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Unlocking the export potential of Georgian agriculture

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Executive summary

Georgia's agri-food export is concentrated in few products and few undemanding markets, making it highly vulnerable to shocks on a small number of commodity and geographical markets. At the same time, the diversity of climatic conditions and ample water resources create significant growth and diversification potential for Georgian agriculture. Georgian conditions appear especially suitable for the production and export of high-value niche products as the land mass is small and fragmented, both due to topographic conditions and present ownership patterns.

Two main constraints limit Georgia's agri-food exports at present. Firstly, a shortage of raw materials because of low agricultural productivity limits the quantity of goods available for export. Secondly, most export chains are poorly organized. This results in bad preparation of export consignments and prevents export transactions from generating repeat clients or long-term contracts with predictable contract prices.

Producers should aim at gradually moving towards more demanding export markets. The self-organisation of producers in value chains through agricultural clusters or "Productive Alliances" (PAs) would further help strengthen the linkages between actors in agriculture value chains, permitting better coordination of actors as well as improved quality control and documentation of products. Cooperation on marketing efforts should be a part of cluster activity or complement PAs.

The government needs to work both on long term and short term constraints in order to boost the growth and diversification of agricultural exports. In the long term, consolidation of the highly fragmented agricultural land is essential to provide Georgia with a competitive agricultural sector. In the short run, the government should encourage and support the foundation of agricultural clusters or PAs, potentially in the context of a wider agricultural and industry cluster initiative. PAs as well as selected, high-potential "leader" companies in specific products should both be the addressee of and multiplier for government and donor programmes for value chain development. Furthermore, the government should modernise agricultural education and provide some information services to bridge knowledge gaps of individual farmers.

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1. Introduction

Agriculture matters for Georgia. Attachment to the land is not only a central pillar of Georgian identity, but agriculture is also a key sector of the economy. In 2016, agriculture contributed 8% to the GDP of Georgia. More than 50% of the Georgian workforce (including self-employment) is employed in the agricultural sector. However, these figures already clearly indicate that Georgian agriculture is grossly underperforming as the employment significance is not matched by output. Agricultural productivity is extremely low, limited by the fragmentation of agricultural land and the presence of many subsistence farmers with extremely small plots – more than 75% of land holdings are smaller than 1 ha. As a result, Georgia usually imports more agricultural goods and food products (agri-food products) than it exports. In 2016, the agricultural trade deficit was at 2.6% of GDP, a sizeable component of Georgia's main economic weakness, its current account deficit totalling around 12% of GDP.

As a country with a large agricultural sector, clear comparative advantages in agriculture due to climatic conditions and excellent market access around the world due to multiple free trade agreements (FTAs), most notably the EU-Georgia Deep and Comprehensive Free Trade Agreement (DCFTA), Georgia should be able to boost its agri-food exports. However, unlocking Georgia's potential for agri-food exports will be no trivial task.

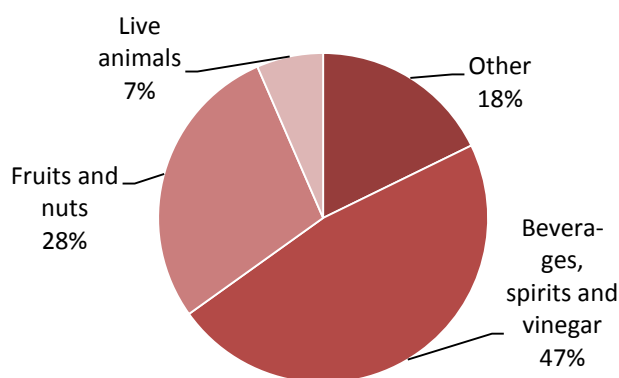
This paper analyses the present situation to derive policy recommendations for boosting Georgia's agri-food exports. We first analyse the present export portfolio in chapter 2. Chapter 3 investigates what potentials Georgian agriculture offers for boosting exports. The key constraints restricting the current exports are identified in chapter 4. Options for producers in the agri-food sector to strengthen their export business are derived in chapter 5 and policy implications for the Georgian government are given in chapter 6.

2. Concentration of present agricultural exports

The current export weakness of Georgia in the agricultural factor is mainly due to export concentration. Georgia's agri-food exports are highly concentrated in very few products. Beverages, including wine, hard spirits and mineral waters accounted for 47% of Georgia's total agri-food exports in 2014-2016, fruit and especially nuts accounted for another 28%. Hence, despite Georgia's varied climatic conditions and its large agricultural sector, three quarters of its agri-food exports were made up by two narrow product categories. The positive aspect of this concentration is that at least beverages with relatively high value such as wine or spirits are processed goods as opposed to agricultural commodities (such as grains or oilseeds). However, these products were mainly sold on traditional, ex-USSR markets. In exports to the EU, nuts (which are relatively unprocessed goods) made up 65% of total exports in the same period, and over 80% in exports to Germany.

