



BOARD OF INVESTMENT & TRADE
GOVERNMENT OF BALOCHISTAN



Preface

The sector profiling exercise aims to capture the current state of the sector, map related regulations and identify areas of reform. It highlights basic value propositions for the selected sectors, as revealed by stakeholder interviews and the consultant's business knowledge.



Balochistan Board of Investment and Trade

The Balochistan Board of Investment and Trade (BBoIT) is Balochistan's premier investment promotion body, responsible for attracting, facilitating and promoting both local and foreign investment for speedy capitalization of projects in all sectors of economy in Balochistan. BBoIT is established with broad based responsibilities of promotion of investment in all sectors of economy; facilitation of local and foreign investors for speedy

materialization of their projects and to enhance the province regional competitiveness and contribute to economic and social development. BBoIT is seeking to develop a conducive environment for private sector. As an input to this process, a sector profiling exercise is required to capture the current state of the sector, map related regulations and identify areas of reform. For this purpose, BBOIT has engaged EY Ford Rhodes to develop sector profiles for designated sectors.



Governance and Policy Project (GPP) for Balochistan

The project is expected to help Balochistan increase its own source revenues, thereby reducing the province's dependence on federal transfers and expanding fiscal space for financing public services. The Project Development Objective (PDO) is to strengthen the capacity for Sales Tax on Services collection, and improve accountability in public financial management and public service delivery in the education and irrigation sectors in Balochistan.

This sector profile has been prepared through technical assistance from **M/s EY Ford Rhodes**, which is a member firm of Ernst & Young Global Limited (EYGL), providing professional services to its clients, both globally and in Pakistan.

Fruits and Vegetable Sector in Balochistan





Balochistan is named as Fruit Basket of Pakistan⁴

Pakistan's fruits and vegetables market is expected to register a CAGR of 5.9% during the forecast period of FY 2021-2026.²



2.24% GDP contribution

by agriculture segment/ category that includes fruits and vegetables in FY21¹



Fruits - **01** million tons

Balochistan's Annual Fruit Production



Vegetables - 1.1 million tons

Balochistan's Annual Vegetable Production

Agriculture is one of the largest economic sector of the Pakistan contributing approx. 20% to its GDP and employing approx. 43% of its labor force. Agriculture sector includes livestock, fisheries, forestry, grains (rice, wheat, maize), fruits and vegetables and other crops. ¹

Fruit and vegetable processing projects aims to replace imported products like squash, Jams, tomato sauces, pickles, etc., besides earning foreign exchange by exporting finished or semi-processed products.⁶

In Balochistan, apple, grapes, and dates can be targeted for international marketing by promoting processing industry for value addition and export.

Apples, dates, melons, apricot, grapes, papaya, pomegranate, almond, cherry, onion, tomatoes, potatoes, carrot and cauliflower^{3,4}





89%

Grapes

45%

Dates

94% Pomegranate

94% Apricots

90%

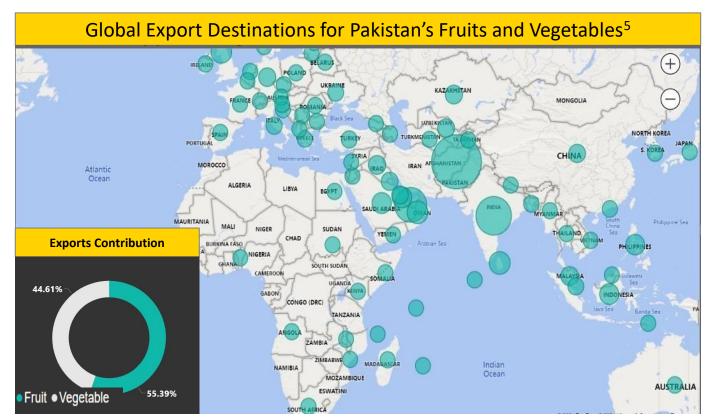
Cherries

92%

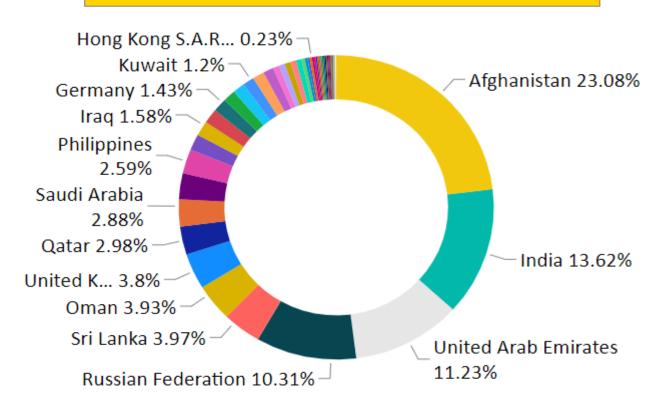
Almonds







Fruits and Vegetables Exports by Countries (2018-2019)⁵



Key Statistics (Cont'd)

apples at 619,452 tons, followed by

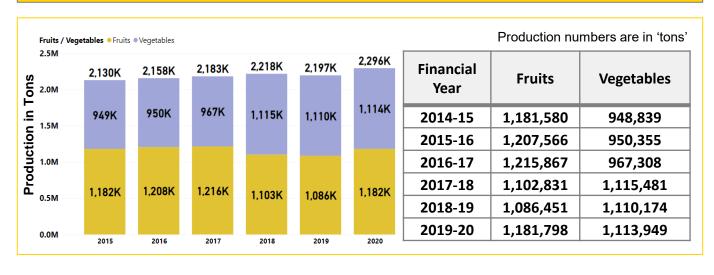
dates and apricot.





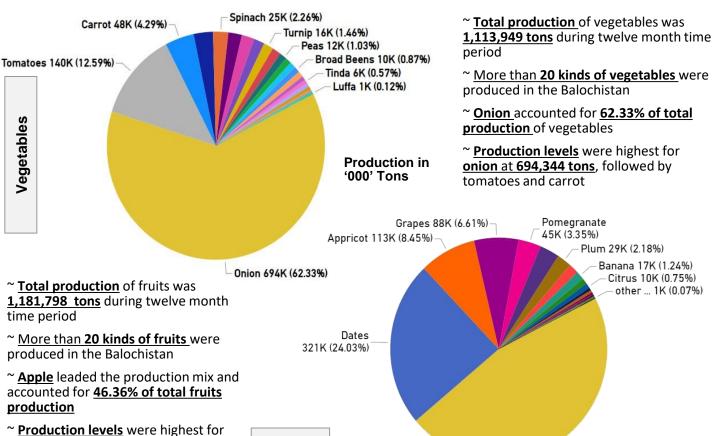
Apple 619K (46.36%)

