



Uzbek Dry Fruit Exports: Prospects, Problems and Potential



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ABSTRACT

This study analyses the current status and future prospects of Uzbek dried fruit exports, with a focus on three issues. First, it reviews the global trade in dried fruit and the position of Uzbekistan within that trade. Second, it uses data from a purpose-built field survey conducted in five regions of Uzbekistan to show the connection between the value chain of dried fruit in Uzbekistan and the quality of the country's dried fruit. Third, it discusses the various trade standards that influence the export of dried fruit from Uzbekistan, with a focus on the European Union. On the basis of analysis of the connection between trade and the quality of the value chain, and on discussion of trade standards for dried fruit, a series of policy measures are proposed to foster the value of Uzbek dried fruit exports.

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ACRONYMS

BRC	British Retail Consortium	GAP	Good Agricultural Practices
CBI	Centre for the Promotion of Imports	GDP	Gross domestic product
CIS	Commonwealth of Independent States	HACCP	Hazard analysis critical control point
EFSA.....	European Food Safety Authority	IFS.....	International Featured Standards
EU	European Union	ISO	International Organization for Standardization
FAO	Food and Agriculture Organization	ITC	International Trade Centre
FRUCOM	European Federation of the Trade in Dried Fruit, Edible Nuts, Processed Fruit and Vegetables and Processed Fishery Products, Honey and Similar Foodstuffs	RASFF	Rapid Alert System for Food and Feeds
		SDG.....	Sustainable Development Goal
		USDA	United States Department of Agriculture

NOTES

Use of the term “dollar” (\$) refers to United States dollars.

The term “billion” signifies 1,000 million.

The term “tons” refers to metric tons.

Use of a dash between years (e.g. 2000–2001) signifies the full period involved, including the initial and final years.

An oblique stroke between two years (e.g. 2000/01) signifies a fiscal or crop year.

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1. Introduction and background

The agricultural sector plays a key role in the Uzbek economy. The World Bank has estimated that agriculture constituted 31 per cent of Uzbek growth in value-added per employee in the two decades up to 2016. Recognizing that raising agricultural productivity by accelerating market reforms in agriculture is an important medium-term goal to increase growth and reduce poverty – and thereby meet Sustainable Development Goal (SDG) 8 (“Decent Work and Economic Growth”) and SDG 1 (“No Poverty”) – the World Bank points to expanding access to markets and accelerating the shift from cotton and wheat cultivation to horticulture and other higher-value crops as instrumental in this process.¹ Additionally, development of the fruit value chain can also foster incomes of women. A survey conducted by the United Nations Conference on Trade and Development (UNCTAD) for this study indicated that 58.6 per cent of the workforce of surveyed fruit farmers were women, employed in particular as temporary workers. Temporary female workers constituted 49.7 per cent of the workforce of the fruit farmers surveyed, but only 8.9 per cent of permanent workers.

Dried fruit constitute an important part of the agricultural sector of Uzbekistan in terms not only of current production and export, but also potential. The international dried fruit market notably includes dried grapes, which account for most of the global market of dried fruit and dominate Uzbek exports, and all other fruits, principally apricots, prunes and apples, but also including peaches, pears, papaws, papayas, tamarinds and other edible fruits.² The fruit sector overall is the sixth largest sector in Uzbekistan’s export profile,³ earning the country US\$644 million in 2019. Edible fruits accounted for 4.5 per cent of Uzbekistan’s total exports of US\$14.3 billion in 2019.⁴ Within edible fruit exports, dried grapes accounted for US\$105 million, or 16.3 per cent, and other dried fruits, notably including prunes, dried apricots and dried apples, accounted for US\$40 million, or 6.2 per cent. Together, therefore, in 2019 dried fruit accounted for 1 per cent of the entire export value of Uzbekistan. Thus, it is clear that dried fruit exports, and developing appropriate methods to increase them, is important for the development of the Uzbek economy.

The findings in this paper and their associated policy implications build upon, complement and reinforce previous research findings by other development partners working in the horticultural and fruit sectors in Uzbekistan, such as the World Bank and the Food and Agriculture Organization (FAO) of the United Nations.⁵ Specifically, this study considers the current status and future prospects of Uzbek dried fruit exports.

Section 2 of the study reviews global trade in dried fruits and the position of Uzbekistan within that trade. Section 3 analyses data from a purpose-built field survey conducted in five regions of Uzbekistan to show the importance of the value chain of dried fruit for the quality of the country’s exportable dried fruit. Section 4 discusses some important aspects of the logistics of dried fruit exports from Uzbekistan. Section 5 reviews the various trade standards that influence the export of dried fruit from Uzbekistan. Section 6 concludes by suggesting some pathways to improve both the volume and value of Uzbek dried fruit exports. These pathways are structured around four main ways to increase Uzbekistan’s share of the global dried fruit market. The first is a process to thoroughly foster quality along the entire fruit value chain, including dried fruit, that involves all stakeholders in the export value chain. The second is to improve logistics and export procedures. The third is to more actively engage with trade standards. And the fourth is to take an innovative, targeted and brand-focused approach to marketing. Turkey successfully undertook such an approach for apricots (including dried apricots), and Uzbekistan, with patient effort, could potentially reproduce that approach for dried grapes.

¹ World Bank, 2018, Growth and job creation in Uzbekistan: An In-depth diagnostic, World Bank, available at <http://documents1.worldbank.org/curated/en/130581560953053964/pdf/Growth-and-Job-Creation-in-Uzbekistan-A-In-depth-Diagnostic.pdf>.

² The trade classification code for dried grapes is 080620 and for other dried fruit is 0813.

³ According to the United Nations Comtrade database. Using International Trade Centre Trade Map data, which does not distinguish between exports of HS codes 71 and 99 for Uzbekistan in 2019, edible fruit exports (code 08) ranked fifth.

⁴ At the time of this writing, according to International Trade Centre trade data, Uzbekistan’s exports in 2019 were US\$14,345 million. According to the United Nations Comtrade database, Uzbekistan’s total goods exports in 2019 were US\$14,929.5 million.

⁵ For the World Bank study, see DF Larson, D Khidirov and I Ramniceanu, 2015, Uzbekistan: Strengthening the horticulture value chain, World Bank Background Paper Series – Uzbekistan Vision 2030.

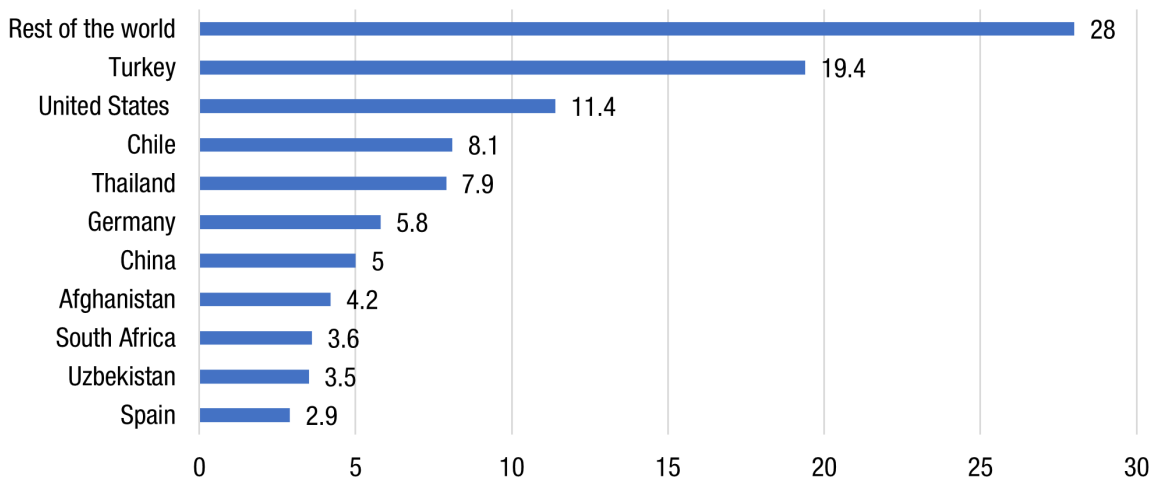


2. The international market for dried fruits

2.1 Global production, exports, imports and consumption

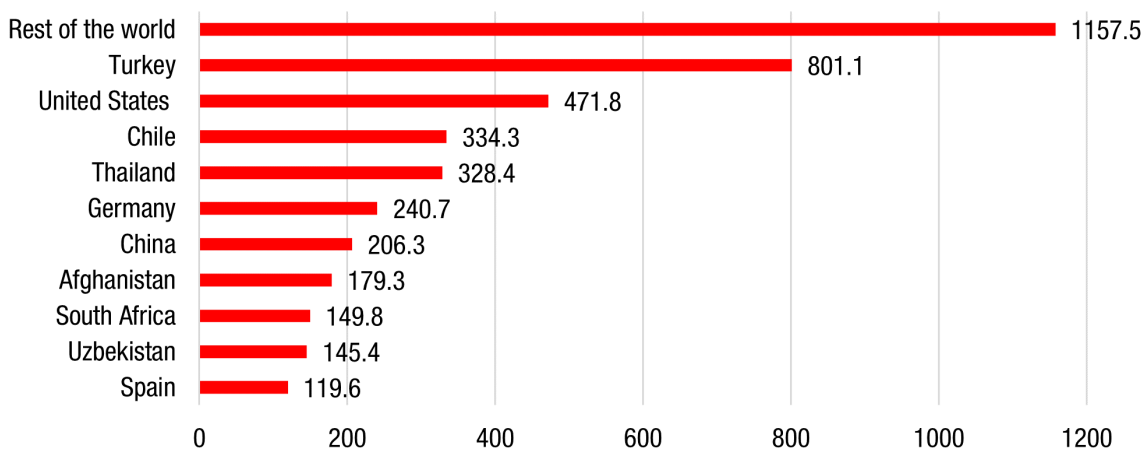
The world has an increasing taste for dried fruits, as evidenced by a positive trend in dried fruit production that has increased by 976,000 tons in the past decade and now amounts to 3.2 million tons annually.⁶ Throughout the past decade, dried grapes (raisins, sultanas and currants) have led the market, with 1.3 million tons produced in 2019/20, 41 per cent of the total. The growing market in table dates is second, with 35 per cent, with all the other fruits having a much lower share of production: prunes (7 per cent), sweetened dried cranberries, (6 per cent), dried apricots (6 per cent) and figs (5 per cent).

Figure 1a. Market share of world dried fruit exports, 2019 (per cent)



Source: Prepared by the authors using data from the International Trade Centre Trade Map.

Figure 1b. Value of world dried fruit exports, 2019 (millions of United States dollars)



Source: Prepared by the authors using data from the International Trade Centre Trade Map.

The main producers throughout the decade have been the United States, Turkey and the Islamic Republic of Iran, with shares of 16 per cent, 15 per cent and 12 per cent in 2019/20, respectively. Turkey led in dried grape production and the United States ranked second, but the United State led in the production of prunes and sweetened dried cranberries globally. Turkey remained as the world's top supplier of Sultana raisins, dried apricots and dried figs. the Islamic Republic of Iran was the second largest producer of table dates and dried figs, and the third and fourth largest producer of dried apricots and grapes.⁷

⁶ This number includes production of dried grapes, table dates, prunes, dried cranberries, dried apricots and dried figs. Source: International Nut and Dried Fruit Council Foundation 2020, *Nuts and Dried Fruits Statistical Yearbook 2019/2020*: 8.

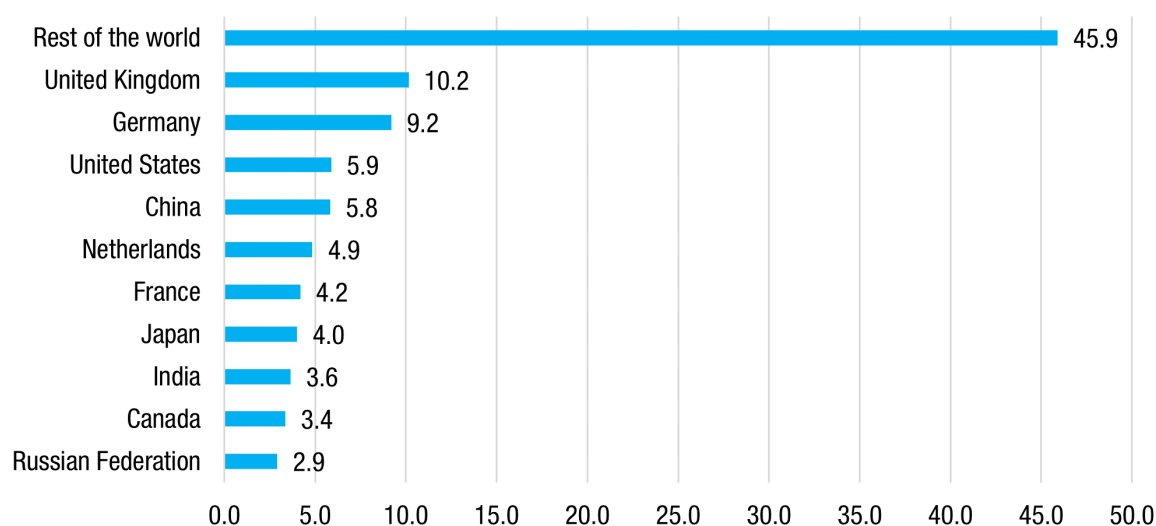
⁷ International Nut and Dried Fruit Council Foundation, 2020 *Nuts and Dried Fruits Statistical Yearbook 2019/2020*: 8, available at https://www.nutfruit.org/files/tech/1587539172_INC_Statistical_Yearbook_2019-2020.pdf.

Global exports of dried fruit (including dried grapes) amounted to US\$4.13 billion in 2019.^{8,9} The total size of the market has been rather stable in the last five years.¹⁰ This suggests that market oscillation, given the relatively benign global economic conditions until 2020, is closely related to climate-related factors rather than economic fundamentals. Given the expected deceleration of world GDP growth resulting from the Covid-19 pandemic,¹¹ it is expected that demand growth will moderate in coming years. Nevertheless, at a time of immense global market challenges generally, dried fruit and nuts – as food items with internationally recognized health benefits if eaten in moderation¹² – are well placed to exhibit relatively inelastic global demand and thereby avoid a dramatic fall in either volumes or prices.

According to data from the International Trade Centre (ITC), which uses mirror statistics to address the challenge of missing export data,¹³ the top 10 exporters of dried fruit in 2019 captured 72 per cent of the market. As shown in figures 1a and 1b, Turkey exported US\$801 million and captured 20 per cent of the global dried fruit export market in 2019, while its nearest competitor, the United States, exported US\$472 million and accounted for 11 per cent, followed by Chile at US\$334 million, representing 8 per cent. Uzbekistan ranked ninth as an exporter of dried fruit, with exports of US\$145 million. The relevant tables with the value of exports and imports of dried grapes, prunes and dried apricots are presented in appendix 1.

Figures 2a and 2b present the value and percentage share by country of world dried fruit imports. Note that imports are less concentrated than exports of dried fruit, as the top 10 importers account for 54 per cent of world dried fruit imports. Key players in this market are European countries. The top five European importers – the United Kingdom, Germany, Netherlands, France, and Italy – imported US\$1,244 million of dried fruit in 2019, accounting for 31 per cent of total imports, while the 28 European Union countries (EU-28) as a group imported US\$1,899 million of dried fruit, accounting for 47.7 per cent of the world import total.¹⁴

Figure 2a. **Market share of world dried fruit imports, 2019 (per cent)**



Source: Prepared by the authors using data from the International Trade Centre Trade Map.

⁸ When referring to exports and imports of “dried fruit,” this report refers to the trade of the following HS classification of merchandise: 080620 (dried grapes), 081310 (dried apricots), 081320 (prunes), 081330 (dried apples), 081340 (other dried fruits), and 081350 (mixtures of dried fruits and nuts).

⁹ Source: ITC Trade Map (accessed in November 2020). The Trade Map uses United Nations Comtrade data when available and complements it with mirror data. Given the relative stability of prices, presenting value data is an acceptable summary of the market.

¹⁰ According to ITC Trade Map data, dried fruit exports in 2019 were 1 per cent smaller than in 2015, and growth oscillated between small positive and negative yearly growth rates between 2015 and 2019.

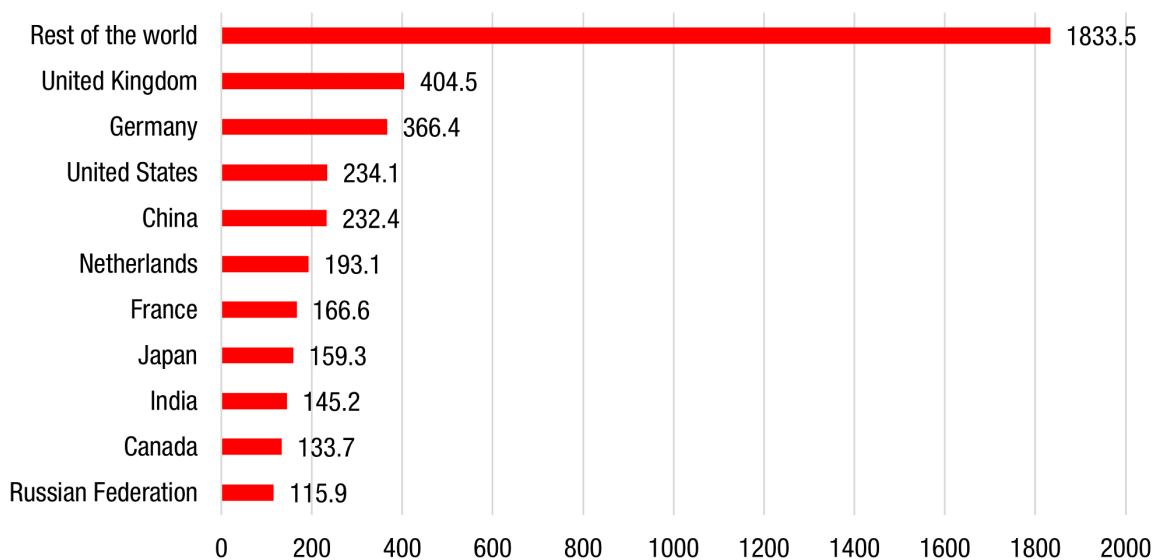
¹¹ In June 2020, the International Monetary Fund forecast a decline of 4.9 per cent in global domestic product during 2020. The World Bank forecast a 5.2 per cent decline.

¹² Harvard Health Letter, October 2016, Is Eating Dried Fruit Healthy?, available at <https://www.health.harvard.edu/healthy-eating/is-eating-dried-fruit-healthy#:~:text=Dried%20fruits%20also%20contain%20more,against%20colon%20cancer%20is%20controversial>.

¹³ For example, the data for Afghanistan for 2019 corresponds to mirror data.

¹⁴ If the United Kingdom is excluded, imports of dried fruit during 2019 by the remaining European Union countries were US\$1,495 million, or 37.5 per cent of world dried fruit imports. The United Kingdom left the European Union in January 2020.

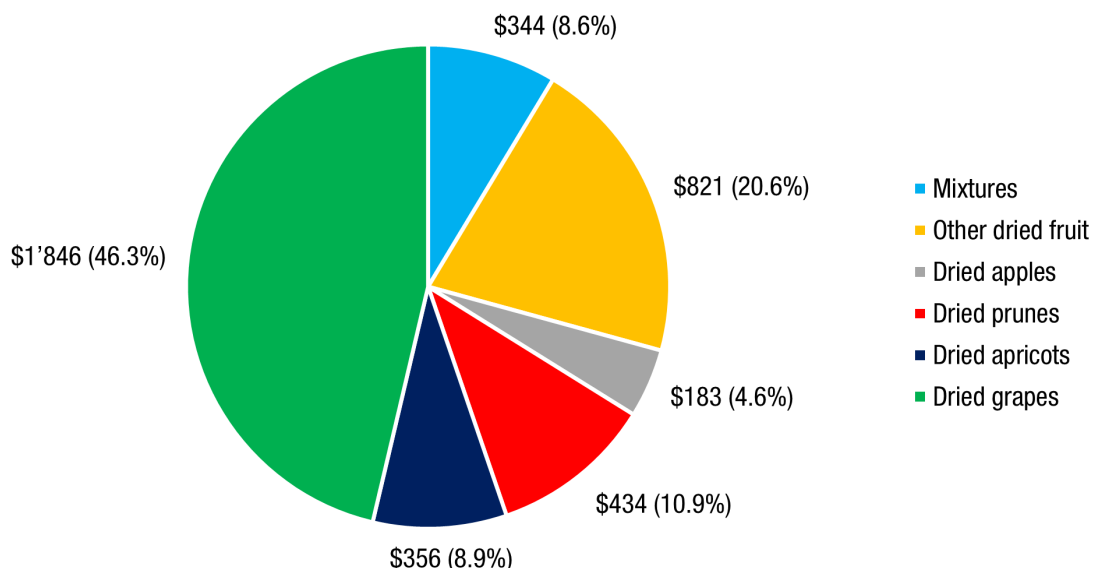
Figure 2b. Value of world dried fruit imports, 2019 (millions of United States dollars)



Source: Prepared by the authors using data from the International Trade Centre Trade Map.

Import figures for 2015–2019 also indicate some interesting changes in the world market for dried fruit. First, there has been a rise in the significance of some Asian countries as dried fruit importers as their per capita income has increased. Between 2015 and 2019, China and India increased the value of their imports of dried fruit by 146 per cent and 107 per cent, respectively, accounting for 5.8 per cent and 3.6 per cent of total global dried fruit imports, compared to 2.4 per cent and 1.8 per cent just four years earlier. Imports of dried fruit by the Russian Federation also increased significantly between 2015 and 2019, growing 55 per cent during the period. The increase in value imported by the Russian Federation (US\$41 million) was the third highest behind China (US\$138 million) and India (US\$75 million). On the other hand, some countries, such as the United Kingdom, and Kazakhstan,¹⁵ reduced their imports of dried fruit during the period by 15 per cent and 71 per cent, respectively.

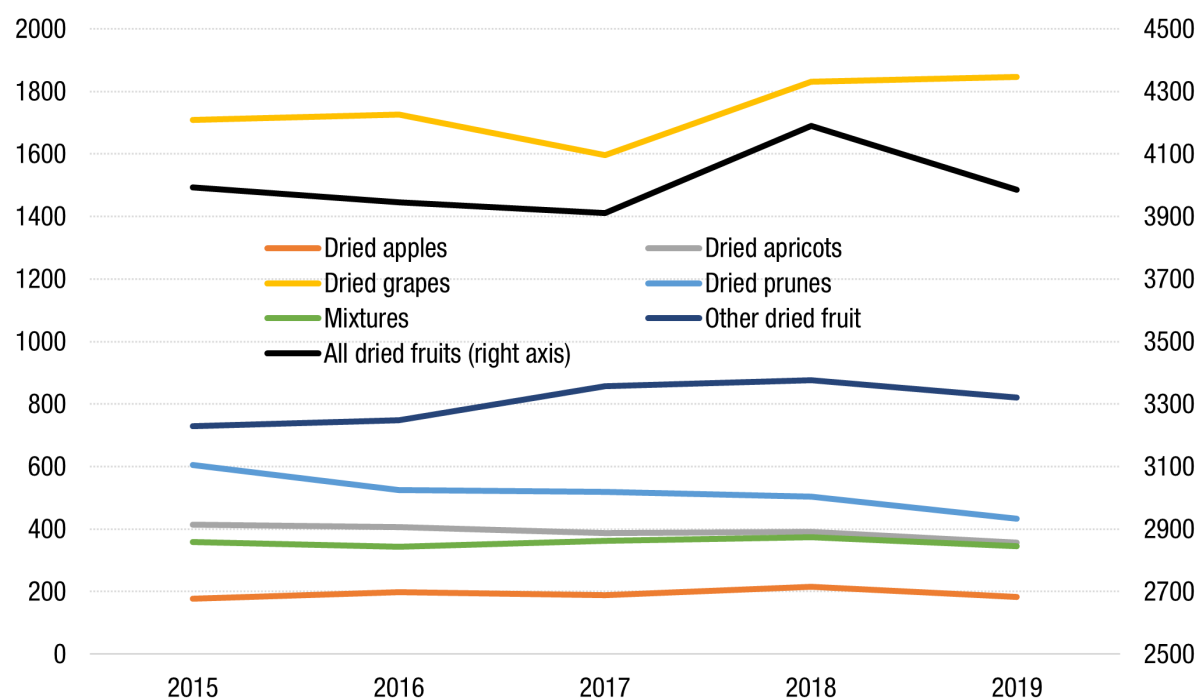
Figure 3. Value (in millions of United States dollars) and share (in per cent) of world dried fruit imports by type of fruit, 2019



Source: Prepared by the authors using data from the International Trade Centre Trade Map.

