https://worldbankgroup.sharepoint.com/sites/gsd/Pictures/GSDPM/LOGOS/WB-WBG-horizontal-RGB-web.jpg?ctag=190606

**China/Russia 2030**

**Implications for the Horticulture Sector in Central Asia – Summary**

© 2017 The World Bank

1818 H Street NW, Washington DC 20433

Telephone: 202-473-1000; Internet: [www.worldbank.org](http://www.worldbank.org)

Some rights reserved

This work is a product of the staff of The World Bank. The findings, interpretations, and conclusions expressed in this work do not necessarily reflect the views of the Executive Directors of The World Bank or the governments they represent. The World Bank does not guarantee the accuracy of the data included in this work. The boundaries, colors, denominations, and other information shown on any map in this work do not imply any judgment on the part of The World Bank concerning the legal status of any territory or the endorsement or acceptance of such boundaries.

**Rights and Permissions**

The material in this work is subject to copyright. Because the World Bank encourages dissemination of its knowledge, this work may be reproduced, in whole or in part, for noncommercial purposes as long as full attribution to this work is given.

**Attribution**—Please cite the work as follows: “World Bank. 2019. China/Russia 2030: Implications for the Horticulture Sector in Central Asia – Summary. © World Bank.”

All queries on rights and licenses, including subsidiary rights, should be addressed to World Bank Publications, The World Bank Group, 1818 H Street NW, Washington, DC 20433, USA; fax: 202-522-2625; e-mail: [pubrights@worldbank.org](mailto:pubrights@worldbank.org).

**In China, changing demographics, rising incomes and shifting consumer preferences have resulted in an ever-growing demand for food that is more varied, healthier and of higher quality and this demand is set to persist well into the future**. According to International Monetary Fund projections (2019), by 2024, Chinese per capita gross domestic product (GDP, in current prices) will increase to $28,450, from $13,130 in 2019, and the population will increase to 1.5 billion people (United Nations, 2019). The projected urbanization rate will reach 67 percent by 2030, compared to 56 percent in 2015 (Goh et al., 2014). The growing number of consumers in China, that are increasingly more affluent and educated, will continue shifting their dietary preferences to include more protein, fruits and vegetables.

**Growing Chinese demand for fresh fruit imports creates an enormous opportunity for the Central Asian[[1]](#footnote-1) fruit exporters to diversify geography and increase value of their horticulture exports**. Between 2015 and 2017, China imported $1.5-billion worth of fresh cherries, grapes, plums and apricots – fruits in which Central Asian countries hold a comparative advantage. According to the IMPACT model projections, by 2030, Chinese import demand for these fruits will increase to $1.8 billion, while an overall import potential is estimated at $2.7 billion (Table 1). Currently, Chile and United States dominate the fresh fruit import market of China, particularly for sweet cherries and plums.

Table 1. Projections of Chinese fruit imports

|  |  |  |  |
| --- | --- | --- | --- |
| **Horticultural products** | **Current Chinese horticultural net imports, 2015***–***2017 average, $** | **Projected Chinese net imports, 2030, 2005 $[[2]](#footnote-2)** | **World export potential to China,**  **$** |
| Cherries, fresh | 903,424,257 | 1,075,074,866 | 1,500,000,000 |
| Grapes, fresh | 532,000,000 | 633,080,000 | 1,000,000,000 |
| Plums and sloes, fresh | 99,008,118 | 117,819,660 | 164,700,000 |
| Apricots, fresh | 496,490 | 590,823 | 1,400,000[[3]](#footnote-3) |

Source: UN COMTRADE (2018), World Bank calculations based on IFPRI IMPACT (2015).

**Central Asian countries are well placed to be more competitive in satisfying fruit import demand in the growing Chinese markets and will reap economic and social development benefits along the way.** For centuries, Central Asia has occupied a position of strategic importance in trade between the East and the West. The region’s geographic location, natural resources, untapped yield potential, and the possibility of greater private sector investment through policy reform create the necessary preconditions for the Central Asian countries to increase their agricultural exports to China. As China places an important role on meeting its growing food needs on dynamic agricultural trade and investment cooperation with the Central Asian countries, this results in significant opportunities for the region to increase its presence in the Chinese fruit markets brought by improved infrastructure and higher cross-border investment. For example, according to the recent World Bank report (World Bank, 2019), Belt and Road Initiative transport projects are estimated to increase trade by up to 9.7 percent. Countries that have a comparative advantage in time-sensitive sectors, such as fresh fruits and vegetables, are expected to be the biggest winners.