Fruits and Vegetables Production in Balochistan⁵²



Balochistan's Fruits and Vegetables Mix by Production Volume for FY20⁵²

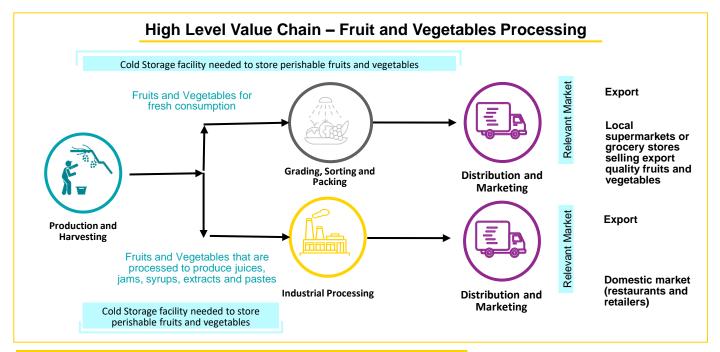
<u>Production mix</u> has been provided for <u>FY20</u> starting from <u>Jul 2019 to Jun 2020.</u>



Fruits



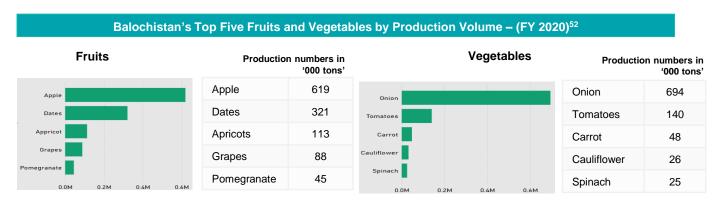




Fruits and Vegetables Value Chain in Balochistan Context

Production and Harvesting:

Balochistan is endowed with rich soil and favorable climate for growing a variety of vegetables and fruits. Vegetables also includes condiments (onion, garlic, chilies, coriander and turmeric).¹ Most of fruits and few vegetables that are grown in the province represent major portion of annual production at national level. Top 05 fruits and vegetables that are produced in Balochistan are provided below:



Balochistan's climate is conductive for production of many fruits and vegetables including olives which is a new focus/priority area for federal and provincial governments. Pakistan desires to become self-sufficient in edible oil production and to reduce import bill relating to edible oil. ⁷

Government of Pakistan has been making rigorous efforts to become a member of International Olive Council (IOC) to bring modern techniques for olive plantation and processing in Pakistan and to become closer to the olive world.⁸ Pakistan Agriculture Research Council (PARC) has been assigned to promote and facilitate olive cultivation and processing in Pakistan.⁹

Fruits and Vegetable Sector in Balochistan





Fruits and Vegetables Value Chain in Balochistan Context (Cont'd)

Grading, Sorting and Packing:

Need for grading and sorting in the fruit and vegetables value chain arises because fruits and vegetables produce usually exhibit variations in size, color and quality and customers/ consumers choice/ preference vary depending upon product quality. Sorting process involves classifying produce into groups designated for example sorting the diseased and healthy fruits. Grading process involves classification of fruit and vegetables produces based on a pre-defined quality criteria for example Extra Class, Class 1, Class 2.

Balochistan, despite being the country's largest fruit producer, is unable to exploit its true potential in fruit and vegetables sector because there are very few grading, sorting and nearly no packing facilities in the province. Fruits and vegetables are usually transported to Karachi for export and to other provinces for industrial processing. There are many fruits and vegetables e.g. dates, apples, grapes and onions which are grown in Balochistan could be regarded as cash crops due to its untapped export potential. Existing fruits and vegetables exports are very low compared to its production reflecting that Pakistan is unable to achieve its true potential. One of the reasons is limited availability of grading and sorting facilities in the Balochistan. Investors can bridge value chain gap between export potential and production by establishing modern grading and sorting facilities in Balochistan.

Packaging also plays a crucial role in horticulture crops as poor packaging can damage the product quality. Currently, packaging material (wooden crates) that is used by majority of growers in Pakistan are of substandard quality in appearance and design and these packaging materials are not conductive in protecting the product quality for export market and even for some domestic markets (supermalls/supermarkets, upper-end shops and industrial consumers). In some international markets, food packaging is strictly regulated and packaging standards have been defined.

Industrial Processing:

In industrial processing, fruits and vegetables are processed to preserve, dry and to produce juices, jams, syrups, extracts and pastes. Value chain margins for industrial processing units are higher than sorting and grading units due to higher value that it provides to customer/ consumers.

Global fruit and vegetable market is expected to reach USD 373.5 billion by 2022, at a CAGR of 7.1% during 2017-2022. The processed segment accounts for an average of 35% of the global market and it is expected to witness fastest growth during 2018-2023 at CAGR of 8.3%. It shows that market potential for processed fruits and vegetables remains largely unexplored and untapped.⁵⁰

Balochistan, despite being the largest fruit producer, does not have any fruits processing units located in the province. Fruits are transported to other provinces for industrial processing because majority of market players in the market of fruits industrial processing are located in Punjab and Sindh. Transport of horticulture crops to other provinces for industrial processing may be costly due to bulk weight adding to transport cost.

Fruits and Vegetable Sector in Balochistan





Fruits and Vegetables Value Chain in Balochistan Context (Cont'd)

Industrial Processing (Cont'd):

It is estimated that post-harvest losses are approx. 15%-30% of its annual production due non-availability of processing facilities in the province. Investor can seize this untapped potential and can introduce value added processed products in local and international markets.

Distribution and Marketing:

In case of sorting, grading and packing facilities, target markets can be international markets, superstores or high-end markets and industrial processing units. Industrial processing can target both domestic and international markets as in domestic market the potential remains largely unexplored. To reach international markets, investors can take advantage of CPEC routes and Geo-strategic position of Balochistan which make it most attractive location for investment as its location provides access to different global markets. Balochistan is located along the long coastal belt from the Middle East toward the Indian-sub-Continent. Balochistan shares borders with two international borders (Iran, Afghanistan) and rest of the three provinces (KPK, Punjab and Sindh). Pak-Iran (Taftan) border provides connectivity to the Middle-East and Europe, and Pak- Afghanistan connects Pakistan to Central Asian States of Uzbekistan, Turkmenistan, Tajikistan and Kyrgyzstan.

Cold Storages:

Cold storages are key requirements in order to reduce spoilage of perishable commodities and prolong their shelf-life. At present, Balochistan has shortage of cold storages which results in loss of value of perishable commodities. Cold storages are highly desirable to preserve nutritional value and extend timeframe for marketing at opportune times in domestic and international markets to reap high margins.¹¹



In Balochistan, sorting, grading and processing segments offer the most lucrative investment opportunities in the fruits and vegetables supply chain. Potential investment opportunities for selected fruits and vegetables have been provided later in this document.

Why to invest in Fruits and Vegetables Sector of Balochistan?







Sector Growth Potential

Fruits and vegetables are estimated to experience significant growth in the future. Agriculture production needs to be expanded by 70% in order to sustain expected population size of 10bn by 2050. Global fruits and vegetables processing is expected to grow by a cumulative avg of 8.3% per annum during the forecast period 2018-23. Fruit processing accounts for 65% of market share whereas vegetable processing makes up the remaining share. The fruit and vegetables market of Pakistan is anticipated to register 5.9% CAGR during 2021-2026.