¹⁵ In the case of Kazakhstan, one partial possible explanation would be a better recording of Uzbek exports transiting through Kazakhstan to other countries, which may have been recorded previously as imports of Kazakhstan, or changes in the transit country of Uzbekistan's dried fruit exports, as exports of dried fruit to Kyrgyzstan, another transit country, jumped in 2019 from very low numbers in 2017 and 2018.

Figure 4. Value of dried fruit imports, 2015–2019 (millions of United States dollars)



Source: Prepared by the authors using data from the International Trade Centre Trade Map.

However, while a perspective of the world dried fruit market as a whole is interesting, it is more important from a policy perspective to analyse the structure of trade in individual dried fruits, as each dried fruit market has its own characteristics.

As shown by figure 3, the most important world trade is in dried grapes, which, at US\$1,845 million in 2019, accounted for 46.3 per cent of the world's imports of dried fruits. The second largest group by value (US\$821 million) is "other dried fruit," which includes dried peaches, pears, papayas, tamarinds and other fruits, and which accounts for 20.6 per cent of world dried fruit imports. World imports of prunes in 2019 were US\$434 million, accounting for 10.9 per cent of the market, while dried apricot imports, at US\$356 million, accounted for 8.9 per cent. Mixtures of dried fruit and nuts and dried apples follow, with shares of 8.6 per cent and 4.6 per cent, respectively.

Figure 4 shows the evolution between 2015 and 2019 of the world dried fruit market by value in the aggregate (the black line) and its component fruits. In particular, there was an increase during the period in the share of dried grapes (of 8 per cent) and of the "other fruit" group (of 12.6 per cent), while there was a decrease in the share of prunes (decline of 28.4 per cent) and, to a lesser extent, dried apricots (decline of 13.9 per cent). Dried apples, the smallest component of dried fruit, oscillated in value at around US\$200 million. For Uzbekistan, the dynamism of the dried grape market is important, as dried grapes constitute the lion's share of the country's dried fruit exports.

Uzbekistan's exports of dried fruit in 2019 were more than 90 per cent concentrated in dried grapes, prunes and dried apricots, so it is important to look more closely at the international markets for those types of dried fruit.

2.1.1 Dried grapes

World production of dried grapes increased 9.8 per cent between 2015/16 and 2019/20, reaching 1.34 million tons.¹⁶ Of total production in 2019/20, the largest world producers were Turkey (23 per cent), the United States (17 per cent), China (13 per cent), the Islamic Republic of Iran (12 per cent), India (11 per cent) and Uzbekistan (6 per cent). In the dried grape export market,¹⁷ Turkey was the market leader in 2019 with a market share of 28 per cent, with the United States second at 14.1 per cent, and Chile third at 8.3 per cent.

¹⁶ Source: International Nut and Dried Fruit Council Foundation, 2020, Nuts and Dried Fruits Statistical Yearbook 2019/2020: 70.

¹⁷ Source: ITC Trade Map

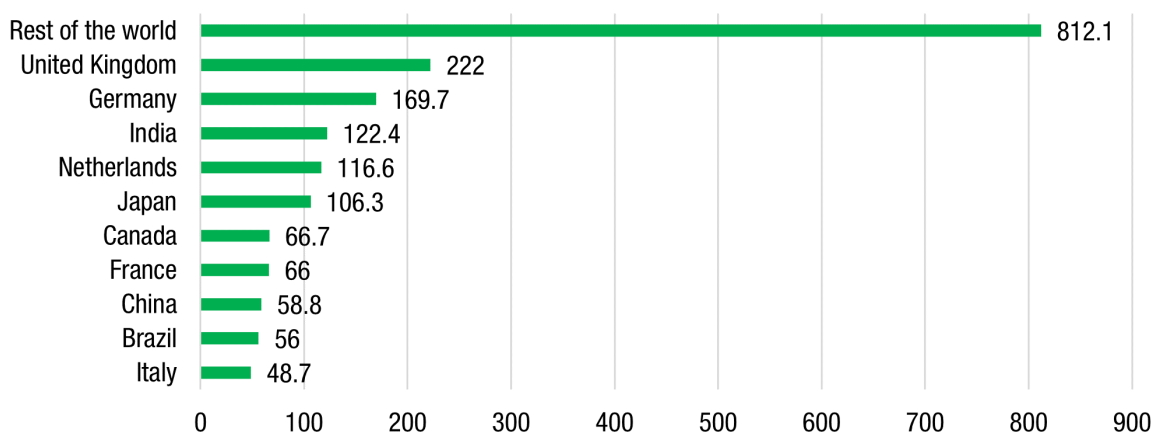
Figure 5 shows the value of world imports of dried grapes in 2019. The European Union as a group is the largest importer of dried grapes in the world, importing US\$875 million and holding a market share of 47.4 per cent in 2019.¹⁸ Dried grapes are the most important dried fruit in the European market, representing 46.1 per cent of all dried fruit imports in 2019. According to the Centre for the Promotion of Imports (CBI) of the Netherlands, nearly 70 per cent of all European imports of dried grapes are from developing countries.¹⁹ Imports of dried grapes by five European countries (the United Kingdom, Germany, the Netherlands, France and Italy) together account for 71 per cent of total European imports and for 33.8 per cent of global imports of dried grapes. India has become an important importer of dried grapes in the last few years, more than doubling its imports from US\$53 million in 2015 to US\$122 million in 2019. India is now the third largest global importer after the United Kingdom and Germany. Other countries that have increased their dried grape imports in the last five years are the Russian Federation (61 per cent increase), Brazil (38 per cent), France (16 per cent) and Japan (14 per cent), which rank 11th, 9th, 7th and 5th as importers, respectively. Note that India and China, while both among the top 10 largest importers of dried grapes, are also big producers, as mentioned above.

It is interesting to look at which countries supply dried grapes to the largest and fastest-growing markets.²⁰ In 2019, the leading importer of dried grapes, the United Kingdom, bought 74 per cent of its dried grapes from Turkey, 8 per cent from Greece and 5.5 per cent from Chile. Germany imported dried grapes mainly from Turkey (40.5 per cent), South Africa (26.5 per cent) and the United States (7.9 per cent). The Netherlands imported 50.5 per cent of its dried grapes from Turkey, Greece (11.4 per cent), China (9 per cent) and Chile (8.7 per cent). Imports of dried grapes in Japan were dominated by those coming from the United States (75.3 per cent), followed distantly by those of Turkey (15.7 per cent) and Chile (3.2 per cent). Finally, dried grapes imported into France came from Turkey (59.1 per cent), followed distantly by South Africa (12.6 per cent) and Chile (6.2 per cent). The presence of dried grapes from Uzbekistan is very small in these countries, with imports of dried grapes from Germany (4.2 per cent) being the largest. In all other countries, imports from Uzbekistan are smaller than 1 per cent.

Regarding the fastest growing markets for dried grapes, table 1 presents the most dynamic importers of dried grapes in the 2015–2019 period, ranked by the size of the increase of dried grape imports, measured in United States dollars.

Uzbekistan has a significant presence in some of these growth markets. The main source of dried grapes imported into China in 2019 was Uzbekistan (40.5 per cent), followed by Chile (18.6 per cent), the United States (17.9 per cent) and Turkey (9 per cent). In the Russian Federation, 41 per cent of dried imported dried grapes came in 2019 from the Islamic Republic of Iran, followed by Chile (17.6 per cent), Uzbekistan (15.6 per cent) and Turkey (12 per cent). However, the most dynamic importer in 2019, India, imported 98 per cent of its dried grapes from Afghanistan, and Uzbekistan has little presence in that market.

Figure 5. Value of world dried grapes imports, 2019 (millions of United States dollars)



Source: Prepared by the authors using data from the International Trade Centre Trade Map.

¹⁸ If the United Kingdom is excluded, the remaining 27 countries of the European Union imported US\$653 million in 2019, accounting for 35.4 per cent of all dried grape imports. The United Kingdom left the European Union in January 2020.

¹⁹ CBI, 2020, Exporting dried grapes to Europe, available at <https://www.cbi.eu/market-information/processed-fruit-vegetables-edible-nuts/dried-grapes/europe>.

²⁰ The data source for the analysis in this paragraph is the United Nations Comtrade database.

Table 1. Growth markets for dried grapes, 2015–2019

Country	Imports (millions of U.S. dollars)		Growth (millions of U.S. dollars)	Growth rate (per cent)	Growth ranking
	2015	2019			
India	53.2	122.4	69.2	130	1
Russian Federation	29.5	47.4	17.9	60.7	2
Brazil	40.6	56.0	15.4	37.8	3
Japan	93.4	106.3	12.9	13.8	4
France	57.1	66.0	8.9	15.6	5
Morocco	0.5	9.4	8.9	1910.5	6
Viet Nam	5.8	14.5	8.7	151.2	7
Germany	161.4	169.7	8.3	5.1	8
China	51.0	58.8	7.9	15.4	9
Colombia	10.4	17.6	7.2	68.9	10
Saudi Arabia	17.7	24.9	7.2	40.5	11
Poland	25.9	32.6	6.6	25.5	12

Source: Prepared by the authors using data from the International Trade Centre Trade Map.

An important difference between dried grape imports and those of prunes and dried apricots is that for dried grapes, the current largest importers have in the last five years either increased or, in the case of the United Kingdom and the Netherlands, maintained stable their imports of dried grapes. This market dynamism of dried grape imports points out the importance for Uzbekistan's exporters to take advantage of this market opportunity.

Regarding consumption, while developed countries in Europe, North America and Australia have the highest consumption of dried grapes per capita, other countries mentioned above whose imports of dried grapes have increased during the last five years have much lower per capita consumption. For example, while the United Kingdom consumed, per capita, between 1,389 and 1,851 grams of dried fruit in 2018,²¹ the Russian Federation consumed between 172 and 687 grams, China consumed between 128 and 389 grams, and India consumed between 103 and 137 grams. As incomes rise in these and other emerging countries located geographically in the same region, these relatively low per capita consumption levels suggest an important potential for Uzbekistan's exports.

2.1.2 Prunes

World production of prunes decreased 20.6 per cent between 2015/16 and 2019/20, when it was 0.21 million tons.²² The largest world producers in 2019/20 were the United States (41 per cent), Chile (30 per cent), France (19 per cent) and Argentina (6 per cent). The largest exporters²³ also match the largest producers: Chile represented 31.1 per cent of the export market in 2019, followed by the United States with 27 per cent, Argentina (9.2 per cent) and France (8.5 per cent).

Figure 6 presents the value of world imports of prunes in 2019. As in the case of dried grapes, the European Union as a group is the world's largest importer of prunes, importing US\$206 million and holding a market share of 47.4 per cent in 2019.²⁴ This makes participation in European markets key for Uzbek exports of prunes.

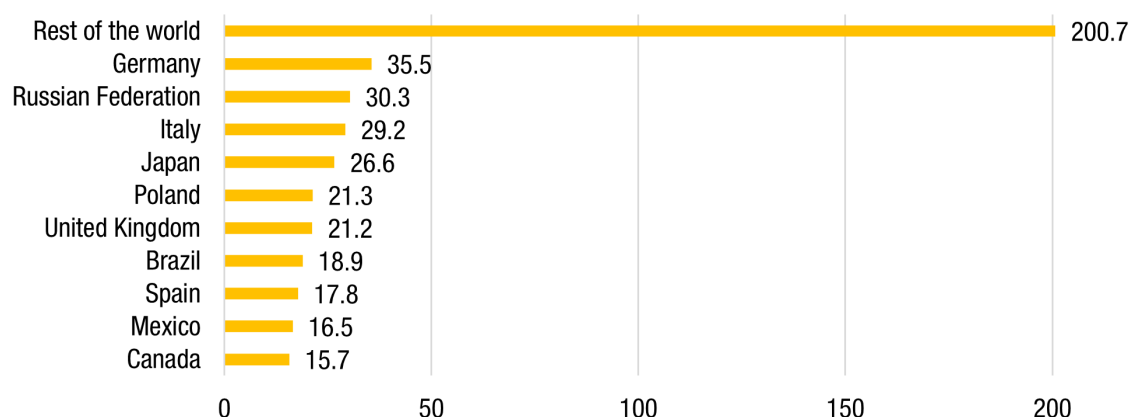
²¹ International Nut and Dried Fruit Council Foundation, 2020, Nuts and Dried Fruits Statistical Yearbook 2019/2020: 73. This publication presents two estimates per country of consumption of dried fruit: one obtained by dividing consumption of dried fruit by the population size, and another obtained using its estimate of the percentage of the population consuming each product. The first method is the lower bound of the range and the second the upper one.

²² Source: International Nut and Dried Fruit Council Foundation, 2020, Nuts and Dried Fruits Statistical Yearbook 2019/2020: 70.

²³ Source: ITC Trade Map data.

²⁴ If the United Kingdom is excluded, the remaining 27 countries of the European Union imported US\$184 million in 2019, accounting for 42.5 per cent of prune imports. The United Kingdom left the European Union in January 2020,

Figure 6. Value of world prune imports, 2019 (millions of United States dollars)



Source: Prepared by the authors using data from the International Trade Centre Trade Map.

While overall imports of prunes decreased between 2015 and 2019, a few countries increased their imports, particularly China and, to a lesser extent, the Russian Federation. Growing from a very low base, China rapidly increased its imports of prunes over the period, reaching the 11th position at US\$15.3 million, while the Russian Federation, the second largest importer of prunes, registered an increase in prune imports of 15 per cent between 2015 and 2019, reaching US\$303 million. The overall decline in total world imports of prunes can be traced to a reduction of imports by European countries (especially Germany, the United Kingdom and Italy) and the United States.

The leading importer of prunes, Germany, bought 41.4 per cent of its prunes from the United States and 32.8 per cent from Chile in 2019.²⁵ In different European Union countries, Chile and the United States are usually the leading sources of prune imports. The second largest importer, the Russian Federation, imported prunes from Chile (36.2 per cent), Argentina (25.8 per cent), the Republic of Moldova (19.8 per cent) and Uzbekistan (12.5 per cent). Imports of prunes in China come from Chile (57.4 per cent), followed by France (19.8 per cent) and the United States (19.4 per cent). The presence of prunes from Uzbekistan is very small in these countries, with the exception of the Russian Federation.

As is the case of dried grapes, developed countries in Europe, North America and Australia have the highest consumption of prunes per capita. However, in some of these countries, like Germany and Italy, consumption per capita has been falling in recent years.²⁶ In others like Poland and the United States, however, consumption per capita has increased. In the Russian Federation, an important market for prunes from Uzbekistan, yearly consumption per capita of prunes in 2018 was between 130 and 394 grams.

2.1.3 Dried apricots

World production of dried apricots increased 19.3 per cent between 2015/16 and 2019/20,²⁷ when it was 186,800 tons. While there have been some oscillations in production in the last 10 years, mean world production during the period was 177,000 tons per year. The largest producers in 2019/20 were Turkey (56 per cent of the total), the Islamic Republic of Iran (15 per cent) and Uzbekistan (6 per cent).

The largest exporters also match the largest producers: Turkey was the world leader with 71.3 per cent of the world's export market for dried apricots in 2019, with Afghanistan and Uzbekistan exporting 5.8 per cent and 3.2 per cent, respectively. If dried apricot exports are compared with those of dried grapes and prunes, export concentration by country source is much higher for dried apricots: the normalized Herfindahl-Hirschman Index for dried apricot exports was 0.51, while the index for prune and dried grape exports was 0.18 and 0.12, respectively.²⁸

²⁵ The data source for this paragraph is the United Nations Comtrade database.

²⁶ Source: International Nut and Dried Fruit Council Foundation, 2020, Nuts and Dried Fruits Statistical Yearbook 2019/2020: 77. This publication presents two estimates per country of consumption of each type of dried fruit: one obtained by dividing consumption of dried fruit by the population size, and another obtained using an estimate of the percentage of the population consuming each product. The first method is the lower bound of the range and the second the upper one.

²⁷ Ibid.: 58.

²⁸ The closer the index is to 1, the higher the concentration.

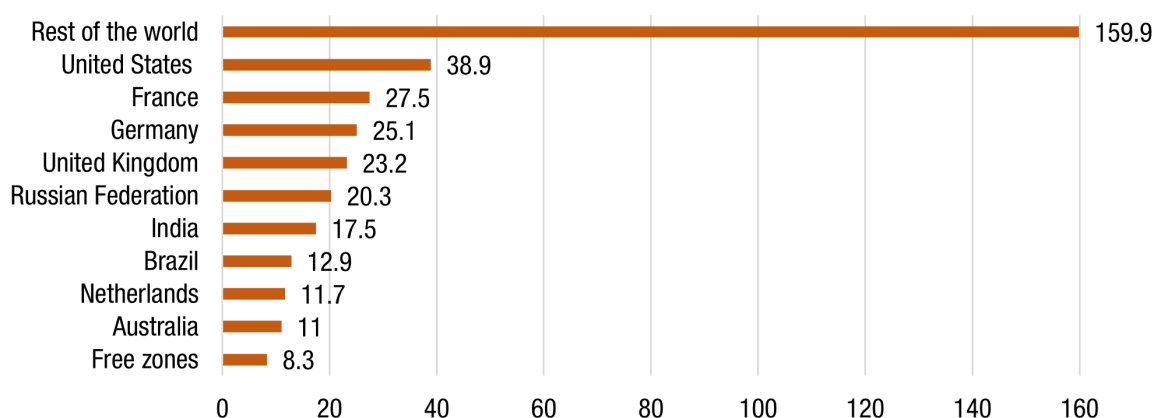
Figure 7 shows the world's imports of dried apricots in 2019. The European Union as a group is again the world's largest importer of dried apricots, importing US\$141 million and holding a market share of 39.6 per cent in 2019.²⁹

Similar to the case of imports of prunes, the leading importing countries of dried apricots shown in figure 7 have decreased their imports in the last five years, with the exceptions of the Russian Federation and India.³⁰ In some cases, these reductions in imports were large – for example, the United States reduced imports by 17,200 tons (a decline of 43 per cent), an amount that is about the size of the total dried apricot imports of India (the sixth largest importer in 2019). The countries that increased their imports of dried apricots the most during the period were the Russian Federation, China, Iraq and India.

The leading importer of dried apricots, the United States, bought 95.1 per cent of its apricot imports from Turkey in 2019.³¹ Dried apricots also came overwhelmingly from Turkey in European countries such as Germany (90.1 per cent), France (93.6 per cent) and the United Kingdom (81 per cent). For other large importers, such as the Russian Federation and, to a lesser degree, India, Turkey also plays an important role, with 61.9 per cent and 13.8 per cent of imports, respectively. Similarly, for China, whose dried apricot imports grew significantly over the five-year period ending in 2019, Turkey was the source in 2019 of 57.7 per cent of dried apricot imports. Interestingly, in the Russian Federation and China, imports from Uzbekistan play a role, although much smaller than Turkey: the Uzbekistan's shares of dried apricot imports in these countries in 2019 were 10.2 per cent and 14.9 per cent. India sourced 82.5 per cent of its dried apricot imports from Afghanistan and did not report any imports of this product from Uzbekistan.

There may be several different explanations for Turkey's dominance of dried apricot exports. Likely contributing factors include advantages of incumbency, with strong developed relationships across international borders, the existence of established trade routes, and the familiarity that Turkish exporters have with the demands of European markets.³² However, there are also some reasons associated with consumer preferences for specific varieties that have determined geographical sources. Turkish apricots from Malatya in particular are claimed to have a higher dry material content (between 24 and 30 per cent) than other varieties (at around 20 per cent),³³ providing support for consumer demand for this variety. Academic analysis has in fact shown that the dry matter contents of Malatya apricots is considerably higher than the dry matter content of the apricot varieties from the Izmir, Ereğli, Bursa and Iğdır regions.³⁴

Figure 7. Value of world apricot imports, 2019 (millions of United States dollars)



Source: Prepared by the authors using data from the International Trade Centre Trade Map.

²⁹ If the United Kingdom is excluded, the remaining 27 countries of the European Union imported US\$118 million in 2019, accounting for 33.1 per cent of dried apricot imports. The United Kingdom left the European Union in January 2020.

³⁰ Kazakhstan was also an important importer in 2015, but imports of dried apricots there declined 82 per cent between 2015 and 2019.

³¹ Data source: United Nations Comtrade database.

³² All these elements were mentioned in communications between the author and European importers.

³³ Fruits of Turkey, 2020, Dried Turkish apricots, available at <http://www.fruitsofturkey.com/products/dried-fruits/dried-apricots/>.

³⁴ EB Akin, I Karabulut and A Topcu, 2008, Some compositional properties of main Malatya apricot (*Prunus armeniaca* L.) varieties, Food Chemistry 107(2008): 939–948.

An example of the importance of dried apricots for Turkey's dried fruit exporters comes from the fact that leading Turkish exporters' websites often specifically mention apricots,³⁵ even though they also sell other products such as figs and raisins. A second example is that one of the leading British dried fruit importers sources exclusively from Greece (by far the European Union's largest producer of dried fruit) and Turkey, citing quality concerns, while one of the leading German importers, Heinrich Brüning,³⁶ may have a single-origin policy for most of its dried fruits, and imports only Turkish apricots.³⁷

Finally, regarding consumption, it is important to note that two of the dynamic markets for dried apricots in recent years, China and India, have also slightly increased their consumption per capita, although from very low bases, and those levels are still a small fraction of those in more developed markets such as France, the United Kingdom and Australia.³⁸

2.2 The role of prices

This section looks at the price dimension of the international dried fruit market using implicit prices calculated from existing value and volume import data.

Using import volume and import value data from the ITC, tables 2a, 2b and 2c present the implied export prices of dried grapes, prunes and dried apricots for 2019. All countries that had at least 1 per cent of world imports of each dried fruit in 2019 are included in the tables. This estimate of implicit prices, calculated from reported values and quantities of imports, shows that the differences in the level of prices for dried grapes, prunes and dried apricots among importing countries is very significant. While there are different potential factors that might explain such differences, most obviously the level of GDP, other potential factors may include differences in local costs (e.g. Japan), organization of distribution networks, and other local market conditions.