**Export competitiveness analysis[[4]](#footnote-4) showed that Central Asian countries have a comparative advantage in the production of export horticultural commodities due to favorable climatic conditions and low production costs.** Central Asian countries have a comparative advantage in the production of export horticultural commodities due to favorable climatic conditions and low production costs. Central Asian republics—namely Uzbekistan, Tajikistan, and the Kyrgyz Republic—have unique soils that are ideal for orcharding. More fully realizing this production potential would allow Central Asian exporters to satisfy an anticipated growth in Chinese and Russian demand for fruits as its consumers become wealthier and more nutrition-sensitive. Specifically, the results of the analysis are as follows:

**Kyrgyz Republic:** Based on the results of the export competitiveness analysis and the interviews with the stakeholders, the products with the most export potential from Kyrgyz Republic to China include cherries, walnuts, milk, fresh apricots, and plums (fresh and dried). According to ITC, the export potential of fresh apricots, cherries and plums was estimated at $17.1 million annually, however only 21 percent of this potential has been realized as of 2018.

|  |  |
| --- | --- |
| Table 2. Export competitiveness assessment, Kyrgyz Republic | Figure 1. Export potential of Kyrgyz fresh fruits |
| |  |  |  | | --- | --- | --- | | **Product** | **RCA[[5]](#footnote-5)**  **(2013-2017 average)** | **DRC[[6]](#footnote-6) (2017)** | | **Apricots (fresh)** | 78.8 | 0.77 | | **Walnuts, with shell** | 29.0 | 0.56 | | **Plums (fresh)** | 13.4 | 0.72 | | **Cherries** | 7.6 | 0.17 | | **Plums (dried)** | 3.3 | 0.29 | | **Milk** | 1.4 | 0.43 | |  |
| Source: UN Comtrade, World Bank calculations | Source: International Trade Center |

**Tajikistan:** Based on the RCA results, and the interviews with the stakeholders, the products with the most export potential from Tajikistan to China include apricots (dry and fresh), plums (fresh) and grapes (fresh) (Table 3). According to ITC, the export potential of fresh apricots, cherries and plums was estimated at $2.3 million annually, however, remains largely unrealized (Figure 2). Dry fruits—apricots and plums—that offer the most promising export opportunity for Tajik exporters. For example, the export potential for dry apricots is estimated at $25.1 million and for prunes at $5.2 million. As of 2018, this potential has been on average realized by only 29 percent.

|  |  |
| --- | --- |
| Table 3. Export competitiveness assessment, Tajikistan | Figure 2. Export potential of Tajik fresh and dried fruits |
| |  |  |  | | --- | --- | --- | | **Product** | **Tajik net exports**  **(2015-2017 average), USD** | **RCA**  **(2012-2016 average)** | | **Apricots (dry)** | 6,086,562 | 287.3 | | **Apricots (fresh)** | 833,364 | 35.6 | | **Plums (fresh)** | 889,636 | 19.6 | | **Grapes** | 2,655,497 | 5.8 | |  |
| Source: UN Comtrade, World Bank calculations | Source: International Trade Center |

**Uzbekistan:** Based on the results of the export competitiveness analysis and the interviews with the stakeholders, the products with the most export potential from Uzbekistan to China include cherries, apricots (dry and fresh), plums (fresh), grapes (fresh) and walnuts (Table 4). Table grapes, cherries and peaches have the highest potential, estimated at $486 million annually. Fresh apricots and plums account for another $115 million. Currently this potential for the target fruits (peaches excluded) is realized by only 32 percent on average (Figure 3).

