

Bank Financing Towards Green Environment-  
Establishment of Fruit Farms. Development of a new  
Bank Lending Product.



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In

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## BUSINESS PROJECT ACCEPTANCE CERTIFICATE

It is Certified that final copy of EMBA Business Project written by Muhammad Arshad Registration No. 363127 of EMBA 2K21 has been vetted by undersigned, found complete in all aspects as per NUST Statutes/Regulations/MS Policy, is free of errors, and mistakes and is accepted as fulfillment for award of EMBA degree. It is further certified that necessary amendments as pointed out by GEC members of the scholar have also been incorporated in the said business project.

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## **ABSTRACT**

Various economists have different views about the role of commercial banks in economic development of an economy.

Schumpeter says, “It is the banking system which serves as a key agent along with the entrepreneur in the process of economic development”.

According to Prof. Cameron in his “Banking and Economic Development”, “a banking system may make a positive contribution to economic growth and development.”

Bank lending plays a vital role in the economic development of an economy especially for underdeveloped countries like Pakistan. The study examined the association among banks credit to private sector and economic growth in Pakistan. Economic growth was taken as dependent variable, while bank credit to private sector, interest rate, inflation, investment to GDP and government consumptions were taken as independent variables. Secondary data were collected from World Bank Indicator, ranging for the period 1973 to 2013. Descriptive research and correlation were used to check the normality of data. Unit root test was used to check the stationarity of variables. Co-integration VECUM and Granger Causality test were statistically used to test the variable relationship and causality effect of the variable. Regression analysis was used to analyze the impact of bank credit on economic growth. The findings of the study showed that bank credit had extensive relationship with economic progression; in short term the relationship was also significant. Regression analysis showed that there was adverse impact of bank credit on economic growth in Pakistan. However, problem associated with bank credit facility is the constraint and regulation imposed by SBP on the percentage of credit to be given to the Entrepreneurs. For solitary in the meantime bank lending has a casual influence on economic growth, there is a policy need to give devotion to liberalization the monetary sector.

On the other hand, according to the 2020 edition of the environmental performance index (EPI) ranking released by Yale Center for Environmental Law & Policy, Pakistan ranks 142 with an EPI score of 33.1, an increase of 6.1 over a 10-year period. It ranked 180 in terms of air quality. The climatic changes and global warming are the most alarming issues risking millions of life across country. The major reasons of these environmental issues are carbon emissions, population

explosion, and deforestation. These are serious environmental problems that Pakistan is facing and they are getting worse as the country's economy expands and the population grows. Although some NGOs and government departments have taken initiatives to stop environmental degradation, Pakistan's environmental issues still remain.

This business project is based on the development of a new banking lending product that will gear up circulation of money in the economy, leads to economic development, will generate various direct and indirect jobs and the main benefit is that it will blowout a green environment in the Terrestrial of Pakistan that will also enable to overcome the threats of climate changes in PAKISTAN.

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## 01. Introduction to the Project:

The latest IPCC (The Intergovernmental Panel on Climate Change) report (IPCC 2018) endorsed that human activities caused global warming and are likely to further accelerate it by reaching 1.5 °C above pre-industrial levels between 2030 and 2052 based on a business-as-usual scenario.

The IPCC report set highly ambitious targets of reducing global net anthropogenic CO<sub>2</sub> emissions by approximately 45% from 2010 levels by 2030 and reaching net zero around 2050 to meet 1.5 °C of global warming. Limiting global warming to 1.5 °C certainly requires social and business transformations and emissions reductions across all sectors. Whilst the National Climate Assessment (USGCRP 2018) was more limited in scope by focusing its findings on the United States, it reached similar conclusions and suggested measures to reduce risks through emissions mitigation and adaptation actions. These findings prove that there is still a long way to go despite negative impacts arising from climate change and global warming.

To achieve such a structural transformation, the magnitude of the investment required is enormous. The IPCC report projected USD 2.4 trillion in clean energy is needed every year through 2035 and between USD 1.6 and USD 3.8 trillion in energy system supply-side investments every year through 2050, which is equivalent to USD 51.2 and USD 122 trillion exclusively for energy investments. Considering the significant investment needs, the financial sector is expected to play a pivotal role in providing necessary financial resources as it is the backbone of the real economy. The role of the banking sector is central in meeting financial needs of the private sector and delivering credit to households and individuals. The banking sector also plays a critical role in supporting a country's adaptation to climate change and enhancing its financial resilience to climate risks. Banks can help reduce risks associated with climate change and sustainability, mitigate the impact of these risks, adapt to climate change and support recovery by reallocating financing to climate-sensitive sectors.

While green banking is still a new concept in the field of climate finance, it can serve the United Nations Framework Convention on Climate Change (UNFCCC)'s objectives by financing climate change mitigation and adaptation activities in collaboration with the private sector. This project aims to identify the challenges that climate change presents to the financial sector and describes and analyzes various tools for financial institutions that can help manage climate and credit risks while developing business opportunities in parallel. Financial institutions, especially banks, have a unique market position as they



have deep market knowledge and experience across all economic sectors. They arguably have one of the widest networks, outreaches and client bases and can shift consumer behavior by scaling up and redirecting financing flow towards low-carbon and climate-resilient investments.

Many international and local banks have undertaken various green banking initiatives to seize business opportunities, manage risks, comply with national and regional regulations and guidelines, enable countries to deliver their climate ambitions and encourage corporate social responsibility (CSR).