Government Initiatives / Support

The Prime Minister of Pakistan has approved an "Agriculture Transformation Plan" presented by the Ministry of National Food Security and Research to transform the agriculture sector of Pakistan. Multiple interventions are planned for example access to credit, digital subsidy mechanism, horizontal expansion, international cooperation, value chain development, clusters approach for fruits and vegetables, etc. to bridge the production yield gap.¹ Pakistan is a beneficiary for the GSP Schemes of Switzerland, Norway, Turkey, UK, USA, Canada, Australia, New Zealand, Japan, Russia, Belarus, and Kazakhstan. Accordingly, import of GSP-eligible products into these countries from Pakistan enjoys preferential tariffs (i.e. reduced or zero import duties).¹³



Availability of Raw Material and Labor

As mentioned in earlier sections, Balochistan is a production hub for some fruits (Dates, apples, grapes) and vegetables (Onion, tomatoes). Investor can seize the benefits of excessive fruits and vegetables production by setting sorting, grading and packing facilities or by establishing processing units for industrial processing. It is also necessity to locate processing unit near to the production fields to capture its best nutritional value and lessen injury from handling and deterioration. Moreover, about 65% of labor depends on Agriculture & Horticulture sector for its livelihood. 15



Geo-strategic Location

Balochistan's geostrategic position provides it access to local and global markets in middle east through coastal belt, Central Asian States through border with Afghanistan and the Middle East and Europe through Pak-Iran border. Infrastructure: 3 major International Airports, 5000 km highway network, 1000 Km railway network. The province experiences diverse climates ranging from temperate to subtropical and tropical, making it suitable for a variety of fruit and vegetables. 16



Social Trends and Impact of Covid

Due to changing lifestyles, people are becoming more inclined towards consuming processed fruit and Vegetables as opposed to fresh as it offers convenience owing to longer shelf-life. The Covid19 pandemic has induced further attractiveness towards fruit and vegetable processing as perpetual lockdowns have limited consumer access to everyday grocery outlets and processed fruit and vegetable served as substitute staples.

<u>Emerging Trend – E Commerce:</u> Owing to increasing digital literacy and accelerated use of online modes of shopping, a number of platforms have emerged for day to day grocery shopping which also offers fresh and processed fruits and vegetables. This behavioral change is also promoted due to limited mobility during Covid19 lockdowns. However, this change in lifestyle is expected to persist in the long-run as it offers convenience. Some of the renowned online Fruit & Vegetable platforms are: Airlift Express; Hum Mart; and Panda Mart.







Balochistan is mainly an agro-based economy with agricultural contribution of 26 percent to the provincial GDP. The agricultural sector in Balochistan has great potential to capitalize on growing demand for value added fruit and vegetables both in the international and domestic markets. Processing of fruits and vegetables involves value addition starting from the post-harvest level. The key investment areas identified in the value chain include cold storages, processing plants and packaging units. The government is fully committed to capitalizing on the fruit and vegetables produced in the province. Some of the fruit and vegetable with high investment potential opportunities for processing include:

- Dates
- Apples
- Grapes
- 4. Tomato
- Olive

Areas to invest Dates





In 2019, it was estimated that global dates market is about USD 13.4 billion and it is expected that market will grow to USD 16.25 billion by 2025. The global dates market is anticipated to witness a CAGR of 4.6% during 2021-2026. During 2020, global production of dates was around 9.6 million metric tons. 18

Pakistan holds 6th position in production of date tons by contributing about approx. 0.565 million metric tons.¹⁹ Balochistan plays a pivotal role in production of dates and contributes approx. 45% share on avg each year in the national production of dates.⁵

More than 300 types of dates are produced across Pakistan and among these commercially most important types are cultivated in Balochistan (Muzawati, Begum Jhangi, Jaan Swor and Rabai). ²⁰

Dates (both fresh and dried) are exported to the USA, Bangladesh, Indonesia, India, Canada, France, Malaysia, Germany and UAE.²¹

Districts



Gwadar, Turbat, Panjgur, Chagai, Kharan, Khuzdar, Jhal Magsi, Nasirabad, Jaffarabad, Bolan, Sibi, Dera Bugti

Area under cultivation

(hectares)



FY20- 53,455 FY21 - 53,561

Prod. (tons)



FY20- 293,801 FY21- 321,074

Yield (Kgs/ha)



FY20- 6,175 FY21- 6,703

USD 60.26 million

Pakistan's Date Export in FY 2020²²

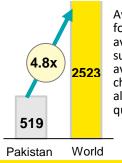
Pakistan holds 11th position in the list of dates exporters despite being 6th largest grower of dates in the world. During FY 2020, Tunisia (USD 266 million), Israel (USD 251 million) and Saudi Arabia ((247 million) were ranked at top 3 positions.²² This reflects Pakistan has not achieved its export potential yet. One of the reasons is Pakistan does not have sufficient facilities/ processing units to process its dates production through grading, sorting and packing facilities. Pakistan is exporting majority of its dates to low-end markets like Afghanistan, India and United Arab Emirates.⁵ Major share in global dates export market can be captured by targeting high-end international markets through improvement in product quality and introduction of postharvest technology for dates processing.²³

USD 11.82 million

Pakistan's Date Import in FY 2020²²

Despite being largest producer of dates, Pakistan is also importing dates from other countries and majority of dates are **imported from Iran and Iraq**. Other importing countries includes Saudi Arabia, the UAE, Kuwait.⁵

Dates imports as percentage of dates export is 19.62% in FY 2020, which represents an untapped opportunity in domestic market. It should be noted that 99% of dates imports comprise of fresh dates. ²²



Average global export prices (USD/ Tons) for FY 2020 are much higher than the average export prices of Pakistan.²² It suggests that in order to <u>obtain</u> world's average dates export price, dates value chain needs significant improvements and aligned with internationally acceptable quality standards.



Pakistan's dates export major share is comprised of dried dates. Export as percentage of production ratio for FY 2018-19 was 27.14%. ⁵

Not Exported

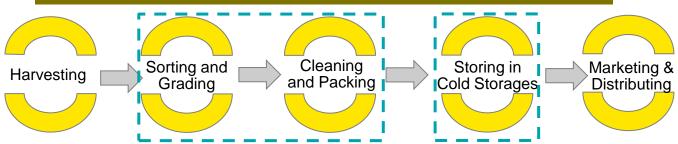
Price in USD per ton

Areas to invest Dates (Cont'd)





Investment Potential in Dates Value Chain – Balochistan



Clean harvesting as it effects further processing. Post-harvest transport from fields to processing facility in a packing ensuring moisture of the fruit is preserved and fruit is not crushed

Sorting performed to remove dates defected by physiology (defects caused by water stress), by pests or fruit is being crushed. Grading based on predefined criteria (size, color, shape, type, maturity)

Usually activities performed at this stage are fumigation, washing, hydration and dehydration. Packing is the vital to protect the fruit from direct contact and avoidable deterioration

Dates are stored to keep freshness of the fruit intact as fresh dates are in high demand and offer high margins Distribution to relevant product markets

Sorting, Grading and Packing Facilities To lock potential opportunities in international dates market and to counter the influx of dates from Iran and Iraq, investments in sorting, grading and packing facilities, and cold storages can be made.