|  |  |
| --- | --- |
| Table 4. Export competitiveness assessment, Uzbekistan | Figure 3. Export potential of Uzbek fresh fruits |
| |  |  |  |  | | --- | --- | --- | --- | | **Product** | **Uzbek net exports**  **(2012-2017 average), USD** | **RCA**  **(2012-2016 average)** | **DRC (2017)** | | **Cherries** | 44,733,333 | 172.0 | 0.20 | | **Apricots (fresh)** | 20,396,311 | 109.1 | 0.17 | | **Apricots (dry)** | 9,594,508 | 57.1 | - | | **Walnuts** | 39,208,645 | 37.5 | 0.20 | | **Plums (fresh)** | 10,665,391 | 28.6 | 0.41 | | **Grapes, including table** | 78,195,406 | 22.1 | 0.22 (table)  0.65 (wine) | | **Plums (dried)** | 11,261,431 | 7.3 | - | |  |
| Source: UN Comtrade, World Bank calculations | Source: International Trade Center |

**Fruit export growth has the potential to significantly boost economic growth in the Central Asian countries, generate employment and income in rural areas, and create opportunities for smallholder inclusion into the value chain.** In addition to the clear macroeconomic benefits from higher value-added exports, such as horticulture, the increasing production of fruits also has a strong positive impact on employment when compared to other agricultural sub-sectors. Research shows that horticulture requires at least twice as much labor as cereal crops. For example, for every job in horticulture, three jobs are generated elsewhere (not including employment generation among farmers). Further, a World Bank study of the Uzbek horticulture sector (Khidirov et al., 2015) estimated that the number of person-months per hectare of farm labor for selected fruits and vegetables ranges from 12-22, compared to 5 and 2 in cotton and wheat, respectively. Similarly, research conducted in South Africa shows (World Bank, 2018a) that commercial vegetable and fruit cultivation generates about 1.3 jobs per hectare compared with 0.01 jobs per hectare of maize. Evidence from around the world shows that increases in horticultural exports bring significant economic benefits to the smallholder farmers who often produce most of these products, including in the Central Asian countries. Smallholders benefit from both higher incomes and the access to credit and extension services which exporter companies provide. Generating employment in agriculture as well as upstream and downstream agribusinesses for Central Asian migrants returning from Russia following the economic downturn and for large numbers of rural youth joining the labor market annually is an important social objective that increased horticultural production can help meet.

**However, entering and increasing presence in the Chinese fresh fruit markets is far from easy.** First, Chinese markets require consistency in the quality and volume of the fresh fruit supplied by exporting countries (see annex 4 for more details). Second, entering China necessitates the existence of sophisticated quality systems and logistics systems to ensure that products are grown and preserved in their best possible condition to meet China’s stringent quality and food safety standards. Third, the Chinese fruit markets’ highly fragmented and competitive structure necessitates a close relationship with a Chinese counterpart on the ground. Fourth, Chinese consumers value attractive packaging and products with recognizable brands.

**And a lot needs to be done by the Central Asian countries to be able to do so.** The majority of Central Asian fruit producers are small farmers who have limited access to financial and knowledge resources, which results in limited production volumes and inconsistent quality of supply. While small farmers across the region have adjusted to trading fruits domestically through a network of local traditional traders, entering international markets requires a different level of bureaucracy, procedural conformity and produce volumes for which Central Asian small-scale producers currently lack capacity. Currently, exports of fresh stone fruits are often sporadic, and vary from year to year depending on yields and demand from Russia and Kazakhstan. At the government level, the quality and capacity of customs control and inspection bodies do not meet the requirements that modern horticulture markets pose, putting Central Asian exporters at a disadvantage vis-à-vis their global competitors.

**As a result, despite the existing opportunities, China still accounts for only a small share of total Central Asian (Kyrgyz Republic, Tajikistan and Uzbekistan) agri-food exports, particularly fruit exports.** In 2018, agri-food exports to China totaled $418.9 million, up by $72 million from 2017 figures. Uzbekistan and captured 96 percent of this value, while the Kyrgyz Republic and Tajikistan remained marginal players. However, Uzbek exports to China (82 percent) consist mainly of cotton and cotton products. Kazakh agri-food exports ($252.3 million in 2018) are more diversified – made up mostly cereals (39.2 percent), oils and fats (23.6 percent) and oilseeds (19 percent). The dominant export category from the Kyrgyz Republic is tobacco, which accounts for 58 percent of total agri-food exports.