All financial institution including bank/DFIs in Pakistan are having their share in Fruit Farming financing, however, their main focus is on crops cultivation and towards modernization of Fruit Farming sector in Pakistan. Fruit Farming financing in Pakistan are accompanying with short term financing for purchase of inputs and midterm financing for purchase of machinery, constructions of where houses and atomization of Fruit Farming techniques. Long term financing in Fruit Farming sector is anhydride in Pakistan due to short term Fruit Farming crops.

To begin with, ‘agri-credit’ or ‘Fruit Farming credit’ is a type of funding provided to Fruit Farming producers, farmers, or to individuals who are looking forward to launching a business in the Fruit Farming sector. This funding is repaid by the lender against a certain interest rate to the bank. The most popular form of Fruit Farming credit in Pakistan is bank loans, while the less-common include a letter of credit or banker’s acceptance document.

That said, here’s our compilation of the banks providing Fruit Farming loans in Pakistan:

1. Bank
2. Allied Bank Limited
3. Habib Bank Limited
4. JS Bank
5. MCB Bank
6. National Bank of Pakistan
7. Soneri Bank Limited
8. Zarai Taraqiati Bank Limited
9. Bank Al-Habib

All above banks are dealing with following types of Agri-financing/loans: -

1. Fruit Farming revolving/running finance/credit (for purchase of inputs).

2. Tractor financing.
3. Agriculture finance for dairy farming.
4. Fruit Farming finance for poultry farming and allied activities.
5. Dairy and Livestock Finance.
6. Fisheries Finance.
7. Floriculture in Pakistan.
8. Kinnow processing plant.
9. Dehydrated fruits and vegetable plant feasibility.

**At present, there is no specific lending product in Pakistan's Banking Sector towards Fruit Farming. This project is a new idea with an objective to attain green environment, through green banking, by developing a new lending product for banks in Pakistan. This will lead to economic development, poverty reductions, increase employment in addition to achieve the objective of green environment in PAKISTAN to overcome the threat of untoward atmosphere situation due to global climate change.**

## 02. Objective of the Project.

Bank's lending for towards Fruit Farms Cultivation is a new concept and a very refreshing addition to existing bank's lending product in Fruit Farming sector.

This Business Project regarding Development of a new bank's lending product to achieve followings: -

### ✓ **Economic Benefits/Objectives: -**

- a. One-time Capital Investment and very low operational cost.
- b. High turnover every year.
- c. Per Unit Yields are Height:
- d. High Net Profit
- e. Economic Benefits at both MACRO & MICRO level.
- f. To increase circulation of money in the economy.
- g. Growth in GDP.
- h. Reduction in Un-Employment by creating direct and indirect employment opportunities.
- i. To overcome the threat of unfavorable balance of payment.
- j. Increase exports.
- k. Source of foreign Exchange.
- l. Development of Fruit Processing related industries.
- m. Extra benefit from Agri land in addition to cultivation of suitable crops including vegetables in addition to cultivation of fruits Fruit Farming.
- n. Source of Raw Material for Agro Based Industries.
- o. Utilization of Waste and Barren Lands for Production

### ✓ **Social, Cultural & Atmosphere/Climate Benefits/Objectives: -**

Climate change directly impacts where people live. One of the most pressing risks for human health associated with a changing climate are the increases in heat-related deaths, diseases, and infectious diseases. The increase in heat and heat-related health problems is especially prevalent in cities, where the Urban Heat Island Effect increases the impact of heat waves. Properly placed Fruit Farming can mitigate temperatures in built environments. Not only do Fruit Farming provide shade through intercepting and absorbing light, but through evapotranspiration Fruit Farming actively

cool the air of cities. An analysis of 94 urban areas around the world indicates that Fruit Farming have a significant impact on the temperature, and are responsible for, on average, 1.9°C (*SD* 2.3) of cooling in a city. Fruit Farming incorporated into the built environment can reduce a city's temperature by 9°C. This reduction of temperature in major cities can ultimately help ameliorate the impact of climate change on human health.

Fruit Farming are considered “decentralized green infrastructure” and can be important tools for managing water, especially in an urban ecosystem. Water runoff is a serious issue in the city environment, as runoff can increase the exposure to pollution and cause property damage. Fruit Farming can help reduce and intercept storm water and improve the quality of runoff water. With less contact on impervious surfaces, storm water is cooler and has fewer pollutants when it enters local waterways and water-related ecosystems. Fruit Farming can also be valuable in phytoremediation, where they can remove heavy metals and other contaminants from the environment. While gray infrastructure depreciates over time, Fruit Farming appreciate in value as they mature. Therefore, an investment in Fruit Farming can make economic sense and align with the UN SDG.

✓ **Reducing Climate Change.**

If people are good at something, then it is building up excess carbon dioxide in the atmosphere. Harmful CO<sub>2</sub> contributes to climate change; the biggest current problem the world has to deal with. Fruit Farming, however, help fight it. They absorb CO<sub>2</sub> removing it from the air and storing it while releasing oxygen. Annually, an acre of Fruit Farming absorbs the amount of carbon dioxide equal to driving your car 26 000 miles. Fruit Farming are our main survival tools; only one Fruit Farming can produce enough oxygen for four people.

✓ **Purifying Air**

Have you ever felt that feeling of „cleaner air” in the woods or by the seaside? Well, you were right because it is well known that Fruit Farming do purify the air. They absorb pollutant gases such as nitrogen oxides, ozone, ammonia, sulfur dioxide. Fruit Farming also absorb odors and act as a filter as little particulates get trapped in leaves. A mature acre of Fruit Farming can yearly provide oxygen for 18 people.