The large differences in price levels between countries shown in tables 2a, 2b and 2c suggest that not just one, but several re-exports would be quite profitable for an arbitrageur. Uzbek dried fruit may end up combined with dried fruit from other destinations around the world.³⁹ It is also possible that exporter countries of dried fruit that are also large importers may be buying dried fruits from abroad to meet the needs of their large domestic markets (possibly mixing imported produce with their own) at lower prices, and exporting their better-quality produce abroad for higher prices. This practice has been observed in other countries and with other products.⁴⁰ In particular, this practice can be particularly attractive when there are important differences in mandatory standards between the domestic and export markets for large exporters. Domestic produce meeting high mandatory standards can be profitably exported, while domestic demand can be met with imported produce that meets less stringent mandatory standards.

Table 2a. **Implicit import prices of dried grapes, 2019 (price per kilogram, cost, insurance and freight)**

Country	World import share (per cent)	Value (millions of U.S. dollars)	Volume (tons)	Implied price (U.S. dollars/kilogram)
United Kingdom	12.0	222	96,093	2.31
Germany	9.2	169.7	71,622	2.37
India	6.6	122.4	28,332	4.32
Netherlands	6.3	116.6	52,102	2.24
Japan	5.8	106.3	31,956	3.33
Canada	3.6	66.7	23,767	2.81
France	3.6	66	27,899	2.37

³⁵ For example, see <http://sahraapricot.com/>.

³⁶ Other European importers include John Morley, QFN Trading and Agency, Catz International and Terylinn.

³⁷ Heinrich Brüning, 2020, Malatya apricots, available at <https://www.bruening-suntree.de/aprikosen.php>.

³⁸ International Nut and Dried Fruit Council Foundation, 2020, Nuts and Dried Fruits Statistical Yearbook 2019/2020: 61.

³⁹ Informal discussions of one of the authors with some importers suggested precisely this.

⁴⁰ For example, in late 2018, leading soya oil exporter Argentina imported soybeans from the United States as a result of the trade frictions between the United States and China at the time. See Hugh Bronstein and Karl Blume, Spoils of trade war: Argentina loads up on cheap United States soybeans, Reuters, 30 November 2018, available at <https://www.reuters.com/article/us-g20-argentina-grains-insight-idUSKCN1NZ0HC>.

Country	World import share (per cent)	Value (millions of U.S. dollars)	Volume (tons)	Implied price (U.S. dollars/kilogram)
China	3.2	58.8	40,666	1.45
Brazil	3.0	56	27809	2.01
Italy	2.6	48.7	21671	2.25
Russian Federation	2.6	47.4	27365	1.73
United States	2.3	42.5	18265	2.33
Australia	2.1	37.8	18162	2.08
Spain	2.0	36.7	16047	2.29
Belgium	1.9	35.4	17891	1.98
Poland	1.8	32.6	15996	2.04
United Arab Emirates	1.6	29.9	23573	1.27
Saudi Arabia	1.4	24.9	12746	1.95
Sweden	1.3	24.1	6516	3.71
Denmark	1.1	20	6187	3.24

Source: Prepared by the authors on the basis of value (cost, insurance and freight) and quantity of import data from the International Trade Centre Trade Map.

Table 2b. **Implicit import prices of prunes, 2019 (price per kilogram, cost, insurance and freight)**

Country	World import Share (per cent)	Value (millions of U.S. dollars)	Volume (tons)	Implied price (U.S. dollars/kilogram)
Germany	8.19	35.5	9,847	3.61
Russian Federation	6.99	30.3	18,354	1.65
Italy	6.74	29.2	8,278	3.53
Japan	6.14	26.6	5,585	4.77
Poland	4.92	21.3	8,499	2.51
United Kingdom	4.89	21.2	7,466	2.84
Brazil	4.36	18.9	11,633	1.62
Spain	4.1	17.8	7,157	2.48
Mexico	3.8	16.5	6,950	2.37
Canada	3.61	15.7	3,938	3.98
China	3.52	15.3	9,080	1.68
Netherlands	3.18	13.8	4,169	3.31
Algeria	1.84	8	5,359	1.49
Australia	1.67	7.3	2,108	3.44
France	1.65	7.2	1,955	3.67
Belgium	1.57	6.8	2,120	3.22
Korea, Republic of	1.33	5.7	1,416	4.06
United States	1.29	5.6	2,425	2.3
Greece	1.22	5.3	1,853	2.85
Sweden	1.22	5.3	1,206	4.38
Austria	1.17	5.1	1,104	4.58
Denmark	1.16	5	1,746	2.88
Chile	1	4.3	3,044	1.42
Switzerland	1	4.3	994	4.34

Source: Prepared by the authors on the basis of value (cost, insurance and freight) and quantity of import data from the International Trade Centre Trade Map.

Table 2c. **Implicit import prices of dried apricots, 2019 (price per kilogram, cost, insurance and freight)**

Country	World import share (per cent)	Value (millions of U.S. dollars)	Volume (tons)	Implied price (U.S. dollars/ kilogram)
United States	10.91	38.9	12,530	3.1
France	7.72	27.5	8,703	3.16
Germany	7.05	25.1	7,271	3.46
United Kingdom	6.51	23.2	7,592	3.05
Russian Federation	5.7	20.3	13,411	1.51
India	4.92	17.5	4,289	4.09
Brazil	3.62	12.9	4,421	2.92
Netherlands	3.28	11.7	3,988	2.93
Australia	3.1	11	3,899	2.83
Free zones	2.33	8.3	3,333	2.49
Canada	2.3	8.2	2,500	3.28
China	2.13	7.6	6,772	1.12
Poland	2.12	7.6	2,719	2.78
Spain	2.11	7.5	2,151	3.5
Algeria	2.1	7.5	2,966	2.52
Italy	2.06	7.3	2,007	3.66
Iraq	1.85	6.6	8,537	0.77
Switzerland	1.58	5.6	1,220	4.61
Belarus	1.53	5.4	4132	1.32
Ukraine	1.41	5	6,088	0.82
Japan	1.14	4.1	650	6.26
Belgium	1.12	4	1,127	3.54
Sweden	1.06	3.8	1,073	3.51
New Zealand	1.03	3.7	1,202	3.04

Source: Prepared by the authors on the basis of value (cost, insurance and freight) and quantity of import data from the International Trade Centre Trade Map.

Table 2a, which includes countries importing 73.9 per cent of the world's imports of dried grapes, clearly shows the pattern of the heterogeneity of prices paid for dried grapes across countries. In particular, it shows the large premiums paid by some European countries for dried grapes, especially in Scandinavia, as well as by India and Japan, and, to a lesser extent, Canada. For Europe as a whole,⁴¹ the estimated price paid per kilogram was US\$2.30, heavily influenced by large importers in the United Kingdom, Germany and the Netherlands.

Table 2b includes countries importing 72.2 per cent of the world's imports of prunes, and also shows the higher prices paid by Switzerland (although its imports of prunes are only 1 per cent of the world market), by European countries such as Sweden, Austria and Germany, and by Japan, the Republic of Korea, and Canada. For the European Union as a whole, the estimated price paid per kilogram was US\$3.00.

Regarding dried apricots, the very significant heterogeneity across countries can be seen in table 2c, which includes countries that account for 78.7 per cent of world imports of this product. Again, Japan, Switzerland and India, as well as several European countries, register the highest implicit prices for dried apricots.

While the estimated average import prices presented above provide an idea about the heterogeneity across markets and – combined with the market size of different possible destinations – indicate the relative attractiveness of different markets for dried fruit exporters, average prices say little about the internal heterogeneity of prices in a destination country, adjusting for quality. In general, internal prices in important destination markets like the European Union and in emerging markets like China vary according to the objective or perceived quality of the product. Academic evidence supports this

⁴¹ Calculated by adding up the value of all imports of dried grapes for the EU-28 in 2019, and dividing it by the aggregate volume of imports for the same countries.

conclusion for developed countries,⁴² but there is now anecdotal evidence that it may have become a global trend.⁴³

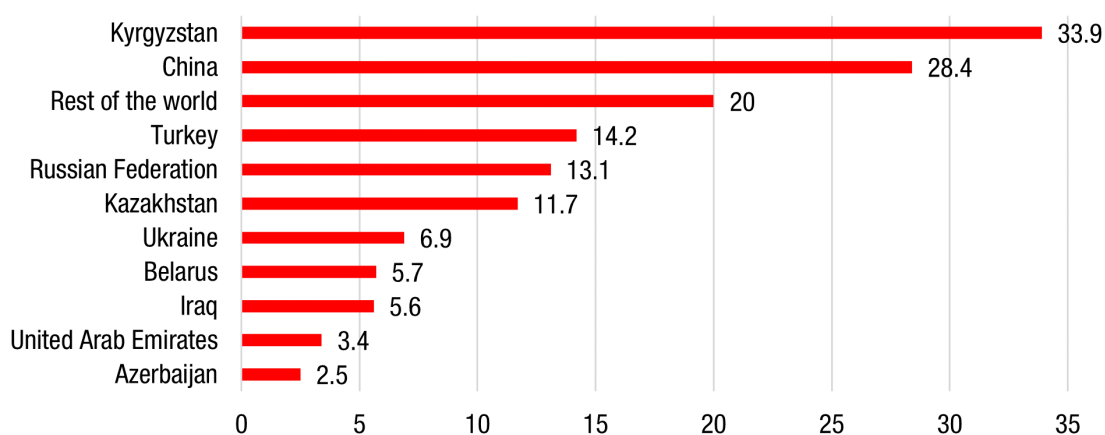
As there are indications that market segmentation across quality dimensions are increasing in different markets, in the future there is likely to be increased variation between top-end exporter prices and those achieved by those lower down the (subjective) international brand ranking. Note that this segmentation may be built on branding, on real quality differences in terms of the organoleptic characteristics of the different products, or on both. For example, in a recent report the CBI noted that prices of dried apricots are different between exporting countries and that “prices from Turkey, as a leading world supplier, are usually higher than prices of other producing countries.”⁴⁴

Finally, reputational capital and persistent relationships between exporters and importers may not only result in sustained demand for dried fruit from certain origins, but in some cases may also positively affect prices of dried fruit from such origins, due for example to “branding” or consumer recognition of produce from those origins. There is a combination of hefty, longstanding relationships between European Union importers and Greek exporters within the European Union as well as Turkish exporters outside the European Union.⁴⁵ Especially when combined with the challenges of meeting both European Union import and Uzbek export procedures, the need for better logistics, and the brand reputation of incumbent exporters (for example, Turkish apricots in the dried apricot market), existing persistent exporter-importer relationships might act as a barrier to entry for Uzbek dried fruit exporters when trying to break into certain new markets.

2.3 The current role and recent evolution of Uzbekistan exports of dried fruit

Starting with aggregate dried fruit export data,⁴⁶ figure 8 shows the destination of exports of all dried fruit from Uzbekistan in 2019, with the top 10 countries shown individually and all others grouped as “Rest of the world.”⁴⁷ Different interesting points emerge from the analysis of this export data by country of destination.

Figure 8. Value of Uzbekistan's dried fruit exports, 2019 (millions of United States dollars)



Source: Prepared by the authors using data from the International Trade Centre Trade Map.

⁴² B Minten and T Reardon, 2008, Food prices, quality, and quality's pricing in supermarkets versus traditional markets in developing countries, *Review of Agricultural Economics*, 30(3): 480–490, available at <http://www.jstor.org/stable/30225891>; and BI Norwegian Business School, 2016, Why are identical products sold at different prices?, available at <https://partner.sciencenorway.no/bi-economy-food/why-are-identical-products-sold-at-different-prices/1430440>.

⁴³ A leading Chinese importer said in 2018: “if you have good products, price is not a problem. The middle class is willing to pay a premium price for premium quality products.” See Dan Siekman, China's domestic fruit industry and what it means for imports, *Produce Report* 1 May 2018, available at <https://www.producereport.com/article/chinas-domestic-fruit-industry-what-it-means-imports>. The same point was raised in a consultancy report the previous year that stated: “The premiumisation trend is spreading across China in first- and second-tier cities, consumers are more willing to pay for products offering high quality and good taste.” See GIZ/Euromonitor, 2017, Analysis of priority markets for diversification of export of products from Central Asia: Dried fruits, nuts, beans: market access strategies and recommendations.

⁴⁴ CBI, 2020, The European market potential for dried grapes, 6 October, available at <https://www.cbi.eu/market-information/processed-fruit-vegetables-edible-nuts/dried-grapes/europe>.

⁴⁵ Verified by interviews with importers and FRUCOM.

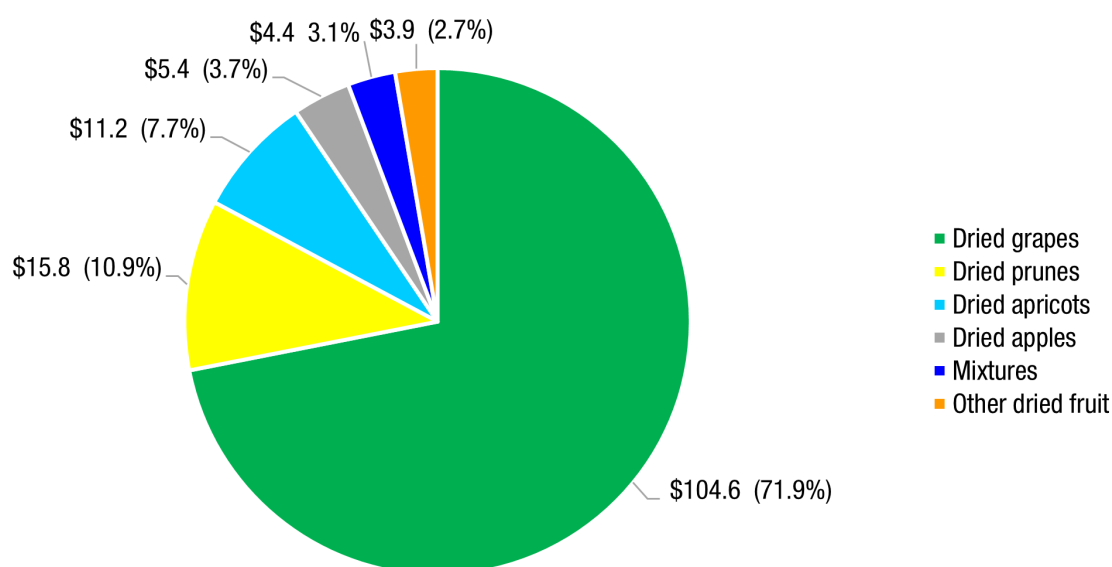
⁴⁶ Matching the content in the analysis of the world dried fruit market, “dried fruit” includes the following HS codes at six digits: 080620 (dried grapes), 081310 (dried apricots), 081320 (prunes), 081330 (dried apples), 081340 (other dried fruits), and 081350 (mixtures of dried fruits and nuts).

⁴⁷ It is worth noting that the authors obtained an alternative set of trade statistics for Uzbek dried fruit from the United States Department of Agriculture that combine dried grapes and other dried fruits. These data are based on mirror data and are available for 2014–2019. They are reproduced at appendix 2.

The data suggests that exports of dried fruit from Uzbekistan to key import markets such as Europe, which (including the United Kingdom) accounts for 47.7 per cent of world imports of dried fruit, are significantly below potential: they totalled US\$10.5 million, equivalent to 7.5 per cent of dried fruit exports in 2019. On a positive side, exports to China and the Russian Federation were 19.5 per cent and 9 per cent of exports, respectively. As mentioned above, these two countries and India have recently been dynamic markets for dried fruit. Uzbekistan's exports of dried fruit currently have almost no presence in India. The important roles of Kyrgyzstan and Kazakhstan as "destinations" for dried fruit exports seem to correspond more to the role of both as transit countries serving as export corridors for Uzbekistan.⁴⁸

Figure 9 shows the composition of Uzbekistan's dried fruit exports in 2019 by type of fruit, clearly showing the dominance of dried grapes (71.9 per cent), followed distantly by prunes (10.9 per cent) and dried apricots (7.7 per cent). Combined, these three products constitute 90.5 per cent of all of the country's dried fruit exports.

Figure 9. Value (in millions of United States dollars) and share (per cent) of Uzbekistan's dried fruit exports by type of fruit, 2019



Source: Prepared by the authors using data from the International Trade Centre Trade Map.

Table 3. Uzbekistan dried fruit export levels and growth, 2017–2019

Product exported	2017 (millions of U.S. dollars)	2018 (millions of U.S. dollars)	2019 millions of U.S. dollars)	Growth, 2017–2018 (per cent)	Growth, 2018–2019 (per cent)
Total	99.0	93.9	145.4	-5.1	54.8
Dried grapes	61.6	58.8	104.6	-4.5	77.8
Prunes	17.8	17.1	15.8	-3.9	-7.3
Dried apricots	10.5	7.4	11.2	-29.6	52.1
Dried apples	0.2	1.4	5.4	475.4	298.2
Mixtures of dried fruits and nuts	6.0	5.7	4.4	-5.2	-21.5
Other dried fruits	3.0	3.6	3.9	21.6	7.4

Source: Prepared by the authors using data from the International Trade Centre Trade Map.

Regarding the recent evolution of exports of dried fruit from Uzbekistan, at the time of this writing the United Nations Comtrade database only had yearly merchandise export data for the 2017–2019 period. While three years of data is certainly insufficient to derive trends, the value of Uzbek dried fruit exports overall did increase considerably between

⁴⁸ For a map of Uzbekistan's transport corridors, see <https://dlca.logcluster.org/display/public/DLCA/2.3+Uzbekistan+Road+Network?preview=/1704351/1998897/Uzbekistan+per+cent20Road+per+cent20Corridor+per+cent20Assessment+per+cent20-+per+cent20Transport+per+cent20Corridors+per+cent202.jpg>.

2017 and 2019 from US\$99 million to US\$145.4 million, an increase of 46.8 per cent. Almost all of this increase was driven by dried grape exports, as shown in table 3. There have been changes in the destinations of dried fruit exports – notably, the share of Kazakhstan fell from 46 per cent in 2017 to just 8 per cent in 2019, while the share of Kyrgyzstan rose from 1 per cent in 2017 to 23.3 per cent in 2019. As both countries are key transit countries for Uzbekistan’s exports, these changes may reflect changes in registration or in the routes taken by exports to third countries. The second largest increase in exports after Kyrgyzstan was exports to China, where Uzbekistan’s dried fruit exports increased by US\$11 million, a rise of 63.5 per cent. Exports to the Russian Federation also rose by US\$9.4 million, an increase of two and a half times over between 2017 and 2019.⁴⁹ In terms of shares of exports, China rose from 17.5 to 19.5 per cent, while the Russian Federation rose from 3.8 to 9 per cent. Both are growth countries in terms of imports of dried grapes, as shown above.

The United States Department of Agriculture (USDA) dataset presented in appendix 2 shows a similar decline between 2017 and 2018 in exports to Kazakhstan, from US\$41.3 million to US\$26.2 million, in parallel with a rise of both the Russian Federation and China in Uzbek dried fruit exports. While it is not possible to conclusively determine the reasons for this, the almost exact parallel between the decline in exports to (or through) Kazakhstan and the rise of exports to the Russian Federation (and, in the USDA’s view, also to China) suggests that it is due to a replacement of indirect exports by direct exports.

Despite the current relative unimportance of European and other developed-country markets for dried fruit exports from Uzbekistan, there have been increases in exports to Europe, especially to Slovakia, Lithuania, Poland and Germany. Dried fruit exports to the EU-28 more than doubled, from US\$5.1 million in 2017 to US\$10.5 million in 2019, with the share of Uzbek dried fruit exports going to the EU-28 rising from 5.2 to 7.2 per cent.⁵⁰ However, exports to Europe are heavily concentrated in a few Eastern European (i.e. Slovakia, Poland) and Baltic (Lithuania, Latvia) countries, with negligible exports to other important markets, with the exception of Germany. One possible explanation for this may be related to the requirement to make significant fixed and sunk costs (notably, meeting standards and establishing business contacts), with uncertain returns, to access these markets. Given that these exports constitute such a small percentage of the total, there is little incentive for exporters to go to the considerable trouble of altering their export process.⁵¹

One additional disincentive may be differential tariffs compared with Turkey, in particular. However, following Uzbekistan’s for application for the Generalized System of Preferences Plus (GSP+) in June 2020, the European Union granted the country that status on 1 December 2020. This will result in a reduction in tariff costs from 2021 onward. This change in tariffs, shown in table 4, provides an additional incentive for the targeted export promotion of dried fruits to the European Union, especially to those countries where tariffs will be comparatively low. With Brexit, however, tariffs on Uzbek dried fruits entering the United Kingdom in 2021 may diverge from these levels.

Table 4. **Comparative European Union tariffs for third-party countries, Uzbekistan and Turkey, 2021 and onward (per cent)**

Product	Third-party tariff	Generalized System of Preferences tariff (Uzbekistan)	Turkey tariff
Dried grapes	2.4	0.0 ³	0
Dried apricots	5.6	2.1	0
Dried apples	3.2	0.0	0
Prunes ¹	9.6	6.1	0
Other dried fruit ²	6.4	2.9	0
Dried fruit mixtures	6.4	2.2	0

Source: <https://trade.ec.europa.eu/access-to-markets/en/>

¹And mixtures of dried fruit including prunes. ²Excluding mixtures including prunes. ³Including currants, sultanas in immediate containers of a net capacity not exceeding 2 kilograms, and other dried grapes.

Aside from the European Union, other countries showed growth in imports between 2017 and 2019, notably countries formerly part of the Soviet Union such as the Ukraine and Belarus, to which exports increased by 58.4 per cent and 71.8

⁴⁹ As mentioned earlier, it is possible that better recording of export destinations explains part of the increase in exports to the Russian Federation and other countries like Turkey, Ukraine, Belarus and Lithuania, while exports to Kazakhstan declined during the period.

⁵⁰ The USDA dataset shows the European Union importing some 14.4 per cent of Uzbek dried fruit exports, significantly higher than the ITC data, even including dried grapes. The possibility exists that European Union countries are reporting imports as being from Uzbekistan that Uzbekistan’s national export statistics report as going to other countries such as Kazakhstan. However, there is no clear evidence supporting this hypothesis.