**Instead, a large share of Kyrgyz, Tajik and Uzbek fruit is destined for Russia and Kazakhstan, their traditional markets.** According to official trade statistics, in 2018 Central Asia exported $108.8 million worth of fresh fruit to Russia, accounting for 25 percent of Central Asia’s total fresh fruit exports. If dried fruits and nuts are considered, this share rises to 43 percent. For example, 88 percent of cherries, and 99 percent of fresh apricots and plums are exported from the Kyrgyz Republic to Russia and Kazakhstan. Similar export dynamics are observed for Uzbek and Tajik fruits. These estimates are likely to be on the low side, as they do not include unrecorded re-exports via Kazakhstan to Russia. Between 2014 and 2018, the region’s fruit exports to Russia grew by a factor of 21, primarily from surging Uzbek exports that increased from $2.8 million in 2014 to $99 million in 2018. Exports from the Kyrgyz Republic and Tajikistan have shown healthy growth over the same period, as well—from $34,453 to $375,550 and from $364,791 to $691,774, respectively.

**Just as in case with China, Russia is a promising market for the Central Asian exporters - rising incomes and changes in dietary habits will accelerate the demand for fresh fruit among Russian consumers**. According to 2015 IFPRI projections, demand in Russia for fruit will be the fastest-growing category of food demand by 2030, with an average growth rate of 1.04 percent annually, $11.4 billion. Temperate fruits are expected to account for 62 percent of that demand. This growing demand presents an opportunity for Central Asian fruit exporters, if they can adjust to the country’s food retail trends.

**Specifically, modern grocery retail chains in Russia have been growing at an accelerated pace, largely at the expense of traditional retail markets, following the trajectory observed in many developed countries.** According to Beragua (2014), the compound annual growth rate for modern food retail between 2007 and 2014 equaled 25.5 percent, compared to a total food retail growth rate of 13.3 percent. The trend is projected to continue. In the same period, traditional food retail’s share in total food retail decreased from 74 percent to 41 percent. The share of fresh produce sold in modern retail stores also has been growing, particularly in large cities. According to the FDF Group, supermarkets were named the main distribution channel in Moscow for fresh produce in July 2015, with 92 percent of respondents citing this channel as their point of purchase over the past three months. Traditional markets comprised just 33 percent. Retail chains are also playing an increasingly important role in fruit imports, imposing stringent requirements for product health and safety, intrinsic product qualities (such as shape, color, and taste), packaging and labeling, and accompanying information.

**Despite Central Asian fruit exporters’ traditionally large presence in the Russian stone fruit markets, Central Asian suppliers remain largely detached from modern retail chains in Russia.** Most Central Asian fruits are sold in Russia’s open-air markets during the summer season. Retail’s low percentage of direct supply of produce from Central Asia is numeric proof of this fact. For example, in 2018, grapes imported by modern retail arrived mainly from Turkey and India, while Central Asian direct supplies of grapes to modern retail were limited to 3 percent of the total export volume. CA fruit suppliers lose out to their competitors in their ability to provide the quality, assortment, and packaging of produce in accordance with retailer needs and volumes. As a result, they receive lower (up to 30 percent) import prices (Table 5).

Table 5. Average Import Prices, Overall Imports Versus Retail Imports

|  |  |  |
| --- | --- | --- |
| Origin | Average import price | Average import price, retail |
| Turkey | 62.3 | 53.1–82 |
| Uzbekistan | 49.6 | 67.7–71.1 |
| Moldova | 21.4 | 67.2 |
| India | 173.2 | 95.2–140.1 |
| Tajikistan | 85.9 | 109 |

Source: Interviews with the stakeholders.

**Central Asian suppliers struggle to deliver the quality, safety, and consistent fruit supply expected by modern retail chains.** Interviews conducted with Russian retailers and Central Asian exporters during the study suggested that Central Asian suppliers often lack the capacity to ensure a consistent, high-quality product that complies with the regulatory requirements of modern retail chains. Several factors contributing to this were identified, including:

* ***Informality and non-transparency of Central Asian fruit supply chains***. Existing fruit supply chains in Central Asia are to a large extent based on personal relationships, which in many cases results in the acceptance of low-quality produce at pack houses and its further export to Russia. During the interviews several retailers pointed out quality issues in the product delivered to their distribution centers, which meant that the quality of the product prior to shipment was questionable. Such unsuccessful deliveries to retail ruin the region’s reputation. In addition, the local modern retail sector in Central Asia is in its infancy. The market is still dominated by bazaars and traditional stores. As a result, local producers lack experience in supplying Central Asian as well as Russian retail chains.
* ***Fragmented production and long value chains***. A large portion of the produce grown in Central Asia is highly fragmented and originates in dekhan plots and smallholder farms, which results in multiple middlemen involved in domestic and export sales. Diverse sources of supply prevent shipment traceability. Growers also don’t receive feedback on necessary changes in production and post-harvest practices in order to reduce future quality claims. Such claims provide practical observations on the influence of harvest and post-harvest processes on quality issues for each delivery of fruit: berry preservation capacity (firmness, skin damages, rot); physiologic quality (mineral balance, ripeness); and commercial quality (size, coloring, taste, shape).
* ***Lack of knowledge about and compliance with retail requirements.*** Modern Russian retailers make food safety and phytosanitary standards their priorities in order to address risks to public health and protect their reputation. To meet retail requirements, exporters need to be up-to-date on Russian legislation related to pesticides, residue levels, and food safety. Central Asian producers often lack knowledge about acceptable production and handling requirements, such as optimal fruit maturity measurement, harvesting within minimal Brix levels, and optimum temperature and humidity conditions for fruit storage. For example, it is not uncommon for the period between harvesting and placement in the warehouse to exceed five hours (the maximum allowed period in Chile is three hours, for example). There is also limited understanding of the importance of cold-chain and its influence on produce durability. With monitored storage temperature and relative humidity, for instance, table grapes can be stored for seven to eight months up to the spring, which brings Central Asian grape suppliers to a new level of communication with Russian retailers and promises higher margins during midseason periods.
* ***Short supply window.*** Formal markets require a long-run period of supply in consistent volumes. The current Central Asian produce supply window is shorter than that of successful competing countries, including Turkey. Small-scale production, as well as multi-variety orchards for each fruit category, create obstacles for consistent, solid supplies, which formal markets demand. For example, produce for each retail delivery needs to be of the same batch and botanical sort (pomology or ampelographic) packed in the same container type.
* ***Lack of branding.*** Central Asian fruits are often sold as commodities without any branding, with the exception of GDF/UzGardens. Moreover, the fruit’s country of origin is often lost due to the multiple middlemen involved in Central Asian fruit distribution, making it difficult to promote produce under a particular country flag. General recognition of Central Asian produce is low among final consumers.
* ***Limited human capacity.*** Based on interviews with Russian retailers, the human factor is among the issues that affect collaboration with Central Asian exporters. Education and workforce training are essential with the introduction of modern technologies. Personnel have multigenerational experience in growing and harvesting fruits, which sometimes hinders the implementation of new regulations. In addition, administrative knowledge is lacking. A key factor in successfully supplying modern retailers—apart from fruit quality and price—is transparency and accurate export documents.

**To be competitive in the Chinese and other evolving global fresh fruit markets** **Central Asian fresh fruit exports need to increase the quantity, quality, sophistication and sustainability of their exports**. To realize their export potential, the Central Asian countries would need to overcome a number of constraints that can be grouped as follows:

**The supply of large volumes of fruit of a consistent quality required by the large and sophisticated import markets, such as in China and in Russian formal retail, can only be achieved by integrating Central Asian smallholder fruit producers into the value chain.** To enter both the Chinese and higher-end Russian markets, Central Asian exporters need to be able to supply large volumes of fruit of consistently high quality and in a timely manner. Such a requirement is in line with evolving global fruit markets that are becoming more concentrated at the retail level with the key players preferring to deal with fewer, larger suppliers to cut down on transaction costs. Central Asian producers will be able to supply large volumes of quality fruit by improving the cooperation of small-holder producers. The role of the government in this case could be to introduce different forms of government support to farmers that engage in cooperation and to educate producers on the benefits of cooperation and knowledge sharing.

**Access to high quality inputs—irrigation, seeds, fertilizer and finance—is a prerequisite for Central Asian farmers to obtain yields comparable to world leading horticulture producers.**The study showed that across the region, fruit producers, who are predominantly small scale, face difficulties in acquiring financial resources that would allow for the procurement of higher quality inputs, modernization of production methods, improved irrigation or expanding operations. While banks have developed products for agricultural borrowers, interest rates remain high, and the requirements to obtain financing are complicated and unclear to most small-scale producers. Limited access to finance is one of the primary reasons behind the current high level of informality of Central Asian fruit exports to the Russian markets—since local producers are short on working capital, they are more eager to make quick, and less formal, sales to ensure the fast turnover of available funds.

