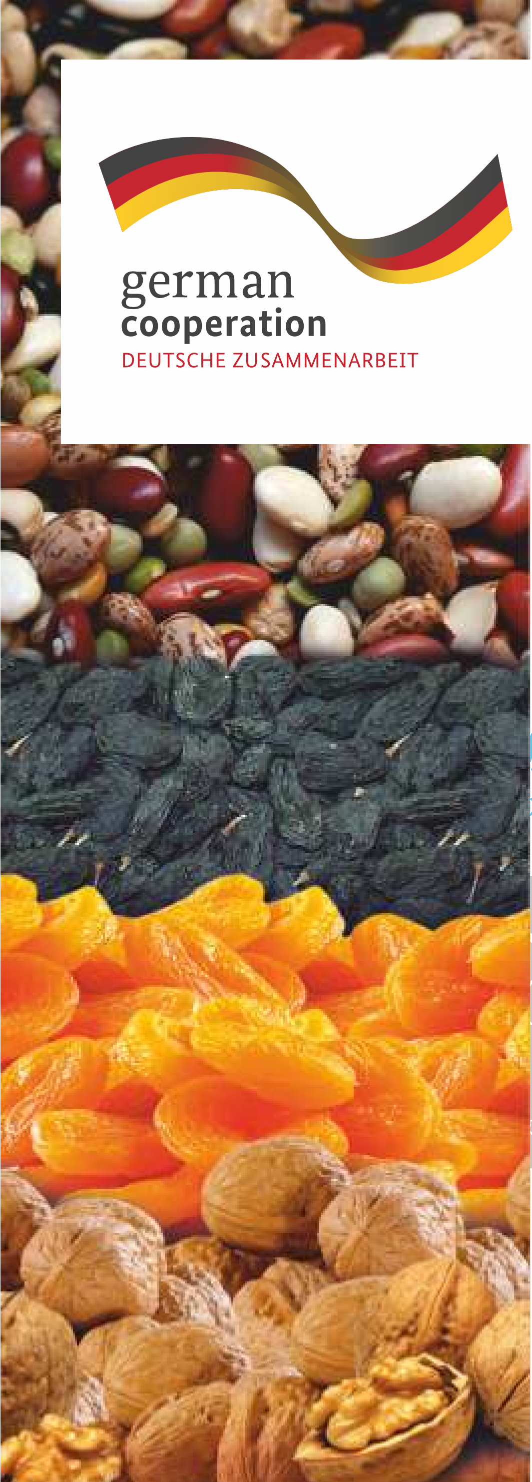
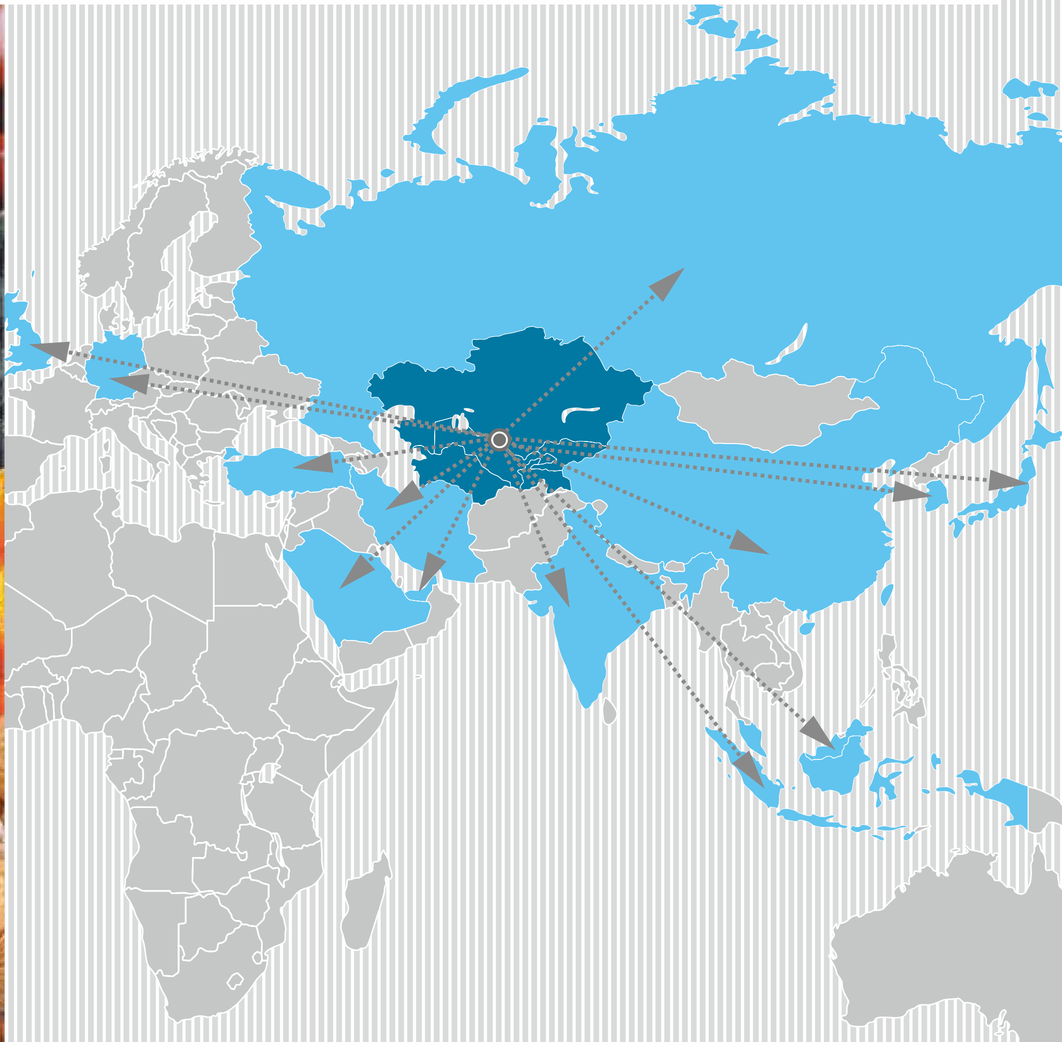
german cooperation
DEUTSCHE ZUSAMMENARBEIT

Implemented by:

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Euromonitor Consulting





Analysis of Priority Markets for diversification of export of products from Central Asia

Dried fruits, nuts, beans: market access strategies and recommendations

Analysis of Priority Markets for diversification of export of products from Central Asia

Dried fruits, nuts, beans: market access strategies and recommendations

A report developed by Euromonitor International

This research was made possible under the order of the Programme 'Trade Facilitation in Central Asia", implemented by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH on behalf of the German Federal Government.

October 2017

www.euromonitor.com

Contents

List of tables

List of figures

List of charts

List of appendices

1. INTRODUCTION

This report is a summary of findings and analysis Euromonitor International performed under the order of the Programme 'Trade Facilitation in Central Asia', implemented by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH on behalf of the German Federal Government. "Trade Facilitation in Central Asia" is a Regional Program for Central Asia and aims at implementation of selected trade facilitation measures among the countries of Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan.

GIZ aims to find the ways to facilitate international trade to traditional and other potential new export markets from the Central Asian countries for selected agricultural products, including fresh fruits (apricots, grapes, cherries and melons), processed fruits and vegetables (dried fruits, leguminous and nuts) and meat (bovine, sheep and sausages). Please see Appendix 1 for more detailed scope of the research.

The goal of the research was to help GIZ Programme to achieve its objectives in development of market access strategies and trade related services to facilitate export trade from Central Asian markets by:

- Identifying the existing challenges that Central Asian exporters face, when exporting to international markets;
- Understanding the exporting environment, demand for the product, distribution network and consumer trends related to the products in question;
- Gap analysis of both challenges and opportunities in order to design and implement intervention measures aimed at overcoming these challenges in order to facilitate trade and take advantage of export opportunities.

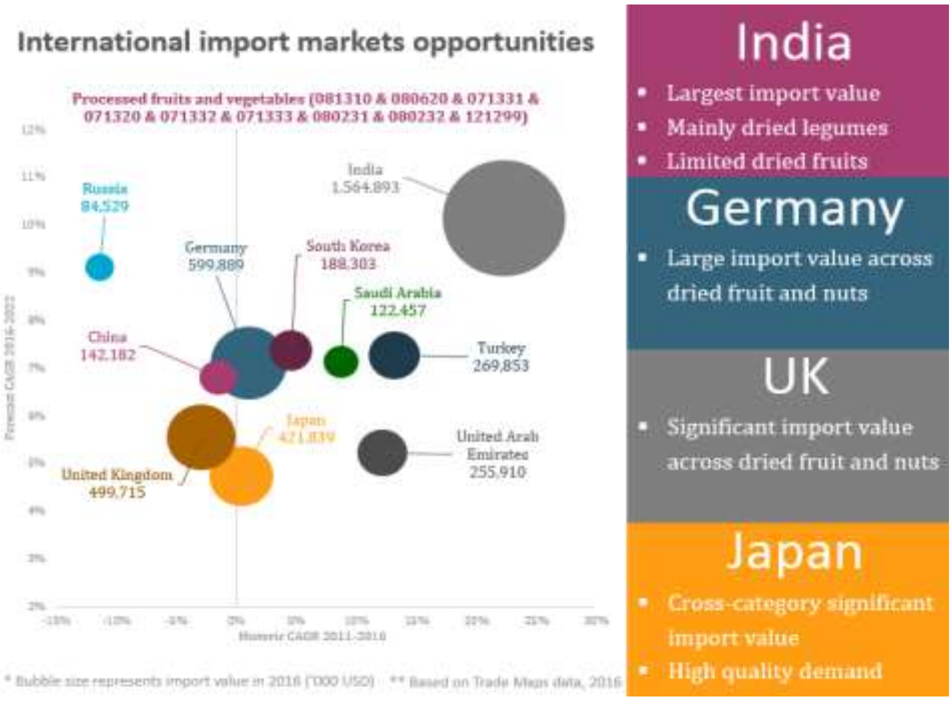
Please note, that all the text in this report that is displayed as underlined is an active hyperlink to a more detailed source of information

2. METHODOLOGY

Euromonitor International has approached the study in two stages. The first stage of the research was focused on the top-line analysis of potential international export market opportunities. GIZ Programme has selected 10 international markets, based on their experience and previously collected trade feedback that presented potential opportunity for Central Asian exporters of agricultural produce. The long-list of international markets was comprised of China, Germany, India, Japan, Russia, Saudi Arabia, South Korea, Turkey, United Arab Emirates and United Kingdom.

Within the first research stage Euromonitor team was sizing the import demand of each of the ten markets for each of the product categories, including dried apricots (HS081310), dried grapes (HS080620), beans (HS071332 and HS071333), mung beans (HS071331), chickpeas (HS071320), walnuts (HS080231 and HS080232) and fruit stones (HS121299), based on the officially published international trade data published by International Trade Centre and Comtrade. While building the opportunity matrices, Euromonitor team aimed to highlight the top export markets for each of the categories *(see Appendix 2)* as well as presented a cross-category view for the complete processed fruit and vegetables opportunity *(see Figure 1)*, in terms of import market size, demand preferences as well as initial screening of market entry requirements.

Figure 1: International import market opportunity matrix for processed fruit and vegetables



Source: ITC Trade Maps, 2016
Notes: Bubble size represents import value in 2016 ('000 USD)

As a result of the first stage of the research the top three export priority markets were selected, including Germany, United Arab Emirates and People's Republic of China. Such choice of the priority markets allows Central Asian exporters to get a closer view on the export opportunities into three different regions, including European Union, Middle East and South-East Asia. Furthermore, the choice of the priority market was determined by the cross-category opportunities presented for fresh fruit, processed fruit and vegetables and meat categories combined, which were discussed and supported by the feedback of Central Asian agricultural trade industry and GIZ internal knowledge of the Central Asian capabilities.

The second stage of the research was focused on the above mentioned short-listed three priority markets and aimed at the detailed analysis of the priority markets, including understanding the consumer demand, distribution channels, supply chain, legal framework, customs regulations, and retail landscape. Such a multitude of research angles allowed Euromonitor to provide GIZ Programme with an actionable recommendations on the future initiatives and activities to be developed for further trade facilitation.

The research was based on a wide range of sources, including official publications, such as national statistics, Euromonitor in-house data, United Nations Comtrade statistics, International Trade Center Developed Trade Maps's import and export indicators (see *appendices*), trade publications, including trade press, industry articles and brand websites as well as primary research across the 88 trade interviews conducted across the C-level executives of the agricultural trade supply chain. The findings were cross-checked and validated before the conclusions were formed.

3. EXECUTIVE SUMMARY

Central Asia processed fruit and vegetable market overview

Currently, agriculture remains a key industry for the Central Asian countries. Kyrgyzstan, Tajikistan and Uzbekistan are significantly more dependent on agriculture, while agriculture in Kazakhstan is rather limited and primarily focused on meat.

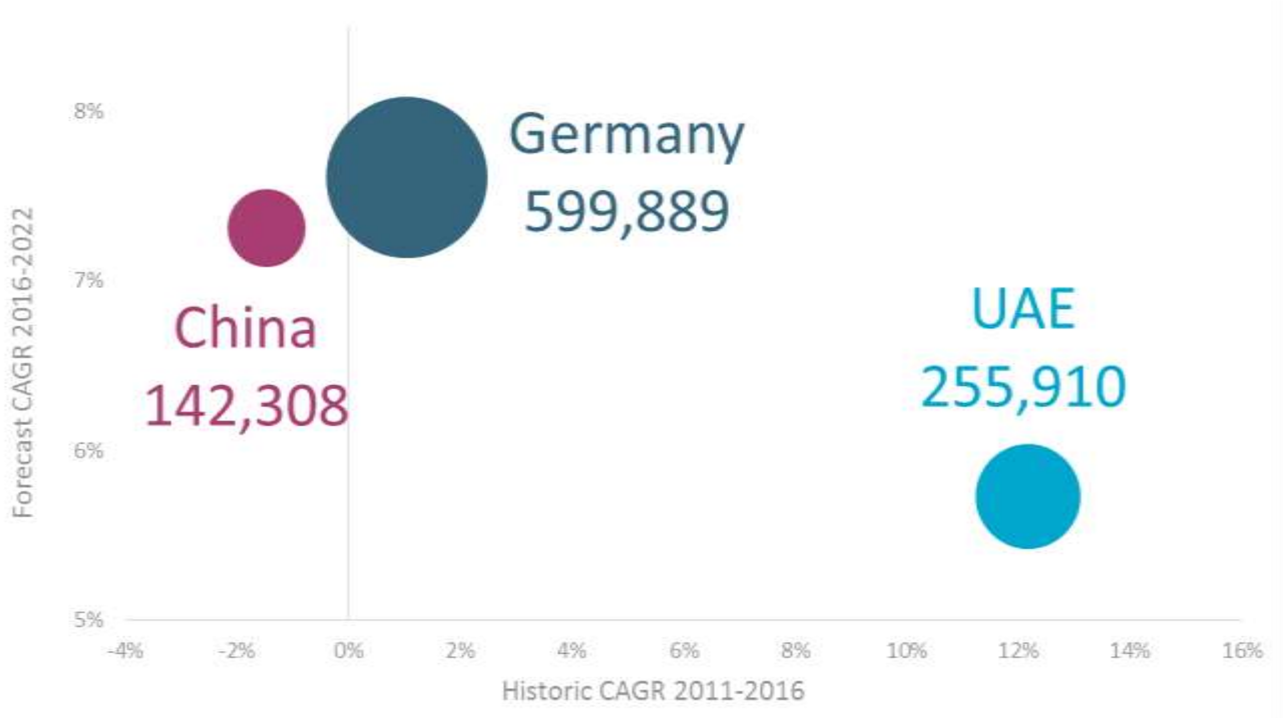
International processed fruit and vegetable trade in Kazakhstan is highly unbalanced, due to the country's significant focus on meat. However, the trade balance of the other three markets, namely Uzbekistan, Tajikistan and Kyrgyzstan is positive, as these markets are self-sufficient in processed fruit and vegetable production and barely import any additional volumes in the domestic markets. Tajikistan and Kyrgystan export volumes are rather similar, while Uzbekistan exports some 1.5 times more produce to foreign markets in volume terms.

Processed fruit and vegetables imports are in demand across the priority markets

All three priority markets are large global fresh fruit importers, in regards to the product categories in scope (see *Chart 1***Ошибка! Источник ссылки не найден.**)

Chart 1: Processed fruit and vegetables import markets value sales, USD mn 2016

(HS081310, HS 080620, HS071331, HS071320, HS 071332, HS 071333, HS080231, HS080232 and HS121299)



Source: ITC Trade Maps, 2016
Notes: Bubble size represents import value in 2016 ('000 USD)

Germany relies heavily on processed fruit and vegetable imports from international markets. Typically, Germans prefer sweet, yet not too sweet-tasting dried fruit, crunchy and not bitter nuts and fruit stones as well as soft, but not slushy pulses. German consumers are ready to pay a premium for domestic farmers' market and ecological produce, however imports are expected to remain the key supply source.

As domestic processed fruit and vegetable production volume is largely non-existent, **UAE** strongly relies on agricultural imports from international markets. UAE consumers generally prefer intense taste, and look for sweet and very sweet dried fruits, very crunchy and not bitter nuts. Pulses have varying requirements depending on their use, but overall quality criteria for pulses are somewhat lower as these products are mainly targeted at the lower-income labourer population or re-exports to Africa and other regions.

China is a large domestic processed fruit and vegetables producer, topping the list of raisin and pulses producers globally. However, China relies heavily on imports of dried fruits and nuts to satisfy local demand. 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.

Central Asia is well positioned to benefit from international trade opportunities

Central Asian countries have good prospects in processed fruit and vegetables exporting due to rising support from government and international organisations. Being a member of WTO has and will boost the region's international trade further.

Looking closer at processed fruit and vegetables categories under research, Central Asian producers are equally well positioned to develop trade in any of the product categories. Dried apricots are considered a superfruit snack, with high nutritional value, full of vitamins and minerals, which appeals to health-aware international markets. Dried grapes, especially the local kishmish and blackcurrant varieties, are a great value for money proposition to the international foodservice industry, as well as when packed in small convenient packaging may be marketed as fruit snacks as well. Walnuts see the widest scope of potential marketing opportunities, ranging from foodservice in bakery products and confectionery, to retail as a protein-based snack, as well as fruit and nut mixed snacks, which could be sold in small on-the-go packaging, as well as larger packs for home consumption. Moreover, the recent trend in grain-based milk products may underpin more demand for walnuts. Apricot kernels, while remaining very niche, represent a non-food opportunity, specifically targeting beauty and personal care ingredient buyers. Pulses, while not seeing strong competition from China and India, are gaining popularity among vegetarians and consumers seeking non-animal protein sources.

Dried fruits and nuts should be the key focus of Central Asian exporters

Dried fruits and nuts represent an interesting opportunity, which could be marketed together as a mix, or as products on their own. Retail is growing its healthy snacking categories, while foodservice demands uniformly-shaped raisins and nuts to use in bakery products and confectionery.

Central Asia is on a path towards international trade facilitation

While there are a number of factors that Central Asia has to improve on to gain access and demand in international markets, the starting point is improving the awareness of Central Asian fruits, their quality and health benefits across the international markets, so international buyers, who currently source the majority of their fruits from suppliers across the globe, include Central Asia to their suppliers' pool. Furthermore, consolidation of the highly fragmented Central Asian fruit market is key in developing international trade partnerships, providing quality calibrated produce on time and in required volumes. Furthermore, international standardisation, certification and of course adherence to legal requirements are the 'musts' the Central Asian suppliers have to prioritise, while developing international trade agendas.

As GIZ, the commissioner of the study, is looking for improving international cooperation and sustainable development of the Central Asian region, the recommendations of the study are tailored to the perspective of development of trade related services that GIZ can support further in the region.

1 **Raise awareness of taste and attributes of Central Asian processed fruit and vegetable produce**

- Facilitate and promote participation of Central Asian producers and exporters at international trade expositions
- Develop or facilitate the development of educational programs focused on international market demands in regards to Central Asia fruit market
- Develop of facilitate the development of the Central Asia origin promotional campaigns (arm exporters with marketing materials)

2 Consolidate production to enhance quality consistency and volume supply

- Promote or facilitate the promotion and education on industry consolidation through cooperatives and associations
- Facilitate the industry and government dialogue and cooperation in terms of governmental support of coordinated production efforts
- Develop or facilitate the development and promotion of an export promoting and coordination body

3 Enhance fruit and vegetable calibration to meet international standards

- Develop or facilitate the development of educational platform on fruit calibration practices and benefits
- Develop a promotional fruit and vegetable calibration as best agricultural practice program

4 Achieve international certification

- Develop educational programs for SME farmers on international certification benefits and requirements
- Facilitate the development of educational platforms (e.g. university courses) for future certification experts
- Establish or facilitate the establishment of FSSC, ISO and wider certification and advisory body available to consult SME's
- Facilitate lobbying between the industry and the government in terms of subsidising the certification process for small players
- Facilitate dialogue between the industry and financiers, in order to facilitate the financial mechanisms and make them more accessible

5 Learn from international best practices to modernize laboratories

- Facilitate the establishment of internationally recognised laboratories in Central Asia through dialogue between the globally recognized certification bodies and Central Asian controlling institutions and training
- Facilitate the development of educational systems for future food quality experts
- Develop an information sharing program aiming to provide information to exporters and current laboratories about what are the acceptable quality levels in international markets as well as detail what are the tests that are to be performed

6 Identify opportunities for partnerships in air freight

- Facilitate the dialogue and partnership building between exporters and air freight carriers
- Help exporters to connect with relevant cargo carriers
- Educate exporters on charter and other competing cargo solutions

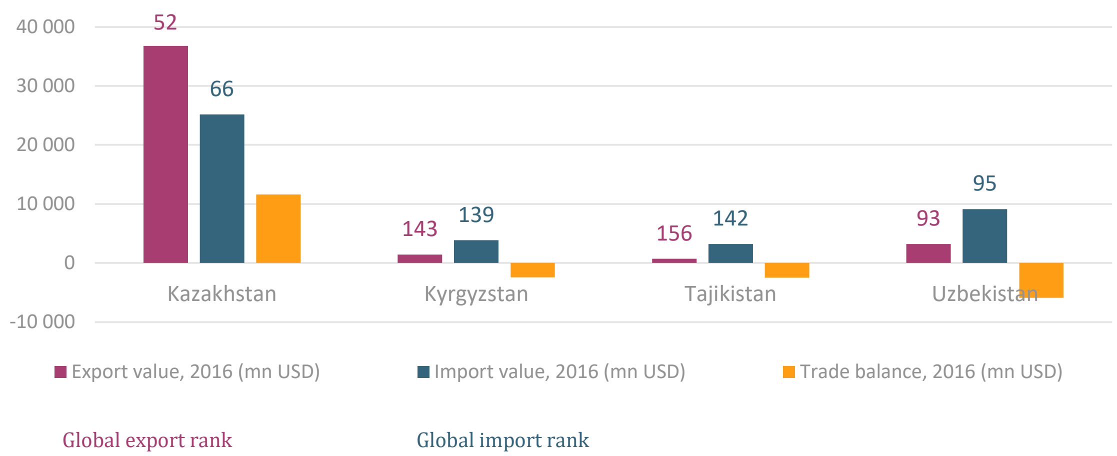
4. OVERVIEW OF CENTRAL ASIAN SUPPLY

4.1 OVERVIEW OF CENTRAL ASIAN MARKETS

Central Asian trade is focused on natural resources, while agricultural trade remains limited

While long ago the Silk Road put the Central Asian region at the forefront of international trade, today the region's trade is underdeveloped. With a population of 61.9 million spread over 3.5 million square kilometers of land with limited connectivity and long distances Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan face low density of trade (see *Chart 2*), particularly focused on a few commodities, including crude oil, gas, metals and cotton fiber. With oil and gas the key export commodities, the region is highly dependent on global oil price fluctuations, which in 2017 were rather favorable for overall trade development.

Chart 2: Central Asia international trade 2016



Source: ITC Trade Maps, 2016

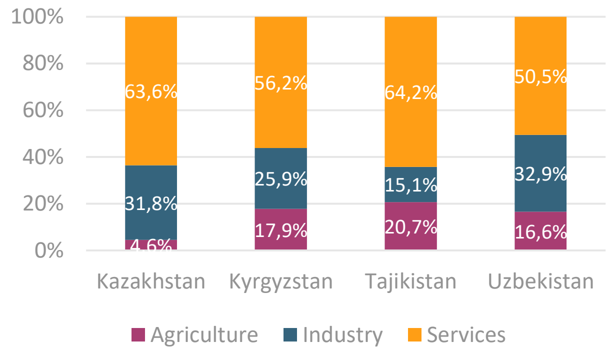
Agricultural focus of Central Asia has declined post-Soviet Union, however for Uzbekistan, Tajikistan and Kyrgyzstan agriculture remains key

Since gaining independence from the Soviet Union, Central Asian agriculture has gone through a set of reforms to transition from a centralised state agricultural set-up of large corporate farms to individual and family-run farms.

This is a very significant change not only in the structure of the agricultural market, but also in ideology of the capital-intensive, highly mechanised economies of scale fostering small- scale farms as these are easier to organise and operate than corporations, free from labour costs and potentially highly efficient entities.

Prior to 1990, over 30% of the region's GDP was derived from agriculture, while today combined agricultural share of GDP amounts to 8.9% across the four researched Central Asian markets (see *Chart 3*). Such a decrease is mainly attributed to Kazakhstan, where only 4.6% of the GDP is accounted for by the agricultural industry. Kyrgyzstan, Tajikistan and Uzbekistan are significantly more dependent on agriculture with an average of 17.1% of the region's GDP attributed to this industry.

Chart 3: Composition of Central Asian GDP 2016



Source: The World Factbook, Central Intelligence Agency

Kazakhstan's international trade is driven by oil and gas, while processed fruit trade is highly unbalanced

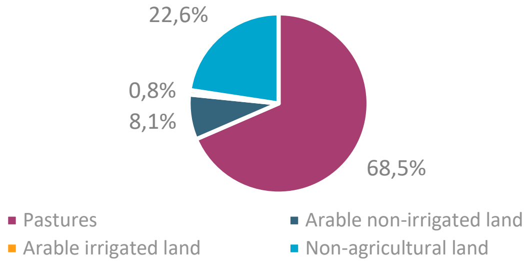
Kazakhstan is the largest Central Asian country under research by territory and is the only Central Asian market showing a positive trade balance, with export value sales exceeding import value sales by 30% largely due to exports of crude oil and gas [ITC Trade maps, 2016]. Agriculture in Kazakhstan is rather limited. Trade in processed fruit and vegetables categories in Kazakhstan shows a negative balance (see *Chart 5* and *Chart 4*). Exports of processed fruit and vegetable product categories under research amounted to 0.01% of total export value sales in 2016, while imports of processed fruit and vegetable products are responsible for 0.2% of total import value sales [ITC Trade maps, 2016]. Kazakhstan's agricultural industry is strongly focused on grains, mainly wheat and barley, thus flour is the key agricultural export product. Across the processed fruit and vegetables categories under research, dried grapes have the strongest presence, accounting for 77% of total processed fruit and vegetables export value sales in 2016 [ITC Trade maps, 2016]. The key processed fruit and vegetables export destination for Kazakhstan is Russian Federation.

Table 1: Kazakhstan - Key facts

Kazakhstan 

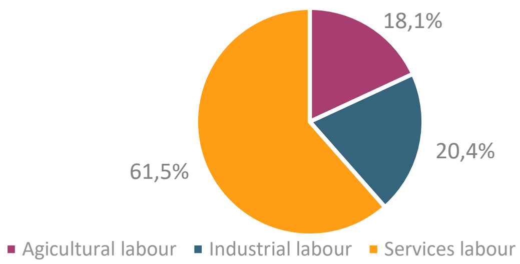
Land

Area	2,724,900 sq km
Agricultural land	2,089,567 sq km
Arable land	240,273 sq km
Irrigated land	20,660 sq km
Pastures	1,849,295 sq km



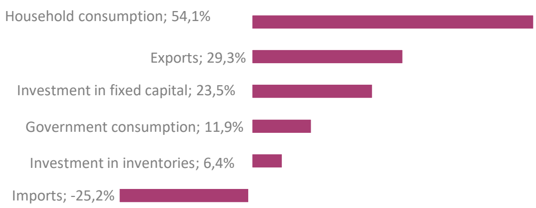
Population

Total population	18,360,353
Rural population	8,592,645
Labour force	8,964,000
Agricultural labour	1,622,484



Economy

GDP (PPP)	USD468.8 bn
GDP per capita	USD25,700
GDP (agriculture)	USD21.6 bn



International trade

Export commodities	Oil and oil products, natural gas, ferrous metals, chemicals, machinery, grain, wool, meat, coal
Export partners	China, Russia, France, Germany, Italy, Greece
Import commodities	Machinery and equipment, metal products, foodstuffs
Import partners	Russia, China, Germany

Dried fruit trade*

	Dried grapes	Dried apricots
Production volume**	n/a	n/a
World export rank (value)	27	42
World export value	USD2,511,000	USD183,000
Key export partners	Russia	Russia

Leguminous*

	Beans	Mung beans	Chickpeas
Production volume**	600 tonnes	2,500 tonnes	11,500 tonnes
World export rank (value)	91	84	37
World export value	USD40,000	USD84,000	USD501,000
Key export partners	Serbia	Russia	Afghanistan

Nuts*

	Walnuts	Fruit stones
Production volume**	2,208 tonnes	n/a
World export rank (value)	74	118
World export value	USD13,000	USD3,000
Key export partners	Russia	Russia

Source: The World Factbook, Central Intelligence Agency

*Notes: *ITC Trade Maps, **Faostat (2014)*

While trading with Russia and Kazakhstan, Kyrgyzstan's international trade is underdeveloped

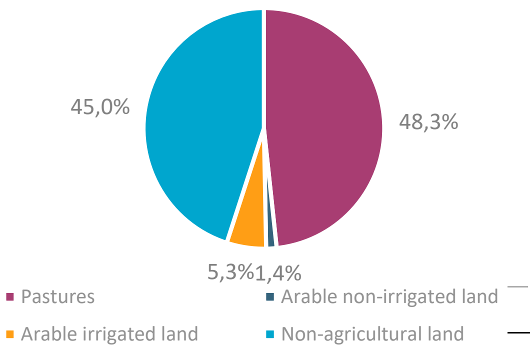
Kyrgyzstan is the least populated country of the four Central Asian markets under research. On a total level, import value sales are 2.7 times higher than export value sales in 2016, in this case the trade balance deficit is caused by imports of natural resources, such as crude oil and gas in particular [ITC Trade maps, 2016]. Nevertheless, international trade of processed fruit and vegetables sees a positive trade balance with export value sales of dried fruits, nuts and leguminous exceeding import value sales by nearly 42 times (see *Chart 5* and *Chart 4*) . The key processed fruit and vegetables export category is leguminous accounting for 96% of total export value sales, destined mainly for the Turkish market. Interestingly, dried apricots are the key processed fruit and vegetable import product category responsible for 68.6% of total import value sales in 2016 [ITC Trade maps, 2016]. Kyrgyzstan's key import commodities include sugar, vegetable oils and bakery product, while major export categories are leguminous and dairy products.

Table 2: Kyrgyzstan - Key facts

Kyrgyzstan 

Land

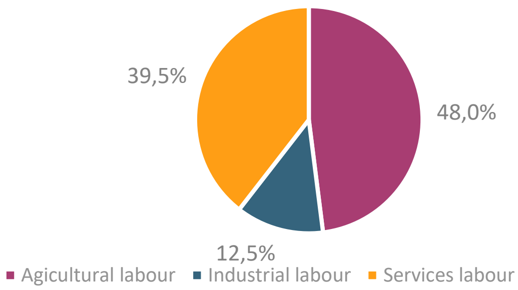
Area	199,951 sq km
Agricultural land	110,772 sq km
Arable land	13,396 sq km
Irrigated land	10,233 sq km



Pastures	92,639 sq km

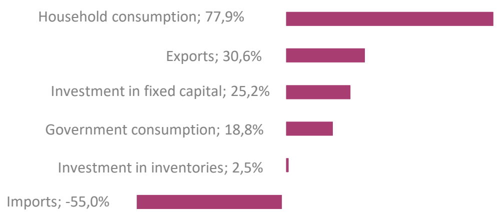
Population

Total population	5,727,553
Rural population	3,682,817
Labour force	2,778,000
Agricultural labour	1,333,440



Economy

GDP (PPP)	USD21.0 bn
GDP per capita	USD3,500
GDP (agriculture)	USD3.8 bn



International trade

Export commodities	Gold, cotton, wool, garments, meat, mercury, uranium, electricity, machinery, shoes
Export partners	Switzerland , Uzbekistan, Kazakhstan, UAE, Turkey, Afghanistan, Russia
Import commodities	Oil and gas, machinery and equipment, chemicals, foodstuffs
Import partners	China, Russia, Kazakhstan

Dried fruit trade*

	Dried grapes	Dried apricots
Production volume**	n/a	n/a
World export rank (value)	84	40
World export value	USD7,000	USD203,000

Key export partners	Turkey	China

Leguminous*

	Beans	Mung beans	Chickpeas
Production volume**	87,100 tonnes	4,400 tonnes	n/a
World export rank (value)	7	n/a	76
World export value	USD55,001,000	USD0	USD6,000
Key export partners	Turkey	n/a	Turkey

Nuts*

	Walnuts	Fruit stones
Production volume**	5,800 tonnes	n/a
World export rank (value)	30	99
World export value	USD2,053,000	USD20,000
Key export partners	Iran, China	China, Turkey

Source: The World Factbook, Central Intelligence Agency

*Notes: *ITC Trade Maps, **Faostat (2014)*

Tajikistan focuses more on production of dried fruit produce thanks to favourable climatic conditions

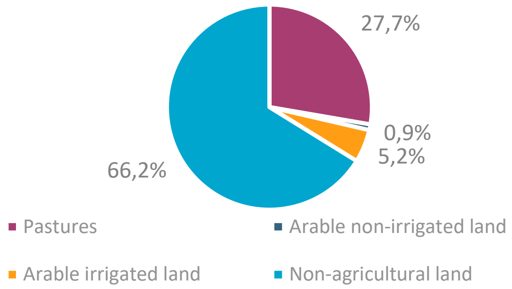
Tajikistan is the smallest country by territory, and has the lowest level of international trade among the four Central Asian markets under research in 2016. Tajikistan's import value is just slightly lower than that of Kyrgyzstan, while export value sales are over two times lower than those of Kyrgyzstan, therefore the trade deficit is significantly larger with import value sales exceeding export value sales by 4.5 times (see *Chart 2*). Tajikistan is a highly agrarian market, therefore looking at the key export categories, export of agricultural produce is the fifth largest export category in the country. However, turning to international trade of processed fruit and vegetable product categories under research, Tajikistan shows a positive trade balance, as import value sales of dried fruits, nuts and leguminous account for only 5% of export value sales of the same (see *Chart 5* and *Chart 4*). It is also important to note that dried apricots account for 77% of total export value sales of processed fruit and vegetables in Tajikistan [ITC Trade maps, 2016]. The key export destinations for the processed fruit and vegetables in general and for the dried apricots in particular are currently Kazakhstan and Russia. Tajikistan aims to continue to concentrate on dried fruits thanks to favourable climatic conditions as well as due to the lower requirements in terms of maintenance and transportation of dried fruits compared to fresh variants.

Table 3: Tajikistan - Key facts

Tajikistan 

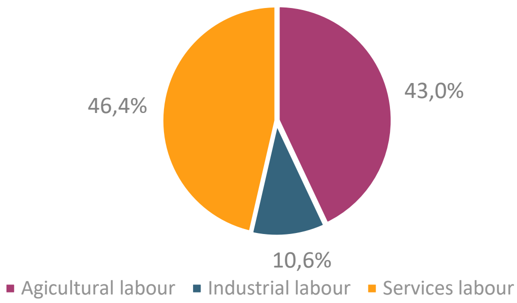
Land

Area	144,100 sq km
Agricultural land	49,103 sq km
Arable land	8,632 sq km
Irrigated land	7,420 sq km
Pastures	39,198 sq km



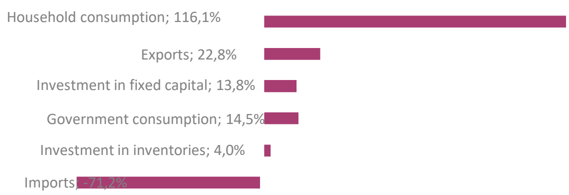
Population

Total population	8,330,946
Rural population	6,098,252
Labour force	2,295,000
Agricultural labour	986,850



Economy

GDP (PPP)	USD25.8 bn
GDP per capita	USD3,000
GDP (agriculture)	USD5.3 bn



International trade

Export commodities	Aluminium, electricity, cotton, fruits, vegetable oil, textiles
Export partners	Turkey, Kazakhstan, Switzerland, Iran, Afghanistan, Russia, China, Italy
Import commodities	Petroleum products, aluminium oxide, machinery and equipment, foodstuffs
Import partners	China, Russia, Kazakhstan, Iran

Dried fruit trade*

	Dried grapes	Dried apricots
Production volume**	n/a	n/a
World export rank (value)	47	7
World export value	USD385,000	USD5.521,000
Key export partners	Kazakhstan	Kazakhstan

Leguminous*

	Beans	Mung beans	Chickpeas
Production volume**	10,588 tonnes	6,300 tonnes	n/a
World export rank (value)	78	68	79
World export value	USD97,000	USD19,000	USD5,000
Key export partners	Kazakhstan	Kazakhstan	Kazakhstan

Nuts*

	Walnuts	Fruit stones
Production volume**	n/a	n/a
World export rank (value)	48	44
World export value	USD535,000	USD612,000
Key export partners	Kazakhstan	Italy, Germany

Source: The World Factbook, Central Intelligence Agency

Notes: *ITC Trade Maps, ** Faostat (2014)

Uzbekistan is the largest processed fruit and vegetable trader in Central Asia today, with strong focus on dried fruits

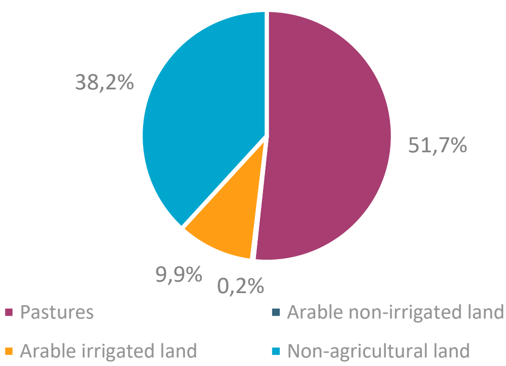
Uzbekistan has the highest population density among the four Central Asian markets under research. The international trade balance of Uzbekistan is also negative, similar to Kyrgyzstan and Tajikistan, however the trade balance is more balanced, with import value sales exceeding export value sales by some 30%, while in the other two markets there is much greater imbalance [ITC Trade maps, 2016]. Turning to the international trade in processed fruit and vegetables, Uzbekistan is a clear leader in Central Asia (see *Chart 5* and *Chart 4*). Uzbekistan displays a positive international trade balance across these categories, with import value sales accounting for 0.15% of export value sales [ITC Trade maps, 2016]. Uzbekistan's export value sales are more than twice those of Kazakhstan, Kyrgyzstan and Tajikistan combined. Uzbekistan's processed fruit and vegetable export portfolio in 2016 is quite diversified, with 69% of export value sales generated by dried fruits, 17.6% by leguminous and 13.4% by nuts [ITC Trade maps, 2016]. The key export destinations in 2016 included Kazakhstan and China.

Table 4: Uzbekistan - Key facts

Uzbekistan 

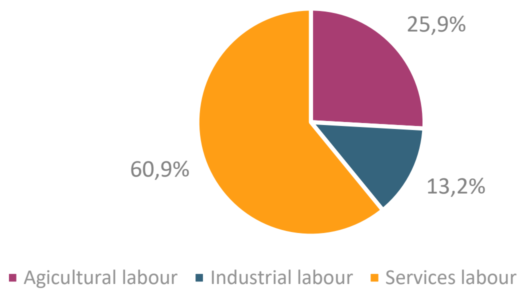
Land

Area	447,400 sq km
Agricultural land	266,300 sq km
Arable land	8,632 sq km
Irrigated land	42,150 sq km
Pastures	219,932 sq km



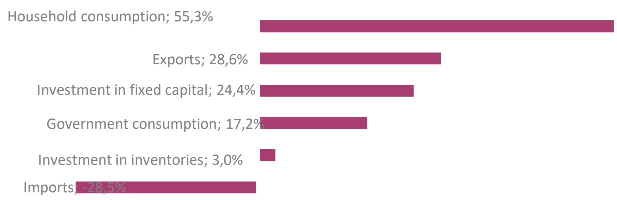
Population

Total population	29,473,61	
Rural population	18,745,22	
Labour force	18,100,000	
Agricultural labour	4,687,900	



Economy

GDP (PPP)	USD202.3 bn
GDP per capita	USD6,500
GDP (agriculture)	USD33.6 bn



International trade

Export commodities	Energy products, cotton, gold, mineral fertilisers, ferrous and non-ferrous metals, textiles, foodstuffs, machinery, automobiles
Export partners	Switzerland, China, Kazakhstan, Turkey, Russia, Bangladesh
Import commodities	Machinery and equipment, foodstuffs, chemicals, ferrous and non-ferrous metals
Import partners	China, Russia, South Korea, Kazakhstan, Turkey, Germany

Dried fruit trade*

	Dried grapes	**Dried apricots**
Production volume**	50,000 tonnes	4,225 tonnes***
World export rank (value)	6	5
World export value	USD82,662,000	USD8,398,000
Key export partners	Kazakhstan/China	Kazakhstan

Leguminous*

	Beans	Mung beans	Chickpeas
Production volume **	n/a	7,000 tonnes	5,700 tonnes
World export rank (value)	27	9	46
World export value	USD4,564,000	USD18,450,000	USD238,000
Key export partners	Georgia	India	Kazakhstan

Nuts*

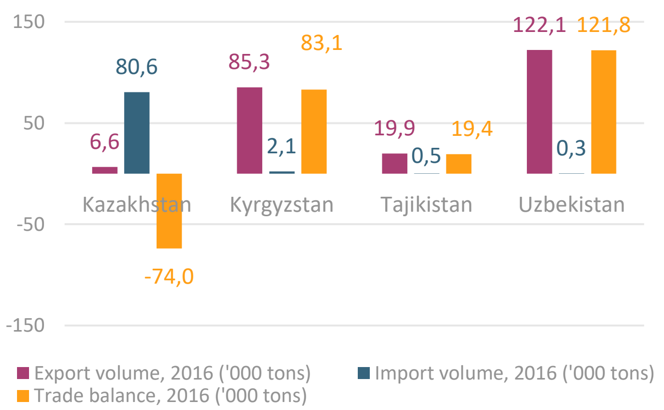
	Walnuts	Fruit stones
Production volume**	44,000 tonnes	n/a
World export rank (value)	12	34
World export value	USD22,661,000	USD1,202,000
Key export partners	**Turkey**	**Italy, Germany**

Source: The World Factbook, Central Intelligence Agency

*Notes: *ITC Trade Maps, ** Faostat (2014), *** INC (2015)*

Chart 5: Central Asia international trade volume sales in processed fruit and vegetables 2016

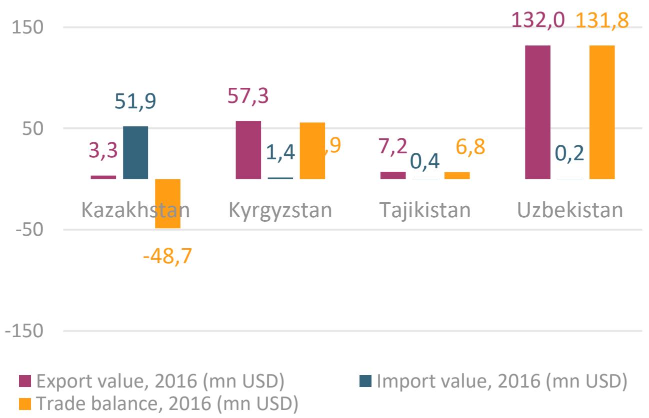
(HS080620, HS081310, HS071320, HS071331, HS071332, HS071333, HS080231, HS080232, HS121299)



Source: ITC Trade Maps 2016

Chart 4: Central Asia international trade value sales in processed fruit and vegetables 2016

(HS080620, HS081310, HS071320, HS071331, HS071332, HS071333, HS080231, HS080232, HS121299)



Source: ITC Trade Maps 2016

Processed fruit and vegetable trade represents an opportunity for Central Asian

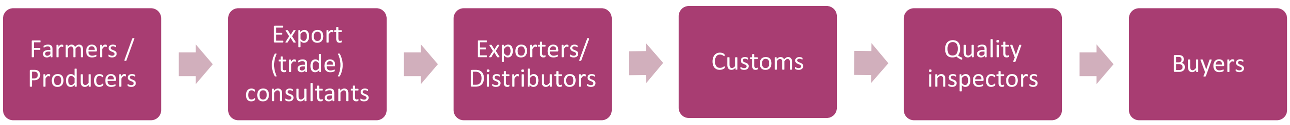
Processed fruit and vegetables trade is significant primarily for Uzbekistan, Kyrgyzstan and Tajikistan, as these countries not only have deep agrarian roots, but also well-balanced climatic conditions to produce dried fruits, nuts and leguminous while climatic conditions in Kazakhstan are somewhat less favourable in this context. It is also worth noting that despite Kyrgyzstan's better potential in meat production, the country has to focus on fruits and vegetables as its meat production is not accepted by international trade partners due to the lack of globally accepted veterinary system. Nevertheless, all the markets with the exception of Kazakhstan, which is mainly focused on meat production, have very limited import levels of the processed fruit categories under research and local production is used for domestic and international trade. Uzbekistan, Tajikistan and Kyrgyzstan as major processed fruit growing markets are known for their very good soil, which allows fruits to ripen reaching high natural sugar levels, and therefore Central Asian fruits are well known for their very sweet taste. In particular, Uzbekistan and Tajikistan are known for their sweet apricots. Moreover, Uzbekistan is also well known for its unique dried grape variant, kishmish, which derives from seedless grapes.

4.2 CENTRAL ASIAN EXPORT SUPPLY CHAIN OVERVIEW

Processed fruit and vegetable supply chain across Central Asia follows typical global set-up, however lack of volume consolidation results in high costs and inefficiency

The typical processed fruit and vegetable supply chain in all Central Asian countries is rather standard, with producers, exporters and buyers being the three key links of the chain (see *Figure* 22). The majority of producers are individual farmers and small and medium-sized agricultural enterprises that have limited funds and experience, but most importantly relatively limited production volumes. While trading processed fruit and vegetables domestically, small farmers are able to offer their produce to local traditional traders, however international trading requires a different level of bureaucracy, procedural conformity and produce volumes.

Figure 2: Central Asia processed fruit and vegetables export supply chain



The majority of large-scale international buyers require suppliers to be GLOBALG.A.P. certified, in case the processed produce has been grown and processed by the same organisation. While Central Asian producers are fully aware of the requirement, there is only a handful of organisations, such as SC Gold Dried Fruits Export, which are able to undertake and afford GLOBALG.A.P. certification independently.

Otherwise, if the processors and fruit and vegetables producers are different entities, FSSC and ISO22000 certificates become the key requirements. In any case the majority of micro and SME producers are not able to afford internationally recognized certification independently, and currently there are no significant trade association bodies or cooperatives that would work towards volume consolidation and potentially be able to afford certification. Other quality standards that are difficult to implement due to fragmentation of the producing industry include organic certification.

International export consultancy is currently under development. There are a number of start-up and young companies moving into the consultancy business, however there is a need for more. The major industry players already have good understanding of international trade requirements, procedures and costs, while small-scale producers have many concerns in terms of international market demand, product quality standards, labelling requirements, certificates, customs procedures, logistics and all related paperwork.

Exporters may and perhaps should play the role of producer's consolidators, however while currently there are established exporters to Russia and bilateral trade between Central Asian markets, exporters to other international markets are quite limited. The key goals of international exporters should include sample quality inspections with buyers as well as overall quality assurance, logistics management and payment management. In terms of payment, compulsory advance payment may be a threat to further development of Uzbekistan's exports.

International customs and quality conformity inspectors are important components of the processed fruit and vegetables supply chain, however the processed fruit and vegetables industry has the least control over these. The key Central Asian challenges in terms of customs control and inspections are to do with recognition and trust. Central Asian quality certificates are not being recognised by the EU or China due to lack of local internationally recognised conformity assessment bodies, such as laboratories, certification and inspection bodies. Additionally, lack of trust caused by past trade experience, where Central Asian producers have provided local certificates stipulating the level of pesticides or other substances within certain limits, while the tests when repeated by the receiving country's inspectors differ also challenges positive international trade development.

Beyond customs control and obligatory safety and quality requirements, international buyers have their own individual requirements of their suppliers, therefore even if the product passes the customs inspection and is allowed onto the international market, the final level of checks performed by the buyer may result in the order being declined for any number of reasons, including visual appearance, calibration, transportation conditions, taste or current supply and demand situation in the market.

Therefore, although the typical supply chain appears relatively standard, there are many inspections and checks involved at every step, which all result in a rather high level of risk attached to international processed fruit and vegetables trade.