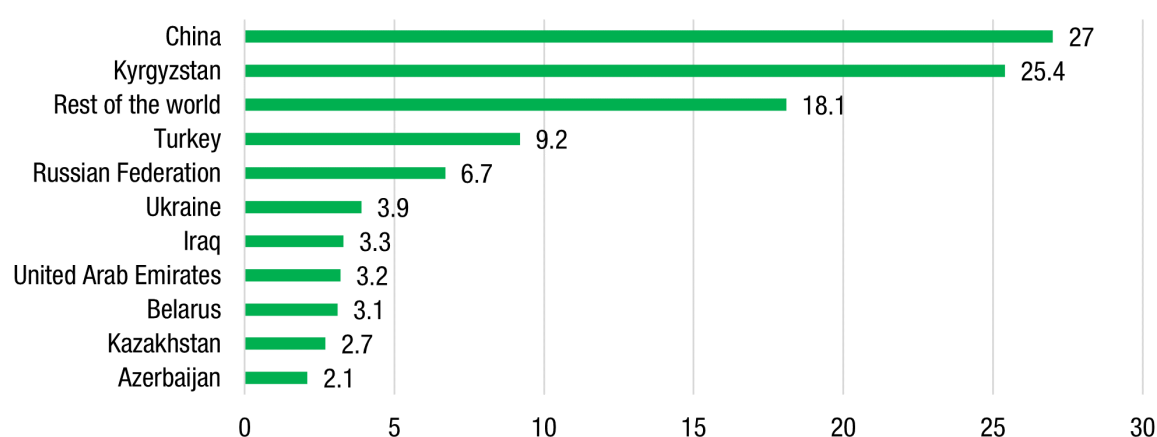
⁵¹ Ever since George Stigler’s 1961 research, the extent of search costs as a disincentive for entering new markets has been widely recognized. See T Besedeš, 2008, “A search cost perspective on formation and duration of trade”, *Review of International Economics*, 16(5): 835–849.

per cent, respectively. Some clear patterns have therefore emerged: in 2017, 62.9 per cent of Uzbek dried fruit exports went to countries formerly part of the Soviet Union, while in 2019 this share was 53.7 per cent.⁵² The importance of Uzbek exports to these countries is particularly notable when exports of dried grapes are excluded: 89.1 per cent in 2017 and 76.2 per cent in 2019.⁵³ Turkey, Iraq, and the United Arab Emirates complete the countries to which exports of Uzbek dried fruit increased by more than US\$1 million between 2017 and 2019.⁵⁴

Regarding export prices of dried fruit from Uzbekistan, although actual transaction prices are available only at a highly aggregated level, advertised prices from a number of Uzbek exporters are available on their websites. Prices differ depending on the amount required. Sunny Fruit, for example, indicates separate prices for 1-5 tons, 5-10 tons, 10-20 tons, 20-100 tons and 100 tons+. Some sources also indicate that Uzbekistan's export prices in certain markets are competitive with respect to other dried fruit exporting countries.⁵⁵

The disparity in achieved prices for Uzbek dried apricot exports, in particular, compared to dried apricots from other origins indicates the importance for Uzbekistan of surveillance and monitoring of the re-export trade. Legally, importers are required to identify from whom the product was exported in the country of origin; if they failed to adhere to these regulations, the mark-up they could well be adding is undeniable. However, there is insufficient evidence in available data to assess the extent of this practice.

Figure 10. Dried grape exports by Uzbekistan, 2019 (millions of United States dollars)



Source: Prepared by the authors using data from the International Trade Centre Trade Map.

Notably, figure 10 shows the importance of China as a market for dried grapes. The share of the 28 European Union countries in Uzbek dried grape exports in 2019 was only 9.7 per cent of Uzbekistan's total exports of this product, though it did increase from 7.5 per cent in 2017.

Uzbekistan exported US\$104.6 million of dried grapes in 2019, making it the sixth largest dried grape exporter worldwide. This gives some indication of dominance of dried grapes in dried fruit exports – the value of Uzbekistan's dried grape exports was 19 times that of dried apples, nine times that of dried apricots, and almost seven times that of prunes.

Particularly interesting is the import data from the United Nations Comtrade database,⁵⁶ which indicates that around 45 per cent of the increase in dried grape imports of the Russian Federation between 2015 and 2019 came from Uzbekistan, while Uzbekistan also accounted for almost all (99 per cent) of the Russian Federation's increase in prune imports and 24 per cent of its increase in dried apricot imports during the period. The Russian Federation in 2019 accounted for 6.4 per cent of Uzbekistan's exports of dried grapes, 20.8 per cent of prunes, and 17.3 per cent of dried apricots. Similarly, more than half (56 per cent) of the increase in dried grape imports by China came from Uzbekistan. Uzbekistan sold 25.8 per

⁵² This number excludes the three Baltic countries that are members of the European Union. If those three countries are included, the Baltic share was 66.4 per cent in 2017 and 56.5 per cent in 2019.

⁵³ If the three Baltic countries that are members of the European Union are included, the shares were 89.4 per cent in 2017 and 76.3 per cent in 2019.

⁵⁴ Iraq is the largest destination for dried apricots from Uzbekistan, accounting for 17.5 per cent of the total.

⁵⁵ A presentation by Javokhir Sharasulov of Uzbekistan's Ministry of Agriculture at a workshop entitled "Fostering Integration of the Dried Fruits Value Chain of Uzbekistan into Regional and Global Value Chains" shows export prices of dried grapes, prunes, dried apricots and dried apples to key export markets. The workshop was held in Tashkent (online) on 4 February 2021. The presentation is available at https://unctad.org/system/files/information-document/THAN_UZB_4Feb21_Sharasulov.pdf.

⁵⁶ United Nations Comtrade data for imports by country, which disaggregates by country of origin.

cent of its dried grape exports to China. In another growth market for dried grapes, Saudi Arabia, the increase in imports of dried grapes from Uzbekistan was 60 per cent larger than the total increase in Saudi Arabia's dried grape imports, leading to a large increase in Uzbekistan's market share in the country.

Figure 11 shows how the share of dried grape imports from Uzbekistan increased during the 2015–2019 period in these three growth markets (i.e. the Russian Federation, China and Saudi Arabia), as well as in the United Arab Emirates. As mentioned above, China and the Russian Federation are large markets for dried grapes – with imports of US\$58.8 million and US\$47.4 million in 2019, ranked 8th and 11th in the world, respectively – and also markets that have grown in the last five years: Russian imports of dried grapes grew by US\$17.9 million between 2015 and 2019 (the second most dynamic growth, after India), while China's dried grape imports grew by US\$7.9 million (see table 1).

There are also indications that Uzbekistan is getting lower prices for dried grapes than its competitors in different international markets.⁵⁷ In addition, as shown above, import prices of important importers of dried grapes from Uzbekistan like China are significantly lower than those in Japan or high-price European countries like Sweden, Denmark and, to a lesser degree, Germany. From the data on value and volume of dried grape exports in table A1.7 in appendix 1, one can calculate implicit export prices – and these implicit export prices to different markets calculated in this way vary widely.

Regarding prunes, in 2019 the main destination markets of Uzbek exports were Kyrgyzstan (a transit country, like Kazakhstan), the Russian Federation and Turkey, which combined accounted for 66 per cent of Uzbek prune exports. In previous years, prune exports had been dominated by exports to (or at least through) Kazakhstan. The data suggests that, as in the case of apricots and dried grapes, Kazakhstan is a transit destination for exports en route to countries like the Russian Federation. Exports of prunes by Uzbekistan to countries in the European Union (six countries) were negligible in 2019 (0.2 per cent of prune exports) and declined from 2017.

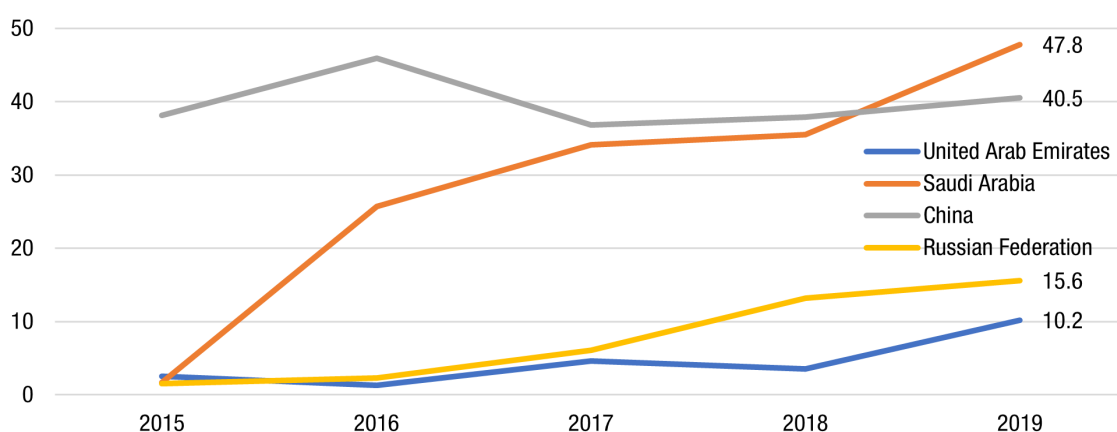
One explanation for limitations on Uzbek prune exports lies with the varieties exported by Uzbekistan. The European market has gotten accustomed to the d'Agen prune variety, and it is not easy to offer something new, even with competitive prices from Uzbekistan.

Regarding dried apricots, several different points emerge from the data.

First, while the top 10 export destinations for Uzbek dried apricots have remained the same for the last three years, exports to the Russian Federation have rapidly increased to the point that this country is now the leading export destination for Uzbek dried apricots. While there could be many reasons for this, one hypothesis is the development of a specific economic relationship between Uzbek exporters and Russian importers.

Starting from an extremely low base, as shown by the ITC Trade Map data, in 2019 Uzbekistan exported dried apricots to 10 European Union countries that together constituted 2.1 per cent of Uzbek dried apricot exports. The European Union is gradually increasing its share as an export destination for Uzbek dried apricots.

Figure 11. Share of dried grape imports from Uzbekistan, selected countries, 2015–2019



Source: Prepared by the authors using import data from the United Nations Comtrade database.

⁵⁷ See the presentation by Javokhir Sharasulov of Uzbekistan's Ministry of Agriculture at a workshop entitled "Fostering Integration of the Dried Fruits Value Chain of Uzbekistan into Regional and Global Value Chains" held in Tashkent (online) on 4 February 2021, available at https://unctad.org/system/files/information-document/THAN_UZB_4Feb21_Sharasulov.pdf.

Prior to the Covid-19 pandemic, there were a number of optimistic commercially available forecasts for the dried apricot market.⁵⁸ However, the Covid-19 crisis has since prompted significant uncertainty regarding world demand. Increased per capita income is one factor likely to drive consumption of what is, in effect, a luxury good compared to, for example, potato crisps in Europe or sweet potato, corn-on-the-cob, sunflower or pumpkin seeds in China.

Regarding dried apples, the data suggests that a portion of Uzbek dried apple exports may be recorded as exports to transit countries like Kazakhstan, when they are actually in transit to third markets. Kazakhstan is the almost exclusive importer of Uzbek dried apples. As yet, direct exports to other markets, including the Russian Federation, are negligible. Kazakhstan does not have a substantial internal market for imported dried apples. Those it does consume have a long heritage and are of the local Saltanat variety,⁵⁹ and, moreover, Kazakhstan is the global market leader in dried apple exports. The expansion of Uzbek dried apple exports in recent years could therefore largely be a function of the ability of Kazakhstan to act as a transit destination for Uzbek dried apples.

Finally, the export evolution of Uzbekistan's other dried fruit, which includes figs,⁶⁰ dates,⁶¹ and dried strawberries,⁶² is somewhat different. Turkey is clearly the dominant destination market, with Kazakhstan second. The emergence in 2019 of the United Arab Emirates as an export destination is noteworthy, given that it is the third largest global importer of dates. Still, the main eventual destination for all Uzbek dried fruit may well be the Russian Federation and China, through transit countries.

The market for other dried fruit is a more stable market overall, whether examined in terms of total value or volume. The different components that constitute it virtually balance out. The share of the European Union in other Uzbek dried fruit exports is again low: the largest European Union importer is Austria. These superficially idiosyncratic trading relationships suggest the importance of individual trading relationships in the European Union context.

⁵⁸ See Profshare, 2020, available at <https://www.profsharemarketresearch.com/dried-apricots-market/>.

⁵⁹ See Speciality Produce, Saltanat apples, available at https://specialityproduce.com/produce/Saltanat_Apples_18339.php.

⁶⁰ See <https://gardencells.com/driedfruits>.

⁶¹ Uzbekistan imports dates from Iran, and its date exports are negligible and all to Kazakhstan.

⁶² See Export Hub, Dried fruit, available at <https://www.exporthub.com/prod/dried-fruits-3974509.html>.



**3. Key characteristics
of the export
value chain for
international
competitiveness**

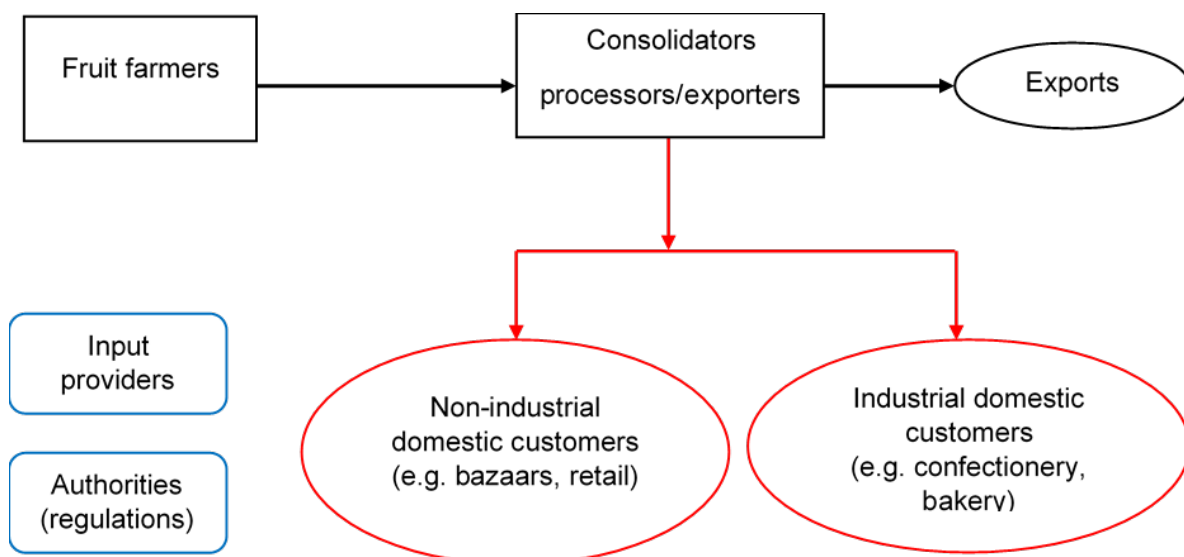
An important conditioning factor for Uzbekistan to expand its export of dried fruit is the capacity of the domestic dried fruit value chain to deliver high-quality produce consistently and at an internationally competitive cost. Fostering access to international markets consequently requires an understanding of the ways in which the domestic value chain affects the quality of dried fruit produce. This section analyses key aspects of the dried fruit value chain in Uzbekistan that have an important bearing on its international competitiveness, notably focusing on the relationship between specific characteristics of the fruit value chain and the quality of dried fruits for export.

Figure 12 presents the main stakeholders of the dried fruit value chain for export in Uzbekistan: input suppliers, fruit farmers, consolidators (intermediaries), and processing companies/exporters. In addition to exports, domestic customers of dried fruits include non-industrial customers (e.g. bazaars and retail shops), as well as industries that use dried fruits as an input in their processes (e.g. bakeries and confectionary industries).

This section complements previous work analysing the horticulture sector in Uzbekistan,⁶³ presenting and analysing data drawn from an UNCTAD field survey of stakeholders in the value chain for dried fruit. The survey was conducted in April–March 2020, and reports data for 103 fruit producers across five regions (Andijan, Fergana, Namangan, Samarkand and Tashkent), and 48 fruit buyers carrying out one or more roles such as consolidator and processor/exporter. Fruit producers that sold at least part of their produce dried were preliminarily identified in the selected regions, and then sampled at random.⁶⁴

For fruit stakeholders, the survey built on official production data for the regions from the State Committee of the Republic of Uzbekistan on Statistics, presented in tables 5a, 5b and 5c. Note that the Samarkand and Tashkent regions concentrated 33 per cent and 13 per cent of grape planted area in Uzbekistan, respectively, and 37.9 per cent and 7 per cent of grape production. In turn, plum production is largest in Tashkent and Namangan, as both these regions have the highest planted area of plums, at 29.5 per cent and 17.6 per cent of planted area in the country, respectively. For apricots, table 5c shows that the Fergana region accounted for 44 per cent of planted area. Hence, the five regions chosen for the survey provide the highest representativeness of production of these three fruits. The Fergana, Namangan and Tashkent regions each accounted for close to 20 per cent of the survey sample, while Samarkand was slightly larger at 25 per cent and Andijan was slightly smaller at 15 per cent. Buyers of fruit interviewed also were from the same regions. The sample size was less balanced than for farmers, with a higher weight of buyers of fruit in based in Samarkand.

Figure 12. The dried fruits value chain in Uzbekistan



Source: Prepared by the authors.

⁶³ See DF Larson, D Khidirov and I Ramniceanu, 2015, Uzbekistan: Strengthening the horticulture value chain, World Bank Background Paper Series – Uzbekistan Vision 2030.

⁶⁴ Ex post, four of the surveyed fruit producers did not report drying fruit. In any case, the share of farmers producing grapes, plums or apricots and drying at least part of the harvest was very high, at 95.7, 88.9 and 97.1 per cent of surveyed farmers producing each of these respective fruits.

Table 5a. **Grape production in Uzbekistan, 2018**

Region	Volume (tons)	Area (hectares)
Samarkand	601,871	37,431
Bukhara	188,052	10,148
Fergana	157,397	6,199
Namangan	111,008	7,636
Tashkent (region)	109,623	15,088
Qashkadarya	96,944	8,673
Surhandarya	91,862	9,217
Navoi	77,401	5,678
Andijan	71,247	3,291
Khorezm	39,416	2,683
Jizzakh	24,663	4,355
Sirdarya	12,685	1,563
Karakalpakistan rep.	7,533	1,232
Tashkent (city)	82	59
Total	1,589,784	113,253

Source: State Committee of the Republic of Uzbekistan on Statistics.

Table 5b. **Plum production in Uzbekistan, 2018**

Region	Volume (tons)	Area (hectares)
Namangan	30,048	2,926
Tashkent (region)	21,994	4,917
Andijan	19,184	1,285
Fergana	13,176	1,677
Samarkand	9,103	1,185
Surhandarya	8,564	1,019
Qashkadarya	6,393	888
Jizzakh	6,114	882
Sirdarya	5,299	927
Bukhara	4,046	277
Khorezm	4,041	274
Navoi	3,656	216
Karakalpakistan rep.	1,405	117
Tashkent (city)	82	87
Total	133,105	16,677

Source: State Committee of the Republic of Uzbekistan on Statistics.

Table 5c. **Apricot production in Uzbekistan, 2018**

Region	Volume (tons)	Area (hectares)
Bukhara	136,989	5,939
Fergana	129,442	22,004
Andijan	69,656	3,157
Navoi	25,445	1,445
Namangan	25,345	2,903

Region	Volume (tons)	Area (hectares)
Qashkadarya	25,223	2,938
Khorezm	21,502	1,463
Samarkand	19,994	1,471
Surhandarya	15,050	2,075
Karakalpakistan rep.	9,345	1,005
Jizzakh	6,885	939
Tashkent (region)	5,299	1,020
Sirdarya	3,515	445
Tashkent (city)	152	106
Total	493,842	46,910

Source: State Committee of the Republic of Uzbekistan on Statistics.

3.1 Producers

3.1.1 Producer size and location

The size of fruit producers is an important variable for the dried fruit value chain, as it is correlated with the prices obtained by those producers, with the availability of certain types of certification, and with the type of drying method used by the farmer. In turn, having certification and the method of drying used are connected with the quality of dried fruit that is available for domestic and export sales.

All agricultural land in Uzbekistan is owned by the state and is farmed via three main types of lease-holders: farm enterprises, dekhkan farms/households, and agrofirms.

Farm enterprises are characterized by land given by the State under a lease contract with a duration of up to 49 years. The lease contract for land is made between the State and the head of the farm. The minimum size of land plots leased for fruit production and viticulture was one hectare until 2008, and has been five hectares since 2008.

Dekhkan farms are small agricultural producers holding no more than 0.35 hectares of irrigated lands and no more than two hectares of non-irrigated (rain-fed) lands.⁶⁵ An important characteristic of dekhkan farms, unlike other farm types, is that the term of the lease is for life. The lifetime lease can also be transferred to other members of a family, and through inheritance. Dekhkan farmers pay a land tax to the State.

Agrofirms are larger commercial enterprises that are also legal entities. These firms operate in various sub-sectors of agriculture. Often, they also process agricultural products.

A common way of measuring the size of fruit producers is via the amount of land planted/harvested. The UNCTAD survey reports data for farm sizes with an average and a median of 6.4 hectares and 7 hectares under cultivation. There are differences in farm size across regions and in terms of the cultivated area of each fruit type.

Regionally, the largest farms among those surveyed were located in the Tashkent region (mean size of 9.3 hectares, median of 8.5 hectares), followed by the Samarkand region (mean size, 7 hectares, median size, 5 hectares) and the Fergana region (mean size. 6.2 hectares, median size. 4 hectares). The farms in the Andijan and Namangan regions in the sample were smaller, with median sizes of 4 and 3 hectares, respectively.

UNCTAD's survey data indicate that farms mostly specialized in producing one type of fruit: 41.7 per cent of surveyed producers said they only produced grapes, 28.2 per cent only produced apricots and 18.4 per cent only produced plums. Most of the remaining 11.7 per cent of farmers said they produced only two products.

In terms of the area cultivated for each type of fruit, the average size of fruit farms in the entire survey sample was 3.4 hectares for grapes, 1.6 hectares for plums, 1 hectare for apricots and 0.4 hectares for other products. However, as most farms only produce one type of fruit, the average size of the area cultivated for each fruit was higher: 45.6 per cent of surveyed farms planted grapes, and the mean area of cultivation of those farms was 7.5 hectares; 26.3 per cent of surveyed farms planted apricots, with a mean area of cultivation of 3.8 hectares; and 34 per cent of surveyed farm planted plums, with a mean area of cultivation of 4.7 hectares.

⁶⁵ In steppe and desert zones, dekhkans hold no more than 1 hectare of irrigated pastures.

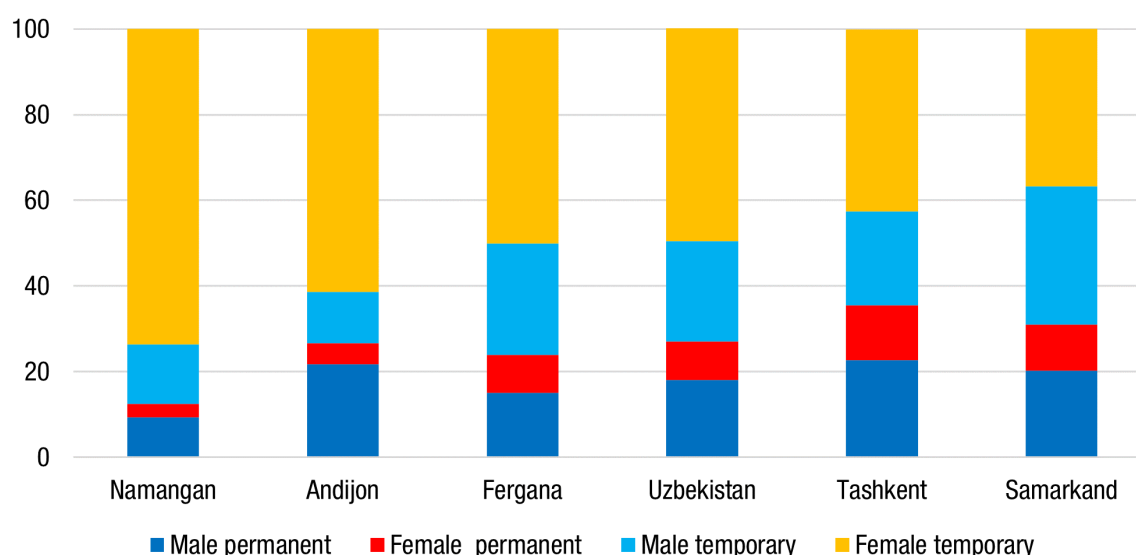
In addition, production of each type of fruit was concentrated in some regions but not in others. Among surveyed producers, grape farming was especially concentrated in Samarkand and, to a lesser extent, Tashkent; producers growing plums were mostly located in the Tashkent and Namangan regions; and producers growing apricots were mostly found in the Fergana region.

