ევროკავშირი საქართველოსთვის
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SITUATION AND PROSPECTS OF THE APPLE VALUE-CHAIN IN GEORGIA
THINK AND ACT TOGETHER

GEORGIA FinExCoop

AFD AGENCE FRANÇAISE DE DÉVELOPPEMENT

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"*The apple and orchard value-chain in Georgia:*
Situation and prospects" (30 mn)

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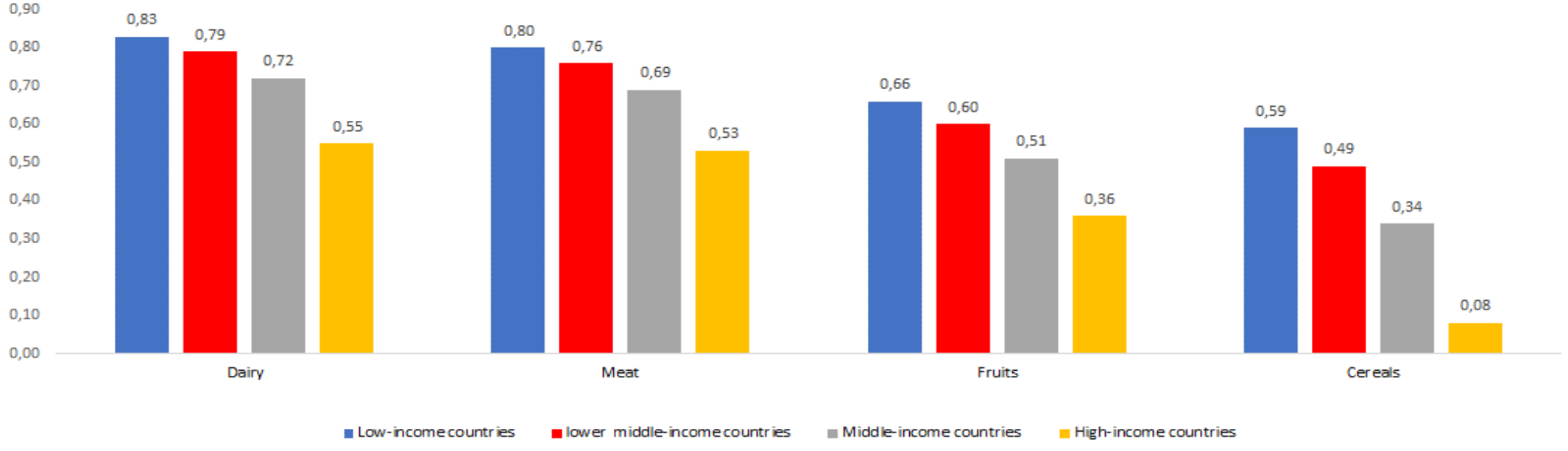
The demand side

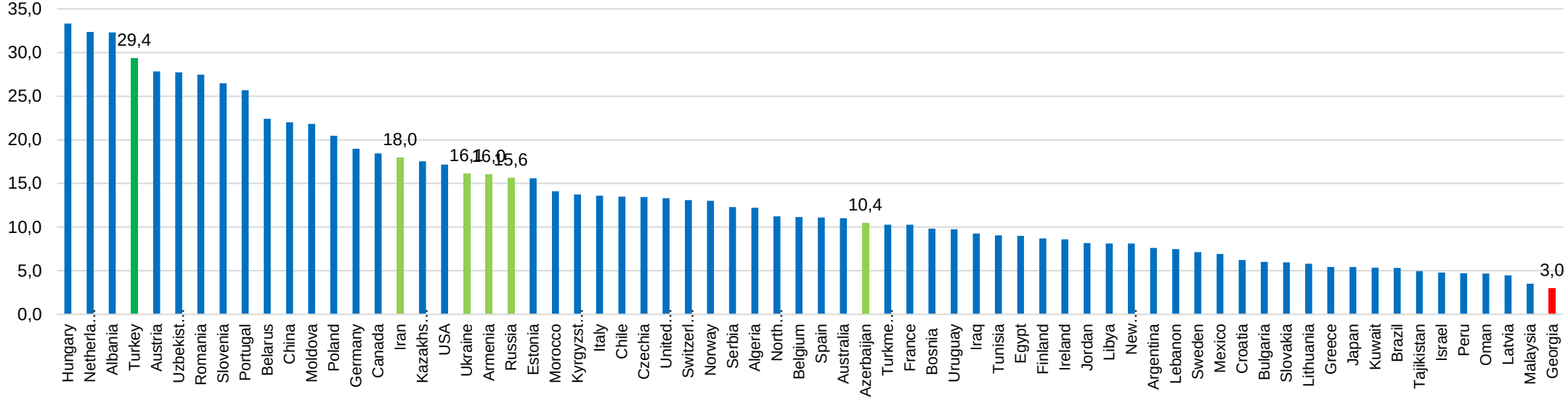
Human beings all over the Globe have different ways to feed themselves, largely depending on resources locally available, and cultural and religious factors. But their average income also plays a critical role: the richer an individual, the more he/she will eat, even though the relative share of food in his/her consumption expenses will decrease. But, when there is an increase in income, the growth of demand for high-value products like dairy, meat, fish, fruit and vegetable is much stronger than for basic commodities like cereals as there is a switch towards better food. In middle-income countries like Georgia, where the population still spends 47% of its income in food, any increase by 1% in income translates into an increase of 0.51% in the consumption of fruit

Average income elasticities for various food categories across 144 countries in 2005 (FAO, Milk and dairy products in human nutrition, 2013)