Figure 1

Composition of agri-food exports, 2014-2016

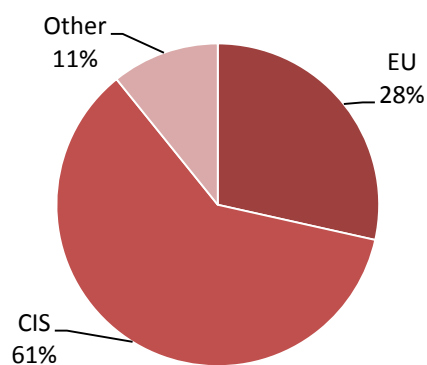


Source: UN Comtrade

Apart from lacking diversification of products, destination markets also are concentrated. 61% of Georgia's agri-food exports in 2009-2016 were destined for the markets in countries of the former Soviet Union, especially Russia and Ukraine.

Figure 2

Geographic composition of agri-food exports, 2009-2016



Source: Geostat, UN Comtrade

Due to this concentration on a limited number of products and destinations, Georgian agricultural exports are highly vulnerable to shocks and disruptions on these markets. In order to reduce the exposure to individual market risks, export diversification is necessary. Therefore, boosting Georgia's agricultural exports should not only be achieved by boosting the quantities of export goods but by increasing the number of products exported.

Furthermore, the concentration also indicates that either, conditions in Georgia are unsuitable for producing a more diversified product basket (highly surprising given Georgia's diversified climatic conditions) or, more probable, current conditions and problems constrain Georgia's potential to export more and more diversified good. Especially the geographic concentration on few and relatively undemanding markets in terms of requirements on product quality and standards indicates that Georgian agricultural exports may be adversely affected by a lack of ability to meet quality and product standards.

3. Growth potential in agricultural exports

In order to boost agri-food exports, three main directions are available:

- Upgrading the quality and boosting the quantity of current exports such as nuts, beverages (incl. wine, mineral waters, juices and lemonade), dried fruits and traditional Georgian products such as churchhela, sulguni and matsoni.
- Improving the quality of available products that are currently exported mostly to undemanding markets so that they can penetrate new, more demanding markets such as fruit and processed fruits, honey, tea, herbs and spices or fresh and dried greens.
- Producing new goods, especially certified organic products and high value-added niche products such as fresh and frozen berries (blueberries, blackberries, raspberries and others), high-value fresh and processed fruits (such as kiwi or feijoa), hybrid fruits such as agli (grapefruit+mandarin), grapple (grape+apple), aprium (plum+apricot), hybrid berries such as boysenberries, jostaberries and loganberries;and medicinal herbs.

All of these options should be pursued. However, within these directions, not all products offer the same potential. In terms of its basic endowments with natural conditions, Georgia features strong comparative advantages for agricultural activity. An impressive diversity of climatic conditions and ample water resources exist in Georgia. Despite being a small country (4% of the territorial size of Iran and 9% of that of Turkey), 12 different climatic zones exist in Georgia. Of 54 soil classes existing globally, 49 exist in Georgia. Hence, Georgia is very well suited for producing a more diversified product basket in terms of its unalterable conditions. The undiversified current export basket is not due to narrow possibilities of the country.

Nevertheless, Georgia's comparative advantages are not equally large for all types of products. Georgia's land area is limited due to the country being small. Agricultural areas are by nature split up in a patchwork of relatively small sections of land. Furthermore, ownership of the land is highly fragmented at present. 75% of all land holdings comprise of less than 1 hectare. Thus, Georgia does not have the resource endowment to compete with countries such as Argentina, Canada and Ukraine on international markets for bulk agricultural products such as grains and oilseeds. Neither are conditions suitable for Georgia to compete on mass products markets, e.g. with France, Italy or Chile,

for the mass wine segment, and with Spain, Morocco or China for standard mandarins or peaches. For all of this, larger, connected areas of land with near-identical conditions are necessary.

However, Georgia has the capacity (in terms of its natural endowments) to become competitive on markets for a variety of high value-added niche products that either cannot be produced in other countries or that are difficult and expensive to produce elsewhere. Examples of such products include exclusive wines produced using traditional techniques, polychromic honey (that is, honey coming from many nectar-bearing plants in different climatic zones), and blackberries with especially high sugar content, to list but a few. All of these products have unique consumer characteristics and are demanded on markets worldwide, including the EU.