Balochistan province can be an ideal location considering its geostrategic location and annual production of dates. Unfortunately, Balochistan, despite being leader in dates production at provincial level, does not have any date processing facility. Due to non-availability of dates processing plants in Balochistan, it is estimated that approx. post harvest losses are about 50% of the production. Agriculture & Cooperatives Extension Wing is establishing a cold storage and date processing unit at Turbat which would process approx. 140,000 tons of dates annually. Considering the production levels for FY 2020 and 2021, additional sorting, grading and packing facilities will be required.

Cold Storages

Palm dates is a seasonal product and mostly of the current market demand exists for fresh dates having high moisture content. Internationally, dates are stored in cold storages to fulfill the customer orders throughout the year. Precaution is exercised in storing dates to avoid exposure of stored fruit product to pests and external hazards.

Currently, Balochistan have only one cold storage facility located at Turbat which is not sufficient to accommodate the huge volumes of dates. Construction of another cold storage facility in Turbat district is underway which have storage capacity of 100 tons. Due to severe shortage of cold storages, growers dry out their dates produce which reduce the weight and value of the dates.

Furthermore, farmers use traditional methods of dates drying (sun dry) which also increase exposure of dates to pests and insects damaging the quality of dates for domestic markets. Dates cold storages have significant potential for investment and can offer promising return.

Areas to invest Apples





Apples are one of the major fruits consumed in the world. About 872 million metric tons apples were produced in 2020, and the market is anticipated to grow by CAGR of 4.0% during 2021-2026.

China, European Union, United States, Turkey and India are among leading apples production countries. ¹⁹

Asia pacific is the major consumer of apples with a share of approx. 62%. ²⁴

Apples are consumed as fresh as well as processed. it is used for making various products like juices, jam, jellies, marmalade, cider, etc.²⁵

In 2019, Pakistan produced 543.8 tones of apples of which 89% were contributed by Balochistan.⁵

Apples are grown in 17 districts of Balochistan out of which Ziarat and Mastung districts are well known for the production of high quality apples.²⁵

About 50% of the provincial production is concentrated in Qilla Saifullah.²⁶

Districts



Kalat, Khuzdar, Quetta, Pishin, Mastung, Qilla Abdullab, Qilla Saifullah, Ziarat

Area under cultivation (hectares)



FY20 – 72,366 FY21 – 71,917

Prod. (tons)



FY20 – 546,555 FY21– 619,452

Yield (Kgs/ha)



FY20- 6,852 FY21- 7,814

USD 231,000

Pakistan's Apples Export in FY 2020²²

During FY 2020, Pakistan has exported 528 tons of apples for USD 231,000. Pakistan is exporting apples to United Arab Emirates, Oman and Bahrain.⁵



USD 36.46 million

Pakistan's Apples Import in FY 2020²

During FY 2020, Pakistan has imported 51,485 tons of apples to meet domestic demand. Above 90% of apple imports are from Afghanistan. Pakistan remained net importer for apples during FY 2020. Russian Federation, Germany, China, United Kingdom, Netherlands and Bangladesh among top importer of apples during FY 2020.²²

Apples Juice Concentrate

Apples juice concentration is a niche market segment. Global Apple Juice Concentrate Market was valued at USD 2,139.1 million in 2018 and is expected to grow at the CGAR of 4.3% from 2018 to 2025.²⁷

During FY 2020, total exports of juice concentrate were around 846,842 tons with value of USD 1,107 million. Poland (US\$ 285 million), Turkey (US\$ 187 million) and Austria (US\$ 187 million) were among top exporters of apple juice concentrate. ²²

During FY 2020, Pakistan has exported juice concentrate of 2,101 tons of apple juice concentrate for USD 1.495 million. Pakistan's imports of apples juice concentrate amounted to USD 20,000 for 20,000 tons. ²²





Apples Processing - Value Chain

Harvesting

Skilled labor needs to pluck apples cautiously to avoid bruising

Washing, Sorting and Grading

Washing the apples to remove dirt, sorting of apples and grading of apples based on size, colors and variety

Waxing and packing

Apples are
artificially coated
with a liquid to
keep the
moisturizer of the
product locked and
packing of apples

Cold Chain

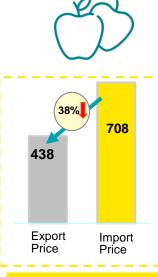
Packed Apples are stored in cold chains

Marketing and Distribution

Product is dispatch to relevant market (export market and super markets)

Sorting, Grading and Packing Facilities

Apple industry in Balochistan can be considered as cash crop for the province, as it has the potential to produce high quality apples which can be sold in the domestic and international markets. Currently, industry is becoming uncompetitive in domestic market due to its distorted value chain and ineffective marketing.²⁵ Average Pakistan's export price in USD/tons is 38% lower than the average import prices in USD/tons.²² It may be due to differences in quality of apple products. Marketing efforts are not effective because there are many small scale traders in the value chain and Balochistan does not have any large scale enterprises for collection and supply of apples from farmers to different markets.²⁵ Another challenge in the industry is the packaging and transportation of the fruit from fields to relevant markets. Apple fruits are packed in wooden crates, sacs or corrugated crates and then loaded in the open trucks for transport. It should be noted that it affects the skin and color of the fruit produce resulting in reduction of prices.²⁶ The main reason for low export has been the lack of standardization in the apple chain to supply the produce as per the international market requirements.²⁵



Price in USD per ton²²

Usually farmers skip the processing in the form of grading, sorting and safe packing with the brand name. Application of modern post-harvesting techniques combined with improvised packaging will reduce the post-harvest losses, increase the shelf life and help to obtain better price of apple. Therefore, modern post harvesting techniques for value addition is an attractive investment opportunity.²⁵

If sorting, grading and packing processing units are established in Balochistan, investors can exploit the untapped market potential in domestic and international markets.

Apple is perishable in nature and requires an optimum temperature level/ cold storage to prolong its life for 08 to 10 months while keeping the quality of the fruit intact. Balochistan currently has 14 registered cold storages out of which 12 are dedicated for apples. Current storage facility are not sufficient to store the produced quantity, therefore, apples are usually at very lower price in the market by the farmers.

Establishment of cold storage facilities can help in reduction of post harvest losses in the apple sector and can ensure availability of quality apple produce throughout the year.

Areas to invest Apples (Cont'd)

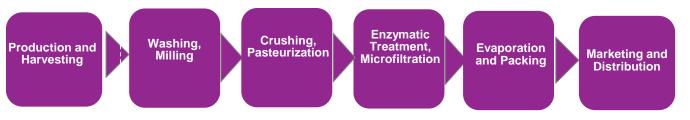




Investment Opportunities in Industrial Processing – Apples

Value Chain – Apple Juice Concentrate

Investment Area



Apple Juice Concentrate

As mentioned earlier, apples juice concentrate market has a good market size and has significant growth potential. The demand for fruit juices is continuously increasing due to raging benefits of these juices on human health. Additionally, social trends are moving towards eat and drink healthy life style. In Pakistan, many well-known brands are already working in this segment such as Nestle, Shezan International, etc.