**To ensure that Central Asian fruit producers are competitive in world horticulture markets, they need to be up-to-date with the latest knowledge on fruit production and handling.** Horticulture is a highly technical and knowledge-dependent industry. Stakeholders across all the surveyed countries pointed to the lack of up-to-date technical knowledge among small scale fruit producers in Central Asia. As such, to sustain growth of the fruit sector in the country, Central Asian governments need to invest in human capacity building and knowledge generation to ensure research findings, best practices and technologies are delivered to the fruit producers. Extension services need to offer educational programs for farmers on plant care, high-yield varieties of fruits, post-harvest handing of the fruit, and necessity of fruit calibration. With this they need to raise awareness and recognition among the producers about the problems created by traditional approaches to the production and handling of fresh fruit that have limited consideration for the food safety and quality requirements that international markets require.

**Post-harvest, an efficient cold chain is critical to ensure a steady and reliable supply of quality fruit.** The lack of sufficient and efficient cold chain infrastructure is a major contributor to fruit losses in Central Asian countries, undermining the competitiveness of exporters in the export markets. In all three analyzed countries, current cold chain storage capacity is insufficient to meet the demand for storing horticultural produce. For example, in Uzbekistan, existing storage is enough to store less than 3 percent of planned fruit and vegetable output by 2020. Uzbekistan has been heavily investing in cold chain capacity, however the Kyrgyz Republic and Tajikistan need to stimulate investment in this area.

**The ability of Central Asian governments to implement sophisticated, internationally recognized food safety and quality control systems would be a determining factor to reach their horticulture export potential.**At the government level, the quality and capacity of customs control and inspection bodies do not meet the requirements of modern horticulture markets, putting Central Asian exporters at a disadvantage vis-à-vis their global competitors. For example, Central Asian food testing laboratories are not recognized by Chinese markets, as they lack modern technology and up-to-date training of personnel (Euromonitor International, 2017). Current fruit exporters from Central Asia are ‘hand-picked’ by Chinese counterparts, which limits overall export volumes from the region. Moving forward this would remain the most important constraint for increasing horticulture export potential from the Central Asian countries to China or other higher-end markets. While the Central Asian governments already understand the problematic food safety and quality control areas and are developing plans to improve these, much remains to be done. Governments urgently need to invest in establishing internationally recognized laboratories that are equipped with modern equipment and to develop educational programs to train food quality experts. Increasingly, strict food safety and quality requirements for fruit imports are not unique to China or Russia but serve as a reflection of the ongoing changes that have been shaping the global horticulture trade, creating an urgency for the Central Asian government to adapt. Growing and increasingly more affluent middle-class consumers around the world are shifting their dietary preference to more diverse, healthier and higher quality foods, stimulating an increased public awareness with regards to food safety. In developed and middle-income countries these trends have been accompanied by a tightening of existing requirements and standards for food quality and safety. Similar trends are observed in the formal retail chains that are expanding in both developed and developing countries. As such, horticulture chains around the world are becoming increasingly more formal, transparent and concentrated, necessitating reforms in the Central Asian horticulture sectors for them to stay relevant in the global fruit trade.

**Investment in R&D has proven to be critical in ensuring the competitiveness of the world leading horticulture exporters—without such investments Central Asian countries will not be able to realize their horticulture export potential**. Examples from both Turkey and Chile show that investments in R&D (both public and private) have played a critical role in ensuring the success of horticulture exports from these two countries in Chinese and Russian markets. Until Central Asian governments recognize the importance of investing in R&D to increase overall fruit production and varieties grown in the region, their exporters will remain less competitive in international markets. As the report shows, the development of early varieties of fruits can immediately give Central Asian countries a competitive boost in their destination markets. R&D spending becomes even more important in the context of climate volatility that Central Asian countries are prone to and the need to develop varieties that are more resilient to climate variability. The private and public sectors need to closely cooperate in this area. Funding for these centers should be driven largely by the commercial applicability of their research.