4.3 OVERVIEW OF THE CENTRAL ASIA EXPORT BOTTLENECKS

Natural fruit and vegetable cultivation traditions lack modern technologies to gain global bio and ecological status

A distinct quality of Central Asian processed fruit and vegetable produce is their ecological nature, as farmers historically are not used to applying harsh chemicals to their crops as they often cannot afford to purchase such products. However, such a clean growing approach in many cases is not supported by organic or ecological certificates, due to lack of knowledge, experience and finance, therefore in many cases this cannot be officially claimed on the product label. Nevertheless, ecological and natural fruit and vegetables development has been recognised as one of the major trends in the region and is gradually developing, paying attention to chemical composition as well as wider production criteria.

Central Asian agriculture undergoes improvement, however the majority of today's producers face at least some technological difficulties

Central Asian agriculture across the region is undergoing modernisation and improvement, however lack of strong financial muscle among the majority of small-scale producers means that the technological advancement is slow and time consuming. Nevertheless, Central Asia as a region strategically understands that the agricultural industry offers an international trade opportunity that is yet barely tapped, and therefore the region is aiming to improve and develop its technological capabilities to meet international requirements (see **Ошибка! Источник ссылки не найден.**).

Table 5: Central Asia production enhancement areas

Production enhancement areas	
Current situation	▪ Kazakhstan continues to be a meat and grain focused market, thus does not prioritise processed fruit and vegetables agricultural development at present. ▪ Kyrgyzstan is currently working on expansion of it processed fruit and vegetables export geography and focuses on implementation of internationally recognised quality standards and production certificates. The country was granted GSP+ status in 2016. Kyrgyzstan implements EAEU Technical Regulations, which are expected to be recognised by all member states and potentially some other countries of the world.

	▪ Tajikistan focuses on increasing processed fruit and vegetables production volumes, as the country strategically moves away from cotton crops to fruits and vegetables. Moreover, processed fruits and vegetables in general and dried fruits in particular are more attractive for Tajikistan since they do not require certain climatic conditions unlike fresh fruits. ▪ Uzbekistan is currently undergoing market liberalisation reforms, including the recent lifting of the UzAgroExport monopoly, which was the only company permitted to export fruits and vegetables from Uzbekistan. This was stipulated in President Shavkat Mirziyoyev's decree, "On measures further supporting domestic exporters and facilitating foreign trade activities", adopted on 21 June 2017. The reform is aimed to enable all business entities to export fresh and processed fruits and vegetables abroad. All business entities are provided with the privileges, which were initially only available to UzAgroExport. The decision was taken as a result of analysis conducted into activities in the sphere of exports of fruits and vegetables, which showed the presence of significant untapped potential and bureaucratic obstacles preventing large-scale participation of fruit and vegetable producers in export activities. Along with the expansion of export volumes, the abolition of the monopoly is also intended to stimulate farmers to increase the production of fruits and vegetables as well as to improve crop yields through more efficient use of land resources, including repeated seeding. Furthermore, the present reform also covers the issue of certification. The government obliges certification bodies to issue certificates of conformity for manufactured and imported goods within a period not exceeding three working days. In addition, Uzbekistan is experimenting with the cultivation of new, for local farmers, types of leguminous such as soybeans, red beans, saffron and others. Scientists are helping farmers to work on these projects. The government hopes to diversify agriculture and increase exports of new products. Finally, Uzbekistan plans to increase the production of walnuts. The government has recently decided to allocate a total of 10,000 hectares for walnut plantations throughout Uzbekistan. A targeted fund of at least USD50 million will also support the projects.
Focus of current technological advancements	Throughout the region, current technological improvements are focused on implementation of drip irrigation systems. ▪ Kazakhstan has recently made further steps towards drip irrigation, particularly in southern regions such as Almaty and Zhambyl, because most of the fruits and vegetables are grown in this part of the country. In 2014, the Ministry of Agriculture of Kazakhstan increased the subsidy rates up to KZT150,000 (USD444) per hectare of cultivation area for growing fruits and vegetables, using drip irrigation systems.

	▪ Kyrgyzstan is at the end of its irrigation mission with many drip irrigation projects completed. In addition, Kyrgyzstan has seen some greenhouse development for off-season fruit and vegetable cultivation in recent years. Pursuing a goal to increase the number of greenhouses and logistics centres in southern regions, the government of Kyrgyzstan plans to allocate large funds to agricultural projects in 2017. The funds are planned to be allocated to peasants and farmers for five years with an annual grace period. ▪ Tajikistan, while still recovering, after civil war caused economic crisis, has also started to develop drip irrigation systems across the agricultural industry. However, to date, implementation is minimum and does not yet have any effect on the export industry. Five years ago Tajikistan adopted a law, by which wastelands, stony lands unsuitable for agriculture, were given to interested farmers for lifetime possession. The law led to a significant increase in agricultural produce and exports (including fresh fruit), as farmers irrigated and cultivated former dry land turning this into agricultural land. ▪ Along with continuous drip irrigation development, Uzbekistan is also developing other kinds of irrigation techniques, including usage of plastic hoses instead of traditional irrigation field ditches. This method significantly reduces the intensity of water infiltration, resulting in saving up to 15% of irrigation water in comparison with conventional irrigation methods. Another irrigation method that is being promoted is the use of plastic films in the form of a protective layer (mulch) on furrows. In this case, as practice shows, water consumption is reduced by 25%. The development of all these irrigation methods is one of the state's priorities in the field of water conservation.
Future technological advancement plans	Across the four Central Asian markets drip irrigation is expected to continue development across the next five years. While Kyrgyzstan and Uzbekistan are expected to have higher level of drip irrigation in the mid-term future due to their current advancement over Kazakhstan and Tajikistan, however Kazakhstan economic position may result in the fast development of Kazakh irrigation.

Lack of fruit and vegetables agriculture support is key obstacle hindering growth opportunities

As stated above, Central Asian international trade in processed fruits and vegetables is underdeveloped. As a landlocked country, Uzbekistan faces high transportation costs, which hinder its opportunity to offer competitive trade volumes and values as opposed to perhaps its main competitor Turkey. In addition, Uzbek legislation requires 100% prepayment on any agricultural export transaction. On the one hand, such a requirement, of course, safeguards the local producers/exporters from fraudulent partners. On the other hand, however, it serves as an obstacle to developing direct trade partnerships with large buyers, such as modern retail chains. Large importers in the EU or UAE are used to making a payment either after the cargo is delivered or with small prepayment of 20-30%. Therefore, it would be expedient for Uzbekistan to consider reducing the full advanced payment requirement to at least partial in order to attract a higher number of buyers.

Moreover, Uzbek producers lack knowledge and sometimes awareness of export procedures and international standards as well as local Uzbek fruit certification bodies are not equipped with the latest technology and therefore are unable to produce globally accepted fruit quality certificates. Kyrgyzstan is similar to Uzbekistan in terms of insufficient local certification as well as lack of government support behind irrigation development projects, which the majority of the farmers cannot afford on their own.

Tajikistan, despite having the smallest economy and still suffering from the aftermath of civil war, has already recognised the importance of certification and sees the biggest issue in gaining international partnerships and marketing the Tajikistan name in the global agricultural trade industry.

While each of the markets has individual pain points in terms of international trade development, all of them face a lack of support from government in terms of policies and subsidies, export experts and consultants in terms of procedural practice and advice, certification bodies, financiers and academics (see *Table 6*).

Table 6: Central Asian export facilitation bottlenecks

Key export facilitation bottlenecks	
Lack of cooperation and knowledge sharing	As Central Asian agriculture is primarily run by micro and SME businesses, there is a lack of production efficiency in terms of: ▪ Ability to meet the volume demand of large international buyers. Small players can only negotiate on small-scale orders, while larger orders may be more cost effective as well as binding the retailer; ▪ Ability to provide production quality certificates, such as FSSC, ISO and GLOBALG.A.P. Small farmers are not able to afford voluntary certification and all related audit and inspection costs; ▪ Ability to apply the best industry practices is limited. Agriculture is a traditional industry, and while there are small yet highly innovative and forward thinking establishments, majority of the

	agricultural entities are limited by their existing knowledge and lack the wider global best practice experience.
Rigid legislation	Uzbek law on full 100% advanced payment on any agricultural export products limits Uzbekistan's export opportunities, in particular trade partnerships with large buyers, who typically require partial prepayment or payment delay. Therefore, Uzbek suppliers are not able to meet common retailers' expectation to pay not only upon delivery, but later in the selling process. On the other hand, demonopolisation of agro export is a positive improvement in Uzbek legislation, allowing all local exporters to reach out to international markets and develop new trade relationships.
Lack of private standards implementation	While the Central Asian region fully understands the importance of private standards certification, there is a lack of local certification expertise: ▪ Lack of complete understanding of what are the private standards requirements and how to ensure conformity; ▪ Lack of domestic inspection/audit bodies, able to provide the required checks and recommendations to improve upon; ▪ While foreign consultants, auditors and inspectors are available to invite into the countries, the costs of such inspections exclude the majority of local businesses from the possibility of obtaining the necessary standards; ▪ A highly fragmented agricultural industry once again limits the ability of individual and small-scale farms to afford the certification, while a lack of collective exporters does not allow for collective certification; ▪ Lack of technological capabilities does not allow the performance of all the required inspection tests, or merely supports performance of them with limited success or lower confidence levels. Central Asian markets already understand the problematic areas and are developing plans to improve on those, including introducing special university courses to develop local certification experts.
Costly and time consuming logistics	As Central Asian markets do not have direct access to marine transportation, SMEs face logistical difficulties, while balancing transportation costs, production margins and competitive offerings. Tajikistan and Uzbekistan are not part of the EAEU, which represents the majority of the current export market. Thus transportation of fruit and vegetables produce by Uzbek or Tajik carriers is more costly than using Kazakh or Kyrgyz partners. Therefore, Tajikistan and Uzbekistan often export their produce to neighbouring

	Kazakhstan and Kyrgyzstan for further re-exporting to other markets, such as Russia.
Lack of access to finance	Across the region, agricultural producers face difficulties in acquiring business loans or mortgages for modernisation of production methods or increasing productivity (volumes) levels. While banks have developed products for agricultural borrowers, the requirements are complicated, challenging and unclear to the majority of SME players. In addition, Kyrgyzstan's farmers lack financial state support in the form of subsidies or governmental loans for further irrigation development.

4.4 OVERVIEW OF THE CENTRAL ASIA EXPORT OPPORTUNITIES

Despite the challenges Central Asia expects its processed fruit and vegetables exports to grow

In general, Central Asian countries are more concentrated on processed produce rather than fresh produce due to the lower technological and climatic requirements for their maintenance. There are not enough warehouses for maintaining effective storage of fresh fruits and vegetables. Cold chain transportation is much more expensive and less available in the local market. Dried fruits, on the other hand, can be maintained in ordinary warehouses for a longer time and can be transported by non-refrigerated trucks and trains. Therefore, Central Asian countries expect to increase their processed fruit and vegetables exports in the next five years. Producing companies also count on rising support from government and wider international organisations, including World Trade Organization (WTO), United Nations Economic Commission for Europe, International Trade Centre, facilitating export procedure domestically and improving international bilateral and multilateral trade agreements, including Generalised Scheme of Preferences (GSP) and GSP+ agreements with Europe. International trade is further developing through re-export strategies, as Uzbekistan and Tajikistan export processed fruits and vegetables to Kazakhstan and Kyrgyzstan on the basis of their bilateral preferential trade agreements, while Kazakhstan and Kyrgyzstan then re-export the produce to Russia and other markets based on their preferential trade agreements and lower customs rates. Nevertheless, it is important to note that there are also cases, when some Kyrgyzstan-based producers sell their products to Uzbekistan and Tajikistan for drying purposes, because the latter countries possess better or use more advanced drying or wider processing technologies. As a consequence, Kyrgyzstan-originated dried fruits are re-exported either back to Kyrgyzstan or to other countries.

While Kazakhstan, Kyrgyzstan and Tajikistan are World Trade Organization (WTO) members and therefore can enjoy Most Favoured Nation (MFN) treatment. Uzbekistan, is still in the very early stages of WTO membership, is clearly restructuring agricultural export focus and facilitating internal export procedures.

Looking at particular dried fruit and vegetables categories under research, Central Asian producers are equally well positioned to develop trade in any of the product categories. For example, Central Asian dried apricots, especially produce from Tajikistan and Uzbekistan, are believed to have higher nutritional qualities than competitive offerings, however they lack international marketing and consumer awareness of the produce’s benefits. Central Asian dried grapes meet fierce competition from global rivals, including products from Turkey, the US and Chile. While Central Asian dried grape produce is sweet and crunchy, it is unknown among international consumers, and thus marketing investment is required to promote this particular product category.

5. PRIORITY EXPORT MARKETS: GERMANY

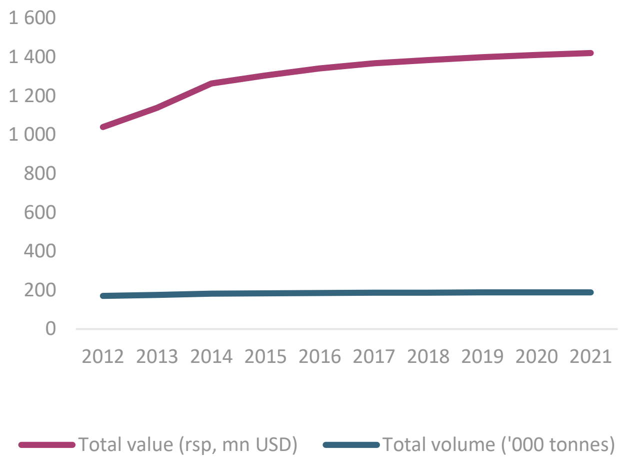
5.1 GERMAN PROCESSED FRUIT AND VEGETABLES MARKET OVERVIEW

German processed fruit and vegetables follow stable growth

In 2016, Germany enjoyed a relatively favourable macroeconomic environment, supported by lower interest rates. Unemployment remained below 5%, and increased consumer confidence positively contributed to spending on goods and services. Processed fruit and vegetables market has also benefited from this development, with German consumers purchasing more high-quality products, often labelled as organic, fair trade, or regionally produced. Processed fruit and vegetables on the other hand witnessed stable growth in both value and volume terms.

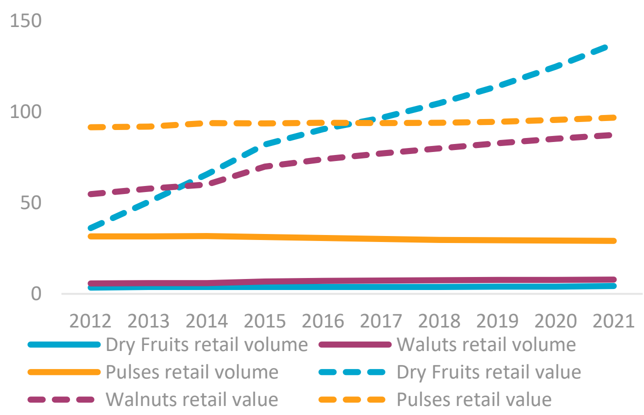
The total dried fruit, nuts and seeds and shelf stable beans market in Germany amounts to 185,600 tonnes per annum (see *Chart*). Retail sales account for the largest share of the market with 149,600 tonnes in 2016. While German consumers typically prefer domestic or European produce to other imports, demand for fried fruits and nuts is on the rise, even though Germany does not produce significant quantities of either dried fruits or nuts. Domestic dried fruits, nuts and legumes consumption is driven by the healthy living trend as well as ethnic minorities, whose diets typically include a high share of processed fruit and vegetables. As Germany is part of the EU, other EU producers are priority import markets, however in the case of dried fruits, nuts and legumes Turkey is by far the largest import partner. The US, Canada, China and European suppliers also participate in international trade with Germany, albeit on a much smaller scale.

Chart 6: Processed fruit and vegetables in Germany 2012-2021



Source: Passport Packaged Food data 2017

Chart 7: Processed fruit and vegetables retail market ('000 tonnes and USD mn) 2012-2021



Source: Euromonitor. Packaged Food and Fresh Food data 2017

Consumption of dried fruits and nuts is slowly, but steadily gaining momentum, as German consumers are following healthy snacking and wider healthy eating habits (see *Chart*). Pulses on the other hand remain a very niche category, which is not expected to gain major demand in the medium term.

Several trends have affected consumer preferences in the last few years. Firstly, the health and wellness trend is continuing to influence the nutritional and consumption habits of Germans. Consumers value healthy snacks and highly nutritional dried fruits and nuts, while pulses enjoy some niche demand among the vegetarian population.

5.2 OVERVIEW OF GERMAN PROCESSED FRUIT AND VEGETABLES MARKET REQUIREMENTS

Fruit and vegetable calibration is a must to meet local consumer demand

German consumers demand both taste and visual aspects when shopping for processed fruit and vegetables, therefore retailers are relatively strict on fruit calibration and demand similar shaped and sized fruits from their suppliers. Major preferences of Germans are typically based on long-standing habits and somewhat traditional food choices (see *Table 7*). Typically Germans prefer sweet, yet not too sweet-tasting fruit and crunchy texture and salted, spiced or plain nuts. Typically, dried fruits, nuts and pulses are distributed through packaged food aisles, however some loose distribution is also present.

Table 7: German consumer processed fruit and vegetable preferences

Dried apricots

Shape	Oval, not a crucial factor
Taste	Sweet
Texture	Soft texture, not too dry
Variant	Light coloured, recent trend - sundried darker apricots

Dried grapes

Shape	Small, oval
Colour	Both dark and light coloured, darker berries are often cheaper
Taste	Sweet
Texture	Soft, yet not sticky

Walnuts

Shape	Half walnut kernels, no damage
Colour	Light brown
Texture	Dry, crunchy
Taste	Not bitter

Apricot kernels

Shape	Oval, almond-alike
Colour	Light brown
Taste	Sweet and bitter equally demanded; bitter kernels preferred for medical reasons
Texture	Crunchy

Beans

Shape	Not damaged, standard bean shape
Colour	Red or white among the most popular
Texture	Soft, yet not “slushy”

Mung beans

Colour	Green
Texture	Soft, yet not “slushy”

Chickpeas

Shape	Well rounded, not damaged
Colour	Light coloured
Texture	Soft, yet not “slushy”

While seasonality is not a factor in processed food, harvests remain the key price determinant

Processed fruit and vegetables are not subject to seasonality. The top level pricing in the processed fruit and vegetables categories is shaped by the harvest yield of both local and global producers, consumer demand as well as country of origin. Other more specific factors influencing processed fruit and vegetable price points include taste, visual appearance, texture, colour, packaging and nutritional value. While all the above-mentioned criteria fluctuate over time, in 2016 the price level remained relatively stable.

As a rule, German consumers are ready to pay an extra premium for higher quality and organically certified produce, however dried fruits and nuts are considered healthy snacks regardless of organic or ecological farming certification. Organic and Fairtrade sales remain limited, however they are developing rapidly. For example, within nuts, 0.3% of retail sales in 2016 were accounted for by Fairtrade certified nuts, 5.8% for organic nuts and the remaining 93.8% of retail sales comprised standard nuts [Source: Euromonitor. Fresh Food data].

Healthy and tasty dried fruits work as snacks and ingredients

Dried fruits in Germany find markets in both foodservice and end consumption. The appetite for the final consumption of dried fruits is driven by the healthy living trend, where dried fruit is considered to be a superfood or a healthy snack of high nutritional value. Dried apricots in particular enjoy superfood status in the German market, thus the key consumption volume is generated through retail primarily through packaged dried apricots or mixed dried fruits or mixed dried fruit and nut bags; however some loose dried apricot distribution is also available. Food processing consumption of dried apricots has also been developing steadily in the past few years, however volumes in this area are currently marginal (see *Chart*). Such high nutritional benefits and the superfruit status of dried apricots result in quite a high average retail price of EUR15 per kilogram or EUR1.5 per 100g (see *Table 8*). Dried grapes represent a relatively common selection by German consumers, as they are broadly present in trail mixes, muesli, and individual packages at supermarkets and discounters. However, dried grapes in the food processing industry are much more important, as raisins find their way into a variety of recipes from baked goods and desserts to salads and hot meat meals. Therefore, the distribution landscape for dried grapes is somewhat equally split between retail and food processing channels. The average retail price of dried grapes was EUR6 per kilogram in 2016.

Import-driven nut market is targeting health-aware snackers

The German nut market showed stable development in 2016, reaching 90,000 tonnes annual consumption volume. Nuts continued to be very popular, both in fresh food but also packaged food, mainly due to being perceived as a naturally healthy snack. Furthermore, both the government and independent agencies with a focus on health and wellness continued to heavily promote the consumption of nuts, recommending that they replace one portion of fruit and/or vegetables among consumers' five-a-day.

Germany has very marginal domestic production of walnuts, amounting to around 300 tonnes per annum. Therefore the market relies largely on imports of close to 30,000 tonnes per year of both shelled and unshelled walnuts. Walnuts posted the strongest total volume growth of 4% in 2016, among the overall nuts category. On the one hand, this was a result of rising demand against a background of strong supply, while on the other it was also a consequence of poorer performances from other categories due to weaker supply. In volume terms, the walnut is the third most popular nut in Germany, following peanuts and almonds, with an average retail price of EUR30 per kilogram (see *Table 8*). Walnuts also find a market in foodservice, as they are used in baked goods and confectionery, albeit to a limited extent, thus retail remains the key distribution channel for walnuts.

The market for apricot kernels is rather small and is estimated at 4,000 tonnes per annum. The market is based entirely on imported products, primarily from China, South Africa and Nigeria, with some of the imports headed for re-export to other EU markets. While apricot kernels are a niche product in Germany, they mainly find success among health-aware consumers, as they are believed to have treatment or preventative properties against some diseases, such as cancer. Having such curative qualities, apricot kernels retail at a relatively high price of EUR25 per kilogram on average (see *Table 8*). Apricot kernels also find use in confectionery, and lately in the cosmetics industry. While the cancer-curing, health-benefiting qualities of apricot kernels are appealing, the main factors hindering category growth are concerns about apricot kernels' possible adverse effects on health, and also strict controls over the quality of produce; kernels are often easily spoiled or contaminated during transportation.

Legumes find their niche among ethnic minorities and vegetarians

Consumption of pulses has been steadily decreasing over the past few years. This is explained by the fact that beans are not typically a main meal ingredient in German diets, and are occasionally added to stews, salads and other mixed dishes. Generally, consumption of pulses is strong in less developed countries and vegetarian cultures, as pulses represent a good source of protein. However, Germany is a strong meat consumer as well as a strong economy, therefore pulses are a secondary consideration in Germans' diets. Local consumers are less likely to pay more for exotic bean variants, however ethnic minorities, for whom pulses are a key meal ingredient, may spend more as well as seek out particular variants of pulses. Despite pulses being a niche market, it is characterised by relatively low average retail prices, for example EUR4 per kilogram for beans and chickpeas, and EUR7 per kilogram for mung beans (see *Table 8*). Foodservice demand is also relatively small.

At the same time, in recent years, the German government has started a special initiative to promote production, distribution and consumption of pulses across the country. The strategy is primarily aimed at strengthening local production by introducing a network of farmers and trading organisations specialising in pulses. The expectation is that increased local production may spur consumer interest in the entire category of pulses, as they tend to be introduced on local markets and in smaller quantities in retail. The process is rather slow however, and the category is not expected to grow significantly in the near future.

Table 8: Processed fruit and vegetable average retail price observations 2016

Dried apricots

Minimum price	EUR 13/kg
Maximum price	EUR 20/kg
Average price	EUR 15/kg
Producing market	Turkey, Uzbekistan, Spain, South Africa

Dried grapes

Minimum price	EUR 3.50/kg
Maximum price	EUR 7/kg
Average price	EUR 6/kg
Producing market	Turkey, South Africa, US, Uzbekistan

Walnuts

Minimum price	EUR 22/kg
Maximum price	EUR 40/kg
Average price	EUR 30/kg
Producing market	US, France, Moldova

Apricot kernels

Minimum price	EUR 18/kg
Maximum price	EUR 30/kg
Average price	EUR 25/kg
Producing market	China, South Africa, Nigeria, Pakistan

Beans

Minimum price	EUR 3.50/kg
Maximum price	EUR 7/kg
Average price	EUR 4/kg
Producing market	China, Canada, Ethiopia, Kyrgyzstan

Mung beans

Minimum price	EUR 6.30/kg
Maximum price	EUR 14/kg
Average price	EUR 7/kg
Producing market	Spain, Italy, Turkey

Chickpeas

Minimum price	EUR 3.30/kg
Maximum price	EUR 10/kg
Average price	EUR 4/kg
Producing market	Spain, Italy, China

Source: Rewe, Edeka, gourmondo.de, dm, topfruits.de, kopp-verlag.de

Increasing interest in nutritional food value leads German consumers to healthy snacking

Germany faces a number of health issues, including an ageing population, obesity and hectic consumer lifestyles, all leading to increasing healthcare and health insurance costs. While these challenges are being addressed by public bodies and private organisations, in light of media attention consumers have turned to improving their lifestyles and nutritional intake. In addition to increasing their physical activity, German consumers have revisited their diets, focusing on calorie intake and the nutritional value of foods consumed. This has led to healthy eating, and subsequently healthy snacking, driving the consumption of dried fruits and nuts.

In addition to the actual health concerns, German consumers are conscious of the environment, which together drive the demand for organic products. Furthermore, agricultural products also benefit from a marketing tie-in to "sustainability" certification, which is also a widely-used food marketing tool in Germany.

Processed fruit and vegetable consumption is expected to continue stable development

While healthy living awareness is expected to strengthen, dried fruit and nut consumption is expected to remain stable. Nuts and dried fruits will continue to benefit from being seen by many as healthier alternatives to other snacking products, especially processed ones. Although German consumers will develop more prominent healthy eating habits, and with that country of origin, organic and fair trade labels are expected to become more important and allow for somewhat higher price points, typical German consumers are expected to remain price and taste, rather than claim, orientated.

5.3 OVERVIEW OF GERMAN PROCESSED FRUIT AND VEGETABLES IMPORT COMPETITION

Bulk imports of high-quality produce at discounted prices a typical German request

While Germany has minor domestic fruit, nut and legumes production, it is one of the major European consumption markets as well as importers. The German processed fruit, nut and legumes market is sustained by bulk imports that are then further processed and packaged in Germany. There are specialised German importers, such as Felix GmbH & Co KG (Intersnack Group), Seeberger GmbH & Co KG, Max Kiene GmbH, Landgard Fachhandel GmbH & Co. KG, which distribute across the food processors and retail, including the large modern chains. Being experts in the business, these importers are well experienced in terms of required import certificates, labelling and other applicable requirements. Despite its well-developed economy, Germans remain very price sensitive, thus both consumers and retailers are looking for top quality at a discounted price. However, Germans are not willing to compromise quality for price, as they are very concerned about food safety and sustainability of the environment. Quality is such an important issue that in cases where products or brands gain negative press, as for example in cases of pesticide or mycotoxin presence, consumers will refuse to buy the product. Such strong quality concerns work well for US exporters, as these are well known for their quality and safety requirements.

Turkey leads dried fruit supply in Germany

The key source of dried apricots is Turkey, supplying 88.6% of total import volumes, followed by Uzbekistan and the Netherlands with 3.4% and 2.0% of imports, respectively. The Netherlands is a European re-exporter, which also primarily sources dried apricots from Turkey. Among European suppliers, France, Italy and Spain are relatively strong, while other non-European suppliers include countries such as China, Afghanistan, Pakistan, Iran and South Africa. While the majority of the healthy, magnesium-rich snack is distributed through retail, nearly half of consumption volume is first distributed to wholesale and food industries for further redistribution.

Dried grapes distribution is less concentrated than dried apricots, however Turkey remains the largest supplier of the category, with 38.9% of imported volumes, with South Africa and US supplying 21.7% and 13.3%, respectively. Uzbekistan is the fifth largest dried grapes supplier to Germany with 3.7% of import volumes, following China with 5.7%. As raisins are typically consumed as part of fruit and nut mixes or in the food processing industry, the importing markets mainly deal with wholesalers and food processors and less with retail directly.

Nuts supply sees strong consolidation, as top three suppliers control most volumes

Domestic production of nuts is limited to a few regions, with Kaiserstuhl bei Freiburg being one of the biggest areas for German cultivation of walnuts. However, production is marginal. Shelled walnuts are strongly preferred by Germans due to increased convenience of consumption as well as food processing, with close to 80% of imports comprising shelled walnuts. The US is the key source of walnuts controlling 66.4% of total walnut imports. In terms of European supply, around 10% of imports are from France and a further 3.5% from the Netherlands. While Germany does not import walnuts from Central Asia, it does trade with another post-Soviet Union market - Moldova - which supplied 4.1% of imports in 2016. Similar to raisins, walnuts find a market in food processing, especially in confectionery and baked goods, and within retail in fruit and nut mixes, therefore the majority of imports go through wholesalers and importers, rather than directly to users.

Apricot kernels and the wider fruit stones market is niche in Germany. Half of the supplies come from China, followed by South Africa, Nigeria and Sudan, which combined generate close to 80% of import volumes. However, it is Pakistan that is being highlighted as the quality provider. As the market is not saturated, importers often look at new supply options and seek high-quality apricot kernels ready for end consumption.

European suppliers well established, although Kyrgyzstan is present in beans

The dried leguminous vegetables market in Germany has been in decline in the past few years, however starting from 2012, the German federal ministry for nutrition and agriculture (BMEL) has developed a common strategy for the popularisation of pulses in the country. While the strategy aims to increase cultivation areas as well as grow and improve processing and distribution, the current leguminous demand is met through imports. Beans are largely supplied from China, Canada and Ethiopa (57.3% of import volumes), a third of imported chickpeas come from European suppliers, such as Italy and the Netherlands, with Turkey being the second largest source of imports. Mung beans see similar suppliers as chickpeas, however Italy and Spain generate 44% of volumes, with China replacing Turkey as the second largest supplier. Similar to other niche categories in leguminous, Kyrgyzstan is the fifth largest supplier of beans, responsible for 7.6% of import volumes. Most leguminous vegetables are intended for end consumption, and are distributed via supermarket chains, both conventional and specific (eg for organic products, or with products for various ethnic cuisines). Some of the products are also distributed in processed form (eg canned beans), and in frozen form (again, mainly beans, but not mung beans and chickpeas). Despite long-lasting cooperation with main suppliers of pulses, the need for import diversification may still arise. This is explained by the growing interest in vegetarian diets and in healthy living.

5.4 OVERVIEW OF GERMAN REGULATORY LANDSCAPE

German importers face the same quality requirements as local producers

German law is focused on food products and their quality and does not provide special provisions to importers versus local producers. Therefore, any processed fruit and vegetables importer must adhere to the same set of standards, norms and regulations as local producers, which means that it is importers' prime responsibility to ensure the quality of the imported goods and their conformity to the minimum quality requirements set by UNECE, EU and German regulations (see *Table 9*). The conformity checks that importers have to perform include product quality inspections, packaging inspection, country of origin checks as well as tracing the route of the product from its origin to the final destination point. In order to be accepted and recognised, the above-mentioned checks shall be performed by German experts and laboratories via sample testing. Although it is importers' responsibility to ensure the imported goods' quality and conformity to the applicable regulations, the legislation allows importers to skip the conformity checks in cases where the exporter provides them with the necessary conformity certification and other documentation, issued by laboratories recognised or operating in the EU. Thus, in practice importing companies require international exporters to handle all the conformity-related checks and provide them with the relevant certificates and standards before the start of the export logistics, so importers are only responsible for the final check of the quality of goods post transportation.

Local conformity checks are executed via sample testing

The key German authority responsible for ensuring imported produce conforms to the quality standards is The Federal Office of Agriculture and Food (Bundesanstalt für Landwirtschaft und Ernährung (BLE)), which runs selective conformity checks on randomly selected product samples at the point of import and also runs checks on request on the product sample that is to be imported to Germany or the EU. BLE has controlling stations across the country, including in Hamburg, Bremerhaven, Berlin, Munich, Frankfurt am Main and Cologne. In addition to BLE, German Federal Lands (Bundesländer) also oversee that imported products conform to regulations at packing stations and in the retail and wholesale sectors. Similar to BLE, controls take place in a selective manner, based on risk analysis by the controlling authorities. Thus products that have a higher risk level (based on product nature or historical data of the checks to date) are checked more often and more thoroughly, in contrast to those labelled as low risk. The conformity process starts with the electronic application filed by the exporter for every set of exported goods, stating the date, time and place for the sample testing. In cases where the destination point is selected as the control point, the transporting vehicle is sealed and allowed through customs to the set destination. The checking body (BLE) analyses the application and within a few days confirms if the export consignment will undergo sample testing control or not. In cases where BLE decides not to test the imported shipment of goods, the produce is allowed into the country and importers themselves check for final quality on arrival. In cases where BLE has chosen to run the control sampling, the checks are performed at the initially selected destination. Such conformity checks do not bear any additional costs to the exporter and also may be performed at any other EU border.

Table 9: German processed fruit and vegetables import-related regulations affecting Central Asian suppliers

Summary of the legislation	**Implications for exports from CA**
General Marketing Standard	
Document location: Annex 1 (English), European Commission fruit and vegetable regime (English)	
General marketing standards set minimum requirements on fruit and vegetables quality, maturity, deviation tolerance and origin of produce	▪ Quality requirements: Intact, sound (not affected by rotting), clean and free from foreign matter, free from pests and their damage, free from abnormal moisture, free from foreign smells or taste, able to withstand transportation and handling, arriving in satisfactory condition to the place of destination. ▪ Maturity requirements: Sufficiently, but not over-developed, display satisfactory ripeness and not overripe. State of the produce must allow continuation of the ripening process. ▪ Tolerance: 10% of the produce count or weight that is not satisfying minimum quality requirement shall be allowed in each shipment, however only 2% of the tolerance deviation may consists of produce affected by decay. ▪ Country of origin: Full name of the country of origin should be stated in a language understandable to the consumers of the country of destination.

EU Regulation 1308/2013

Document location: Summary (German), Complete regulation (English)

The aim of the regulation is to create a common market for agricultural products across the EU. Processed fruit and vegetables are present in Section X of the Regulation. In general, the products should be fit for sale on the market, not damaged, or with some significant defects. Unless there are some specific requirements, overall marketing standards can be applied to the fruit and vegetables.	Central Asian processed fruit and vegetable produce has to adhere to the following minimum requirements: ▪ Healthy - no fungus or its traces, no sun scorch, no cold temperature damage, no visual pressure damage; ▪ Clean - no visible dirt, earth traces or fertiliser residue; ▪ Pest free - colonies of insects and pests are prohibited, while random individual insects are allowed as long as they do not affect the quality of the produce; ▪ Pest damage free - no visible signs of pest traces, affecting the marketing and consumption. Some random minimal traces are tolerated; ▪ External fluid free - no external fluids are allowed, except condensed fluids caused by temperature changes during transportation; ▪ Neutral smell and taste - no unusual, unnatural smell and taste caused by other products, transportation and warehousing.

EU Regulation 543/2011

Document location: Summary (German), Complete regulation (English)

The aim of the regulation is to set out detailed rules for the application of the Council regulation EC 1234/2007, which was repealed by EU 1308/2013 (above). The regulation applies to fresh and processed fruit and vegetables. Regulation specifies that general marketing norms should be applied to all fruit and vegetable produce, provided that the produce corresponds to the international UNECE and OECD standards. More particular EU regulations are applicable for 10 particular product categories, including apples, pears, strawberries, grapes, paprika, kiwi,	Conformity checks are carried out by sampling and are focused on traders that are most likely to have goods that do not comply with the standards. Conformity checks are carried out before the goods enter the customs territory of the EU. Customs allow goods into the EU in cases where the conformity certificate is present or a competent inspection body has notified customs that the conformity certificate has been granted.

nectarines/peaches, tomatoes, salad and citrus fruits.

UNECE standard DDP-15 for dried apricots

Document location: UNECE dried apricots quality standard (English), UNECE dried apricots quality standard (Russian)

UNECE standard for dried apricots provides a guideline to internationally accepted minimum requirements for the product category. These requirements may be supplemented by additional provisions in the national/EU legislation and particular buyer standards.	**Minimum requirements** Dried apricots must be: ▪ Free of living insects or mites whatever their stage of development; ▪ Free of abnormal external humidity; ▪ Free of foreign smells and/or tastes; ▪ Whole, the fruit may be pitted or cut (halves or slabs) according to marketing requirements; ▪ Sound; produce affected by rotting or deterioration, making it unfit for consumption, is excluded; ▪ Prepared from fruit that is sufficiently ripe; ▪ Clean; practically free from any visible foreign matter; ▪ Fleshy, with elastic or flexible flesh and very little moist flesh in the pit cavity; ▪ Free of visible traces of damage by insects, mites or other pests; ▪ Free of fermentation; ▪ Free of mould. Furthermore, the standard provides information on sizing, tolerances for some defects, and classes of the fruit (Extra, Class I, Class II).

UNECE standard for DDP-06 almond kernels

Document location: UNECE almond kernels quality standard (English), UNECE almond kernels quality standard (Russian)

UNECE standard for almond kernels is believed to represent the closest possible standard for apricot kernels that do not have a specific set of internationally defined requirements.	**Minimum requirements** The kernels should be: ▪ Intact; however, kernels with less than 1/8th missing are considered whole; ▪ Sound; produce affected by rotting or deterioration, making it unfit for human consumption, is excluded;

	▪ Clean; practically free of any visible foreign matter; ▪ Sufficiently developed. Shrunken or shrivelled kernels, which are extremely wrinkled, are to be excluded; ▪ Free from blemishes, areas of discoloration, yellowing, fat diffusion or spread stains in pronounced contrast with the rest of the kernel affecting in aggregate more than 25% of the surface of the kernel; ▪ Well-formed; ▪ Free from living pests, whatever their stage of development; ▪ Free from damage caused by pests, including the presence of dead insects and/or mites, their debris or excreta; ▪ Free from mould filaments visible to the naked eye; ▪ Free from rancidity; ▪ Free of abnormal external moisture; ▪ Free of foreign smells and/or tastes.

UNECE standard DDP-01 and DDP-02 for walnuts

Document location: UNECE walnuts quality standard DDP-01 (English), UNECE walnuts quality standard DDP-01 (Russian), UNECE walnuts quality standard DDP-02 (English), UNECE walnuts quality standard DDP-02 (Russian)

UNECE standard for walnuts provides internationally accepted requirements pertaining to the shape, condition, and overall health of the walnuts.	**Minimum requirements** In order to be marketed, the walnut kernels should be: ▪ Sufficiently dry to ensure quality; ▪ Sound; produce affected by rotting or deterioration, making it unfit for consumption, is excluded; ▪ Firm; ▪ Sufficiently developed; shrivelled kernels are to be excluded; ▪ Clean, practically free from any visible foreign matter and from shell; ▪ Free from insects or mites whatever their stage of development; ▪ Free from damage caused by pests; ▪ Free of any rancidity or oily appearance; free from mould; ▪ Free of abnormal external moisture;

	▪ Free of foreign smells and/or tastes. Walnut kernels must have moisture content of not greater than 5%. Walnut kernels must be packed in such a way to preserve their qualities throughout the supply chain. If wooden packaging is used, the produce should be separated from the bottom, sides and lid by paper material. Walnut kernels shall be presented in individual packages, or in bulk packaging. In addition, UNECE standard provides more information on product classes, tolerance scales and sizing.

UNECE standard DDP-11 for dried grapes

Document location: UNECE dried grapes quality standard

UNECE standard for dried grapes provides internationally accepted requirements pertaining to the shape, condition, and overall health of the product category.	**Minimum requirements** In order to be marketed, dried grapes should be: ▪ Intact; however, slight superficial damage is not considered a defect; ▪ Sound; produce affected by rotting or deterioration, making it unfit for human consumption, is excluded; ▪ Clean, practically free of any visible foreign matter; ▪ Free from living pests whatever their stage of development; ▪ Free from damage caused by pests, including the presence of dead insects and/or mites, their debris or excreta; ▪ Free from mould filaments visible to the naked eye; ▪ Free from underdeveloped berries; ▪ Free from capstems exceeding 3mm in length, except for lots presented with capstems; ▪ Free from sugar crystals visible to the naked eye; ▪ Free of abnormal external moisture; ▪ Free of foreign smells and/or tastes except for a slight salty taste of sodium chloride and or calcium chloride and a slight smell and taste of vegetable oil and preservatives/additives, including sulphur dioxide. The dried grapes shall have **a moisture content** not exceeding: ▪ 18% for seedless varieties except for Monukka variety ▪ 20% for currants; ▪ 19% for seed-bearing varieties;

	▪ 31% for Malaga Muscatel variety treated with preservatives or preserved by other means. Dried grapes have to be packaged in a way to preserve their qualities. If any stamps and labels are used on the packaging, they should be without any toxic ink or glue.

UNECE standard FFV-06 for beans

Document location: UNECE beans quality standard (English), UNECE beans quality standard (Russian)

The document provides internationally accepted standards for a generic category of beans.	**Minimum requirements** In order to be marketed, beans have to be: ▪ Intact; ▪ Sound; produce affected by rotting or deterioration, making it unfit for consumption, is excluded; ▪ Clean, practically free of any visible foreign matter; ▪ Free from parchment (hard endoderm); ▪ Practically free from pests; ▪ Practically free from damage caused by pests - free of abnormal external moisture; ▪ Free of any foreign smells and/or tastes.

UNECE standard FFV-27 for peas

Document location: UNECE peas quality standard (English), UNECE peas quality standard (Russian)

The document provides internationally accepted standards for a generic category of peas.	**Minimum requirements** The pods must be: ▪ Intact; however mange-tout peas and sugar snap peas may have their ends removed; ▪ Sound; produce affected by rotting or deterioration, making it unfit for consumption, is excluded; ▪ Clean, practically free of any visible foreign matter (including parts of the flowers); ▪ Free from hard filaments or films in mange-tout peas and sugar snap peas; ▪ Practically free from pests; ▪ Practically free from damage caused by pests; ▪ Free of abnormal external moisture; ▪ Free of any foreign smells and/or tastes.

EU Regulation 978/2012

Document location: Complete regulation in English

The regulation provides reduction and partly complete suspension of common customs duties for certain product groups from underdeveloped countries. This is especially relevant in the context of Tajikistan and Uzbekistan, which benefit from the scheme.	Under the scheme, Uzbekistan and Tajikistan are exempt from customs duties for dried grapes, walnuts, and have reduced customs duty amount for shelled walnuts and apricot kernels. Customs duties are completely removed from the products that are considered non-sensitive.

CBI buyer requirements of processed fruit, vegetables and edible nuts in Europe

Document location: Complete text in English

The document provides a compilation of the most important legal requirements, as well as some tips to buyers in terms of mandatory food safety standards.	In addition to the main legal requirements for food safety stated in the EU food law, there may exist some stricter food safety requirements for countries, products of which have been found to repeatedly not conform to the standards. There is a list of such countries supplying processed fruit and edible nuts. Among the countries and products there are dried apricots from Turkey and Uzbekistan. In practice, this means that the produce from these countries will be increasingly controlled for sulphites. There are certain most common contaminants of fruit and vegetables that are listed under the EU legislation, and the list is often updated. They are: -Mycotoxins produced by funghi commonly known as mould. Aflatoxins are most commonly observed in dried fruit and common edible nuts; -Heavy metals; there are certain restrictions for lead, cadmium and tin (especially for canned food); -Microbiological contaminants such as salmonella and viruses (norovirus, Hepatitis A etc). The outbreak of the associated diseases is closely controlled and followed by the authorities and may lead to reconsidering the safety of importation of some fruit and vegetables from third countries; -Pesticides; the EU has maximum residue levels for various sorts of pesticides. MRLs can increasingly complicate trade, and they may be also changed according to EU considerations. For instance, in 2016 a new regulation of the chlorpyrifos pesticide has affected imports of dried grapes to the EU, in particular, large

	consignments from Turkey. More specific information on MRLs can be found under EU Pesticide database; -Foreign matter refers to contamination through any foreign matter such as glass particles, insects, plastic.

EU Regulation 1169/2011

Document location: Complete text of the regulation in English

The Regulation establishes requirements for food information to be provided to consumers.	There is a set of mandatory food information requirements that have to be provided to consumers: ▪ Information on the identity, composition, properties of food; ▪ Compositional additives that might be harmful to some groups of consumers; ▪ Durability, storage, safe use; ▪ The health impact, also related to harmful and hazardous consumption of food; ▪ Information on nutritional value. The food business operator responsible for the food information shall be the one under whose name the food is marketed. The Regulation further provides a more specific list of mandatory food information requirements: 1. The name of the food; 2. List of ingredients; 3. Any ingredient causing allergies and intolerances (also listed in the annex to the regulation); 4. Quantity of certain ingredients; 5. The "use by" date; 6. Any special storage conditions; 7. The name of the food business operator; 8. The country of origin, or the place of provenance; 9. Instructions about use where appropriate; 10. A nutrition declaration.

The Federal Office of Agriculture and Food (Bundesanstalt für Landwirtschaft und Ernährung (BLE))

Document location: Contact details

Contact details to all controlling stations of BLE, providing physical addresses and phone numbers. Includes stations in Hamburg, Bremerhaven, Berlin, Munich, Frankfurt am Main and Cologne.

BLE guide to the conformity control of the import and export of processed fruit and vegetables

Document location: About conformity controls (German)

The guide summarises the main legislation documents concerning conformity requirements, and outlines the conformity control procedure by the BLE.	Processed produce imported to Germany needs to conform to the general marketing norms, and given specific standards for some types of fruit and vegetables. It is the main responsibility of producers, packers, importers to check the conformity of the products. BLE conducts controls on a selective basis. For the import of consignments, conformity documents have to be presented at the border (it should be noted, third countries may show export control documents issued by inland authorities recognised by the EU in accordance with Part IV of the Regulation 543/2011).

Guide to risk analysis and on reporting requirements

Document location: About risk analysis and reporting (German)

The document explains risk analysis definition and process, and contains an example of a checklist for risk analysis on page 22. The guide is mainly applicable to the importer companies/distributors/ buyers in Germany, as the companies are part of the German database. However, some important risk factors for the imported fruit and vegetables are also addressed.	Risk analysis enables German authorities to analyse the level of risk that import/marketing of fruit and vegetables from certain producers/distributors may cause. There are several risk parameters to be considered: ▪ Type of the firm and its position in the supply chain (producer, pack station, cooperative, etc); ▪ Assortment of products; ▪ Size of the company (according to turnovers). When it comes to foreign goods, as in the case of this study, importers in Germany have little control over the conditions of production in the exporting country, thus, different risk parameters play a significant role here: ▪ Product range; ▪ Country of origin; ▪ Exporter/packer; ▪ Buyer; ▪ Other factors (transportation conditions, seasonality, and point of conformity control). Each company/produce is assigned a certain amount of risk points and categorised as high or low risk. This further affects the frequency of controls and conformity checks.

Phyto-sanitary norms

Document location: Phyto-sanitary norms

EU has a detailed set of rules to reduce or eliminate the possible risks of animal and plant diseases being introduced into the EU with goods originating from third countries. The norms also contain cooperation guidelines between relevant authorities and customs services, as well as provisions on targeting control on the basis of risk analysis.	The norms concern preventative measures to be taken by relevant authorities and customs services in the EU, in order to prevent introduction of harmful substances, pests and other prohibited elements that may threaten or damage plant and public health in the country of destination.

Phyto-sanitary certificates

Document location: Phyto-sanitary certification norms and guidelines

The document sums up international norms for filling phyto-sanitary certificates.	Imports of fruit and vegetables from all non-EU countries require phyto-sanitary certificates. These certificates indicate that consignments do not pose threats to plant and human health. The certificates have to be issued by a competent food and agriculture authority within the exporting country (in the local language and in English). Each phyto-sanitary certificate needs to be issued in the exporting country, however the importing country may have some additional requests regarding the language, and validity period of the certificate. Section 2.1 contains sample requirements for the completion of the certificate. Some of them refer to name and address of importer, number and description of packages, place of origin, distinguishing marks, botanical names of plants, name of the point of entry etc.

Wooden packaging of the imported products

Document location: Wooden packaging regulation

Certain types of wooden packaging fall under phyto-sanitary control requirements, and thus, have to be regulated separately.	Packaging made of raw wood, or wood not processed sufficiently (eg heat treatment), has to be accompanied by a phyto-sanitary certificate and/or be stamped accordingly. There are certain exceptions to the rule:

	▪ Packaging made of raw wood but no more than 6mm thick; ▪ Packaging of wood that has undergone processing such as heat treatment, pressure, and contains glue materials; ▪ Wooden shavings, sawdust; ▪ Wooden materials that are continuously linked to the transportation/containers. Wooden packaging that is included in the regulation, has to undergo relevant treatment to ensure it is free of harmful organisms.

Food and feed safety

Document location: Food and feed safety norms

EU rules on food safety are designed to protect human life and health while the rules on animal feed aim at protecting human and animal life and health. There are some general principles and requirements for this category of imports to be considered before introducing them to the market.	Regulation (EC) No 178/2002 - Section 4 lays down all main principles of food safety under the food law. Unsafe products should be prohibited from sales. All food business must ensure traceability of their products at all stages of production and distribution, and immediately withdraw unsafe products from distribution. The following aspects are important in assessing the food safety and risks: ▪ Information provided to consumers; ▪ Normal conditions of consuming the products; ▪ Short- and long-term effects on health; ▪ Toxic effects; ▪ Sensitivities among some consumer groups (eg children). Regulation (EC) No 852/2004 on the hygiene of foodstuffs provides information on ensuring hygiene of food products at all stages of production and distribution. This concerns food premises and equipment, transport, water supply, food waste, personal hygiene of workers, wrapping and packaging and any heat treatment.