A different dimension of the scale of a farm is provided by the number of workers it employs. The average number of workers across all surveyed farms was 21.8, including 5.9 permanent workers and 15.9 temporary workers per farm. Figure 13 shows the composition of workers by work status, gender and region for the complete survey sample.

Figure 13 shows that while temporary workers outnumber permanent ones across all regions, the share of permanent workers is higher in the regions with the larger average farms in terms of area cultivated, Tashkent and Samarkand.

A significant insight that emerges from figure 13 is the important role played by female workers, especially temporary ones, in fruit farming. While female workers make up 58.6 per cent of the total for the entire surveyed sample, women constitute 76.7 per cent and 66.3 per cent of the workforce on the surveyed farms in Namangan and Andijan, respectively. However, female participation in the fruit farming workforce is heavily concentrated in temporary work (e.g. harvesting fruit) rather than permanent work. For example, among surveyed fruit farms in Namangan, temporary women workers constituted 73.6 per cent of the total workforce, but only 3.1 per cent of permanent workers. The region with the highest permanent female worker participation was Tashkent, at 12.8 per cent of the workforce, followed by Samarkand (10.7 per cent). However, even in these cases, the share of male-to-female permanent workers was close to double: in Tashkent, male permanent workers made up 22.7 per cent of the workforce, while in Samarkand that figure was 20.3 per cent.

Figure 13. **Composition of the workforce on surveyed farms by region (per cent)**



Source: Prepared by the authors on the basis of UNCTAD survey data.

In summary, there is wide diversity in the sizes of farms by type of fruit planted and by region, both in terms of the surface area planted and the number of workers employed (especially permanent workers). This heterogeneity in terms of the scale of fruit farming, combined with the issues of quality that will be discussed below, are important for policy reasons. It is possible that additional efforts will be needed to help the smallest farmers in order to produce high-quality high dried fruit all along the value chain.

3.1.2 Fruit production and drying

Stringent quality-control processes throughout the production value chain are important pre-conditions for accessing high-price export markets for dried fruit, including the European Union and Japan.⁶⁶ Production of quality fruit at the farm level is hence a key driver of competitiveness.

Nevertheless, UNCTAD's survey found an extensive lack of quality certification among producers at the farm level, with 81 per cent of farmers reporting no form of certification whatsoever. Of those reporting having some form of certification,

⁶⁶ See World Bank, 2020, Central Asia's horticulture sector — Capitalizing on new export opportunities in Chinese and Russian markets, available at <https://openknowledge.worldbank.org/handle/10986/33652..>

most had only phytosanitary certificates. Only 4 per cent of surveyed farmers reported holding International Organization for Standardization (ISO) 9001 certificates,⁶⁷ and none had internationally recognized certificates such as Organic or Global Good Agricultural Practices (GAP) certifications. An internationally recognized Organic certification could be particularly attractive, given the increasing requirement in high-price markets for products that are certified as safe and environmentally sustainable all along the value chain. Another important point is that those farmers holding ISO 9001 certificates were those who had much larger farms than the others: while these few farmers had an average size of 16.9 hectares planted, the rest of the farmers had an average of 6 hectares planted. This suggests that farmer scale matters for the quality of dried fruit, as only some of the larger farms are certified.

Despite the paucity of certification across fruit producers, all surveyed farmers indicated that they were aware of the importance of quality for their customers, and that the price paid by their customers varied according to its perceived quality. Additionally, nearly half (49 per cent) of farmers identified supplying the required quality to buyers as the second most important challenge they faced when working with customers.⁶⁸ Hence, a question that arises from these findings is why small farmers in Uzbekistan are not certified. While that question goes beyond the scope of this study, other studies on smallholder challenges in obtaining certification have identified as possible causes a lack of education and access to finance, and the fixed and variable costs of obtaining and maintaining certification, among others.

Regarding the absence of observed Organic certification, surveyed farmers were also asked why they did not produce organic fruits. The most frequently mentioned reason was the lack of knowledge about how to implement pest and disease controls consistent with Organic certification: 64 per cent of surveyed farmers cited that as a key reason for not producing organic fruit. Informal conversations conducted with farmers during the survey suggest that many are only aware of spraying with chemicals as a method for pest and disease control. In a wider context, there appears to be an extensive information gap regarding knowledge of how to implement organic farming methods for fruit consistent with certification: 50.5 per cent of surveyed farmers claimed to have insufficient knowledge about organic farming methods. Additionally, more than a quarter of surveyed farmers (28.2 per cent) were concerned about the impact of organic methods of production on profits. However, on the positive side, only 6 per cent of those surveyed indicated that they perceive that there is no market in Uzbekistan for organically certified fruit. All these points indicate the need for additional policy efforts in Uzbekistan to support organic fruit farming, including further research into the true costs and benefits of such farming and implementation of an information campaign through, for example, farming extension services.

Another important element of dried fruit quality at the farm level is the drying process.

Fruit farmers surveyed sold their fruit in part fresh and in part after drying it,⁶⁹ with 80.6 per cent of all surveyed farmers indicated selling at least part of their fruit fresh immediately after harvest. The median share of their harvest that these farmers indicated selling immediately fresh was 56 per cent.

UNCTAD's survey found that of those farmers who said they sold grapes, the average share of raisins sold as part of the total volume sold was 31.6 per cent, but with large differences across regions. While the share of dried grapes declared in Samarkand was on average 42.8 per cent by volume, it was 24.9 per cent in Tashkent and smaller in regions surveyed where there was less grape production. For farmers producing and selling plums, the survey found that, on average, 25.8 per cent of the volume sold was prunes while the rest was sold fresh, but the regions with higher production of plums like Tashkent and Namangan reported higher shares of dried plums (i.e. prunes) as a percentage of the total volume sold: 33.3 per cent and 22.3 per cent, respectively. For farmers producing and selling apricots, the average dried share of apricots in total volume sold for all farmers was 39.7 per cent, but fruit farmers producing and selling apricots in the high-production Fergana region had a lower share of dried fruit, at 31.7 per cent.

Farmers interviewed indicated that an important reason for selling a share of their fruit fresh is related to the binding need for income to maintain their household. Fruit constituted a key component of income for the surveyed farmers, but also 94 per cent of the surveyed producers indicating having livestock as a secondary income source. Moreover, 61 per cent of surveyed fruit producers said extra-farm work was an additional income source, particularly from assorted business activities, but in a few cases also from salaried occupations such as teachers.

According to the survey, the two main reasons why farmers dry fruit are the advantages in terms of ease of storage (as reported by 83.8 per cent of respondents drying fruit) and the higher prices that dried fruits command compared to fresh fruit (cited by 69.7 per cent of respondents drying fruit). Related to this point, surveyed farmers were asked about the specific quality of fruit they used for drying from their harvest: 21.6 per cent of farmers drying fruit said they use all qualities of fruit for drying, 43.3 per cent said they dry only their best/high-quality fruit, and the remaining 35.1 per

⁶⁷ All these farmers were located in the Fergana region.

⁶⁸ The first most important challenge, as to be expected, was to reach an agreement with customers on prices, indicated by 80.5 per cent of farmers.

⁶⁹ In certain regions, especially Tashkent and Andijan, the survey found that some farmers planted grapes and plum varieties that are sold fresh and are not suitable for drying. The varieties of plums used for drying in Uzbekistan are Samarkand Black Plum, Burton, Arton, Autumn, Hungarian violet, Ispolinskaya, Black Plum, Anna Shpet and Kirke.

cent said they dried only the fruit not included in the best/high-quality category. This indicates the importance of drying practices as a tool for reducing post-harvest losses. Additional advantages of dried over fresh fruits are the much lower requirements in terms of storage volume and the lower transport costs per amount of product transported.

The fact that drying can reduce post-harvest losses and that dried fruit is easier to store and transport (after incurring the cost of drying) has implications for the export of high-quality fruit to high-price international markets. Specifically, unless efforts are undertaken by farmers and buyers of dried fruit to separate dried fruit by quality at the origin, unsorted dried fruit arriving at processors for export is likely to include a significant proportion of lower-quality fruit. This either transfers the cost of sorting dried fruit according to quality to exporters, or can result in a lower average quality of dried fruit for export.

Importantly, the method of dried fruit production at the farmer level has implications for quality, and hence can affect the competitiveness of exports. In particular, the survey and interviews with fruit farmers suggest that in Uzbekistan, drying methods rely mostly on different forms of sun and shade drying for dried fruits, due to their low cost. When asked about the methods used for drying fruit, no farmers indicated that they use artificial methods. Among the farmers indicating that they dry fruit, 17.2 per cent use only sun drying, 5 per cent use only shade drying (where dry air circulation plays an important role), 61.6 per cent use both sun and shade drying, and the remaining 16.2 per cent did not specify the method used. Only 3 per cent of farmers drying fruit said they own equipment to do so, and even in those cases the equipment was used as part of sun or shade drying. Analysis of the survey data also suggests that the scale of production and the methods used for drying are correlated: while the average size of producers using direct sun or both direct sun and shade to dry fruit was 5.2 hectares, the average size of those using only shade drying was 18.5 hectares.

For drying grapes, farmers in Uzbekistan prefer locations with good sunshine and the availability of wind or breeze during the harvest season. The traditional air-drying shelter for grapes has been used for thousands of years in Asia and other places around the world. The drying of grapes under sheds is common practice followed in major raisin-reducing sites of Uzbekistan.

For drying apricots, the resulting quality of dried fruit varies depending not only on the drying method used but also on the treatment of the fruit (e.g. whether or not sulphured) and the fruit variety used. Similar to the process for drying grapes, apricots dried under direct sunlight are considered of low quality, while apricots dried under shade are considered to be of better quality. Another important aspect in the drying process of apricots is whether the apricot is dried with the stone or whether the stone is removed before drying. Usually, apricots dried with stone are sold in the local market and apricots without stones are destined for export.

As indicated by the FAO,⁷⁰ an important challenge for quality resulting from the use of direct solar drying methods is that farmers have little control over the drying conditions, and hence the final quality of the dried fruit.⁷¹ In particular, the FAO study indicates that direct sunlight when drying fruit can lower the quality of the resulting dried product because it can bleach the colour of the fruit and reduce its level of natural vitamins A and C. As temperatures for drying fruit are recommended at levels that avoid overheating of the fruit or damaging it, solar methods that offer limited or no control of temperature can result in lower-quality dried fruit.

One quality problem that may appear when the temperature is imperfectly controlled during drying is “case hardening.” This occurs when the outside layer of the fruit dries quickly and becomes hard, preventing the inside of the fruit from drying. When this occurs, fruit can become spoiled during storage, as only the outside of the fruit is dried. To reduce the incidence of this problem, it is important to use an adequate drying process in which drying temperatures are adequately controlled (for example through the use of a solar dryer).

As indicated by the FAO, the sulphuring of fruit before drying is used to preserve the bright colour of fruit like apricots. During this process, fruit is exposed to sulphur dioxide gas, or sodium/potassium metabisulphite is used in fruit treated with sugar syrup.⁷² Two potential downsides of sulphuring fruit are, first, that some consumers may prefer to consume fruit that has been dried without adding additional sulphur dioxide (SO₂) due to personal preference or sensitivity to SO₂; and second, that farmers applying SO₂ to fruit need to carefully control the process in order to obtain the desired results.

According to the survey, the sulphuring of fruit as part of the drying process is quite common among the farmers who say they dry apricots, with 50 per cent of them indicating that they use sulphur during drying. Interestingly, all the farmers using sulphuring for dried apricots were located in the Fergana region.⁷³ None of the surveyed farmers in Namangan

⁷⁰ FAO, 2007, Dried fruit, instructional manual on primary processing of food commodities (e.g. cleaning, drying, milling, etc.), available at <http://www.fao.org/3/a-au111e.pdf>.

⁷¹ Note that direct solar methods are not the same as using an artificial drier that uses solar energy or employs the sun.

⁷² FAO, 2007, Dried fruit, instructional manual on primary processing of food commodities (e.g. cleaning, drying, milling, etc.), available at <http://www.fao.org/3/a-au111e.pdf>.

⁷³ Almost two-thirds (63.2 per cent) of farmers in Fergana drying apricots said they used sulphuring during drying.

drying apricots indicated practicing sulphuring during drying. This suggests that at least some agricultural techniques in Uzbekistan follow a regionally clustered pattern. Further confirmation of this could be important for the targeting of additional rural extension efforts by the authorities, particularly in terms of diffusing sustainable best agricultural practices to support the production of high-quality dried fruit, including organic fruit. Additionally, the fact that only half of farmers drying apricots use sulphuring indicates that lack of use is more related to insufficient knowledge about the practical aspects of the process (e.g. application, dosage control), as indicated by informal conversations with surveyed farmers.⁷⁴

Another issue related to dried fruit quality relates to fruit storage by farmers. Storage methods can affect the quality of dried fruits, which can be vulnerable to external dust and other sources of contamination when storage is suboptimal. Storage in a modified/controlled atmosphere and/or controlled temperature contributes to preserving the quality not only of fresh but also dried fruit, particularly in the face of pests that attack fruits while drying or during storage.⁷⁵ However, informal discussions with the surveyed farmers revealed that storage areas were often a basement of farmers' houses or one or two rooms of their houses.

Drying fruit allows farmers to substitute for cold storage for their fresh fruit, which is expensive and requires electricity. Indeed, 80.5 per cent of surveyed farmers indicated that the capacity to store is a key reason for drying fruit, so the availability of cold storage and drying practices are connected.

In UNCTAD's survey, only 22.3 per cent of farmers reported storing fresh fruit before sale, and this storage was short-lived, as 95 per cent of the surveyed farmers said they do not have a cooled warehouse for storing. In contrast, of the farmers drying fruit (96.1 per cent of all farmers), 79.8 per cent said they stored at least part of their dry fruit while waiting for better prices. These farmers indicated that they stored a median of 34 per cent of their harvest to wait for better prices. This suggests that drying allows farmers at least some control over the moment when they can sell their produce.

While the survey found cooled warehouses to be very rare, due to scale and financial limitations, most of the surveyed farmers (92 per cent) indicated using bags or cardboard boxes to store fresh or dry fruit. The 5 per cent of farmers who used cold storage had much larger farms than the other farmers surveyed – 19.3 hectares of median planted area in comparison with 4 hectares of median planted area for the entire sample. This suggests that producer size is also related to the availability or better-quality storage.

3.1.3 Farmer sales

Higher prices obtained by farmers for their fruit can potentially have a positive impact on fruit quality because it can improve the financial capacity of producers to invest in equipment, training, increasing scale and measures. In turn, this can increase the capacity of exporters to export higher-quality produce to more demanding international markets, which also often pay higher prices.

Figure 14 presents the summary distribution of prices reported by farmers in UNCTAD's survey for fresh and dried grapes, fresh and dried apricots, and plums and prunes. It shows that drying allows farmers to fetch higher prices per kilogram of each type of fruit: 67 per cent of surveyed farmers indicated that one key reason for drying is the higher prices of dried fruit, with the other important reason related to storage, as mentioned above.

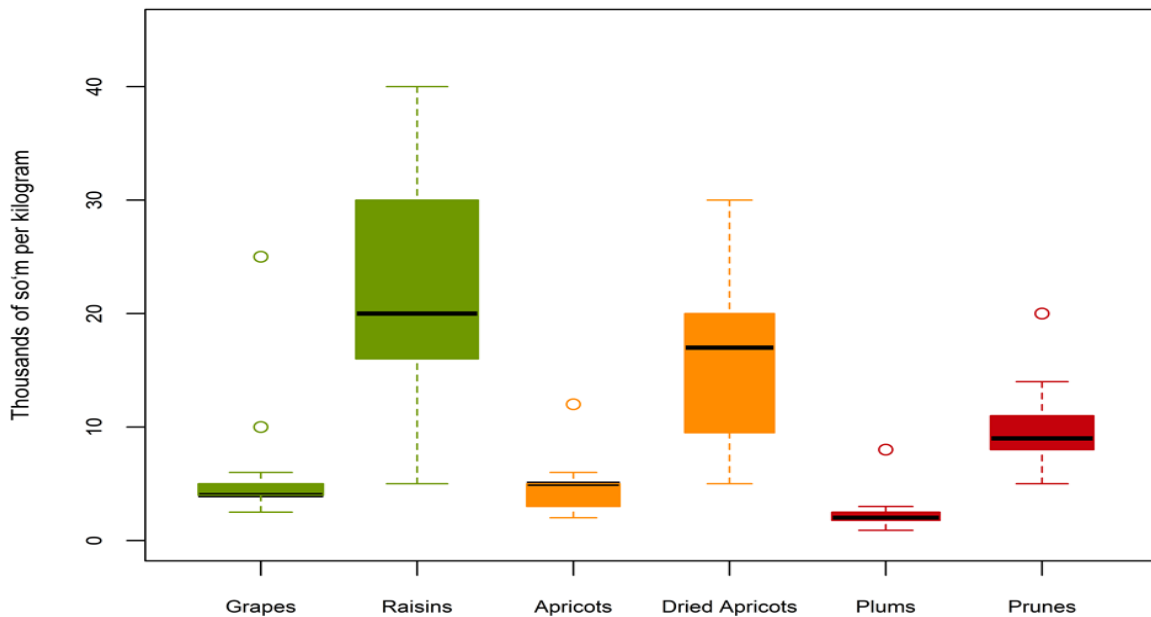
The average ratio of the price of raisins to the price of grapes sold by surveyed farmers was 4.9 (median, 4.6), with a standard deviation of 2.7; the mean and median ratio of prices of dried apricots to fresh apricots was 3.5, with a standard deviation of 1; and the mean ratio of prices of prunes to plums was 5 (median, 4.7), with a standard deviation of 1.9. This would suggest that, at least in the case of grapes, drying could allow farmers to not only store fruit effectively without having cold storage, but also to obtain prices slightly over the technical ratio of conversion of fresh fruit to dried fruit.⁷⁶ However, note that these prices slightly over the transformation ratio of grapes into dried grapes are obtained using the inexpensive sun or shade drying techniques, so it is not clear from the available survey data that observed price ratios would incentivize farmers to acquire drying equipment (e.g. a solar drying machine) that could increase the quality of dried fruit, as discussed above.

⁷⁴ An alternative explanation for the lack of use of sulphuring could have been restrictions in its use due to Organic certification, but, as previously mentioned, none of the farmers surveyed had that certification.

⁷⁵ See J Johnson, EM Yahia, and DG Brandl, 2009, Dried fruits and tree nuts, in EM Yahia (editor), *Modified and Controlled Atmospheres for Transportation, Storage and Packaging of Horticultural Commodities*, CRC Press, 2009: 507–526;; and United States Department of Agriculture, EO Guidance Document FNS-GD-2005-0011, available at <https://www.fns.usda.gov/usda-foods/handling-dried-fruits-trail-mix>.

⁷⁶ See United States Department of Agriculture, 1992, *Weights, measures and the conversion factors for agricultural commodities and their products*, USDA Economic Research Service Agricultural Handbook AH-697: 52. For grapes, the conversion ratio is 4–4.3, for apricots it is 6, and for plums into prunes it is 2.90–3.14. Interviewed farmers confirmed conversion values for grapes of 4 and for plums of 3, but indicated a much smaller conversion ratio for apricots. Note, however, that the differences between the mean observed ratios of prices and the conversion rate are small relative to the standard deviation of the observed ratio of prices.

Figure 14. Summary distribution of fresh and dried grape, apricot and plum surveyed prices



Source: Prepared by the authors on the basis of UNCTAD survey data.

The survey also indicates that prices of raisins, dried apricots and prunes are positively and significantly correlated with the size of farms. This indicates the close connection between farmer scale (and, possibly, access to financial resources) and the practices of drying and storing fruit.

Additionally, the role of farmers as transporters of fruit is closely connected to the size of the farm (i.e. scale of operation) and the extent of drying of their fruit: 65 per cent of surveyed farmers indicated transporting fruit, and of those, 86.6 per cent said they use their own vehicles at least in part. Surveyed farmers who transport fruit have farms that are more than double the size in planted area than those of farmers who do not transport: the former had on average 7.76 hectares of land planted, versus 3.73 hectares for those who do not transport fruit. Also, among surveyed farmers who transport fruit, 64 per cent, on average, dry of their fruit, while those not transporting only dry 22 per cent of their fruit.

In view of the importance of scale for both the quality of dried fruit and the prices received by farmers, producer groups (often also known as cooperatives) could play an important role in assisting small fruit producers. Positive impacts of cooperatives could include promoting best practices among members, improving the bargaining power of members through collective action, and playing an aggregation role. All these issues could potentially result in both higher quality of fresh and dried fruit, as well as higher prices for members, as observed in other countries.⁷⁷ Membership of small farmers in producer groups can also make it easier for buyers of fruit to buy via the cooperative, as cooperatives are legal entities capable of signing contracts with fruit buyers such as processors/exporters.

However, the UNCTAD survey indicates that cooperative membership has a limited footprint in Uzbekistan: 66 per cent of surveyed fruit farmers indicated they are not members of a cooperative. On the positive side, cooperative membership is more extended among smaller fruit producers. Among those fruit farmers with a planted area smaller than the mean planted area of all surveyed fruit farmers, almost half (47.3 per cent) reported being cooperative members. Among surveyed farmers, 86 per cent of cooperative members have a planted area (an indicator of scale) smaller than the mean of all surveyed farmers. Also, the average cooperative member has, on average, only 61.2 per cent of the planted area of the average fruit farmer surveyed.

When accounting for the effects of scale and geographic location, analysis of UNCTAD's survey data suggests that cooperative membership among fruit farmers in Uzbekistan can result in higher mean prices for fresh fruit and for some types of dried fruits, such as raisins. For example, comparing the prices paid for raisins in the Samarkand region for farmers who were and were not members of a cooperative, the survey suggested that cooperative members obtained slightly higher prices than non-members.⁷⁸ As profitability of fresh and dried fruit production can increase the incentives to invest in better farming techniques and generate higher investment via re-invested profits, cooperative membership, by boosting the profitability of small farmers, could potentially also result in higher quality for cooperative members.

⁷⁷ For the case of maize in Lao PDR, see R Cárcamo, 2020, Analysing the maize value chain for export in Lao People's Democratic Republic, UNCTAD Technical Report NCTAD/DITC/COM/MISC/2020/2, September.

⁷⁸ This difference in means was statistically significant, but the sample size is small, so these results need to be taken with caution.

3.2 Fruit buyers and quality

One way to implement quality control in agricultural value chains is through vertical integration from farming to export (or even beyond). In the case of dried fruit in Uzbekistan, however, interviews with exporters, wholesalers and brokers indicate that there is only limited full vertical integration in the sector, with 10 per cent of dried fruit buyers reporting also being responsible for growing fruit. Stakeholders usually do not have their own farms and cold stores, but instead rent space or purchase produce from farmers.

However, two-thirds of the buyers of dried fruit interviewed in UNCTAD's survey indicated that they also buy fresh fruit and dry it themselves, especially grapes.⁷⁹ Several of the surveyed exporters who dry fruit themselves indicated in informal conversation with the survey team that an important reason was to better control the quality of dried fruit, given the importance of the drying process for final quality, as indicated above. In common with farmers, most fruit buyers who dry fruit also reported using sun or shade drying, with one in eight reporting the use of drying equipment. Hence, drying by buyers of fruit in Uzbekistan is similarly dependent on sun or shade drying.