Pakistan has already some footprints in international market as it is exporting above 2000 tons of juice concentrate but the export potential has not been fully exploited yet which can be seen from our juice concentration export contribution 0.25% (2,101 tons/ 846,842 tons) in export market. Pakistan has been placed on 35th position on the list of the exporter for FY2020. ²²

Top importers of apples juice concentrate include US, Turkey, Austria and Ukraine. ²² These markets can be targeted. Investors will be required to have good quality control and traceability system in place practices in order to enter to high-end international markets. ²⁵

Furthermore, as there is insufficient cold storages facilities in Balochistan, processing apples remain an attractive area of investment to avoid post-harvest losses. There lies a huge potential for investment in apple juice or concentrate making unit in apple clusters of Balochistan.²⁶





Areas to invest Grapes





Grapes come under top 20 agricultural commodities that are produced worldwide. During FY 2020, grapes production was around 23.38 million metric tons worldwide. The major grape-producing countries include China, Italy, the United States, Spain and France. During FY 2020, global grapes market was estimated at USD 189.19 billion, and it is expected to post a CAGR of 7.1% during the period 2021-2026. Grapes are consumed in fresh form as table grapes or in processed form such as raisins (dried grapes), jams, jellies, juices, and so on.

In Pakistan, Balochistan is the province leading the grapes production contributing approx. 89% in the national grapes production.⁴ Quetta, Pashin, Mastung and Kharan contribute about 96% of grapes produced in the province. Pashin among above 4 districts is leading the grapes production in the province. Balochistan is producing both table and wine grapes: Haita, Kishmishi, Sahibi, Shundokhani, Kishmishi, Thompson (Seedless), Shekhali autumn royal and Red Globe (Seeded) and Crimson (Seedless).²⁸

Districts



Quetta, Pishin, Mastung, Qilla Abdullah, Ziarat, Zhob, Loralai, Nushki, Kalat, Karan, Punjgoor

Area under cultivation (hectares)



FY20 – 11,470 FY21 – 15,626

Prod. (tons)



FY20 - 81,268

FY21-88.339

Yield (Kgs/ha)



FY20- 7,085

FY21- 7,693



USD 16,000

Pakistan's Grapes Export in FY 2020²²

During FY 2020, Pakistan has exported 9 tons of grapes. Globally, China and Italy topped exporters list of exports of grapes. ¹⁹ Currently, wine grapes are also produced in the provinces which are also used in domestic market as table grapes. ²⁸ Globally, wine grapes are expensive than table grapes. Investors can target that market segment and can export the wine grapes to other countries after ensuring sorting, grading and packing of grapes according to international standards. ²⁵



USD 60.4 million

Pakistan's Grapes Import in FY 2020²²

Pakistan imports grapes to meet its domestic demand. During FY 2020, grapes of 88,640 tons were imported which overburdens the import bills. Imports of grapes from Afghanistan are approx. 95% - 97% and 2% - 3% of grapes imports come from Iran. Grapes produced in Pakistan, particularly in Balochistan has potential to counter grapes imports provided quality of the grapes is improved through sorting, grading and packing. Expression of the grapes is improved through sorting, grading and packing.



Raisins

Global market of raisins was valued at USD 2,216.70 million in 2019 and it is projected to grow at a CAGR of 4. 7% from 2020 to 2027. During FY 2020, raisins exports were USD 56,000 (35 tons) and imports were USD 4.76 million (3,389 tons). 87% of the grapes produced in Balochistan are consumed as table grapes and 13% are dried in the form of raisins. It shows that raisins market is a well established industry in global market and imports are reflecting the domestic demand for raisins. It can be seen as a potential investment area. To exploit the market potential, investment in raisins making machines and technology infrastructure would be required. Page 128.



Grape Juice

Global market for grapes juices amounts to USD 4,520.7m in FY 2021. The market is projected to grow annually by 3.90% (CAGR 2021-2026) and volume is expected to amount to 1,561.8ML by 2026.³⁰ During FY 2020, Pakistan's grape juice imports were USD 1.24 million (635 tons) and exports were USD 1,000 (01 ton).²² Investment in juice processing units can be made to tap the unlocked domestic and international market opportunities by making investment in juice processing plants, and marketing and distribution activities.²⁸

Areas to invest Grapes (Cont'd)





Value Chain - Table Grapes

Investment Area

Grapes Harvesting

Grape is hand-picked by skilled labor to protect the sensitive skin of the fruit and prevent it from physiological deterioration or bruising Sorting and Grading

Sorting performed to separate grapes defected during post harvest handling. Grading performed to classify on predefined quality criteria Packing

Grapes are packed in retail and bulk packing Storage and Transport

The gapes are stored in to preserve its nutritional value and prolong its shelf-life and are ideally transported in cold chain Market and Distribution

Grapes are distributed to relevant markets (international export market, high end retail stores and supermalls)

Sorting, Grading and Packing Facilities To seize potential opportunities both in domestic and international markets, investors are encouraged to invest in sorting and grading facilities. Balochistan can be an ideal location investment due to abundance of the grapes in the provinces, its geo-strategic locations and CPEC routes. It will enable the investors to save significant transportation cost which is one of the significant component of grapes value chain as it requires cold chain transport vehicles.

Currently, sorting and grading activities are usually not performed and mixed quality of grapes are packed within the same package which reduce the quality and price of the grapes. Quality of grapes can be improved by establishing facilities and processing units to perform sorting and grading based on variety, color, size and sugar content, quality and these grapes can be sold at higher prices.

Grapes packing is also important to maintain the quality and shape of the fruit intact and to keep its freshness and moisture preserved. In Pakistan, grapes are usually packed in wooden crates or box crates which can impair the fruit quality. In order to enter international market and high-end domestic markets (supermalls and super stores), it is usually recommended to use paper-based packings for grapes.

Investor can introduce fresh grapes products with their brands. Currently, grapes marketing is not that much effective because high quality grapes are moved from Balochistan to other provinces (Sindh and Punjab) through a long supply chain (producers, pre-harvest contractors, commission agents, retailers and consumers) and marketing efforts of each trader is limited to his own role and share. It should be noted that 90% of farmers are selling grapes through contractors in the market. Furthermore, current packing materials (wooden and box crates) do not offer attractive marketing options. Paper boxes can be used with attractive marketing messages and brand name to promote grapes in local and international markets. If investors intend to enter to international grapes market, compliances with strict food safety and traceability standards will also be required.

Cold

Demand for cold chain stores maintaining the freshness of the fruit has been increasing.

As grapes are one of the perishable fruits, therefore, cold chain transports are used to transport grapes from one place to another.

In Pakistan, grapes are transported from one place to another in open trucks which deteriorates the grapes quality.

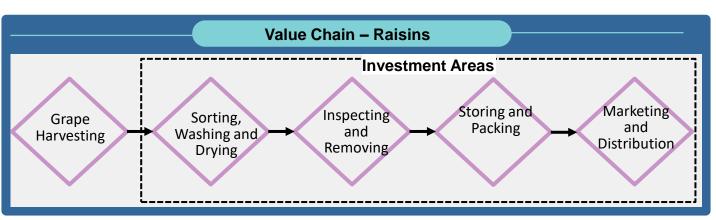
Cold chains can be considered as an area of investment. With introduction of cold chains, post harvest loss of 20% in grapes sector can be reduced.