Guidelines on additional controls of organic products imported to the EU from particular countries

Document location: Complete document in English

The document applies to organic products imported from Ukraine, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Tajikistan, Uzbekistan and the Russian Federation. The products from these countries shall undergo stricter border controls and document checks. It is the duty of the importer to inform border controlling bodies of the consignments arriving at the border points.	All organic products should undergo complete documentation checks at the point of entry. The documents to be checked: ▪ Certificate of inspection, boxes 1 to 15; ▪ Documents of custom declaration; ▪ Transport documents; ▪ Operators and product traceability - verification of names, addresses and valid certification of all operators in the trade flow. At least one representative sample shall be taken of each of these consignments at the point of entry in the EU. Samples should be analysed for the presence of pesticide residues at an accredited laboratory. When pesticide residues are detected, investigation shall start and a note should be made in the EU Commission's Organic Farmers' Information System (OFIS).

Guideline for conformity controls of dried grapes by German authorities (BLE)

Document location: Text in German

The document provides an overview of the control procedure for dried grapes. The prerequisite is that the dried grapes correspond to the minimum requirements.	Consignments of dried grapes from third countries must be presented by the importers to conformity checks in the receiving country. These are conducted by BLE in Germany. For the import of consignments, conformity documents have to be presented at the border. There are no specific licences required for the import of dried grapes at present.

EC Regulation No 1881/2006

Document location: EC Regulation 1881/2006 (English)

EC Regulation 1881/2006 sets maximum levels of contaminants in foodstuffs and foodstuff mixes marketed in the EU.	When applying the maximum levels to foodstuffs that are dried, diluted, processed or composed of more than one ingredient, the following shall be taken into account: ▪ changes of the concentration of the contaminant caused by drying or dilution processes; ▪ changes of the concentration of the contaminant caused by processing;

- the relative proportions of the ingredients in the product;
- the analytical limit of quantification.

The specific concentration or dilution factors for the drying, dilution, processing and/or mixing operations concerned or for the dried, diluted, processed and/or compound foodstuffs concerned shall be provided and justified by the food business operator, when the competent authority carries out an official control.

If the food business operator does not provide the necessary concentration or dilution factor or if the competent authority deems that factor inappropriate in view of the justification given, the authority shall itself define that factor, based on the available information and with the objective of maximum protection of human health.

Ground nuts, nuts and dried fruit shall comply with appropriate **maximum levels of aflatoxins**. Almonds, pistachios and apricot kernels are to be subjected to sorting, or other physical treatment, before human consumption or use as an ingredient in foodstuffs. Maximum level of aflatoxins is at 10 μg/kg (Sum of B1, B2, G1 and G2), if they are intended for direct human consumption and use in foodstuffs. Tree nuts (incl. walnuts) and dried fruit shall have a maximum level of aflatoxins at 4 μg/kg (Sum of B1, B2, G1 and G2).

Dried grapes should have the maximum level of ochratoxin A at 10 μg/kg.

The Regulation further lists a vast number of various foodstuffs and acceptable contaminants levels.

EC Regulation 396/2005 on the maximum pesticide residue levels

Document location: EC Regulation 396/2005 (English)

Regulation (EC) No 396/2005 of the European Parliament defines a fully harmonised set of rules for pesticide residues. This Regulation lays down provisions for the setting of EU	The Regulation covers plant and animal products intended for marketing in the EU, which may contain pesticide residues. Maximum residue levels are established for fruit and vegetables and have to be observed by food business operators and controlled by the EU country authorities.

pesticide maximum residue levels (MRLs) in food and feed.
Imports of plant and animal products must comply with such MRLs set by the European Commission to protect consumers from exposure to unacceptable levels of pesticide residues.

EU Pesticide residues database

Document location: Maximum residue level database

The unified EU Database contains a large number of existing pesticide residues and product categories. By selecting products and various pesticide residues, it is possible to check the most relevant maximum residue level for the product category. MRLs may be often updated, thus, it is useful to check the database in case of doubt.

Multiple bilateral and multilateral trade agreements drive the EU's international trade

EU trade policy is based on the law of the EU, and agreement on establishing a common economic area, and thus, a single market. This creates a free trade zone between the European Union (EU) and European Free Trade Association (EFTA) member states, and allows for free movement of goods, services, people and capital. Apart from this, the EU has multiple bilateral trade agreements that benefit its trade. For example, agreement with Turkey creates a customs union and provides concessions for tariffs on agricultural goods. In addition, the EU actively works on promoting trade with least developed countries and countries with low incomes and vulnerable economies. Generalised Scheme of Preferences (GSP, GSP+) allows for closer trade relations with these countries, and reduces tariffs on 66% of the goods imported to the EU. In the course of development of any GSP country, it may be considered no longer eligible for GSP due to better economic conditions. In such cases, a country and its export product groups may be considered as "graduated" from GSP. This was the case with Kazakhstan in 2014. On the other hand, Kyrgyzstan has transitioned from GSP to GSP+ scheme, which allows for even further trade facilitation measures, such as zero rate custom rates for agricultural produce. . The EU considers the Central Asia region significant from a geostrategic perspective and aims to develop and facilitate trade relations with the Central Asian republics. While the intentions to develop trade are present on both sides, the EU and Central Asia, currently trade turnover remains very low. The main goods imported to the EU from Central Asia are of a non-food nature (cotton fibre, oil, gas, metals), and the EU exports mainly machinery and transport to the region. The EU has developed a strategy for cooperation with the Central Asian republics, and the main prerequisite for building closer economic relations has been World Trade Organization (WTO) membership for the republics. Kyrgyzstan (1998), Tajikistan (2013) and Kazakhstan (2015) already satisfy the latter criteria, while Uzbekistan is just starting the accession process. Further relationships with the region are based on general EU Central Asia Strategy, and on bilateral partnership and cooperation agreements that also provide for Most Favoured Nation treatment, and prohibition of general quantitative restrictions on imports to the EU.

Table 10: Germany's bilateral and multilateral trade agreements affecting processed fruit and vegetables trade

Summary of the legislation	Implications for exports from Central Asia
The EU Single Market Policy Document location: EU Single Market Policy	
The Law of the EU (Treaty on Founding the EU, other additional treaties) provides that all EU member states become part of a single market, with no trade barriers. Quantitative restrictions on imports and exports are prohibited and standardised technical procedures are applied to manufacturing, monitoring and other procedures on the market. All EU products receive a CE mark that certifies their safety for consumption across the entire EU	For the CA countries, such a situation provides both advantages and challenges. On the one hand, CA exporters may expect harmonised rules and import conditions across all EU-28 countries, and thus apply unified EU requirements to their products and enter the EU at any border point that is most suitable from a logistical point of view. On the one hand, CA exporters may expect harmonised rules and import conditions across all EU-28 countries, and thus apply unified EU requirements to their products and enter the EU at any border point that is most suitable from a logistical point of view. On the other hand, CA exporters face increased competition from the EU-28 countries that have no barriers to supply their products to other member states. For the processed fruit and vegetables category, this may be even more important, since the products are seasonal and affected by weather conditions - thus, fast reaction to changing marketing environment may be needed for successful trade. At the same time, it is important to keep in mind that the EU still has to import a large share of its processed fruit and vegetables from third countries, in order to meet the internal demand. Therefore, there is some opportunity for new suppliers of quality processed fruit and vegetables.
EU-Turkey Preferential Agreement on Agriculture Document location: EU-Turkey Preferential Agreement on Agriculture	
EU and Turkey have been linked by a customs union agreement since 1995. However, the free trade agreement applies to industrial and some processed food	Turkey is one of the biggest trade partners of the EU, and has been developing its relationships for several decades. In the processed fruit and vegetables category (especially, dried apricots) Turkey is one of the most important competitors on the

goods, and does not apply to agricultural goods. Trade in agricultural goods is regulated by separate concessions laid down in the Preferential Agreement on Agriculture and further Directives.	German market. Turkey and the EU have agreed upon certain bilateral tariff concessions that help liberalise trade. For example, by decreasing some tariffs, or by making procedures around transportation, invoicing and other aspects easier for exporters from a legal point of view.

European Economic Area (EEA)

Document location: European Economic Area Agreement

EEA brings together EU member states and EFTA member states (Liechtenstein, Norway and Iceland) in a single market. The Agreement provides for the distribution of four main freedoms (free movement of people, goods, services and capital) across the 31 EEA states. It also includes provisions on cooperation in research and development, education, environment, etc. Note: Switzerland is not part of the EEA, and has separate bilateral agreements on free trade with the EU.	The EEA Agreement prohibits customs duties and equivalent charges between the contracting parties, as well as any quantitative restriction on imported/exported products. Trade in agricultural products, however, is regulated more strictly, and there is no full liberalisation in this segment according to the EEA. However, no specific restrictions are provided in the legislative document. Iceland, Norway and Liechtenstein are not the main competitors on the EU processed fruit and vegetables market, and thus do not represent a serious threat to the exporters of Central Asian processed fruit and vegetables. However, this agreement is to illustrate another aspect of free trade cooperation with the EU.

EU Generalised Scheme of Preferences (GSP, GSP+)

Document location: EU GSP+, EU GSP

EU Generalised Scheme of Preferences covers over 30 countries, and allows tariff reductions for 66% of the goods categories imported to the EU. It helps vulnerable countries pay fewer tariff duties and benefit from exports to the EU. GSP sets clear criteria for granting GSP+, while vulnerable countries can use GSP+ as an incentive to develop and trade more.	In the light of the current research, GSP+ is an interesting scheme, and was granted to Kyrgyzstan in 2016. There are certain strict criteria to joining GSP+: The country must be vulnerable, without diversified sectors of economy; Import levels from the EU must be low; The country must have ratified 27 conventions on human and labour rights, environment and other socially important issues; There are currently eight beneficiaries of GSP+, including Kyrgyzstan. Four of the five Central Asian countries benefit from favourable access to the EU market, through the Generalised Scheme of Preferences (Kazakhstan, as an upper middle income level

	economy, no longer benefits from this scheme, since January 2014).
EU partnership and cooperation agreements	
Document location: EU PCA with Uzbekistan, EU PCA with Kazakhstan, EU PCA with Kyrgyzstan, EU PCA with Tajikistan	
EU PCAs with CA countries promote trade relations between the parties and lead to further harmonisation of legislation and standards, including those related to trade.	In terms of trade, PCAs are of non-preferential nature and ensure the regime of Most Favoured Nation, while prohibiting quantitative restrictions on imports/exports between the parties. The PCAs envisage approximation of the legislation related to trade, customs, technical standards, intellectual property rights etc. Thus, the agreements lay down a base for promoting closer relations between the EU and CA countries.

5.5 OVERVIEW OF GERMAN PROCESSED FRUIT AND VEGETABLES IMPORT SUPPLY CHAIN

Importers and wholesalers are needed to meet the inconsistent demand

Germany's processed fruit and vegetables supply chain is relatively standard. A typical supply chain for processed fruit and vegetables runs from fresh fruit or vegetable farmers to food processors via importers/distributors to retailers, horeca and wholesalers. For dried fruits and nuts, foodservice plays a greater role than for leguminous vegetables. At total category level, major retailers, due to inconsistent supply, typically do not aim to source produce directly from farmers and prefer to deal with domestic specialist distributors and wholesalers. Thus, a typical supply chain includes importers that then distribute the products through their networks of clients (see *Figure 3*)

Figure 3: Processed fruit and vegetables imports to Germany supply chain

Organic distribution enters online arena

In the past few years, the significance of pulses consumption and healthy snacking has risen, leading to more nut/dried fruit mixes present in major retailers, and more pulses distributed via smaller/specialised retail channels. At the same time, the online channel has been slowly expanding, with specialised online retailers offering premium products and product mixes, with the online channel especially significant for premium apricot kernels. Here, stable supply may be more desired by buyers, and the possibility of longer-term contracts may arise.

German buyers prefer marine distribution for long-distance deliveries

Germany's geographical location allows for a number of logistical solutions. European processed fruit and vegetable imports are typically delivered by truck and in smaller quantities, while Chinese, Turkish and South African trade partners primarily use marine deliveries through Hamburg port (the second busiest European seaport and the 15th largest seaport globally), Bremen port and also neighbouring Rotterdam port in the Netherlands. However, air transport may also be effective for some product categories, particularly walnuts and apricot kernels. These products are usually imported in smaller quantities, and the imports may be less frequent than for other daily consumed produce. Thus, the costs for the transportation may be not as heavy as for some other imported products (eg fresh produce, bulky goods). However, there are certain recommended transportation and storage conditions for the categories under research. These conditions are issued by the specific information service for food transport to Germany (Transport Information Service) and can be summarised as follows:

Table 11: Transportation and packaging requirements

 **Dried apricots**	
Transportation	▪ Cargo/Refrigerated containers that comply with lower water content of the good ▪ Must be well protected from bad weather/moisture (in case of road transportation) ▪ Cool, well ventilated, dry transport ▪ Temperature range must be 5-20°C, sometimes 0°C is also acceptable. Optimum temperature is below 10°C to inhibit mite growth ▪ Air exchange rate should be six changes/hour (recommended) ▪ Neutral odour is crucial, as produce is susceptible to foreign odours
Packaging	▪ Common packaging for transportation: 12.5kg cartons, 12-14kg boxes, 70kg bags ▪ Any treatment with sulphur dioxide should be indicated
 **Dried grapes**	
Transportation	▪ Must be well protected from bad weather/moisture (in case of road transportation)

	▪ Temperature range should be 4-20°C, above 25°C there is a risk of syrup formation and agglomeration, as well as infection development, discoloration and hardening
Packaging	▪ Common packaging - paperboard cartons, wooden boxes, jute bags ▪ Storage duration up to 12 months ▪ Any treatment with sulphur dioxide should be indicated
Walnuts	
Transportation	▪ Temperature may range from -3 to 25°C, whereas -3 to 0°C helps achieve the longest storage duration ▪ Proper ventilation is required to avoid frost if in chilled transportation and a high concentration of aflatoxin ▪ Shipping documents are often expected to contain phyto-sanitary and fumigation certificates
Packaging	▪ Year of harvest should be ascertained, as previous year's harvest has greater tendency to get spoiled ▪ Packaging - net bags (1-3kg), cartons (10kg), polysacks (10-15kg), jute bags (55kg) ▪ Impermeable to water and vapour
Apricot kernels	
Transportation	▪ Temperature range should be 5-25°C
Packaging	▪ Common packaging - boxes and bags up to 50kg
Beans	
Transportation	▪ Temperature range should be 5-25°C. The lower temperature limit for common bean weevil pest development is 12°C ▪ Heat sensitive product, should not be in proximity to heat sources (engines, heated tanks etc) ▪ Must be protected from exposure to any kind of moisture (rain, condensation, sea water etc) ▪ Ventilation is important
Packaging	▪ Year of harvest should be ascertained, as previous year's harvest has greater tendency to get spoiled ▪ Storage life of dried beans is around two years

	▪ Common packaging - natural fabric bags (50-100kg), cartons (beans should be heat sealed in film bags)
Chickpeas	
Transportation	▪ Proper ventilation is essential, air exchange rate at 10 changes/hour ▪ Heat sensitive, should not be in proximity to heat sources (engines, heated tanks etc) ▪ Must be protected from exposure to any kind of moisture (rain, condensation, sea water etc) ▪ Highly odour sensitive, readily absorb any foreign odours that are difficult to remove ▪ Temperature range should be 5-25°C
Packaging	▪ Year of harvest should be ascertained, as previous year's harvest has greater tendency to get spoiled ▪ Storage duration up to 12 months ▪ Common packaging - jute bags (50-100kg), cartons (peas should be heat sealed in film bags)

Source: Transport Information Service

Most importers of dried fruits, nuts and pulses have well-maintained warehouses and often also packing premises for the goods they import. All products are being taken care of in the most suitable manner. For example, specialists are aware that certain contamination can be only detected with UV devices, and it is important to allow proper ventilation while entering the transport facilities with beans and peas that may produce high levels of carbon dioxide during transportation.

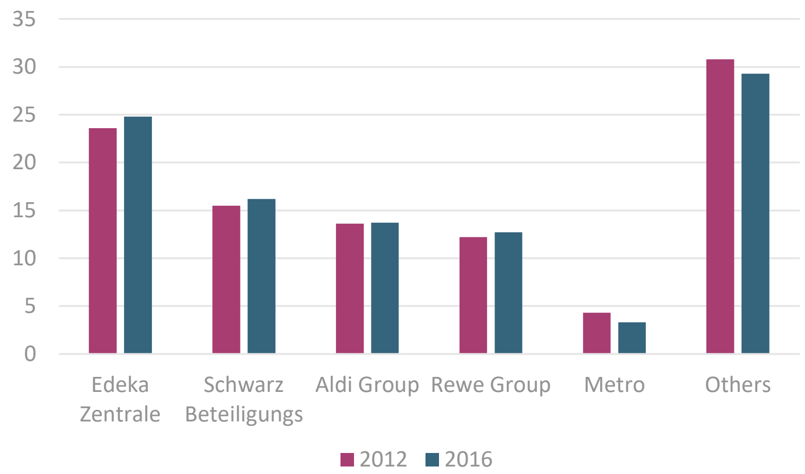
Exporters are expected to customise logistical solutions to meet importers' requirements

Detailed and customised preferences of German importers depend on the actual geographical location of the players and their target markets, as each player is looking to receive the order in the most convenient manner. Therefore international exporters are advised to do some preliminary research of the importer they deal with to have initial understanding of what the logistical preferences of the particular player might be. For example, UNIVEG Trade International GmbH is located in Bremen, and therefore its preferred import port is Bremen seaport, whereas Fresh Line Fruit Services is on the border with the Netherlands and Luxembourg and therefore prioritises Rotterdam port over others. A specialised processed fruit and nuts importer Heinrich Bruening GmbH is also based in the large port of Hamburg and receives consignments from various regions of the world.

5.6 OVERVIEW OF GERMAN PROCESSED FRUIT AND VEGETABLES RETAIL LANDSCAPE

German grocery retail becomes more concentrated

Chart 6: Grocery retail landscape (value sales based market shares 2012, 2016)



Source: Euromonitor. Grocery Retailing 2016

Germany's grocery retailing landscape is strongly focused on modern retailers, with particular focus on discounters, such as Lidl and Aldi. Looking at the wider grocery market, 71% of grocery value sales in 2016 were generated by the top five retail holdings (see *Chart 6*) namely Edeka Zentrale AG & Co KG (Edeka, Netto Marken, Marktkauf), Rewe Group (Rewe, Penny Markt, Rewe Center), Schwarz Group (Lidl, Kaufland), Aldi Group (Aldi) and Metro AG (Real). In addition to the big five, there are a few more important players, including nationwide discounter Norma and regional purchasing cooperatives, such as Bünting, Tengelmann, Bartels-Langness, Dohle Handelsgruppe, Globus and Klaas & Klock. Discounters alone control around 35% of grocery retail value sales, catering to price-sensitive consumers, while offering good quality products. Retailers such as Edeka and Rewe have in recent years particularly addressed the quality needs of German consumers through product and store differentiation as well as the grocery shopping experience as a whole. It is also particularly important to them that their product ranges reflect current trends and consumers' needs. Retailers typically work directly with large producers, while in the agro sector SMEs are dominant. Therefore, retailers work with importers who are able to meet their volume requirements while consolidating stock of different producers. Importers themselves do not have any minimum volume requirements to producers, since importers typically work on a commission basis (around 8-10%), so they are interested in any volume.

Healthy and organic processed fruit and vegetables distribution goes online

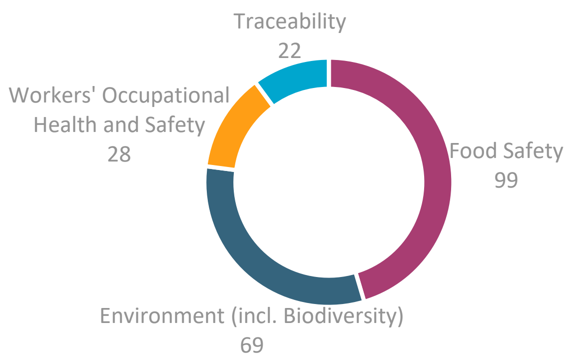
Internet retailing continues to gain share within grocery retailing in Germany, however still remains very limited compared to store-based operations. While typical consumer behaviour still includes store visits, rather than time-efficient online shopping, organic and niche products, such as apricot kernels, organic beans, and ecological dried fruit, find success online and there organic or speciality online retailers are gaining presence, for example www.keimling.de, www.sandos-naturkost.de and www.gourmondo.de.

Key German retailers work with GLOBALG.A.P. and IFS certified suppliers

European supermarket chains are increasingly demanding that their suppliers be certified against a private food safety standard such as GLOBALG.A.P., BRC and IFS. These chains account for over 60% of processed fruit and vegetable produce retail sales in many European countries. In addition, each individual retail company may impose even stronger quality requirements on its suppliers in order to differentiate its products from those of its competitors. German retailers in particular are looking for holistic suppliers who can not only guarantee food safety, but also occupational health and safety, traceability, biodiversity and environmentally-friendly production methods (see *Chart 7*). All of the above-mentioned requirements are part of the fifth version of the Fruit & Vegetable GLOBALG.A.P. certification, offering 218 control points over the production cycle.

For example, the largest German retailer Edeka sources its fruit and vegetables from more than 80 countries and in order to ensure equally trusted and respected levels of safety control Edeka has been a GLOBALG.A.P. member since 2005. While GLOBALG.A.P. has 15 different standards, Edeka demands all its producers to be certified with Integrated Farm Assurance Standard, Chain of Custody Standard and since 2014 GRASP (Risk Assessment on Social Practice) standard.

Chart 7: Composition of GLOBALG.A.P. standard



Source: www.globalgap.org/fv

Rewe Group demands its suppliers to be certified with Quality Scheme for Food (QS) or GLOBALG.A.P. standards, as a means to add additional levels of end-to-end controls and inspections throughout the entire production and supply chain, including farming, logistics and wholesale. Rewe Group sets high standards on pesticide control and demands far beyond statutory requirements, asking all its fruit and vegetable suppliers to employ integrated agricultural practices and use fertilisers responsibly, in moderation and in an environmentally-compatible manner. Rewe is the only German retailer that annually publishes a report on chemical plant protection ("Statusbericht chemischer Pflanzenschutz"), where the company measures and evaluates data from residues and talks about measures for improvement and development.

Other key German players such as Metro, Lidl and Aldi support Global Food Safety Initiative and demand their suppliers provide International Featured Standards (IFS) and GLOBALG.A.P. certifications.

Table 12: Common voluntary conformity requirements in German processed fruit and vegetables industry

GLOBALG.A.P.

Document location:

- Fruit and Vegetables Booklet - the document provides a good overview of the existing GLOBALG.A.P. Certification Version, and explains what the most important aspects to it are;
- GLOBALG.A.P. Documentation - there are several documents and checklists applicable to fruit and vegetable producers. These documents are free to download and allow farmers to run preliminary self-assessment in light of the GLOBALG.A.P. requirements;
- Approved GLOBALG.A.P. Certification Bodies - the List provides an overview of the existing Certification Bodies and can be filtered by region and country.

GLOBALG.A.P. is an international standard ensuring Good Agricultural Practices across almost 200,000 farmers worldwide. The aim of GLOBALG.A.P. is to ensure safe and sustainable food production, and offer opportunities for voluntary certification to small and large enterprises, as well as to groups of farmers. Several aspects are crucial for GLOBALG.A.P. standards and certification:

- Food safety and traceability;
- Environment protection (including bio-diversity);
- Safe work conditions and social responsibility;
- Animal protection;
- Plant safety control and quality management system, Hazard Analysis and Critical Control Points (HACCP).

All retailer chains in Germany require GLOBALG.A.P. certification in addition to other conformity standards. Thus, this cannot be considered a voluntary conformity requirement in the context of the German market for food and agricultural products. A technical benefit of GLOBALG.A.P. certification is that it allows tracing of farmers´ status by their unique certification number in the online database at any time.

LocalGAP is a stepping stone to GLOBALG.A.P. certification. LocalGAP can be created by a local programme owner and allows farmers to step, generally, from a foundational to an intermediate level, and obtain GLOBALG.A.P. certification in five years. LocalGAP thus represents an assessment process, and is a subset of the International Farm Assurance Standard. Every LocalGAP programme has a programme owner that signed a Memorandum of Understanding with the GLOBALG.A.P. Secretariat. Implementation of the programme is customer and market related, the process and results of assessments are only visible to the specific customer requesting the LocalGAP programme for certain farmers. Programme owners must be members of GLOBALG.A.P. and can be retailers, manufacturers, traders or cooperatives.

There are five main steps to obtaining GLOBALG.A.P. certification (skipping LocalGAP):

- Get the relevant document on the GLOBALG.A.P.. website;
- Choose a certification body within the relevant country and acquire a GLOBALG.A.P. number (GGN);
- Conduct a self-assessment based on the checklist and see which points are the weakest. GLOBALG.A.P. licensed Farm Assurers can provide necessary consultations and help;

- After arranging an appointment with the local GLOBALG.A.P. certification body, a first on-site inspection will be conducted.

After successful completion of the steps, a GLOBALG.A.P. certificate will be granted to producers for the certain scope of their products for one year.

In the case of processed fruit and vegetables GLOBALG.A.P. certification is only required of those suppliers who produce (grow) and process the fruit and vegetables. Traders and exporters who do not produce fruit and vegetables and engage in processing only are not required to have GLOBALG.A.P. certification.

The Hazard Analysis and Critical Control Points (HACCP) system

Businesses in the food sector should apply HACCP principles which are part of the Codex Alimentarius (please click on "Codex Alimentarius" for detailed information). These principles, however, do not replace official checks.

The HACCP system outlines the key principles of food hygiene and safety and is a legal requirement according to EU law.

EU countries must encourage the development of national guidelines based on HACCP principles, with the possibility of EU-wide guidelines if this is thought necessary.

Food imported into the EU must comply with EU standards or their equivalent, as well as any requirements that the importing country may impose.

International Featured Standard (IFS)

IFS is one of the most widespread food standards, and although not directly laid down as an obligatory requirement, IFS is preferred by most German buyers and traders. IFS can apply to both producers and to logistics and packaging companies. HACCP is also part of IFS certification. All retailers (Metro Group, Rewe Group, Edeka, Aldi and Lidl) in Germany require IFS from their suppliers. For developing small enterprises, there is an opportunity to obtain IFS Global Markets Certificate.

Main aspects of IFS are as follows:

- Responsibility of enterprises;
- Establishment of quality and food safety systems;
- Resource management;
- Production process;
- Assessments, measurements, analysis;
- Food defence (defence of food chain from terrorist attacks).

To be audited by the IFS, following steps have to be taken:

- Decision to get IFS Food or IFS Logistics certificate;
- Ordering the latest version of the standard via www.ifs-online.eu;

- Assessment of current status (by the enterprise itself);
- Choice of certification location;
- Determining of audit conditions and times;
- Optional - having a pre-audit to maintain status quo;
- Conduct of the audit.

ISO22000

ISO provides a quality norm for the entire supply chain, from production to end destination. However, IFS is a more detailed and broad standard, and would be sufficient for most buyers.

ISO 22000 requirements enable an organization

- to operate and maintain a food safety management system aimed at providing products that are safe to consumers,
- to comply with applicable food safety regulations,
- to evaluate and conform with customer requirements related to food safety,
- to communicate food safety issues to their suppliers, customers and other relevant food chain participators,
- to seek certification of its food safety management system by an external organization, or make a self-assessment of conformity to ISO 22000.

There are 10 ISO standards available at the ISO website (please click on "ISO website" for detailed information). The standards apply to prerequisite programs on food safety and hygiene in the realms of food manufacturing, catering, farming, packaging, feed production. Each standard can be purchased at the website for a full review. Any organization in the food chain may choose to apply for ISO certification. However, certification is not a requirement, food businesses can also benefit from implementing the standards without being certified. ISO does not perform certification itself, but the process can be carried out by external certification bodies.

FSSC 22000

FSSC 22000 represents a complete food safety certification system and is primarily based on independent international standards such as ISO22000, ISO22003, with sector-specific requirements. The certification scheme includes manufacturing and transportation, and on-site storage. The standard can be applicable to all kinds of food businesses, regardless of their size and structure.

The geographic scope of FSSC 22000 includes Central Asian republics, except Tajikistan and Turkmenistan. The scope includes countries, where the standard is currently implemented and product sectors covered by the standard are verified. In terms of product scope, FSSC 22000 covers food safety systems for animal products, vegetal products, products with a long shelf life and food packaging.

In order to obtain and maintain the standard, third party audits have to be conducted, and surveillance audits take place once per year. More specific information on the certification process can be found under the FSSC certification scheme (please click on "FSSC certification scheme" for detailed information).

The FSSC certification process can be viewed as the following sequence:

- Selection of the certification scheme and preliminary self-assessment;
- Addressing any non-conformities;
- Selection of a certification body;
- Creation and signing of a certification agreement between the certification body and the food enterprise;
- Elaboration of an audit scheme and calculation of the costs;
- Audit process - check relevant food safety documentation and check implementation of food safety standards;
- Issuance of the certificate.

The certificate expires three years after its issuance. During this period, surveillance audits shall be conducted at least once per year. It is up to the certification body to decide whether an extension of the certificate can be granted after the initial three years.

Fairtrade

Fairtrade certification is available for producers of different size, and for multiple product categories (including pulses, nuts, fresh and prepared/preserved fruit and vegetables). In general terms, Fairtrade refers to a strategy that aims at promotion of sustainable development and reduction of poverty by introducing fair trade standards. The system is designed to benefit small producers, in particular. Small farmer organisations may apply for the certification and should accept the necessary technical requirements for the audits, laid down by the certification body. The farms should concentrate on agricultural production that does not involve a significant number of permanently hired works (eg family farm, seasonally hired works as regulated by the certification body). Most of the income of such workers should come from the farm.

Products sold under the Fairtrade label have to be well traceable and separated from other non-certified products. All aspects of production flow have to be recorded, as well as all the sales of Fairtrade products by a farm. Fairtrade International publishes minimum fair trade prices, and they are further defined in contracts between producers and buyers. An important aspect of Fairtrade certification refers to the environment protection, risk analysis every three years, as well as consistent control of pests and diseases, and relevant training provided to farmers. More specific information on Fairtrade certification for small farmer organisations can be found here (please click on "here" for detailed information).

Organic Regulation EU 834/2007

The document puts together main principles for the production and certification of organic products. The product range covers living and unprocessed agricultural products, processed food products, feed and seeds. The document provides main standards for organic farming and food processing, as well as prohibits the use of ionising radiation and the use of GMOs.

Organic production should rest on the following principles:

- The appropriate design and management of biological processes based on ecological systems using natural resources that are internal to the system by methods that:
- Use living organisms and mechanical production methods;
- Practice land-related crop cultivation and livestock production or practice aquaculture which complies with the principle of sustainable exploitation of fisheries;
- Exclude the use of GMOs and products produced from or by GMOs with the exception of veterinary medicinal products;
- Are based on risk assessment, and the use of precautionary and preventative measures, when appropriate;
- The restriction of the use of external inputs.
- Where the inputs are necessary they should be limited to:
- Inputs from organic production;
- Natural or naturally-derived substances;
- Low solubility mineral fertilisers;
- The strict limitation of the use of chemically synthesised inputs to exceptional cases these being: adaptation, where necessary, of the rules of organic production taking account of sanitary status, regional differences in climate and local conditions, stages of development and specific husbandry practices.

German Organic Trade association has similar, yet somewhat higher standards for food products to be marketed in Germany. Bio-Siegel is one of the most widespread organic labels in Germany for the categories in scope. Before using Bio-Siegel for the first time, manufacturers of organic products must notify their intention to the Bio-Siegel information service located within the BLE. Both the German Bio-Siegel and the trademarks of other organic producer organisations may be used in addition to the EU eco label.

In order to get a more clear understanding of the existing organic standards and requirements, it is useful to consult the Organic Standards information portal (click on "Organic Standards" for detailed information).

5.7 OVERVIEW OF THE GERMAN CUSTOMS AND DUTIES

Exporters to German market face stable customs tariffs and online services

German import customs and tariff norms conform to the wider EU tariff system and are available to find online within the TARIC database (see *Table 13*). Over the past decade, customs and tariffs have been relatively stable. Some preferential quotas may appear, based on preferential agreements. Such agreements are not in place for the Central Asian republics. However, it is noteworthy that for Uzbekistan and Tajikistan, tariffs under GSP arrangement are lower than those for Kazakhstan, and those for GSP+ member Kyrgyzstan are set at 0%.

Legumes see a 0% customs rate across the Central Asian market, since this category does not see local competition.

Table 13: Key processed fruit and vegetable customs duties in Germany

Dried apricots	
Kazakhstan	5.60%
Kyrgyzstan	0% (GSP+)
Tajikistan	2.10% (GSP)
Uzbekistan	2.10% (GSP)

Dried grapes	
Kazakhstan	2.40%
Kyrgyzstan	0% (GSP+)
Tajikistan	0% (GSP)
Uzbekistan	0% (GSP)

Walnuts	
Kazakhstan	Unshelled 4%, shelled 5.10%
Kyrgyzstan	0% (GSP+)
Tajikistan	Unshelled 0%, shelled 1.6% (GSP)
Uzbekistan	Unshelled 0%, shelled 1.6% (GSP)

Apricot kernels

Kazakhstan	5.80%
Kyrgyzstan	0% (GSP+)
Tajikistan	2.3% (GSP)
Uzbekistan	2.3% (GSP)

Beans

Kazakhstan	0%
Kyrgyzstan	0%
Tajikistan	0%
Uzbekistan	0%

Mung beans

Kazakhstan	0%
Kyrgyzstan	0%
Tajikistan	0%
Uzbekistan	0%

Chickpeas

Kazakhstan	0%
Kyrgyzstan	0%
Tajikistan	0%
Uzbekistan	0%

Source: TARIC database

Every product is assigned a tariff norm based on its country of origin. Normally, the importer is notified about the delivery of the import consignment to the border. The importer should fill in the import declaration and present it with all necessary documents such as declaration of value, invoice check the export tax rate, enter the name of the country of origin and the harmonised product code etc. For more specific tax information, each exporter or importer may contact the tax office directly and enquire personalised calculation of the tax for the particular import/export consignment. The tax enquiry is binding to the extent that it sets the tariff for the particular product to be imported and lasts for and other applicable documents at customs. When all supporting documents (see *Table 14*) are correct, the import duties are fixed and as soon as they are paid and the goods have been controlled by the BIP, the importer receives the goods.

Value-added tax for processed fruit and vegetables analysed in this report is usually 7%. For more specific information, tax authorities have to be contacted as to check, if certain products may have lower VAT rate. As a rule, importers have to pay VAT at the customs, as to be positioned under the same conditions as companies selling the same product categories inland.

Table 14: Customs-related documentation in Germany

Import declaration
Document location: Import declaration (Einfuhrzollanmeldung)
The document is issued by the central tax authority of Germany, can be found online at zoll.de.
Invoice
Invoice should contain the information about buyer and seller, date and place of the document, precise description of goods and packages, price of the goods, conditions of delivery and payment, as well as the country of origin of the goods.
Declaration of value
Document location: Declaration of value
Declaration of value is normally necessary for imports valued at over EUR 15,000. The declaration is to be presented with the import declaration and relates to the customs value and calculation of customs value. The document is issued by the central tax authority of Germany.
Import licence
Required - laid down by EU legislation.

5.8 OVERVIEW OF OPPORTUNITIES IN GERMAN MARKET OPEN FOR CENTRAL ASIAN SUPPLIERS

Increasing the Central Asian footprint in German dried fruit through preferential custom rates

Dried grapes offer equally interesting opportunities across retail and food processing. Uzbek suppliers are already known and liked by German consumers, and most importantly some have established relationships with German importers. There are opportunities to extend the level of trade for Uzbekistan, but also Kyrgyzstan and Tajikistan, as all three markets benefit from a zero rate customs tariff for this product category. Central Asian suppliers should develop long-term relationships with dried fruit or more general importers and target both retail as well as foodservice players. As a dried product, raisins are fairly easy to transport. While importers typically currently receive marine shipments, they are open to discussing air freight opportunities.

Dried apricots face somewhat similar opportunities to dried grapes. Uzbek suppliers have some niche presence in the German market already, and should be working on growing trade partnerships. However, in this case Uzbekistan faces a 2.3% customs rate, which is less than half the standard rate, and only Kyrgyzstan, as a GSP+ member, enjoys customs-free trade. Tajikistan as well other Central Asian countries, having entered Ferghana dried apricots into the UNECE standard, sees a new opportunity to penetrate the German market.

Apricot kernels offer niche opportunity, however loyal customers

German consumers have limited knowledge and therefore demand for apricot kernels. While marketing efforts may result in an increase in demand, as fruit stones are generally not a traditional German snack, the category is expected to remain niche. Consumers of apricot kernels are loyal, as they enjoy kernels not only for their taste, but also for their health benefits; therefore consumers are looking for high-quality, or even organic produce. Central Asian producers may consider targeting this niche category through online presence. Moreover, Central Asian suppliers should consider targeting the medical and beauty industries and position apricot kernels as an innovative ingredient.

Walnut is the third most popular and the strongest growing nut in Germany

Central Asian producers, namely Uzbekistan, Tajikistan and Kyrgyzstan, enjoy a zero customs rate on walnuts with Germany. Central Asian suppliers should be targeting importers and wholesalers specialising in nuts to first establish presence in the market, and then widen the relationship further. Consumers enjoy walnuts as snacks, while food processors are using them in confectionery and baked goods. The German market is looking for high-quality walnuts, thus the price points offered are high.

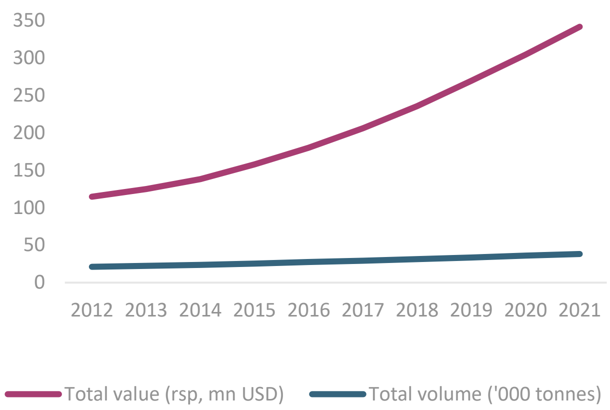
6. EXPORT PRIORITY MARKETS: UAE

6.1 UAE PROCESSED FRUIT AND VEGETABLES MARKET OVERVIEW

Emirati residents fast embrace protein-rich foods

United Arab Emirates (UAE) is the fourth largest economy in the Middle East and Africa, having one of the highest living standards globally. Despite being among the most diversified economies in the Middle East, UAE remains strongly dependent on oil prices and hydrocarbon exports. Therefore, in 2016 UAE saw real GDP growth of only 3%, the lowest in the last seven years, caused by hampered oil production, which in turn resulted in lower consumption and investment levels. Slower economic development is expected to continue through 2017, with real GDP growth of 1.5%. In 2018, the economy is expected to rebound, thanks to recovering oil prices and return to stronger real GDP growth of 4.4%. Furthermore, UAE is expected to continue benefiting from improvement in Iran's trading relations globally, as it serves as a transhipment point for renewed trade activity. In January 2017, UAE and India signed 14 deals that will strengthen and enhance the two countries' technology, defence, infrastructure and trade sectors [Source: Euromonitor. Countries and Consumers].

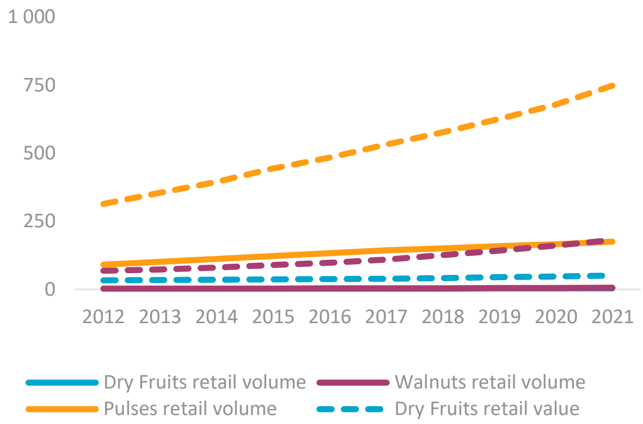
Chart 8: Processed fruit and vegetables in UAE 2012-2021



Source: Euromonitor. Packaged Food 2017

The total dried fruit, nuts and seeds and shelf stable beans market in UAE amounts to 27,200 tonnes per annum (see *Chart 8*). Retail sales accounted for the lion's share of the market, with 23,900 tonnes in 2016. While UAE consumers typically prefer either domestic or imported produce, demand for dried fruits and nuts is on the rise, even though UAE does not produce significant quantities of either dried fruits or nuts. Domestic dried fruits, nuts and legumes consumption is driven by the healthy living trend as well as ethnic minorities, whose diets typically include a high share of processed fruit and vegetables. Volume sales of processed fruit, legumes and nuts amounted to 141,400 tonnes in 2016 (see *Chart 9*) [Source: Euromonitor. Fresh Food and Packaged Food]. Looking particularly at the categories under research, market value was estimated at USD255.9 million in 2016, with a forecast 5% CAGR over 2016-2021. [Source: Trade data]. More specifically, beans, chickpeas and nuts are largely consumed by South Asian consumers in UAE.

Chart 9: Processed fruit and vegetable market size in UAE ('000 tonnes and USD mn) 2012-2021



Source: Passport Fresh Food and Packaged Food data 2017

Among dry fruits, dried apricots and dried grapes are not as widely consumed as much as dried dates, which are integral to Emirati culture. There are 44 million date palms of different varieties in UAE, producing around 76,000 tonnes of fruit each year [Source: Dubai travel culture]. Popular nut varieties include almonds, pistachios and walnuts which are all available through the big supermarkets and hypermarkets. Nuts find their markets across both end consumers, in the form of snacks and supplements to breakfast meals, and food processing, in confectionery and baked goods. Furthermore, 60-70% of imported walnuts are re-exported to UAE's neighbouring markets. Dried fruit and nut distribution is highly focused on retail with over 90% of volume sales generated through this channel.

Beans was the most dynamic category in 2016 registering total volume growth of 11% due to the rising number of health-conscious consumers. Wealthy European expatriates and Arabs consume pulses in the form of salads, home-cooked meals, or use them as meat alternatives, however these are not the key ingredients of their diets. Legumes are well known for their protein-rich nature and affordable price compared to other protein sources such as meat and fish, therefore the South Asian labour population in UAE consumes pulses as an integral part of daily diets due to their protein-rich content, fibre and other essential minerals. Furthermore, with rising numbers of health-conscious consumers and preference for non-animal protein, many Western expats are exploring options within beans and chickpeas. Pulses are primarily distributed through the retail channel, accounting for 57% of volume sales, followed by foodservice with 29% and institutional with 15%. [Source: Euromonitor. Fresh Food - Pulses].

Re-exports and local festivals are a demand pull factor for dried fruits and nuts

Similar to fresh fruit, the desert-like nature of UAE land and climate limits its production capabilities, thus fruits, nuts and pulses see very limited domestic production. Therefore, UAE's agricultural portfolio depends largely on imports. Despite the lack of local production, UAE is a trading portal to the wider Middle Eastern arena, with 60% of total imports of dried fruits, nuts and legumes being further re-exported across GCC markets. Politics within the region play a major role in hindering market growth. For example, the recent ban on Qatar, and wars in Syria and Iraq have had an impact on demand to some extent, further leading to price reductions by some suppliers and wholesalers. On the other hand, demand is also driven on the retail and food processing side by population growth and special occasions such as Ramadan, Eid, Diwali, Chinese New Year, etc.

6.2 OVERVIEW OF UAE PROCESSED FRUIT AND VEGETABLES MARKET REQUIREMENTS

Fruit calibration is a requirement for premium produce, but not for mass market

Modern retail chains have become the key shopping destinations for middle- and high-income consumers. These retailers are very particular about product quality in terms of both taste and visual appearance. Thus, premium processed fruit and vegetables are required to be calibrated in order to visually appeal to the consumer through the identical size, shape and colour of the produce to the buyers. The lower-income population, known as labourers, typically shop through traditional retail channels that often offer loose produce of different shapes, sizes and colours. This channel is primarily focused on affordable prices, rather than on the visual appearance of the produce.

Convenient packaging for snacks and loose distribution for cooking are preferred

Similar to fresh fruits, consumers look for intense sweetness in dried fruits; while in nuts the key criteria is crunchiness (see *Table 15*). These two categories are both driven by the healthy living trend, as dried fruits and nuts or mixes of both are being consumed as snacks and typically chosen as a healthy alternative to traditional snacks, such as chocolate bars or crisps, thus typically distributed in convenient small packages. Moreover, both categories find some presence in food processing in baked goods and confectionery.

Pulses, on the other hand, typically see loose distribution through both traditional and modern retail formats, as beans and chickpeas are typically used in home cooking. Packaged pulses are mainly targeted at snackers and on-the-go consumers, present among single-person households.

Table 15: UAE consumer processed fruit and vegetable preferences

Dried apricots

Shape	Flat, round
Colour	-
Taste	Sweet
Variant	Orange colour

Dried grapes

Shape	Small, oval
Colour	Golden and brown are more popular, sun-dried
Taste	Sweet
Format	Loose, plastic packs (most preferred)

Walnuts

Shape	Shelled, non-shelled (most preferred)
Colour	Light brown
Taste	Crunchy, not bitter
Format	Loose, packaged format (most preferred)

Apricot kernels

Shape	Oval, almond-alike
Colour	-
Taste	Sweet
Texture	-

Beans

Shape	Standard bean shape
Colour	-
Texture	Crunchy
Format	Canned, loose/dry format

Mung beans

Colour	Green
Texture	Crunchy
Format	Loose/dry format

Chickpeas

Shape	-
Colour	Light brown
Texture	Crunchy
Format	Canned, loose/dry format

Dried apricots is niche category in UAE

Dried apricots are subject to seasonality and demand is usually higher during the seasons of Ramadan, Eid, Diwali, and Chinese New Year, when there is a tradition for people to consume and offer dried fruits and nuts to guests. The average price of dried apricots is AED48.75 per kilogram (USD13.27/kg), however prices rise during the religious festival seasons (see *Table 16*). In addition, many households use dried apricots to prepare mixed healthy snacks, consisting of dried fruits and nuts. Consumers include both locals and high-income expats whose preference is driven by quality and freshness. They are also used in food processing, especially as ingredients in typical Arabic sweets and desserts, especially for stuffing dates and filling chocolate. Therefore, dried apricots are not easily replaceable despite the availability of a wide variety of dry fruit options.

Dried grapes provide a fruit treat for all consumer types

Dried grapes are available all year round and have a long shelf life. Therefore, prices are subject to local consumption demand rather than the season. The average price per kilogram is AED21.25 (USD5.79), however as demand rises during the festival seasons, prices also increase marginally (see *Table 16*). Similar to dried apricots, demand is primarily generated by locals and wealthy expats, who look for high-quality dried grapes. Often dried grapes are consumed as a supplement to breakfast meals by Western consumers, while South Asian consumers use raisins in home preparation of desserts. Therefore, despite a large variety of dried fruit alternatives, raisins find their place in snacks, home cooking and food processing. Depending on the end consumer group, the requirements in terms of packaging and quality vary. The most prevalent dried grapes assortments in UAE are sultana, golden and currant raisins, with sultana grapes being slightly more expensive than the currant variant. The most popular supplier of all raisin variants is Iran.

Nut quality and freshness supersedes pricing of walnuts in UAE

Similar to dried fruits, demand for walnuts and prices vary based on seasons, seeing higher demand and higher prices during the religious festivals, with the average price for walnuts at AED99.3 per kilogram (USD27.04/kg) (see *Table 16*). Demand is skewed towards the higher-income group as this target group is ready to pay a premium price for walnuts depending on quality, freshness and country of origin. Walnut quality is primarily defined by crunchiness and also less bitterness in taste. US walnuts enjoy the highest popularity among UAE consumers, followed by raisins of Chilean origin, as they have superior quality. On the other hand, lower-income groups such as the labourer population prefer cheaper nut alternatives, such as groundnuts and roasted peanuts. Among many households, walnuts are commonly used for dessert making such as stuffed dates, and traditional Arabic sweets such as Mamoul, especially made for Eid.

High-income consumers look for organic walnuts as they are less bitter than regular walnuts. These varieties are usually sold in shelled format and in plastic packaging, mainly originating from Peru and the US (California). Such varieties are available through online retailers, such as Greenheart Organic Farms and Desert Cart. Moreover, walnuts are gaining demand due to their richness in fibre, omega-3 fatty acids, vitamins, protein, and their antioxidant benefits. Recent studies have proven that a daily dose of walnuts improves blood vessel function and reduces cholesterol.

Limited local demand for apricot kernels underpins re-exports

Local demand for apricot kernels is fairly limited, hence the majority of imports are destined for re-export. Pricing mainly depends on country of origin. Average apricot kernel price is estimated at AED27.90 per kilogram (USD7.60/kg) in UAE (see *Table 16*). Demand is relatively stable as apricot kernels do not see any spikes related to religious festivals or holidays. In addition, apricot kernels see high competition from other nuts, especially almonds.