Another mechanism often used to ensure quality control is pre-purchase agreements between buyers and producers of fruit. These agreements can be oral or written in nature. Only 18.4 per cent of surveyed fruit producers indicated having a pre-sale agreement with buyers, in almost all cases of a written nature. In cases where an agreement existed, the quantity to be delivered and the price to be paid were specified in 89.5 per cent and 82.2 per cent of cases, respectively, indicating a role of contracts in risk sharing and ensuring supply/customers in the few cases where an agreement exists. However, only slightly over half of the agreements explicitly specify quality to be delivered. Surveyed buyers of fruit also indicated that agreements with sellers of fruit were rare, with 18.7 per cent indicating having such an agreement, also mostly written. As in the case of farmers, almost all buyers of fruit indicated that such agreements specified the quantity of fruit to be bought. However, buyers of fruit indicated that the agreements they have with producers very rarely specify the price of fruit to be paid, but almost always specify the quality of fruit to be delivered. Ninety per cent of fruit buyers who do not have an agreement said the main reason for them is to maintain flexibility. Together with the rarity of agreements specifying price, as reported by both farmers and buyers of fruit, this indicates the limited degree of price risk-sharing in contracts in the fruit value chain in Uzbekistan.

In general, the rarity of pre-sale or pre-buying agreements suggests that, overall, contracts do not play an important role at present in ensuring quality along the value chain. This also suggests that there is no "top-down" incentive-compatible mechanism that delivers quality dried fruit along the value chain.

As discussed earlier, consolidators are intermediaries who play an important role in linking dried fruit producers with the processors/exporters in Uzbekistan. They often, but not always, act as agents for processors/exporters, as their services to convey information about market conditions and requirements to producers are paid for by the exporter. When acting in this "agent" role, consolidators charge exporters a commission for obtaining produce on their behalf that is added to the price paid by the processor/exporter to the farmer. When they act as agents of exporters, consolidators do not risk their own capital.⁸⁰ Key information conveyed by consolidators involves quality requirements and price information. Consolidators are self-trained people who usually learned the intermediation business via "learning-by-doing," and who have an important intangible asset in the form of a network of connections and detailed information about sources of fruit, clients, prices, and other matters in a certain village or region. Although several interviewed farmers/dekhkans said they believe they can get better prices by selling directly to buyers, they often cannot avoid selling to consolidators instead, as several processors/exporters use the services of consolidators to gather the required amount of dried fruit and control the quality requirements.

In this way, consolidators carry out an important aggregation role that is bundled with quality control, and which provides an important economic justification for their involvement. The role played by consolidators is also associated with geography. As many exporters are concentrated in Tashkent city, consolidators are hired by exporters to obtain, accumulate and control the quality of dried fruit, as well as to pay farmers on behalf of the buyer. However, some processors/exporters also buy directly from larger farmers or farmer groups. Some larger exporters also have local employees located in dried-fruit-producing regions to collect the produce during the production season.

All buyers of dried fruit control quality themselves, in addition to any other controls conducted before or afterward. What is particularly interesting is that UNCTAD's survey suggests that buyers of dried fruit rely mostly on subjective criteria to define "quality." In particular, when asked if chemicals used on the product were a main attribute of quality, no buyer of dried fruit indicated that is the case. Instead, all of them indicated that the appearance of fruit was a main quality attribute, while 88 per cent of them mentioned variety and 57 per cent indicated weight (and, relatedly, size). The fact that buyers of dried fruit from farmers in the sample did not control for chemical residues (and, possibly, neither for microbiological

⁷⁹ Those reporting growing fruit are also included in the group.

⁸⁰ Unfortunately, no data could be gathered regarding the differences in intermediation costs between consolidators acting as agents and those risking their own capital.

contamination) at the time of buying provides additional credence to the hypothesis that the existing functioning of the value chain often does not support meeting the strict quality standards that are required by high-price markets and necessary for obtaining internationally recognized certifications.⁸¹ Improving quality control for contaminants of all sorts at the source is also key to maintaining access to existing important markets like the Russian Federation and China.⁸²

Only 20.8 per cent of buyers of fruit interviewed had any certification: 14.6 per cent had ISO 9001 certification, 2.1 per cent had ISO 22000 or equivalent, and 4.1 per cent had both. Scale among buyers of fruit also matters for certification: 70 per cent of surveyed buyers had who had certification, including all of those declaring having two certifications, handled a larger volume than the median buyer. Consolidators, processors/exporters and other buyers of dried fruit are well aware of the challenges posed by quality deficiencies along the value chain. Respondents to UNCTAD's field survey ranked supplying the required quality as the third biggest challenge they face when working with customers, cited by 64.3 per cent of respondents.⁸³ Interestingly, almost no respondents (0.2 per cent) listed meeting certification requirements as a main challenge, indicating the disconnection between perceived dried fruit quality and quality standards as required by certification for export. Another interesting element emerging from UNCTAD's survey is that none of the fruit buyers surveyed, including those buying dried fruits, indicated that they buy organic products. When asked why not, the main reason was the lack of available suppliers of organic dried fruit (83.3 per cent of respondents). Dried fruit buyers, including consolidators, processors/exporters and traders selling dried fruit domestically, also play an important role in the transport of dried fruits, with 66.7 per cent of the who bought dried grapes, dried apricots or prunes reporting that they also transport the fruit. Around half of dried fruit buyers also said that they dried, stored and packaged fruit. Preserving the quality of fruit, including dried fruit, is also important during transport and storage.

Figure 15. Processing line equipment for dried grapes



Source: <https://www.vvmworks.com/>.

As mentioned earlier, the availability of temperature-controlled storage can contribute to the quality of dried fruit along the value chain and help in meeting quality standards for export to higher-value destinations. However, similar to the case for farmers, buyers of dried fruit, including consolidators and processors/exporters, often do not have access to cooled storage for dried fruit. Only 21.4 per cent of surveyed buyers of dried fruit indicated using cold storage prior to sale.

The lack of availability of cold storage facilities is not the only indication that capital deficiencies among buyers of fruit compound the issues of quality discussed for farmers. When asked what equipment they used, only 16.7 per cent of buyers indicated having equipment for processing dry fruit, mainly drying or cleaning/packaging equipment. The sequence of processing steps necessary for the export of raisins is mechanical cleaning – washing – destemming – oiling – drying – packaging; for dried apricots, it is mechanical cleaning – washing – drying – packaging; and for prunes, it is mechanical cleaning – washing – drying – oiling – packaging. Figure 15 shows the machinery used for large-scale processing of raisins for export. As such processing equipment requires high capital investment, and also requires scale to make its acquisition economically viable, only larger exporters own such equipment. Smaller exporters rent the use of such machinery from larger exporters for a fee.

⁸¹ While the evidence from UNCTAD's survey may not be conclusive due to the small sample size (48 buyers of fruit, including 42 buyers of dried fruits), the results suggest the need for additional data gathering and analysis of the way that quality is measured and evaluated along the dried fruit value chain, especially for policymaking.

⁸² In December 2020, the Federal Service for Veterinary and Phytosanitary Surveillance of Russia introduced a ban on the import of all plant products from the Fergana region of Uzbekistan due to the detection of khapra beetles in larval stage in a batch of dried apricots. See the *Tashkent Times*, 2020, "Russia bans import of all plant products from Fergana province," 12 September, available at <https://tashkenttimes.uz/national/6033-russia-bans-import-of-all-plant-products-from-fergana-province>. This ban was lifted in January 2021 following negotiations between Uzdavkarantin and Rosselkhozadzor. As a result of these negotiations, phytosanitary certificates must now also include the name and address of the manufacturer.

⁸³ The two largest challenges, as would be expected, were agreeing on prices (81 per cent of respondents) and getting paid on time (69 per cent).



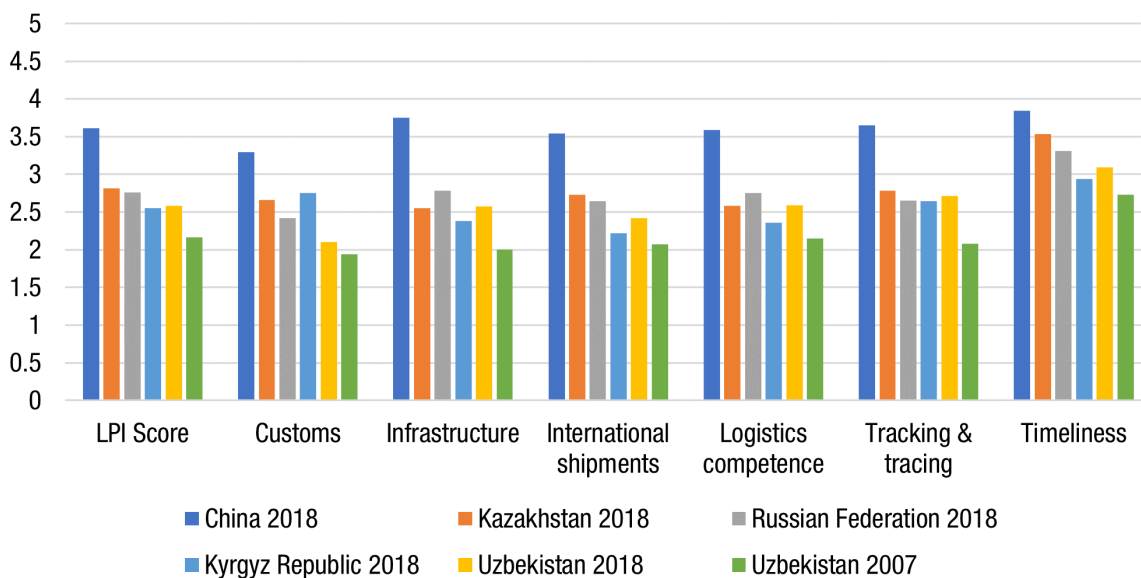
**4. Logistics and
export procedures**

Correctly structured, business processes themselves are valuable organizational assets. They enable the creation and attainment of business values as defined by organizational goals. In the area of international supply chains, notably, delays in document processing or problems with the information that flows across business processes has been recognized for over a decade as a significant factor constraining the development of trade,⁸⁴ and the importance of logistics in promoting international trade has now been empirically demonstrated.⁸⁵ These issues are even more important in the case of a landlocked developing country like Uzbekistan, so they come up in the analysis of the dried fruit industry in Uzbekistan, as will be discussed in this section.

In order to quantify and compare logistics performance in different countries, one useful tool is the World Bank's Logistics Performance Index (LPI), which is the weighted average of national logistics performance across six key dimensions:

- Efficiency of the clearance process (i.e. speed, simplicity and predictability of formalities) by border control agencies, including customs
- Quality of trade and transport-related infrastructure (e.g. ports, railroads, roads, information technology)
- Ease of arranging competitively priced shipments
- Competence and quality of logistics services (e.g. transport operators, customs brokers)
- Ability to track and trace consignments
- Timeliness of shipments in reaching their destination within the scheduled or expected delivery time.⁸⁶

Figure 16. **Regional Logistics Performance Index scores for Uzbekistan (2007 and 2018) and selected other countries, 2018**



Source: World Bank (<https://lpi.worldbank.org>).

Note: Survey respondents were asked to provide a score between 1 (worst) and 5 (best) for each indicator. See the full methodology for calculation of the Logistics Performance Index and its components at <https://wb-lpi-media.s3.amazonaws.com/LPI%20Methodology.pdf>.

Using LPI scores for 2018, figure 16 shows that although Uzbekistan has improved its logistics performance since 2007 across each dimension, and has scored higher than the Kyrgyz Republic across five of the six dimensions, the country continues to lag China, the Russian Federation and Kazakhstan across all six logistics dimensions.⁸⁷

⁸⁴ A Gani, 2017, The logistics performance effect in international trade, *The Asian Journal of Shipping and Logistics*, 33(4): 279–288, available at <https://doi.org/10.1016/j.ajsl.2017.12.012>.

⁸⁵ L Martí, R Puertas and L García, 2014, The importance of the Logistics Performance Index in international trade, *Applied Economics*, 46:24: 2982–2992, DOI: 10.1080/00036846.2014.916394

⁸⁶ World Bank, 2018, Connecting to compete 2018: Trade logistics in the global economy country score card: Uzbekistan 2018, available at <https://lpi.worldbank.org/international/scorecard/line/2/C/UZB/2018>.

⁸⁷ World Bank, 2018, Connecting to compete 2018: Trade logistics in the global economy, International LPI results, APPENDIX 2 for 2018, with bounds, available at <https://openknowledge.worldbank.org/bitstream/handle/10986/29971/LPI2018.pdf>.

International best practice to improve logistics performance rests on Business Process Analysis (BPA), which is a methodology for the analysis of a business with a view to understanding its processes and improving the efficiency and effectiveness of its operations. The methodology describes the processes involved, parties participating, information exchanged, and documents produced.⁸⁸ Evidence already suggests that trade digitization, for example, strengthens the relationship between supply chain finance and small and mid-size enterprise performance.⁸⁹ Each BPA model is designed to illustrate:

- Activities that come in a specific order and decision points
- Actors that perform those activities
- Defined inputs and outputs of each activity
- Criteria for entering and exiting the business process
- How actors relate to one another
- How information flows throughout the business process
- Associated rules and regulations
- Quantitative indicators such as the number of steps, as well as the time and cost required to complete a particular business process.⁹⁰

BPA is broadly applied by major companies, including exporters, for various consulting services and implementation solutions. Using BPA and drawing on the framework above, the World Bank has identified the characteristics of the process for the export of Uzbek dried fruit to China, as described below. The need for the exporter to engage with multiple agencies is evident.

1. Dried fruits are exported to China using the railway service,⁹¹ and passing through Kazakhstan.⁹²
2. The Importer and exporter agree and issue a commercial contract specifying the volume, value, date and terms of delivery of the goods.
3. The exporter's bank is used for registration of the contract and payment for cargo.
4. A certificate of origin is obtained from Uzbekexpertiza.
5. A phytosanitary certificate is obtained and issued by the State Inspection for Plant Quarantine.
6. A certificate of conformity is issued by Uzstandard upon the request of the importer.
7. Customs clearance is performed through the services of a licensed customs broker for these activities; the broker is registered in the E-declaration system and in the automated "Permits" system on the website of the Customs Committee of the Republic of Uzbekistan.
8. Customs clearance is done electronically via the single window system through the website of the Customs Committee of the Republic of Uzbekistan (<http://www.customs.uz>).
9. The exporter has a digital signature (EDS), which gives the exporter the opportunity to use the online services of the Single Interactive State Services Portal (www.my.gov.uz).
10. The Customs Committee is responsible for customs clearance and formalities.
11. A transit permit is obtained for the export commodities, since the shipment will pass through Kazakhstan.
12. A Logistics company is hired by the exporter to deliver the packed dried fruits to the train yard for loading.

⁸⁸ United Nations Commission for Europe, 2020, Business process analysis, available at [http://tfig.unece.org/contents/business-process-analysis.htm#:~:text=Business per cent20Process per cent20Analysis per cent20\(BPA\) per cent20is,information per cent20exchanged per cent20and per cent20documents per cent20produced](http://tfig.unece.org/contents/business-process-analysis.htm#:~:text=Business per cent20Process per cent20Analysis per cent20(BPA) per cent20is,information per cent20exchanged per cent20and per cent20documents per cent20produced).

⁸⁹ Z Ali, B Gongbing and A Mehreen, 2018, Does supply chain finance improve SMEs performance? The moderating role of trade digitization, *Business Process Management Journal*, 26(1): 150–167, available at <https://doi.org/10.1108/BPMJ-05-2018-0133>.

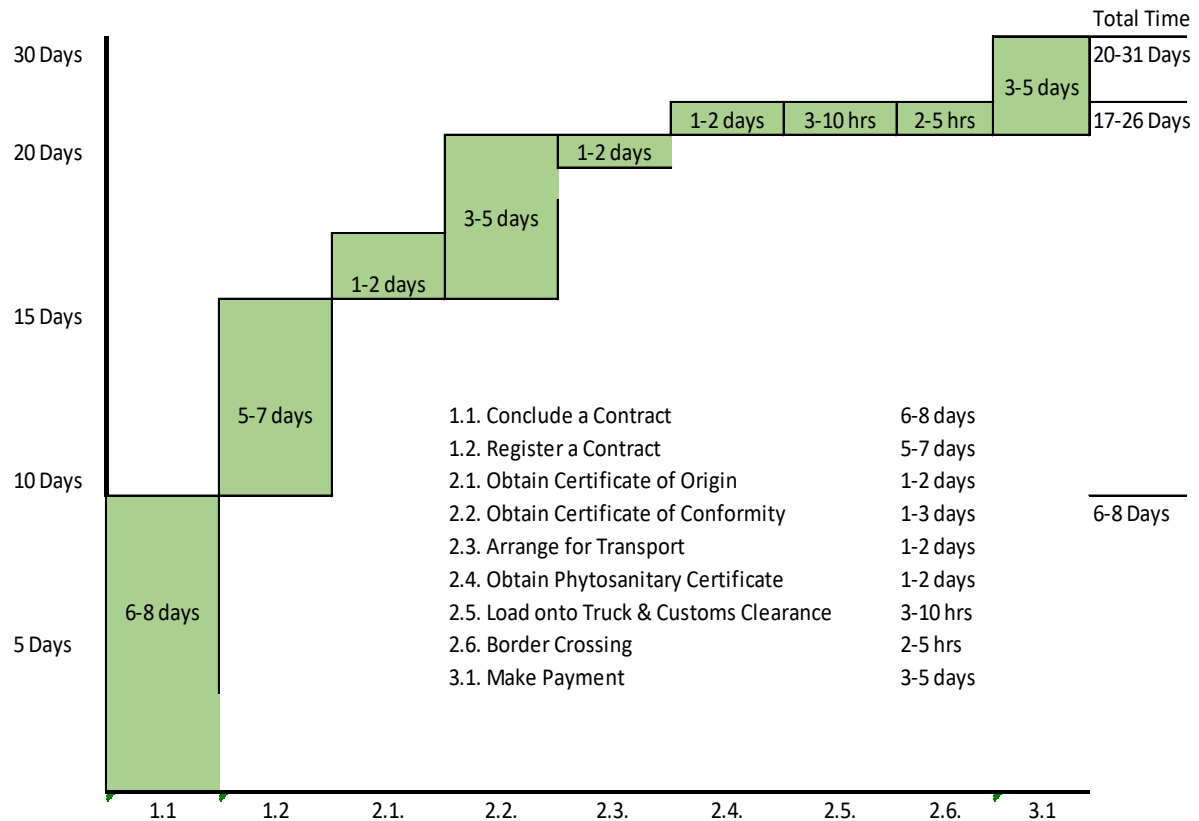
⁹⁰ United Nations Commission for Asia, 2009, Business process analysis guide to simplify trade procedures, available at <http://www.ecdc.net.cn/escap/ESCAPFILES/34 per cent20business per cent20process per cent20analysis per cent20guide per cent20to per cent20simplify per cent20trade per cent20procedures.pdf>.

⁹¹ No rail connection exists to directly link China and Uzbekistan via Kyrgyzstan.

⁹² This may explain discrepancies between export and production figures.

Dried fruits are mainly exported by Uzbekistan to China by railway, but the newly opened China-Kyrgyzstan-Uzbekistan road, part of China's Belt and Road Initiative, is expected to be a viable alternative to the railway route and to cut costs. This could further strengthen the competitiveness of Uzbek dried fruit exports. This is important because the United States Agency for International Development reported in 2018 that Uzbek exporters must keep the cost of transport below US\$0.20/kg, and that, otherwise, their products would be less competitive.

Figure 17. Time process chart for the export of dried fruit from Uzbekistan to China



Source: United Nations Economic and Social Commission for Asia and the Pacific, 2019, Readiness assessment for cross-border paperless trade: UZBEKISTAN, UNESCAP Bangkok: 6, available at <https://www.unescap.org/sites/default/files/UZB-CBPT%20Readiness-FINAL%2B.pdf>.

It is also important to mention the documentation necessary for exporting dried fruit. Application for a Certificate of Origin requires filling out the required application form and sending an email to Uzbekexpertiza that includes a scanned copy of the contract and tax invoices. The company checks the information sent electronically with the documents submitted. For export, these include:

- Original contract
- Waybill
- Invoice
- Product certificate
- Customs declaration
- Confirmation of payment for custom clearance
- Confirmation of payment of custom check
- Inspection report
- Hygiene certificate
- Phytosanitary certificate
- Quarantine report
- Inspection certificate

No fewer than 12 documents are required, yet still there is no isonomy with European Union or Chinese regulations. A certificate is then issued if Uzbekexpertiza finds all the information acceptable. The net result is that the export process is time-consuming and expensive. In UNCTAD's survey of fruit buyers, including consolidators and processors/exporters, 51 per cent of respondents who reported exporting (mainly to the Russian Federation, China and Kazakhstan) said the main regulatory challenge was documentation requirements.

The World Bank has suggested that there is considerable scope to strengthen logistics and streamline export procedures in order to create a needed comprehensive logistics information management system to support the Belt and Road

Initiative.⁹³ The World Bank has recommended that approval by both the Ministry of Investment and Foreign Trade and Uzagroexport for all export contracts is a duplication, since the information contained in the contract should also be encoded and captured in the Single Portal (Single Electronic System for Foreign Operation database) when the trader registers the contract.

For dried fruit export customs clearance, it is mandatory to have the consignment note and a phytosanitary certificate in addition to the certificate of origin, contract and invoice. This, the Uzbek exporters can manage. However, prior to Covid-19, the European Food Safety Authority was about to introduce alternative checks based on digital documents. As yet it is not clear if and when these checks will be introduced, but it is certain that, compared to their Turkish competitors, Uzbek exporters will find them more difficult to comply with. Eventually, it is possible that other important markets may follow the same path, so Uzbekistan cannot avoid investing in this area.

Another regulation requires that all foreign currency contracts in Uzbekistan be registered online. The World Bank notes that this activity notably takes the longest time to accomplish under this core business process. Currently, three copies of the original contract need to be physically signed, and contracts must be sent through the postal service or by courier, all of which contributes to the extended time to finish the process. All of this suggests that there is still room for the authorities in Uzbekistan to improve the different aspects of the logistics and export regulation processes to strengthen dried fruit exports.

⁹³ Y Peng, 2019, On the coordination between international trade and international logistics under the strategy of the “Belt and Road Initiative,” in Proceedings of the 2019 International Conference on Management Science and Industrial Economy: 149.

A close-up photograph of a variety of dried fruits. In the foreground, there are several large, round, golden-brown sultanas. Behind them, there are smaller, dark brown raisins and currants. The fruits are piled together on a white background. A white rectangular box with a dark red border is overlaid on the lower half of the image, containing the text '5. Trade standards' in a bold, dark blue font.

5. Trade standards

Trade standards are crucially important in certifying alternative aspects of product quality. A distinction should be made at the outset between (mandatory) regulatory standards and commercial standards applied by industries collectively or by individual firms. Whereas the former ensure that products meet a minimum quality and safety threshold, the latter have an important bearing on market success, particularly in high-value export markets. In view of the size of the European market for dried fruit and its relative high prices, this section focuses in particular on European Union trade standards for dried fruit and how they relate to Uzbekistan's exports of these products.

5.1 Regulatory standards for dried fruit

In relation to mandatory standards specific to the European Union, apart from customs procedures, almost all mandatory requirements related to importing processed fruit and vegetables (and food in general) are related to food safety.⁹⁴

The General Food Law specified establishment of the European Food Safety Authority (EFSA), which is responsible for the development of specific food safety legislation and the creation of a framework for official food controls. This law is based on the "farm to fork" approach. This means that all food must be traceable throughout the entire supply chain, including exporters from developing countries. The EFSA mandates that all food business operators implement the Hazard Analysis of Critical Control Points (HACCP) system in their daily operations.