Areas to invest Grapes (Cont'd)





Investment Opportunities - Grapes Industrial Processing



Industrial Processing Units for Raisins

Raisins have a good market both at domestic and international level. Raisins, due to its great health benefits, can be consumed in its original form or can be used as inputs to bakery items.

In Balochistan, only 13% of productions are dried using the traditional methods to prepare raisins (locally known as 'Kishmish'). Considering the strong demand in domestic and international market, current production levels do not seem to target these markets effectively. During FY 2020, Pakistan has exported only 35 tons of raisins whereas the rest of the world exported 868,209 tons of raisins for USD 1.686 million.

Investor can target international markets by establishing raisins making processing units. In order to enter to high-end markets, investors will be required to maintain quality and traceability standards.



Grapes Juices

Global juice market was valued at USD 4,520.7m in FY 2021. During FY 2020, total global exports in terms quantity were 643,079 tons and in terms of value were USD 679.75 million. Pakistan has also imported 635 tons of grapes juices. It reflects that grapes juice segment has a strong demand at national and international level.

The demand for fruit juices is continuously increasing due to raging benefits of these juices on human health. Additionally, social trends are moving towards eat and drink healthy life style. In Pakistan, many well known brands are already working in this segment such as Nestle, Shezan International, CocaCola, PepsiCo, etc.

Investor can select grapes juices segment for investment and can set up juice processing plant in Balochistan province to unlock full potential of abundance of grapes grown in the province and geostrategic position of Balochistan.

nvestment Potential in Grapes Juice Market Segment - Value

Production and Harvesting Removing stems and cleaning Crushing and extraction filtration and clarification Filling and packing Sterilization and cooling

Marketing and Distribution

Areas to invest Tomatoes





During FY 2020, tomatoes worldwide production was around 251.67 million tons. China, India, Turkey and United States were among top tomatoes producers.¹⁹ The Fresh Tomato market was valued at USD 5,700 Million in 2019 and is expected to reach USD 6,084 Million in 2025 with a CAGR of 1.09% during 2021-2025. ³¹

During FY 2020, Pakistan has produced 594,210 tons and was held on 36th position worldwide for tomato production.¹⁹

Balochistan is a leading tomato growing province and it has potential to expand its production levels further as well. The major tomato growing districts in Balochistan include Qilla Saifullah, Barkhan and Nasirabad. Killa Saifullah is the epicenter of tomato production by contributing 44% to provincial tomato production. Balochistan, due to its climate, has the advantage of production of tomatoes most of the year which increase country's competitiveness in tomatoes production. Dollor, Yanki, California, Denar. Salar, Sandal, Ana and OPV are some tomatoes varities grown in Balochistan Province. ³²

Districts



Quetta, Pishin, Mastung, Qilla Saifullah, Nasirabad, Barkhan, Jaffarabad, Loralai, Awran, Khuzdar

<u>Area under cultivation</u> (hectares)



FY20 – 12,482 FY21 – 23,416

Prod. (tons)



FY20 – 140,296 FY21 – 365,677

Yield (Kgs/ha)



FY20 – 11,240 FY21 - 15,616

USD 3.63 millions

Pakistan's Tomatoes Export in FY 2020²²

During FY 2020, Pakistan has exported 14,638 tons of tomatoes. It represents 2.5% (14,638/594,210) of the tomatoes production. Globally, Mexico, Netherlands, Spain and Morroco leaded the export list for exports of tomatoes.²²



USD 64.5 million

Pakistan's Tomatoes Import in FY 2020²²

In order to meet domestic market demand, Pakistan imports tomatoes from other countries. During FY 2020, 365,380 tons of tomatoes were imported. Pakistan's import from 2018 to 2020 are provided below:

Tomatoes Paste

During FY 2020, Pakistan has imported 4,787 tons of tomatoes pastes for USD 6.8 million to cater domestic needs. Pakistan has also exported tomatoes pastes of around 533 tons for USD 1.2 million. Pakistan remained net importer for tomatoes pastes. ²²

It is estimated that approx. 20% of global tomato produce is processed into making purees, soups, tomato ketchup, pickles, juices, and sauces. It shows that tomatoes pastes have a good market at national and international level. Processed tomato consumption was earlier concentrated in developed countries but with improving economic indicators and westernization in lifestyles, its consumption is rising in developing countries as well. ³³

Financial Year	Import Quantity (Tons)	Import Value (USD million)	
2020	365,380	64.55	-
2019	232,786	42.53	
2018	181,605	30.26	

It can be seen that imports in terms of quantity and value are almost doubled from 2018 to 2020. It shows that Pakistan's domestic need for tomatoes has been continuously increasing. Pakistan is net importer of tomato based products despite significant growth in domestic production. ²²

Areas to invest Tomatoes (Cont'd)





Value Chain - Tomatoes

Harvesting

Labor picks up and gathers tomato crop in an open field. Tomato are transported in open pickups, usually in plastic bags

Washing, Sorting and Grading

Washing the vegetables to remove dirt and separation of crop damaged during harvesting or transportation

Waxing and packing

Tomatoes are artificially coated with a liquid to keep the moisture of the product locked, Packing

Cold Chain

Packed tomatoes are stored in cold chains

Marketing and Distribution

Product is dispatch to relevant market (most probably super market and export markets)

Sorting and Grading Facilities

Tomato demand is continuously increasing in global and national markets. In FY 2020, Pakistan has exported (14,638 tons) only 2.5% of its production whereas global export in volume was around 8 million tons. It reflects that export potential for tomato has not been achieved yet. To increase Pakistan's export share in global export market, investment in sorting and grading facilities will be required. Moreover, grading of tomatoes will fetch better price for each variety of tomato and will add value to other stakeholders down the chain. Overall, the improved post-harvest value chain activities will upgrade quality of offering in local and international market which will help to obtain higher price.³²

Cold Chains

As tomato is a seasonal produce and is perishable in nature, cold chain facilities are required to ensure the availability of the tomatoes throughout the year for industrial and household consumers.

Currently, Pakistan does not have sufficient cold chain facilities to store tomato produce. Therefore, Pakistan imports tomatoes to cater off-season demand which adds import bill burden on Pakistan. Considering the return in form of high prices during off-season sale, cold chain facilities for tomatoes can be seen as a good investment area.³²

Ideal location for tomato cold storage facilities is Balochistan as its one of the leading province in the cultivation of tomatoes. Balochistan, despite being the second largest tomatoes producing province, does not have any cold chain facilities specifically dedicated for tomatoes. If any cold chain facilities for storing tomatoes is established, it may help to reduce the post harvest losses in tomatoes sector. ³²

Investment Opportunities in Industrial Processing – Tomatoes

Production and Harvesting

Washing, Sorting and Crushing

Preheating, Peeling, Pulping

Refining, Vacuum Evaporation

Sterilizing, Packaging

Marketing and Distribution

Tomatoes Pastes

Demand for tomatoes pastes is on rise both in domestic and international markets. It can be observed that Pakistan's import of tomatoes pastes in 2017 were 3,596 tons which is increased to 4,787 tons in FY2020, giving an increase of 33%.²²

There are many well known brands such as Shan Foods, Shangrila, National Foods, etc. already operating in this market segment. Investors can target this sector by setting up a tomatoes pastes preparing plant in the Balochistan's province to fully exploit export markets through effective utilization of geostrategic position of Balochistan.