Animal protein-replacing beans are popular across the labourer population

There are many bean varieties in UAE, including white, green and kidney shaped, to name a few. With such a large spectrum, beans easily succeed in finding a consumer base, especially among the South Asian labourer population, who culturally have high vegetable protein-based diets allowing balanced diets and cost-saving opportunities. Beans are much more affordable than nuts or dried fruits, posting an average price of AED8.50 per kilogram (USD2.31/kg) (see *Table 16*). Beans are available in retail throughout the year at stable prices, with some marginal variation based on quality or country of origin. Although consumers are willing to pay a higher price for beans of superior quality, the acceptable level of price increment does not exceed 5%.

Asian community embracing the mung bean drives local demand

Mung beans are highly popular among Indians and Chinese communities in UAE. Both nationalities are growing in number, and these beans are widely used as a basic ingredient for most Asian dishes. The price of mung beans has been stable at an average of AED19.9 per kilogram (USD5.41/kg) in 2016, and the price is usually mainly affected by the level of supply available in global markets or harvest yields (see *Table 16*). Demand in the local market is quite high as a result of the growing Asian expat population in the country. Therefore, mung beans see increasing demand across both retail and horeca, the latter underpinned by the rising number of Asian restaurants in UAE.

Versatility of chickpeas plays key role in local consumption

Chickpeas are a very popular ingredient for a wide variety of recipes, including salads, spreads, dips and main dishes among the Arabic and Asian UAE communities. However, in the case of chickpeas, UAE consumers are not willing to pay more than the average price of AED7.25 per kilogram (USD1.97/kg) (see *Table 16*). Thanks to a large base of recipes, chickpeas are not easily substituted or replaced in either retail or foodservice. For example, chickpeas make the most important ingredient of hummus, which is a very popular traditional Arabic dish that can be prepared at home and very popular at Arabic/Lebanese, Turkish and other traditional restaurants. Chickpeas form the majority of volumes after bread and juices in food donations as well. For example, UAE Food Bank, which works to reduce food wastage with the aim of feeding the less fortunate and the growing labourer population, has tied up with Dubai World Trade Centre to donate basic food ingredients such as chickpeas on an annual basis.

Table 16: Processed fruit and vegetables average retail price observations in UAE 2016

Dried apricots	
Average price	AED48.75/kg
Producing market	Turkey, Iran
Dried grapes	
Average price	AED21.25/kg
Producing market	Iran, Chile
Walnuts	
Average price	AED99.30/kg
Producing market	US, UK, Chile
Apricot kernels	
Average price	AED27.90/kg
Producing market	Turkey, Canada

Beans

Average price	AED8.50/kg
Producing market	US, Canada

Mung beans

Average price	AED19.90/kg
Producing market	Australia, Pakistan

Chickpeas

Average price	AED7.25/kg
Producing market	Turkey, Canada

Source: Al Naya, Food Trading, Dena Trading, Al Douri Group, Bayara, Gyma Food Industries, Lulu Hypermarket

Import demand set to be driven by re-export requirements

Around 60% of walnuts, chickpeas, beans and apricot kernels import volumes are designated for further re-export to other GCC and wider markets. Dried grapes and dried apricots see slightly lower re-export share of around 50%. Such high focus on re-exports is due to the rising demand for the products under research from African countries such as Nigeria and South Africa.

Cultural and lifestyle habits shape the processed food industry

The health and wellness trend is rising slowly in UAE due to the influence of foreign expats living and working in the country. Therefore, healthy eating advocates call for a rise in healthier food and beverage alternatives. For example, dried fruits and nuts are more and more commonly consumed as healthy snacks, while chickpeas and beans benefit from the low-fat, protein-rich foods boom. In addition to the healthy living trend, the cultural celebrations of widely diverse ethnic populations in UAE, for example Ramadan, Eid, Diwali, and Chinese New Year to name a few, boost demand in this category. Moreover, horeca, following the diverse consumer demand, is expanding into multiple cuisines, particularly those from India and South Asia, both of which are strong users of pulses.

6.3 OVERVIEW OF UAE PROCESSED FRUIT AND VEGETABLES IMPORT COMPETITION

Dwindling local production pushing imports

Local production of dried fruits, legumes, and nuts is fairly limited in UAE. The local government is encouraging local farmers to improve domestic means of production of fruit and vegetables, however it is still in its nascent stage. The UAE government provides subsidies for every aspect of farming in order to attract more investors. To further encourage farmers, the government announced an agricultural fund started by the Abu Dhabi Farmers Service Centre (ADFSC). This fund will support the farmers by spending nearly AED20 million per year to support and finance modern farming techniques. The fund mainly focuses on hydroponic programmes and will cover up to 50% of the total cost of production, for every farmer. Due to the government's efforts to increase domestic production, the farmers produced over 38,800 tonnes of fruits and vegetables during the 2014-2015 farming season [Source: Khaleej Times]. It is estimated that the value of domestically-produced fruit and vegetables will increase by 25% in the future. Demand for fruit and vegetables has been growing year on year, so has the need for foreign investors and local farmers. However, in order to meet the rising population and resulting consumption demand, the country is largely dependent on imports in order to maintain consistency of quality and volume throughout the year.

US is a dominant player among imported dried fruits and nuts in UAE

Imports from Iran, the US and Chile have been well established for 20 years and they are known to supply large quantities with high quality standards and competitive pricing. On the other hand, chickpeas for example come in many sizes, and are available from Turkey, Canada and Mexico, and white kidney beans are imported from Egypt and the US. Some of the walnuts are imported from Central Asian markets such as Uzbekistan, however the priority sources remain Iran, the US and Chile. The US has maintained its position as the top exporter of walnuts to UAE with a 70% share of imported walnuts [ITC Trade maps, 2016]. Some of the top suppliers of dried fruits, beans and nuts in UAE, include but are not limited to Gyma Food Industries, Dena Trading and Al Douri Group.

Over three quarters of dried fruit imports are supplied by the leading exporter market

Iran is the dominant supplier of dried grapes into UAE, generating 75.6% of total import volumes. India (6.7%), China (4.3%), Afghanistan (3.7%) and Uzbekistan (3.3%) are the following leading dried grapes suppliers. Chilean and US suppliers combined deliver around 2.7% of import volumes, and primarily focus on the premium and organic ends of the market [ITC Trade maps, 2016].

In terms of dried apricots, the distribution landscape is somewhat similar, with one country, Turkey, taking the leading position in import volume terms (76.7%). Afghanistan is the second largest dried apricots exporter to UAE, supplying 11.8% of total dried apricots import volumes [ITC Trade maps, 2016]. Iran, Pakistan and Syria are also among the key suppliers. Tajikistan is the sixth largest dried apricots supplier to UAE with 0.6% of import volumes in 2015, while Uzbekistan which previously had a trading relationship with UAE delivered no volumes in 2015 [ITC Trade maps, 2016].

Central Asian importers have minor presence in nuts

Walnut imports are split largely between US (68.1%) and Chilean (25.1%) suppliers, leaving only 6.8% of the market to other exporters. Nevertheless, Uzbekistan is the fifth largest supplier of walnuts to UAE with 1% of import volumes in 2015, while Kyrgyzstan is the eighth largest supplier with 0.4% [ITC Trade maps, 2016].

A slightly less duopolistic situation is observed within fruit stone imports, where China (50.0%), Afghanistan (33.3%) and Egypt (9.0%) leave other players to split the remaining 7.7% of import volumes. Uzbekistan and Tajikistan both had some minor historic trading partnerships with UAE, however in 2015 neither supplied UAE with apricot kernels [ITC Trade maps, 2016].

Supplies from Uzbekistan take sizeable share of mung bean imports

China, Argentina and Egypt are the three key suppliers of beans to UAE, combined providing some 86% of import volumes. Uzbekistan and Kyrgyzstan exported very limited volumes of beans to UAE in 2013, but no further trading has taken place [ITC Trade maps, 2016].

In mung beans, importers are relatively diversified, with leading Myanmar supplying 30.4% of import volumes, followed by Kenya (19.0%), Tanzania (14.9%), Mozambique (10.1%), Afghanistan (10.1%) and Uzbekistan (7.5%). Other Central Asian markets do not have any trading history with UAE in mung beans [ITC Trade maps, 2016].

In terms of chickpeas, the leading supplier is Australia with 47.4% of import volumes in 2015, followed by Tanzania (16.8%) and India (8.5%). Uzbekistan saw marginal export trade to UAE in 2012, however since then no trade has been recorded.

6.4 OVERVIEW OF UAE REGULATORY LANDSCAPE

Health assurance is achieved through detailed import regulations

Imported products, whether they are for final consumption or re-export, face the same legal requirements. Food, including processed fruit and vegetables imports to UAE, regardless of its purpose, be it final consumption, food processing or re-export, is subject to national import regulations and standards, which aim to safeguard human health and only access fit for purpose products to the market. The import-related procedures are required to be covered by producer or exporter prior to their goods reaching UAE customs. Some of the prerequisites before the goods enter UAE include registration of the company in the Dubai Municipality (DM) and Food Import and Re-Export System (FIRS), which allows for food label approval in order to confirm produce compliance to quality standards (see *Table 17*). FIRS approval is followed by the FIT inspection performed by Dubai Central Food Laboratory or by other internationally accredited laboratories, specifying the items' fitness for human consumption. Additionally exporters are required to fill in some paperwork supporting the import goods, including such documents as original health certificate issued by the governmental health authority of the country of origin, packing list, and invoice to name a few. Post-shipment, food products are subject to visual inspection to ensure compliance with label and shelf life regulations.

UAE focuses on increasing food quality requirement

With the rising healthy living trend, UAE is looking to increase its domestically consumed food quality as well as transparently inform consumers about the food's nutritional benefits and substantiate other marketing claims. Thus, in April 2017 UAE banned fruit and vegetable imports from countries including Egypt, Oman, Jordan, Lebanon and Yemen, due to unreasonably high pesticide levels in these suppliers' produce. The ban primarily affects the melons category as banned Lebanon and Oman are large UAE suppliers. Moreover, the government has specified that all countries affected by the ban must submit certificates to indicate that all their fruits and vegetables are free of pesticide residues before allowing their importation. Furthermore, UAE is looking to increase the food quality requirements of foodservice players, as the recent regulation demanded that foodservice players and horeca substantiate any nutritional and benefit claims they make.

Due diligence checks pre-shipment will merit products entering UAE

Products entering UAE go through a set of procedures before they are finally approved for further distribution and sales. UAE trade officials, customers, and food authorities scrutinise a product to determine compliance with food ingredient standards. For all products entering the market for the first time, laboratory testing is required, however some of the imported products also go through random laboratory testing. It is recommended that exporters carefully go through the guidelines and requirements for processed products before actual shipment of goods, especially for first few consignments to UAE. Costs involved vary, depending on type of product and ingredients. Occasionally, local health officials will permit the importation of food products with minor labelling infractions. Exemptions are granted on a one-time basis and the sale of such products is usually limited to institutional end users.

Standard label rules apply for processed fruit and vegetables products entering UAE

Labelling regulations apply to all products shipped in bulk and institutional-sized containers. Bulk cartons of processed fruits and vegetables must contain most label information, but need not carry production/expiry dates. The letter “P” must precede the production date. The expiry date must be preceded by one of the statements: “Expiration (date)”; “Fit for.....from the date of production”; “Use by (date)”; “Use before (date)”; “Sell by (date)”; “Valid until (date) from the date of production”; or the letter “E". However, production dating is a key difference in determining quality products from various countries. Bi-lingual labels are now required, and should contain product description, ingredients, country of origin, name and address of manufacturer/ producer or exporter declared on the label, special storage requirements (if any), foods with health claims labelled accordingly as they will require re-approval by the Ministry of Health and net weight clearly written in Arabic and English. There are no specific requirements for imported food samples. Samples for food shows and other promotional events are routinely exempt from local labelling and shelf life requirements. Product samples must be clearly marked as samples and accompanied by a statement claiming that they are not for sale.

Table 17: UAE processed fruit and vegetables import related regulations effecting Central Asian suppliers

Summary of the legislation	**Implications for exports from CA**
Import procedures for foodstuff Document location: Regulation	
The regulation covers import and re-export requirements for foodstuffs, and includes food labelling procedure, company procedure, food label approval, registration of the company with e-government, food item barcode registering, activation of FIRS service and company representative training, laboratory test, and deposit.	If Central Asia is to import processed fruit and vegetables produce to UAE, the suppliers have to adhere to: ▪ Food items procedure: Includes the procedures of food labelling and item barcode registration in the FIRS database. ▪ Company procedures: The consignee should have a trade licence covering food trading activity or general trading issued by the government licensing authority in UAE. ▪ Food label approval: Request to ensure compliance of the label with standard and regulation of food labelling - samples or complete scanned label of the item should be submitted online. ▪ Registering the company in the e-government: Copy of trade licence is required with stamped registration form available at DM website, DM main office - Tawar Center/Karama Center.

- Food item barcode registering:

Samples or complete scanned label of the item should be submitted to be registered and classified on the database of the system, Karama Center 04-3374800 - Dubai Flower Center 04-2163485.

- Activation of FIRS service and company representative training:

Copy of trade licence and contact details of the company and their representative should be submitted.

- Laboratory test:

Lab test for the item at consignee's expense to ensure the item's compliance with standards and regulations.

- Deposit:

Permanent deposit for unlimited number of consignments of AED15,000 should be paid in cash, cheque or credit card (company cheque is not accepted), Karama Center - 04-3374800.

GCC Gulf Standard – GSO 9/2007

Document location: GCC Standards

This GCC standard looks into the labelling requirements for UAE. While the UAE has accepted English-only labels in the past, bi-lingual labels are now required.

The product that is imported should have Arabic stickers or labels that clearly mentions the product description, ingredients, country of origin, and net weight. Products intended for institutional use, may be exempt from the Arabic labelling requirement, but the "mechanism" is designed to eventually provide greater clarity on this point. Exporters should work closely with their importers to ensure that their products will meet the needs of retailers. Labelling regulations apply to all products shipped in bulk and in institutional-size containers. Bulk cartons of fresh fruits and vegetables must contain most label information, but need not carry production/expiry dates. Most major municipalities in the UAE offer the services related to pre-shipment approval of food labels, compliance checks with food ingredients standards

GCC Gulf Standard – GSO 150/2007

Document location: GCC Standards

This standard concerns the shelf life of imported products and relates to expiration periods of food products. The following products are exempt from expiration dating - salt, white sugar, dried legumes, dried vegetables, spices and other condiments, tea, rice, fresh fruits and vegetables and vinegar. However, importers tend to prefer to have such products labelled with production and expiry dates, as consumers often are not aware of this exemption.

GCC Gulf Standard – GSO 2233/2012

Document location: GCC Standards

This regulation applies to the nutrition labelling of all pre-packaged food products except for raw products such as fresh fruits, vegetables, meat and fish. The health claims mentioned in the product must be cleared by one of the following bodies in the importing country:

1)Food control section of the importing municipality

2)Medical clinic of the municipality

3)Federal Ministry of Health of importing country/municipality

GCC Gulf Standard – GSO 839/1997

Document location: GCC Standards

The standard stresses the need to use suitable materials that protect the integrity of the food, its wholesomeness and characteristics whether it is packed with metal, glass, plastic, paper, carton, multi-layered textile, or wood.

GCC Gulf Standard – GSO 2500/2015

Document location: GCC Standards

UAE health authorities look closely at the addition of food colouring, preservatives, antioxidants and non-nutritive sweeteners when reviewing new-to-market products. The Food Control Section of the respective Municipality should be contacted for further details.

FIRS

The system covers all services provided by the Food Trade Control Section of the Food Control Department. Such services include: importing foods, importing foods for re-export, food label approval, issuing all kinds of health certificates, food destruction application and issuing of their certificates. This is in addition to displaying all circulars and information to food traders, all food establishments, and other internal and external clients.	Fully electronic FIRS system, allows consignee to make application, review its status as well as submit payments from anywhere in the world.

Federal National Council Regulation

Document location: Full regulation (English)

The goal of the regulation is to establish a system of effective regulatory and oversight services to ensure the protection of public health and consumers.	As UAE's quality standards are being recognised by other international markets, the country has a well-established standardisation body; it harmonises standards at local and federal levels and participates in regional and international standards-setting activities.

Animal and Plant Health Inspection Services (APHIS) Phyto-Sanitary Certificate

Document location: Phyto-sanitary certificate

Pest and insect free confirmation issued by the health department of local municipality, Ministry of Environment and Water.	This is to certify that the plant(s) product(s) have been inspected and/or tested according to appropriate official procedures, are considered to be free from quarantine pests, and conform to phyto-sanitary regulations of the importing contracting party including those for regulated non-quarantine pests.

Country of origin certificate

Document location: Origin certification

Conformity of origin confirmation issued by customs authority.	This is to certify and promote products from Central Asian countries and bring awareness of Central Asian produce through "Made in Kazakhstan", "Made in Uzbekistan", "Made in Kyrgyzstan", and "Made in Tajikistan".

Health Certificate and Radiation-Free Certificate

Document location: Health certificate

Health department-issued health certificate.	Conforming product fitness for human consumption.

Conformity certificate for organic products

Detailed organic certification requirements.	▪ Registration on ESMA website (Emirates Authority for Standardization and Metrology) ▪ Application for a certificate of conformity ▪ Uploading the required document as per the scope (crops - livestock - processed food) ▪ Paying the service fees ▪ Evaluation of the facility ▪ Obtaining a certificate of conformity

- The average period for service completion is 10 working days and it costs AED1,000 for the application fee and AED2,500 for the assessment fee

Bill of entry

Electronic document that includes the country of origin, the source of the shipment, its type, its cost and other information, issued by customs.

Delivery order

It is a document issued from the port authority to the shipment once it arrives to release it under the consignee's request.

Relevant control bodies

- Emirates Authority for Standardization & Meteorology - develops specifications and technical regulations for products as well as regulates imported products.

Website: http://www.esma.gov.ae/en-us/Pages/index.aspx

- Abu Dhabi Food Control - regulates the import of food products.

Website: http://www.adfca.ae/english/pages/default .aspx

- Dubai Municipality is responsible for issuing guidelines for importing products, ensuring food safety and providing conformity standards.

Website: http://login.dm.gov.ae/wps/portal/home_ar

- Sharjah Municipality - responsible for issuing guidelines for importing products, ensuring food safety and providing conformity standards and inspection.

Website: http://portal.shjmun.gov.ae/

Processed fruit and vegetables free of exemptions as per trade agreements with UAE

UAE along with Saudi Arabia, Kuwait, Qatar, Bahrain, and Oman is part of the political and economic alliance of Middle Eastern countries known as The Gulf Cooperation Council (GCC). The six GCC member states have formally become part of a customs union, allowing for a free trade area with a common external tariff first outlined in January 2003. The free trade bloc has set a standard 5% levy on goods imported from outside the GCC and has a single point of entry system for imported goods. Similar to the EU model, customs duties are paid only on the non-GCC-produced products and only once at the port of entry. The GCC countries will also implement the unified GCC customs procedures guide in order to facilitate bilateral trade and strengthen cooperation with non-GCC countries. In addition to the customs union, UAE has a number of bilateral and multilateral trade agreements starting with General Agreement on Trade and Tariffs (GATT) membership since 1994, WTO membership since 1996, Trade and Investment Framework Agreement with the US (TIFA), EFTA-GCC Free Trade Agreement, GCC-

Singapore Free Trade Agreement (GSFTA), Greater Arab free Trade Area Agreement (GAFTA) and many other bilateral preferential agreements (see *Table 188*).

While it is UAE's strategic goal to have diversified import suppliers, the region is particularly interested in preferential trade agreements with Asia, the US and Europe. Cooperation with Europe has become easier since the EFTA-GCC FTA which includes Switzerland, Iceland, Liechtenstein and Norway on the European side and UAE, Saudi Arabia, Oman, Qatar, Bahrain and Kuwait on the GCC side. While UAE does not currently have any sizeable processed fruit and vegetables trade with Central Asia, in 2012 UAE agreed with Kazakhstan on a free trade area.

Table 18: UAE's bilateral and multilateral trade agreements affecting processed fruit and vegetables trade

Summary of the legislation	Implications for exports from CA
GCC	
Document location: GCC law, GCC regulation	
GCC law aims to unify customer procedures of all GCC member states and enable cooperation in the customs field and regulation of the relationship between these administrators and the community of traders in GCC member states, namely Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and UAE.	Standard customs rules apply for Central Asia for entry of goods to any of the GCC member states, including UAE.
EFTA-GCC FTA	
Document location: EFTA-GCC trade agreement	
The EFTA-GCC free trade agreement exists between a number of European countries such as Iceland, Liechtenstein, Norway and Switzerland, with the GCC countries, including UAE, and this trade agreement implemented on 1 July 2015.	No implications for Central Asia.
GSFTA	
Document location: Trade agreement with Singapore	
GSFTA is a trade agreement between the GCC countries and Singapore. It allows GCC goods full duty-free access to Singapore,	No implications for Central Asia.

and 99% of Singaporean goods into the GCC market for tariff-free concessions.	

GAFTA

Document location: UAE trade agreements, Other UAE trade agreements

GAFTA is a trade facilitation and development agreement with 17 of its member countries, including, Bahrain, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Palestine, Qatar, Saudi Arabia, Sudan, Syria, Tunisia, UAE and Yemen.	Standard customs rules apply for Central Asia for entry of goods to any of the GAFTA member states, including UAE.

Bilateral trade agreements with Kazakhstan

Document location: Other bilateral trade agreements, Kazakhstan trade agreement

Trade agreement with Kazakhstan was signed in 1998 on trade and economic cooperation between the two countries, with priority focus on agricultural, industrial and consumer goods production.	As per Article 4 of the trade agreement, it would help Kazakhstan make arrangements for trade fairs, exhibitions, and events in UAE for the purpose of developing trade and economic relations.

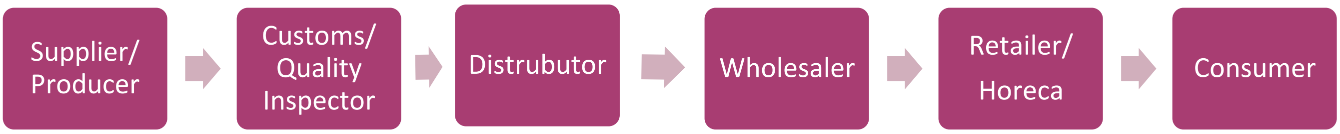
6.5 OVERVIEW OF UAE PROCESSED FRUIT AND VEGETABLES SUPPLY CHAIN

Intermediaries-driven supply chain prevails

UAE's processed fruit and vegetables import supply chain is relatively standard, however based on the current market structure a typical product's route to market is rather lengthy, going through a number of intermediaries before reaching end retailers and consumers. Typically processed fruit and vegetables arrive at Jebel Ali Zone where the produce is received by distributors. Major distributors and importers companies who trade in the nuts and dried fruits market do not trade in fruits and vegetables. As a result, many of the imported products are shared between a few companies and they are mainly located in Dubai. Some of the major distributors, such as Best Food, Gyma, Albogari General Trading, Nuts Valley, and Emirates Pearl General Trading, are involved in distribution as well as direct sales of dried fruits and nuts. In most cases, they do not only import, but also perform wholesale, distribution, and re-export activities. The key distributor role encompasses movement of imported produce to wholesalers, and only then to retailers.

Exporters play a key role in the supply chain as nearly 50% of the imported dried fruits and nuts are kept for re-exports. For beans, retail accounts for around 60% of volume sales, followed by foodservice

Figure 4: Processed fruit and vegetables imports to UAE supply chain



with 30% and institutional with 10%. In addition, there are SMEs that play a key role as wholesalers, importers and exporters in the processed fruit and vegetables market in UAE. This is due to the fact that UAE's retailing landscape continues to remain highly traditional, which due to the smaller scale of retailers requires the presence of intermediaries. Major distributors include Multi Grain Foodstuff Trading LLC, Sun Impex FZE and Al Osool Foodstuff Trading LLC.

In the case of large retail chains such as Lulu Hypermarket and Spinneys Group Ltd, imported products reach the retailers directly bypassing the middlemen (see *Figure 5*). In this scenario, dried fruits, nuts and pulses are directly imported from suppliers in order to guarantee quality and better control costs. Such supply chain optimisation has become possible in modern retail due to their state-of-the-art logistics solutions that facilitate an efficient distribution system through warehouse management processes and automates communication of resource allocation. Buying of processed food directly from suppliers helps reduce prices on an average by 15%, benefiting all the parties, including chained retailers, suppliers and end consumers.

Figure 5: Effective large retail chain supply chain in UAE

Only a small volume of the imported processed fruit and vegetables are available for re-export, whereby distributors directly buy the imported processed fruit and vegetables and sell to various neighbouring countries. Demand through local consumption (retail) is rising noticeably due to population growth in UAE.

Marine distribution is preferred

Marine is the preferential route for food, including processed fruit and vegetables imports to UAE, due to its relatively low costs and significantly larger volume capacities, compared to air or road transportation. Given that UAE has become an important re-exporting partner to other Middle Eastern markets, the volumes required by the industry players are significant (see *Table 19*).

Table 19: Key UAE cargo ports

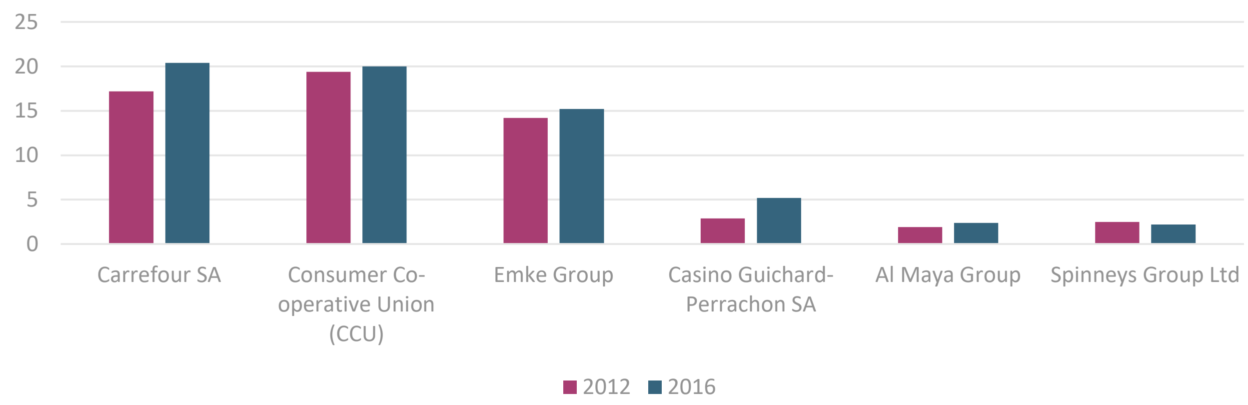
Key Port	Location	Cargo Handled	Website
Jebel Ali Port	Dubai	General cargo	http://www.dpworld.ae/en/content/71/47
Port Rashid	Dubai	General cargo	http://www.dpworld.ae/en/content/45/101
Khalifa Port	Abu Dhabi	General cargo and containers	http://www.adports.ae/en/article/khalifa-port/khalifa- port-was-inaugurated-on-december-12th-handling-all- of-abu-dhabis-container-traffic.html
Port Zayed	Abu Dhabi	General and bulk cargo	http://www.adports.ae/en/article/ports/mina - zayed.html
Port Khalid	Sharjah	General, reefer, and dry, liquid, and bulk cargo	http://www.sharjahports.gov.ae/
Port of Hamriyah	Sharjah	General cargo and oil tankers	http://www.sharjahports.gov.ae/
Port of Khor Fakkan	Sharjah	Containers (transit shipment hub)	http://www.sharjahports.gov.ae/
Port of Fujairah	Fujairah	General cargo, bulk cargo, wet bulk cargo, and container handling	http://fujairahpor

6.6 OVERVIEW OF UAE RETAIL LANDSCAPE

Convenience-driven consumers are looking for one-stop shop

Within retail, modern supermarkets and hypermarkets chains such as Carrefour SA, Consumer Cooperative Union (CCU), Lulu Hypermarket (managed by Emke Group), Géant (a franchise by a French grocery retailer Casino Guichard-Parrachon SA), Al Maya Group, and Spinneys Group Ltd, aggressively compete in UAE with a 65% share of the retail market (see *Chart 10*). Retail infrastructure has changed in the past 10 years adapting to busy consumer lifestyles; people are shifting preference towards larger outlets offering a one-stop shop. These outlets offer a large variety of culturally distinct food items in term of flavours and variants. Consumer preference for modern retail has increased across the country, and as the number of expatriates in the country grows and the government works towards world-class infrastructure, the development of modern retail is coming along. Grocery retailers is set to grow at a CAGR of 6% at constant 2016 prices over the forecast period. Key drivers of growth for the channel are rising disposable incomes and population growth, as UAE is continuously emerging as a desirable country for expatriates to live and work in, in the light of weaker economic conditions in regional countries and high unemployment levels in South Asia. In addition, the open-air markets channel is also of importance in UAE as it mainly supplies the lower-income consumer segment, which is quite significant in UAE given the large pool of labourers. [Source: Euromonitor. Grocery Retailing 2016]

Chart 10: Grocery retail landscape in UAE (value sales based market shares 2012, 2016)



Source: Euromonitor. Grocery Retailing 2016

Voluntary certification is yet to develop in UAE

While traditional trade controls a significant share of the market, and modern retailers are not yet present in the same way as in developed markets, voluntary conformity norms are not yet common in UAE. While large UAE retailers are certainly familiar with conformity standards such as GLOBALG.A.P., HACCP and ISO22000, even these retailers primarily use certification as “nice to have”, rather than a mandatory requirement.

6.7 OVERVIEW OF UAE CUSTOMS AND DUTIES

Standard taxes for all processed fruit and vegetables entering UAE

As UAE is a GCC free trade area member, it therefore faces similar tax norms, rates and procedures as the wider GCC. The customs duties for most items are calculated on Cost, Insurance and Freight (CIF) value at the rate of 5%. CIF value will normally be calculated by reference to the commercial invoices covering the related shipment, but customs is not bound to accept the figures shown therein and may set an estimated value on the goods, which shall be final, as far as duty is concerned.

Customs duty is calculated based on the value of imported goods declared by the importer or his agent. In addition to custom duty, UAE will be introduced a standard VAT rate of 5% across GCC countries effective as of 1 January, 2018. According to the VAT law basic food items will be subject to a standard VAT rate of 5%. VAT is due on the goods and services purchased from abroad. In case the recipient in the State is a registered person with the Federal Tax Authority for VAT purposes, VAT would be due on that import using a reverse charge mechanism. In case the recipient in the State is a non-registered person for VAT purposes, VAT would be paid on import of goods from a place outside the GCC. Such VAT will typically be required to be paid before the goods are released to the person. A business must register for VAT if their taxable supplies and imports exceed the mandatory registration threshold of AED 375,000. Furthermore, a business may choose to register for VAT voluntarily if their supplies and imports are less than the mandatory registration threshold, but exceed the voluntary registration threshold of AED 187,500. Similarly, a business may register voluntarily if their expenses exceed the voluntary registration threshold. This latter opportunity to register voluntarily is designed to enable start-up businesses with no turnover to register for VAT.

To promote growth and expansion in investment and trade with UAE, the Ministry of Finance (MoF) has an agreement with its trading partners to avoid double taxation on income between UAE and foreign countries. The agreements on the avoidance of double taxation aim to ensure fairness across the board of taxpayers, companies or individuals, and protecting the national economy. These agreements also aim to support the principles of transparency and information exchange to strengthen UAE's position as a global financial and trade hub. UAE has signed 94 agreements with other nations to avoid double taxation on investment overseas, and among Central Asian countries it has agreements with Tajikistan, Azerbaijan, Uzbekistan, Kazakhstan, and the agreement is under ratification for Kyrgyzstan.

A customs declaration form is produced for any goods entering or leaving the country; the goods are then presented to the customs authorities at the nearest customs office. All papers are required to be ready before products are shipped and for customs declaration they should be ready upon arrival of the goods/products to the port. In addition to manual customs declaration procedure, Dubai customs provides an online service for paying any outstanding bills, surcharges or customs fines and top-up on their customs duty accounts. Every import consignment must be supported by the following documents:

- Delivery order from a shipping agent addressed to a company licensed in UAE;
- Original bill of loading (for seaports);
- Original invoice from the exporter addressed to a licensed importer in the country detailing total quantity, goods description and total value for each item (in triplicate)*;
- Copy of the trade licence of buyer and seller;
- Certificate of origin approved by the Chamber of Commerce in the country of origin detailing the origin of goods*;
- Transport certificate*;

- Customs entry declaration.

A form or letter of exemption from customs duties in cases where exemption requirements are fulfilled, including a Local Purchase Order (LPO):

- Detailed packing list: weight, method of packing and HS code for each individual article contained in the shipment*;
- Import permit from the competent agencies in the event of importing restricted goods*;
- A health or phyto-sanitary certificate or, for processed goods, an export certificate confirming that the product is fit for human consumption;
- A non-radiation certificate (optional for European products)*;
- Transport documents required for import clearance.

Further customs and tariff requirements may be found in *Table 20*.

Table 20: Additional customs-related information

Import tariff information
▪ https://www.export.gov/article?id=United-Arab-Emirates-Import-Tariffs ▪ http://www.dubaicustoms.gov.ae/en/eServices/ServicesForBusinesses/ClaimsRefund/Pages/PayCustoms.aspx ▪ https://www.export.gov/article?id=United-Arab-Emirates-Import-Tariffs ▪ http://www.dubaitrade.ae/knowledge-centre/laws

Additional costs of warehousing and administration apply in UAE

Goods placed in the yards and warehouses of the customs office are subject to storage, handling and insurance charges and the other services required for the storage and inspection of goods at the applicable rates. However, storage charges normally do not exceed 50% of the estimated value of the goods. If the warehouses are administered by entities other than the customs office, additional charges can be levied according to the provisions and rates specified between the parties. Goods may be subject to charges for stowage, sealing, analysis and all services rendered.

*Note: *Documents must be attested by the Embassy of the United Arab Emirates and the Chamber of Commerce in the country of origin of the products.*

6.8 OVERVIEW OF OPPORTUNITIES IN UAE MARKET OPEN FOR CENTRAL ASIAN SUPPLIERS

Thorough promotion of Central Asian produce is needed to start UAE trade

The market in UAE has three major requirements of any of the processed fruit and vegetables categories:

- All the produce must be of immense quality in terms of taste, nutrition and visual appearance;
- The supplier must be reliable, meaning delivering agreed product volumes in agreed timelines and in good quality;
- The supplier must be able to offer competitive prices in order for UAE to include it in its typical supplier list.

All these demands are met sufficiently by the current set of suppliers, even during the peak demand periods of the Ramadan and Eid celebrations. Nevertheless, as UAE has very limited domestic production capabilities, the country is continuously looking for new import suppliers aiming to satisfy not only domestic, but also wider Middle Eastern re-export demand.

Currently Central Asia has a very marginal footprint in UAE, which is mainly directed towards re-exports to Africa, Oman and Yemen, rather than local consumption, which strongly prefers Iranian, Chilean and US produce [Source: Trade interviews]. Due to lack of awareness, UAE buyers use their fairly negative trade experience with Azerbaijan to identify possible opportunities with Central Asia. As Azerbaijan is not part of Central Asia, Kazakhstan, Kyrgyzstan, Uzbekistan and Tajikistan must promote Central Asian produce through trade shows, domestic chambers of commerce and other business- specific meetings with potential buyers. In addition, Central Asian suppliers should consider offering very competitive pricing as a key differentiator.

While there is a lack of awareness of Central Asian produce among retailers, importers and distributors might become a great stepping stone to enter UAE, specifically targeting players working with horeca and foodservice buyers, as these are typically less concerned about country of origin.

Above all else, Central Asian producers and exporters need to prove to UAE buyers that they are able to provide consistent and reliable service and produce on time. Therefore initial attempts to get into the market should specifically stress and guarantee reliability of the Central Asian partner.

Among all the products under review, beans and chickpeas have a large consumption group in UAE. Lower-priced offerings for these product categories benefiting local distributors and wholesalers could help win a good share of imports for Central Asia. Furthermore, with the rising number of Asian restaurants, horeca (hotels, restaurants and cafes) could be a potential entry point for Central Asian produce.

7. PRIOIRTY EXPORT MARKETS: CHINA

7.1 CHINESE PROCESSED FRUIT AND VEGETABLES MARKET OVERVIEW

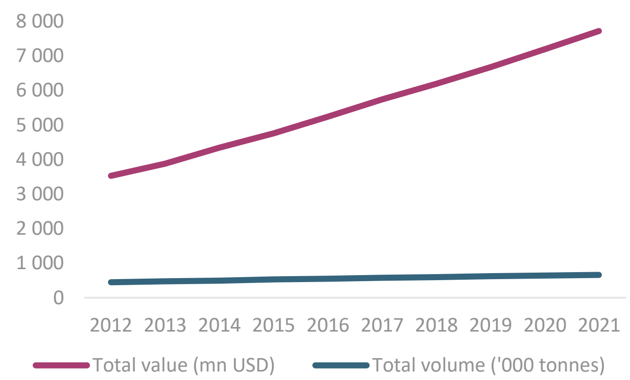
Healthy living drives fruit and vegetable snacking

The rising healthy living trend is driving Chinese consumers towards healthy snacks and highly nutritional foods. With constantly improving technology and large domestic fruit and vegetable production, China is well positioned in terms of domestic provision of processed fruit and vegetables. In 2016, China issued new Dietary Guidelines which directed the general population, offered recommendations for specific population groups with special needs including infants, pre-school children, school children and adolescents, pregnant women, breastfeeding women and the elderly. The Dietary Guidelines suggested that a rich food variety for consumers' daily intake was a minimum of 12 types a day, and 25 a week. Cereals and tubers were suggested as the base of daily diets, which together with fruits and vegetables should make up the majority of any meal.

China is one of the main producers of beans, mung beans, walnuts and dried grapes

Domestic consumption of processed fruit and vegetables in 2016 amounted to 553,400 tonnes or USD 5,239 million (see *Chart 11*).

Chart 11: Processed fruit and vegetables market size in China 2012-2021



Source: Euromonitor. Packaged Food 2017

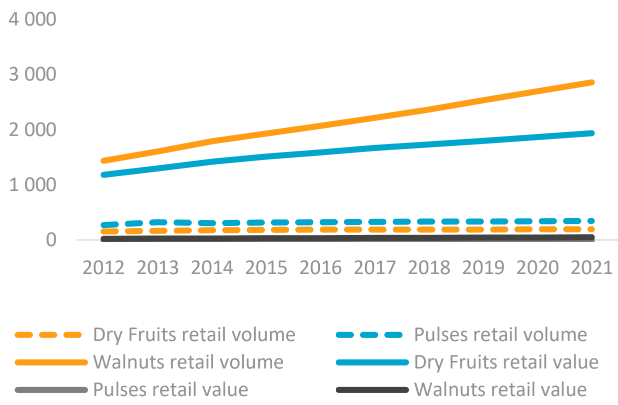
In the past few years, local production of processed fruit and vegetables, including dried fruits, dried leguminous vegetables and nuts, has increased steadily in terms of value and volume.

For dried leguminous vegetables, according to the National Bureau of Statistics in China, the production volume of beans amounted to 370,000 tonnes in 2016, having posted a CAGR of 7.8% over 2012-2016, mainly due to the growing production area. However, the National Bureau of Statistics stated that the production volume of mung beans decreased from 866,600 tonnes in 2012 to 610,000 tonnes in 2016, due to the bad weather conditions in the past five years. In addition, China has only a very small production area for chickpeas, which accounts for less than 5% of total world production. Nevertheless, China has a low demand for chickpeas and local supply basically meets this demand.

In terms of dried fruits, China is the third largest producer of dried grapes, following the US and Turkey. It is estimated, by USDA, that the production volume of dried grapes amounted to 190,000 tonnes in 2015/2016, representing 15.9% of global production. Furthermore, Turpan in Xinjiang province is the largest production base for dried grapes in China, and almost 80% of dried grapes in China are harvested in Turpan. In contrast, the production volume of dried apricots is relatively small, primarily restricted by the low production volume of fresh apricots in China.

For nuts, China is also one of the leading walnut producers in the world. The total production volume of walnuts amounted to 2,264,800 tonnes in 2016, having posted a CAGR of 5.2% over 2012-2016. However, production volume of apricot kernels is small, due to the low production of apricots.

Chart 12: Processed fruit and vegetables market size in China ('000 tonnes, and USD mn) 2012-2021



Source: Euromonitor. Packaged Food and Fresh Food 2017

The retail market for the processed fruit and vegetables categories under research is expected to rise over the forecast period (see *Chart 12*).

7.2 OVERVIEW OF CHINESE PROCESSED FRUIT AND VEGETABLES MARKET REQUIREMENTS

Rising health awareness and development of domestic snack brands drive nut and dried fruit growth

The improvement of consumers' living standards and rising disposable incomes have increased the purchasing power of the population. With higher standards of living, consumption of processed foods, such as dried grapes, dried apricots and nuts, has grown strongly, as consumers are more willing to buy these products as snacks. This is especially true among young consumers.

Changes in consumers' values also play an important role in driving the market. There is an increase in consumers' health awareness, thanks to the various health programmes and information available on TV and online. For example, according to traditional Chinese medicine, nuts such as walnuts are considered good for the brain. Other dried fruits such as dried apricots and grapes are said to be good for the kidneys and brain, and can invigorate the blood, thus receive a warm welcome from consumers. In addition, the benefits of these products are also emphasised through TV advertisements, which further drives consumption of healthy products such as nuts, leguminous products and dried fruits.

Additionally, as vegetarian diets become more popular, snacking on nuts has become a wider trend, in order to meet the need for phytoproteins.

On the supply side, the market is also driven by the rise of manufacturers. In the last decade, a few popular snack brands, eg Three Squirrels, Liangpin Store, Be&Cheery, etc, have developed dramatically and expanded their retail networks to various first- and second-tier cities across China. This have further driven development of the nuts and dried fruits categories.

Consumer preferences are shaped by the product offerings on the market

Currently, consumer preferences for dried fruits and vegetables are shaped by the market offerings. On the one hand, with the rise of leading snack brands such as Three Squirrels, Liangpin Store, Be&Cheery and Lyfen with products ranging from nuts to dried fruits etc, Chinese consumption of snacks, particularly dried fruits and nuts, has been continuously changing and developing in recent years. Snack enterprises actively introduce a variety of products which continually affect and shape the tastes of consumers. For example, consumers' preference for tastes has changed from the dominant original flavour and flavour with five spices a decade ago to various flavours including original flavour, salt and pepper flavour, flavour with five spices, spicy flavour and creamy flavour. Furthermore, product offerings in terms of variety have also expanded from one or two to numerous variants, including dried grapes, dried apricots, dried cranberries, dried blueberries, walnuts, pecans, almonds, cashews, macadamias, etc. On the other hand, the producers will adjust their product offerings and product flavours based on consumer preferences (see *Table 21*) and product sales. In addition, in order to meet the preferences of young consumers, the current product packaging is also becoming more and more delicate and attractive, with a trend to small packages for easy consumption.

Table 21: Chinese consumer processed fruit and vegetable preferences

Dried apricots

Texture	Soft, large, without kernels
Taste	Sweet, not too dry
Shape	Oval or round
Colour	Orange
Form	Pre-packaged
Packaging	Plastic bags and plastic boxes with various capacities, including 100g, 200g, 500g per pack, etc

Dried grapes

Texture	Soft, large, seedless, without sands
Taste	Sweet, certain level of water content (not too dry)
Shape	Oval or round
Colour	Black/dark red, white
Form	Pre-packaged
Packaging	Plastic bags with various capacities including 250g, 500g, 900g per pack, etc

Walnuts

Variety	▪ In shell: Paper-shell walnut (easy to open) ▪ Shelled: Dried and/or processed ▪ Walnut drinks
Taste	▪ In shell: Original ▪ Shelled (unprocessed): Original ▪ Shelled (processed): Salty, sweet
Packaging	Unpackaged and/or pre-packaged in plastic bags; metal can packaged for walnut drink (240ml per can)

Apricot kernels

Variety	▪ Sweet apricot kernels ▪ Apricot kernel drinks
Taste	Original
Form	Whole nut, slices, drinks
Packaging:	Pre-packaged in plastic bags; metal can packaged apricot kernel drinks (240ml per can)

Beans

Shape	Round or oval, full, glossy, without impurities
Variant	Shelled, dried, unprocessed
Colour	Red
Packaging	Unpackaged or pre-packaged in plastic bags with minimum packaging capacity of 400g

Mung beans

Colour	Green
Shape	Round, full, glossy, without impurities
Form	Shelled, dried, unprocessed
Packaging	Unpackaged or pre-packaged in plastic bags with minimum packaging capacity of 400g

Chickpeas

Shape	Round, full, without impurities
Colour	Light coloured
Form	Shelled, dried or processed (dry fried at high temperature)
Taste	For high temperature dry fried products: Delicate taste, crisp and delicious
Packaging	▪ Dried, unprocessed: Unpackaged or pre-packaged in plastic bags with minimum packaging capacity of 400g ▪ Processed: Pre-packaged in plastic bags with minimum capacity of 400g

Despite year-round supply, processed fruit and vegetables consumption is seasonal

Nuts, including walnuts and apricot kernels, have strong seasonality throughout the year and are usually consumed in autumn and winter, from the Mid-Autumn Festival in September to Chinese New Year in February. One reason is that nuts are generally harvested in autumn and supply increases during this period. Additionally, during autumn and winter, consumer demand increases as they prefer food with high protein and fat content in the cold weather. Moreover, nuts are also a good choice for family reunions and gatherings of friends during Chinese New Year.

Dried fruits have relatively low seasonality. Dried apricots are available throughout the year, but consumption of dried apricots is lower from May to August, as people may consume fresh ones. Similarly, the availability of dried grapes also extends across the year, but they are sold in larger quantities from July to February, as consumers show greater demand for dried grapes due to the upcoming winter season and especially the Chinese New Year.

In terms of dried leguminous vegetables, mung beans are known to offer effects such as cooling, detoxification, quenching and moisturising. Therefore, the summer is the peak season for mung bean consumption, spreading from early June to late September. Meanwhile, beans are good for the cardiovascular system, kidneys and stomachs, thus being suitable for winter consumption, ie from early December to late March. As a result, the consumption of red beans in winter is higher than that in summer. However, most Chinese consumers have no habit of consuming chickpeas.

Price fluctuations vary greatly for various categories of products

While prices for processed fruit and vegetables are relatively stable (see *Table 22*), since processed supplies are available throughout the year, supply and demand continues to show its typical correlation. Thus, as demand peaks, for example during the Chinese New Year celebration, prices tend to go up, primarily in the dried fruits category. There is little price fluctuation for nuts and dried leguminous vegetables. As there are no main price influencers or substitutes in the market, prices remain stable in general.

Table 22: Processed fruit and vegetables average retail price observations in China 2016

	Modern retail chain	Open-air market
Dried apricots		
Minimum price	CNY60.0/kg	CNY20.0/kg
Maximum price	CNY100.0/kg	CNY64.0/kg
Average price	CNY80.0/kg	CNY40.0/kg
Dried grapes		
Minimum price	CNY60.0/kg	CNY16.0/kg
Maximum price	CNY100.0/kg	CNY60.0/kg
Average price	CNY80.0/kg	CNY32.0/kg
Walnuts		
Minimum price	CNY30.0/kg	CNY20.0/kg
Maximum price	CNY140.0/kg	CNY70.0/kg
Average price	CNY50.0/kg	CNY35.0/kg
Apricot kernels		
Minimum price	CNY28.0/kg	CNY7.8/kg
Maximum price	CNY110.0/kg	CNY26.0/kg

Average price	CNY40.0/kg	CNY34.0/kg
Beans		
Minimum price	CNY14.8/kg	CNY7.8/kg
Maximum price	CNY40.0/kg	CNY26.0/kg
Average price	CNY25.0/kg	CNY15.0/kg
Mung beans		
Minimum price	CNY11.6/kg	CNY9.8/kg
Maximum price	CNY28.8/kg	CNY25.6/kg
Average price	CNY14.9/kg	CNY12.8/kg
Chickpeas		
Minimum price	CNY19.8/kg	CNY10.0/kg
Maximum price	CNY33.8/kg	CNY26.0/kg
Average price	CNY22.0/kg	CNY15.0/kg

Brand is the key decision-making criteria for dried fruits

For dried apricots and dried grapes, prices and quality are equally important, however the key purchasing criteria are brand and product origin. As there are numerous brands of dried fruits available on the market, different brands in different regions have different brand awareness. Consumers evaluate product quality based on brand and origin. Those brands that enjoy higher consumer awareness and have better promotional images are preferred by consumers.

Both price and quality are important to consumers when buying nuts and dried leguminous vegetables. In most cases, consumers primarily pay attention to the cost-performance ratio. However, for some high-end consumers with higher purchasing power in first-tier cities, they place quality as the priority and are more willing to pay higher prices for better-quality products.