### ✓ **Cooling Down the Streets**

Every year we listen to the shocking global warming news. For instance, the average temperature of Karachi has risen by 6F in 50 years, and the average global temperature grew by 1.4 F. This happens as Fruit Farming coverage declines. Removing Fruit Farming and replacing them with heat absorbing asphalt roads and buildings makes cities much warmer. Fruit Farming are cooling cities by up to 10 F by providing shade and releasing water.

### ✓ **Natural Air Conditioning**

Did you know that strategically placed Fruit Farming around your home can significantly cut air conditioning needs? Not only will this make your wallet thicker, but it will also reduce carbon dioxide and emissions from power plants. Architects and environmentalists sat together and came up with the great solution – green roofs. Green roofs are an amazing way to incorporate vegetation to your home and provide environmental benefits for your community while saving money on cooling bills.

## **5. Saving Water**

Except for cooling, Fruit Framings also help to save water. Because of the shade they provide, water will evaporate slowly from low vegetation. Fruit Framings need about 15 water gallons a week to survive, and they release about 200-450 gallons of water per day.

## **6. Preventing Water Pollution**

Storm water can be full of phosphorus pollutants and nitrogen. Without Fruit Framings, storm water flows into oceans and waters without being filtered. Fruit Framings break the rainfall and allow water to enter the earth and seep into the soil. Therefore, they prevent storm water from polluting oceans. Except for Fruit Framings, green infrastructure like green roof can help sooth effects of storm water.

## **7. Providing Shelters for Wildlife**

Fruit Framings also contribute to boosting biodiversity as they become a food source and natural habitat for wildlife. One apple Fruit Farming produces about 20 fruit bushels per year which can

nourish many birds, insects, and wildlife. It can be planted on a very small surface but has a fantastic environmental effect. Fruit Framings that are most planted as homes for birds, squirrels, and bees are oak and sycamore.

## **8. Renewable Energy Source**

Nowadays, one of the biggest world problems is fossil fuels. Except for their toxic properties, they will also not be around forever. So many companies are focusing on renewable sources of energy. If harvested and treated sustainably, Fruit Framings can become a great renewable source of energy. They are simple to use, have been around since the beginning of time, and with smart forest management they can become an excellent eco-friendly fuel.

### ✓ **Reinforcing Soil**

Fruit Framing are one of the best partners when it comes to agriculture. They act positively in several ways: they reduce soil erosion, increase fertility and help soil obtain moisture. Fallen Fruit Farming leaves lower reduce soil temperature and prevent soil from losing too much moisture. Decaying leaves that fall onto the ground turn into nutrients for Fruit Farming growth and promote microorganism development.

### ✓ **Erosion Control**

Rain and wind are two primary erosion forces that damage the bare soil. As they fall from heights, drops of rain gain power and momentum which is strong enough to penetrate soil once they hit the ground. On the other hand, if the land is dried out, then wind can do significant damage. Fruit Farming break droplets of rain and weaken their strength while roots hold the soil together and protect it from effects of wind.

### ✓ **Final Thoughts.**

There are many environmental benefits of planting a Fruit Farming. Strategically planting Fruit trees around your home can have tremendous benefits on the environment. Not only will you help restore life quality in your community, contribute to the environment and help fight climate change, but you will also set an example. Therefore, planting a beautiful Fruit Tree is always a good idea.

### 03. **Financial Institutions (Banks/DFIs) and their role of Lending.**

A financial institution (FI) is a company engaged in the business of dealing with financial and monetary transactions such as deposits, loans, investments, and currency exchange. Financial institutions encompass a broad range of business operations within the financial services sector including banks, trust companies, insurance companies, brokerage firms, and investment dealers. Virtually everyone living in a developed economy has an ongoing or at least periodic need for the services of financial institutions (Investopedia).

#### **Types of Financial Institutions: -**

Financial institutions offer a wide range of products and services for individual and commercial clients. The specific services offered vary widely between different types of financial institutions.

##### ***1. Commercial Banks***

A commercial bank is a type of financial institution that accepts deposits, offers checking account services, makes business, personal, and mortgage loans, and offers basic financial products like certificates of deposit (CDs) and savings accounts to individuals and small businesses. A commercial bank is where most people do their banking, as opposed to an investment bank.

Banks and similar business entities, such as thrifts or credit unions, offer the most commonly recognized and frequently used financial services: checking and savings accounts, home mortgages, and other types of loans for retail and commercial customers. Banks also act as payment agents via credit cards, wire transfers, and currency exchange.

Financial institutions can operate at several scales from local community credit unions to international investment banks.

##### ***2. Investment Banks***

Investment banks specialize in providing services designed to facilitate business operations, such as capital expenditure financing and equity offerings, including initial public offerings (IPOs). They also commonly offer brokerage services for investors, act as market makers for trading exchanges, and manage mergers, acquisitions, and other corporate restructurings.

### **3. Insurance Companies**

Among the most familiar non-bank financial institutions are insurance companies. Providing insurance, whether for individuals or corporations, is one of the oldest financial services. Protection of assets and protection against financial risk, secured through insurance products, is an essential service that facilitates individual and corporate investments that fuel economic growth.

### **4. Brokerage Firms**

Investment companies and brokerages, such as mutual fund and exchange-traded fund (ETF) provider Fidelity Investments, specialize in providing investment services that include wealth management and financial advisory services. They also provide access to investment products that may range from stocks and bonds all the way to lesser-known alternative investments, such as hedge funds and private equity investments.

