despite having suffered from hail, the crop looked good. Upon harvest, we organized the second joint demonstration day for potatoes and fodder beets in Tsalka region. The pilot farmer Murtaz Tsulukidze harvested 30 t/ha of four types of potato seeds, which is almost triple the regional average of 11 t per ha in Kvemo Kartli in 2019 recorded by Geostat, without drip irrigation. The farmer strictly followed the recommendation of FinExCoop experts to stop the growth of his potatoes by cutting their leaves and stopping irrigation in early September to keep tubers small for further seeding. If he had kept the potatoes growing until harvest, yields would have been much higher.

For all the plots, after harvest, calculation of yields and gross margins were made. They showed how profitable it is to use better seed material and follow technical recommendations. Additionally, our team provided its pilot farmers with seeds of other plants (peas, fodder beets) to promote crop rotation which is the second most important factor to increase yields through decreasing pressure of pests and viruses.

All in all, the first year of our experience with the 8 pilot farmers was very fruitful. In 2021, FinExCoop will build on this success by keeping on developing access to better seed material which is the most critical element for better crops. The idea is to gather all the leading global companies which are selling their products to Georgia together with the best local farmers so as to create a group of potato pioneers interacting positively for the modernization of the value-chain.

By gathering forces with other key stakeholders involved in the field, development organizations, off-takers, suppliers of inputs and equipment, we aim at playing a catalyst role to help Georgia increase its yields which were in 2018 38% of those of Turkey (FaoStat).

WHAT'S NEXT?

Because of Covid-19, the first and a half year of FinExCoop has been quite difficult. But Covid-19 has also created opportunities. **At macro level, there is now a need to make agriculture and agribusinesses the main vectors of economic diversification of Georgia.** Better productivity and competitiveness are no more options, they are a must. However, they shall be obtained in a socially-inclusive way and with more focus on the preservation of environmental resources including the fantastic biodiversity of Georgia. In our day-to-day work, we also learnt to weather the storm and to substitute digital communications to traditional physical gatherings of participants in our training and coaching activities. Even though we expect to relaunch such planned events like our international conferences, we will keep on using these digital tools which have proven quite flexible, in particular as they could gather in short and regular evening training sessions participants from all over Georgia.

FinExCoop's strategy will keep on relying on the combination of **Top down** and **Bottom-up** activities. Through our strategic researches and lessons learnt from the fields, FinExCoop can play a role in policy issues linked to agriculture. This role will be enhanced through the three international conferences we will organize in the next two years, through our leadership of the Working Group on cooperatives we put on track together with RDA, and through other events organized by or with third parties.

At bottom-up level, FinExCoop will keep on promoting its three Ts strategy: **Test, Train** and **Transfer**. As the list of such activities will require another newsletter, let us focus on some key ones.

Regarding Test, we will launch our **Genetic Initiative** in close coordination with MEPA and other development stakeholders in beef-and-dairy. This initiative will build on a successful protocol experienced in other countries of the region, and on-line trainings already provided by FinExCoop in 2020. It will aim at reconnecting Georgian small and medium farmers with best practices of artificial insemination which have virtually disappeared (total imports of bovine semen in 2019 were a miserable USD 30,000, making for less than 10,000 doses mainly used by larger farms).

Experimental agronomic work will be intensified for the **value-chains** where FinExCoop is involved: new crops, new seeds, new technological partners for seasonal crops. **Use of new technologies** as well such as zero till, in close coordination with FAO ENPARD which has a lead in this field. For modern intensive orchards, FinExCoop will keep on providing training and coaching with a strong focus on Integrated Pest Management (IPM). We particularly aim to promote the use of digital systems based on small scale climatic stations for better pest management.

We plan much experimental work after farm gate, especially for high value addition. Both for cows and goats' milk, FinExCoop will intensify its training-by-testing approach which has already given quite positive results. We will implement this component in close partnership with the Georgian Technical University (GTU) and the Georgian French University which will have soon launched an experimental base to test new technologies in dairy processing.

In parallel with our Test experimental activities, we will keep on developing trainings, with strong coordination with RDA/ICCs and other development organizations. In spring 2021, trainings will be provided on-line for all the crops which have been tested by FinExCoop or which will be tested soon. They will include trainings for cereals with straw (wheat, barley, triticale), for peas, for rapeseeds, for fodder beets, for maize, for potato and for sorghum.

By the end of 2021, we aim to have built a **solid "library" of training material** translated in Georgian for all our value-chains. We will systematically complement theoretical trainings with practical trainings gathering smaller groups of extensionists and farmers in demo days.

The Transfer of the positive results of FinExCoop's innovations will be made at local level through the promotion of its partner cooperatives, and at national level through systematic coordination with MEPA/RDA and all the key stakeholders in the development of the agrarian sector in Georgia.

For more information, please contact us via email info@finexcoop.ge or reach us at +995 599 30 57 58.

Please also visit our website and our Facebook page. We look forward to hearing from you!

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