Hence, while boosting the quantities of present exports is desirable, in order to achieve more diversification and higher value of exports, developing and improving the production of niche and organic products appears best suited to the basic agricultural conditions of Georgia.

4. Constraints to export growth

Two main and interrelated constraints currently limit export growth:

1. A shortage of raw materials
2. Poor organisation of export chains from the farm to the delivery of export consignments

4.1 Shortage of raw materials

In order to export more, the first necessity is to have capacities for producing more goods. At present, the lack of this capacity is a sharp constraint on Georgian exports, in agriculture as in industry. There are processing plants, e.g. for vegetables, that could produce and export more goods but simply cannot find enough raw materials in order to fully utilise their capacities. The lack of primary agricultural goods / the low agricultural productivity in Georgia is caused by the following factors:

Fragmentation of land holdings. 75% of all land holdings in Georgia comprise less than 1 ha, and only 0,16% comprise more than 50 hectares¹. Investment in capital in order to raise productivity is often not efficient for such small plots. Furthermore, it is difficult and costly for processors and traders to contract with many individually small producers to coordinate important factors such as variety selection and the timing of deliveries. As a result, it is difficult to assemble sufficiently large lots of agri-food products that are homogeneous and satisfy importers' requirements for certified quality and traceability.

Poor diversity of crops and varieties Georgian fruit orchards are dominated by a limited number of varieties, especially for mandarins (which are dominated by "ushiu") and nuts (which are dominated by "anakliuri"). The situation with peaches is better, but nevertheless characterised by few early and late varieties. Concentration on a small number of varieties reduces the length of the harvest season and leads to more pronounced peaks of activity in production and processing. As a result, there are shorter and sharper periods of surplus on markets, which can depress prices, and the use of processing facilities and trade infrastructure becomes more seasonal, with negative consequences

¹ Ministry of Agriculture of Georgia (2015): Strategy for agricultural development in Georgia 2015-2020, pp.12

for capacity utilisation (longer idle periods) and cash flow. In addition, concentration on a small number of varieties can also increase vulnerability to pests and plant diseases.

Degradation of old plantations and orchards. Mandarin plantations are the worst example of this problem. Many of these orchards were planted in the 1930s with the consequence that today over 30% of the trees are 70-80 years old.² However, the productive lifetime of a mandarin tree is 40-50 years. Without fresh investment, yields will collapse in the near future. “In less than 10 years mandarin yield in Georgia will be reduced from 60-80 thousand tons in the best last years to 20-25 thousand tons with eventual degradation of orchards and disappearance of fresh mandarins exports. In near future they may be useful only for processing into concentrate and/or for domestic sales”³. The situation with nuts, peaches, nectarines, apples and other fruits is generally better: In most cases, trees are relatively young. But there is a lack of high quality seed and planting material, and farmers often use inexpensive low-grade seeds and plants. This results in declining of yields, increased vulnerability to pests and plant diseases, and low quality of production.

Short planning horizons and micro zones violation. In the past, Georgian farmers often invested in some crops too quickly without carefully considering whether those crops fit local climatic conditions and soil specifications. After flocking to popular mandarins (in Soviet times) or nuts (in recent years), farmers are stuck with bad choices, because these are perennial or tree crops with high investment costs that take several years to reach peak production. Farmers chase short-term profits and do not consider whether the crops in question will be productive in the long run, including the question whether the crops in question are suited to local agro-climatic conditions (which are very heterogeneous in Georgia).

Lack of knowledge. Many farmers in Georgia have little formal or recent training in crop production and farm management. Some did receive training in Soviet times, but much of this knowledge is today outdated and based on farm and production structures that have long since disappeared. Many others who started farming in the early 1990s after the collapse of the Soviet Union have no agricultural training whatsoever. The current agricultural research and education system in Georgia is underfunded and unable to provide the training and extension services that farmers need to compete in global agri-food chains. Many farmers display a traditional mistrust of innovations and specialist recommendations, focus on short planning horizons, and prefer informal relations with their partners in the chain (“business by unwritten rules”).

Vulnerability to pests and plant diseases. The narrow and often inappropriate spectrum of planted varieties, degraded and overaged plantations and orchards, low quality seed and planting material, and a lack of knowledge make Georgian crops highly vulnerable to pest and plant diseases. Currently, one pest in particular, the ‘brown marmorated stink bug’ (BMSB), poses a major threat to nut production in Georgia, which is a mainstay of the country’s agri-food exports to EU. This and other pests and diseases threaten production volumes, quality and thus the reliability of Georgia’s agri-food exports.