The European Commission Regulation, which is regularly updated, sets maximum levels for certain contaminants in food products.⁹⁵ Exporters must be prepared to declare composition (calorific value, quantities of protein, carbohydrates [of which sugars], fat [of which saturated fat], fibre, sodium). These statistics are not only collected for official inspection but are also commonly used for marketing purposes. For dried fruit, the key required standards are publicly available.⁹⁶

As indicated by the CBI,⁹⁷ the most common requirements regarding contaminants in processed fruit and vegetables are related to microbiological contaminants (for which the European Union has a specific regulation applicable to foodstuffs), such as mycotoxins and aflatoxins. Pesticide residues are also an important concern.

There is currently insufficient agreement between the international requirements for certification outlined above and those imposed by Uzbek regulations. This puts an administrative burden on would-be exporters, who must meet multiple disparate sets of regulations to gain market access. Ultimately, resolution of this issue will require close coordination between the Uzbek authorities and those of targeted import countries. Specifically, the Uzbek government will need to establish how tests will be accredited in conjunction with agreements on the mutual acceptance of certificates.

Matters are complicated by the online presence of reporting. In the European Union, non-compliant events are reported through the Rapid Alert System for Food and Feeds (RASFF), set up in 1979, which places products from particular countries on a list of prohibited products. A notification is classified as an "alert" and is triggered when the food, feed or food contact material presents a serious risk on the market and rapid action is or might be required, generally aimed at withdrawing the product from the market.⁹⁸ The highest percentage of alerts has over time been related to the import of edible nuts and seeds, followed by fruit and vegetable products. Uzbekistan has in the past generated such alerts, for example in 2011 for too high a level of ochratoxin A in dried raisins for use in pet food.⁹⁹ In March 2014, dried grapes from Uzbekistan and Afghanistan were placed on the heightened surveillance list due to observed occurrence of ochratoxin A in different export shipments. In cases from both countries, the result was an increased level of official controls by comparison to the previous decade, with the frequency of laboratory checks at 50 per cent. In 2014 and 2015, RASFF again reported 16 cases of occurrence of ochratoxin A, of which six cases were from Afghanistan, six from Uzbekistan, one from Australia, one from Chile, one from Turkey and one from Pakistan. In 2019, although alerts were issued for Uzbek dried fruit, there were also alerts issued for dried fruit from Turkey.¹⁰⁰

⁹⁴ United States Department of Agriculture, 2019, EU-28. Food and Agricultural Import Regulations and Standards, Report FAIRS Annual Country Report, available at [https://apps.fas.usda.gov/newgainapi/api/report/downloadreportbyfilename?filename=Food per cent20and per cent20agricultural per cent20import per cent20regulations per cent20and per cent20standards per cent20report_Brussels per cent20EU-28_2-12-2019.pdf](https://apps.fas.usda.gov/newgainapi/api/report/downloadreportbyfilename?filename=Food%20and%20agricultural%20import%20regulations%20and%20standards%20report_Brussels%20EU-28_2-12-2019.pdf).

⁹⁵ European Commission (2006) COMMISSION REGULATION (EC) No. 1881/2006 of 19 December 2006 setting maximum levels for certain contaminants in foodstuffs, available at <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=celex:32006R1881>

⁹⁶ CBI, 2020, The European market for dried grapes, available at <https://www.cbi.eu/market-information/processed-fruit-vegetables-edible-nuts/dried-grapes/europe>.

⁹⁷ CBI, 2020, What requirements must processed fruit and vegetables comply with to be allowed on the European market?, available at <https://www.cbi.eu/market-information/processed-fruit-vegetables-edible-nuts/buyer-requirements>

⁹⁸ A Kowalska and L Manning, 2020, Using the rapid alert system for food and feed: Potential benefits and problems on data interpretation, in *Critical Reviews in Food Science and Nutrition*, available at DOI: 10.1080/10408398.2020.1747978.

⁹⁹ Ochratoxin A is a mycotoxin produced by fungi in a variety of agricultural products.

¹⁰⁰ Food World, 2019, RASFF alerts – ochratoxin A – dried grapes – dried figs – dried raisins – children's organic fruit and oats, available at <https://kswfoodmicro.com/2019/11/22/rasff-alerts-ochratoxin-a-dried-grapes-dried-figs-dried-raisins-childrens-organic-fruit-and-oat/>.

Ochratoxin A in dried grapes results from contamination and growth of ochratoxigenic fungi, which can flourish in humid weather during drying. Suppression of ochratoxin A consequently depends upon having adequate facilities for drying and storage. European Union regulations also require exporters to the European Union to develop ochratoxin control systems based on the HACCP,¹⁰¹ and make them available for auditing by importers. Although dried grapes are not on the list of allergens, notification applies for sulphur dioxide and sulphites at concentrations of more than 10 mg/kg in terms of the total SO₂.

The European Union has set minimum residue levels for pesticides in and on food products, and also regularly publishes a list of approved pesticides that are authorized for use in the European Union. It is common that European buyers ask for tests for more than 500 different pesticide residues. It is therefore common practice in Europe for deliveries to be accompanied with documentation from accredited laboratories that is not older than six months (e.g. the Zerya scheme).

Packaging requirements are another area where the European Union sets minimum standards for imports (e.g. packaging made of wood or vegetable materials may be subjected to phytosanitary controls). In addition, individual European Union countries may impose their own regulations. For example, Germany has implemented an updated version of its waste management law, VerpackG.¹⁰² This requires producers, importers and distributors of consumer products, including food stuffs, to enter into a contract for recycling of packaging material with one of the licensed recycling companies. In addition, manufacturers are obliged to register with a newly created national authority, the Zentrale Stelle, before placing packaged products on the market. Registered manufacturers must report a range of detailed packaging-related data to the Zentrale Stelle.¹⁰³

5.2 Commercial standards for dried fruit

In terms of commercial standards, there are three important points to mention.

First are the optional standards that affix to the mandatory ones. For example, for dried grapes, these include moisture and size requirements. Although the European Union marketing standard defines maximum moisture content, it is a common industry requirement that moisture be lower, usually 14-17 per cent at the time of packing. As to size, there is no official European Union sizing standard, so importers sometimes refer to the United States standards for processed raisins. Hence, Uzbek exporters willing to diversify their exports should be prepared to meet such stringent commercial moisture content standards. These additional requirements for both moisture content and size often require exporters to de facto meet standards that exceed the minimum regulatory standards imposed by any given jurisdiction.

Second, some European buyers have their own control lists, derived in part from supermarket requirements, in turn leading to a number of different quality requests that Uzbek dried fruit have sometimes not met, according to the European Federation of the Trade in Dried Fruit, Edible Nuts, Processed Fruit and Vegetables and Processed Fishery Products, Honey and Similar Foodstuffs (FRUCOM). For example, the Danish-operated supermarket chains Coop (Switzerland) and Aldi and Lidl (Germany) request even lower levels of pesticide residues than legally required: Lidl requires 66 per cent less residues, Coop 50 per cent less, and Aldi 20 per cent-30 per cent less than mandated by European Union legislation.¹⁰⁴

Third, the United Nations Development Programme's 2016 research identified difficulties with the introduction of the HACCP, ISO, GAP elements of the Global Food Safety Initiative¹⁰⁵ and other quality assurance systems. Food safety certification is a common request by European Union importers. The most common certification schemes accepted on the European markets are International Featured Standards (IFS), FSSC22000,¹⁰⁶ and the British Retail Consortium (BRC). This is complicated by the fact that, unlike the homogenous situation for China, British buyers often require the BRC, while the IFS is more common for German retailers.¹⁰⁷

¹⁰¹ See Official Journal of the European Union 59, 31 July 2016, available at <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:C:2016:278:FULL&from=HU> (accessed on 27 January 2021).

¹⁰² The USDA specifically identified this factor in relation to dried fruit and nut exports to Germany.

¹⁰³ United States Department of Agriculture, 2020, Product brief: Dried fruit and nuts, 13 January, available at [https://apps.fas.usda.gov/newgainapi/api/Report/DownloadReportByFileName?fileName=Product per cent20Brief per cent20Dried per cent20Fruits per cent20and per cent20Nuts_Berlin_Germany_01-07-2020](https://apps.fas.usda.gov/newgainapi/api/Report/DownloadReportByFileName?fileName=Product%20Brief%20Dried%20Fruits%20and%20Nuts_Berlin_Germany_01-07-2020).

¹⁰⁴ K Askew, Danish supermarkets react to consumer concern over pesticide residues, FOODNavigator.com, 2 May 2019, available at <https://www.foodnavigator.com/Article/2019/05/03/Danish-supermarkets-react-to-consumer-concern-over-pesticide-residues>.

¹⁰⁵ See Global Food Safety Initiative, Recognition: Once certified, recognised everywhere, available at <https://mygfsi.com/how-to-implement/recognition/>.

¹⁰⁶ See Foundation Food Safety System Certification, Scheme, available at <https://www.fssc22000.com/scheme/>.

¹⁰⁷ See International Featured Standards, IFS Food 6.1, available at <https://www.ifs-certification.com/index.php/en/standards/251-ifs-food-en>.

5.3 Uzbekistan and international standards for dried fruit

Although there has been significant progress in recent years, even with adequate knowledge there remains a gap between what is required by the European Union (e.g. restrictions for cadmium) and the services provided by Uzbek laboratories.¹⁰⁸ This applies to the tests required by European markets for some by-products and for the identification of minimum residual level for pesticides, both of which are not performed in Uzbek laboratories. For organic fruit, virtually no pesticides are allowed at all. Tests for foreign matter may also not be as stringent as required by the European Union (through IFOAM Organics Europe). To succeed with organic certification, Uzbek exporters would have to pay a certification fee to any of the European Union-recognized control bodies that are approved by European Union regulation (EC) No. 1235/2008 and ensure the issuance of a certificate in compliance with ISO standard 65/EN 45011. The Chinese equivalent is administered through the Certification and Accreditation Administration of the People's Republic of China, an organization of great potential importance for the export of dried fruit from Uzbekistan to China.

Turning to commercial standards, only 24 Uzbek enterprises were ISO 22000 certified in 2017, and the cost of introduction at the farm level was evidently very high. A few Uzbek dried fruit export companies have engaged in global certification. For example, Gold Dried Fruits, has the GAP Certificate and the Certificate of Food Safety Management Systems ISO 22000.¹⁰⁹ But such companies are the exception rather than the rule, and the standards to which they adhere have more to do with manufactured and packaged products than dried fruit.

Aside from food safety and product quality requests, there is an increasing demand for proof of sustainable and ethical business practices, such as eco-standards on food (e.g. NutriScore) or production (e.g. EcoVadis, Fair Trade, Business Social Compliance Initiative and SEDEX Members Ethical Trade Audit), or specific certifications such as the Global Risk Assessment for Social Practices, Global Social Compliance Programme, or the FAO's Sustainability Assessment of Food and Agriculture. Also, at the Anuga trade fair in 2019,¹¹⁰ exhibitors were classified in one or more of 11 trend categories according to their product range, namely functional and free-from products, halal food, kosher products, non-GMO products, organic products, products with protected designations of origin, ready-to-eat products, superfoods, fair trade products, vegan products and/or vegetarian products.¹¹¹ Most Uzbek exporters would be unable to be featured in any of these categories. It is of little surprise therefore that there were only two Uzbek exhibitors at Anuga 2019, Garden Cells¹¹² and Namangan Agro Logistics,¹¹³ neither of which exports dried fruits.

All in all, meeting the quality and food safety requirements of more stringent markets like the European Union remains a challenge for many Uzbek exporters, for different reasons. One important challenge remains the fact that, as interviews with exporters indicate, only some exporters test dried fruits for sulphur dioxide content, pesticide residues, heavy metal contaminants and other chemical content requirements. Additionally, as indicated in section 3 of this report, the way buyers of dried fruit measure various elements when they buy dried fruit from farmers is very subjective and does not contribute to the capacity of the industry to meet either mandatory or commercial standards. These problems with quality production and control, as discussed in section 3, affect the entire dried fruit value chain in Uzbekistan. In UNCTAD's survey of fruit buyers, including consolidators and processors/exporters, 68.8 per cent of interviewed stakeholders who said they export indicated that "safety and quality" as well as certification issues topped the list of constraints they face when exporting.

A related challenge in terms of market access involves the recognition of quality certificates or laboratory analysis results issued in Uzbekistan. As Uzbekistan is a member of the Commonwealth of Independent States (CIS), most of the certificates and laboratory analysis results are accepted by other CIS countries, but the European Union does not recognize them (Regulation (EC) No 178/2002). Another market access challenge is related to the commercial standards of important retailers in destination markets, even in traditional markets like the Russian Federation. As the supermarket chains in these markets are generally expanding quality and food safety requirements, the requirements for exports of dried fruit from Uzbekistan are also becoming more stringent.¹¹⁴

As mentioned above, China is an important destination for exports of dried grapes from Uzbekistan. In order to strengthen exports of dried fruit to this market Uzbekistan has signed a phytosanitary agreement with China covering different fruits

¹⁰⁸ World Bank, 2020, Central Asia's horticulture sector capitalizing on new export opportunities in Chinese and Russian Markets: 44.

¹⁰⁹ <http://gdf.uz/en/o-kompanii>

¹¹⁰ Anuga is held every two years in Cologne in Germany.

¹¹¹ CBI, 2019, CBI presents latest market insights at largest trade fair for food, available at <https://www.cbi.eu/news/cbi-presents-latest-market-insights-largest-trade-fair-food>.

¹¹² See the company website at www.gardencells.com.

¹¹³ See the company website at www.mevas.uz.

¹¹⁴ Center for Economic Research, Increasing production and export potential horticultural industry of Uzbekistan: Problems and perspectives, Analytical report 9/2016. Tashkent.

and vegetables that are now approved by the Chinese authorities to be exported to China. Further negotiations are under way to increase the number of approved fruits and vegetables.¹¹⁵

5.4 Fostering the capacity of Uzbek dried fruit exporters to meet standards

The path to a larger share for Uzbekistan in the global dried fruit export market undoubtedly goes through the more widespread adoption of international standards. Given the gradually increasing level of exports to China and other Asian countries, particular attention to – and dialogue with – the standard-setters in those countries should reap dividends, especially if that work is carried out in conjunction with a reputable international company experienced in adjusting domestic production to international standards. Such dialogue and cooperation could help to raise the standards of Uzbek laboratories, resolve current issues surrounding the standards of Uzbek dried fruit exports, and reach the level of certification approval that Turkey has been able to achieve. This is evidently a potential role for government intervention in support of the dried fruit sector.

The most important revelation from research, however, has been the way in which to view certification and trade standards. They should no longer be viewed as uni-dimensional, statutory, and mandatory, and set by a national government or by supra-governmental institutions such as the European Union. Rather, the standards should be viewed as a complex game between exporters, importers and retailers, with governments and numerous other certifying institutions influencing supply to a market. This is not to say that traditional mandatory standards do not exist, or to suggest that conforming to them is not vital. But it is to say that adhering to them and expecting automatic entry into a market, especially a developed-country market (including the Russian Federation and China), is no longer remotely realistic. This serves to reinforce the point that the question of standards must therefore not be envisaged as a matter only of conforming to official published standards such as those of the European Union. Instead, it is much more nuanced, and there are significant costs in adhering to all of the standards, mandatory and commercial. A client-oriented exporters' association could achieve a lot in this space, especially if the government were to provide support to cover translation and a centralized database on standards. Another possibility would be for the authorities to adopt an international standard as the target for exporters in Uzbekistan, as well as a transition plan to meet such a standard.

Interviews with exporters suggest that several of them are aware of the stringent market requirements of the European Union, Japan and other high-price markets. However, exporters find the requirements imposed by mandatory and commercial standards of these markets difficult to meet due to limited control and management over the quality of dried fruit along the entire value chain, a process that starts with production and continues with harvesting and post-harvesting practices and transport before processing and export.

In particular, meeting full “farm-to-fork” traceability requirements, as increasingly demanded by consumers in high-price markets, continues to be challenging for Uzbek exporters. Following up on the discussion in section 3, collective and integrated efforts would be required to foster quality control along the entire value chain in order to meet these requirements. Meeting key quality standards that are internationally accepted such as United Nations Economic Commission for Europe Quality Standards, European Union Marketing Standards and United States Grade Standards along the entire dried fruit value chain could greatly strengthen the capacity of Uzbek exporters to be certified and thus enable them to successfully sell to high-price markets like the European Union or Japan.

There are different ways that policy action can strengthen quality along the value chain. The first is to provide enhanced extension services and productive rural credit. Extension services directly enhance quality by fostering better agricultural practices, promoting the adoption of new varieties, improving farmers' understanding of issues and solutions to contaminants, and promoting more controlled drying processes such as those using a solar-energy-powered drier. Extension services can also increase the capacity of farmers to understand quality standards for fruit (both fresh and dry) and how to meet them in practical ways. For example, farmers could be trained on (i) understanding objective, quantifiable parameters of quality; (ii) how to measure those parameters using available tools; and (iii) the impact on quality of different steps in the value chain such as production, drying, storage and transport. In short, extension services can serve to disseminate best practices among farmers so that quality is maximized along the value chain. Such efforts by extension services could be complemented by efforts from exporters to publicize buying requirements through an information campaign coordinated with an exporters' association.

Second, strengthening fruit producer groups can help address several of the challenges identified in the fruit value chain in

¹¹⁵ See the State Inspection for Plant Quarantine at the Office of Ministers of the Republic of Uzbekistan, Special requirements, available at <https://karantin.uz/ru/export/xitoy>; see also EUR-Lex: Access to European law, available at <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32002R0178>.

Uzbekistan. Producer groups can lead to higher fruit prices, lower input costs, co-insurance for credit, facilitating extension services, and other potential benefits. Given that most producers of dried fruit are small, cooperative membership can particularly help in providing the aggregation and quality control roles that would allow producers to sell to larger exporters through the cooperative. Producer groups could also help small farmers get unbiased market information about particular prices. Finally, producer groups could facilitate contractual relationships between producers and buyers of fruit, which can be hindered by legal issues or other barriers. As indicated in section 3, contracts between producers and buyers of fruit and buyers are currently rare.

5.5 Export promotion strategy for dried fruits

There is room for Uzbekistan to improve its value added in dried fruits through marketing. The leading suppliers of dried fruit as a group, such as Chile and the United States (especially for prunes) and Turkey (especially for apricots), are official members of international trade associations (e.g. FRUCOM or the international Nut and Dried Fruit Council). This gives them the capacity to communicate frequently and directly with buyers – and potentially even influence European Union decisions for some regulatory requirements. For example, Turkey has a dried fruit exporters' association with 18 members,¹¹⁶ and engages actively in monitoring and communicating on issues related to regulations affecting the industry.

An important point that emerges from the analysis of the size and recent evolution of the world's dried fruit market, and of the export pattern of Uzbekistan within this market, is that export promotion efforts could benefit from targeting specific markets. Three particular priorities could be (i) European Union countries and Japan, which record both high import volumes and high prices; (ii) untapped growth markets like India and Viet Nam; and (iii) further expansion into growth markets where there is already penetration (especially of dried grapes), such as the Russian Federation, China and Saudi Arabia. As discussed in section 2, these markets have interesting potential in terms of size, prices and/or growth. There would be considerable logic in bringing together Uzbek exporters, almost irrespective of their size, into an active exporters' association that would provide valuable services to both current and prospective exporters, focused specifically on dried fruit.

A significant number of Uzbek exporters have limited or no contact with European importers because the research cost of reaching out to those importers significantly outweighs any potential price benefit they would achieve, especially when combined with the issue of standards discussed above. For these exporters, and for exporters in general who want to lower their search and transaction costs to diversify their contacts with importers, having access to a centralized body with information and contacts of this nature could be very valuable, especially in light of frequent regulatory changes. Also, market access requirements such as the Codes of Hygienic Practice published by Codex Alimentarius, the European Union minimum residue levels database, and the European Association of Fruit and Vegetables Processors' guidelines for minimizing the risk of microbial contamination of berries are all published in English (supplemented by the other European Union languages) but not in Uzbek, or even Russian. These documents could be translated by an exporters' association and made available to all members.

One approach could be through FRUCOM, starting with some genuine evidence that a subset of Uzbek companies collectively can match European Union import standards, and then using the Uzbek exporters' association as a "shop window" for members of FRUCOM and national institutions such as the United Kingdom National Dried Fruit Trade Association, the Netherlands Association for the Trade of the Dried Fruit, Spices and Allied Products or Waren-Verein.

There is a genuine opportunity for Uzbekistan to strengthen its national brand in relation to dried fruits.¹¹⁷ This might seem difficult to achieve, but evidence suggests that, provided quick results are neither expected nor demanded, countries have been able to achieve this kind of turnaround in the past with agricultural products – rice exports from the United States are one example, and Dakado avocados exports from Viet Nam are another.¹¹⁸ Uzbekistan is already a very significant grape exporter, but international awareness of this fact is extremely limited. Dried grapes from Uzbekistan as a marketing endeavour would involve many aspects, not least close attention to the variety of grape grown – Moscatel and Black Corinth are the most well-known – as well as phytosanitary and standards issues. However, financial support from donors may be available for this initiative, and the time to start planning for it is probably now.

One possibility would be to start such a branding exercise focusing on dried grapes. This has two advantages: first, it builds on Uzbekistan's existing strength in this product, and second, it reduces the risk of facing strong established incumbents, as in the case of dried apricots. Turkish apricots fetch a significant price premium over Uzbek apricots in

¹¹⁶ <http://www.kumib.org.tr/en/home.html>.

¹¹⁷ C Docherty, 2011, Branding agricultural commodities: The development case for adding value through branding, International Institute for Environment and Development, available at <https://pubs.iied.org/pdfs/16509IIED.pdf>.

¹¹⁸ M Boomsma and M Arnoldus, 2008, Branding for development, KIT Working Paper Series C2, Amsterdam, available at <http://www.bibalex.org/Search4Dev/files/292090/122243.pdf>.

different markets. If such a price premium could be opened up for Uzbek dried grapes, as currently exists for South Africa, the impact on Uzbek exports would be considerable. The potential objection that could be raised is that Turkey may have transferred its strong market position in fresh apricots across to dried apricots, but the success of China and Afghanistan in exporting dried grapes suggests that there is not necessarily a need to have a strong export presence in fresh grapes to be a successful exporter of dried grapes.

A part of these price premia is connected with branding. The exact impact of branding on pricing, though recognized throughout the dried fruit market, has not been quantified, principally because of the absence of any internationally recognized scale by which to measure the extent to which dried fruit is branded, but also because the branding is most obvious at the retail level and not evident at the national level. Clearly, however, international brands, such as Angas Park in Australia,¹¹⁹ do extract premium prices from their clearly identified packaged products. In China, although the main drivers for fruit consumption are appearance, flavour and price, the country of origin and packaging are already recognized as affecting consumers' purchasing decisions.¹²⁰ Currently, the value added from packaging of dried fruit exports from Uzbekistan depends on individual agreements with European traders – an example is a joint venture agreed upon in December 2019 for the packing of Uzbek dried fruits and vegetables destined for the French market.¹²¹ There may well be scope for the extension and harmonization of this kind of agreement.