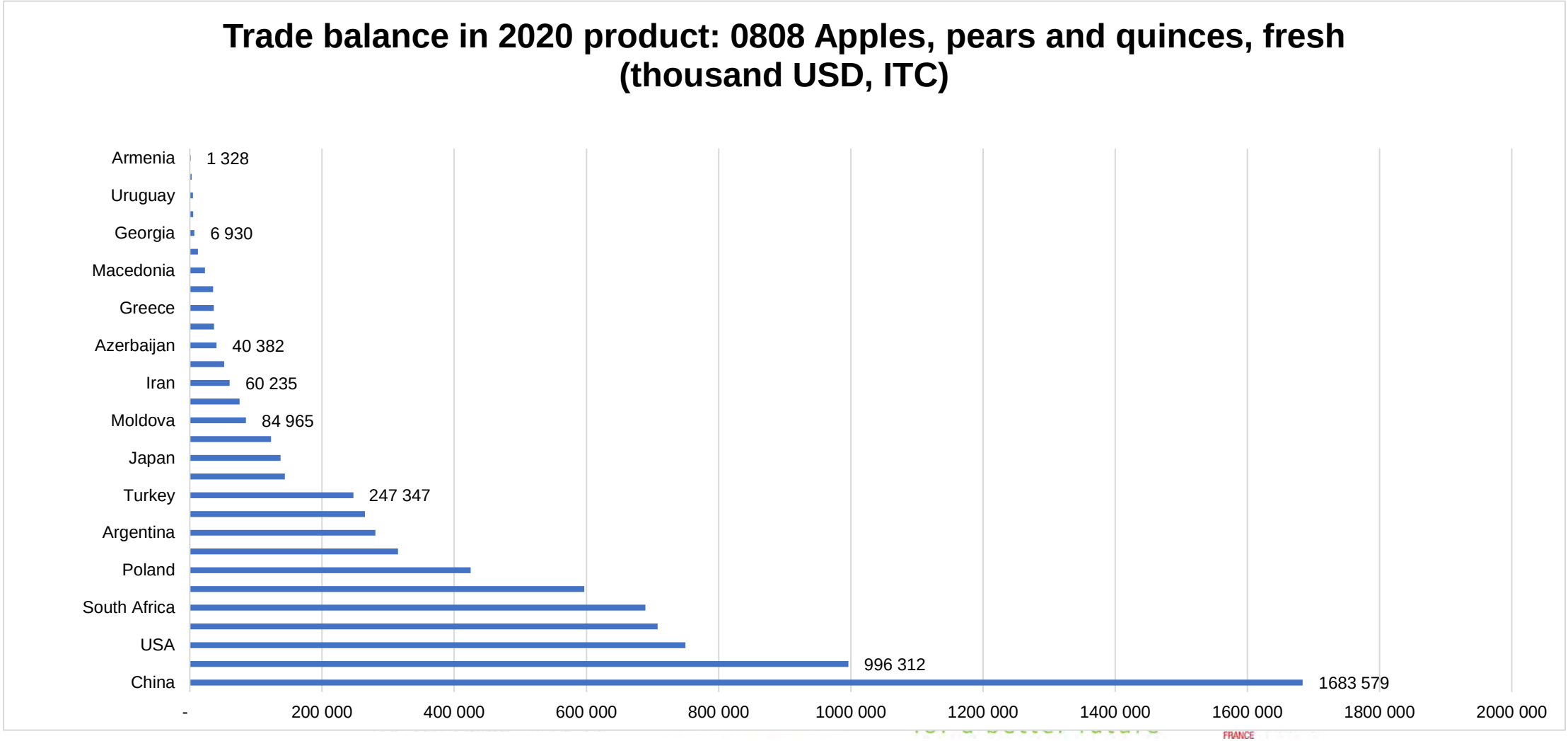


These factors apply very well to apples. Apples are usually consumed where they can be produced, with limited consumption per capita in tropical countries and also in highly septentrional countries like those of Scandinavia. Their consumption is the highest in countries with favourable climate like those of Western Europe, China and many Mediterranean and Silk Road countries (apples originated from the region of Almaty in Kazakhstan, “alma” meaning apple in Turkish languages). And in countries with good income per capita. However, Georgia is an exception: while they have ideal agronomic conditions for growing apples, Georgians eat only 3 kg of apples per year against 10 kg for Azerbaijanis, 16 kg for Russians, Armenians and Ukrainians, 18 kg for Iranians, nearly 30 kg for Turks and 33 kg for Hungarians. Sooner or later, this exception will disappear and we must therefore expect large future increase in local market demand

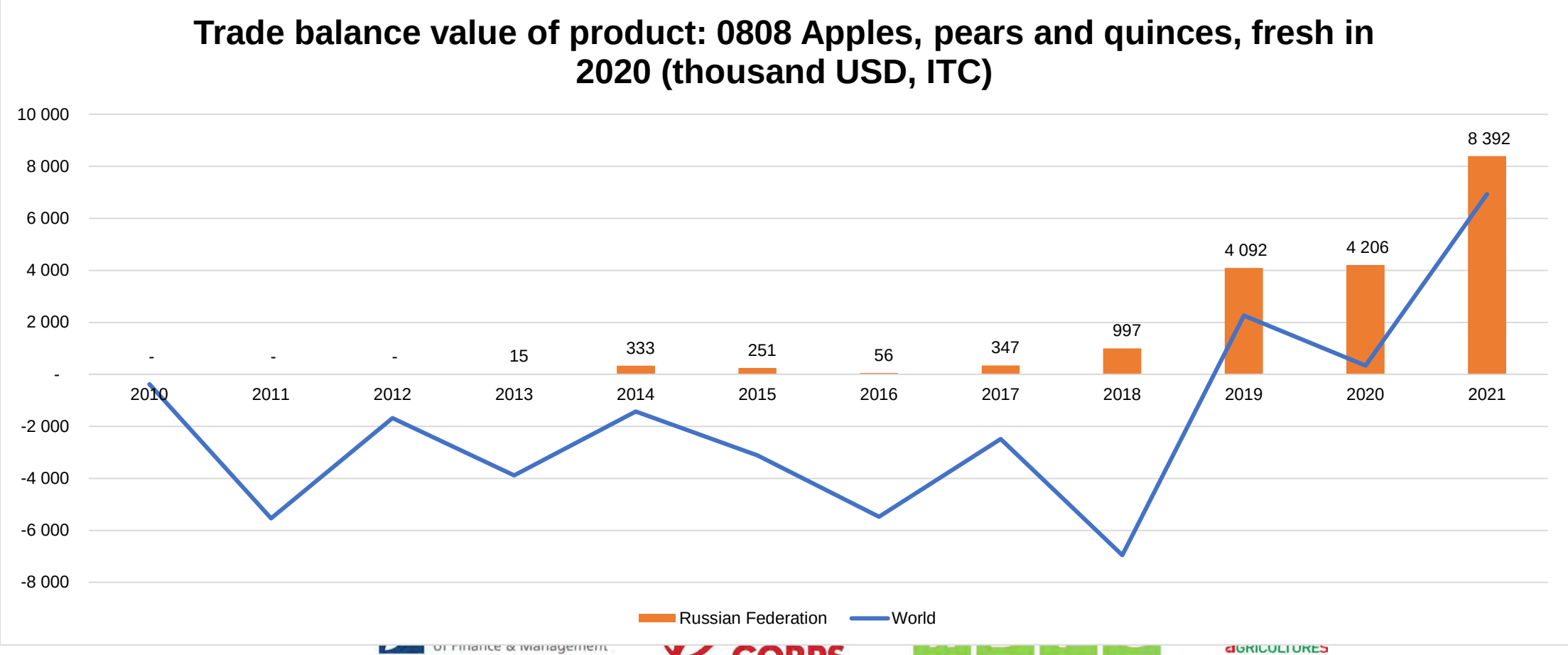
Food supply quantity apples and products (kg/capita/yr, 2019, FaoStat)