Substitutes do exist for dried fruits and nuts

As the dried fruits and nuts category is highly diverse and Chinese consumers are not traditionally or culturally bound to a particular dried fruit or nut type, these two categories see a high level of substitution. For example, dried fruits such as prunes, pears, peaches, figs, cranberries and blueberries

Source: Open-air markets, Carrefour, Wal-Mart, Century Mart, Ole, Tmall.com are good substitutes for dried apricots and dried grapes, while walnuts and apricot kernels can be replaced by peanuts, pecans, almonds, macadamias, cashews, pine nuts, etc.

However, mung beans, beans and chickpeas have no substitutes, as they have different functions and cannot be replaced by other dried leguminous vegetables due to different nutritional content.

Increasing health awareness drives consumer preference for healthy and organic preserved fruits

With increase disposable incomes and trading up in China, consumers are paying more attention to quality of life. Therefore, novel, healthy, preserved fruits with low salt, low sugar, no additives and no preservatives are gaining importance in China and have become a new trend for snacks in daily life. Additionally, organic agricultural products are increasingly welcomed as well, as they are considered better for absorption. Moreover, the growing middle class places more emphasis on food safety issues, which also drives the trend for healthy processed fruit and vegetables with zero additives.

Increasing popularity of rice-, nut-, grain- and seed-based drinks in China

At present, non-dairy-based drinks are enjoying an increasing level of popularity in China. Despite consuming nuts and dried leguminous vegetables in daily life, an increasing number of consumers now prefer to drink rice-, nut-, grain- and seed-based drinks for protein and nutritional intake, eg walnut drinks, apricot kernel drinks, as well as soy milk with beans. Leading beverage and dairy manufacturers have also identified this new market opportunity in China and have entered this market by introducing various soy milk drinks and rice-, nut-, grain- and seed-based drinks to seize this new chance.

Individual small packaging is preferred

Currently in China, pre-packaged products are developing more quickly than unpacked products and are more preferred by consumers because they meet higher hygiene standards and offer different flavours that can satisfy different consumers' needs. In terms of packaging, instead of large plastic packages, which used to be the main pack type for processed fruit and vegetables a decade ago, individual small packages are now more popular and welcomed by consumers, since products are usually packed in 100g small packs, which make them convenient for consumers to carry and are suitable for single-person consumption at one occasion.

7.3 OVERVIEW OF CHINESE PROCESSED FRUIT AND VEGETABLES IMPORT COMPETITION

Domestic supply limits demand for imports

As China is a large producer of processed fruit and vegetables, the domestic market's capabilities somewhat limit demand for imports. However, despite large-scale domestic production of dried fruits and nuts, the categories see significant import levels. Therefore, the international supply also takes some share of the local consumption market and represents consumers' preferences to some extent.

Low demand for dried leguminous vegetables from overseas markets

Due to China's large domestic production of beans and mung beans, it mainly exports these products instead of importing. Agricultural products such as beans and mung beans belong to the category of products that China earns export revenue from, thus the importing rules are very strict. Therefore, the import share of beans and mung beans accounted for just 3.7% and 4.8% of total production, respectively, in 2016. Currently, the main importing countries for beans to China are Myanmar (37.0% of total import volumes) and Democratic People's Republic of Korea (34.3%), while the main export countries for mung beans from China are Australia (42.4%), Myanmar (40.1%) and Indonesia (15.1%) [Source: UN Comtrade].

Meanwhile, the import volumes of chickpeas amounted to just 10.7 tonnes in 2016, mainly from India (80.3% of total import volumes). This is because India is the largest producer of chickpeas in the world, covering over 75% of global production [Source: UN Comtrade].

China imports large quantity of dried apricots and dried grapes

Chinese imports of dried apricots and dried grapes are relatively large in quantity, reaching 1,282 tonnes and 37,087 tonnes, respectively, in 2016, which represents about 15-20% of local production. Among them, the main exporting countries of dried apricots are Kyrgyzstan (75.6%), Turkey (20.1%) and Tajikistan (4.2%). Dried grapes are mainly imported from Uzbekistan (68.4%) and the US (25.8%) [Source: UN Comtrade].

As Central Asia is a main production base for dried apricots and dried grapes, Central Asia is a main source of imported dried apricots and dried grapes in China.

US and Chile are main sources of walnuts

Walnuts are mainly imported from the US, because walnuts there are of good quality and thus welcomed by both end consumers and industry consumers. In terms of walnuts in shells, 84.7% of imports come from the US, while Chile accounts for 12.7%. The main exporting countries for shelled walnuts are the US (81.7%) and Kyrgyzstan (10.6%) [Source: UN Comtrade].

In China, walnuts from the US and Chile are regarded as having the best quality in the world. China and Chile have signed bilateral free trade agreements. In addition, walnuts from Chile have been recognised as the premium walnuts with bright colour, authentic taste, full shape and long shelf life. In the meantime, the US has large walnut production volumes with large export quantities to China. Pecans from the US are especially preferred. In addition, the US has been a large producer and exporter of nuts. Its other products, such as pecans, almonds and macadamias, are well received by consumers in China as well, and thus possess synergy effects and competitive advantages when these products are exported to China together.

Among all Central Asian countries, only Kyrgyzstan exported walnuts to China in 2016. However, other Central Asian countries, namely Kazakhstan, Tajikistan and Uzbekistan, had a presence in the Chinese walnuts market in previous years, but with declining export volumes. The main reason for the decline in quantity is the increase in China domestic production. As a result, total imports of walnuts have been declining for two years, which mainly affected non-core exporters including the Central Asian countries.

China imports fruit stones from over 60 countries

Total import volumes of fruit stones amounted to 6,551.7 tonnes in 2016, which is smaller than that of walnuts. China imports fruit stones from more than 60 countries. The main importing countries are Indonesia (53.4%), Paraguay (11.1%), and Democratic People's Republic of Korea (9.5%). Central Asian countries are also present in the export market for fruit stones to China, but command a negligible share under 0.5% [Source: UN Comtrade].

Central Asia has good presence in exporting walnuts and dried fruits to China volume terms, but limited presence in value terms

By taking a deeper look at trade between Central Asia and China, China mainly imports dried apricots from Kyrgyzstan (75.6% of total import volumes in 2016), dried grapes from Uzbekistan (68.4% in 2016), while Kyrgyzstan is also a key exporter of shelled walnuts (10.6% in 2016). However, the import value of these products from these countries are relatively low. Kyrgyzstan accounted for just 46.5% of total import value of dried apricots and 3.4% of total import value of shelled walnuts in 2016, while Uzbekistan commanded only 45.9% of import value of dried grapes in 2016. This demonstrates that the products from Central Asian countries are generally unpackaged with low value added and are usually used as raw materials for further processing by Chinese consumers. However, products from the US have high value and target premium end consumers directly [Source: UN Comtrade].

7.4 OVERVIEW OF CHINESE REGULATORY LANDSCAPE

Relatively loose regulations for processed fruits and vegetables compared with regulations for fresh fruits and meat products

As processed fruits and vegetables are not fresh, they generally contain fewer hazardous substances and cannot spread decease to China, the regulations for processed fruits and vegetables are relatively loose. Generally speaking, they should fulfil all legislations relating to food.

Inspection and quarantine access is a prerequisite for countries and exporters to export processed fruits and vegetables to China

In order to conduct trade in processed fruits and vegetables with China, the export countries should obtain inspection and quarantine access first and be listed on the "List of products from countries and regions meeting relevant assessment requirements or having traditional trades with China" developed by the General Administration of Quality Supervision, Inspection and Quarantine (SAQSIQ).

First of all, the Ministry of Agriculture of the exporting country shall submit its written application to the General Administration of Quality Supervision, Inspection and Quarantine (SAQSIQ). The Chinese authorities send a questionnaire to the exporting country. The questionnaire includes information regarding the growing environment, planting area, production scale, and risk control system and quarantine situation of exporting agricultural products. The Chinese authorities will analyse the questionnaire and decide whether to initiate the assessment review procedure. If the case is initiated, a filed inspection is required.

The field inspection covers the inspection of cultivation base of agricultural products, processing enterprises, processing technology, product packaging, and logistics, etc. During the inspection period, the Chinese authorities are mainly concerned with the problem of plant pests and whether there is a risk of pests spreading. The two sides shall consult on the contents of the inspection and quarantine health protocol for related products to be exported to China. After reaching agreement, both sides shall sign and confirm the contents and format of the health certificate.

Table 23: Chinese processed fruit and vegetables import-related regulations affecting Central Asian suppliers

Summary of the legislation	Implications for exports from CA
Foreign Trade Law of the People's Republic of China	
Document location: Complete regulation (Chinese)	
This law is formulated with a view to developing foreign trade, maintaining the foreign trade order and promoting healthy development of the socialist market economy.	Regulates the import of goods and techniques at the top level.
Customs Law of the People's Republic of China	
Document location: Complete regulation (Chinese)	
The document states the provisions for import and export of transport, goods, tariffs and law enforcement.	Regulates the transportation means, customs clearance, tariffs of import goods at the top level.

Regulation of the People's Republic of China on the administration of the import and export of goods

Document location: Section II of Chapter II (Chinese)

It regulates the import and export of goods in China.	Dried apricots, dried grapes, walnuts, apricot kernels, beans, mung beans and chickpeas are the restricted import categories.

Law of the People's Republic of China on the entry and exit animal and plant quarantine

Document location: Chapter II (Chinese)

The document regulates the inspection and quarantine of imported animals and plants, including beans and dried fruits.	Central Asian countries should apply for processed fruit and vegetables import permission if they want to export fruits to China and their products need to be inspected and quarantined for the access permission.

List of products from countries and regions meeting relevant assessment requirements or having traditional trade with China

Document location: Complete list (Chinese)

According to the list: ▪ Dried apricots: Permission for Tajikistan, Kyrgyzstan, Uzbekistan ▪ Dried grapes: Permission for Kyrgyzstan, Uzbekistan, Kazakhstan ▪ Beans, ie kidney beans (HS code 071333): Permission for Kyrgyzstan ▪ Chickpeas: Permission for Kazakhstan ▪ Walnut in shells (HS code 080231): Permission for Tajikistan, Kyrgyzstan, Kazakhstan ▪ Shelled walnuts (HS code 080232): Permission for Kyrgyzstan, Uzbekistan ▪ Apricot kernels: Permission for all four countries	In order to export processed fruits and vegetables to China, Central Asian countries shall first obtain the inspection and quarantine permit from the recognised body, General Administration of Quality Supervision, Inspection and Quarantine (SAQSIQ).

Food Safety Law of the People's Republic of China

Document location: Complete law (Chinese), Complete law (English)

This Law is formulated to assure food safety and safeguard people's health and life. The following business activities carried out within the territory of the People's Republic of China shall abide by this Law: 1) Food production and processing; food sales and catering service; 2) Production and trading of food additives; 3) Production and trading of packing materials, containers, detergents/disinfectants for foods, as well as tools and equipment used in food production and trading; 4) Food additives and food-related products used by food producers and traders; Food storage and transportation; Safety management of food, food additives and food-related products.	The new food safety law came into force on the 1st October 2015. Currently China Food and Drug Administration (CFDA) is the main, central authority for food safety. Other ministries who also share regulatory competences in this matter are The General Administration of Quality Supervision, Inspection and Quarantine (AQSIQ) which overview food import/export and The National Health and Family Planning Commission of Peoples Republic of China (NHPFC) which is in charge of risk assessment. Traceability is a key principle of the new law, aiming to pursue food safety across the supply chain, including producers, traders, caterers, authorities, consumers, and media. Producers and traders are obliged to recall non-compliant or unsafe products. Sanctions for incompliance include criminal liability, punitive damages or fines of 20 to 30 times the value of the non-compliant products. Imported foods, food additives and food-related products shall comply with China's national food safety standards. Imported foods and food additives shall pass inspection by the exit-entry inspection and quarantine agencies (CIQ) pursuant to laws and administrative regulations. Imported foods and food additives shall be accompanied by inspection certificates, as required by AQSIQ. Overseas exporter and producers shall guarantee that the foods, food additives, and food related products exported to China comply with requirements of this Law, other Chinese administrative laws, regulations and the national food safety standard; they shall be responsible for content of the food labels and instructions. Imported food produce that does not have specific food safety standards in China is now allowed to apply for ad hoc approval by submitting documents providing compliance with foreign and international safety standards.

Regulation on the Implementation of the Food Safety Law of the People's Republic of China

Document location: Complete regulation (Chinese)

This Regulation is formulated in accordance with the Food Safety Law of	The food producers and business operators shall, in accordance with laws, regulations and food safety standards, engage in

the People's Republic of China (hereinafter referred to as the "Food Safety Law").	production and business operation, establish and improve the food safety management system, and take effective management measures to ensure food safety. The food producers and business operators shall be responsible for the safety of food which they produce and deal in, be responsible to the society and the general public, and bear the social responsibilities.

NHFPC Food safety standards

Document location: List of Standards (English)

List of 37 National food safety standards include food additives, testing methods, specific food product and hygienic practice for food operation.

- Bean products safety standard – GB 2712-2014
- Nuts and seeds products safety standard – GB 19200-2014
- Procedures for toxicological assessment on food safety – GB15193.1-2014
- Good laboratory practice of food toxicology – GB15193.2-2014

China CFDA Food Safety Sampling Inspection regulation

Document location: About the regulation (English)

China Food and Drug Administration (CFDA) issued Food Safety Sampling Inspection regulation, containing 53 articles and specifying planning, sampling, inspection, treatment method and legal liability of food sampling inspection.	**Food manufacturers or distributors are responsible for food safety** It is manufacturers and distributors duty to stop selling unqualified products and actively assist the government to solve the food safety problem. **Increased legal obligation of food inspection institution** Increase penalties for the misconduct of food inspection institution. Food safety inspection institutes presenting false testing reports, seeking illegal benefits or illegally releasing information will face penalties or annulment of qualification. **Sampling focus** ▪ Food with high risk, increasing pollution level, high consumption, large number of customer complaints or obvious security risk; ▪ Main and subsidiary foods especially for high risk groups (eg infants, pregnant women, etc) ▪ Collective meal distribution units, school canteens and scenic catering services ▪ Foods, which caused healthy issues in foreign countries

	Improving the re-examination procedures of disqualified results Food Safety Sampling Inspection Regulation stipulates that food manufacturers can submit written application for re-examination within 5 days after receiving the disqualification report. The inspection agency shall draw a re-examination conclusion within 10 days after receiving the backup sample. However the regulation also indicates that if the samples were tested with microbial overweight or the backup samples are beyond expiration date, the application for re-examination will not be accepted. **Simplifying the authenticity dissent handling procedure** Food manufacturers or distributors can submit written application and related materials of the food authenticity within 5 days after receiving the disqualification report.
Food Contact Material Standards Document location: About the regulation (English)	
National Health and Family Planning Commission of the People's Republic of China (NHFPC) released 53 Food safety national standards including 52 standards on food contact materials and articles (herein called FCM) on 18 November 2016.	The standard consists of: **2 General standards** General safety requirements in regards to food contact materials and packaging **10 Product standards** Specifies particular requirement to various contact materials, such as plastic, enamel, ceramic, etc **40 testing standards** Specifies requirements and procedures of testing

Limited bilateral trade agreements outweighed by size of domestic market

Since China's accession to WTO in 2002, China offers Most Favoured Nation (MFN) treatment to all WTO members. In addition, China has also signed free trade agreements with several countries to facilitate bilateral and multilateral import and export trade. Until August 2017, China had signed 11 bilateral FTAs (with Georgia, Australia, South Korea, Switzerland, Iceland, Costa Rica, Peru, New Zealand, Singapore, Pakistan and Chile). However, just as the other two priority markets under research, China has become a member of two multilateral free trade agreements with the Association of Southeast Asian Nations (ASEAN) and the Asia - Pacific Trade Agreement. The regional trade agreements facilitate and develop trade across the neighbouring markets. Bilateral trade agreements are rather limited thanks to the significant size of the domestic market and its neighbouring export destinations (see *Table 24*).

Table 24: China's bilateral and multilateral trade agreements affecting processed fruit and vegetables trade

Summary of the legislation	Implications for exports from CA
Free trade agreement between China and Chile Document location: Complete FTA (English)	
Committed to strengthening the special bonds between China and Chile.	Zero tariff for dried grapes and walnuts
Free trade agreement between China and Australia Document location: Complete FTA (English)	
Strengthen the economic partnership and further liberalise bilateral trade and investment to bring economic and social benefits.	Zero tariff for dried apricots, dried grapes, mung beans, walnuts and fruit stones.
Free trade agreement between China and Peru Document location: Complete FTA (English)	
Promote reciprocal trade through the establishment of clear and mutually advantageous trade rules and the avoidance of trade barriers, unjustified discrimination and distortions to their reciprocal trade.	Zero tariff for fruit stones.
Free trade agreement between China and New Zealand Document location: Complete FTA (English)	
Encourage the expansion and diversification of trade between the parties, eliminate barriers to trade, and facilitate cross-border movement of goods and services between the parties.	Zero tariff for all processed fruits and vegetables.
Free trade agreement between China and Democratic People's Republic of Korea Document location: Complete FTA (English)	
Encourage expansion and diversification of trade between the parties, eliminate barriers to trade, and facilitate cross-border movement of goods and services between the parties.	36.0% tariff for dried apricots 17.8% tariff for dried grapes Zero tariff for walnuts 6.4% tariff for apricot kernels

One Belt One Road Initiative expected to facilitate trade between China and Eurasian countries

The One Belt One Road Initiative (OBOR) is a development strategy proposed by China's leader Xi Jinping that focuses on connectivity and cooperation between Eurasian countries, primarily the People's Republic of China (PRC), the land-based Silk Road Economic Belt (SREB)[1] and the oceangoing Maritime Silk Road (MSR)[2]. The strategy underlines China's promotion of a China-centred trading network by investing heavily in infrastructure in countries along the old Silk Road linking it with Europe. Its ultimate goal is to make Eurasia a strong economic and trading area which is as important as the transatlantic one.

The OBOR initiative is geographically structured along six corridors, and the Maritime Silk Road, including a New Eurasian Land Bridge (running from western China to western Russia), China-Mongolia-Russia Corridor (running from northern China to eastern Russia), China-Central Asia-West Asia Corridor (running from western China to Turkey), China-Indochina Peninsula Corridor (running from southern China to Singapore), China-Myanmar-Bangladesh-India Corridor (running from southern China to Myanmar), China-Pakistan Corridor (running from southwestern China to Pakistan) and Maritime Silk Road (running from the Chinese coast through Singapore to the Mediterranean).

It is expected that with this initiative and the infrastructure investment, foreign trade between China and the countries along these corridors will be further facilitated, and the Central Asian countries will definitely benefit from this initiative.

7.5 OVERVIEW OF CHINESE PROCESSED FRUIT AND VEGETABLES IMPORT SUPPLY CHAIN

Domestic consumption is the main import driver

Processed fruits and vegetables imported to China are mainly for the purpose of domestic consumption. The local market of importers is highly fragmented. Importers are mainly small to medium-sized trading companies with less than 1% market share, which are usually regional players only responsible for importation of processed fruits and vegetables in certain regions, for example, Dongguan Aita Trading Co, Yingbo (Shanghai) Trading Co, Weihai Teddy Trading Co, etc.

Note: [1] Including five provinces in Northwest China (ie Shaanxi, Gansu, Qinghai, Ningxia, and Xinjiang) and four provinces in Southwest China (ie Chongqing, Sichuan, Yunnan and Guangxi).
Note: [2] The Maritime Silk Road, officially the 21st Century Maritime Silk Route Economic Belt is a Chinese strategic initiative to increase investment and foster collaboration across the historic Silk Road. China-Pakistan Economic Corridor is an extension to the proposed Silk Road.

Small to medium-sized food processing enterprises are intermediaries in the process

In China, the main consumers of processed foods (including dried fruits, nuts and dried leguminous vegetables) are domestic food processing enterprises. The typical import supply chain (see *Figure 6*) starts with the processed fruit and vegetables manufacturers in the exporting countries. Those enterprises sell their products to the importers in China. In most cases, the imported products are unpacked and need further processing. In this situation, importers sell them to downstream food processing enterprises, who further process the bulk of supply (eg dry fry, season) and or package products, such as Xuzhou Jiushun Food Co Ltd, Hangzhou Huaguoshan Food Co Ltd, Shanghai Laizhende Food Co Ltd, etc. Then food processing enterprises sell the processed products to the retail channel, such as hypermarkets, supermarkets, online retailers, or primary food processing, such as bakery and confectionery players. Processed fruits and vegetables are usually served as raw materials and are widely sold to industrial customers.

Figure 6: Processed fruit and vegetables imports to China supply chain

In some other cases, imported products are pre-packed. They are usually sold by importers to the downstream distributors/wholesalers, which further supply these pre-packed imported products to the retailers. Eventually, consumers will purchase them from the retailers.

Figure 7: Pre-packed processed fruit and vegetables imports to China supply chain

Chinese importers and distributors do not set any minimum requirements on produce volumes, however as typically imports are delivered in containers, a minimum of one container is common.

Marine transportation is the main method for processed fruits and vegetables and products are imported through ports close to the sales regions

While there is no strict requirement regarding transportation temperature, processed fruits and vegetables need to be transported in cool and dry conditions. Benefiting from the less demanding transportation requirements, marine transportation is the best solution and the most widely used method for imported products, as it reduces costs.

Conventionally, over 90% of imported processed fruits and vegetables go through marine transportation. However, there are special cases when air transport is used for a minority of foods with high preservation requirements. Additionally, imports from CA countries mainly go via land transport.

There are a great number of ports across China, through which processed fruits and vegetables can be imported. Generally speaking, products are imported through the ports close to the sales regions. However, the choice of port is also a decisive factor in the transportation method. Products going to the middle and eastern regions of China are mainly transported by sea, while products with destinations in northwest and southwest China are usually transported by road.

Imports from CA countries mainly go through land ports

However, imports from Central Asian countries generally go through the land ports. As China borders Kyrgyzstan, Kazakhstan and Tajikistan, there are several frontier ports, namely Tulgate port (Kizilsu Kirgiz Autonomous Prefecture) and Irkishtan port (Kizilsu Kirgiz Autonomous Prefecture) between Xinjiang province in China and Kyrgyzstan, Ahetubieke port (Altay area), Jimo Nai port (Altay area), Buckport port (Tacheng area), Alashankou port (Boltara Mongolian Autonomous Prefecture), Horgos port (Ili Kazak Autonomous Prefecture), Tiruta port (Ili Kazak Autonomous Prefecture) and Mucha Zate port (Ili Kazak Autonomous Prefecture) between Xinjiang province in China and Kazakhstan. However, there is only one border port between Xinjiang province in China and Tajikistan, namely Karasu port (Kashi area). As China and Uzbekistan do not border each other, the two countries have no direct border ports and can only rely on cross-border trade and entreport trade. At present, Xinjiang province mainly imports from Horgos port.

Domestic importers are usually responsible for inland transportation of imported products in the domestic market

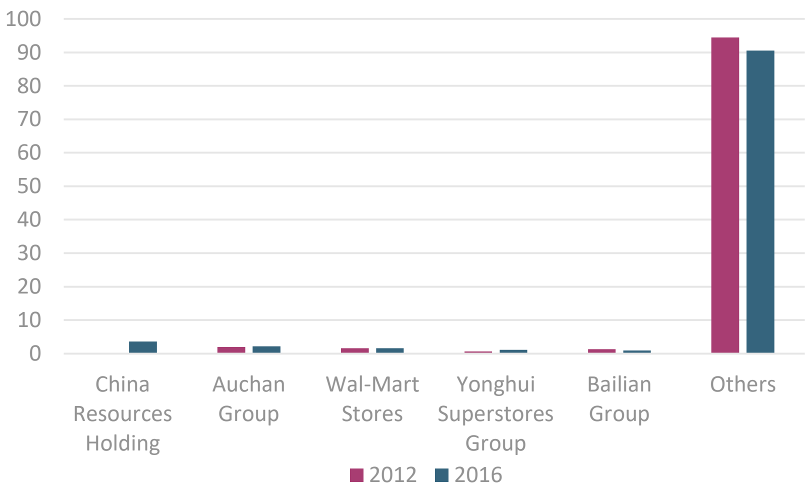
CIF (Cost, Insurance and Freight - clause requiring a seller to arrange for the carriage of goods by sea to a port of destination) and FOB (Free on Board - clause stipulates that supplier is responsible for the goods and transportation until the goods reach the import port (border), from where the buyer takes responsibility upon himself) clauses are the ones widely used in domestic trade related to imports of processed fruits and vegetables. Imported processed fruits and vegetables are shipped to China from abroad by the shipping companies. Upon arriving at the ports, domestic importers will entrust the third party customs service companies to assist with customs clearance of goods at customs. After the customs clearance of imported products, domestic importers will arrange logistics agencies to distribute the products directly to the food processing enterprises or downstream distributors. In some cases, goods will also be transported to importers’ own warehouses.

7.6 OVERVIEW OF CHINESE PROCESSED FRUIT AND VEGETABLES RETAIL LANDSCAPE

Chinese retail market is highly fragmented with leading company holding just 3.6% share

Grocery shopping in China could be characterised by polarisation in 2016. Chinese consumers' shopping habits became increasingly polarised, as many consumers, especially those in higher-tier cities, started to focus more on convenience and quality, in line with their rising disposable incomes and the fast pace of daily work and life, although others were still more price sensitive due to the economic downturn. Therefore, small formats and premiumisation became the major trends impacting grocery retailers in 2016, with many leading players adopting corresponding activities, such as opening convenience stores and boutique supermarkets. A growing number of retailers are shifting away from large store formats such as hypermarkets and supermarkets to concentrate more on smaller store formats such as convenience stores. This move aims not only to meet consumers' changing shopping emphasis on convenience, but also to follow an omnichannel strategy to maintain competitiveness. Some of the leading players, such as Carrefour and Yonghui, aimed to segment the market even further, by launching Easy Carrefour and Yonghui Membership Stores, providing more premium products and in particular increasing the share of imported products.

Chart 13: Grocery retail landscape in China (value sales based market shares 2012, 2016)



Source: Euromonitor. Grocery Retailing 2016

Due to such significant retail market fragmentation, voluntary quality standards are not popular

Chinese retailers trust the checks, inspections and other quality controls run on a governmental level. However, retailers and other distributors do tend to carry out additional quality checks and inspections, following their own sets of rules, rather than a standard such as GLOBALG.A.P.. Nevertheless, with retailers such as Auchan and Wal-Mart making their way in the Chinese market the typical conformity standards, including GLOBALG.A.P., HACCP, ISO22000 and IFS, are expected to become more significant in the medium to long term.

7.7 OVERVIEW OF CHINESE CUSTOMS AND DUTIES

Most Favoured Nation (MFN) treatment for Central Asian countries

There are two taxes related to imported goods in China, namely tariffs and value-added tax.

Kazakhstan, Kyrgyzstan and Tajikistan enjoy Most Favoured Nation (MFN) treatment when importing processed fruit and vegetables to China. According to MFN treatment, the tariffs vary between as low as 3% up to 25% (see *Table 2*). The amount of tariff is calculated based on the CIF value of the imported goods and the tariff rate, using the formula: Amount of tariff = CIF value of goods * tariff rate.

Value-added tax for processed fruit and vegetables is usually 13%, which cannot be exempted. The calculation base for value-added tax is CIF value of goods plus tariff, using the formula: Amount of value-added tax = (CIF value of goods + amount of tariff) * value-added tax rate. Through the historic period the rates of MFN tariffs and VAT have not undergone any change and remained stable.

Table 25: Key processed fruit and vegetables custom duties in China

Dried apricots	
Kazakhstan	25.0% (MFN)
Kyrgyzstan	25.0% (MFN)
Tajikistan	25.0% (MFN)
Uzbekistan	70.0%
Dried grapes	
Kazakhstan	10.0% (MFN)
Kyrgyzstan	10.0% (MFN)
Tajikistan	10.0% (MFN)
Uzbekistan	80.0%
Walnuts	
Kazakhstan	25.0% (shelled), 20.0% (unshelled) (MFN)
Kyrgyzstan	25.0% (shelled), 20.0% (unshelled) (MFN)
Tajikistan	25.0% (shelled), 20.0% (unshelled) (MFN)
Uzbekistan	70.0%

Apricot kernels

Kazakhstan	20.0% (MFN)
Kyrgyzstan	20.0% (MFN)
Tajikistan	20.0% (MFN)
Uzbekistan	80.0%

Beans

Kazakhstan	3% (HS071332), 7.5% (HS071333) (MFN)
Kyrgyzstan	3% (HS071332), 7.5% (HS071333) (MFN)
Tajikistan	3% (HS071332), 7.5% (HS071333) (MFN)
Uzbekistan	14.0% (HS071332), 20.0% (HS071333)

Mung beans

Kazakhstan	3.0% (MFN)
Kyrgyzstan	3.0% (MFN)
Tajikistan	3.0% (MFN)
Uzbekistan	11.0%

Chickpeas

Kazakhstan	7.0% (MFN)
Kyrgyzstan	7.0% (MFN)
Tajikistan	7.0%(MFN)
Uzbekistan	20.0%

Source: Ministry of Commerce of the People's Republic of China

Customs clearance of goods are usually taken care by importers

Similar to other categories, the tariffs and value-added tax should be paid to Chinese customs when the imported processed fruits and vegetables arrive at the ports in China. Usually the importers of processed fruits and vegetables will take charge of the customs clearance of goods. In China, it is common for importers to delegate the customs clearance of goods to third party customs service companies. A series of documents is needed for customs clearance of goods, among which are a Certificate of Origin and a Sanitary Certificate provided by the Ministry of Agriculture of the exporting country. Exporters of processed fruits and vegetables are not required to fill in any documents or forms when exporting to China.

No additional costs for exporters

For imports of processed fruits and vegetables, most additional costs usually occur during the customs clearance of goods, such as various costs and charges for filing, inspection, quarantine, services and agency fees, which are usually borne by importers. Therefore, there are no additional costs for exporters during the whole procedure.

7.8 OVERVIEW OF OPPORTUNITIES IN CHINESE MARKET OPEN FOR CENTRAL ASIAN SUPPLIERS

Despite domestic production, high-quality walnut imports are in demand

Chinese walnut demand is not fully met by domestic production, therefore China is open to high-quality walnut imports. All the Central Asian countries under research are legally allowed to export walnuts to China, as all are granted quarantine access. Furthermore, Central Asian countries have previously exported their walnut produce to China and already developed some trade partnerships. There is an opportunity to increase export volumes to China as well as partner with more importers and distributors, especially those focusing on the foodservice industry.

Central Asian raisins offer diversity to Chinese consumers

While China is a large raisin producer itself, market demand requires significant import levels. Uzbekistan, Kazakhstan and Kyrgyzstan are legally allowed to export dried grapes to China, as all are granted quarantine access. Central Asian dried grapes differ from domestic ones in terms of taste, while offering a competitive price compared to US and other imported products. As Central Asia already has an established dried grapes market in China, there is an opportunity to further grow dried grape sales and stress the diversity of taste and value for money price/quality ratio.

Despite the substitute market, dried apricots are set to grow

Tajikistan, Kyrgyzstan and Uzbekistan are legally allowed to export dried apricots to China, as all are granted quarantine access. While dried apricots see quite a number of substitute products, Chinese consumers are developing a demand for this particular dried fruit variety; thus Central Asia should benefit from existing trade partnerships with China and develop trade in dried apricots further.

8. IMPLICATIONS, GAP ANALYSIS AND RECOMMENDATIONS

8.1 INTERNATIONAL MARKETS TRADE REQUIREMENTS IMPLICATIONS FOR CENTRAL ASIA

As we discussed all the markets in isolation, in this section we will aim to bring the market findings together and discuss the key insights into Central Asian production and its export opportunities (see *Table 25*).

Table 25: Central Asian processed fruit and vegetables SWOT analysis

Strengths
Central Asian processed fruit and vegetable produce is able to meet consumer demand on variety and healthiness Central Asian producers are able to add variety to the priority markets' imports through black currant and kishmish dried grape varieties, which see limited supply from elsewhere. Moreover, as major fruit cultivators Uzbekistan, Tajikistan and Kyrgyzstan have very good agricultural soil, through which fruits are gaining high natural sugar levels, and therefore typically possess a very sweet taste. Moreover, after drying, Central Asian fruits preserve the vitamins that are necessary for maintaining the human body. **Fruit production capacity development on the agenda** As the demand for processed fruit and vegetables is on the rise thanks to the healthy living trend, Central Asia strategically plans to increase its agricultural yield through irrigation, new variants of more effective seedlings (including dwarfs), greenhouses, and sustainable use of natural fertilisers. **Competitive fruit distributors are looking for value for money deals** Lower economic development of the Central Asian region results in lower labour and crop costs, making the final produce more affordable than produce from other countries. For example, Kyrgyzstan-sourced walnuts in China carry a price point a third of similar produce sourced from the US, while the quality is deemed good. **Health-aware consumers are looking for superfruit snacks** Central Asia is able to offer unique products, including unique kishmish dried grapes, dried apricots from the Ferghana, Namangan and Surkhandarya regions and Qandari dried apricots, which are

considered to be superfruit snacks, due to a multitude of nutritional benefits, including high levels of beta-carotene.

Central Asia has strong presence in global dried grapes market

Dried grapes see the highest consumption level across the priority markets. Uzbekistan produced over 50,000 tonnes of dried grapes, which was more than 3% of global table grape supplies in 2014, becoming one of the top seven grape producers in the world, and plans to further increase dried grape produce to reach over 70,000 tonnes in 2017. The dried grapes market is growing through increasing global consumption. Dried grape-related market development should be mainly focusing on Uzbekistan.

Central Asia possesses favourable climate for production of beans

Favourable climatic conditions allow Central Asian producers to cultivate high-quality beans. Although beans are grown in all countries of the region, Kyrgyzstan is the most successful in this category, producing over 87,000 tonnes in 2014. Beans from Kyrgyzstan attract consumers and importers for several reasons. The beans are valued for their ecological purity. The farmers generally add no chemical fertilisers. The beans contain valuable microelements, for example, molybdenum and folic acid. Almost 80% of the beans are exported to such countries as Turkey, Bulgaria, Macedonia, Georgia and Iran.

Dried apricots are Central Asian speciality fruits, especially the Ferghana Valley variant

Not only is Uzbekistan the third largest apricot producer in the world, but the Ferghana Valley, located in the territories of Uzbekistan, Kyrgyzstan and Tajikistan, features a unique apricot variant, which is known for its high nutritional value.

Central Asian markets aim to increase production and export of walnuts

While the US and China are global leaders in production and export of walnuts, the Central Asian region sees gradual growth of walnut production. Uzbekistan is producing close to 45,000 tonnes of walnuts a year. Pursuing the aim of increasing exports of walnuts, the President of Uzbekistan has signed a decree to establish an association of walnut producers and exporters. The document also releases the entrepreneurs, belonging to the association, from customs fees for importing the equipment for drip irrigation, specialised agricultural machinery, seedlings, seedling stock, grafts and parent walnut material by 1 January 2020.

Central Asia has some presence in the priority markets already

Central Asian dried fruits and nuts have already entered all the priority markets, however at a very limited scale. While end consumers remain largely unaware of Central Asian producers, exporters are networking with priority market buyers, including importers and distributors.

Demand for organics is on the rise

Central Asian fresh fruit and vegetable produce historically follows a natural or close to natural cultivation process, as farmers are not used to applying harsh chemicals to their crops, often because they cannot afford to purchase them.

Active participation in global standardisation process

Ferghana Valley producers have taken a first step in the standardisation of domestic produce and included features of Ferghana dried apricots in the UNECE standard. While the actual standard was developed for the processed fruit and vegetables category, it allowed industry players to learn the application process and should put them in a stronger position for further improvements.

Central Asia accession to international trade agreements positively affects trade

As Kyrgyzstan, Kazakstan and Tajikistan are WTO members, they benefit from MFN treatment. Uzbekistan is still in the very early stages of its WTO membership. Tajikistan and Uzbekistan enjoy GSP status, while Kyrgyzstan has recently been granted GSP+ status for trade with the EU.

Central Asia understands that global certification is the way forward

With European and Russian buyers' requirements for FSSC, ISO, GLOBALG.A.P. or other global certification standards, Central Asian producers are in agreement that certification has become a standard requirement for international trade. Some of the largest producers, for example Uzbek Golden dried Fruit (GDF) have achieved the certification and develop their international presence. Moreover, the region is actively developing education systems for future certification experts, so regional producers would not have to depend on international experts.

Weaknesses

Limited international consumer awareness of Central Asian fruit and vegetables

While Central Asian produce is tasty and of high quality, international consumers are not aware and buyers lack awareness of Central Asia as an origin of processed fruit and vegetable produce. Different from fresh fruit, processed fruits and vegetables enjoy considerable consumption in food processing, and not only retail, thus it is important to promote the origin to both channels.

While productivity and efficiency improvement on the agenda, implementation remains challenging

As the Central Asian agricultural industry is highly fragmented, small players often cannot afford to act on the strategic production enhancements, such as irrigation development, new land cultivation, introduction of new seedling variants, and implementation of modern machinery across farming, packing, calibration, cleaning and minor processing etc. Although commercial banks offer loans to agricultural players, the interest rates are high, the available loan principal is insufficient and the banking procedure is complicated and lengthy, driving many small and micro businesses away from the opportunity.

While Central Asia may be able to offer lower prices than the competition, first investment is needed

Due to economic development of the region, labour costs, operational costs, land transportation costs and other related costs are lower than those in more developed rival exporters. Moreover, Central Asian producers are developing quickly and ready to adopt the standards of international buyers in order to meet their demands. However, the costs are considerable for Central Asian producers and they need to gain more trust and orders from international buyers first.

Historically rather natural production, but lacks certification proof

While Central Asian production is considered relatively natural, the region needs to gain international organic, eco or bio certificates to be able to use the natural claim, while trading with international markets. Moreover, in order to position Central Asian varieties, such as Ferghana dried apricots, as somewhat superior to other variants in terms of vitamin content and wider nutritional value, producers must obtain proof for their claims.

Despite significant production of pulses, demand is not universal

Central Asia is a strong leguminous producer, however leguminous as such are primarily popular in the less developed economies (as a substitute for meat protein), or among vegetarian cultures. Therefore, the German market sees very niche demand for pulses, while UAE has some cultural demand for pulses, however the level of development and multiculturalism of the market again limits the demand, and China is the largest producer of pulses in the world.

Dried fruit exporters face difficulties in compiling volumes of similar quality produce

As Central Asian agriculture is highly fragmented and lacks coordination between the individual entities, Central Asian exporters when building their stock volumes face various produce quality challenges, in terms of colour, size and taste. While this is acceptable in the Russian and domestic markets, the priority markets look for uniformity.

Central Asian trade is highly focused on Russia and post-Soviet space and lacks further diversification

Historically, culturally and geographically Russia is the key export market for Central Asian producers along with cross-border trade among the Central Asian markets. While the sole focus on Russia has resulted in strong partnerships with Russian buyers, other priority markets have remained untapped. Domestic farmers are not motivated to change their ways of working and produce better quality produce to satisfy international markets' requirements, because they profitably realise their current produce through their domestic market and Russia. There is a lack of wider information sharing about the benefits and the requirements of exports to international markets.

Certification and voluntary standards

As Central Asian producers realise the need for international certification and conformity to buyers' voluntary requirements, such as FSSC, IFS, GLOBALG.A.P., Fairtrade and ISO22000; the certification process is only familiar in theory and there is a lack of practical advice. There is a lack of local certification auditors, laboratories and other experts, such as business consultants, able to help the domestic producers through the process of certification. Furthermore, certification is largely unaffordable for the majority of SME players.

Access to market

While it is Central Asia's strategic goal to improve international trade, the Central Asian producers and exporters lack understanding of international markets' requirements, when it comes to other international destinations than Russia. Fragmented and SME based industry lacks awareness of legal access requirement to China and UAE markets. While European UNECE based standards are more familiar, the industry needs more education on voluntary certification and standardization requirements. Furthermore, there is a need for further education on typical export operational process, when it comes to international markets.

Lack of regional cooperation

Central Asian countries, while developing some wider regional strategies in terms of international trade development, continue to lack cooperation and dialogue between the countries, and do not efficiently share their experiences (both successes and failures).

Opportunities

Germany

Market

Large and mature market with established demand for dried fruits and nuts. Participation in German market opens wider opportunities at the EU level.

Product

Walnuts are the third most popular nuts in Germany, with consumption demand generated by both retail and foodservice. Central Asian producers may target supplying the German retail market with highly natural or organically certified walnuts, offering competitive prices. While foodservice may not require organic certification and offers an opportunity to work with specialised importers.

Dried fruits are developing demand in the snacking industry with small convenient packaging in either pure or mixed formats with other fruits and/or nuts. Dried grapes supply should be targeted at foodservice and retail, while dried apricots should primarily

UAE

Market

While a smaller market than either China or Germany, UAE sees an increase in processed fruit and vegetables consumption and very strong and wealthy consumer groups.

Product

UAE does not have much domestic production and therefore depends heavily on imports.

Therefore, there are equally interesting opportunities across all the product categories under research. However, due to lack of awareness of Central Asian produce quality and only minor and rather inconsistent trade partnerships, Central Asian produce has an opportunity to target UAE's re-export market to Africa, Oman and Yemen, as these markets do not have such high quality requirements as UAE.

Regardless of the product category, the key requirements in UAE are quality, quantity and

China

Market

China's market is looking to support very large local production with additional volumes as well as tasty and affordably-priced varieties.

Product

As China is a neighbour to the Central Asian markets, it does have domestic production of the same products as Central Asia, however there are certain varieties such as black currant that are relatively rare on China's domestic market.

China is the largest producer of grapes, hence raisins as well, and is also the largest producer of pulses globally.

The opportunity in pulses is rather limited because of the wide domestic supply, however in walnuts and dried fruits Central Asia is able to offer variety (different variants) as well as very competitive price points, compared to the large current suppliers such as the US.

be targeted at retail. The opportunity is to extend existing relationships through wider marketing efforts around country of origin, quality of produce and price.

Apricot kernels represent a niche opportunity at present in in terms of end consumption as a snack. The curative qualities of the product have started to generate interest in the beauty and personal care industry. There is an opportunity to market apricot kernels proactively to the beauty industry, as ingredients in novelty products.

Trade agreements

Uzbekistan and Tajikistan benefit from the lower custom rates thanks to GSP agreements. Kyrgyzstan, newly accepted to GSP+ agreement, benefits from custom free trade in processed fruit and vegetables.

consistency. Thus Central Asian suppliers will have to convince UAE buyers of their reliability, consistent delivery capacities and premium product quality.

Trade agreements

UAE is part of the GCC free trade area, and is the gateway to the wider Middle Eastern trade through re-exporting.

Kazakhstan and UAE, despite a lack of sizeable trade relations, have established a trade agreement, aimed to develop mutual trade realtionships.

The market is looking for high quality and is primarily targeted at food processing. The retail market, similar to Europe, is focusing on healthy snacks and looks for small convenient packaging for on-the-go consumption.

Trade agreements

As China primarily focuses on Eastern Asia and Australia trade relationships, there are no preferential trade agreements between Central Asia and China currently. However Kazakhstan, Kyrgyzstan and Tajikistan enjoy MFN treatment.

However China has very strict control over import access to the country, granting quarantine access control to importers/ producers pending the inspection.

Central Asian countries are allowed to export nuts; Uzbekistan, Kazakhstan and Kyrgyzstan are permitted to export dried grapes, while Tajikistan, Kyrgyzstan and Uzbekistan are on the quarantine list for dried apricots.

Furthermore, the Chinese government has introduced the **One Belt One Road initiative,** aiming to enhance China's international trade with Central Asian countries; in addition, the Chinese government provides Central Asian countries with **technological support**, encouraging Central Asian countries to export agricultural products to China.

Challenges

Access to market

Central Asian countries face difficulties while attempting to export processed produce to:

- German buyers require all their suppliers to adhere to voluntary quality and sustainability standards. Depending on the retailer, there may be a specific demand for a particular standard implementation. However, FSSC, IFS, GLOBALG.A.P. and ISO are some ofof the trusted certificates, required by such retailers as Edeka, Rewe, Lidl, Aldi and Metro. In particular, retailers require implementation of Integrated Farm Assurance Standard, Chain of Custody Standard and Risk Assessment on Social Practice Standard.
- UAE buyers, while they do not have experience trading with Central Asian suppliers, associate the whole Central Asian region with the negative trade experience they had with Azerbaijan. Thus Central Asian suppliers, while not required to provide any additional certificates or proof of conformity, do need to convince UAE buyers of their quality and consistency.
- China has set quarantine access for agricultural produce imports, with not all Central Asian countries consistently permitted to export all processed fruit and vegetables. Therefore, before being able to establish trade relationships with Chinese buyers, Central Asia will have to work on quarantine access first.

Lack of Central Asian produce awareness

Central Asian fruit and vegetable processed produce is not widely present in the priority markets, and therefore buyers are not sure of the demand for Central Asian processed fruits and vegetables, while consumers are not used to the taste.

Technological challenges in meeting quality requirements

All the international priority markets have legally set the requirements for processed fruit and vegetable produce quality; while Germany follows UNECE standards, UAE and China have developed their own standards. The import procedure to any of the priority markets includes a product quality inspection, which is performed upon arrival to the market. In order to ensure that the quality standards are met, Central Asian producers and exporters must test the produce while still at home. The local laboratories lack the equipment to run all the tests required by the more developed economies' buyers, and even if they do, the results the obsolete equipment produce are not always trustworthy. There have been a number of cases where Central Asian exporters obtained a local certificate of quality testing stating that the level of pesticides and other residues was within the norm, but when the test was performed by foreign laboratories it proved negative for particular residues, and therefore the produce was not allowed into the country.

Unstable prices of agricultural produce

By definition, agriculture is a high risk industry, because it is highly dependent on weather conditions, which are beyond human control. The agricultural price points are set by demand and supply. While demand may be somewhat predicted and forecast for the future, weather-dependent supply may under or over deliver, hence impact price points. The supply and demand relation effecting price includes not only the domestic market, by wider global suppliers and buyers, making the industry even more difficult to predict.

8.2 GAP ANALYSIS AND POSSIBLE INTERVENTIONS

The following table provides a summary of the gap analysis and suggests the possible intervention measures that can be employed to narrow or close the gap between the supply and demand of the market (see *Table 26*).

Table 26: Central Asian supply and international demand gap analysis

Current supply situation	Current demand requirements	Interventions
Raise awareness of taste and attributes of Central Asian processed fruit and vegetables		
Central Asian countries do not have efficient rules or regulations to safeguard the	International buyers are not aware of Central Asian produce qualities. Moreover, there are	▪ Facilitate and promote participation of Central Asian producers and exporters in

country of origin claims. Central Asian produce is often purchased by other exporting markets and is sold as their produce.	only very limited trade relations between Central Asia and the priority markets, so international buyers are not aware of the exporters and lack trust in their consistency and ability to deliver.	international trade expositions and other trade promotional events, specifically focusing on those in priority markets. Establish relevant branded produce for them to showcase. ▪ Educate agricultural industry (from farmers to exporters) on the international market demands. ▪ Promote "Made in Uzbekistan", "Made in Tajikistan" and "Made in Kyrgyzstan" countries of origin through educational materials on agricultural products in priority markets.
Consolidate production to enhance quality consistency and volume supply		
Post-Soviet Union collapse, Central Asian agriculture is highly fragmented with many individual farmers as well as micro and SME farms. As farms are free to choose the type of goods to produce as well as the exact variant of the produce as well as individually decide on what technological approach they would apply, the produce is highly fractured in terms of taste and variant, thus exporters and wholesalers who	International buyers are looking for suppliers who can guarantee consistent quality and quantity of produce.	▪ Educate Central Asian producers on the benefits of cooperation and knowledge sharing, focus on how the cooperation would benefit them. ▪ Introduce governmental support to farmers that participate in the coordinated production efforts. ▪ Introduce an export promoting and coordination body (for each of the

trade with small farmers are not able to guarantee produce of uniform quality.		products separately) that would be the go-to entity for farmers who want to export goods. This could take the form of a cooperative, association or broker.
Enhance fruit and vegetable calibration to meet international standards		
Central Asian producers lack a systematic approach towards production, therefore there are inconsistencies in terms of visual produce appearance, eg varying size and colour. Therefore it becomes difficult to compile large export volumes, satisfying specific quality requirements.	International consumers are looking for premium looking and tasting produce. It is important to satisfy both visual and taste requirements of the markets, since visually unattractive produce, regardless of taste, will not sell well.	▪ Improve calibration technology. ▪ Educate farmers and producers on the necessity and benefits of calibration.
Achieve international certification		
Fragmented Central Asian producers are not able to afford GLOBALG.A.P., FSSC, ISO or other high calibre food quality certification, which is required by European buyers. Farmers already have an understanding of the certification procedure, and recognise its significance, however lack of affordability stops farmers from going through the certification process. Moreover, domestic, cross-regional and CIS trade	European markets require FSSC, ISO, QS and/ or Global G.A.P. certification of their suppliers, in order to ensure not only the quality of the produce, but also the farming process, the transportation process and the sustainability of the producer.	▪ Educate SME farmers on the benefits of certification and subsequent ability to enter international markets, which may return higher profits for the same produce. ▪ Facilitate development of educational systems for future certification experts. ▪ Establish a wider certification advisory body, which would be able to address the questions of SMEs.

does not require the extra effort of certification as well as is more familiar to the farmers, thus many producers take the "easy" option.		▪ Facilitate the establishment of the internationally recognized certification institution in the Central Asia ▪ Facilitate lobbying of government in terms of subsidising the certification process for small players (through taxes or loans). ▪ Facilitate dialogue between financiers (banks) and agricultural industry, in order to reduce the loan process as well as agree on acceptable interest rates and relevant principal loan sums.
Learn from international best practices to modernise laboratories		
Central Asian food testing laboratories are not recognised by international markets, such as Germany and China, because the laboratories lack modern technology, up-to-date training and consistency in running tests. There have been cases where Central Asian laboratories have granted food safety/quality certificates specifying various criteria within norms, while the same test repeated in the international entry market showed different results. Central Asian producers are	Each of the priority markets has laws specifying the requirements for processed food produce in detail either for agriculture, product group or even product type. Each market performs a food quality inspection as the products enter the market, and in cases where the produce does not satisfy the minimum requirements it is returned to the supplier or destroyed.	▪ Facilitate establishment of internationally recognised laboratories in Central Asia, particularly Uzbekistan. ▪ Facilitate development of educational systems for future food quality experts to fill the laboratory jobs. ▪ Provide information to exporters and current laboratories on what are the acceptable quality levels in international markets as well as detail what are the tests that need to be performed (to avoid using different methodologies).

able to provide samples to international laboratories, however as in the case of imports in many cases the produce comprises collective produce of many farms, thus sample testing is not efficient.		
Identify opportunities for partnerships in air freight		
As a landlocked region, Central Asian exporters have to deliver by land or air. In terms of processed fruit and vegetables, land transportation is relatively safe in terms of the product, however the transportation volumes are vastly smaller than the marine solution may offer. Air freight is an available option, however it is an expensive one.	International buyers generally prefer marine transportation, however are happy to accept other solutions, as long as price and quality are guaranteed.	▪ Facilitate relationships between exporters and air freight carriers. ▪ Provide exporters with information about competing air freight carriers (beyond Uzbek Airlines and relevant carriers in other countries). ▪ Provide information about charter cargo flights with independent carriers, rather than traditional big players. ▪ Facilitate lobbying plan, for domestic exporters to gain some discounted air freight rates, when they export agricultural produce to priority markets.