### **Function of a Commercial Bank: -**

The two most distinctive features of a commercial bank are borrowing and lending, i.e.,

#### **1. Acceptance of deposits and**

#### **2. Lending of money to projects to earn Interest (profit).**

In short, banks borrow to lend. The rate of interest offered by the banks to depositors is called the borrowing rate while the rate at which banks lend out is called lending rate. The difference between the rates is called 'spread' which is appropriated by the banks. Mind, all financial institutions are not commercial banks because only those which perform dual functions of (i) accepting deposits and (ii) giving loans are termed as commercial banks. For example, post offices are not bank because they do not give loans. Functions of commercial banks are classified in to two main categories

a) Primary functions (Accepting Deposits & Lending)

b) Secondary functions (Investment, Agency and Misc. Functions)

In this business project, our focus is on Bank's Lending.



## **Bank's Lending**

A term loan is simply a loan provided for business purposes that needs to be paid back within a specified time frame. It typically carries a fixed interest rate, monthly or quarterly repayment schedule - and includes a set maturity date. Term loans can be both secure (i.e. some collateral is provided) and unsecured. A secured term loan will usually have a lower interest rate than an unsecured one. Depending upon the repayment period this loan type is classified as under:

- Short term loan: Repayment period less than 1 year.
- Medium term loan: Repayment period between 1 to 3 years.
- Long term loan: Repayment period above 3 years.

## **Bank Overdraft Facility.**

A Bank Overdraft Facility refers to the ability to draw funds greater than are available in the company's current account. The actual size of the facility and the interest to be paid on overdrafts is typically agreed to prior to sanction. An overdraft facility is considered as a source of short term funding as it can be covered with the next deposit.

## **Letter of Credit.**

A letter of credit is a document issued by a financial institution assuring payment to a seller provided certain documents have been presented to the bank. This ensures the payment will be made as long as the services are performed (usually the dispatch of goods). Hence, a Letter of Credit serves as a guarantee to the seller that he or she will be paid as agreed. It is often used in trade financing when goods are sold to overseas customers or the trading parties are not well known to each other.

## **Bank Guarantee.**

A bank guarantee is a 'letter of guarantee' issued by a bank on behalf of its customer, to a third party (the beneficiary) guaranteeing that certain sum of money shall be paid by the bank to the third party within its validity period on presentation of the letter of guarantee. A letter of guarantee usually sets out certain conditions under which the guarantee can be invoked. Unlike a line of credit, the sum is only paid if the opposing party does not fulfil the stipulated obligations under the contract. A bank guarantee is usually used to insure a buyer or seller from loss or damage due to non-performance by the other party in a contract.

**Lease Finance.**

Lease Financing is a modern financing method that allows individuals or companies to own and make use of certain assets for medium to long term financing periods in return for previously - set interim payments. The lessor, who is the finance company, purchases the assets and becomes its legal owner. At the conclusion of the leasing period, the lessor would have recovered a large portion (or all) of the initial cost of the identified asset, in addition to interest earned from the rentals or installments paid by the lessee. The lessee also has the option to acquire ownership of the identified asset by, for example, paying the final rental or installment, or by bargaining a final purchase price with the lessor. Throughout the duration of the leasing period, the lessor (finance company) remains the legal owner of the asset. However, the lessee has control over the asset, and makes use of it as required.

**SME Collateral free loan.**

This is usually a business loan offered to SMEs and are collateral-free or without third party guarantee. Here the borrower is not required to provide collateral to avail the loan. It is made available to SMEs in both the start-up as well as existent phases to serve working capital requirements, purchase of machines, support expansion plans. However, it is to be noted that small businesses involved in retail trade are not eligible for these type of loans.

**Construction Equipment loans.**

Construction Equipment loans are provided for purchase of both new and used equipment like excavators, backhoe loaders, cranes, higher end construction equipment's etc. The tenure of such loans vary from 12 to 60 months depending upon the deal and nature of repayment capacity. This is usually a secured loan where the machine itself is hypothecated until the loan is repaid.

**SME Credit Card.**

A SME Credit Card is a loan type that is made available either in Cash Credit or in Term Loan - type, the quantum of credit being up to 10 lakhs.

This loan facility can be used by small industrial units, small retail trader, small business enterprises and transport traders. The repayment period for Term Loans is 5 years and 3 years for Cash Credit.

**Commercial Vehicle Loans.**

Commercial Vehicle Loans enables a borrower to purchase vehicles like trucks, buses, tippers, light commercial vehicles. The tenure of such loans vary from 12 to 60 months depending upon the deal and nature of repayment capacity.

This loan facility is provided to companies with more than two years of business experience, existing owners of at least two commercial vehicles, captive customers and transporters.

### **Consumer Finance**

It includes house loan, general purpose loan, advance salary loan, credit cards and auto lease etc.

#### 04. **Role of Bank's Lending in Economic development of Pakistan.**

Bank credit plays an important role in the economy of any nation. The current study examined the association among bank credit to private sector and economic growth in Pakistan. Economic growth was taken as dependent variable, while bank credit to private sector, interest rate, inflation, investment to GDP and government consumptions were taken as independent variables. Secondary data were collected from World Bank Indicator, ranging for the period 1973 to 2013.

Descriptive research and correlation were used to check the normality of data. Unit root test was used to check the stationarity of variables. Co-integration VECUM and Granger Causality test were statistically used to test the variable relationship and causality effect of the variable. Regression analysis was used to analyze the impact of bank credit on economic growth. The findings of the study showed that bank credit had extensive relationship with economic progression; in short term the relationship was also significant. Regression analysis showed that there was adverse impact of bank credit on economic growth in Pakistan. However, problem associated with bank credit facility is the constraint and regulation imposed by SBP on the percentage of credit to be given to the Entrepreneurs. For solitary in the meantime bank lending has a casual influence on economic growth, there is a policy need to give devotion to liberalization the monetary sector.