**Strengthening digitization of agriculture sector can provide new ways to solve the existing constraints to participation of the Central Asian exporters in the new export markets.** Digital technologies, such as new digital platforms and applications, can reduce the existing transaction costs and market failures that prevail in the Central Asian horticulture sector, improving its efficiency. Specifically, digitalization of the sector can provide various stakeholders along the value chain with the direct access to information about input and product markets, including international one, reducing reliance on traditional intermediaries, and better aligning production with demand. Digital solutions, such as digital advisory services, can also be used to improve the knowledge base of the horticulture producers by offering information on production and post-harvest methods, on-farm storage techniques, use of new technology, fertilizers and agro-chemicals, standards, and financial management. Digital technologies have also a great potential to improve the delivery of public policies and services. For example, digitization can increase the efficiency and reliability of traceability systems, customs management and trade logistics (OECD, 2018b).

**Expanding participation in multilateral and bilateral trade agreements will create a more level playing field for Central Asian exporters in world markets**. While the Kyrgyz Republic and Tajikistan are already WTO members and benefit from MFN treatment, Uzbekistan needs to speed up WTO accession negotiations and finalize accession. This will enable Uzbekistan to take greater advantage of the multilateral trading system. In addition, all the Central Asian countries concluding free trade agreements with additional trading partners, including China, would give them greater access to these markets. As the Chilean example shows in its trade relationship with China, signing an FTA was a key success factor for the increased Chilean presence in Chinese fruit markets.

**Strengthening export promotion and marketing will facilitate Central Asian penetration in new export markets**. The results of the study highlight the competitive advantage of Central Asian fruit exports that is grounded in their competitive cost structure. However, Central Asian countries also have a strong potential to increase their competitive advantage based on product differentiation. Such a strategy is a more secure route for capturing higher-end markets and mainlining margins. Product differentiation may involve more skill in production and processing, greater capital inputs, greater innovation capabilities, or simply an improved approach to marketing and export promotion (Labaste, 2015). The Chilean example presented in the report highlights the role that governments can play in marketing and promoting horticulture exports. Central Asian apricots, especially Tajik and Uzbek produce, are believed to have higher nutritional qualities than competitive offerings, however, international buyers and consumers, including Chinese ones, are not aware of their quality, taste and nutrition value. A similar situation is observed for Central Asian grapes. Central Asian governments can support their exporters by facilitating and promoting their participation in international trade expositions and other trade promotional events, particularly in the priority markets. Central Asian governments also need to strengthen or create a presence for their trade representatives in the target export countries. In addition, improving producer access to market information is needed to improve transparency of the value chain. To stay competitive in international markets, fruit producers need to have easy access to up-to-date market information. Governments need to target public spending on increasing market research and data collection to better understand end markets and the costs associated with production. This will help Central Asian producers to better adjust to existing global demand and any evolving trends.

**While the region faces similar general constraints along the value chain, the urgency to tackle specific bottlenecks varies across countries.** Addressing some of these constraints are already part of ongoing programs/projects undertaken by governments, or by international organizations. In these cases, there is a need to ensure that these activities remain on track and/or are expedited. In other cases, governments have introduced a limited effort to address the existing constraints and doing so would require a coordinated effort in terms of implementation.

1. Kyrgyz Republic, Tajikistan and Uzbekistan [↑](#footnote-ref-1)
2. The IFPRI IMPACT model offers projections for fruit and vegetable aggregates only. It does not allow for differentiation among the specific horticulture products’ import growth. The selected fruits are those that are projected to exhibit strong import growth until 2050 based on the latest relevant trade data for China and Central Asia. Based on this analysis, horticulture products for which China is a strong net importer were compared to the horticulture products for which Central Asian countries are net exporters. [↑](#footnote-ref-2)
3. Imported via Hong Kong SAR, China. World export potential estimates via mainland China are not available. [↑](#footnote-ref-3)
4. Export competitiveness analysis was comprised of the calculation of the Revealed Comparative Advantage (RCA) and Domestic Resource Cost (DRC) indices and interviews with the stakeholders. [↑](#footnote-ref-4)
5. RCA index measures the relative weight of exports of a commodity in a nation’s total exports, relative to the share of that commodity in total world exports. When RCA > 1, the country has a comparative advantage in that commodity. [↑](#footnote-ref-5)
6. DRC shows the value of a country’s resources used to produce one dollar’s worth of that commodity. DRCij < 1 is an indication that country i has a “comparative advantage” in producing good j. [↑](#footnote-ref-6)