8.3 RECOMMENDATIONS FOR GIZ TRADE FACILITATION IN CENTRAL ASIA PROGRAMME DEVELOPMENT

The goal of the report was to provide GIZ with detailed information about the export priority market demands and guide GIZ towards the next step the trade facilitation programme may take, in order to improve international trade in agricultural produce across the Central Asian region. Based on the research findings, industry insights and analysis, Euromonitor International suggests the following future trade facilitation initiatives, programmes and lobbying verticals (see *Table 27*).

Table 27: Recommendations for processed fruit and vegetables trade facilitation development

Recommendation	Detailed summary	Beneficiaries
Raise awareness of taste and attributes of Central Asian processed produce		
Facilitate and promote participation of Central Asian producers and exporters in international trade expositions and other trade promotional events, specifically focusing on those in priority markets. Establish relevant branded produce for them to showcase.	Educate exporters, exporting producers and traders about the Trade Expo calendar (when, what kind of exposition, product relevance, entry prices, markets targeted), so they can plan their attendance in advance. Establish a body, helping participants with implementation of exposition requirements. The go-to entity to find out what to prepare for the trade show, how to prepare for the trade show, what to expect to find there and how to network while at the show.	▪ Exporters ▪ Traders ▪ Farmers
Educate agricultural industry (from farmers to exporters) about international market demands.	Provide farmers, processors and exporters/traders with information on priority export markets in order to promote exports, show opportunities and convince them to focus on international trade. Include such factors as: ▪ Consumer demand and preferences; ▪ Market size; ▪ Buyers' requirements; ▪ Legal market entry requirements; ▪ Competitor analysis; ▪ Key trading partner analysis.	▪ All supply chain.

Promote "Made in Uzbekistan", "Made in Tajikistan" and "Made in Kyrgyzstan" through educational materials on agricultural products in priority markets.	Facilitate development of "Made in…" support programmes by creating marketing and educational materials about Central Asian agriculture, presenting the processed fruits and vegetables the region aims to export, explaining the production process, presenting some of the exporting bodies or cooperatives of exporters, claiming the benefits of the Central Asian produce versus the competition. The goal is to develop visual print materials and promotional videos, which could be presented to partners as well as a wider audience through social media.	▪ All supply chain.
Consolidate production to enhance quality consistency and volume supply		
Educate Central Asian producers about the benefits of cooperation and knowledge sharing, focusing on how the cooperation would benefit them.	Facilitate development of individual, micro and small farmers' cooperatives (not in terms of sharing profits, but in terms of sharing knowledge and coordinating the technological production approach as well as coordinating product focus). Assure farmers that the cooperative is not taking over control of their farm, and that they continue to remain in charge. The goal of the cooperative/association is to be able to gain stable high volume orders from international buyers, which are fulfilled by a number of small domestic producers, who all work towards the same goal. Such a set-up would guarantee to buy farmers' produce at a set price, so that	▪ Farmers ▪ Micro farms ▪ SME farms ▪ Exporters ▪ Wholesalers (traders)

	farmers will not have to worry about realisation and price fluctuation.	
Introduce governmental support to farmers that participate in the coordinated production efforts.	Facilitate lobbying programme to connect domestic exporters with the government to discuss the following support systems: ▪ Guaranteed long-term land lease - government to provide farmers with a set amount of land, that they will cultivate in a coordinated manner and sell the produce to exporters to international markets; ▪ Tax relief or deductions for the initial set-up stage (3-5 years), so that farmers have more funds to introduce technological equipment required to cultivate the new land; ▪ Exporters - consolidators' subsidies, enabling them to learn more about the best agricultural practices to be applied by the coordinated farms; ▪ Subsidies for coordinated farms' seedlings for the first few years.	▪ All supply chain, excluding large corporations.
Introduce an export promoting and coordination body (for each of the products separately) that would become the go-to entity for farmers who want to export goods. This could take the form of a cooperative, association or broker.	Facilitate development of export promoting entity specific to a particular product (eg apricot export cooperative, dried apricot export cooperative), which would be the know-how centre for all specific product-related export information, including costs and prices, transportation, customs, potential partners, etc.	▪ Farmers ▪ Micro farms ▪ SME farms ▪ Exporters

Enhance fruit and vegetable calibration to meet international standards		
Educate farmers and producers on the necessity and benefits of produce calibration.	Establish educational material for farmers, informing them of the necessity and benefits of produce calibration. Showcase real life examples of what products and why they were refused by buyers because of calibration. Educate on how to correctly set the calibres, and what calibres are popular in priority markets.	▪ Farmers ▪ Micro farms ▪ SME farms ▪ Exporters ▪ Wholesalers (traders)
Improve produce calibration technology	Provide farmers with information on the potential price point of installation of calibration technology. Provide farmers with best practices of calibration technology, showcase different brands, machinery and applications. Facilitate dialogue between farmers and technical experts, for the latter to provide farmers with more technical advice.	▪ Farmers ▪ Micro farms ▪ SME farms ▪ Exporters ▪ Wholesalers (traders)
Achieve international certification		
Educate SME farmers about the benefits of certification and subsequent ability to enter international markets, which may return higher profits for the same produce .	Facilitate development of educational programmes for individual farmers as well as micro and SME farms, well as processors about the benefits of international certification, such as FSSC, ISO, Organic, GLOBALG.A.P.: ▪ Focus on the benefits international certification provides to farmers/producers (eg more efficient production, sustainable production);	▪ Farmers ▪ Exporters

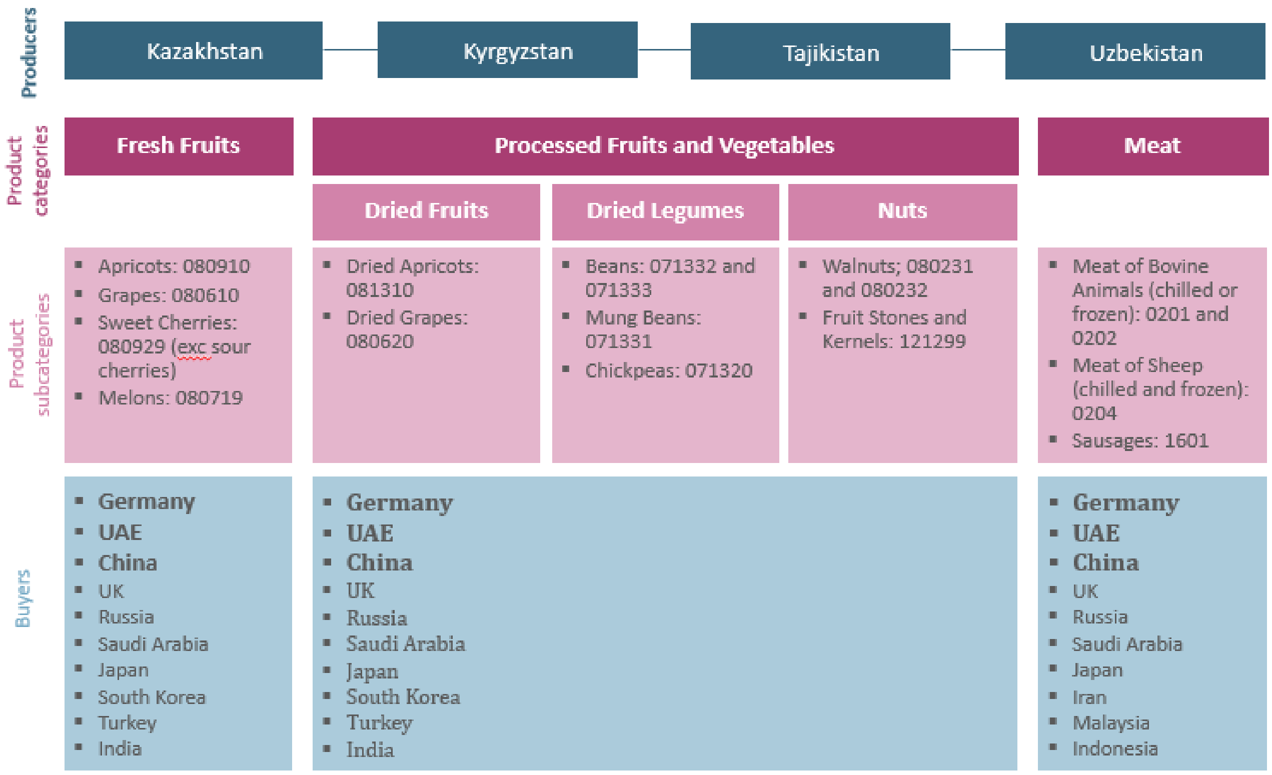
	▪ Explain what are the new market entry opportunities, while having certification (eg for German market this is a prerequisite); ▪ Educate about the detailed composition of international certification and highlight which of the standards are recommended for which part of the agricultural business.	
Facilitate development of educational systems for future certification experts.	Facilitate development of international certification professional training at local universities (FFSC, GLOBALG.A.P., ISO, Organic, etc). Introduce current food testing specialists to international training.	▪ All supply chain
Establish a GLOBALG.A.P. or wider certification or advisory body, which would be able to address the questions of SMEs.	Facilitate development of domestic consulting companies and certification bodies specialising in international standardisation and certification. Consultants would be responsible for step-by-step facilitation, coordination and other assistance to farmers that would like to know more or to start the certification process.	▪ Farmers ▪ Micro farms ▪ SME farms ▪ Farming cooperative
Facilitate lobbying of government in terms of subsidising the certification process for small players (through taxes or loans).	Facilitate dialogue between farmers, exporters and government in order to agree on possible subsidies or tax relief for those farmers that choose to be internationally certified.	▪ All supply chain
Facilitate dialogue between financiers (banks) and	Facilitate dialogue between farmers, exporters and banks in order to agree on	▪ All supply chain

agricultural industry, in order to reduce the loan process as well as agree on acceptable interest rates and relevant principal loan sums.	possible financing tools available for certification purposes.	
Learn from international best practices to modernize laboratories		
Facilitate establishment of internationally recognised laboratories in Central Asia, particularly Uzbekistan.	Facilitate development of internationally recognised food testing laboratories in Central Asian countries. Initiate dialogue between the European, UAE and China laboratories and Central Asian experts to share the best practices. Facilitate business plan development for laboratory establishment and any impact on costs that currently exporters face.	▪ Exporters
Facilitate development of educational systems for future food quality experts to fill the laboratory jobs.	Facilitate development of food testing professional training in local universities. Introduce current food testing specialists to international training.	▪ Exporters
Provide information to exporters and current laboratories about what are the acceptable quality levels in international markets as well as detail what are the tests that are to be performed (to avoid using different methodologies).	Facilitate education of exporters about the detailed food safety requirements of international markets: ▪ Provide a list of the food safety requirements by country; ▪ Explain the type of testing international laboratories run and how it differs from current domestic checks; ▪ Highlight the particular tests that domestic laboratories do not take, or do not have the proper	▪ Exporters

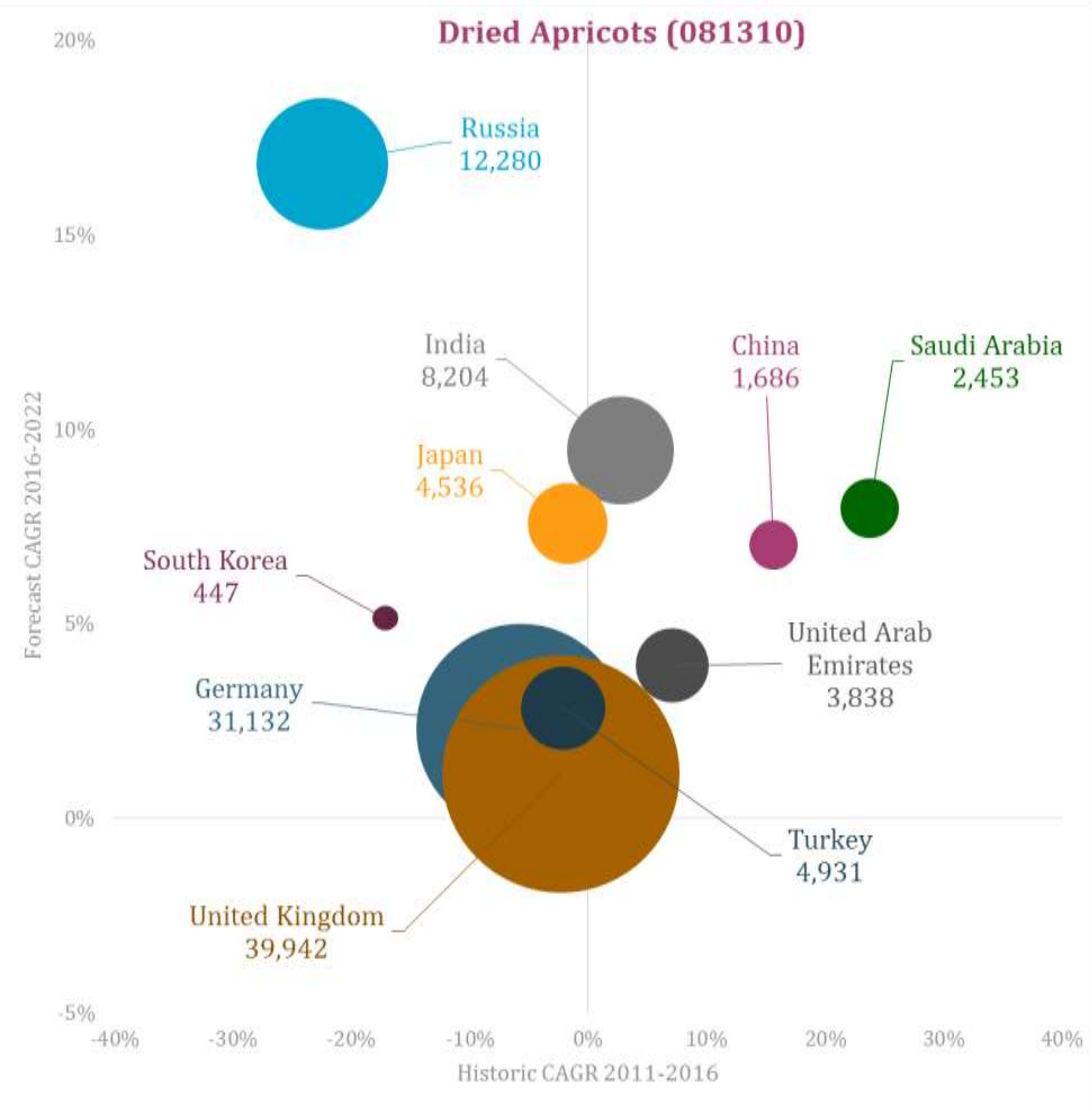
	technology to obtain accurate results.	
Identify opportunities for partnerships in air freight		
Facilitate relationships between exporters and air freight carriers.	Facilitate dialogue between exporters and air freight companies. Help exporters connect with the relevant cargo carriers. Provide exporters with information about competing air freight carriers (beyond Uzbek Airlines and relevant carriers in other countries). Provide information about charter cargo flights with independent carriers, rather than traditional big players. Facilitate lobbying plan, for domestic exporters to gain some discounted air freight rates, when they export agricultural produce to priority markets.	▪ Exporters

9. APPENDICES

Appendix 1: Central Asia international trade facilitation scope



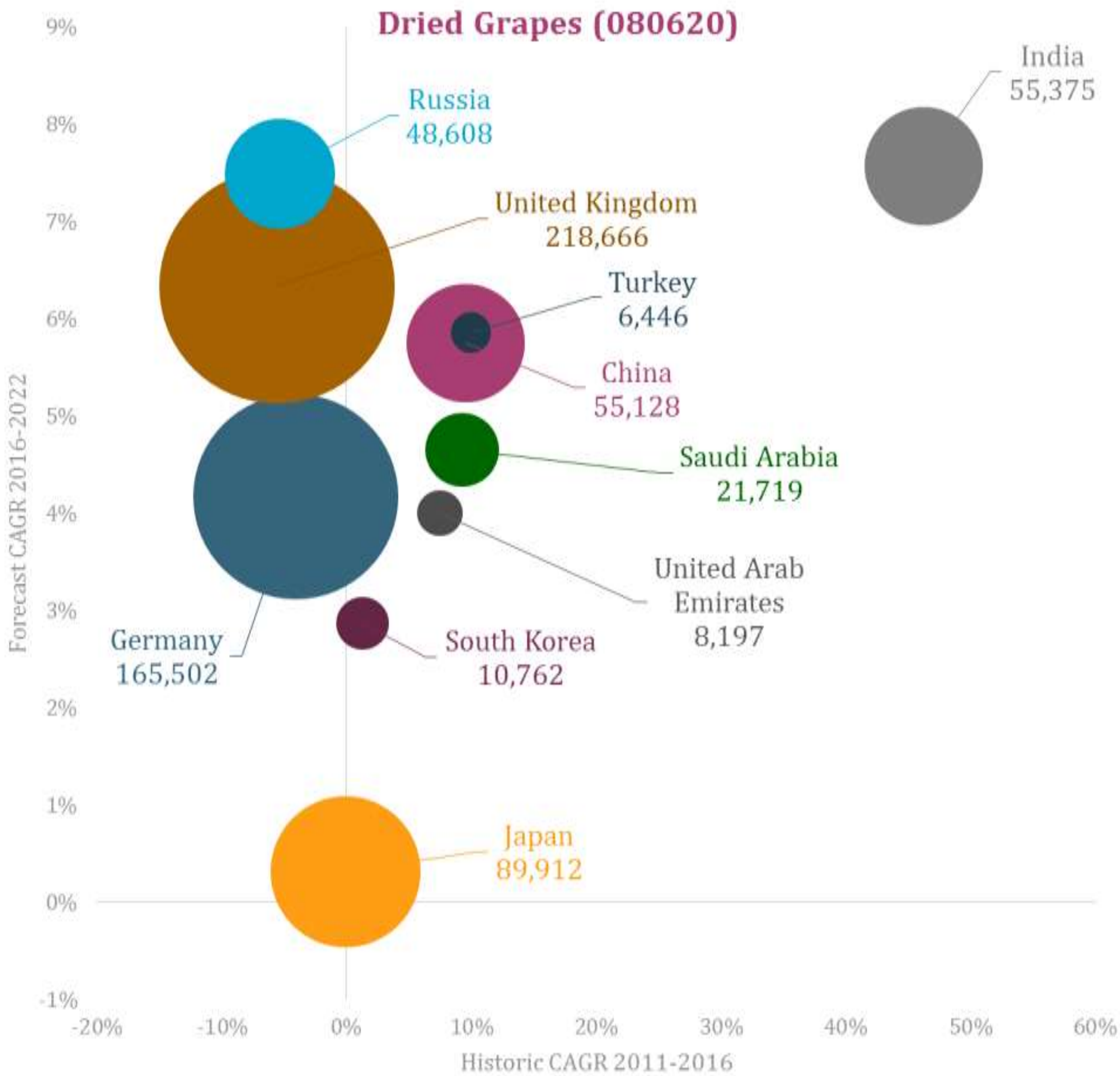
Appendix 2: Processed fruit and vegetables international demand opportunity matrices (result of the first stage of the research)



Source: ITC Trade Maps, 2016

Note: Bubble size represents import value ('000 USD)

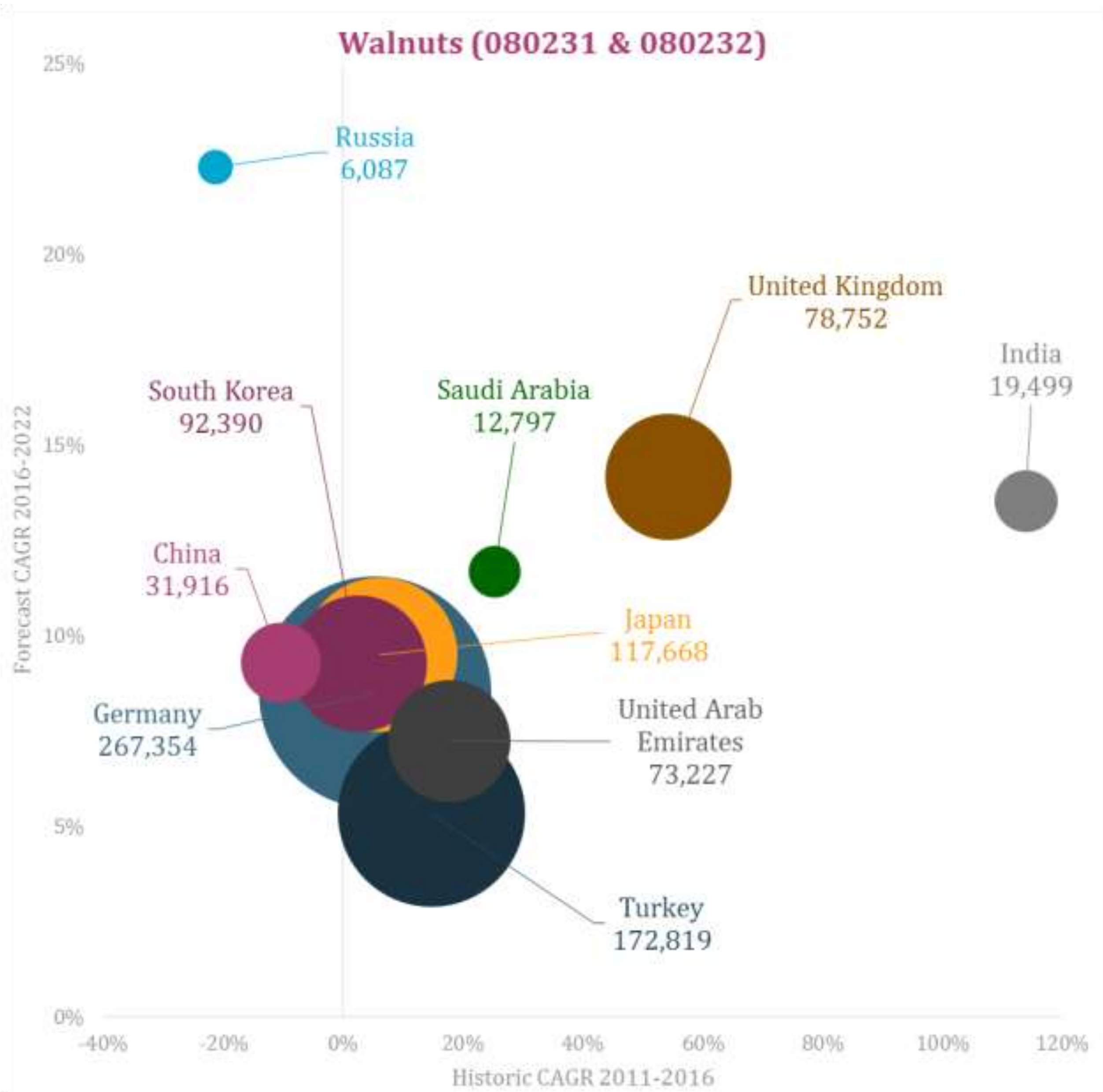
Note: Forecast CAGR was modelled by Euromonitor research team, based on the historic category performance and macro-economic markets' performance



Source: ITC Trade Maps, 2016

Note: Bubble size represents import value ('000 USD)

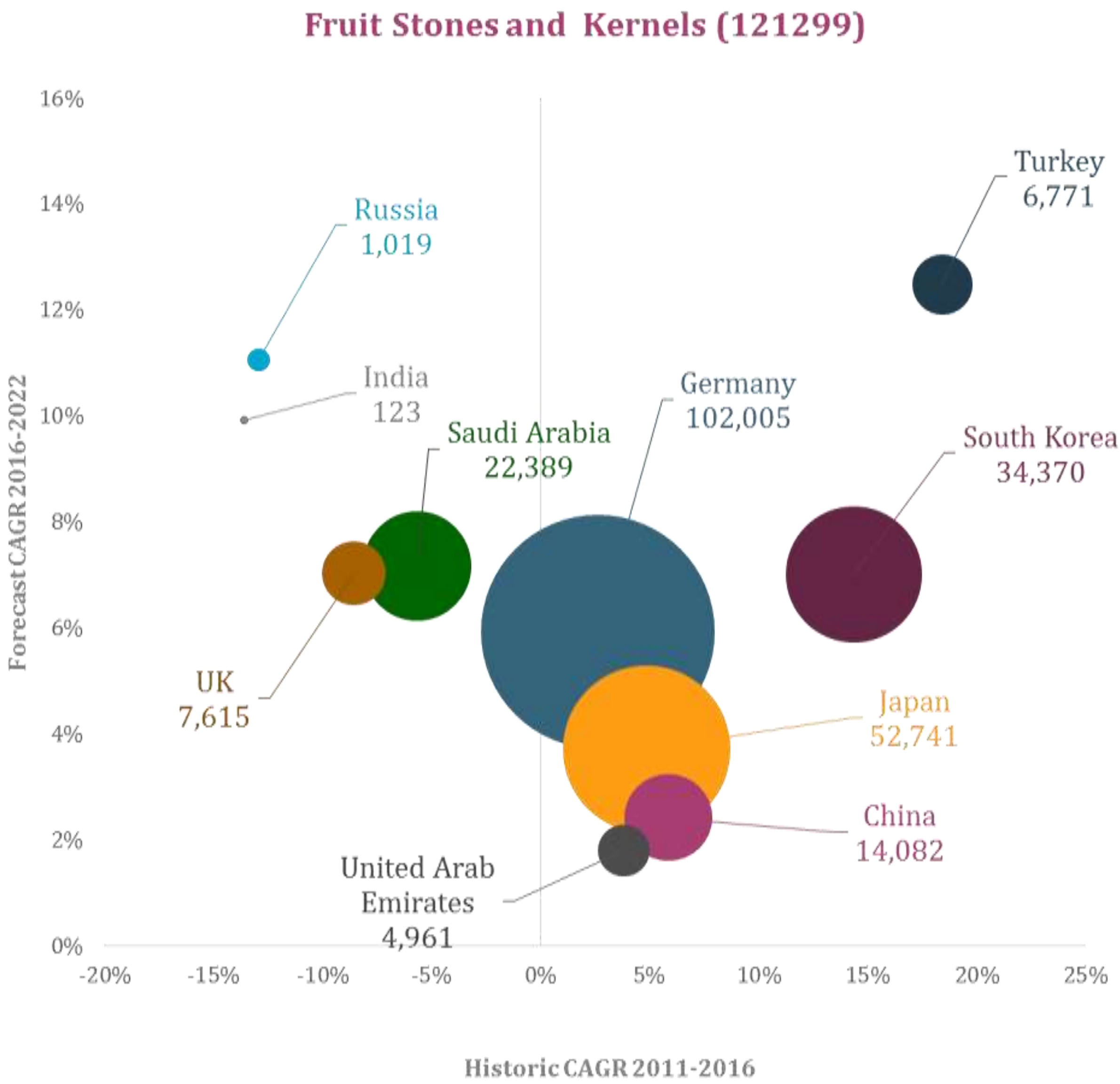
Note: Forecast CAGR was modelled by Euromonitor research team, based on the historic category performance and macro-economic markets' performance



Source: ITC Trade Maps, 2016

Note: Bubble size represents import value ('000 USD)

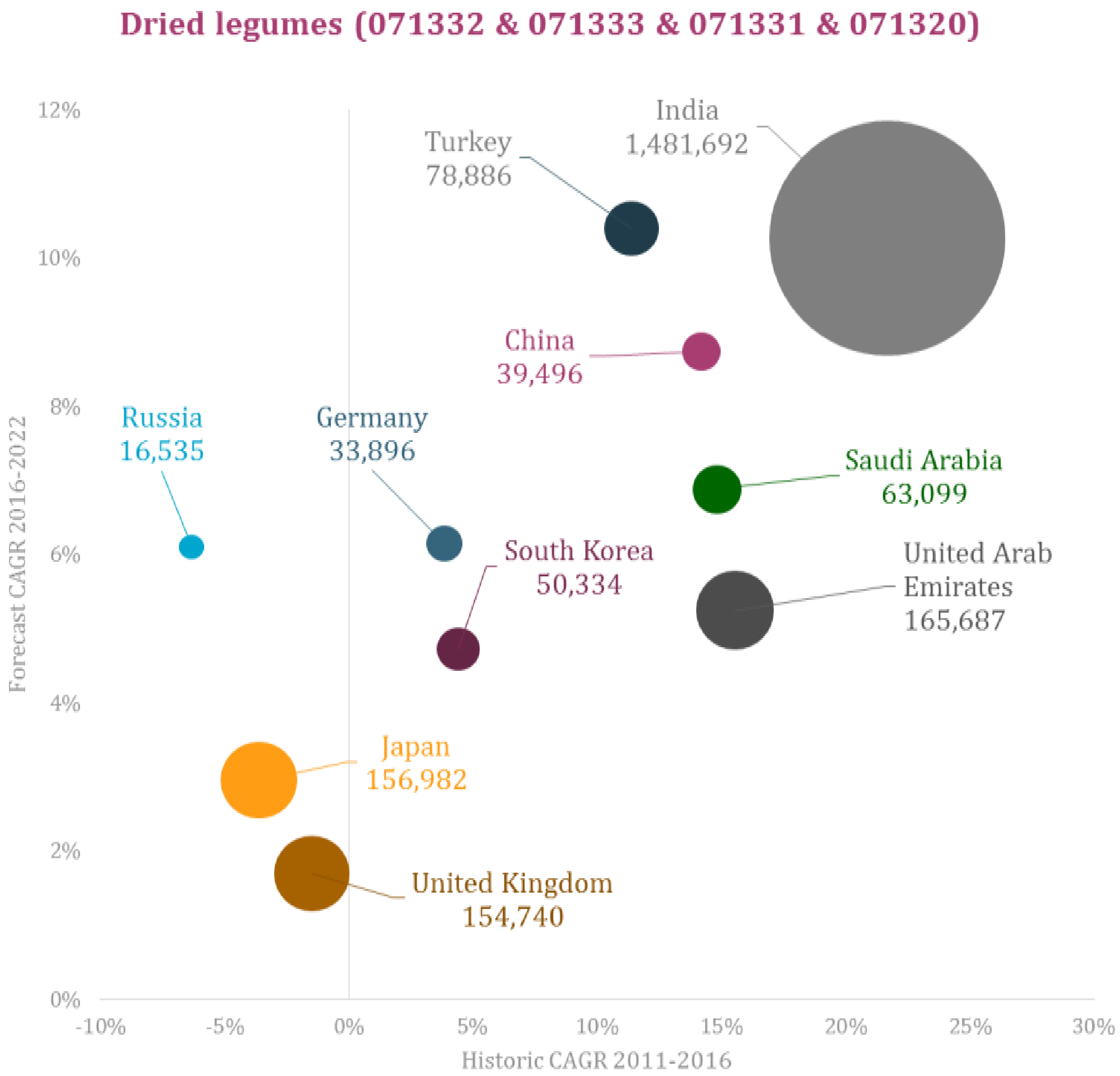
Note: Forecast CAGR was modelled by Euromonitor research team, based on the historic category performance and macro-economic markets' performance



Source: ITC Trade Maps, 2016

Note: Bubble size represents import value ('000 USD)

Note: Forecast CAGR was modelled by Euromonitor research team, based on the historic category performance and macro-economic markets' performance



Source: ITC Trade Maps, 2016

Note: Bubble size represents import value ('000 USD)

Note: Forecast CAGR was modelled by Euromonitor research team, based on the historic category performance and macro-economic markets' performance

Appendix 3: Germany's international dried apricots (HS081310) imports volume sales (tons)

Exporting Country	2012	2013	2014	2015	2016	Volume share
World	7759	9647	8858	5403	6687	100%
Turkey	7130	8882	7790	4504	5926	89%
Uzbekistan	43	4	528	259	227	3%
Netherlands	70	145	100	125	137	2%
France	41	77	52	17	116	2%
China	21	17	90	300	96	1%
Italy	59	56	28	40	50	1%
Afghanistan	38	8	11	35	32	0%
Pakistan	21	0	0	38	24	0%
Iran, Islamic Republic of	9	28	7	13	20	0%
Austria	43	36	21	12	16	0%
Spain	1	1	21	12	12	0%
South Africa	10	24	86	11	9	0%
United Kingdom	0	0	0	0	6	0%
Belgium	2	1	9	2	5	0%
Syrian Arab Republic	2	0	0	0	5	0%
Tajikistan	2	2	3	2	2	0%
Poland	0	0	0	0	2	0%
Serbia	0	0	0	0	1	0%
Viet Nam	0	0	0	0	1	0%
Korea, Republic of	0	0	0	0	0	0%
Lebanon	0	1	0	1	0	0%
United Arab Emirates	0	0	0	0	0	0%
Ukraine	0	3	0	0	0	0%
Algeria	0	0	27	8	0	0%
Argentina	0	0	0	20	0	0%
Armenia	0	0	0	0	0	0%
Brazil	0	0	0	0	0	0%
Bulgaria	0	0	0	0	0	0%
Canada	0	0	0	0	0	0%
Sri Lanka	0	0	0	0	0	0%
Chile	5	0	0	0	0	0%
Czech Republic	0	1	0	0	0	0%
Denmark	0	1	2	0	0	0%
Greece	0	0	0	0	0	0%
Hong Kong, China	0	0	0	0	0	0%
Iraq	0	0	0	1	0	0%
Ireland	0	0	0	0	0	0%
Kyrgyzstan	0	0	1	1	0	0%
Latvia	0	0	0	0	0	0%
Lithuania	0	0	0	0	0	0%

Exporting Country	2012	2013	2014	2015	2016	Volume share
Luxembourg	3	0	0	0	0	0%
India	0	0	0	0	0	0%
Singapore	0	0	0	0	0	0%
Slovakia	20	12	7	2	0	0%
Slovenia	0	0	0	0	0	0%
Switzerland	0	0	2	0	0	0%
Thailand	0	0	0	0	0	0%
Tunisia	236	349	73	0	0	0%
United States of America	1	0	0	0	0	0%

Source: ITC Trade Maps

Appendix 4: Germany's international dried grapes (HS080620) imports volume sales (tons)

Exporting Country	2012	2013	2014	2015	2016	Volume share
World	75475	80507	75801	80136	77875	100%
Turkey	45711	43603	37015	37659	30260	39%
South Africa	2732	3846	4097	12105	16907	22%
United States of America	10782	12511	16043	8859	10347	13%
China	3406	4099	3119	3923	4424	6%
Uzbekistan	356	107	469	1695	2914	4%
Belgium	2250	2035	2737	2909	2223	3%
Netherlands	1285	2181	2888	2133	2108	3%
Iran, Islamic Republic of	3355	5160	3699	4621	1946	2%
Australia	423	616	786	1089	1518	2%
Chile	2016	2105	1191	1670	1303	2%
Greece	904	1075	1168	1197	1032	1%
India	491	506	416	680	809	1%
Austria	620	810	670	337	688	1%
Argentina	596	337	279	153	440	1%
Afghanistan	78	346	698	173	273	0%
Pakistan	22	22	48	132	158	0%
France	146	80	89	57	148	0%
Italy	128	210	30	98	118	0%
United Kingdom	75	3	96	541	117	0%
Denmark	28	26	27	29	73	0%
Poland	0	12	21	27	52	0%
Lithuania	5	6	7	8	10	0%
Sweden	0	0	0	1	3	0%
Russian Federation	0	0	0	0	2	0%
Czech Republic	27	0	0	1	1	0%
Spain	1	695	129	1	1	0%
Hungary	0	0	0	0	0	0%
United Arab Emirates	0	0	0	0	0	0%
Ukraine	0	0	41	0	0	0%
Brazil	0	40	20	0	0	0%
Bulgaria	0	20	2	0	0	0%
Canada	0	0	0	0	0	0%
Cyprus	8	7	15	0	0	0%
Indonesia	0	0	0	0	0	0%
Ireland	8	6	0	0	0	0%
Israel	0	0	0	0	0	0%
Latvia	0	0	0	21	0	0%
Taipei, Chinese	20	0	0	0	0	0%
Morocco	0	22	0	5	0	0%
New Zealand	0	0	0	0	0	0%

Peru	0	19	0	0	0	0%
Portugal	0	0	0	0	0	0%
Slovakia	1	1	1	0	0	0%
Switzerland	0	0	0	14	0	0%

Source: ITC Trade Maps

Appendix 5: Germany's international fruit stones (HS121299) imports volume sales (tons)

Exporting Country	2012	2013	2014	2015	2016	Volume share
World	31814	28258	33973	34851	31368	100%
China	8990	8526	11828	14477	15792	50%
South Africa	2609	3402	3593	3491	3640	12%
Nigeria	6612	4762	8333	6677	3255	10%
Sudan	5084	2422	2963	3832	2205	7%
Egypt	647	548	813	688	754	2%
United Arab Emirates	0	29	0	0	572	2%
Turkey	3541	3725	2185	659	532	2%
Albania	293	208	293	396	512	2%
Spain	98	325	388	375	434	1%
Syrian Arab Republic	967	833	132	499	403	1%
Burkina Faso	157	419	392	306	386	1%
Bulgaria	379	281	282	488	337	1%
Netherlands	217	109	99	242	273	1%
India	43	13	79	378	253	1%
Cyprus	60	0	66	169	241	1%
United Kingdom	883	93	17	60	196	1%
Senegal	55	789	316	125	187	1%
Austria	41	70	75	357	170	1%
United States of America	24	111	23	41	147	0%
Pakistan	106	231	140	230	120	0%
Uzbekistan	12	2	50	26	115	0%
Poland	71	60	97	115	114	0%
Bosnia and Herzegovina	26	36	55	68	73	0%
Tajikistan	0	0	292	197	65	0%
Ukraine	24	15	12	51	61	0%
Greece	74	201	145	63	48	0%
Moldova, Republic of	0	0	48	44	47	0%
Paraguay	40	46	92	76	45	0%
Italy	121	90	93	70	40	0%
Chile	0	42	0	0	38	0%
France	48	77	116	53	37	0%
Georgia	0	0	0	2	28	0%
Iran, Islamic Republic of	191	345	176	49	26	0%
Thailand	40	114	88	150	26	0%
Mali	0	14	0	0	21	0%
Viet Nam	1	2	5	3	21	0%
Lesotho	0	0	5	0	18	0%
Romania	13	2	2	28	16	0%
Australia	150	1	4	6	14	0%
Hungary	15	6	190	24	13	0%

Exporting Country	2012	2013	2014	2015	2016	Volume share
Serbia	32	63	0	0	13	0%
Algeria	0	0	0	0	10	0%
Taipei, Chinese	0	0	0	0	9	0%
Kazakhstan	1	2	10	12	7	0%
Portugal	0	2	8	6	7	0%
Ghana	1	30	1	55	6	0%
Sri Lanka	0	0	1	7	5	0%
Denmark	24	9	20	5	5	0%
Brazil	9	30	181	57	4	0%
Malaysia	0	0	0	2	4	0%
Morocco	25	2	61	67	4	0%
New Zealand	2	5	8	4	4	0%
Belgium	3	1	2	2	3	0%
Switzerland	1	0	0	2	2	0%
Lebanon	1	2	10	0	1	0%
Afghanistan	36	58	83	45	1	0%
Argentina	0	0	6	18	1	0%
Israel	0	1	3	1	1	0%
Japan	1	1	0	0	1	0%
Jordan	0	1	2	0	1	0%
Peru	0	0	2	0	1	0%
Russian Federation	0	0	0	0	1	0%
Singapore	0	0	0	0	1	0%
Macedonia, The Former Yugoslav Republic of	0	11	0	0	1	0%
Korea, Republic of	0	1	1	2	0	0%
Armenia	0	11	0	0	0	0%
Bolivia, Plurinational State of	0	0	0	3	0	0%
Canada	0	0	0	0	0	0%
Colombia	0	0	0	0	0	0%
Croatia	3	0	0	0	0	0%
Czech Republic	21	64	56	27	0	0%
Dominican Republic	18	12	1	0	0	0%
Ethiopia	0	0	1	0	0	0%
Finland	0	0	0	0	0	0%
Hong Kong, China	0	0	18	0	0	0%
Indonesia	0	0	0	3	0	0%
Kenya	0	0	0	0	0	0%
Lithuania	0	4	2	0	0	0%
Madagascar	0	0	0	5	0	0%
Mexico	0	0	0	0	0	0%
Saudi Arabia	0	0	0	0	0	0%
Zimbabwe	0	0	11	9	0	0%

Exporting Country	2012	2013	2014	2015	2016	Volume share
Sweden	0	1	0	0	0	0%
Tunisia	0	0	0	0	0	0%
Tanzania, United Republic of	2	0	0	0	0	0%

Source: ITC Trade Maps

Appendix 6: Germany's international beans- dried small red beans-shelled (HS071332) imports volume sales (tons)

Exporting Country	2012	2013	2014	2015	2016	Volume share
World	200	230	336	483	543	100%
China	106	111	196	253	236	43%
Kyrgyzstan	13	16	34	92	107	20%
Netherlands	2	1	0	41	103	19%
Poland	38	46	44	41	44	8%
Argentina	1	0	0	1	16	3%
Italy	2	2	3	3	6	1%
Kazakhstan	0	0	0	0	6	1%
Turkey	16	2	12	21	6	1%
Madagascar	0	2	2	7	5	1%
Thailand	2	3	5	2	4	1%
United States of America	0	0	0	0	3	1%
Greece	0	0	0	0	2	0%
United Kingdom	0	21	0	0	2	0%
Ukraine	0	0	0	0	1	0%
Canada	2	0	24	0	1	0%
Japan	1	1	1	0	1	0%
Uzbekistan	2	8	1	5	0	0%
Albania	2	0	0	0	0	0%
Austria	0	0	0	0	0	0%
Brazil	0	0	0	0	0	0%
France	2	0	1	1	0	0%
Malaysia	0	0	0	0	0	0%
Morocco	4	7	5	3	0	0%
Peru	2	1	2	2	0	0%
Saudi Arabia	0	0	0	2	0	0%
Serbia	2	0	0	0	0	0%
Spain	3	8	2	8	0	0%
Egypt	0	0	1	0	0	0%

Source: ITC Trade Maps

Appendix 7: Germany's international beans- dried shelled kidney beans (HS071333) imports volume sales (tons)

Exporting Country	2012	2013	2014	2015	2016	Volume share
World	14096	18536	14968	11927	12950	100%
China	5553	8232	5836	3489	3891	30%
Canada	3335	3009	2416	1276	2047	16%
Ethiopia	1123	2065	1497	914	1568	12%
Netherlands	954	1523	1262	1302	1310	10%
Kyrgyzstan	221	694	561	903	917	7%
United States of America	643	872	1029	933	772	6%
Ukraine	84	0	42	635	540	4%
Turkey	851	725	909	472	359	3%
Italy	463	380	264	308	325	3%
France	227	217	209	408	300	2%
Poland	120	90	92	133	159	1%
Belgium	13	79	129	173	150	1%
Argentina	90	196	6	553	134	1%
United Kingdom	54	55	181	61	79	1%
Lithuania	23	22	26	42	52	0%
Portugal	7	7	1	2	51	0%
Myanmar	0	0	80	2	40	0%
Sweden	0	0	0	0	30	0%
Tanzania, United Republic of	28	14	28	0	29	0%
Egypt	10	12	9	68	26	0%
Kazakhstan	4	0	26	17	21	0%
Switzerland	9	22	202	69	17	0%
Peru	1	10	13	20	16	0%
Lebanon	34	1	19	1	14	0%
Iran, Islamic Republic of	7	7	8	6	13	0%
Spain	13	5	0	24	11	0%
Uzbekistan	12	25	19	7	10	0%
Thailand	9	18	4	3	9	0%
Bosnia and Herzegovina	0	0	24	0	8	0%
Chile	11	0	11	2	8	0%
Ecuador	1	3	6	5	8	0%
Greece	6	10	9	23	8	0%
Madagascar	0	3	22	10	7	0%
Romania	0	0	0	0	6	0%
Paraguay	0	7	1	0	4	0%
Russian Federation	0	1	6	0	3	0%
India	0	5	0	0	3	0%
Macedonia, The Former Yugoslav Republic of	0	0	0	10	3	0%
Austria	116	112	10	4	1	0%

Exporting Country	2012	2013	2014	2015	2016	Volume share
Moldova, Republic of	0	0	0	0	1	0%
Nigeria	0	0	0	0	1	0%
Hungary	0	0	0	0	0	0%
United Arab Emirates	14	0	0	0	0	0%
Afghanistan	0	1	1	0	0	0%
Australia	0	0	0	0	0	0%
Brazil	16	22	0	0	0	0%
Cambodia	0	0	0	22	0	0%
Czech Republic	0	0	4	0	0	0%
Denmark	42	0	0	0	0	0%
Dominican Republic	0	4	8	4	0	0%
Estonia	0	75	0	23	0	0%
Israel	0	0	0	0	0	0%
Luxembourg	2	0	1	0	0	0%
Viet Nam	0	0	0	0	0	0%
Tunisia	0	9	0	0	0	0%
Uganda	0	4	0	0	0	0%
Venezuela, Bolivarian Republic of	0	0	0	1	0	0%

Source: ITC Trade Maps

Appendix 8: Germany's international mung beans (HS 071331) imports volume sales (tons)

Exporting Country	2012	2013	2014	2015	2016	Volume share
World	1938	2798	2429	4270	3999	100%
Italy	3	2	4	590	1133	28%
China	746	934	700	823	664	17%
Netherlands	160	124	193	1119	655	16%
Myanmar	182	212	212	366	479	12%
Canada	209	485	435	211	266	7%
Spain	295	299	262	332	191	5%
Thailand	96	156	197	93	176	4%
Viet Nam	9	25	44	37	86	2%
United Kingdom	36	40	30	138	77	2%
Argentina	0	0	0	27	57	1%
Poland	0	0	0	242	43	1%
United States of America	20	308	9	0	40	1%
Turkey	6	31	210	94	38	1%
India	1	48	7	32	30	1%
Belgium	8	19	10	22	13	0%
Portugal	13	16	17	17	13	0%
Uzbekistan	0	3	34	9	11	0%
Austria	0	0	0	5	10	0%
United Arab Emirates	23	62	19	29	9	0%
Lebanon	0	0	0	0	3	0%
Czech Republic	0	0	0	43	2	0%
Kenya	0	0	0	2	1	0%
Madagascar	0	0	0	0	1	0%
Korea, Republic of	0	2	0	0	0	0%
Afghanistan	0	3	0	0	0	0%
Australia	97	23	0	0	0	0%
Brazil	0	0	13	0	0	0%
Ethiopia	0	0	22	0	0	0%
France	0	0	0	3	0	0%
Ghana	1	0	0	0	0	0%
Greece	1	1	2	33	0	0%
Iran, Islamic Republic of	0	0	0	0	0	0%
Japan	0	0	0	1	0	0%
Kazakhstan	0	0	2	0	0	0%
Kyrgyzstan	0	1	6	0	0	0%
Malaysia	0	0	0	0	0	0%
Mexico	0	4	0	0	0	0%
Peru	1	0	0	0	0	0%
Singapore	31	0	0	0	0	0%
Switzerland	0	0	0	0	0	0%
Tanzania, United Republic of	0	0	0	2	0	0%

Source: ITC Trade Maps

Appendix 9: Germany's international chickpeas (HS071320) imports volume sales (tons)