²Gross, Steve (2014): Ajara agriculture sector competitiveness and export promotion policy study, UNDP, p.17

³Avtandil Meskhidze, Ajara Deputy Minister of Agriculture

4.2 Poor organisation of the export chain

Second, poor organisation of the export chain makes it difficult and costly to transform production at the farm level in Georgia into export consignments that satisfy importers' requirements. In Soviet times, most agri-food products, and especially many Georgian specialties, were in chronically short supply. As a result, buyers were happy to get what they could, and sellers could largely dictate terms. Today, the situation has completely changed. Many producers compete for the same markets and the success of an export chain is driven by its ability to reliably and traceably satisfy the demands of the final consumer. The lack of reliable, long-term relations between the actors in the chain – producers, input and service suppliers, processors/consolidators and traders – results in a vicious circle of poor quality and low prices, widespread fraud, bad reputation, and the retention of only the most undemanding export markets. Critical constraints in the export chain include:

Unsatisfactory sorting and calibration. Even the small volumes of agricultural products that are currently being produced are not being properly prepared to meet export standards. To compensate for low production volumes, farmer in the orchards (or their seasonal workers) harvest all crops with minimum or no selection. Due to dominance of informal relations in rural areas, the owner of the local consolidation centre often cannot refuse to accept low-quality and poorly sorted output from his/her relatives, friends or fellow countrymen. There are no formal, written contracts between producers and consolidation centres, which traditionally accept all goods in bulk in return for a uniform price.

Lack of financial motivation and quality control. These problems are exacerbated by ineffective financial schemes. Deliveries to the consolidation and/or processing centres are depersonalised and in most cases, payment is not differentiated according to quality. The same applies to employees who harvest products or sort them at the consolidation centres, who receive fixed daily wages, independent of the quality of their work. If a buyer or his representative attempts to monitor or control the sorting process, he/she often faces collective resistance or even outright fraud. Correspondingly, in many cases, consolidation centres are not interested in or capable of introducing independent quality controls, because these would lead to a major disruption of traditional relationships with farmers and employees.

Opportunistic behaviour. As a rule, the seller of a consignment of agri-food products knows more about the true quality of this consignment than the buyer. This information asymmetry creates numerous opportunities and (short run) incentives for opportunistic behaviour aimed at misleading or defrauding the buyer. For example, the seller might use top layers of appropriately sorted, nice looking fruits to hide sub-standard products at the bottom of a box or palette. Or the seller might place boxes/pallettes or higher-quality produce close to the doors of the truck to hide sub-standard produce in the bulk of a consignment. The buyer who is tricked in this manner will either not repeat or only be willing to pay much less for the next consignment.

Lack of comprehensive legal documentation. Inevitable business conflicts are aggravated by the fact that contract obligations are not registered by detailed legal documents. Quite often, the stakeholders limit themselves to verbal arrangements ("my word!"). Correspondingly, business conflicts are solved outside the legal system. This is supported by the inefficiency of Georgia's legal system, which takes very long to reach decisions and enforce penalties.

Payment terms. Farmers and/or collectors work only with those consolidators and/or exporters who are ready to pay immediate cash. As a result, the latter quite often face a sharp shortage of working capital to buy the required volumes of raw materials in time. In addition, Georgian exporters are often not able to offer standard payment terms to importers (consignment up to 60 days), which places them at a competitive disadvantage vis-à-vis exporters from other countries.

Lack of marketing and information. Because of small export volumes, most Georgian exporters have limited resources to penetrate new markets. They cannot afford to monitor markets and prices closely, or to make the investments that are required to establish relationships with potential importers and acquire specific knowledge and expertise on import requirements and procedures in a particular market.

A symptomatic and problematic outcome of these constraints is a very low share of repeat clients and long-term contracts between Georgian exporters and importers abroad, with Georgian agri-food exports largely confined to undemanding, low-price, and often shrinking markets in Russia and other CIS countries. Box 1 contains a case study, based on the author's experience, which may be regarded as a typical illustration of these constraints and their results.

Box 1:**Case study: Inadequate product quality and sorting in a mandarin delivery to Russia**

For four consecutive seasons the author's logistics company worked with one of the biggest Georgian mandarin consolidation centres, starting from an export contract for 30.000 tons in 2014 and ending with contract for 500 tons in 2016/17 season. None of these contracts was fulfilled and no client returned after the first attempt, because there were always problems with quality due to bad sorting and calibration. The 2016/17 transaction, summarised in the table below, provides a typical illustration of the results of poor organisation and opportunistic behaviour.