Banks fulfil several key functions in the economy. They improve the allocation of scarce capital by extending credit to where it is most productive, as well as allowing households to plan their consumption over time through saving and borrowing (Allen and Gale 2000). Banks also provide liquidity to the economy by funding illiquid assets with liquid liabilities. By doing so, banks help savers manage their liquidity risk, while at the same time enabling long-term investment. While existing theory points to liquidity creation as a key mechanism through which a more developed banking system helps economies grow faster, the empirical evidence.

## 05. Fruit Farming Financing in Pakistan

Fruit Farming sector is crucial to the country's economic growth, food security, employment generation and poverty alleviation particularly, at the rural level. It contributes 19.2 percent to the GDP and provides employment to around 38.5 percent of the labor force. More than 65-70 percent of the population depends on agriculture for its livelihood. Fruit Farming growth rate has been constrained by shrinking arable land, climate change, water shortages, and large-scale population and labor shift from rural to urban areas. Increasing Fruit Farming productivity, therefore, requires adoption of new approaches. With strong forward and backward linkages with the secondary (industrial) and tertiary (services) sectors, it can play a pivotal role to spur economic growth. However, this sector has remained prone to several challenges like climate change, variance in temperature, water shortage, and changes in pattern of precipitation along with increase in input prices.

The agriculture sector of Pakistan is facing many challenges including water and energy shortages along with the rising prices of many important inputs such as seeds, fertilizers, pesticides, and obtaining easy loan. For the most part small farmers are confronting strict conditions and they appear to be unable to live with agriculture sector, they obtain credit depending on their socio-economic conditions and they need credit to buy seeds, fertilizer, pesticides, machinery and other necessary inputs. Fruit Farming credit means credit disbursed to farmers to meet their financial needs. Fruit Farming credit has the ability to provide financial resources to farmers, especially for the purchase of above mentioned things. There are two main sources from which this Fruit Farming credit comes, either from farmer's savings or borrowing from some institutions. But as we know, farmers from less developed countries like Pakistan do not have excess money to save and so they have to depend on formal and informal lenders including specialized banks such as Zarai Taraqati Bank Limited (ZTBL), commercial banks, cooperatives or some commission agents. Credit plays an instrumental role in agriculture sector of Pakistan. Farmers are lacking technical knowhow and finances to carry out the necessary farming practices. If this issue not addressed in an appropriate way can cause multifold problems including exploitation of poor farmers, slowdown in the adoption of modern farming techniques which will result in sluggish development of this key sector. According to sensing the role of credit in agriculture sector and its impact on economic growth, and are making very efforts to promote and develop Fruit Farming finance in the country at reasonable prices. According to the amount of agriculture credit increased by thirteen fold from 1980-81 to 2001-02. The credit disbursement increased from Rs. 80.2 to Rs. 939 per cultivated acre and Rs. 84.2 to Rs. 938 per cropped acre form 1980-81 to 2001-02 in nominal terms while in real terms this increase was from Rs. 80 to Rs. 191 per cultivated acre

and Rs. 84 to Rs. 191 per cropped acre during the above same period. Historically table no. 3 shows the nominal and real credit per cropped hectare and institutional credit as a percentage of Fruit Farming GDP. A well-established network consisting of 26 commercial & micro finance banks along with 3900 designated branches is operating in the country to provide credit to needy farmers. These banks include; Allied Bank Limited (ABL), Habib Bank Limited (HBL), Muslim Commercial Bank (MCB), United Bank Limited (UBL), two specialized banks, Zarai Taraqati Bank Limited (ZTBL), Punjab Provincial Corporative Bank Limited (PPCBL), and 14 private domestic banks. There are also five micro finance banks (MFBs) which provide credit to farmers for any type of farming activities including crop growing, livestock, poultry, orchards, forestry, fisheries, nurseries and sericulture.

Agriculture is central to economic growth and development of Pakistan. The credit requirement of farmers in Pakistan is increased over time, mainly due to technological advancement and the high use of fertilizers and pesticides. Due to state bank of Pakistan (SBP) initiative of introduction of annual outstanding indicative target for banks, the outstanding portfolio of Fruit Farming loans has increased from Rs. 28.1 billion to 312.7 billion, an increase of 11.2 percent at the end of March 2015 as compared to the previous year. Commercial banks disbursed Rs. 326.0 billion this year as compared to Rs. 255.7 billion last years, which is 27.5 percent higher and is 65.2 percent of the overall target of Rs. 500 billion. Credit disbursement made by five commercial banks during the above same period increased by about 25.4 percent from Rs 133.5 billion to Rs. 167.4 billion. Data revealed that total credit disbursement increased from Rs. 40424.31 million to Rs. 51347.82 million during 1980-81 to 2001-02 showing an increase of 271.9 percent from 1980-81 to 1990-91, while 243.0 percent from 1990-91 to 2001-2002. There was a smooth increase in Fruit Farming credit disbursement. It was Rs. 21215.6 million in 1995-96, Rs. 42562.5 million in 1998-99 and Rs. 51347.86 million in 2001-02. Fruit Farming credit data from 1960-61 till 2012-13 from different agencies including ZTBL.