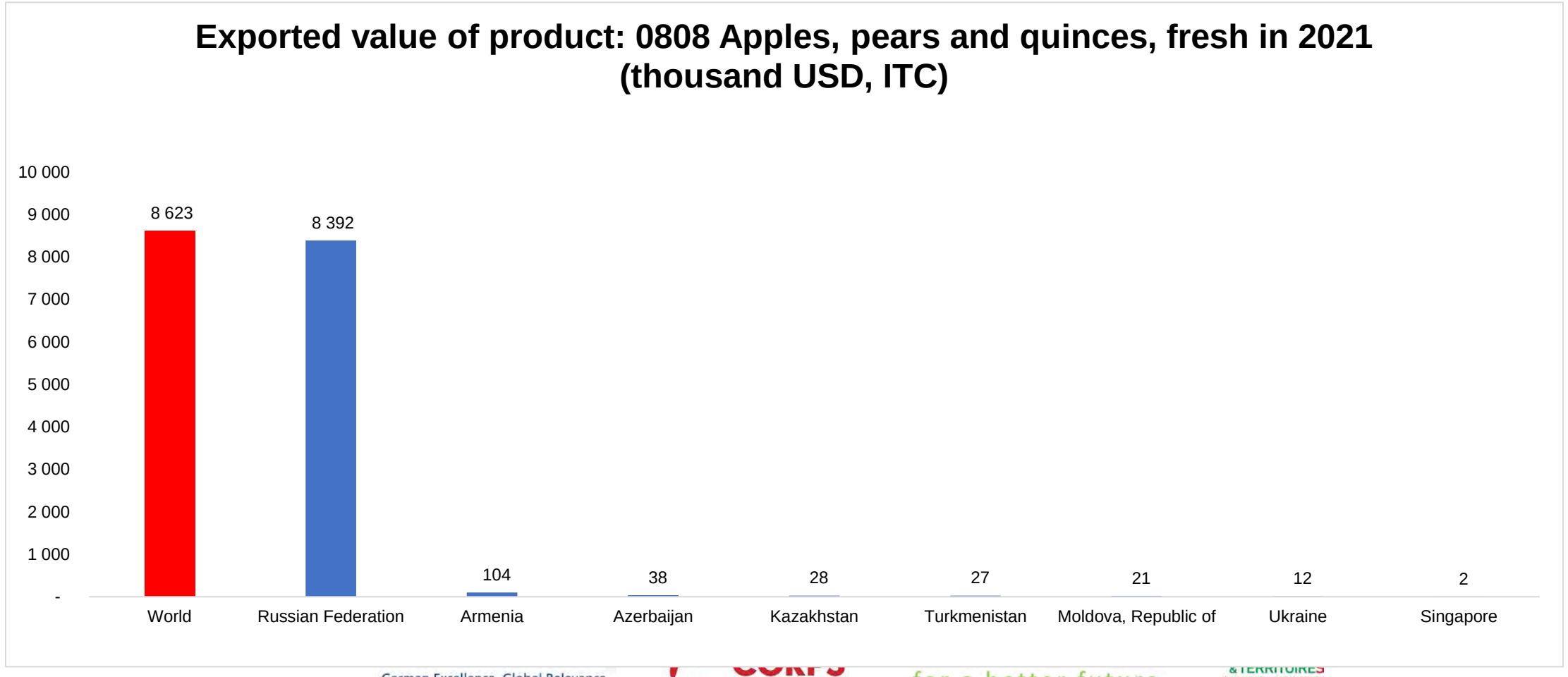
Despite its very modest local demand and excellent agronomic conditions to produce apples, Georgia has not yet been able to generate the large trade surpluses for apples of its regional neighbours, Turkey, Moldova, Iran or Azerbaijan



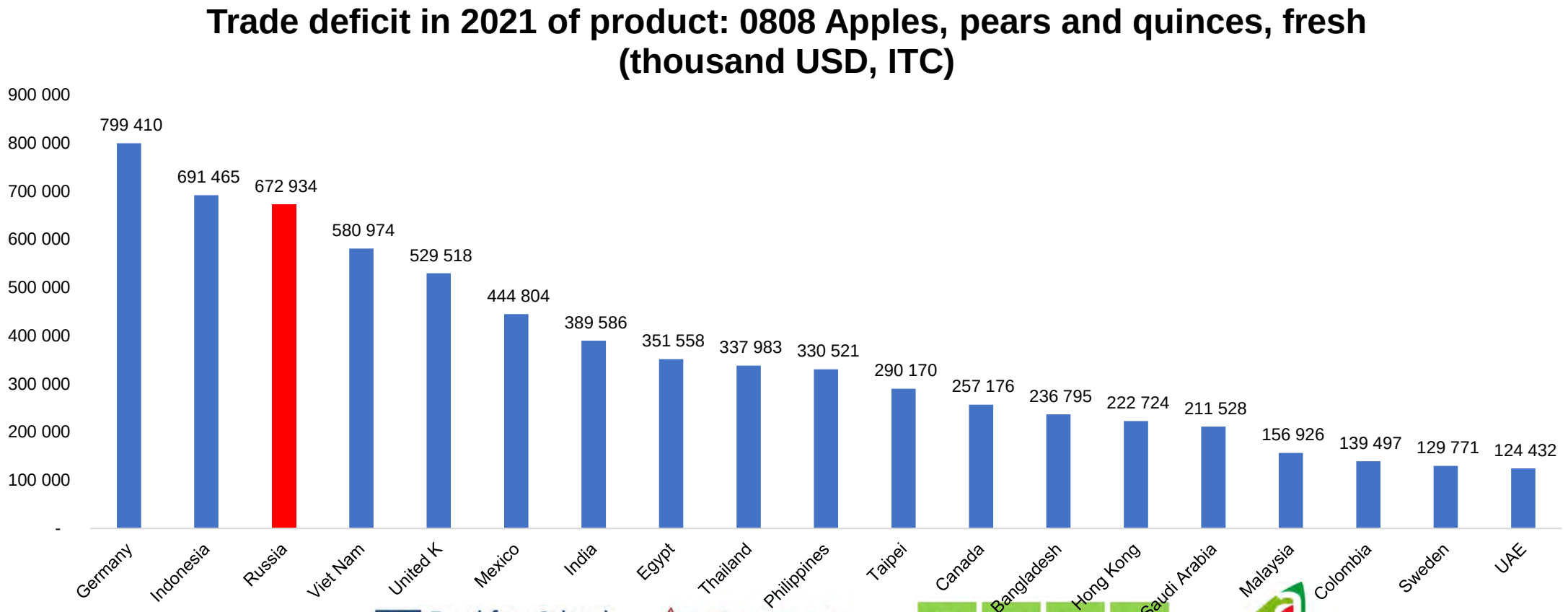
During most of the previous decade, Georgia had even trade deficits for apples. But since 2017, its trade balance has substantially improved with a USD 8.4 million surplus in 2021