The total delivery of 498 tons included 59 tons or 12% of spoilt and sub-standard fruits, rather than the maximum allowed 1%. Because the purchaser refused to pay for these 59 tons, the final price per delivered ton ("actual outcome") was 0.77 USD/kg rather than the contracted 0.90 USD/t. If the consolidator had prepared the consignment according to contract specifications and the sub-standard 59 tons had remained in Georgia ("2nd best outcome"), the seller could have saved over 22 thousand USD in costs of packaging, logistics and customs. Moreover, these 59 tons of spoilage could have been sold to the local Kobuleti mandarin concentrate factory for 4500 USD of additional income. Hence, if the consolidation center had followed agreed contract terms and conditions, instead of delivering spoilt and sub-standard fruits, he would have saved reputation and earned additional income.

Table 1

An example of sub-optimal turnout of a contract due to inadequate sorting quality

	Initial Contract	Actual outcome: price reduced by the buyer because of low quality	Possible "2 nd best" outcome
Tons	498	498	439
Price per kg, USD	0.90	0.77	0.90
Total Sales, USD	448,200	383,460	395,100
Total Costs, USD	292,122	292,122	269,423
Income, USD	156,078	91,338	125,677
Sale of sub-standard fruits to Kobuleti, USD	0	0	4,538
Total income	156,078	91,338	130,215

Source: Author's calculations, based on the factual contracts of 2016/2017 season

5. Producers' options to overcome constraints

Georgian producers of agri-food goods should take action in order to better utilise available potential. They should invest in modernised production structures and update their skills and knowledge about production, quality control and the needs of destination markets.

5.1 Strategic methods for producers to boost exports

Apart from improving the quality of their products and investing in more modern technologies, producers should also use the three compatible concepts outlined below to boost their exports:

Gradual development towards more demanding markets. Producers should aim at gradually shifting towards more demanding export markets. With the present quality of exports and documentation, boosting export quantities to highly demanding markets such as the EU is not feasible in the short run. Rather, exporters should move gradually: From cash markets to retail networks in CIS markets, then to China, MENA and finally to the most demanding markets the EU or Japan. A gradual approach will enable exporters to gradually learn to conform to more demanding market requirements and to build durable business relationships.

Founding “Productive Alliances” or agricultural clusters. Producers should contemplate joining forces in order to address their problems through cooperation. Agricultural clusters, encompassing companies and institutions in related value chains or “Productive Alliances” (PAs) of companies within a single value chain would help strengthen the linkages between actors in agriculture value chains and would permit a better coordination of actors, as well as improved quality control and documentation of products. The approaches are compatible. Whereas clusters include a wider range of companies who do not all work together, cooperating on selected work areas such as education or quality control, Productive Alliances (PA) are a more close-knit concept, defined by the World Bank as associations designed to strengthen the linkages between all actors within agriculture value-chains. The UN Food and Agriculture Organisation (FAO) uses another term for this approach – agri-Public-Private Partnership (PPP). In 2016, the FAO released a report that analyses 70 case studies from 15 developing countries (mainly from Latin America and Africa) to identify key take-away lessons. This report highlights the importance of aligning the disparate interests of the partners in the export chain, to clearly define each partner's role, to share risks fairly among partners, to involve financial institutions as an additional core partner, and to develop sound institutional and regulatory frameworks⁴.

Marketing alliances. As a part of the work of agricultural clusters (i.e. as individual projects within a cluster organisation) or as a complement to PAs, “Marketing Alliances” (MAs) could be formed, in which successful, but small-scale exporters consolidate their efforts and resources to jointly penetrate a new demanding market, thereby pooling their resources to cover the costs of business trips, logistics, customs services, exports promotion, social networks advertising, and on-line marketing and sales.

⁴ Rankin, Marlo and others (2016): Public-private partnerships for agribusiness development. A review of international experiences, Food and Agriculture Organization of the United Nations

5.2 Existing examples of Productive Alliances in Georgia

Several individual exporters, producers or consolidators have already succeeded in overcoming constraints to export growth by setting up PAs to develop long-term contract relations between all or most key stakeholders in their respective export chains. As the following examples show, these individual success stories are disparate and isolated, but they share a number of common characteristics that enable them to mitigate the production volume and chain coordination problems outlined above.