Areas to invest Onions





Onion is one of the most widely consumed condiment across the globe. It can be used as fresh and in preparation of many dishes. Onions are also used in soups, sauces and for seasoning foods. The small bulbs are being used to be pickled in vinegar. Popular onion products include dehydrated onion, powdered onion, and onion oil.

Globally, approx. 98 million tons of onion is produced on about 5.2 million hectares of cultivated land per annum. India, China, United States, Egypt and Turkey are among top onion producers.

During FY 2020, Pakistan has produced 2,122,000 tons and stood at 6th position worldwide for onion production.¹⁹

Balochistan is a leading onion growing province contributing approx. 30% to the national production. The major onion growing districts in Balochistan include Nasirabad, Khuzdar and Kalat which contribute 67% to total onion production of the province. Nasirabad is the epicenter of onion production by contributing 31% to provincial onion production.

Districts



Nasirabad, Khuzdar, Kalat, Jaffarabad, Chagai, Mastung, Killa Saifullah, Quetta

<u>Area under cultivation</u> (hectares)



FY20 – 36,130 FY21 – 39,063

Prod. (tons)



FY20 – 694,344 FY21– 672,170

Yield (Kgs/ha)



FY20 – 19.218 FY21- 17,207



USD .124 million

Pakistan's Onion Export in FY 2020²²

During FY 2020, Pakistan has exported 303,989 tons of onion. It represents 14.3% of the onions production. Globally, Netherlands, China, Mexico and India are the top exporters of onions.²²

Pakistan stood 8th largest exporter of onions. However, with the opening of CPEC trade routes, the country is expected to tap bigger share in Central Asian countries while taking seasonal advantage.

Pakistan also has a comparative advantage over major onion producing countries like China in onion production because of its low farm gate prices due to its cheap labor. Value-added onion export is expected to generate additional foreign exchange of USD 1.83 million.

The per capita consumption of onion is rising in both domestic and international market. Further, the growing population is expected to largely increase the demand for onion. Balochistan has advantage of large farm sizes and proximity to urban markets nationally like Karachi and internationally like Middle East. It has significant potential to capture business opportunity by investing in storage and processing units. With improved export quality and expanding ecommerce, a competitive price can be obtained for the commodity.



USD .028 million

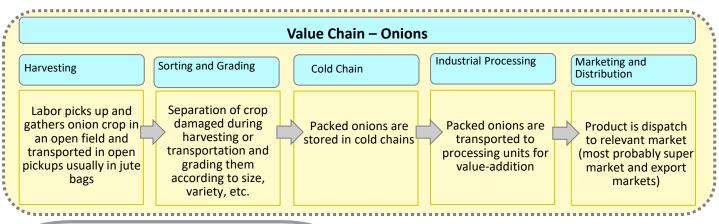
Pakistan's Onion Import in FY 2020²²

In order to meet domestic market demand during seasonal fluctuation, Pakistan imports onion from other countries. During FY 2020, 165,237 tons of onion were imported.

Areas to invest Onions (Cont'd)







Sorting and Grading Facilities

Basic value-addition steps like onion grading, storage are very often which are missed by traders to achieve higher prices. Also, process to make value added products is non-existent in the province. Mostly, traders simply pack a semigraded product in rudimentary plastic or jute bags, often without any labels or brand name.

To gain higher rates in the local market and increase Pakistan's export share in global onion market, investment in sorting and grading facilities is needful. In addition, grading of onion will obtain competitive price for each variety of onion and will add value to other stakeholders across the value chain. The average export price of Pakistani onion is lower than the international average price. A major reason of this price differential is the low quality of the produce. Adopting proper value chain improvement and commercial strategies and upgrading quality of offering in local and international market which will help to obtain higher price. Currently, there is no processing of onion is being carried out in the country.

Cold Chains

Currently, fresh onion is simply sorted based on size, color etc., packed in jute bags and transported in unrefrigerated containers. These are sold in auction markets in urban centers. Clearly, the quality of onion deteriorates in such transport and storage conditions, consequently the onion then fetches a lower price than if it were sold as a value-added product or transported in proper refrigerated vehicles.

There is no availability of cold chains for onions in Balochistan at present. Hence, potential investors have a significant scope to capitalize on value-added onions, especially during off-season (December to January) when the supply of onion drops and prices soar to up to five times higher than that during the normal season. Onion can be bought in between September to November when onion is harvested and prices are lowest due to excess supply. The post-harvest losses reported in Balochistan stood at 30%. Cold chains will help to keep onions dry by maintaining its low humidity and reduce post-harvest losses thereby. Onion cold chains will give investors opportunity to hedge their position during winters while also meeting consumer demand.

Investment Opportunities in Industrial Processing – Onions

Onion Dried / Dehydrated (Flakes)

Globally, the changing lifestyle is inclined towards consumption of processed food for ease / convenience. Locally, some farmers are frying onion flakes in oil and after basic branding and packaging it is being sold to UAE and other Gulf markets. The dried onion is in high demand in the Middle East and Gulf countries. Drying is a very effective method to reduce post-harvest losses. Dried onion is used in a variety of ways including taste enhancers or flavor ingredient like spices and cooked food. Some market players have also processed onions into paste which can be used in preparing meals for household consumption. Other popular onion products include onion oil. There is immense potential for introducing new products and tapping wider markets in onion processing.

Areas to invest Olives





In 2019, the global olives market was valued at USD 13.03 billion 35 and it is anticipated to witness the CAGR at 4.5% during 2021-2026. 34

Olives were harvested on 10,578,200 hectares of area in 2019.⁵ The top olive producing countries in 2019 include Spain (5.96 million tons), Greece (2.8 million tons), Italy (2.2 million tons) and Morocco (1.91 million tons).¹⁹

The top olive importing countries include the United States, the European Union, Brazil and Russia. Pakistan has been dependent on olive producer countries as well.²²

Olives are consumed as table olives or processed into oil, pickle, syrup and tea. ³⁶

In Pakistan, olives are grown over 31,000 acres with 3.6 million plants. Out of which half a million plants are being grown over an area of over 9,391 acres in Balochistan.³⁷

Districts

Zhob, Khuzdar, Loralai, Kila Saifullah and Musa Khel.