Nearly all Georgian apples were also exported in 2021 to Russia whose market has been closed to EU exporters since 2014

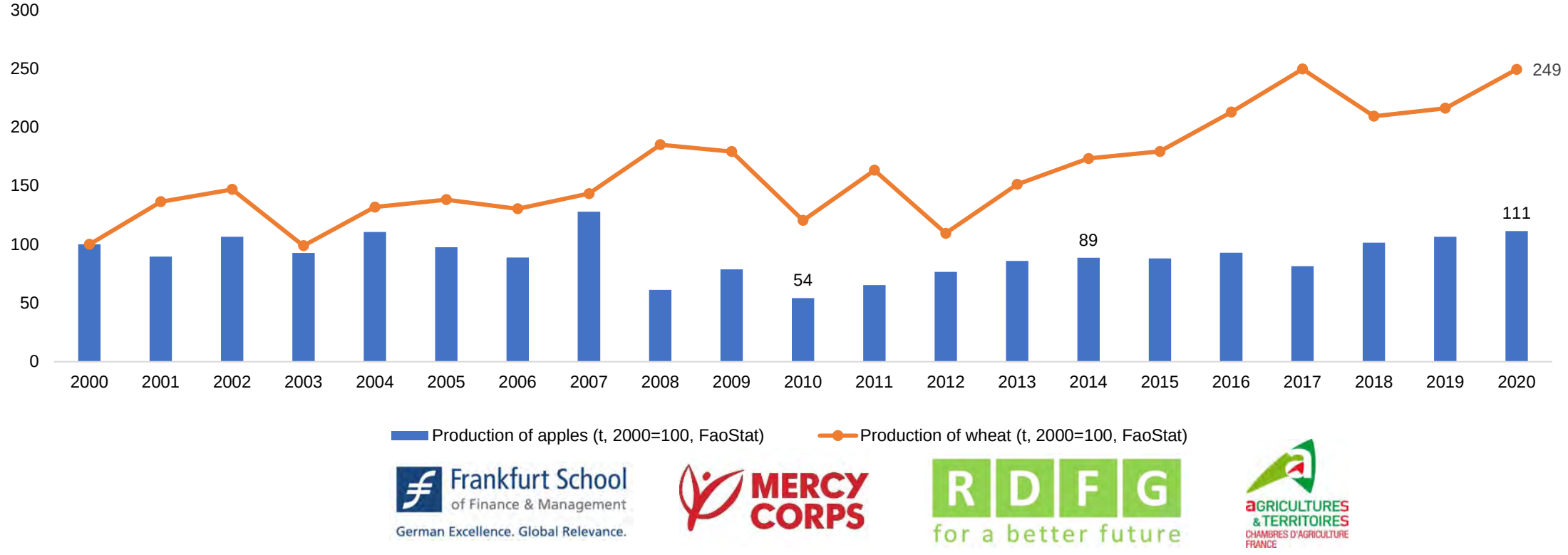


It must be noted in this respect that, despite its embargo on imports of apples from the EU and other Western countries, Russia remains the third biggest net importer in the world. But there is a risk that this market will progressively close down

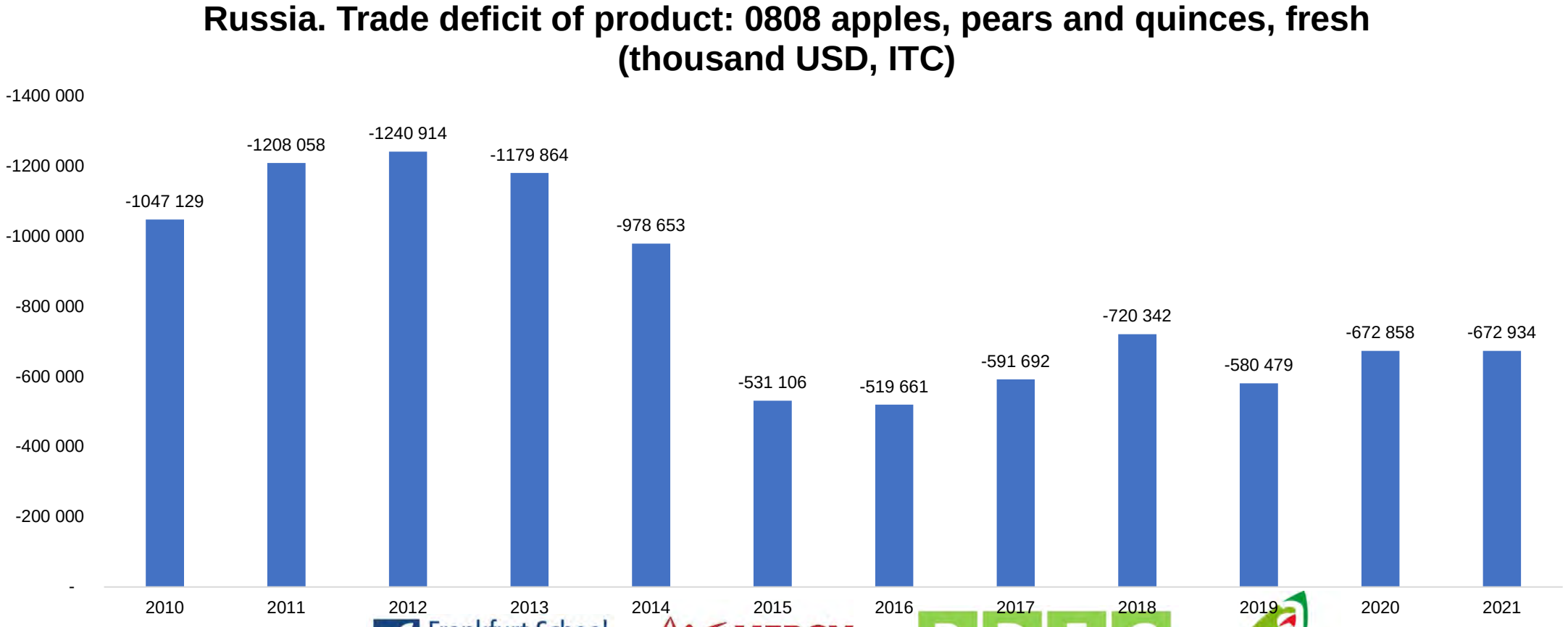


For years, Russia mainly focused on the increase of its wheat production. In 2010, its production of apples had contracted by 46% since 2000. But it then rebounded strongly after its 2014 embargo. From 2014 till 2020, there was a 25% increase in output. Areas harvested increased from 38 thousand ha in 2017 to 48 thousand ha in 2020, reflecting a strong State support to new modern intensive orchards, mainly in Southern Russia. Eventually, Russia could achieve the same levels of import substitution as for other products like poultry for which it was a major net importer in the past