Taplikatsi is a beekeeping farm at Alaverdi monastery that sources 7 tons of honey annually from 15 local producers. Though there are no formal contracts between the company and these producers, Taplikatsi delivers training, extension services and inputs. It provides winter feed for bees, wooden frames and commercial honeycomb foundation. Taplikatsi arranges joint migration trip for suppliers' beehives using own trucks to ensure high quality and uniform honey, which is very well branded and sold at local markets and through Georgia's duty free shops. Last year 1.5 tons were exported to China.

BPC Ltd produces organic rosehip juice from wild rosehips. BPC supported the TkisNobati cooperative in Saguramo in achieving bio certification, provided detailed guidelines on how to produce bio rosehips, and helped TkisNobati purchase needed equipment. There is no formal contract between BPC and TkisNobati, however all the requirements for the collection and storage of rosehips, as well as payment terms, are communicated to the cooperative in written form. BPC pays the cooperative a 15-20% price premium for the supply of bio rosehips. The bio juice is exported to the EU and Asia.

Nergeta Co. is a highly intensive 23 hectare kiwi plantation. High quality fruits, Italian calibration equipment, 150 tons of storage capacity, and food standards certification allow Nergeta to export kiwis to Germany and Japan. Local farmers work in Nergeta plantations under the supervision of company specialists, acquiring new skills and agronomic expertise. Some workers have used this training to start producing kiwis on their home plots, thus expanding the supplies that are available to Nergeta.

Schuchmann produces traditional Georgian wines (such as Kisi, Saperavi, Rkatsiteli, Mukuzani and Kindzmarauli) and non-Georgian wines (such as Chardonnay and Cabernet Sauvignon) in the Kakheti region. They have vineyards in the Napareuli, Tsinandali and Kindzmarauli micro zones. The company owns 120 hectares, out of which 60 hectares are devoted to vineyards. However, some wine grapes are also purchased from local farmers. The relationships between Schuchmann and these farmers are based on "gentleman's agreements". The clearing between the partners takes place after the farmers provide raw materials (grapes), and in return Schuchmann provides farmers with their agronomists' assistance. Currently, Schuchmann sells 1.5 million bottles of wine in more than 15 countries, hosts foreign guests at their chateau, operates a bar-restaurant, and provides gastronomic, agro and other types of tourism.

Michail Gogiashvili is an individual Gurdjaani farmer who produces high quality peaches and nectarines on 50 own and 120 contracted hectares. He is a highly reputed expert who can realistically assess the export potential of the local orchards, and he has been providing over 100 neighbouring

farmers with recommendations for many years. Supported by necessary infrastructure, equipment and marketing, he could become an export consolidator within a successful PA.

There are other cases, in which PAs have failed to develop long-term relations with local suppliers to ensure a reliable supply of high-quality raw materials. In such cases, some have preferred to become fully vertically integrated enclaves in Georgian agriculture by developing their own raw materials base for agri-food exports:

Frozera is the premier producer and exporter of frozen fruits and vegetables in Georgia. Launched about ten years ago, the company started by sourcing fruits and vegetables from farmers in nearby areas. Facing problems with the quality, quantity and consistency of raw material supply, the company started its own agricultural production in 2014 on about 160 hectares. It remains interested in buying raw materials from Georgian farmers, although its past experience with Georgian suppliers is very problematic. Frozera had contracted relatively large farmers in Marneuli, and also tried to establish long-term business relationship with small farmers who were provided with seeds, extension services and financial support. Unfortunately, farmers used the company's money to buy low quality seeds and did not take good care of Frozera-provided seeds.

6. Policy implications

In order to help unlock the export potential of Georgian agriculture, the government needs to contribute to addressing the constraints limiting the present exports. We identify three key axes of measures, one directed at the long term improvement of agricultural productivity and exports and two directed at improvements in the short to medium term:

6.1 Enabling a consolidation of the fragmented agricultural land

Firstly, consolidation of the highly fragmented agricultural holdings in Georgia is an essential condition for the evolution of a competitive agricultural sector in the long run, which should be worked on immediately. All of the problems outlined above – the shortage of raw materials, the lack of compliance with international standards, high transaction costs, the predominance of informal relations, widespread opportunistic behaviour which ultimately undermines reliability and reputation – make it difficult in the medium and long term to organise the production of large, homogeneous shipments of high-quality produce. They can be solved in an agricultural sector characterised by large numbers of small producers, but under these conditions solutions require more coordination, are more costly and, ultimately, less robust and reliable. The government should take steps to foster the consolidation of agricultural holdings in the medium and long run in Georgia, such as driving the completion of the land cadastre and disentangling agricultural from social policies so that small subsistence farmers can sell their small plots without giving up an essential source of income (farming income artificially raised through subsidies or price controls), which they presently depend on.