### **Present Hurdles in Fruit Farming Credit Disbursement**

The sluggish growth in rural institutional lending in Pakistan and in almost all the developing countries of the world are due to certain factors including high risk of default difficulty in access to formal credit sources inflexibility in formal loan repayment schedule institutions lacking interest to implement loan contracts, failure to repay loan resulting in loss of respect both lenders and borrowers have limited information inadequate collateral institutional corruption and inefficiency. Some of the problems which the Pakistani Fruit Farming credit sector is facing are:

- The most important issue which the policy makers are facing is the lack of efficiency in Fruit Farming credit disbursement.
- One of the main difficulties faced by the farmers in obtaining Fruit Farming credit from the formal institutions is documentation and cumbersome procedure; it is considered the prime impediment in securing loans from institutional sources.
- There is lack of timely availability of credit.
- There is considerable Political pressure in disbursement of the Fruit Farming credit. Institutional credit is not offered according to the relative efficiency of the farmer but according to the economic and political power of the credit recipient.
- Formal institutions always ask for collateral when they issue credit. However, majority of our farmers are resource poor, they do not have anything to offer. This makes cheap credit accessibility difficult for marginal, sub-marginal and small farmers.
- Banking institutions have difficult credit rules which obstruct small and marginalized farmers from accessing the loan. Because the credit rules and regulations are very complicated, and these are not clearly apprehended by illiterate and partially educated farmers.
- There is risk involved in lending to farm sector because of the associated uncertainties and probability of default. So banks try to avoid it and find other lucrative investments.
- Despite the fact that Zarai Taraqiati Bank Limited (ZTBL) has played a crucial role in advancement of Fruit Farming credit to farmers, but still rural farmers hesitate to apply for loan. There are various reasons accountable for this. For example, high interest rate, distance from home to bank, delay in disbursement of loans, complex procedure, and unlawful demands of officials, no- cooperation of the revenue department and the biggest being collateral kept for loan.
- The operation of banks has not been extended and so the farmers are provided expensive financial support.
- There is no proper research and no specific policy from the government side on the agriculture credit requirement. No specific database is available on the current credit needs of the farmers.

## 06. **Role of Banks Financing towards Fruit Farming Sector Development.**

History of modern agriculture has witnessed huge expansion in production. The development of agriculture is mainly due to the extensive use of credit. Fruit Farming credit is considered as an important factor in the course of modernization of agriculture. It creates and maintains adequate flow of inputs, and thus increases efficiency in farm production. It makes farmers able to use modern technologies and advanced practices. Credit facilities are vital for progress of the rural and Fruit Farming development.

Fruit Farming credit plays a major role to push the production and raises the standard of living of rural farmers and consequently increasing economic growth and development. The Agriculture Development Bank of Pakistan (ADBP) established in 1961. It has been playing a key role in catering to the needs of poor farmers. Under the umbrella of government, ADBP provide some special schemes such as five loan windows and supervised Fruit Farming credit system. These loan windows provide different kind of loans including Development Loans, Production Loans, Cottage Industry Loans, Agribusiness Loans, and Off-farm Income Generating Loans. In order to enable farmers to purchase modern inputs and technology, state bank of Pakistan give subsidy on Fruit Farming credit which is quite successful.

The credit provided by ZTBL has significant impact on Fruit Farming productivity [43]. The apex bank of Pakistan from time to time has introduced various banking reforms and also revised policies to help increase productivity of agriculture sector [7]. According to [44] this can only be achieved by the provision of credit to farmers. In short, Fruit Farming credit plays integral role in boosting up the speed of Fruit Farming modernization and economic development.

### **Need to Overhaul Fruit Farming Finance Regime**

According to the State Bank of Pakistan (SBP), the share of development loans in total Fruit Farming finance stood at 6pc in 2018-19. This percentage improved to 6.7pc in 2019-20 and further to 10pc in the first seven months of this fiscal year.

Among other things, this factor is also responsible for keeping our agriculture where it is today — under-exploited, low on productivity, high on wastages, slow-progressing and least prepared for future challenges.



The development and commercialization of agriculture requires financial services that can support: larger agriculture investments and agriculture-related infrastructure that require long-term funding, a greater inclusion of youth and women in agriculture and advancements in technology.” This statement coming from the World Bank in October 2020 sums up, to a great extent, how Fruit Farming financing should be overhauled in most developing countries.

Pakistan is no exception. On its part, the country has long been making efforts to restructure its Fruit Farming finance regime. And, one can find some examples of these ongoing efforts in the introduction of measures like warehouse receipt financing and greater involvement of microfinance institutions in Fruit Farming lending.

Last year, the SBP had come up with a detailed report on agri financing. In that report, it had defined development agri finance as medium- and long-term loans that banks offer in all sub-sectors of agriculture i.e. major and minor crops, livestock, dairy, poultry, fisheries and forestry. Short-term loans of six months to one year are offered to the entire agriculture sector mostly for meeting their working capital needs. But medium- to long-term loans of three- to five-year maturity are advanced to enable agriculturists to undertake projects that can help improve productivity and cut wastages.

That is why looking at the volumes of Fruit Farming development lending is important to understand how much Pakistan agriculture is prepared to meet future challenges like national food security and environmental protection.

Within Fruit Farming development financing, farm sector’s development loans are mainly offered for improvement of farmland and orchards, construction of tunnel farms, storage sites and warehouses, installation of efficient irrigation systems and purchase of farming machinery. But no study has been conducted by the provinces to ascertain how development finance offered to crop growers in each province have resulted in better yields and low wastages.

After all, agriculture is a provincial subject and in the absence of such studies one cannot expect banks or the central bank to overhaul Fruit Farming development finance with a view to increasing crop yields and cut pre- and post-harvest losses. Banks just offer Fruit Farming development finance as part of overall Fruit Farming financing and their lending remains demand-driven. It is up to growers to see the benefits of development finance and seek it from banks if they meet the eligibility criteria. For those in corporate

farming, this makes sense. But leaving such crucial decision-making to small individual growers seems unwise.