Area under cultivation



FY20 - 200 FY21 - 780

Prod. (tons)



FY20 - 1,894

FY21 - 2,308

Yield (Kgs/ha)



FY20 – 9,470

FY21-9,821

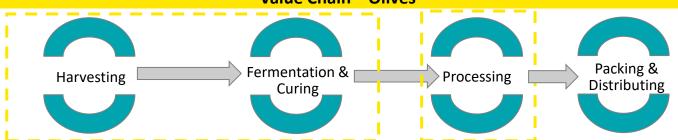


USD 14.18 million

Pakistan's Import of Olives and Olives based products – FY 2020 22

Pakistan presently produces 34% of the edible oils it consumes domestically and is forced to spend significant foreign exchange on the import of edible oil to meet domestic demand. Therefore, the government of Pakistan has been encouraging cultivation of oil plants and olive trees are one of the priority sectors.³⁸

Value Chain - Olives



The olive trees ripen in summer and by late summer its fruit color changes from green to purple to black and it is ready for harvesting. This process is called Veraison. Harvesting of olive fruit should be done carefully to avoid damaging the tree and prevent deterioration of olive oil chemistry.

Olive is naturally a bitter fruit. To make it palatable, it is fermented and cured using brine mixture made of salt and water mainly.

Olives selected for extracting oil are defoliated and washed. Then they are pressed under pressure to obtain oil from the fruit's flesh.

Fresh olives are also sold in the market.

Areas to invest Olives (Cont'd)





Olives - Production

There lies tremendous potential for commercializing olives production at large scale in the province as it is estimated that Pakistan has vast lands suitable for olive production even more than the existing major olive producing countries. 36 Thus, if well capitalized on this opportunity, Pakistan is likely to become a leading olive producing country which will not only help to reduce the import burden but enhance potential to increase the export as the olive consumption has been rising in Asia, United States and Australia.22

In FY21, Olives were cultivated on 235 hectares in Balochistan which yielded 9,821 kgs per acre. Olives can be cultivated in 26 districts of Balochistan by utilizing the wasteland without disturbing other existing field crops. The potential areas found suitable for olive cultivation are Zhob, Khuzdar, Loralai, Kila Saifullah and Musa Khel. 36 Out of 11 D5 nursery tunnels in the country, four are situated in Balochistan (Loralai 2, Killah Saifullah 1, Khuzdar 1).39



Carefully picked up by processing facility

hand and post-harvest state of ripeness and quality, removed and washed with transport from fields to Stored for the short period to water. Grinding of olives in get warm for effective oil extraction

Categorized based on the Stems, leaves or twigs are Separation of oil from rest homogenized paste and mixing for 20-25 minutes.

of the components usually by centrifugation method. Stored in under ground vats.

Packed in canto keep the original color of the oil intact. Distribution to relevant product markets

Olives - Processing

As olive is a naturally bitter fruit, the table olives are also required an elaboration process to make them suitable for consumption. In 2020, Pakistan imported preserved olives worth USD 2.85 million.²² Olive oil is the most demanded processed olive product worldwide. In 2019, the global olive oil market was estimated at USD 13.03 billion and it is anticipated to reach USD 16.64 billion by 2027, registering a CAGR of 3.2% during 2020-2027.⁴⁰ The demand has been rising domestically as well. In 2019, Pakistan imported virgin olive oil worth USD 6.65 million.⁴¹ Given the increase in olive cultivation and demand for olive oil, there is an intense need to plant more extraction units. At present, there are only nine olive oil extraction units across the country of which two are located in Balochistan, one having capacity of 600 kg per hour (Quetta) and second having capacity of 100 kg per hour (Loralai).³⁹ The PakOlive has been established by the government to issue quality certification and allow branding to tap export market. In 2019, Pakistan exported USD 40.4K olive oil, mostly destined to Myanmar, Mozambique and the United States. 41 There is significant potential to explore further markets.

Government Initiatives





Government's Policy Support

The National Food Security Policy of MNFSR (2018) aims to facilitate provinces in improving market intelligence and ICT for informed decision making, regulation of markets for better transparency and access, providing policy support for enhancing modern cold storage facilities, improved post-harvest handling practices to reduce post-harvest losses and improved quality for exports, developing standard grading, processing and packaging entrepreneurship etc.⁴²



Creating awareness through educational and training courses

Balochistan University of Information Technology, Engineering and Management Sciences (BUITEMS)⁴⁵ and University of Balochistan (UOB) offers the supply chain management and agriculture economics course in undergraduate and graduate levels. Balochistan Agriculture College (BAC) offers some courses on agriculture value chain.⁴⁶



Incentives/ Schemes for Financial Support of SMEs

Government encouragement for producing value added goods supporting set up of industry. Government has introduced two schemes to encourage investment in the industry.



Refinance Scheme for Working Capital Financing of Small Enterprises and Low-End Medium Enterprises⁴³

Eligibility - Fruits, vegetables and food processing & packaging and dates processing units

Incentives

- Maximum financing limit is Rs 50 million.
- Maximum loan tenure will be one year.
- Mark-up rate will be upto 6% p.a.

02

Financing Facility for Storage of Agriculture Produce⁴⁴

<u>Eligibility</u> - Warehouses & Cold Storage facilities for storing agricultural produce

Incentives

- Financing limit for a single project is Rs. 500 million
- Maximum financing tenure is 7 years (10 years for SMEs)
- Mark-up rate of upto 6 percent p.a.



Government Initiatives (Cont'd)





Improving Water Access¹

Government of Balochistan has been doing multiple projects to improve the water access and irrigation system in the province. Measures include following projects:

Project	Irrigated Area	Status
Kacchi Canal Phase I	72,000 Acres	Phase I completed. Out of 102,000 acres CCA about 50,000 acres have been developed of Dera Bugti.
Naulong Dam	47,000 acres (4.4 MW power gen)	Design completed. Costing Rs. 35,484 million is under approval process.
Right Bank Outfall III	3520 cusecs	98% completed





Balochistan Board of Investment and Trade (BBoIT):

Focused towards facilitating and guiding investors in order to help realize Balochistan's maximum potential.

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Impact of China Pakistan Economic Corridor





- Increased connectivity due to CPEC roads will enable the quicker access to local and international markets with reduced transportation costs.
- Balochistan has the geo-strategic importance for exporting its processed fruit and vegetable products to the rest of the world. Currently, fruits and vegetables travel to Afghanistan and central Asia through Chaman and Torkham borders.
- Moreover, Gawader is a port to both the Persian Gulf and Central Asian countries, which after development will effectively link some 64 Asian and European countries. Gawader has all the necessary features to turn into a regional center of trade and transportation.
- Under CPEC developments, the export of fruits is likely to increase from Balochistan due to the improvement of the road infrastructure, energy supply and the establishment of economic zones.
- There will be an opportunity for rapid industrial development through special economic zones planned in connection with CPEC.
- The Bostan Industrial Zone (within CPEC) is situated in district Pishin bordered with Quetta (provided with enough skilled labour), Qila Saifullah (famous livestock, fruits and vegetables), Ziarat (famous for dry fruits, apples and grapes) and Qila Abdullah (climate suitable for fruits and vegetables). The zone is situated at area of 1000 Acres.⁴⁷
- Investors interested in the fruit and vegetable processing sector can benefit from the trade routes and Special Economic Zones that have been established as a result of CPEC.⁴⁹



China's imports of fruits and vegetables from Pakistan was USD 14.5 million in 2018, while its total imports of horticulture were USD 10.7 billion. There is a year on year growth in imports of fruits by China, a trend which is likely to continue and create opportunity for Balochistan grab the fair share of China's import.



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