Russian production of wheat and apples (t, 2000=100, FaoStat)

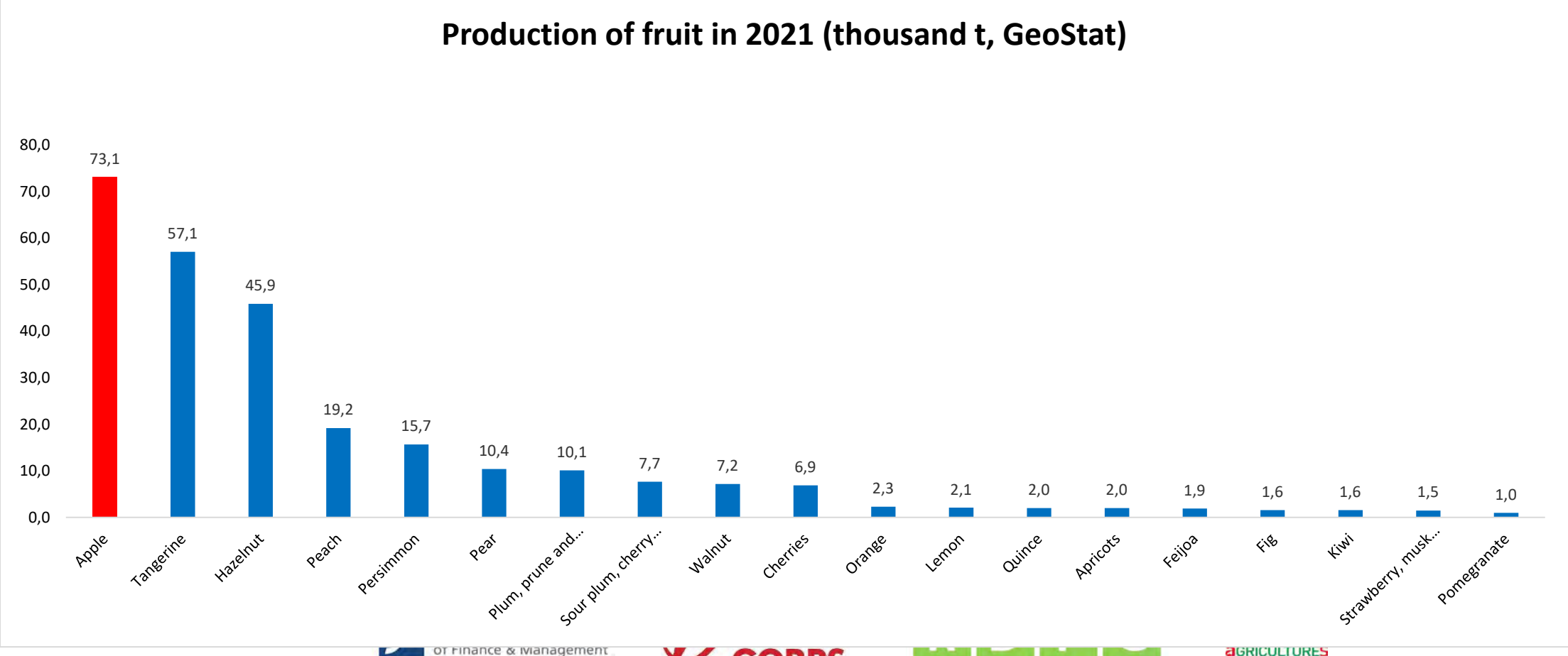


This import substitution process already explains why the trade deficit of Russia for apples remains only half of that of the beginning of the previous decade. Georgia should therefore try to diversify its exports to other proximity markets like the EU and Arab countries



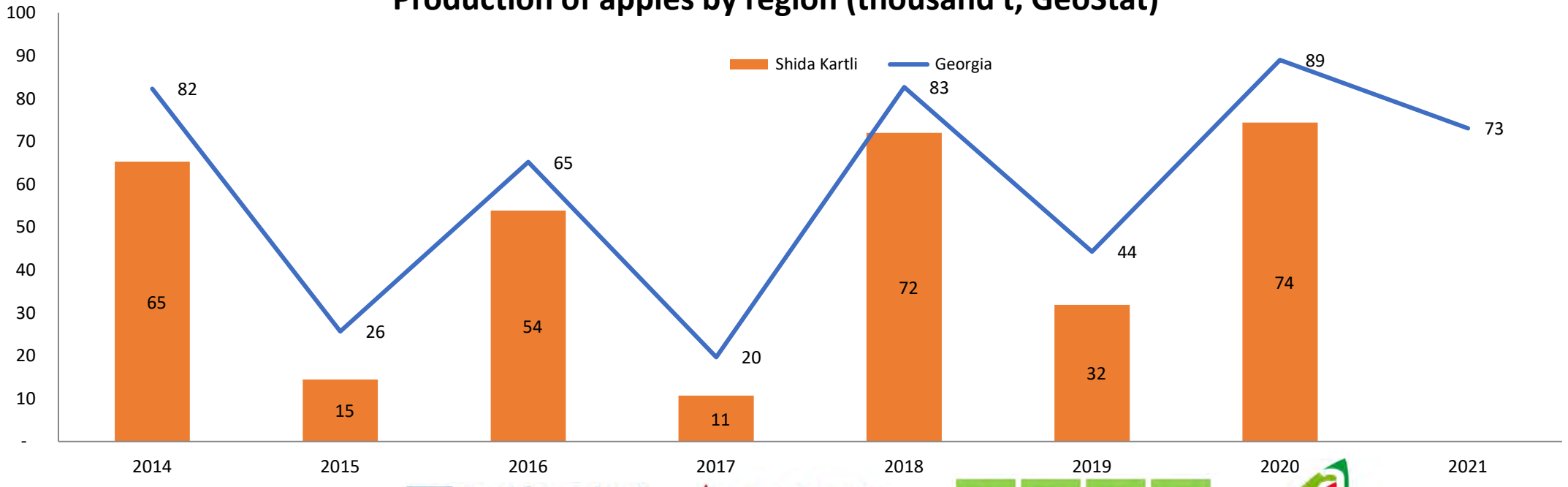
The supply side

Georgia has a huge diversity of climate for the small size of its territory and can produce a very large diversity of pome fruit, stone fruit, fruit with shells and small berries. In 2021, Georgia produced 73.1 thousand t of apples. Apple is the most important fruit for the country, in volume