6.2. Supporting and leveraging agricultural clusters and PAs

To assist producers overcoming their current productivity and quality problems, which mainly constrain their ability to export, the government should help popularising the concept, assist and

encourage the formation of agricultural clusters or Productive Alliances. These will help the self-organisation of producers to address their problems and will be beneficial to improve production and export growth and diversification in the short to medium term.

The concepts of agricultural clusters and PAs are reasonably similar. Whereas clusters are “wider” in design and feature multiple final producers, who sell related, but different goods separately, PAs are closer to cooperatives. Nevertheless, both concepts are similar in their direction insofar as they would feature a strong component of mutual assistance and joint projects in order to strengthen product quality, conforming to market standards and jointly attempting to develop exports to new markets. Marketing alliances, including joint efforts to receive food standards certification and to penetrate specific geographic markets, could form either a part of the activity of clusters or be established as a complement to PAs, potentially encompassing different PAs in their joint attempt to export to one new market.

For this, the government might want to consider promoting the foundation of agricultural clusters or PAs within the context of a wider cluster initiative that would also promote and potentially support the foundation of clusters in industry value chains. Cluster policy is a relatively inexpensive and low-intervention method of driving the development of industrial and agricultural value chains. Usually, the government only provides financing to employ the key staff for each cluster organisation for the first two to three years, after which a cluster should be fully financed by its members. Cluster policy has been successfully utilised in many EU countries and their experiences could be used to appropriately design such a programme for Georgia.

Agricultural/agri-food clusters or PAs could then, potentially together with selected, high-potential “leader” companies in specific products be used as key addressees multipliers for government and donor efforts at value chain development, to improve and diffuse agricultural and commercial skills and know-how. The government should on the one hand identify these PA and leaders to provide them with government and international donor support, and on the other hand ensure in-depth research and monitoring of the efficiency of funded projects, both in the past and future. Two examples of such projects already exist and are described in Annex 2.

6.3 Address information shortages, reform of agricultural education

Finally, the government should also address the problems of inadequate information and education affecting all producers and especially small producers. This implies especially a reform of agricultural education (which will deliver results in the medium to long term) as well as some information assistance to individual, small-scale individual exporters/farmers that should contribute to export growth and diversification in the short term.

Developing education in agriculture, including agricultural business: The skills base of the agricultural labour force should be developed through vocational and academic education. The current cooperation of the Ministry of Education with EU donor institutions (e.g. Germany for vocational education) should be continued. Agricultural education institutions should be comprehensively overhauled. This may require the closing down of institutions unfit for modernisation.

Information on crop and varieties choice. Dynamic exports of Georgian niche products should be the outcome of market processes, not of government planning. However, farmers need guidance to escape long-term wrong decisions with crops and varieties choice. The government should ensure farmer with agro expertise what crops and varieties are optimal for the specific land plot climatic conditions and soil specifications. Simultaneously farmer should be provided with sample business plans and cost calculations that as a basis for realistic and sustainable investment decisions. It shouldn't be done by the government itself, but delegated to national and international agricultural and economic research centers and/or private companies (as it is done by the University of California Cooperative Extension, which provides up-to-date, knowledge-based assistance and advice to farmers in California based on publicly-funded research and a long history of cooperation with local producers, see Annex1).

Market information system. It is necessary to increase farmers' bargaining power and to keep all stakeholders better informed of developments and demand in target export markets.

Legal documents package. The government should task legal specialists and experienced exporters to develop all necessary templates to formalise relations between stakeholders: farmer - collector, farmer - base, collector - base, base - exporter, base/exporter - importer, base/exporter - quality inspection - importer, bank - base/exporter - inspection - importer - bank. Eventually these documents in three languages (Georgian, Russian, English) should be placed for free access at a special portal. It doesn't mean that the government should make stakeholders to use it, but stakeholders should have possibility to become legally defended at minimum costs.