The SBP should consider assigning sub-targets of Fruit Farming development loans to banks as a certain percentage of overall Fruit Farming lending targets. The central bank may also push banks for greater Fruit Farming development lending to small and medium-size individual growers as well.

Sub-targets for Fruit Farming development loans can also be set for banks for making Fruit Farming loans in livestock, fisheries and poultry sub-sectors. And, banks should seek help from provincial governments in creating awareness among farmers — and devising a mechanism for aligning Fruit Farming development loans with the overall national food security targets.

In case of overall Fruit Farming lending that includes loans for production as well as development, distribution of loans still suffers from geographical discrepancies. If this issue is left unaddressed, it would produce undesired political fallouts besides hurting the objectives of national food security via sustainable high growth in agriculture.

In continuation of a long-held trend, Fruit Farming lending in July-December 2020 remained disproportionately high in Punjab and the smaller provinces got little. Out of Rs617bn worth of total Fruit Farming loans, Punjab-based farmers got Rs517.6bn or 83.9pc, followed by Sindh that got Rs88.8bn or 14.4pc. Only 1.7pc of the total agri credit was distributed among farmers in Khyber Pakhtunkhwa, Baluchistan, Azad Jammu and Kashmir and Gilgit-Baltistan, latest data released by the SBP reveals.

This pattern needs to be broken once and for all. Sindh's contribution to Pakistan's agriculture is close to 20pc and the collective contribution of Khyber Pakhtunkhwa, Baluchistan, Azad Jammu and Kashmir and Gilgit-Baltistan is about 5pc.

Besides, Fruit Farming loaning, particularly Fruit Farming development loaning, cannot be linked to the exact contribution of a federating unit to the country's total agriculture. It ought to be linked to the provinces' specific Fruit Farming needs and unique development potential. That will eventually help in sustained growth of the country's entire agriculture.

Under the umbrella of the China-Pakistan Economic Corridor (CPEC), Pakistan and China have signed several agreements for cooperation in the Fruit Farming sector. The SBP-supervised Fruit Farming credit

scheme under which banks make agri loans to farmers must now encourage banks to roll out specific financing models for the projects that these agreements cover. The central bank should also revise the scheme in the near future to accommodate inputs from the smaller provinces. This is important as some of the planned Fruit Farming projects under CPEC aim at improving the irrigation system across Pakistan.

Irrigation, fishing and corporate and joint farming are some key areas of planned cooperation under CPEC's Fruit Farming outreach program. In each of these areas, agriculturists and provincial Fruit Farming authorities complain of a lack of clarity and also have some reservations. The federal government must provide them with the required clarity and remove their reservations. That, too, is very essential in redesigning the Fruit Farming credit scheme with a view to making it responsive to the upcoming specific needs of CPEC-related Fruit Farming projects.

**07. Existing Agri-Financing Banking Products in Pakistan.**

Following commercial and agri-specialized banks are providing Fruit Farming loans in Pakistan:

1. Bank of Punjab
2. Allied Bank Limited
3. Habib Bank Limited
4. JS Bank
5. MCB Bank
6. National Bank of Pakistan
7. Soneri Bank Limited
8. Zarai Taraqiati Bank Limited
9. Bank Al-Habib

All above banks are dealing with following types of Agri-financing/loans: -

1. Fruit Farming revolving/running finance/credit (for purchase of inputs).
2. Tractor financing.
3. Agriculture finance for dairy farming.
4. Fruit Farming finance for poultry farming and allied activities.
5. Dairy and Livestock Finance.
6. Fisheries Finance.
7. Floriculture in Pakistan.
8. Kinnow processing plant.
9. Dehydrated fruits and vegetable plant feasibility.
10. Agri renewable energy Finance.
11. Farm Mechanization Finance.
12. Hydrolysis Management Loan

## 08. **Introduction to Fruit Farming**

Fruit crops have been cultivated for centuries, both commercially and in amateur gardens, and many species covering a wide range of trees, shrubs, and non woody perennials have been the long-term subjects of germplasm improvement programs.

Fruit crop species have certain common characteristics: they are long-lived, usually highly heterozygous, and clonally propagated from an elite mother plant. They are also invariably economically minor crops compared with large-scale arable species such as cereals or potatoes, as reflected in the relative research and development resources available. However, fruit is increasingly recognized as an important component of a healthy diet, and consumption of temperate fruit and fruit products, especially juices and dairy derivatives, has risen sharply over the past decade.

### **Crop Systems**

Fruit crop yields worldwide are reduced by a variety of insect, disease, and animal pests which require management. The methods used are usually a combination of cultural and chemical depending on the pest complex and is termed 'Integrated Pest Management.' This method manages the pest complex using a range of tools including chemicals (insecticides, fungicides, bactericides), natural enemies, trapping out, exclusion, and destruction of attractive plant material. Timing must be very precise so methods for monitoring pests have been developed. These include pheromone traps, mathematical models of insect and disease life cycles that predict occurrences of damaging stages, and direct observation of pests.

### **Tracing Fruits and Vegetables from Farm to Fork: Questions of Novelty and Efficiency**

Fruit crops are a major part of Fruit Farming production. The statistics show the world fruit production in 2014 was 35 million metric ton (MT) which was higher by 12.66% than in 2010. According to the Food and Fruit Farming Organization, Statistics Division (FAOSTAT, 2016a), countries with a significant production amount include India, Viet Nam, China, Iran, and Indonesia (Table 6.1). Global export value of fresh fruits was over \$ 68.17 billion in 2009, and grew rapidly to reach \$ 97.02 billion in 2013.