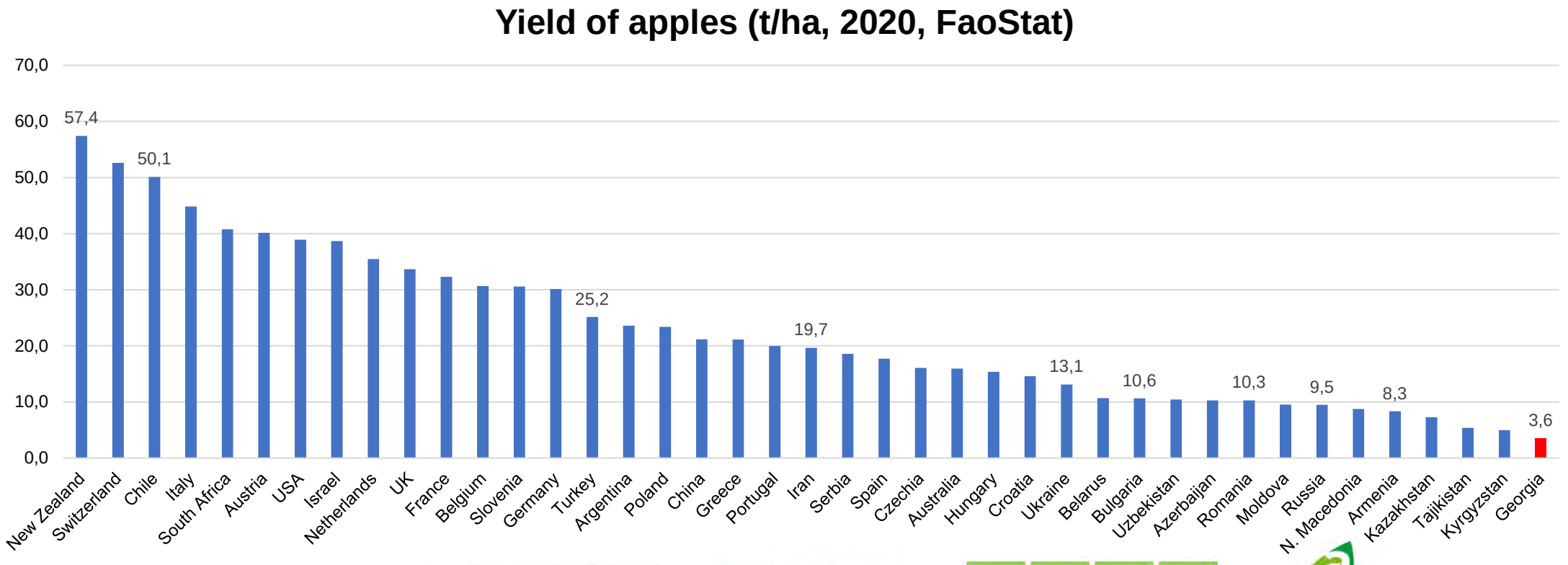


The apple sector has been largely supported by GoG. According to MEPA, from 2015 till 2020, the program Plant the Future financed 1,185 ha of modern apple orchards, with a total investment of GEL 19.7 million, mainly financed by RDA's co-investment subsidies (GEL 10.1 million) and RDA's subsidized preferential agro credits. But even though modern intensive orchards do not need much time to become productive, GeoStat has not registered any substantial increase in output which remains mainly located in Shida Kartli. A key feature is also the extreme annual variations of output

Production of apples by region (thousand t, GeoStat)



Today, even in best years, Georgian yields remain very low by regional and international standards, including in modern intensive orchards which very often suffer from alternation with no production every second year. It is partly linked to events of God like late frost, which could be dealt with through adequate technologies, but it also mainly reflects the low technical level of most orchard managers who do not know how to control this natural phenomenon



In well-managed orchards worldwide, alternation is systematically reduced by a combination of approaches. Good pruning in wintertime allows to efficiently manage the future crop load

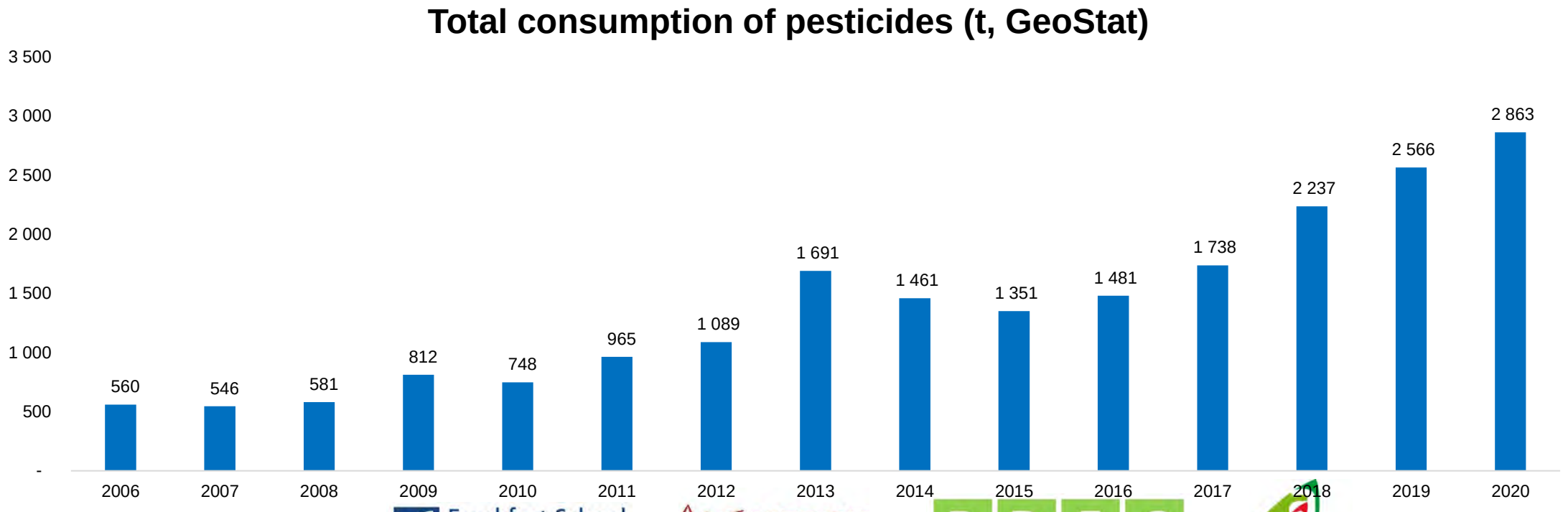
But thinning of trees to keep the right number of fruits is also necessary. It can be done manually, but it is a quite heavy work with up to 250 hours of work per ha