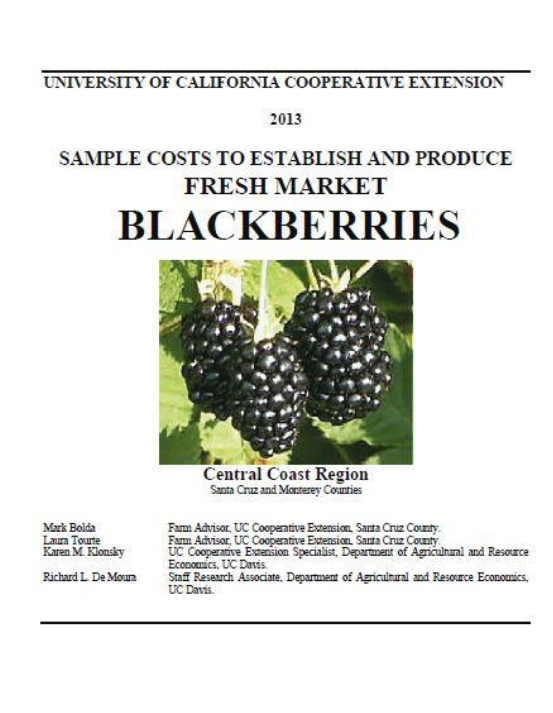
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Annex 1:

Research-based public assistance to blackberry producers in California

The University of California Cooperative Extension service provides up-to-date, knowledge-based assistance and advice to farmers in California based on publicly-funded research and a long history of cooperation with local producers. As an example, the figure below shows the first two pages of a publication on the costs of producing blackberries.



UNIVERSITY OF CALIFORNIA COOPERATIVE EXTENSION
SAMPLE COSTS TO ESTABLISH AND PRODUCE FRESH MARKET BLACKBERRIES
 Central Coast Region – Santa Cruz & Monterey Counties 2013

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INTRODUCTION

Sample costs to produce blackberries in Santa Cruz and Monterey Counties are presented in this study. The study is intended as a guide only, and can be used to make production decisions, determine potential returns, prepare budgets and evaluate production loans. The practices described are based on production procedures considered typical for this crop and area, and may not apply to every farm. Sample costs for labor, materials, equipment and custom services are based on current figures. A blank column, "Your Cost", is provided to enter your actual costs on Tables 2 through 6.

The hypothetical farm operation, production practices, overhead, and calculations are described under assumptions. For additional information or explanation of calculations used in the study call the Department of Agricultural and Resource Economics, University of California, Davis, (530) 752-3589, UC Cooperative Extension Santa Cruz County: Mark Bolda (831) 763-8025 and Laura Tourte (831) 763-8005, or the UC Cooperative Extension office in your county.

Current and archived "Sample Cost of Production" studies for many commodities can be downloaded at <http://coststudies.ucdavis.edu>, requested through the Department of Agricultural and Resource Economics, UC Davis, (530) 752-8887, or obtained from selected county UC Cooperative Extension offices.

2013 Blackberries Cost and Return Study Central Coast UC Cooperative Extension 2

Annex 2:

Examples of value chain development programmes targeting PAs in Georgia

Two projects using PAs as the target of value chain development are already designed (one in operation) in Georgia, although it is too early to assess their results at this time:

- **Promoting access to finance and agricultural insurance project (PAFAI project).** This project is carried out by the Business and Finance Consulting (BFC) GmbH, and is funded by the Swiss Agency for Development and Cooperation. It aims to introduce integrated financial and technical support services to farmers in selected value chains (hazelnuts and pork). RAFAI's financial services partner is the Georgian micro-finance organisation Cristal. The RAFAI model engages farmers in a scheme which also includes input suppliers, service providers, processors, and financial institutions. Ideally, RAFAI enables farmers to receive all inputs and services without spending any cash. Farmers have to be contracted by the participating processors, who also provide advisory services to the farmers. Once the product is sold to the processor, Cristal receives the loan principal repayment and interest, and participating farmers are paid for the product.
- **Adjara PA project.** This project, which is awaiting approval by the Adjara government, is targeted at planting new large (20 hectares) commercial cooperative mandarin orchards with new seedlings from state nurseries. At the same time it motivates farmers to uproot old mandarin trees by giving them a share in the future cooperative based on the principle 'one seedling planted for each uprooted old tree'. Simultaneously the farmer had a possibility to receive seedlings for other high value crops and/or early/late varieties of mandarin from the state nurseries. This project can contribute to land consolidation and the renovation of old orchards, as well as the diversification of agricultural production and the lengthening of harvest and marketing seasons. But to become successful it should be supported by above described measures (land plot expertise, crops – varieties choice recommendations, business planning and sample costs) as well as initiating and/or promoting a private company to develop PA for specific crop consolidation. It should provide farmers with all necessary inputs, services and expertise with payment by the future harvest at the beginning stage, with products certification, branding, marketing and preparing export consignments at the final stage.

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All papers, briefings and further publications can be downloaded free of charge under <http://www.get-georgia.de/publikationen/policy-papers/>. For more information please contact the German Economic Team Georgia on info@get-georgien.de.