Exporting Country	2012	2013	2014	2015	2016	Volume share
World	5070	5670	6001	7199	8791	100%
Italy	526	610	641	1578	2127	24%
Turkey	1812	1799	1211	1249	1567	18%
Netherlands	414	630	862	988	744	8%
Russian Federation	264	279	365	477	551	6%
Lithuania	361	212	48	25	451	5%
Canada	175	244	513	416	446	5%
France	130	196	442	513	434	5%
Kazakhstan	0	0	56	24	405	5%
Mexico	27	74	64	225	352	4%
India	172	380	421	220	335	4%
Argentina	224	267	240	235	260	3%
Belgium	11	4	0	16	135	2%
Australia	160	96	123	79	126	1%
United Kingdom	92	108	82	107	103	1%
United States of America	140	105	149	147	102	1%
Iran, Islamic Republic of	117	67	61	49	99	1%
Denmark	100	154	173	314	96	1%
Latvia	0	101	140	142	73	1%
Bulgaria	0	0	0	9	55	1%
Pakistan	125	48	50	6	51	1%
Ethiopia	0	0	0	14	47	1%
Myanmar	24	5	0	51	35	0%
Egypt	1	20	23	25	35	0%
Spain	92	127	26	117	34	0%
Austria	10	10	3	2	29	0%
Lebanon	38	10	20	17	18	0%
Israel	0	0	0	5	14	0%
United Arab Emirates	16	27	18	8	12	0%
Kyrgyzstan	0	0	17	0	8	0%
Afghanistan	16	2	2	2	7	0%
Greece	2	4	5	5	7	0%
Jordan	0	0	1	0	7	0%
Uzbekistan	0	4	1	1	6	0%
Portugal	6	6	8	4	6	0%
Hungary	0	0	0	0	5	0%
Ukraine	0	22	200	122	3	0%
Czech Republic	0	0	0	2	3	0%
Moldova, Republic of	0	0	0	0	3	0%
Syrian Arab Republic	3	0	2	2	2	0%
Peru	0	0	0	2	1	0%

Exporting Country	2012	2013	2014	2015	2016	Volume share
Korea, Republic of	0	0	0	0	0	0%
Azerbaijan	0	32	0	0	0	0%
Brazil	0	5	0	0	0	0%
Sri Lanka	0	0	0	0	0	0%
Chile	0	4	0	0	0	0%
China	8	2	1	2	0	0%
Hong Kong, China	0	0	0	0	0	0%
Madagascar	0	1	0	0	0	0%
New Zealand	0	0	34	0	0	0%
Poland	0	0	0	0	0	0%
Romania	0	1	0	0	0	0%
Slovenia	0	0	0	0	0	0%
South Africa	3	13	0	0	0	0%
Sweden	0	0	1	0	0	0%
Switzerland	0	0	0	0	0	0%

Source: ITC Trade Maps

Appendix 10: Germany's international walnuts (HS080231) imports volume sales (tons)

Exporting Country	2012	2013	2014	2015	2016	Volume share
World	9738	11009	8879	9695	12010	100%
United States of America	3115	4554	3588	4435	5530	46%
France	5078	4005	3794	3052	2989	25%
Australia	0	46	233	797	1253	10%
Chile	365	779	449	406	936	8%
Netherlands	65	151	97	225	922	8%
Hungary	1041	1226	621	665	322	3%
Italy	10	21	10	9	38	0%
Denmark	0	0	6	0	6	0%
Poland	5	5	8	4	5	0%
Spain	7	1	1	25	2	0%
Uzbekistan	0	0	0	0	1	0%
Belgium	3	4	2	2	1	0%
Mexico	0	0	0	0	1	0%
Switzerland	0	0	0	0	1	0%
United Kingdom	0	1	1	1	1	0%
United Arab Emirates	0	0	0	1	0	0%
Ukraine	0	0	14	0	0	0%
Argentina	0	0	0	1	0	0%
Austria	2	1	0	1	0	0%
Brazil	0	1	0	0	0	0%
Bulgaria	0	0	1	0	0	0%
China	1	0	0	0	0	0%
Czech Republic	0	0	0	0	0	0%
Greece	36	0	0	0	0	0%
Honduras	0	0	0	0	0	0%
Israel	0	0	0	2	0	0%
Luxembourg	0	0	0	0	0	0%
Moldova, Republic of	0	0	22	15	0	0%
Morocco	0	0	1	0	0	0%
Portugal	0	0	0	0	0	0%
Romania	0	0	0	0	0	0%
Serbia	0	0	0	1	0	0%
Singapore	0	0	20	0	0	0%
Slovakia	1	31	7	5	0	0%
Viet Nam	6	6	2	1	0	0%
South Africa	0	176	1	46	0	0%
Thailand	0	0	0	0	0	0%
Turkey	0	0	0	0	0	0%
Uruguay	0	0	0	0	0	0%

Source: ITC Trade Maps

Appendix 11: Germany's international in shell walnut (HS080232) imports volume sales (tons)

Exporting Country	2012	2013	2014	2015	2016	Volume share
World	16,917	17,206	20,401	25,301	30,985	100%
United States of America	10,256	10,550	12,201	17,308	23,027	74%
Chile	1,552	2,022	2,530	2,759	2,472	8%
Moldova, Republic of	1,222	1,474	1,564	1,595	1,771	6%
France	1,079	986	912	1,146	1,395	5%
Netherlands	184	194	142	458	568	2%
Romania	67	91	518	543	487	2%
India	688	367	284	272	485	2%
Ukraine	865	482	180	365	205	1%
Austria	186	211	188	84	160	1%
Hungary	304	284	459	231	114	0%
China	47	158	641	311	80	0%
Poland	166	92	100	50	57	0%
Canada	0	12	0	0	38	0%
Turkey	90	88	515	55	31	0%
United Kingdom	1	1	15	5	16	0%
Italy	54	59	39	56	13	0%
Serbia	0	0	0	7	11	0%
Czech Republic	31	15	2	0	9	0%
Belgium	13	2	6	1	7	0%
Denmark	10	5	7	0	6	0%
Israel	0	0	0	7	6	0%
Spain	6	45	45	5	6	0%
Luxembourg	4	0	0	2	4	0%
Switzerland	0	0	2	2	3	0%
Afghanistan	0	0	2	0	2	0%
Greece	2	1	3	1	2	0%
Iran, Islamic Republic of	0	0	1	5	2	0%
Slovakia	39	34	12	6	2	0%
Bulgaria	13	21	8	1	1	0%
Viet Nam	0	0	0	1	1	0%
Thailand	0	0	0	2	1	0%
Uzbekistan	0	0	0	0	0	0%
Australia	0	1	0	0	0	0%
Croatia	0	0	0	0	0	0%
Hong Kong, China	0	0	0	0	0	0%
Kenya	0	0	0	1	0	0%
Kyrgyzstan	20	0	4	24	0	0%
Macao, China	0	0	0	0	0	0%
Taipei, Chinese	0	0	0	0	0	0%
Morocco	6	7	1	0	0	0%
Norway	0	1	0	0	0	0%
Pakistan	0	1	0	0	0	0%

Portugal	12	0	0	0	0	0%
Russian Federation	0	0	20	0	0	0%
South Africa	0	0	0	0	0	0%

Source: ITC Trade Maps

Appendix 12: UAE's international dried apricots (HS081310) imports volume sales (tons)

Exporting Country	2012	2013	2014	2015	Volume share
World	1620	1482	1153	1155	100%
Turkey	570	873	701	886	77%
Afghanistan	33	58	113	136	12%
Iran, Islamic Republic of	737	364	111	58	5%
Pakistan	101	89	33	41	4%
Syrian Arab Republic	0	22	0	11	1%
Tajikistan	0	0	27	7	1%
Switzerland	2	2	5	5	0%
United Kingdom	104	52	22	3	0%
Saudi Arabia	0	2	0	2	0%
Austria	0	0	0	1	0%
China	0	4	1	1	0%
France	0	0	5	1	0%
Ireland	0	0	4	1	0%
United States of America	34	3	7	1	0%
Lebanon	0	5	0	0	0%
Uzbekistan	16	2	98	0	0%
Area Nes	0	0	3	0	0%
Algeria	0	0	0	0	0%
Australia	0	0	2	0	0%
Belgium	1	1	1	0	0%
Canada	0	0	2	0	0%
Sri Lanka	0	0	0	0	0%
Chile	0	0	0	0	0%
Finland	0	0	2	0	0%
Germany	0	0	1	0	0%
Italy	21	0	8	0	0%
Japan	0	1	0	0	0%
Morocco	0	0	0	0	0%
Netherlands	0	0	0	0	0%
Philippines	0	1	3	0	0%
Poland	0	0	1	0	0%
South Africa	0	2	0	0	0%
Thailand	0	0	2	0	0%

Source: ITC Trade Maps

Appendix 13: UAE's international dried grapes (HS080620) imports volume sales (tons)

Exporting Country	2012	2013	2014	2015	Volume share
World	19163	24256	21518	18950	100%
Iran, Islamic Republic of	11500	17640	15880	14322	76%
India	5520	3547	715	1276	7%
China	851	1216	2527	822	4%
Afghanistan	53	428	601	702	4%
Uzbekistan	120	252	464	624	3%
South Africa	136	34	87	461	2%
Chile	554	485	314	318	2%
United States of America	76	206	142	186	1%
Turkey	192	227	278	150	1%
Pakistan	116	78	34	21	0%
Turkmenistan	0	43	356	18	0%
Malaysia	1	1	0	18	0%
United Kingdom	8	11	10	7	0%
Australia	0	1	0	5	0%
Greece	0	5	25	5	0%
Philippines	1	2	4	5	0%
France	2	2	1	4	0%
Egypt	5	0	0	3	0%
Kuwait	0	0	0	1	0%
Syrian Arab Republic	0	0	0	1	0%
Yemen	20	1	5	1	0%
Korea, Republic of	0	1	0	0	0%
Lebanon	4	0	15	0	0%
Somalia	0	0	0	0	0%
Azerbaijan	0	0	21	0	0%
Argentina	0	0	0	0	0%
Canada	0	0	0	0	0%
Germany	0	0	0	0	0%
Iraq	0	0	36	0	0%
Italy	0	59	0	0	0%
Japan	0	0	0	0	0%
Jordan	3	15	0	0	0%
Netherlands	1	0	0	0	0%
Peru	0	0	0	0	0%
Saudi Arabia	0	0	2	0	0%
Switzerland	0	0	0	0	0%
Tunisia	0	2	0	0	0%

Source: ITC Trade Maps

Appendix 14: UAE's international fruit stones (HS121299) imports volume sales (tons)

Exporting Country	2012	2013	2014	2015	Volume share
World	9077	12413	11884	6525	100%
China	4251	6238	4851	3264	50%
Afghanistan	2426	4125	4502	2171	33%
Egypt	982	773	620	588	9%
India	416	542	412	160	2%
Iran, Islamic Republic of	392	487	501	76	1%
Syrian Arab Republic	22	48	27	72	1%
Sudan	4	0	655	54	1%
Bulgaria	24	52	65	52	1%
Viet Nam	0	0	0	19	0%
Oman	147	0	0	18	0%
United States of America	1	2	1	11	0%
Palestine, State of	10	31	47	10	0%
Nigeria	23	13	12	7	0%
France	0	0	2	5	0%
Ukraine	121	0	0	3	0%
Pakistan	99	3	8	2	0%
Spain	0	6	13	2	0%
United Kingdom	8	2	3	2	0%
Lebanon	1	1	1	1	0%
Austria	0	0	0	1	0%
Germany	1	1	10	1	0%
Ireland	0	0	0	1	0%
Italy	0	0	0	1	0%
Jordan	3	2	2	1	0%
South Africa	2	7	1	1	0%
Korea, Republic of	0	0	0	0	0%
Tajikistan	0	24	23	0	0%
Turkmenistan	0	10	1	0	0%
Free Zones	0	0	0	0	0%
Uzbekistan	0	0	0	0	0%
Area Nes	0	0	98	0	0%
Algeria	0	0	15	0	0%
Australia	0	0	0	0	0%
Bahrain	0	0	8	0	0%
Belgium	0	0	0	0	0%
Brazil	2	0	0	0	0%
Canada	0	0	0	0	0%
Costa Rica	0	0	0	0	0%
Indonesia	28	0	0	0	0%
Japan	0	1	1	0	0%

Exporting Country	2012	2013	2014	2015	Volume share
Kuwait	0	5	0	0	0%
Malaysia	0	0	0	0	0%
Taipei, Chinese	0	0	0	0	0%
Nepal	0	0	0	0	0%
Netherlands	0	0	0	0	0%
Paraguay	0	0	0	0	0%
Peru	0	0	1	0	0%
Philippines	0	0	1	0	0%
Poland	0	0	0	0	0%
Saudi Arabia	1	9	0	0	0%
Singapore	3	0	0	0	0%
Switzerland	0	0	0	0	0%
Thailand	1	0	0	0	0%
Turkey	110	26	0	0	0%
Yemen	0	0	0	0	0%

Source: ITC Trade Maps

Appendix 15: UAE's international beans- dried red beans shelled (HS071332) imports volume sales (tons)

Exporting Country	2012	2013	2014	2015	Volume share
World	453	1095	277	233	100%
Argentina	0	78	0	116	50%
Italy	0	0	0	43	18%
India	23	5	15	42	18%
China	270	507	49	25	11%
Nigeria	0	0	0	3	1%
Thailand	0	0	2	3	1%
Egypt	50	0	1	1	0%
Myanmar	75	0	96	0	0%
Canada	0	25	0	0	0%
Ethiopia	0	471	0	0	0%
Germany	0	0	0	0	0%
Iran, Islamic Republic of	0	5	0	0	0%
Japan	0	1	0	0	0%
Jordan	0	0	0	0	0%
Taipei, Chinese	1	1	0	0	0%
Portugal	0	0	0	0	0%
Saudi Arabia	25	0	0	0	0%
Sudan	0	0	65	0	0%
Uganda	0	0	46	0	0%
United Kingdom	0	0	0	0	0%
United States of America	8	2	3	0	0%

Source: ITC Trade Maps

Appendix 16: UAE's international beans- dried kidney beans shelled (HS071333) imports volume sales (tons)

Exporting Country	2012	2013	2014	2015	Volume share
World	10420	14396	13796	12149	100%
China	8498	12220	6906	6882	57%
Argentina	726	305	602	1890	16%
Egypt	559	471	854	1721	14%
Uganda	0	0	751	807	7%
Ethiopia	467	664	1799	361	3%
Canada	24	100	1432	263	2%
Belize	69	0	0	136	1%
Myanmar	0	23	24	56	0%
Lebanon	2	3	1	19	0%
India	0	136	0	8	0%
Portugal	24	0	0	3	0%
Italy	1	1	7	1	0%
Sudan	0	0	0	1	0%
United Kingdom	1	0	0	1	0%
United States of America	23	127	399	1	0%
Somalia	0	0	1	0	0%
Uzbekistan	0	44	0	0	0%
Bolivia, Plurinational State of	0	46	10	0	0%
Chile	3	0	0	0	0%
France	0	0	1	0	0%
Germany	0	0	0	0	0%
Iran, Islamic Republic of	0	2	32	0	0%
Kyrgyzstan	0	48	0	0	0%
Madagascar	23	183	593	0	0%
Malawi	0	23	0	0	0%
Mexico	0	0	22	0	0%
Oman	0	0	0	0	0%
Pakistan	1	0	0	0	0%
Peru	0	0	23	0	0%
South Africa	0	0	336	0	0%

Source: ITC Trade Maps

Appendix 17: UAE's international mung beans (HS071331) imports volume sales (tons)

Exporting Country	2012	2013	2014	2015	Volume share
World	15175	20377	17475	42759	100%
Myanmar	1639	648	491	13018	30%
Kenya	260	1325	1236	8144	19%
Tanzania, United Republic of	5270	8224	4531	6378	15%
Mozambique	963	857	3141	4311	10%
Afghanistan	1944	5214	4311	3197	7%
Uzbekistan	1300	2440	2006	3005	7%
Argentina	132	240	48	2024	5%
Australia	329	249	254	1088	3%
Ethiopia	1347	0	409	753	2%
Uganda	0	0	92	300	1%
Iraq	622	227	300	238	1%
Canada	0	0	0	105	0%
Bolivia, Plurinational State of	0	0	0	69	0%
Malawi	0	0	0	48	0%
Madagascar	137	191	69	46	0%
India	3	3	6	26	0%
Egypt	19	110	60	4	0%
Thailand	0	25	2	2	0%
Bangladesh	1	0	0	1	0%
China	83	1	6	1	0%
Nigeria	0	0	0	1	0%
Lebanon	6	2	0	0	0%
Somalia	0	289	0	0	0%
Bahrain	1	0	0	0	0%
France	2	0	0	0	0%
Germany	0	0	0	0	0%
Indonesia	251	0	266	0	0%
Iran, Islamic Republic of	488	132	3	0	0%
Italy	8	0	1	0	0%
Jordan	0	0	0	0	0%
Kuwait	0	0	0	0	0%
Malaysia	0	0	0	0	0%
Morocco	0	0	0	0	0%
Pakistan	2	175	109	0	0%
Peru	8	23	0	0	0%
Qatar	0	0	0	0	0%
Saudi Arabia	0	0	0	0	0%
South Africa	1	0	0	0	0%
Sudan	146	0	2	0	0%
Syrian Arab Republic	0	0	0	0	0%

Turkey	0	0	0	0	0%
United Kingdom	163	0	0	0	0%
United States of America	48	0	133	0	0%
Yemen	0	0	0	0	0%

Source: ITC Trade Maps

Appendix 18: UAE's international chickpeas (HS071320) imports volume sales (tons)

Exporting Country	2012	2013	2014	2015	Volume share
World	88864	109864	105611	112023	100%
Australia	50580	60837	55640	53147	47%
Tanzania, United Republic of	2140	5844	13892	18789	17%
India	10456	15872	12177	9542	9%
Ethiopia	10692	15586	12328	7187	6%
Mexico	3147	1717	3338	6806	6%
Iran, Islamic Republic of	49	133	478	5327	5%
Myanmar	2151	137	4	3036	3%
Russian Federation	1322	1624	2035	2954	3%
Canada	3404	3402	555	1976	2%
Turkey	1466	1066	1250	1516	1%
United States of America	346	565	1533	416	0%
Sudan	525	21	0	327	0%
Argentina	1548	1142	162	278	0%
Ukraine	0	22	1149	270	0%
Saudi Arabia	151	85	202	181	0%
Pakistan	193	606	3	119	0%
Italy	129	176	341	51	0%
Jordan	45	13	37	31	0%
Kuwait	8	11	0	25	0%
Kenya	0	0	0	24	0%
Portugal	95	0	24	18	0%
United Kingdom	0	18	1	2	0%
Lebanon	24	3	141	1	0%
Free Zones	0	0	0	1	0%
Uzbekistan	5	0	0	0	0%
Afghanistan	0	976	3	0	0%
Bangladesh	0	0	0	0	0%
Bulgaria	49	0	0	0	0%
China	0	7	0	0	0%
Japan	0	2	0	0	0%
Malaysia	248	0	0	0	0%
Netherlands	0	0	0	0	0%
Syrian Arab Republic	0	2	22	0	0%
Thailand	0	0	0	0	0%
Egypt	90	0	297	0	0%

Source: ITC Trade Maps

Appendix 19: UAE's international walnuts (HS080231) imports volume sales (tons)

Exporting Country	2012	2013	2014	2015	Volume share
World	6833	6237	8678	6508	100%
United States of America	6068	5011	7109	4415	68%
Chile	557	1070	1363	1850	28%
South Africa	0	0	0	182	3%
Uzbekistan	0	24	25	24	0%
Ukraine	22	11	21	23	0%
Spain	6	9	0	6	0%
Iran, Islamic Republic of	3	48	89	4	0%
Afghanistan	3	26	12	3	0%
Lebanon	0	0	1	0	0%
Area Nes	11	0	0	0	0%
Bosnia and Herzegovina	0	0	0	0	0%
Bulgaria	0	0	22	0	0%
Sri Lanka	26	0	0	0	0%
China	11	5	0	0	0%
France	1	11	5	0	0%
Italy	0	0	3	0	0%
Netherlands	4	4	0	0	0%
Pakistan	88	8	16	0	0%
India	22	7	11	0	0%
Turkey	0	1	1	0	0%
Egypt	0	0	0	0	0%
United Kingdom	9	2	0	0	0%

Source: ITC Trade Maps

Appendix 20: UAE's international walnut in shell (HS080232) imports volume sales (tons)

Exporting country	2012	2013	2014	2015	Volume share
World	3,179	2,680	8,094	7,489	100%
Iraq	0	2	112	2,342	31%
Iran, Islamic Republic of	952	896	1,585	1,972	26%
Oman	128	659	520	576	8%
Ukraine	0	0	0	461	6%
Algeria	449	120	955	322	4%
Somalia	0	0	0	311	4%
Qatar	89	102	487	245	3%
Jordan	0	29	119	214	3%
Bahrain	160	54	223	181	2%
Libya, State of	112	0	339	165	2%
Egypt	584	82	169	165	2%
Kuwait	11	23	47	120	2%
Saudi Arabia	269	191	1,237	114	2%
India	0	0	90	113	2%
Yemen	11	15	163	72	1%
Tunisia	19	102	55	41	1%
Mauritius	13	16	19	25	0%
Georgia	13	23	18	21	0%
Turkmenistan	4	0	0	10	0%
Azerbaijan	0	95	320	5	0%
Ethiopia	0	0	1	5	0%
Sudan	1	0	0	5	0%
Singapore	1	0	0	3	0%
Maldives	1	0	1	1	0%
Morocco	0	2	9	1	0%
Haiti	0	0	13	0	0%
Lebanon	0	0	144	0	0%
Free Zones	0	1	87	0	0%
Uzbekistan	0	0	67	0	0%
Afghanistan	0	2	0	0	0%
Australia	0	0	169	0	0%
Armenia	0	0	72	0	0%
Canada	0	0	2	0	0%
Sri Lanka	0	9	5	0	0%
Chile	0	0	52	0	0%
Germany	0	0	283	0	0%
Japan	0	0	250	0	0%
Netherlands	203	200	55	0	0%
Pakistan	10	0	0	0	0%
Senegal	0	0	7	0	0%
Syrian Arab Republic	57	20	221	0	0%
Turkey	0	34	197	0	0%

Tanzania, United Republic of	0	0	2	0	0%
United States of America	89	0	0	0	0%
Venezuela, Bolivarian Republic of	5	0	0	0	0%

Source: ITC Trade Maps

Appendix 21: China's international dried apricots (HS081310) imports volume sales (tons)

Exporting Country	2012	2013	2014	2015	2016	Volume share
World	246	306	574	1273	1282	100%
Kyrgyzstan	0	0	97	919	969	76%
Turkey	240	290	172	122	258	20%
Tajikistan	0	13	243	90	54	4%
France	0	0	0	0	1	0%
Korea, Republic of	0	0	0	0	0	0%
Australia	0	0	0	1	0	0%
Canada	0	1	0	0	0	0%
Germany	2	2	0	1	0	0%
Hong Kong, China	0	0	0	0	0	0%
Taipei, Chinese	0	0	0	0	0	0%
Pakistan	1	0	61	139	0	0%
Thailand	0	0	0	0	0	0%
United States of America	2	0	0	0	0	0%

Source: ITC Trade Maps

Appendix 22: China's international dried grapes (HS080620) imports volume sales (tons)

Exporting Country	2012	2013	2014	2015	2016	Volume share
World	22358	20072	22592	34818	37087	100%
Uzbekistan	8625	7576	10843	22954	25376	68%
United States of America	11655	9979	9695	9955	9568	26%
Chile	226	475	555	604	1060	3%
Taipei, Chinese	215	586	408	426	344	1%
Turkey	665	582	599	546	319	1%
Australia	33	29	11	56	135	0%
Iran, Islamic Republic of	678	446	150	6	85	0%
South Africa	98	79	94	146	74	0%
Greece	0	4	16	20	46	0%
Kyrgyzstan	29	117	91	0	40	0%
Germany	7	26	36	31	16	0%
Thailand	4	26	23	7	14	0%
Malaysia	33	3	8	9	4	0%
Viet Nam	0	0	1	2	4	0%
France	0	0	0	0	1	0%
Korea, Republic of	0	0	0	0	0	0%
Tajikistan	0	0	23	0	0	0%
Afghanistan	0	0	0	23	0	0%
Argentina	86	99	0	20	0	0%
Belgium	0	0	0	0	0	0%
China	0	21	0	0	0	0%
Hong Kong, China	2	2	1	1	0	0%
Italy	0	1	0	0	0	0%
Japan	0	0	33	0	0	0%
Macao, China	0	0	5	7	0	0%
Netherlands	0	0	0	0	0	0%
New Zealand	0	0	0	0	0	0%
Spain	0	0	0	4	0	0%
United Kingdom	0	21	0	0	0	0%

Source: ITC Trade Maps

Appendix 23: China's international fruit stones (HS121299) imports volume sales (tons)

Exporting Country	2012	2013	2014	2015	2016	Volume share
World	6543	7389	7236	6196	6552	100%
Indonesia	2635	3800	3947	3453	3496	53%
Paraguay	230	113	202	407	727	11%
Korea, Democratic People's Republic of	847	487	869	929	623	10%
Ecuador	0	0	265	441	453	7%
Poland	1	0	0	99	320	5%
Myanmar	48	267	147	180	188	3%
Peru	108	116	228	159	151	2%
Netherlands	45	94	0	0	114	2%
Zambia	0	0	0	0	113	2%
Timor-Leste	0	0	0	0	64	1%
United States of America	1794	1049	437	42	61	1%
Bulgaria	0	0	0	0	34	1%
Mexico	0	0	20	0	30	0%
Albania	14	14	30	26	28	0%
Kenya	316	126	192	80	27	0%
Kyrgyzstan	16	125	50	4	23	0%
Nigeria	0	19	216	80	20	0%
Rwanda	0	0	31	11	19	0%
India	129	161	91	33	12	0%
Taipei, Chinese	1	53	9	10	11	0%
Uzbekistan	131	256	50	8	7	0%
Thailand	0	46	0	0	7	0%
Central African Republic	0	0	0	0	6	0%
Malaysia	0	0	0	14	5	0%
Area Nes	0	0	0	0	3	0%
Russian Federation	0	0	1	0	3	0%
Ukraine	0	0	0	0	2	0%
Germany	2	7	1	2	2	0%
Australia	1	5	2	2	1	0%
Japan	0	0	0	0	1	0%
South Africa	25	48	65	2	1	0%
Egypt	1	8	0	1	1	0%
Hungary	0	0	0	0	0	0%
Korea, Republic of	6	0	0	1	0	0%
Tajikistan	0	0	0	3	0	0%
Argentina	0	359	0	0	0	0%
Austria	0	0	0	0	0	0%
Belgium	0	0	0	0	0	0%
Brazil	0	0	0	0	0	0%
Cambodia	100	0	0	0	0	0%

Exporting Country	2012	2013	2014	2015	2016	Volume share
Cameroon	0	0	0	4	0	0%
Canada	0	0	0	0	0	0%
Sri Lanka	1	0	1	1	0	0%
China	4	43	31	3	0	0%
Croatia	0	0	0	0	0	0%
Denmark	68	91	225	180	0	0%
France	0	5	0	0	0	0%
French Polynesia	0	0	0	0	0	0%
Hong Kong, China	0	0	0	0	0	0%
Iran, Islamic Republic of	20	1	0	0	0	0%
Italy	0	0	0	1	0	0%
Madagascar	0	0	0	0	0	0%
Namibia	0	0	0	7	0	0%
New Zealand	0	0	0	0	0	0%
Pakistan	0	26	0	0	0	0%
Philippines	0	11	0	0	0	0%
Portugal	0	0	0	0	0	0%
Romania	0	0	0	11	0	0%
Singapore	0	0	0	0	0	0%
Viet Nam	0	17	37	0	0	0%
Slovenia	0	0	0	0	0	0%
Spain	0	4	5	0	0	0%
Sudan	0	0	29	0	0	0%
Togo	0	13	54	0	0	0%
Turkey	0	26	1	0	0	0%
United Kingdom	0	0	1	0	0	0%

Source: ITC Trade Maps

Appendix 24: China's international beans- dried red beans shelled (HS071332) imports volume sales (tons)

Exporting Country	2012	2013	2014	2015	2016	Volume share
World	1111	2129	7222	8917	3125	100%
Korea, Democratic People's Republic of	891	2041	7222	8778	1805	58%
Thailand	199	63	0	96	1320	42%
China	21	0	0	43	0	0%
France	0	0	0	0	0	0%
Italy	0	0	0	0	0	0%
Japan	0	0	0	0	0	0%
Viet Nam	0	25	0	0	0	0%
United States of America	0	0	0	0	0	0%

Source: ITC Trade Maps

Appendix 25: China's international mung beans (HS071331) imports volume sales (tons)

Exporting Country	2012	2013	2014	2015	2016	Volume share
World	33461	13118	14955	37958	29393	100%
Australia	6078	113	428	12937	12474	42%
Myanmar	22052	12080	12460	19615	11796	40%
Indonesia	421	250	1627	5028	4452	15%
Thailand	4885	676	400	378	650	2%
Area Nes	0	0	0	0	20	0%
Korea, Democratic People's Republic of	0	0	40	0	0	0%
China	25	0	0	0	0	0%
France	0	0	0	0	0	0%
Taipei, Chinese	0	0	0	0	0	0%

Source: ITC Trade Maps

Appendix 26: China's international chickpeas (HS071320) imports volume sales (tons)

Exporting Country	2012	2013	2014	2015	2016	Volume share
World	27	14	75	219	11	100%
India	7	0	75	62	9	82%
Italy	0	0	0	0	1	9%
Spain	0	0	0	0	1	9%
Lebanon	0	0	0	0	0	0%
Kazakhstan	0	0	0	152	0	0%
Syrian Arab Republic	0	0	0	0	0	0%
Turkey	1	13	0	4	0	0%
United States of America	19	0	0	0	0	0%

Source: ITC Trade Maps

Appendix 27: China's international walnuts (HS080232) imports volume sales (tons)

Exporting Country	2012	2013	2014	2015	2016	Volume share
World	4016	6185	7250	2989	3031	100%
United States of America	2983	2286	2066	1843	2475	82%
Kyrgyzstan	115	3246	4010	998	320	11%
Viet Nam	0	0	0	0	143	5%
Ukraine	1	21	40	0	68	2%
Italy	0	0	0	18	20	1%
Australia	0	0	0	0	4	0%
Korea, Democratic People's Republic of	4	0	0	2	0	0%
Korea, Republic of	0	0	0	1	0	0%
Tajikistan	0	0	98	73	0	0%
Uzbekistan	206	160	6	3	0	0%
China	0	0	1	0	0	0%
France	0	0	0	0	0	0%
Germany	0	0	0	0	0	0%
Hong Kong, China	0	0	0	0	0	0%
Japan	0	3	0	0	0	0%
Kazakhstan	0	0	0	11	0	0%
Taipei, Chinese	0	0	0	0	0	0%
Moldova, Republic of	158	243	300	0	0	0%
Netherlands	0	0	0	0	0	0%
Pakistan	0	0	143	35	0	0%
Romania	188	0	562	0	0	0%
India	321	226	24	1	0	0%
Spain	0	0	0	3	0	0%
Turkey	40	0	0	0	0	0%
United Kingdom	0	0	0	0	0	0%

Source: ITC Trade Maps

Appendix 28: Source list

Country	Source type	Organization type	Name of establishment	Website
Central Asia	Secondary	Media	Uzbekistan National News Agency	www.uza.uz
Central Asia	Secondary	Media	Gazeta	www.gazeta.uz
Central Asia	Secondary	Media	Review.uz	www.review.uz
Central Asia	Secondary	Media	K news	www.knews.kg
Central Asia	Secondary	Government	Agro news	www.agro.kg
Central Asia	Secondary	Media	Asia plus news	www.news.tj
Central Asia	Secondary	Media	Avesta	www.avesta.tj
Central Asia	Secondary	Consultancy	Kazagro	www.kazagro.kz
Central Asia	Secondary	Government	Ministry of Agriculture, Kazakhstan	www.mgov.kz
Central Asia	Secondary	Government	Ministry	www.agroprod.kg
Central Asia	Secondary	Government	Ministry of Agriculture, Tajikistan	www.moa.tj
Central Asia	Secondary	Government	Ministry of Agriculture, Uzbekistan	www.agro.uz
Central Asia	Secondary	Statistical agency	ITC Trade statistics	www.trademap.org
Central Asia	Secondary	Inter-governmental	FAO	www.faostat.org
Central Asia	Secondary	Government	International nut and dry fruit council	www.nutfruit.org
Central Asia	Secondary	Government	Public Services, Kazakhstan	www.egov.kz
Central Asia	Secondary	Media	Kazakh Zerno	www.kazakh-zerno.kz
Central Asia	Secondary	Media	Kabar	www.kabar.kg
Kazakhstan	Primary	Producer	Batys Marka Lamb	
Kazakhstan	Primary	Producer/Exporter	TOO Aktep	www.aktep.kz/about
Kazakhstan	Primary	Producer	TOO Sever Agro N	
Kazakhstan	Primary	Producer	TOO Empire Food	
Kazakhstan	Secondary	Government	Atameken	www.atameken.kz/en/press/25141
Kyrgyzstan	Primary	Producer/Exporter	Nuristan company, Association of suppliers, producers and distributers	www.pelmeni.kg, www.lojka.kg
Kyrgyzstan	Primary	Producer/Exporter	Agroproduct	www.agroproduct.kg
Kyrgyzstan	Primary	Producer/Exporter	Vestra Food	
Kyrgyzstan	Primary	Trade association	Kyrgyz Association of food processing companies	www.afve.org
Kyrgyzstan	Primary	Government	Ministry of Agriculture	
Tajikistan	Primary	Consultant	Hilfswer Austria International	www.hilfswerk.at
Tajikistan	Primary	Producer	Apricot & Company	
Tajikistan	Primary	Consultant	Advisory council on the development of entrepreneurship and the investment climate in the Khatpon region of the Republic of Tajikistan	
Uzbekistan	Primary	Consultant	UNDP	www.undp.uz
Uzbekistan	Primary	Producer	GDF	www.gdf.uz

Uzbekistan	Primary	Consultant	DAI	www.dai.com
Uzbekistan	Primary	Consultant/Logistics	Alimkhan Exim Group	www.alikhan.uz
Uzbekistan	Primary	Producer	Spectrum Industrial Technology Group	www.spectrumitg.com
Uzbekistan	Primary	Consultant	USAID	www.usaid.gov
Uzbekistan	Primary	Producer	Tursunov Asrorxon Boglari	
Uzbekistan	Primary	Exporter	OOO Yanigiyo'L Agro Eksport	www.ecofruit.uz
Uzbekistan	Primary	State Laboratory	Private laboratory	
Uzbekistan	Primary	Producer	Farmer	
Germany	Secondary	Government	TARIC	www.ec.europa.eu/taxation_customs
Germany	Secondary	Government	TIS	www.tis-gdv.de
Germany	Secondary	Government	Federal Tax Service Germany	www.zoll.de
Germany	Secondary	Government	Council of the European Union	www.consilium.europa.eu/en/policies/trade-agreements/
Germany	Secondary	Inter-governmental	Global G.A.P. Certification Organisation	www.globalgap.org
Germany	Secondary	Inter-governmental	IFS Certification Database	www.ifs-certification.com
Germany	Secondary	Media	Agrarheute.com	www.agrarheute.com
Germany	Secondary	Media	Top Agrar	www.topagrar.com
Germany	Primary	Importer	Greenyard Fresh DFM GmbH (UNIVEG Trade International GmbH)	www.univeg.com/de/
Germany	Primary	Importer	Fruchthof Ehinger GmbH	www.fruchthof-ehinger.de/
Germany	Primary	Retailer	Schwarz Group (Lidl)	www.lidl.de/
Germany	Primary	Retailer	REWE Group	www.rewe-group.com
Germany	Primary	Importer/ Food broker	Fresh Line Fruit Services GmbH	www.fresh-line-services.de/impressum/
Germany	Primary	Importer	Heinrich Brüning GmbH	www.heinrichbruening.de/
Germany	Primary	Consultancy	Pro Baltikum	www.pro-baltikum.com/
Germany	Primary	Trade Association	Deutscher Fruchthandelsverband e.V.	www.dfhv.de
Germany	Primary	Importer	Landgard Service GmbH	www.landgard.de
UAE	Secondary	Government	Dubai Municipality	www.dm.gov.ae
UAE	Secondary	Government	Export.gov	www.export.gov
UAE	Secondary	Government	Federal Customs Authority	www.fca.gov.ae
UAE	Secondary	Government	United Arab Emirates Ministry of Economy	www.economy.gov.ae
UAE	Secondary	Government	Government of Dubai	www.dubaided.ae
UAE	Secondary	Government	Emirates Authority for Standardization & Meteorology	www.esma.gov .ae
UAE	Secondary	Government	Abu Dhabi Food Control	www.adfca.ae

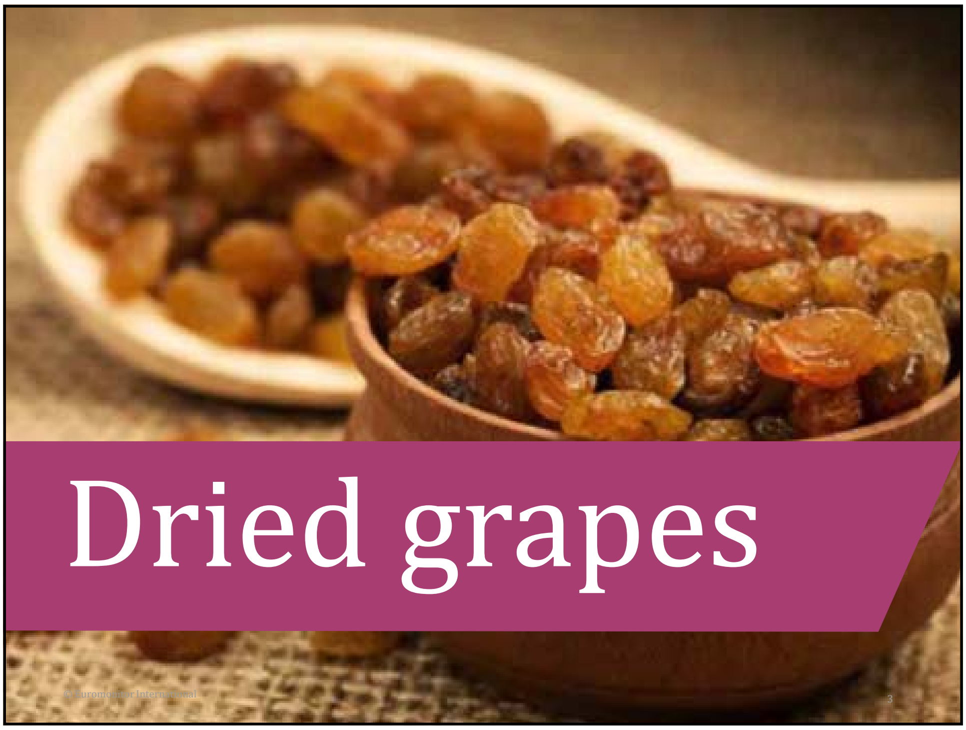
UAE	Secondary	Government	Sharjah Municipality	www.portal.shjmun.gov.ae/
UAE	Secondary	Government	DP World	www.dpworld.ae/en/content/10/3
UAE	Secondary	Media	The National	www.thenational.ae/uae
UAE	Secondary	Government	USDA Foreign Agricultural Service	www.gain.fas.usda.gov
UAE	Secondary	Retailer	Lulu Group International	www.lulugroupinternational.com/import-distribution.php
UAE	Secondary	Media	Arabian Supply Chain	www.arabiansupplychain.com/
UAE	Secondary	Retailer	Spinneys	www.spinneys-dubai.com/
UAE	Secondary	Media	Khaleej Times	www.khaleejtimes.com
UAE	Secondary	Inter-governmental	UNECE	www.unece.org/trade/agr/standard/dry/ddp-standards.html
UAE	Secondary	Government	UAE Government	www.government.ae
UAE	Secondary	Media	Freshplaza	www.freshplaza.com/info
UAE	Secondary	Government	Dubai Trade	www.dubaitrade.ae
UAE	Primary	Importer	Barakat Vegetables and Fruits	www.barakatuae.ae/
UAE	Primary	Retailer	Lulu Hypermarket	www.luluhypermarket.com/AE/all
UAE	Primary	Importer	Nassar Al Refaee Fruits & Vegetables Trading Company	www.nrtcgroup.com/Nassar-Al-Refaee-Home.html
UAE	Primary	Importer	Abdullah Al Khattal	www.aakinternational.com/
UAE	Primary	Importer	Farzana Cold Storage	www.farzanatrading.com/
UAE	Primary	Distributor	Bayara Gyma food Industries	www.bayara.ae/
UAE	Primary	Importer	Dena Trading	www.denatrading.com/
UAE	Primary	Importer	Al Nayah Food Stuff	-
UAE	Primary	Consultant	ISO	www.iso-uae.ae/
China	Secondary	Government	China MOFCOM FTA	www.fta.mofcom.gov.cn/index.shtml
China	Secondary	Government	China SAQSIQ	www.dzwjyjgs.aqsiq.gov.cn/fwdh_n/qymd/
China	Secondary	Media	China Industry Information Website	www.chyxx.com/
China	Secondary	Media	China Commercial Information Website	www.askci.com/
China	Secondary	Agency	UN Comtrade	www.comtrade.un.org/
China	Secondary	Government	China Electronic Inspectiion and Quarantine Net	www.eciq.cn
China	Secondary	Government	The Central People's Government of the PRC	www.gov.cn

China	Secondary	Government	General Administration of Customs, PR China	www.customs.gov.cn
China	Secondary	Government	Ministry of Agriculture of the PRC	www.moa.gov.cn
China	Secondary	Media	China National Radio	www.news.cnr.cn
China	Secondary	Government	National Bureau of Statistics of the PRC	www.stats.gov.cn/
China	Primary	Government	General Administration of Customs, PR China	www.customs.gov.cn/
China	Primary	Others	Shenzhen Bojun Supply Chain Co Ltd	www.bojunimport.1688.com/
China	Primary	Others	Channel Ltd	www.channelsh.com/en/
China	Primary	Government	Certification and Accreditation Administration of the People's Republic of China	www.english.cnca.gov.cn/
China	Primary	Importer	Guangzhou Berdafruit Trading Co Ltd	www.berdafruit.com.cn/
China	Primary	Retailer	Shanghai Fruitday E-Commerce Co Ltd	www.fruitday.com/?tracking=mHFBF9FzuI
China	Primary	Retailer	Shanghai Xijiao International Agricultural Product Trade Center	www.xjgj.com/
China	Primary	Government	General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China	www.aqsiq.gov.cn/
China	Primary	Association	China Fruit Association	www.daohang.china-fruit.com.cn/
China	Primary	Consultant	Qingyang Gardening Studio	www.cnxdny001.blog.163.com/
China	Primary	Government	Xinjiang Entry Exit Inspection and Quarantine Bureau	www.xjciq.gov.cn/xxgk/csxx/tgyw_305/
China	Primary	Association	China Meat Association	www.chinameat.org/
China	Primary	Government	Registration Department of Imported Foods and Cosmetic Importer and Exporter	www.ire.eciq.cn/#
China	Primary	Government	Zhejiang Food and Drug Administration	www.zjfda.gov.cn/
China	Primary	Distributor	Qingdao Xieji Food Co Ltd	www.xiejifood.com/
China	Primary	Government	Shanghai Entry-Exit Inspection and Quarantine Bureau	www.shciq.gov.cn/
China	Primary	Importer	Chengdu Haiyunda International Trading Co Ltd	www.haiyundagj.com/
China	Primary	Association	China Animal Agricultural Association	www.org.caaa.cn/
China	Primary	Importer	Nicefood (Beijing) International Trading Co Ltd	www.tianyancha.com/company/3014126590
China	Primary	Others	Beijing LTD AQSIQ Certificates Services Co Ltd	www.aqsiqchina.com/
China	Primary	Producer	Qingdao Yuerong Food Co Ltd	www.rongyuefood.1688.com/
China	Primary	Importer	Ningbo Best-home Imp.& Exp. Co Ltd	www.besthome21.com/
China	Primary	Importer	Dongguan Aita Trading Co Ltd	www.aitafood.1688.com/

China	Primary	Distributor	Urumuqi Meiyu Food Trading Co Ltd	www.xjtc1688.cn.gongxuku.com/
China	Primary	Producer	Lin'an Xiaoxiao Food Co Ltd	www.wclcly.1688.com/
China	Primary	Others	Guangdong Seabond Import and Export Co Ltd	www.seabond.cn/
China	Primary	Others	Shanghai Zhifan Import and Export Co Ltd	www.shzhifan123.gxso.net/
China	Primary	Others	Ephon Food International Supply Chain Co Ltd	www.ephonfood.jdzj.com/
China	Primary	Government	Ministry of Commerce of the People's Republic of China	www.mofcom.gov.cn/
China	Primary	Distributor	Dongguan Anjia Food Co Ltd	www.dganjia.1688.com/
China	Primary	Distributor	Yingbo (Shanghai) Import and Export Co Ltd	www.shop1467391167456.1688.com/
China	Primary	Association	Professional Committee of Roasted Seeds and Nuts of China National Food Industry Association	www.csnc.cn/
China	Primary	Others	Shanghai Lianying Import and Export Co Ltd	www.lianying-sh.com/index.html
China	Primary	Distributor	Jiashan Tuode Food Co Ltd	www.shop1449248377835.1688.com/
China	Primary	Importer	Weihai Teddy Import and Export Co Ltd	www.teddyfoods.1688.com/?spm=a261b.2187601.com-list.180.3pAwug
China	Primary	Distributor	Xinjiang Gongchuangtianxia Trading Co Ltd	www.shop1431942458204.1688.com/page/contactinfo.htm?spm=a2615.2177701.0.0.35688ae8MEoPfC
China	Primary	Producer	Ningbo Guodizi Food Co Ltd	www.guozidinet.1688.com/?spm=a261b.2187601.com-list.136.eIXo5r
China	Primary	Importer	Ningbo Beihong Food Trading Co Ltd	www.weiqufood.1688.com/page/contactinfo.htm?spm=a2615.7691478.0.0.61936f5bnTcCCO
China	Primary	Brand owner	Be & Cherry Food Co Ltd	www.vipbcw.com/
China	Primary	Brand owner	Shanghai Lyfen E-Commerce Co Ltd	www.laiyifen.com/
China	Primary	Brand owner	Hangzhou Huaweiheng Food Co Ltd	www.huaweiheng.com/

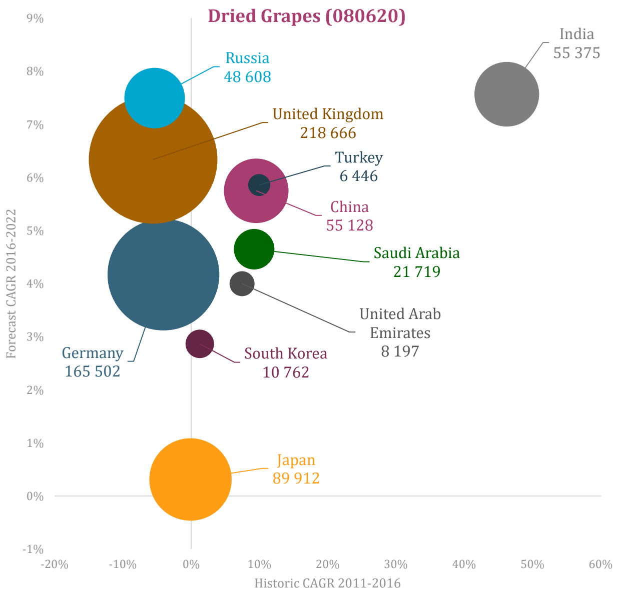
Project scope

	Kazakhstan	Kyrgyzstan		Tajikistan	Uzbekistan
Producers					
Product categories	Fresh Fruit and Vegetables	Processed Fruit and Vegetables			Meat products
		Dried Fruit	Dried Leguminous Vegetables	Nuts	
Product sub-categories	▪ Apricots: 080910 ▪ Table Grapes: 080610 ▪ Sweet Cherries: 080929 ▪ Melons: 080719	▪ Dried Apricots: 081310 ▪ Dried Grapes: 080620	▪ Beans: 071332 & 071333 ▪ Mung Beans: 071331 ▪ Chickpeas: 071320	▪ Walnuts: 080231 & 080232 ▪ Fruit Stones: 121299	▪ Bovine Meat (chilled and frozen): 0201 & 0202 ▪ Sheep Meat (chilled and frozen): 0204 ▪ Sausages: 1601
Buyers	▪ **Germany** ▪ **China** ▪ **UAE** ▪ UK ▪ Russia ▪ Saudi Arabia ▪ Japan ▪ South Korea ▪ Turkey ▪ India	▪ **Germany** ▪ **China** ▪ **UAE** ▪ UK ▪ Russia ▪ Saudi Arabia ▪ Japan ▪ South Korea ▪ Turkey ▪ India			▪ **Germany** ▪ **China** ▪ **UAE** ▪ UK ▪ Russia ▪ Saudi Arabia ▪ Japan ▪ Iran ▪ Malaysia ▪ Indonesia



Dried grapes

International import markets opportunities



* Bubble size represents import value in 2016 ('000 USD) ** Based on Trade Maps data, 2016

Volume (tonnes)

- UK: 107,215
- Germany: 77,875
- China: 37,087

CAGR 11-16 (volume)