It can also be done mechanically, but the best technology, virtually unknown in Georgia, is through chemical thinning

Not only does alternation lead to poor harvest every second year. It also leads to poor quality crop as there are too many small fruit in “good” years and as they suffer from “bitter pit”, which is linked to a lack of calcium impacting the fruits

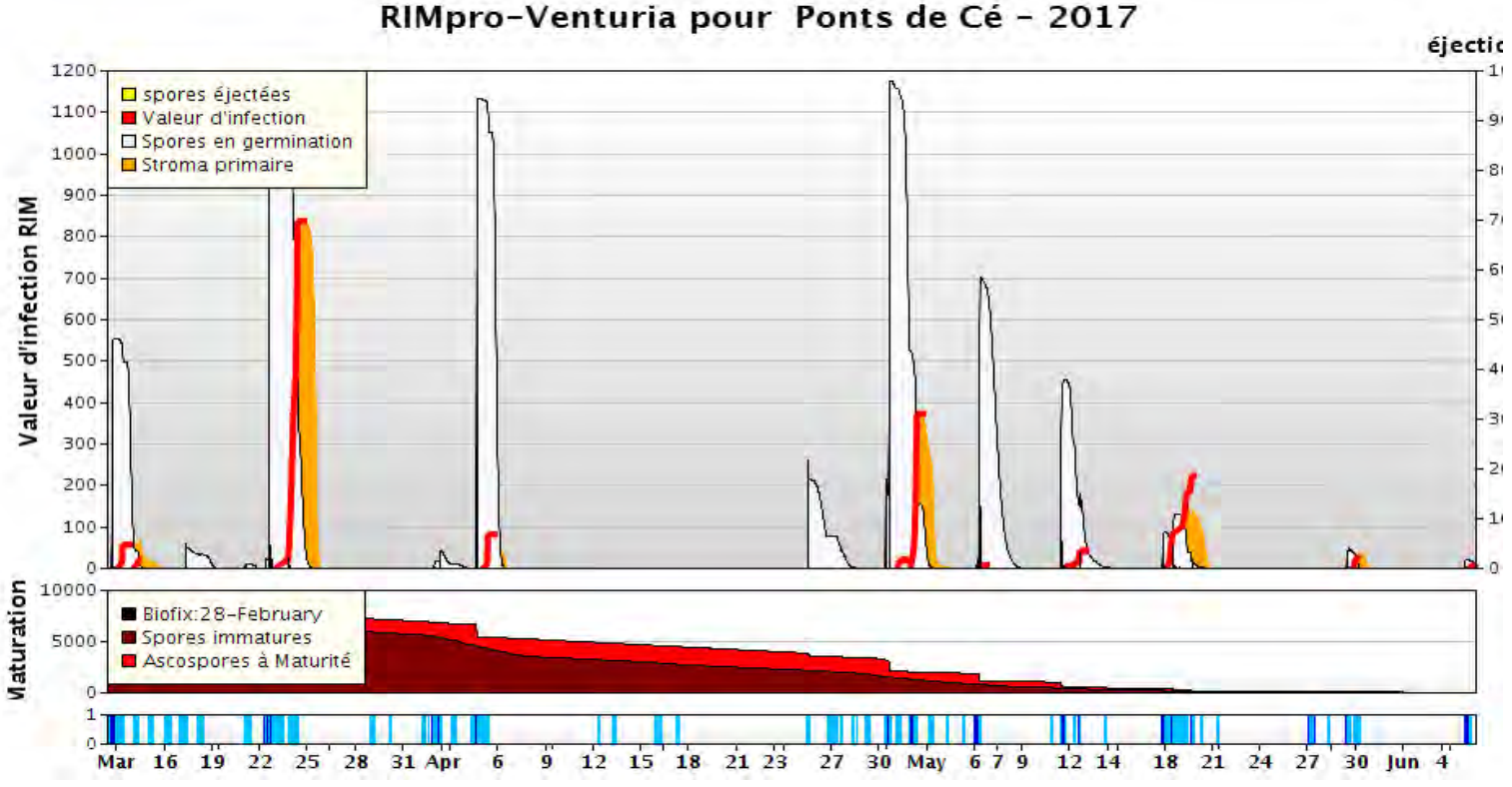
Another key problem of Georgian orchards is the still poor management of pests and diseases, which tend to increase in frequency because of climate change (humid springs). Scab (Venturia inaequalis) is in particular a major cause for concern

To deal with these problems, farmers have been using more and more pesticides with less and less results as pests and diseases become resilient to treatments. To export their products to countries where there are strong controls over residues of pesticides, especially in the EU where the new Green Deal plans a reduction by 50% in the use of pesticides by 2030, could therefore become mission impossible



The use of pesticides could be drastically reduced if they were applied just on time as it is the case in advanced countries where meteo stations and effective software like RIMpro are combined to give precise instructions to farmers on when and how to treat pests

There have been some tentative experiences of such approaches in Georgia. But they have not given good results until now because the equipment had been given either to suppliers of pesticides, who had no strong incentive to reduce the demand for their products, or to State bodies not directly connected to farmers in the field



There are other technologies which could be better mobilized to deal with pests in an environmentally-friendly way. One of them is the use of pheromones to monitor or trap dangerous insects like Cydia Pomonela

Georgia can also learn from best practices of advanced organic farmers who use animals like hens or dwarf sheep to clean their orchards from dead leaves and scab

Even though the general picture of Georgian apple orchards remains unsatisfactory, FinExCoop's experience of theoretical on-line training and coaching in-the-field is beginning to pay off. A new group of highly motivated leading farmers, with much improved knowledge and technical capacity, is clearly emerging