In addition, there are real differentiations of variety (as in the case of prunes) that are connected to limitations to export performance. Countries such as Australia have taken a proactive stance with regard to their domestic varieties of plums,¹²² deliberately implementing efforts to globalize them through the Associated International Group of Nurseries.¹²³ Uzbekistan could look at replicating this process, or if that effort proves ineffective, at taking steps to change the varieties grown, at least in part and for export, where this is climatically and logistically feasible.

¹¹⁹ See the company website at www.angaspark.com.au.

¹²⁰ EUSME Centre, 2019, The imported fruit market in China, available at <https://www.eusmecentre.org.cn/report/imported-fruit-market-china>.

¹²¹ Trend News Agency, 2019, Joint venture for export of Uzbekistan's fruits, vegetables created in France, available at <https://en.trend.az/business/tenders/3165750.html>.

¹²² Fruit Growers News, 2020, Australian-bred plum varieties set for global commercialization, 21 July, available at <https://fruitgrowersnews.com/news/australian-bred-plum-varieties-set-for-global-commercialization/>.

¹²³ The organization's website is available at <https://aign.org/>.



6. Conclusions

There are measures the government can take in conjunction with farmers and traders that can improve the prospects for Uzbek dried fruit exports, even in the challenging context of the next few years marked by the Covid-19 pandemic and its effects going forward.

The effective route forward for Uzbekistan is to capitalize on its existing strengths and promote dried fruit exports to the Russian Federation and China in the short term, while progressively building strengths to tap higher-value markets like specific European Union countries and Japan, or growth markets like India. This policy strategy is supported by the available data, as shown by the trade analysis of the international dried fruit market presented in section 2 of this study. Aside from a geographic focus, however, there are over-arching policy initiatives that may be of considerable assistance in promoting dried fruit exports from Uzbekistan, as follows:

- **The establishment of an exporters' association active in providing export support services to current and potential exporters.** Such an association could be modelled on successful existing experiences around the world (e.g. Turkey). An effective, service-driven exporters' association could provide such services as centralized market intelligence to its members regarding opportunities, prices, and related market statistics. Previous work by the CBI has suggested that Uzbek dried fruit exporters should monitor a range of industry websites, including those of the Dried Fruit Promotion Committee of Turkey, the Raisins Agricultural Sales Cooperative Union, the California Raisin Industry, and the Iran Dried Fruit Exporters Association. However, although such sites do provide relevant information, they are unlikely to substitute completely for personal engagement. In terms of international market monitoring, providing members with information on production trends could be very useful. For example, for dried grapes there is a real need to monitor the output of key producers like Turkey and the United States, and the production of currants in Greece, as these determine world supply and price developments. In countries such as the United States, national departments of agriculture play an important role in this activity – the USDA is the most well-known, but other countries take similar steps, albeit less publicly. Other important potential services that an exporters' association could provide include acting as a repository and provider of sector-specific regulations, giving advice on attaining certification, and offering other associated services that require industry-specific knowledge. An important caveat for an exporters' association to work effectively would be coordination between the national Ministry of Agriculture and the association to avoid overlapping efforts, and to ensure data sharing.
- **Implementation of a comprehensive strategy to support quality all along the value chain.** The alternative measures discussed in sections 3 and 5 of this study include (i) strengthening technical extension services to farmers and buyers of fruit, with a focus on how the different steps of the fruit value chain affect the quality of exportable dried fruit, as well as other policy interventions in relevant areas (e.g. fostering the availability of cold storage, adequate drying equipment) along the value chain that can improve quality; and (ii) fostering development of well-managed and effective producer groups that can provide aggregation services (potentially leading in turn to higher fruit prices), lower input costs, provide co-insurance for credit, and facilitate contracting with buyers of fruit, among other potential benefits. Importantly, the road to export certification starts with input providers to farms, and continues through the entire value chain, as discussed in section 3. A consistent, effective and sustainable approach to certification (see below) requires the design and implementation of an effective “total quality” roadmap along the value chain with associated policy measures. For example, production-level certifications should be promoted with the same vigour as export-level certification. Finally, export measures that support quality along the value chain – such as defining the different dimensions of “quality” and their measurement, using chemicals such as herbicides and pesticides, examining different methods of drying, and fostering the use of idoneous storage, among others – should be consistent and coordinated among the different policy actors involved.
- **Improvements to country logistics and transport systems.** Efforts in this regard could include, in terms of transport to China and parts of the Russian Federation, the adoption of road transport in place of existing shipping practices.¹²⁴ This could result in gains in both reliability and decreased cost. Streamlined export registration would help exporters avoid the use of the land route via Kazakhstan. Completion of the rail connection between China and Uzbekistan via Kyrgyzstan will also be important. An indication of the benefits to be gained can be seen from the fact that, currently, Uzbekistan is connected to China by railroad through Kazakhstan's Khorgos via Almaty, but that route is 20 per cent more expensive compared to the existing option via Kyrgyzstan, despite the fact that midway cargo needs to be moved by trucks.¹²⁵
- **Develop wider and deeper relationships with Russian and Chinese importers.** The key role here is likely to be played by the Uzbek Commercial Attachés in Moscow and Beijing. These would work alongside the Chamber of Commerce, the Trade Ministry, and the Export Promotions Agency, with the possible involvement of other government agencies and industry associations. The diversity of actors involved implies a need to coordinate

¹²⁴ International Transport Forum, 2019, Enhancing connectivity and freight in Central Asia, ITF Policy Paper No. 71, OECD Publishing, Paris.

¹²⁵ I Hasimova, 2020, The China-Kyrgyzstan-Uzbekistan transport corridor stretches further into China, The Diplomat, 22 June, available at <https://thediplomat.com/2020/06/the-china-kyrgyzstan-uzbekistan-transport-corridor-stretches-further-into-china/>.

promotional efforts. One approach to coordination is to develop a common marketing plan for presentation at Russian and Chinese conferences and trade exhibitions. This could be supplemented with the ready availability of samples and technical adherence to Russian and Chinese import standards.

Overhaul domestic production procedures to comply with international certification standards and requirements. This could start with efforts to meet regulatory import requirements of targeted importing destinations:

- a. Define a set of target countries for export
- b. Define the (minimum) consolidated regulatory requirements for exports to the targeted countries for export
- c. Decide on which set of commercial requirements (e.g. supermarkets) that exceed consolidated requirements to meet
- d. Establish best practices to meet the full set of accommodated requirements for export
- e. Institute a close, fully transparent (therefore probably contracted out) and comprehensive dialogue with the relevant certification institutions in all relevant jurisdictions
- f. Design and implement a plan to produce domestic certification in complete alignment with the full set of accommodated requirements, modifying the plan as dialogue with importers continues
- g. Since (at least initially) not all dried fruit exports would necessarily satisfy the requirements for certification and points (b) to (e) above, start the plan with a pilot programme that must be thoroughly documented and justified through commercial success.

Finally, it must be noted that the vast majority of exports by value in the global dried fruit market are dried grapes, where Uzbekistan is engaged in close and continued competition with leading exporters across different markets, as indicated in section 2. On the other hand, Uzbekistan also has opportunities available as an exporter of prunes and dried apricots to specific markets.

Nuanced policies will be required for the different market positions of each different fruit, as discussed in detail in this study. In particular, Uzbekistan's position in relation to the production and exports of dried grapes is at present much stronger than for dried apricots or prunes. There is no universal perception of any individual country's brand advantage across all markets, including high-volume, high-price and growth markets, and market concentration on specific exporting countries is lower than in the case of prunes and, especially, that of dried apricots.

Therefore, after consistently and persistently implementing the general measures above, Uzbekistan can and should develop its own national dried fruit branding strategy specifically aimed at high-value and high-growth import markets, especially focused on dried grapes. This effort should draw on the strength of renewed cooperation between the private and public sectors, boldly aiming to follow the trajectory of the development and national branding of the Turkish apricot market with the aim of making dried grapes from Uzbekistan an international reference standard.

Appendix 1. International Trade Centre world dried fruit trade data¹²⁶

A1.1 Exports of dried grapes by country

Exporters	Exported value in 2015	Exported value in 2016	Exported value in 2017	Exported value in 2018	Exported value in 2019	Per cent share in 2019
World	1,765,805	1,786,195	1,560,426	1,809,500	1,864,613	100.0
Turkey	428,999	426,082	408,211	490,407	521,645	28.0
United States	336,932	322,989	308,024	284,012	257,599	13.8
Chile	133,366	116,856	116,574	155,686	155,046	8.3
Afghanistan	80,248	56,621		94,153	149,515	8.0
South Africa	111,305	99,587	99,769	151,714	118,709	6.4
Uzbekistan			61,565	58,811	104,566	5.6
Iran, Islamic Republic of	252,992	281,254	152,709	152,938	93,382	5.0
China	56,891	62,244	29,387	45,736	74,200	4.0
Argentina	47,899	53,361	49,341	82,344	73,409	3.9
Greece	39,757	38,289	41,474	50,874	53,800	2.9
Netherlands	27,359	33,101	26,350	31,079	39,847	2.1
India	26,499	44,509	33,816	43,142	36,518	2.0
United Arab Emirates	13,128	13,380	20,153	30,523	32,657	1.8
Germany	28,002	31,040	24,395	24,605	29,236	1.6
Australia	12,899	17,671	12,761	19,441	23,214	1.2
Others	169,529	189,211	175,897	94,035	101,270	5.4

Source: International Trade Centre Trade Map.

Note: All export values in thousands of United States dollars.

¹²⁶ Source of tables A1.1 to A1.9: ITC Trade Map, accessed in November 2020. All countries exporting or importing at least 1 per cent of the world total are included in each of tables A1.1 to A1.6. Any country to which exports by value from Uzbekistan are at least 1 per cent of the relevant product is included in tables A1.7 to A1.9. All export and import values are in thousands of United States dollars, and all net weight values are in tons.

A1.2 Imports of dried grapes by country

Importers	Imported value in 2015	Imported value in 2016	Imported value in 2017	Imported value in 2018	Imported value in 2019	Per cent share in 2019
World	1,709,318	1,725,057	1,596,696	1,830,571	1,845,521	100.0
United Kingdom	221,394	218,540	191,638	199,064	222,041	12.0
Germany	161,436	166,933	144,518	161,756	169,749	9.2
India	53,222	55,372	76,327	95,181	122,416	6.6
Netherlands	115,634	101,932	95,707	108,539	116,637	6.3
Japan	93,449	90,082	91,098	116,215	106,343	5.8
Canada	62,483	64,850	60,348	63,649	66,738	3.6
France	57,126	59,458	57,604	58,386	66,039	3.6
China	50,951	55,128	43,633	52,951	58,806	3.2
Brazil	40,604	42,013	43,532	49,747	55,971	3.0
Italy	44,218	43,233	37,801	41,387	48,699	2.6
Russian Federation	29,477	48,608	37,002	40,774	47,357	2.6
United States	45,519	35,110	33,182	87,517	42,474	2.3
Australia	35,536	36,030	36,773	37,093	37,837	2.1
Spain	33,180	39,705	30,747	34,590	36,686	2.0
Belgium	39,816	42,723	37,399	41,330	35,358	1.9
Poland	25,930	28,956	25,435	25,119	32,555	1.8
United Arab Emirates	28,784	28,886	28,722	29,789	29,875	1.6
Saudi Arabia	17,740	21,719	29,524	27,608	24,918	1.4
Sweden	24,064	23,771	18,480	21,567	24,142	1.3
Denmark	24,164	21,580	18,690	19,296	20,016	1.1
Austria	16,538	16,772	14,229	13,861	18,286	1.0
Colombia	10,446	12,327	13,904	15,790	17,640	1.0
Others	477,607	471,329	430,403	489,362	444,938	24.1

Source: International Trade Centre Trade Map.

Note: All import values in thousands of United States dollars, cost, insurance and freight.

A1.3 Exports of prunes by country

Exporters	Exported value in 2015	Exported value in 2016	Exported value in 2017	Exported value in 2018	Exported value in 2019	Per cent share in 2019
World	629,184	548,178	548,227	528,806	468,323	100.0
Chile	200,336	157,949	175,007	163,278	145,558	31.1
United States	183,030	163,642	140,138	142,248	126,274	27.0
Argentina	63,041	57,618	45,123	56,377	43,033	9.2
France	38,406	36,162	44,339	40,588	39,708	8.5
Uzbekistan			17,784	17,095	15,844	3.4
Spain	13,638	12,992	12,506	6,414	13,443	2.9
Netherlands	15,622	13,836	16,993	12,639	12,311	2.6
Germany	22,458	15,801	14,170	12,036	11,296	2.4
Poland	4,368	4,914	4,464	7,444	8,210	1.8
Serbia	11,965	10,878	10,601	7,268	7,519	1.6
Moldova, Republic of	6,069	6,156	8,286	6,546	7,192	1.5
Others	70,251	68,230	58,816	56,873	37,935	8.1

Source: International Trade Centre Trade Map.

Note: All export values in thousands of United States dollars.

A1.4 Imports of prunes by country

Importers	Imported value in 2015	Imported value in 2016	Imported value in 2017	Imported value in 2018	Imported value in 2019	Per cent share in 2019
World	605,701	524,509	518,968	504,104	433,642	100.0
Germany	64,903	49,377	49,344	41,156	35,510	8.2
Russian Federation	26,338	22,902	27,269	37,015	30,321	7.0
Italy	42,442	36,175	35,790	28,592	29,209	6.7
Japan	36,540	34,842	27,978	31,128	26,625	6.1
Poland	27,838	18,277	20,898	24,676	21,315	4.9
United Kingdom	45,889	38,052	24,246	23,446	21,224	4.9
Brazil	22,780	20,235	22,704	19,699	18,894	4.4
Spain	24,429	20,862	21,856	20,314	17,760	4.1
Mexico	32,059	19,577	26,788	25,285	16,469	3.8
Canada	18,894	16,405	17,296	15,427	15,654	3.6
China	3,272	6,286	7,722	11,366	15,270	3.5
Netherlands	19,124	17,841	16,250	14,547	13,795	3.2
Algeria	10,595	11,369	13,897	6,406	7,976	1.8
Australia	9,873	9,740	9,189	10,075	7,262	1.7
France	10,907	11,518	11,227	8,841	7,167	1.7
Belgium	8,350	8,035	10,354	8,755	6,817	1.6
Korea, Republic of	4,388	4,617	3,895	4,699	5,746	1.3
United States	33,915	35,192	28,067	25,245	5,583	1.3
Greece	5,321	5,664	5,946	5,823	5,288	1.2
Sweden	6,431	6,490	6,033	5,824	5,281	1.2
Israel	9,103	7,606	5,144	5,531	5,176	1.2
Austria	8,046	7,189	6,563	6,825	5,061	1.2
Denmark	7,593	6,162	5,583	5,607	5,036	1.2
Egypt	3,063	2,872	835	3,055	4,537	1.0
Chile	4,182	1,537	164	1,277	4,336	1.0
Switzerland	5,352	4,552	4,247	4,272	4,316	1.0
Norway	4,195	3,839	4,571	3,349	4,175	1.0
Others	109,879	97,296	105,112	105,869	87,839	20.3

Source: International Trade Centre Trade Map.

Note: All import values in thousands of United States dollars, cost, insurance and freight.

A1.5 Exports of dried apricots by country

Exporters	Exported value in 2015	Exported value in 2016	Exported value in 2017	Exported value in 2018	Exported value in 2019	Per cent share in 2019
World	399,352	375,500	373,144	334,360	354,815	100.0
Turkey	302,689	289,106	266,928	253,377	253,138	71.3
Afghanistan	0	0		0	20,465	5.8
Uzbekistan			10,494	7,387	11,232	3.2
France	10,062	8,717	8,448	7,647	7,979	2.2
Germany	11,186	9,283	8,042	6,112	7,033	2.0
United States	7,829	8,023	8,711	4,877	6,493	1.8
Netherlands	6,517	5,512	5,190	5,893	5,618	1.6
South Africa	5,636	5,456	6,795	9,088	5,009	1.4
Kyrgyzstan	331	1,206	2,482	2,578	4,483	1.3
Others	55,102	48,197	56,054	37,401	33,365	9.4

Source: International Trade Centre Trade Map.

Note: All export values in thousands of United States dollars.

A1.6 Imports of dried apricots by country

Importers	Imported value in 2015	Imported value in 2016	Imported value in 2017	Imported value in 2018	Imported value in 2019	Per cent share in 2019
World	413,723	406,632	386,579	391,459	356,313	100.0
United States	51,259	57,364	50,069	44,955	38,887	10.9
France	33,822	32,494	27,829	28,357	27,490	7.7
Germany	32,423	31,445	27,691	25,601	25,136	7.1
United Kingdom	40,379	39,922	32,575	29,710	23,189	6.5
Russian Federation	12,766	12,280	16,381	19,212	20,300	5.7
India	14,017	8,203	24,829	28,240	17,529	4.9
Brazil	14,058	12,276	11,960	14,169	12,890	3.6
Netherlands	14,231	13,149	12,278	12,770	11,675	3.3
Australia	21,300	14,488	13,656	13,988	11,040	3.1
Free zones	9,975	9,193	8,621	8,646	8,296	2.3
Canada	10,021	10,787	10,457	9,384	8,189	2.3
China	1,436	1,686	2,963	5,427	7,572	2.1
Poland	9,999	10,342	9,176	9,497	7,559	2.1
Spain	11,521	10,536	8,744	7,728	7,528	2.1
Algeria	6,071	5,510	5,946	5,338	7,489	2.1
Italy	8,278	9,514	7,555	6,782	7,340	2.1
Iraq	2,923	4,072	5,717	6,374	6,600	1.9
Switzerland	7,539	6,934	5,631	6,199	5,630	1.6
Belarus	2,287	6,273	5,238	11,967	5,444	1.5
Egypt	4,926	5,691	3,584	4,809	5,163	1.4
Israel	6,036	5,709	4,840	5,137	5,059	1.4
Ukraine	3,394	5,336	5,400	4,737	5,021	1.4
Japan	3,506	4,545	4,837	4,967	4,068	1.1
Belgium	5,086	5,572	4,603	3,962	3,994	1.1
Sweden	6,767	5,565	4,397	3,858	3,765	1.1
New Zealand	6,393	5,983	4,255	3,805	3,660	1.0
United Arab Emirates	3,467	2,688	3,170	3,495	3,520	1.0
Others	69,843	69,075	64,177	62,345	62,280	17.5

Source: International Trade Centre Trade Map.

Note: All import values in thousands of United States dollars, cost, insurance and freight.

A1.7 Exports of dried grapes by Uzbekistan, 2019

Country	Trade value (thousands of U.S. dollars)	Value share (per cent)	Net weight (tons)	Volume share (per cent)
China	26,973	25.8	25,258	26.75
Kyrgyzstan	25,352	24.24	22,890	24.24
Turkey	9,212	8.81	7,300	7.73
Russian Federation	6,700	6.41	5,642	5.98
Ukraine	3,886	3.72	5,129	5.43
Iraq	3,330	3.18	2,826	2.99
United Arab Emirates	3,180	3.04	3,045	3.23
Belarus	3,066	2.93	2,693	2.85
Kazakhstan	2,676	2.56	3,806	4.03
Azerbaijan	2,099	2.01	1,437	1.52
Lithuania	1,979	1.89	1,618	1.71
Slovakia	1,913	1.83	1,180	1.25
Latvia	1,798	1.72	1,563	1.66
Germany	1,712	1.64	848	0.9
Poland	1,556	1.49	1,250	1.32
Saudi Arabia	1,529	1.46	1,314	1.39
Iran, Islamic Republic of	1,275	1.22	1,164	1.23
Georgia	1,271	1.22	847	0.9
Others	5,059	4.84	4,605	4.88

Source: International Trade Centre Trade Map.

A1.8 Exports of prunes by Uzbekistan, 2019

Country	Trade value (thousands of U.S. dollars)	Value share (per cent)	Net weight (tons)	Volume share (per cent)
Kyrgyzstan	5,782	36.49	8,094	36.49
Russian Federation	3,294	20.79	4,611	20.79
Turkey	2,345	14.8	3,283	14.8
Ukraine	1,526	9.63	2,136	9.63
Belarus	1,302	8.22	1,823	8.22
Kazakhstan	1,091	6.89	1,527	6.88
Georgia	162	1.02	227	1.02
Others	342	2.16	478	2.16

Source: International Trade Centre Trade Map.

A1.9 Exports of dried apricots by Uzbekistan, 2019

Country	Trade value (thousands of U.S. dollars)	Value share (per cent)	Net weight (tons)	Volume share (per cent)
Iraq	1,965	17.49	1,438	16.14
Kyrgyzstan	1,965	17.49	986	11.07
Russian Federation	1,943	17.3	1,526	17.13
China	1,291	11.49	1,286	14.43
Belarus	901	8.02	753	8.45
Ukraine	793	7.06	904	10.15
Kazakhstan	738	6.57	857	9.62
Turkmenistan	709	6.31	607	6.81
Israel	209	1.86	119	1.34
Turkey	207	1.84	137	1.54
Italy	132	1.18	80	0.9
Others	379	3.37	216	2.42

Source: International Trade Centre Trade Map.

Appendix 2. United States Department of Agriculture world dried fruit trade data

Reporter	Annual Series (in U.S. dollars)					
	2014	2015	2016	2017	2018	2019
Total			101,596,348	97,283,901	99,749,019	
China	8,569,756	19,427,691	25,419,828	16,397,466	20,535,059	24,966,102
EU-28 external trade	14,341,981	19,217,478	17,870,368	11,473,614	14,350,501	
Russia	700,662	899,206	1,648,221	3,823,193	9,355,716	13,668,298
Kazakhstan	18,475,000	36,416,500	41,786,500	41,342,200	26,175,194	
Saudi Arabia	0	391,640	5,851,552	10,121,830	9,917,491	
Belarus	3,343,500	3,455,300	2,684,200	5,587,700	6,931,400	7,015,900
Ukraine	4,469,210	2,635,960	2,181,116	4,046,177	4,838,191	
Morocco			0	160,312	950,415	
Georgia	244,000	524,100	596,700	1,228,792	1,366,191	1,594,100
U.S. consumption	981,954	1,642,037	1,571,335	1,530,007	3,240,037	1,109,212
Israel	968,000	614,000	281,000	555,000	619,000	
Brazil	0	0	0	0	0	624,285
Turkey	160,558	45,969	672,526	402,701	562,945	524,751
Canada	189,918	182,829	149,407	18,929	235,242	522,427
Bahrain	3,601	43,579	65,235	39,435	167,784	158,877
Switzerland	720,021	59,860	111,673	42,084	69,612	109,727
Jordan	0	5,750	174,185	97,532	176,134	
Japan	0	134,694	0	0	0	89,637
Egypt	30,073	599,585	331,248	61,964	42,017	
Australia	0	0	0	73,928	91,632	62,311
New Zealand	0	0	0	0	0	47,744
Malaysia	26,859	16,205	174,770	87,372	26,810	
Thailand	0	0	0	0	0	27,353
Iceland	0	66	9,132	30,867	11,598	16,314
Norway	44,416	32,565	14,068	10,295	10,186	12,393
Ethiopia	0	0	0	0	0	10,196
Sri Lanka		2,070	0	52,580	0	7,545
Bosnia and Herzegovina	0	32	272	883	161	6,389
North Macedonia	0	0	131	48	1,756	4,772
Hong Kong Special Administrative Region	964	5,893	1,497	1,956	621	4,111
Serbia	0	475	938	50,315	612	1,076
Kenya	0	0	0	83	0	
Montenegro	164	0	0	154	90	388
Kosovo	0	0	0	3,734	3,608	234
South Africa	0	0	0	0	2,041	0
Taiwan Province of China	888	249	445	9,407	2,143	