- India: 23.8%
- China: 12.5%
- Saudi Arabia: 5.0%

Production (tonnes)

- Turkey: 353,167
- China: 180,000
- India: 100,000
- Russia: 371

Germany

Current suppliers (USD '000, %)

- Turkey: 60,471 (36.5%)
- South Africa: 35,348 (21.4%)
- US: 25,139 (15.2%)

UK

Current suppliers (USD '000, %)

- Turkey: 134,329 (61.4%)
- US: 26,199 (12.0%)
- Greece: 16,613 (7.6%)

Russia

Current suppliers (USD '000, %)

- Iran: 18,725 (38.5%)
- Chile: 6,839 (14.1%)
- India: 6,109 (12.6%)

Based on Trade Maps data, 2016

Dried grapes are most important dried fruit in European market

- **99% of all domestic** dried grapes come from **Greece,** however EU supply is not sufficient
- **The UK consumes** 2.6kg of grapes per capita, compared to 1kg in Germany
- Despite growing snacking habit, the largest consumer segments are **bakery and retail**
- **The EU** is responsible for **50% of global dried raisin** imports, with **the UK, the Netherlands and Germany** amounting to 74% of total European imports
- Nearly **70% of all European imports** of dried grapes are from **developing countries**, led by Turkey

Raisins are most popular dried fruit due to affordability and wide use

- **Russia does not produce grapes for raisins** and meets consumption demand through imports
- Russians traditionally **use raisins in home cooking** as well as a **snack,** while not recognising the variety of dried grapes
- **Iran has been a long-standing supplier**, however **Chile** has increased in recent years as a **high-quality supplier to food processors**

Kazakhstan

27th

Export rank 2016 (Value)

- World exports: US$2,511
  - Russia: US$2,469 (98.3%)
  - Turkey: US$ 42 (1.7%)

Kyrgyzstan

81st

Export rank 2016 (Value)

- World exports: US$7
  - Turkey: US$7 (100.0%)

Tajikistan

47th

Export rank 2016 (Value)

- World exports: US$385
  - Kazakhstan: US$286 (74.3%)
  - Russia: US$96 (24.9%)

Uzbekistan

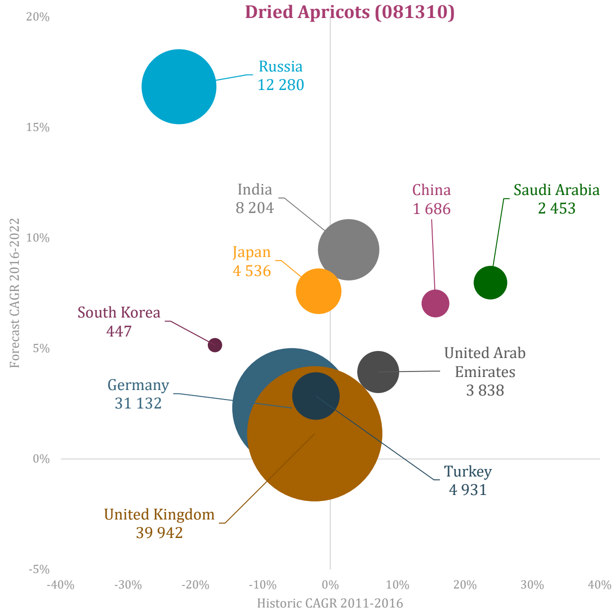
6th

Export rank 2016 (Value)

- World exports: US$82,640
  - Kazakhstan: US$28,706 (34.7%)
  - China: US$25,356 (30.7%)
  - Germany: US$7,693 (9.3%)

* Export value data from Trade Maps 2016 is expressed in '000 USD

International import markets opportunities



* Bubble size represents import value in 2016 ('000 USD) ** Based on Trade Maps data, 2016

Volume (tonnes)

- UK: 8,991
- Germany: 6,687
- Russia: 6,476

CAGR 11-16 (volume)

- UAE: 52.1%
- China: 51.1%
- Saudi Arabia: 23.1%

Production (tonnes)

- Turkey: 104,532
- China: 5,650

Germany

Current suppliers (USD '000, %)

- Turkey: 27,374 (87.9%)
- Uzbekistan: 967 (3.1%)
- France: 943 (3.0%)

UK

Current suppliers (USD '000, %)

- Turkey: 30,355 (76.0%)
- France: 6,853 (17.1%)
- Netherlands: 931 (2.3%)

Russia

Current suppliers (USD '000, %)

- Turkey: 9,795 (79.8%)
- China: 802 (6.5%)
- Belarus: 747 (6.1%)

Based on Trade Maps data, 2016

Dried apricots see steady increase in EU demand

- Both **the UK and Germany** primarily engage in **secondary production** of dried apricots, including repacking, coating and sometimes roasting
- **Germany** consumes **0.16kg** of dried apricots per capita, while **the UK** follows with **0.12kg**. Consumption is steadily growing across both markets
- **Germany and the Netherlands are key re-export centres** for dried apricots in Europe
- As **Turkey** produces 80% of global dried apricots supply, unsurprisingly it is **the key importer to the EU**
- **Inter-European supply** comes from **France, Italy and Greece**

Price sensitivity is key risk for Russian demand

- The Russian dried fruit market **is set to grow** in line with rising healthy living trend
- **Consumers are very price sensitive**, and even slight increases in prices may affect demand
- The **leading supplier** is **Turkey, while** products from Tajikistan and Uzbekistan are broadly available
- **Products from Tajikistan and Uzbekistan have reached Russia via Kazakhstan** since 2010, following a customs union agreement

Kazakhstan

40th

Export rank 2016 (Value)

- World exports: US$183
  - Russia: US$183(100.0%)

Kyrgyzstan

38th

Export rank 2016 (Value)

- World exports: US$203
  - China: US$162 (79.8%)
  - Turkmenistan US$21 (10.3%)
  - India US$12 (5.9%)

Tajikistan

7th

Export rank 2016 (Value)

- World exports: US$5,521
  - Kazakhstan: US$4,429 (80.2%)
  - Russia: US$509 (9.2%)
  - Belarus: US$300 (5.4%)

Uzbekistan

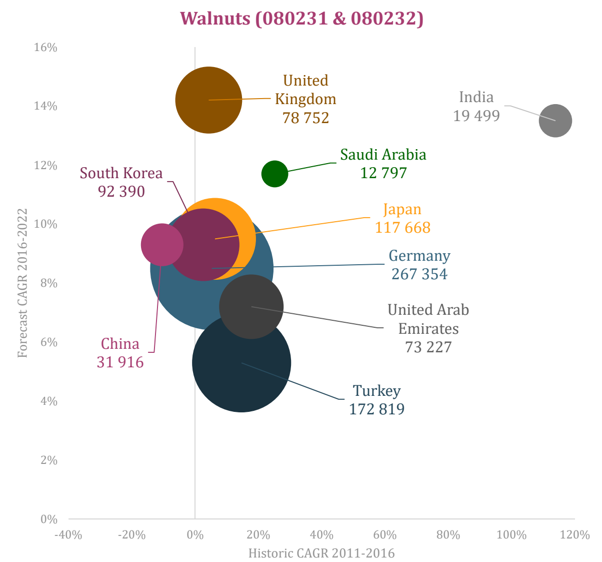
4th

Export rank 2016 (Value)

- World exports: US$8,490
  - Kazakhstan: US$5,875 (69.2%)
  - Germany: US$967 (11.4%)
  - Belarus: US$663 (7.8%)

* Export value data from Trade Maps 2016 is expressed in '000 USD

International import markets opportunities



* Bubble size represents import value in 2016 ('000 USD) ** Based on Trade Maps data, 2016

Volume (tonnes)

- Germany: 42,995
- Japan: 17,151
- Turkey: 11,694

CAGR 11-16 (volume)

- India: 116.1%
- Saudi Arabia: 17.8%
- Japan: 11.7%

Production (metric tonnes 2014-15)

- World: 720,000
- China: 240,000
- Turkey: 30,400

Germany

Current suppliers (USD '000, %)

- US: 178,907 (66.9%)
- Chile: 23,596 (8.8%)
- Moldova: 13,975 (5.2%)

Turkey

Current suppliers (USD '000, %)

- US: 69,087 (40.0%)
- Uzbekistan: 35,683 (20.6%)
- Chile: 27,744 (16.1%)

Japan

Current suppliers (USD '000, %)

- US: 112,998 (96.0%)
- Chile: 1,800 (1.5%)
- China: 1,622 (1.4%)

Healthy eating drives demand for walnuts in Germany

- **German domestic production** totalled 16,000 tonnes in 2012
- Germany is the **fifth largest global consumer** of walnuts
- The **growth of snacking** is a key driver behind walnut demand
- Import opportunities exist for **high-quality produce**, especially at peak seasons around the Christmas period

Fourth largest walnut consumer globally relies on imports

- Production of walnuts **is spread across the country** and based on domestic and **unstandardized seeds**, which results in inconsistent yields and qualities
- Around **55% of total consumption is supplied through imports**
- A Walnut Action Plan was developed to **increase domestic production,** however land deficiencies continue to favour imports

Japanese import demand steadily growing

- **Japan is the sixth largest consumer** of walnuts globally with consumption volume of 15,046 tonnes
- Different from Turkey and Germany, **Japanese imports are solely focused on shelled walnuts**

Based on Trade Maps data, 2016

Kazakhstan

- World exports: US$13
  - Russia: US$13 (100.0%)

Kyrgyzstan

- World exports: US$2,053
  - Iran: US$533 (26.0%)
  - China: US$339 (16.5%)
  - Kazakhstan: US$324 (15.8%)

Tajikistan

- World exports: US$535
  - Kazakhstan: US$534 (99.8%)

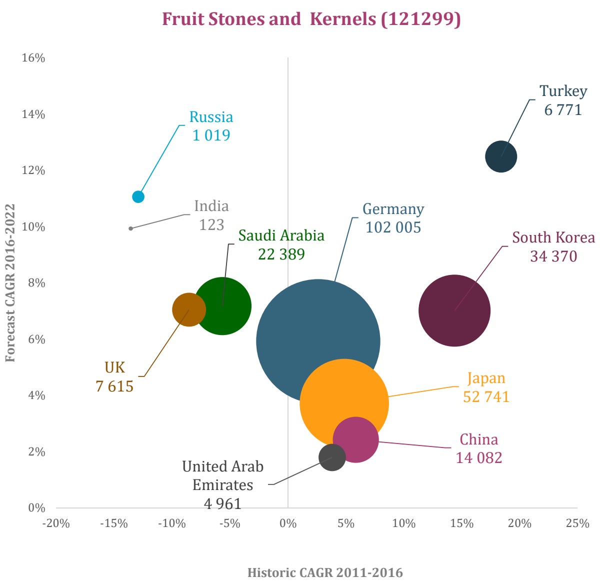
Uzbekistan

- World exports: $37,475
  - Turkey: US$35.683 (95.2%)
  - Kazakhstan: US$1,229 (3.3%)

* Export value data from Trade Maps 2016 is expressed in '000 USD

Fruit stones and kernels

International import markets - opportunities



* Bubble size represents import value in 2016 ('000 USD) ** Based on Trade Maps data, 2016

Volume (tonnes)

- Germany: 31,368
- Saudi Arabia: 10,978
- Japan: 8,361

CAGR 2011-2016 (volume)

- Turkey: 14.7%
- South Korea: 12.3%
- Japan: 3.1%

Production

- Mainly Central Asia

Germany
Current suppliers (USD '000, %)

- Australia: 580,287 (39.2%)
- Myanmar: 545,351 (36.8%)
- Russia: 52,982 (3.6%)

Japan
Current suppliers (USD '000, %)

- Mexico: 15,523 (19.7%)
- Kyrgyzstan: 9,520 (12.1%)
- India: 9,252 (11.7%)

South Korea
Current suppliers (USD '000, %)

- Australia: 13,763 (35.0%)
- Myanmar: 13,576 (34.5%)
- South Korea: 4,600 (11.7%)

Globally fruit stones and kernels market is niche, however price points are premium

- **China, Turkey and Syria** are the **top three** fruit stones and kernels **suppliers** globally
- **Uzbekistan is among the top 10** leading suppliers globally

- Apricot kernels in particular witnessed some **controversy in terms of claimed health benefits**, being cited as both a cancer treatment as well as a poison

- **Germany is the biggest importer** of fruit stones and kernels globally, however the share of apricot kernels is niche

Based on Trade Maps data, 2016

Kazakhstan

- World exports (value): 3
  - Russia: 3 (100.0%)

Kyrgyzstan

- World exports (value): 20
  - China: 10 (50.0%)
  - Turkey: 10 (50.0%)

Tajikistan

- World exports (value): 612
  - Italy: 267 (43.6%)
  - Germany: 185 (30.2%)
  - Kazakhstan: 139 (22.7%)

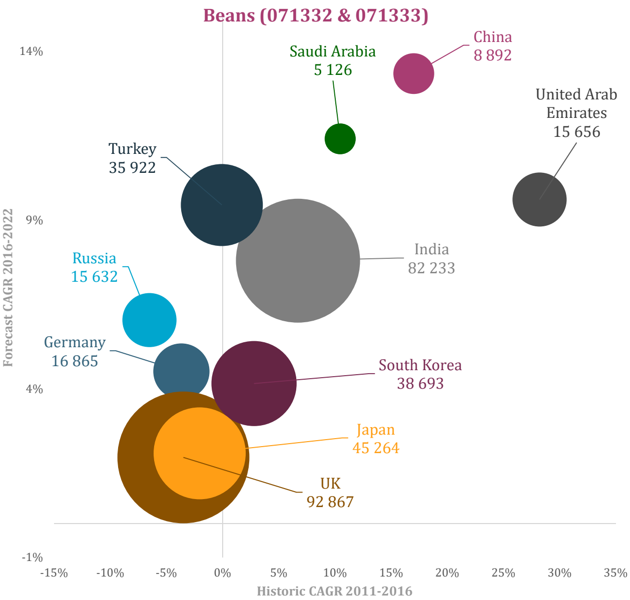
Uzbekistan

- World exports (value): 1,202
  - Italy: 599 (49.8%)
  - Germany: 345 (28.7%)
  - Turkey: 105 (8.7%)

Note: Value data are expressed in USD '000.

Beans

International import markets - opportunities



* Bubble size represents import value in 2016 ('000 USD) ** Based on Trade Maps data, 2016

Volume (tonnes)

- UK: 92,867
- India: 82,233
- Japan: 45,264

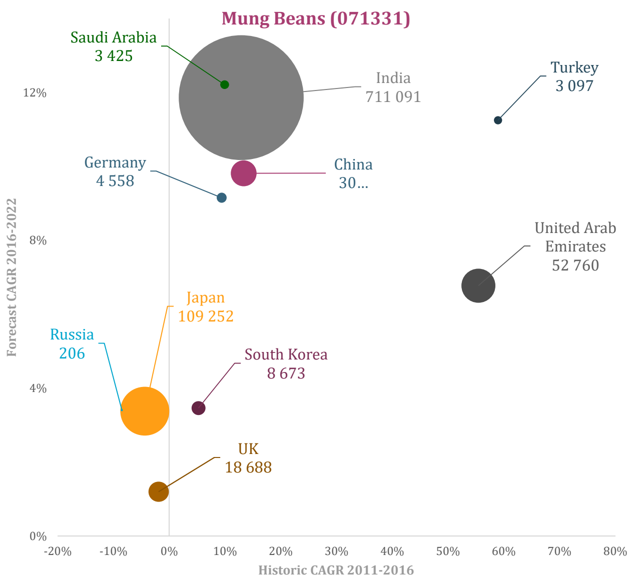
CAGR 2011-2016 (volume)

- India: 5.5%
- UAE: 4.4%
- Saudi Arabia: 3.6%

Production (tonnes)

- India: 3.6 mn
- China: 1.4 mn

International import markets - opportunities



* Bubble size represents import value in 2016 ('000 USD) ** Based on Trade Maps data, 2016

Volume (tonnes)

- India: 577,690
- Japan: 57,739
- China: 29,393

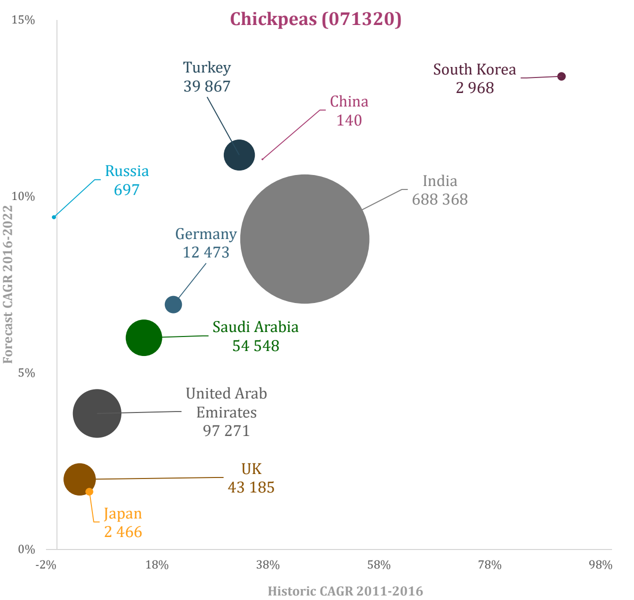
CAGR 2011-2016 (volume)

- Turkey: 56.7%
- UAE: 41.2%
- Germany: 20.0%

Production (tonnes)

- India: 1.2 mn
- China: 0.8 mn

International import markets - opportunities



* Bubble size represents import value in 2016 ('000 USD) ** Based on Trade Maps data, 2016

Volume (tonnes)

- India: 873,542
- UAE: 115,191
- Saudi Arabia: 55,404

CAGR 2011-2016 (volume)

- South Korea: 79.1%
- Turkey: 29.2%
- India: 16.6%

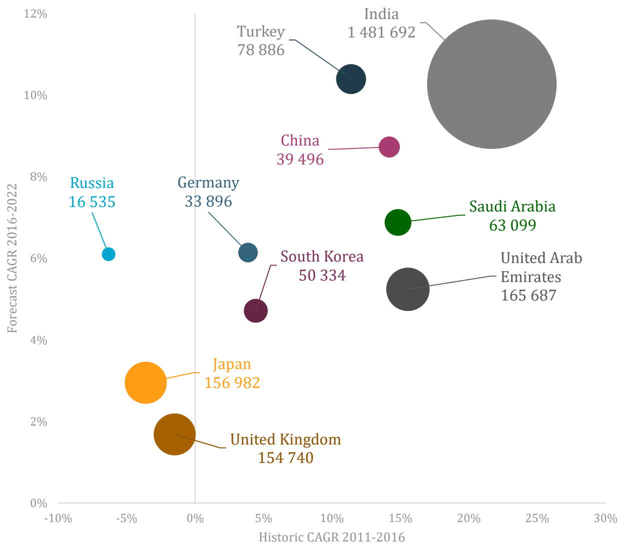
Production (tonnes)

- India: 8,832,500
- Turkey: 506,000

Dried legumes

International import markets opportunities

Dried legumes (071332 & 071333 & 071331 & 071320)



* Bubble size represents import value in 2016 ('000 USD) ** Based on Trade Maps data, 2016

Volume (tonnes)

- India: 1.55 mn
- UK: 0.15 mn
- UAE: 0.12 mn

CAGR 11-16

(volume)

- India: 19.5%
- Turkey: 10.0%
- China: 9.6%

Production

(mn tonnes 2013-14)

- India: 18.5
- Burma: 6.02
- Canada: 4.96
- China: 2.24

India

Current suppliers (USD '000, %)

- Australia: 580,287 (39.2%)
- Myanmar: 545,351 (36.8%)
- Russia: 52,982 (3.6%)

Turkey

Current suppliers (USD '000, %)

- Mexico: 15,523 (19.7%)
- Kyrgyzstan: 9,520 (12.1%)
- India: 9,252 (11.7%)

China

Current suppliers (USD '000, %)

- Australia: 13,763 (35.0%)
- Myanmar: 13,576 (34.5%)
- South Korea: 4,600 (11.7%)

Based on Trade Maps data, 2016

Pulses are in high demand in less wealthy countries

- **Pulses are consumed as a protein** source across less developed countries due to their **vegetarian nature** and low cost
- As countries **become more wealthy**, populations are shifting from vegetable protein to **more expensive protein** sources such as dairy and meat

- **India is the world's largest producer** of pulses, with some 25% of global production grown on Indian soil
- In recent years, **India has experienced significant price hikes** in pulses due to poor harvests and droughts
- **China** has transitioned from net-exporter **to net-importer of pulses**

- With a large vegetarian population, **India** also **consumes some 30% of global production**

- **Canada** has rapidly ascended to become **one of the world's top producers and exporters** of pulses and now accounts for around 35% of global pulse trade each year
- **Ethiopia is also one of the world's larger producers** and exporters of pulses

Kazakhstan

- World exports: US$545
  - Afghanistan: US$349 (64.0%)
  - Azerbaijan: US$66 (12.1%)
  - Iran: US$41 (7.5%)

Kyrgyzstan

- World exports: US$55,007
  - Turkey: US$28,441 (51.7%)
  - Russia: US$8,904 (16.2%)
  - Bulgaria: US$4,336 (7.9%)

Tajikistan

- World exports: US$121
  - Kazakhstan: US$116 (95.9%)

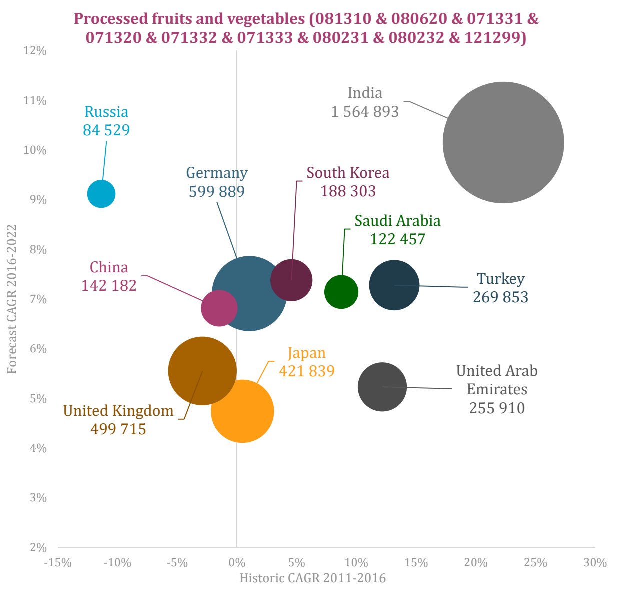
Uzbekistan

- World exports: US$23,252
  - India: US$17,972 (77.3%)
  - Georgia: US$2,930 (12.6%)
  - Russia: 1,046(4.5%)

* Export value data from Trade Maps 2016 is expressed in '000 USD

Processed fruit & veg

International import markets opportunities



* Bubble size represents import value in 2016 ('000 USD) ** Based on Trade Maps data, 2016

India

- Largest import value
- Mainly dried legumes
- Limited dried fruits

Germany

- Large import value across dried fruit and nuts

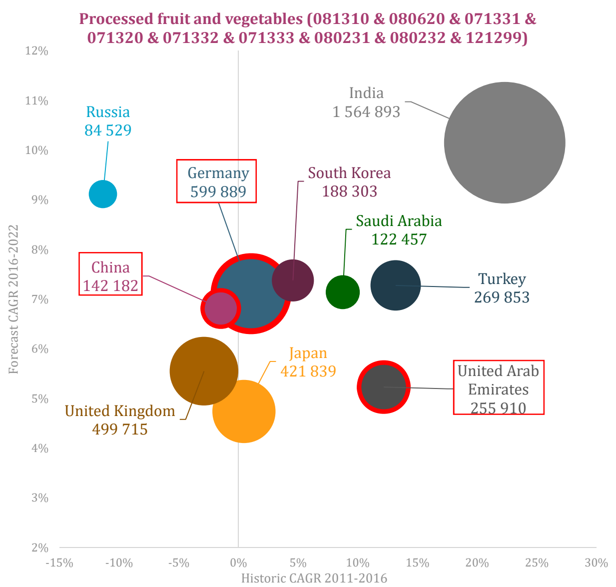
UK

- Significant import value across dried fruit and nuts

Japan

- Cross-category significant import value
- High quality demand

International import markets - opportunities



Bubble size represents import value in 2016 ('000 USD)

Based on Trade Maps data, 2016

China

- Lack of domestic walnut supplies

Germany

- Large import value across dried fruit and nuts

UAE

- Marginal domestic production
- Heavily import-dependant

Central Asia exports

467.7

'000 tonnes

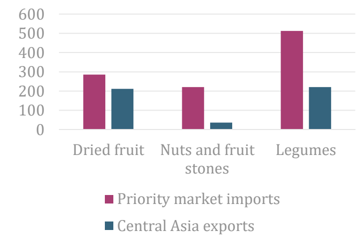
Priority market imports

1,018.7

'000 tonnes

Source: ITC Trade Maps, 2016

Processed fruit and vegetables trade balance: priority market imports vs Central Asia exports ('000 tonnes, 2016)



UAE trade data for 2016 modelled based on historic CAGR

Healthy living trend benefits nuts and snacks

- **One of the largest producers** of pulses, dried fruit and nuts globally
- **New dietary guidelines** promote balanced nutrition, favouring the consumption of processed fruit and vegetables
- **Pulses are an integral part of Chinese cuisine**

Snacking on dried fruit and nuts is on the rise

- The **stable economic climate** is gradually increasing disposable incomes
- The **healthy snacking** trend favours dried fruit and nuts
- Processed **pulses enjoy niche demand** from vegetarians and ethnic minority consumers

Protein-rich foods are gaining momentum

- Amongst the **highest living standards**, with a highly **multinational consumer** group
- **Local production** of processed fruit and vegetables **is marginal**, thus the country is import-dependant
- The **healthy living trend** calls for the consumption of protein-rich foods
- **Dried fruit and nuts** find their market in **snacking,** confectionery and add-ons, while pulses remain a key ingredient in ethnic minority cuisines

China

- **Nuts and dried fruit** are increasingly consumed as **on-the-go snacks**, with high emphasis on the packaging and brand
- **Legumes are typically used in meal preparation**, and face very little competition, as each of the variants has its own purpose

Germany

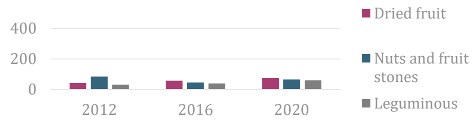
- **Sweet, yet not too sweet dried fruit**, and **crunchy, yet not bitter nuts** are gaining popularity as quick, healthy snacks
- **Calibration is key**, as consumers choose visually
- Consumers are **willing to pay a premium for organic origin and sustainably** farmed produce

UAE

- The premium **market** requires **outstanding quality**, packaging and calibration
- Meanwhile, **traditional trade accepts various sizes and variants of fruit and**

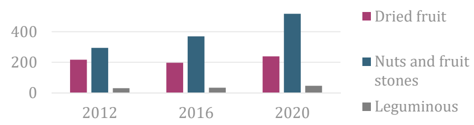
Limited imports due to strong domestic supply

Imports of processed fruit and vegetables, 2012/2016/2020, mn USD



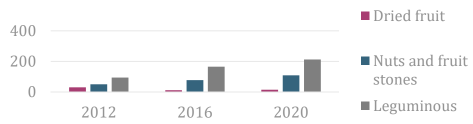
Consumption of dried fruit and nuts is on the rise

Imports of processed fruit and vegetables, 2012/2016/2020, mn USD



Protein-rich legumes see the strongest growth

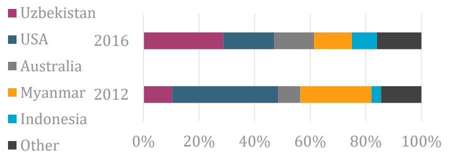
Imports of processed fruit and vegetables, 2012/2016/2020, mn USD



Source: ITC Trade Maps, 2016

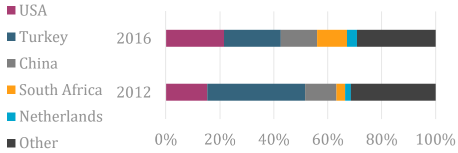
Uzbekistan overtakes the US in dried grapes

Key suppliers, share of total import volumes (%), 2012/2016



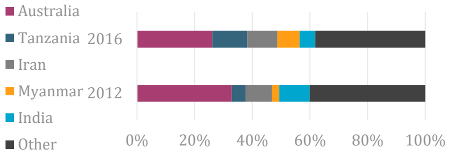
The US and Turkey lead the way in nuts and dried fruit

Key suppliers, share of total import volumes (%), 2012/2016



While the top suppliers focus on chickpeas, Iran offers dried fruit

Key suppliers, share of total import volumes (%), 2012/2016



Source: ITC Trade Maps, 2016

China

- **Uzbekistan** successfully gains share in **dried grapes**, while the **US** continues its strong trade in **walnuts**
- **Myanmar is losing share to Australia** in terms of imports of mung beans, due to superior Australian quality

Germany

- The **US strengthens** its leading position in **walnut** supplies, while **Turkey** remains the **key partner for dried fruit**
- **Uzbekistan has some presence** across categories in processed fruit and vegetables, mainly focusing on dried grapes

UAE

- **Half of category imports** in the UAE are generated by **chickpeas**
- **Australia supplies over half of** the import volume **of chickpeas** to the UAE
- **Uzbekistan** is focusing on the **supply of mung beans**, but trade is currently limited

Processed fruit and veg: Supply chain overview

China

- The vast territory and SME-driven retail lead to a **highly fragmented distribution** network, with the **leading importers controlling ~1%** of the market, and are only **dominant in certain regions**, like Dongguan Aita Trading Co, Yingbo (Shanghai) Trading Co, Weihai Teddy Trading Co

Germany

- Highly **retail-oriented consumption** is catered for by **regional importers** and distributors such as UNIVEG Trade International GmbH in the north, Fresh Line Fruit Services in the west and Fruchthof Eichinger GmbH in the south

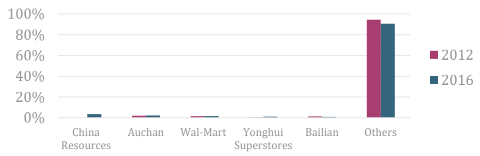
UAE

- The **largest domestic importers**, such as Best Food, Gyma, Albogari General Trading, Nuts Valley and Emirates Pearl General Trading, are involved in **distribution,**

China has both national and regional wholesalers before the goods reach foodservice and retail

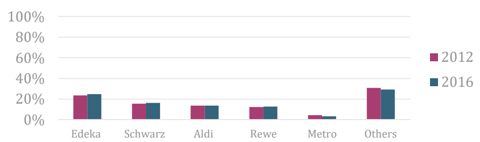
Traditional retail remains key in China

Grocery retail landscape, value shares (%), 2012/2016



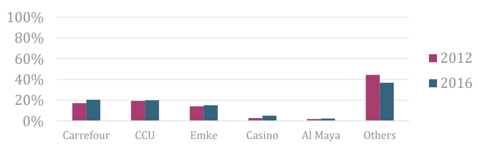
Processed fruit retail is controlled by modern chains

Grocery retail landscape, value shares (%), 2012/2016



Polarised retail market caters for various wallet sizes

Grocery retail landscape, value shares (%), 2012/2016



Source: Euromonitor. Grocery Retailing, 2016

China

- **Imports** of processed fruit and vegetables are mainly **targeted at retail distribution** and some **further processing** in confectionery
- The **grocery market remains traditional** and highly fragmented

Germany

- Nearly **80% of imports** of processed fruit and vegetables are **distributed through retail**
- Dried fruit and nuts are distributed in the form of **small-sized snacks** on their own or mixed together
- **ISO and FSSC certification** is a common retail requirement

UAE

- **Half of the imports of dried fruit and nuts are designated for re-export**, and do not enter the retail arena in the UAE
- Around **60% of legumes are consumed locally** and distributed **through retail channels**, with a further **30% going into foodservice**

Processed fruit and veg: Regulatory overview

Key regulations in China

- Domestic safety requirements
- Domestic labelling and packaging requirements
- Phyto-sanitary norms
- Quarantine access
- Sample testing
- On-going improvement of legal quality standards and safety requirements

Key regulations in Germany

- UNECE based marketing requirements
- Phyto-sanitary norms
- Control of contaminants in foodstuffs
- Control of pesticide residues
- Sample testing

Key regulations in UAE

- Domestic safety requirements
- Phyto-sanitary norms
- Sample testing

China

Source: PR China's Minister of Commerce, 2017

MFN treatment for all WTO members

Market							
Kazakhstan	25.0%	10.0%	20%,25%	20.0%	14%,7.5%	3.0%	7.0%
Kyrgyzstan	25.0%	10.0%	20%,25%	20.0%	14%,7.5%	3.0%	7.0%
Tajikistan	25.0%	10.0%	20%,25%	20.0%	14%,7.5%	3.0%	7.0%
Uzbekistan	70.0%	80.0%	70.0%	80.0%	30%,20%	11.0%	20.0%

Germany

Source: TARIC database, 2017

GSP and GSP+ agreements benefit all but Kazakhstan

Market							
Kazakhstan	5.6%	2.4%	4.0%,5.1%	5.8%	0.0%	0.0%	0.0%
Kyrgyzstan	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Tajikistan	2.1%	0.0%	0.0%,1.6%	2.3%	0.0%	0.0%	0.0%
Uzbekistan	2.1%	0.0%	0.0%,1.6%	2.3%	0.0%	0.0%	0.0%

UAE

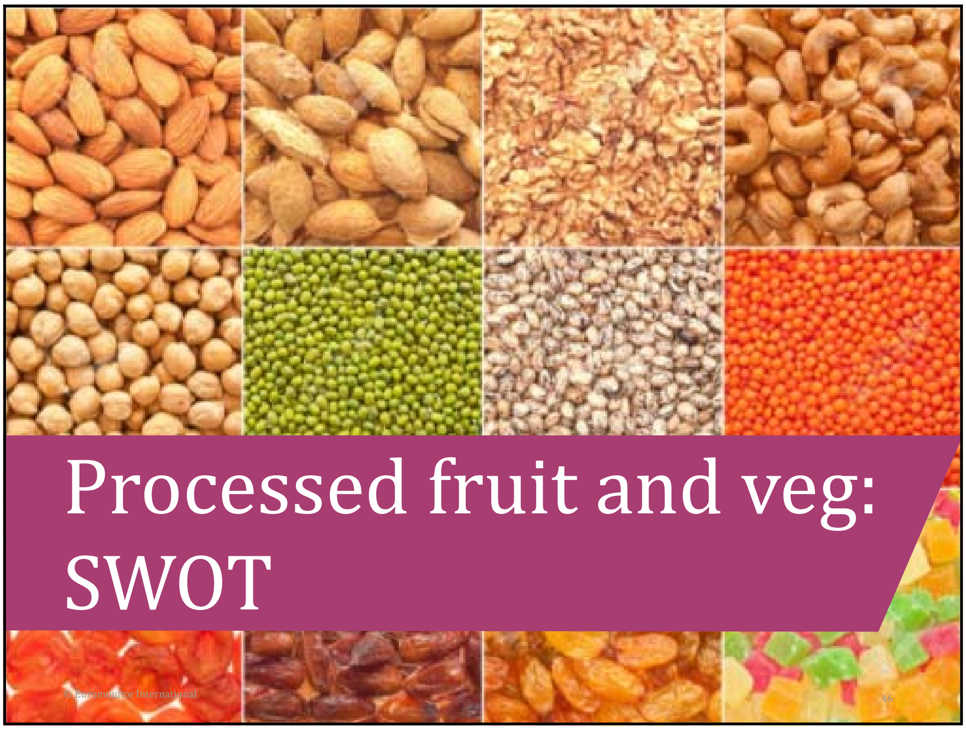
Source: UAE Ministry of Finance, 2017

No special treatment for Central Asian suppliers

Market							
Kazakhstan	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Kyrgyzstan	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Tajikistan	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Uzbekistan	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%

Nuts for China, dried fruit for Europe and pulses for the Middle East

China	Germany	UAE
Key opportunities:	**Key opportunities:**	**Key opportunities:**
▪ **Focus on high-quality walnuts** to support the lack of domestic supply ▪ The opportunity in **dried grapes** is **niche, and offers variety** to local produce ▪ **Dried apricots and nuts** should be marketed through **highlighting the health benefits**	▪ **Extend the trade for dried grapes and walnuts** through retail and food processing for Uzbekistan, Kyrgyzstan and Tajikistan, as all three markets benefit from zero customs ▪ Market **Ferghana dried apricots as a super snack** ▪ **Target apricot kernels to** organic, medical and **beauty niches**	▪ **Establish a presence in pulses;** chickpeas in particular ▪ Target **wealthy snackers** with packaged dried fruit and nut mixes ▪ Superior **quality is a must**



Strengths
SWOT

Central Asia is on the way to improving international trade in processed fruit and vegetables

- Fruit produce meets demand in terms of variety and health
- Production **capacity development** is on the agenda
- Suppliers are able to offer **value for money** deals
- Demand for **organic products is on the rise**
- Health-aware consumers are looking for **superfruit snacks**
- Active participation in **global standardisation** processes
- Accession to **international trade agreements** positively affects trade
- An understanding that **global certification** is the way forward
- **Strong presence** in global dried **grapes** market
- **Favourable climate for legumes, and plans to increase walnut production**
- **Speciality dried apricots** from Ferghana Valley

Central Asia has to overcome a number of internal challenges

- **Limited awareness** amongst **international consumers**
- **Productivity enhancement** remains challenging
- **Initial investment** in international partnerships
- Traditionally natural production **lacks certificates**
- Fragmented production and **lack of volume consolidation**
- Russia-focused trade **lacks diversification**
- **Weak certification** due to the cost and the lack of experts
- **Restricted access to markets** due to lack of conformity
- **Lack of regional cooperation**
- Despite significant production of **pulses, demand is not universal**
- **Exporters of dried fruit** face **difficulties in compiling volumes** of similar quality produce

Weaknesses
SWOT

China: opportunities

SWOT

While leading in pulses and fruit, China lacks walnuts

- **The smallest** of the priority markets, as imports support significant local production
- Increasing demand for **nutritional and healthy** snacks
- **Insufficient local walnut production** calls for stronger support from imports, looking at quality and competitive prices
- **Demand for dried fruit calls for variety;** blackcurrants are especially in favour

Central Asia should **focus on the development of the walnut** trade, offering **competitive prices and high-quality** produce

Central Asia may **complement China's dried fruit market** with **new varieties**, focusing on the healthy snack and confectionery markets

While **major focus** should be on **food processing** , retail can be targeted through on-the-go snacks

Germany: opportunities

SWOT

Nuts and dried fruit are of key interest to health-aware Germans

- **Large and mature** market with established consumption of dried fruit and nuts
- Opens up **wider opportunities in the EU** market
- **Domestic production** is relatively **limited**
- Preferential trade under **GSP** for Uzbekistan and Tajikistan and **GSP+** for Kyrgyzstan
- **Walnuts** are the third most popular nuts in Germany
- Developing demand for **dried fruit** is seen in the snacking industry, with small convenient packaging

Central Asia should **prioritise walnuts,** offering **organic products for retail** and establishing partnerships with **foodservice specialist importers**

Dried grapes primarily to be targeted at **foodservice** and snack mixes in retail, while **dried apricots** to be positioned **as a superfruit** snack in retail

UAE: opportunities

SWOT

With no domestic produce, the UAE is open to quality partnerships

- **The largest pulses import market** among the priority countries
- The UAE is a **gateway to the wider GCC** market
- **Wealthy consumers** are looking for variety and quality
- Increasing demand for **nutritional and protein-rich snacks**
- **Limited domestic production**

Equally interesting opportunities across the product categories

Pulses sees the highest demand across both retail and foodservice, as these are integral to a variety of multinational cuisines

Regardless of the product category, the key requirements in the UAE are **quality, quantity and consistency**

Central Asia has to enhance its international image and improve its technology

Challenging access to international markets:
- Voluntary quality standards in **Germany**
- Negative perception of Central Asian consistency in the **UAE**
- Quarantine access restrictions in **China**

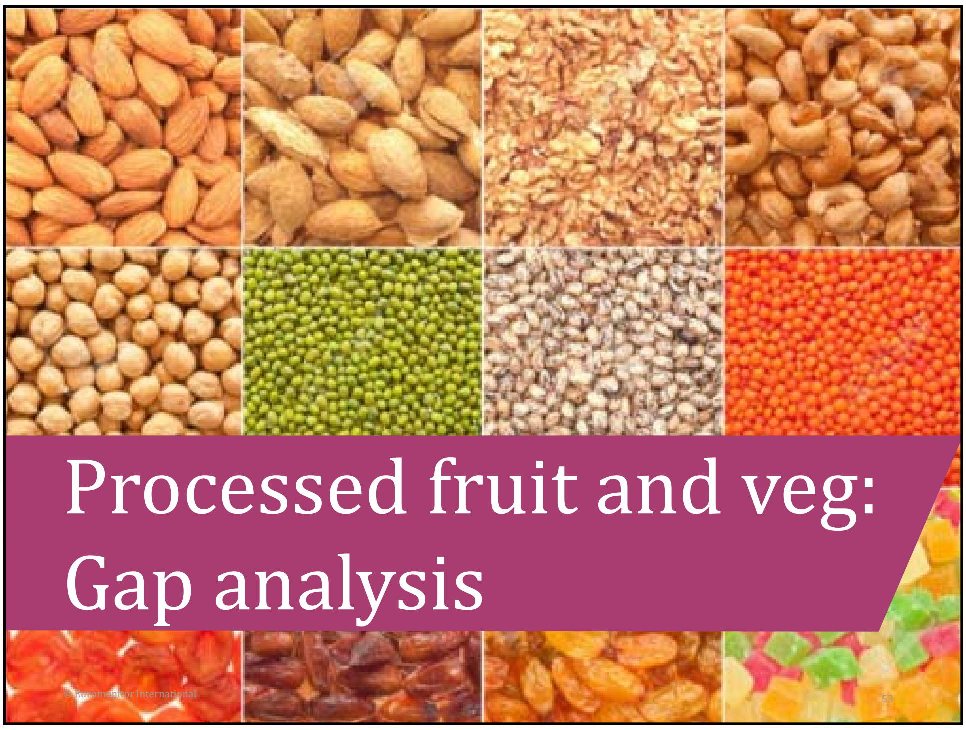
Lack of awareness of Central Asian produce:
- Lack of international market presence raises a question about the level of demand

Technological challenges in meeting quality requirements:
- **Conformity to** minimum **quality requirements** is a must
- However, Central Asian **laboratories lack the equipment** to run all the tests required
- Thus, the **results are not always trustworthy**

Unstable prices of agricultural produce:
- Agriculture is highly dependent on the weather
- Price points are set by demand and supply
- While demand may be predicted to some extent, **supply may under- or over-deliver**
- The supply and demand relationship is subject to global production

Threats

SWOT



Processed fruit and veg: Gap analysis

Raise awareness of the taste and attributes of Central Asian processed fruit and vegetables

Current supply situation	▪ Lack of efficient regulations **safeguarding the country of origin** claims ▪ Central Asian produce is often purchased by other exporting markets and is sold as their produce
Current demand requirements	▪ International **buyers are not aware** of the quality of Central Asian **processed fruit and vegetables** and the speciality variants available ▪ Limited trading relationships between Central Asia and the priority markets **causes a lack of trust in consistency and the ability to deliver**
Suggested interventions	▪ Participation in **international trade expositions and** promotional events ▪ Agricultural industry **education** on international market demands ▪ **Promotion of "Made in..."** claims in priority markets

Consolidate production to enhance quality consistency and volume supply

Current supply situation	▪ Central Asian agriculture is **highly fragmented** ▪ Exporters and wholesalers are **not able to guarantee produce of uniform quality**
Current demand requirements	▪ International buyers are looking for suppliers which can **guarantee consistent quality**
Suggested interventions	▪ **Educate** farmers **on the benefits of cooperation** ▪ Introduce **government support for those that coordinate production** ▪ Introduce an **export promotion and coordination body**

Enhance the calibration of processed fruit and vegetables to meet international standards

Current supply situation	▪ **Lack of a systematic approach** towards production ▪ **Visual inconsistencies** in terms of processed fruit and vegetables ▪ **Difficulties in compiling sizeable volumes** for export
Current demand requirements	▪ International consumers are looking for **premium-looking and -tasting processed fruit and vegetables** ▪ It is **important to satisfy both visual and taste requirements**
Suggested interventions	▪ **Improve the calibration of processed fruit and vegetables** ▪ **Educate** producers on the necessity for and benefits of calibration

Achieve international certification

Current supply situation	▪ Fragmented industry is **unable to afford** international certification ▪ **Domestic and cross-regional trade** does not require certification ▪ Farmers are **becoming familiar with certification procedures**
Current demand requirements	▪ **European markets require FSSC, ISO and/or GLOBALG.A.P. certification** for their suppliers ▪ In particular, buyers are interested in produce quality, the farming process, transportation process and sustainability of the supplier
Suggested interventions	▪ **Educate farmers** on the benefits of certification and related opportunities ▪ Facilitate the **education and development of certification experts** ▪ Establish a **certification advisory body** ▪ Facilitate **lobbying of governments and financiers**

Learn from international best practices to modernise laboratories

Current supply situation	▪ Food testing laboratories **are not recognised by international markets** ▪ Local laboratories **lack modern technology, up-to-date training and consistency** in running tests ▪ **Use of international laboratories is limited,** as imports comprise collective produce from many farms
Current demand requirements	▪ Priority markets have **legal requirements for the quality and safety of processed food produce** ▪ Each market **performs a food quality inspection** as products enter the market
Suggested interventions	▪ Facilitate the establishment of **internationally recognised laboratories** ▪ Facilitate the development of an **educational system** for future food quality experts ▪ **Inform exporters and current testing facilities of acceptable quality levels** in priority markets

Identify opportunities for partnerships in air freight

Current supply situation

- As a **landlocked region**, Central Asian exporters have to deliver by land or air
- While **road transportation is lengthy, air freight is costly**

Current demand requirements

- International buyers **prefer marine transportation**
- However, they are **happy to accept other solutions**, as long as the price and quality are not affected

Suggested interventions

- **Facilitate relationships between exporters and air freight carriers**
- Provide exporters with **information about a wide range of air carriers,** including **charters**
- **Facilitate lobbying** to gain discounted rates when exporting to priority markets
- Facilitate lobbying to **support financing** of cold chain fleet development

1 Raise awareness of Central Asian processed fruit and vegetable produce

- Facilitate and **promote the participation** of Central Asian producers and exporters at **international trade expositions**
- Develop or facilitate the development of **educational programmes focused on international market demands** with regard to Central Asian processed fruit and vegetables
- Develop or facilitate the development of **Central Asia origin promotional campaigns** (arm exporters with marketing materials)

2 Consolidate production to enhance quality consistency and volume supply

- Promote or facilitate education and **promotion on industry consolidation** through cooperatives and associations
- Facilitate **industry and government dialogue** and cooperation in terms of governmental support of **coordinated production** efforts
- Develop or facilitate the development and promotion of an **export promotion and coordination body**

3 Enhance calibration to meet international standards

- Develop or facilitate the development of an **educational platform on agricultural produce calibration** practices and benefits
- Develop a promotional fruit and vegetables calibration as **best agricultural practice programme**

4 Achieve international certification

- Develop **educational programmes for SME farmers** on the benefits and requirements of international certification
- Facilitate the development of **educational platforms for future certification experts**
- Facilitate the **establishment** of **certification advisory bodies** to consult SMEs
- Facilitate the **establishment of certification bodies**
- Facilitate the **establishment of certification bodies**
- Facilitate **lobbying between the industry and governments** in terms of **subsidising** the certification process
- Facilitate dialogue between the industry and financiers, in order to **facilitate financial mechanisms**

5 Learn from international best practices to modernise laboratories

- Facilitate the **establishment of internationally recognised laboratories in Central Asia** through dialogue between the globally recognised laboratories, training and adapting best practices
- Facilitate the development of **educational systems for future food quality experts**
- Develop an **information sharing programme** aiming to provide information to exporters and current laboratories about the acceptable quality levels in international markets, as well as detailing the tests to be performed

6 Identify opportunities for partnerships in air freight

- Facilitate **dialogue and partnership- building between exporters and air freight carriers**
- **Help exporters to connect** with relevant cargo carriers
- **Educate exporters** on charter and other **competing cargo solutions**
- Facilitate **dialogue between financiers/ government** in order to support **financing of cold chain fleet development**

Deutsche Gesellschaft für
Internationale Zusammenarbeit (GIZ) GmbH

Regional Programme
“Trade Facilitation in Central Asia”

David Oberhuber
Programme Manager

david.oberhuber@giz.de

GIZ Bishkek
22, Erkindik Blvd.
720041, Bishkek,
Kyrgyz Republic
T + 996 312 909137
F + 996 312 909130
www.giz.de

GIZ Astana
12, Samal mcr.,
010000, Astana
Republic of Kazakhstan
T + 7 7172 58 09 26
F + 7 7172 58 09 26
www.giz.de

GIZ Dushanbe
Ayni/ Nazarshoeva,
734042, Dushanbe
Republic of Tajikistan
T + 992 44 600 67 83
F + 992 44 600 67 82
www.giz.de

GIZ Tashkent
7a, Chimkentskaya str.
100029, Tashkent
Republic of Uzbekistan
T + 998 71280 67 51
F + 998 71280 67 52
www.giz.de