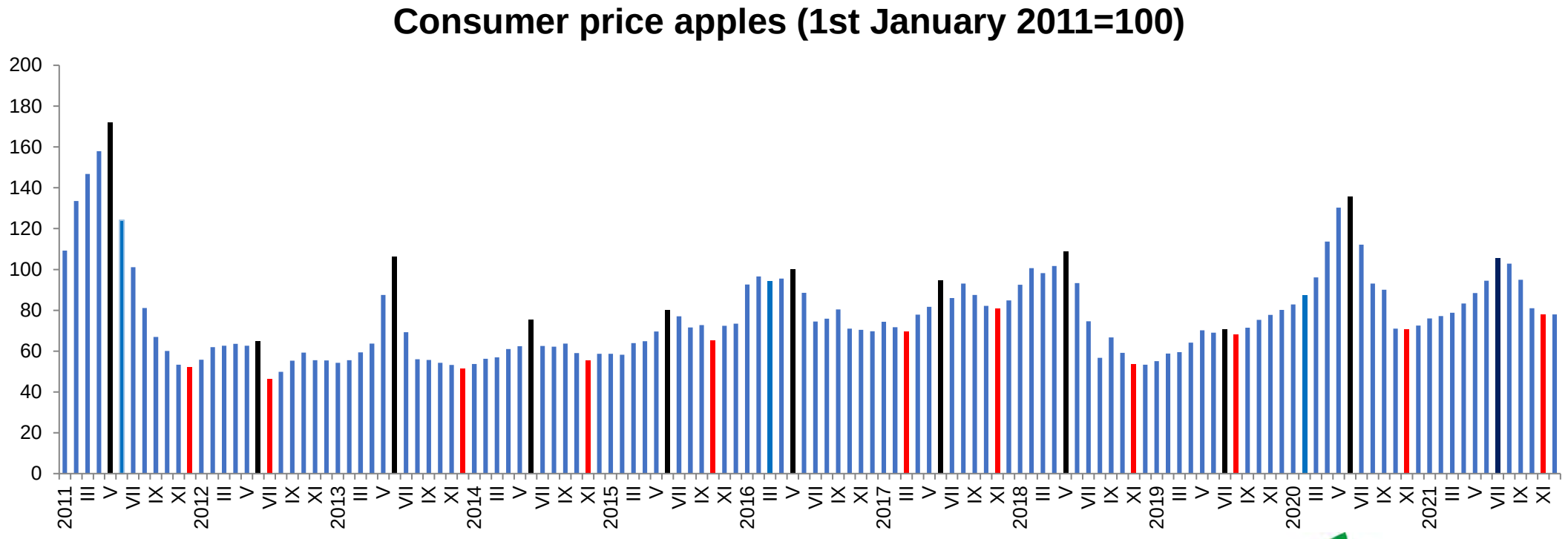
Thanks to FinExCoop's advice, the farmer Irakli achieved for instance a very good 50 t yield of variety Golden in 2021

In this new third-year orchard which also used FinExCoop's pruning method, yields of 20 t/ha have also being achieved in 2021 by farmer Eduard. It should be able to produce at least 50 t/ha in the near future

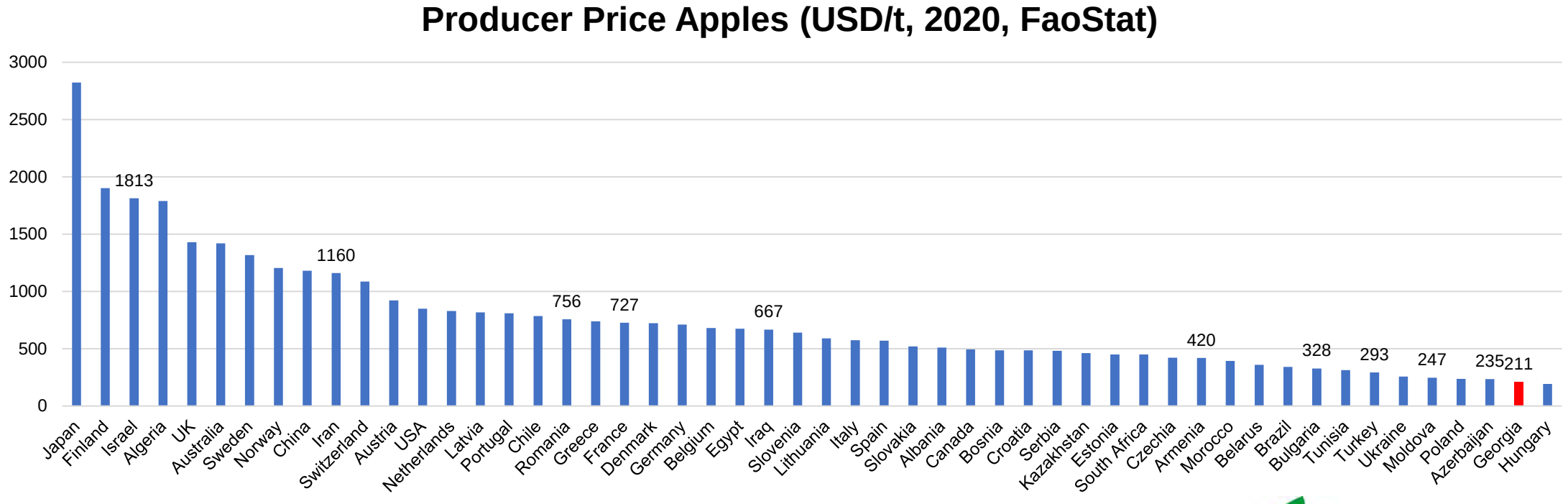
Thanks to its good technical management, this orchard is already able to produce high quality fruit with the calibre required by the market which can sell at a premium

FinExCoop has also systematically promoted cooperation among farmers. More and more they are learning from each other, which is the best way for sustainable improvement. Many of them are now ready to act in a collective and cooperative way to improve their performance

Apart from joining forces in some segments of their productive activities, like for instance the joint use of meteo stations, farmers must cooperate to better promote and sell their apples. Better access to storage and warehouse finance is in particular a must to avoid selling them just after harvest at depressed prices



Prices paid to Georgian producers are also among the lowest worldwide. It leaves a huge margin for improvement if Georgia is able to produce better quality fruit through better practices, but also if independent best producers join forces to better market their apples through efficient marketing and branding, including through the promotion of organic apples and apples with geographic indications



An excellent example for such prospect can be given by the French company Blue Whale which was created in the 1950s by a group of French independent farmers to better market their products. Today Blue Whale is owned by 300 farmers working on 6,620 ha. It sells annually 240,000 t of apples, three times the whole production of Georgia, with a EUR 250 million turnover

With better quality and better selling prices, Georgian apple farmers can become highly profitable and will not need price subsidies like the one provided in 2020 by MEPA/RDA (0.1 GEL/kg subsidy) to fruit processors for buying non-standard apples as there were too many of them on the market. No risk either for these processors not to be able to get inputs as, even in the best orchards, there is always a certain number of low-quality fruit to be sold for processing. Meanwhile, these processors could also better value their by-products, building on the successful innovative use of preserved apple pulp for cattle feed experimented by FinExCoop in 2021

Thank you for your attention!