The Top Producers of Fresh Fruits Statistics: -

Country	Production (MT) <sup>2</sup>
India	9872
Viet Nam	2849
Islamic Republic of Iran	2843
China	2511
Myanmar	1322
Nigeria	1256
Indonesia	1253
Papua New Guinea	1043
Nepal	965
Colombia	685

#### 09. Major Fruit Products of Pakistan & Comparison with rest of the world Countries in Fruit Production.

Pakistan has an ideal climate for cultivation of a variety of fruits, which allow for an assortment of fruits to be cultivated throughout the tropical, sub-tropical and temperate zones of the country. According to Ministry of Agriculture, in FY18, the different varieties of fruits were cultivated on an area spanning more than 467,400 hectares with a total production amounting to an estimated 7,898,300 tons. The above-mentioned means of production helps meet not only requirement of the local markets, but also adds to its ever-increasing export levels. According to latest figures posted by State Bank of Pakistan, US\$ 425 million worth of fruits were exported to the world, out of which US\$ 19 million went to the UK.

Pakistan is still an agrarian country at large, with a population of 220 million growing at a rapid growth rate of 2.4 percent (PES, 2019). Food Security and economic development of the country predominantly hinges upon the agriculture. Horticulture in Pakistan has emerged an important sector contributing a good 18.5 percent to the national agriculture GDP (PES, 2019) producing large number of horticultural products to fulfill domestic demand of fruit and vegetables for the rapidly expanding population as well as to cater the rising demand arising in potential export markets.

Pakistan is a major producer of fruits and vegetables. More than 29 types of fruits are produced throughout the year. Production of citrus, mangoes, apples, melons, dates, guava, and apricot reflects strong domestic market demand for horticulture crops. The production of citrus fruits & mangoes peaked 2.40 and 1.73 million tons respectively (MNFSR, 2018), benefitting major export revenue earners.

UK and Pakistan exchanged an estimated USD 2 billion worth of trade in FY19 (SBP, 2019) out of which 12.25 percent was based on fruits alone. It is important that this economic interchange be enhanced as the spillover shall undoubtedly play a critical role in uprooting the 39 percent people living below poverty line

in Pakistan (PES, 2019). The rural sector is purely dependent on farming and the actualization of export potential to the UK market, shall shoot up fruit farming, and spur innovation in agro-industry. Moreover, the UK importers will benefit individually once the competitively priced range of products provided by Pakistan are compared with other choices. The upcoming section provides individual insight over the leading products from the range provided by Pakistan

#### 10. **Weak Areas of Pakistan in Fruit Farming.**

Fruit produced in Pakistan have one feature in common: while climatic conditions are favorable for cultivation production results are in all varieties below average and in general sinking

Pakistan is climatically capable of growing fruits easily and in abundance. Evidence for the growth of fruit in the subcontinent has been provided from ancient times, citriculture is known from the Indus valley for some 4000 years. The climatic diversity is such that it allows cultivation of nearly all types of fruit-temperate, tropical and subtropical. Apple, apricot, cherry, peach, pear, plum, grape, strawberry and currant are temperate fruit; banana, mango, guava, papaya and tamarind are tropical fruit that cannot stand even light frost and date, fig, orange and pomegranates are subtropical fruit.

Followings are the main reason for low Fruit Production/Weak Areas of Fruit Farming in Pakistan

- 1) Limited Cultivable Area
- 2) Water Logging and Salinity
- 3) Slow Growth of Allied Product
- 4) Low Per Hectare Yield
- 5) Inadequate Infrastructure
- 6) Uneconomic Land Holdings
- 7) Inadequate Supply of Fruit Farming Inputs
- 8) Lack of Irrigation Facilities
- 9) Inadequate Fruit Farming Research
- 10) Problem of Land Reforms
- 11) Defective Land Tenure System
- 12) Subsistence Farming
- 13) Low Cropping Intensity
- 14) Improper Crop Rotation

- 15) Various Plant Diseases
- 16) Natural Calamities
- 17) Under Utilization of Land
- 18) Consumption Oriented
- 19) Farmer's Litigation
- 20) Illiteracy and Ill-health
- 21) Lack of Credit
- 22) Poor Financial Position of Farmers
- 23) Instability in Market Prices
- 24) Shortage of Fruit Farming Finance

### **MEASURES TO REMOVE THESE PROBLEMS**

Following measures are suggested to improve the agriculture:

#### **1) Supply of Agriculture Credit**

Poor farmers cannot afford the expensive technology from their own resources in Pakistan. So, supply of agriculture credit at easy terms and conditions is very necessary. An amount of Rs. 85,177 million is disbursed by commercial banks in 2009 and Rs. 49 billion was distributed by ZTBL. ZTBL issued credit of Rs. 37.4 billion during 2010-11.

#### **2) Water Logging and Salinity Control**

Water logging and salinity destroys about one million acre of land every year in Punjab and Sindh. It reduces our cultivable area. For this purpose, installation of tube wells, repair of canal banks and drainage of water etc. are needed. The Ministry of Agriculture proposed to invest Rs. 18.5 billion with the objective of converting 2,00,000 acres of irrigated land to drip and shower irrigation system.

#### **3) Construction of Dams**

Sometimes, due to heavy unwanted rains and floods Fruit Farming productivities destroys. To tackle this problem, it is necessary to construct dams and bands on rivers.

#### **4) Provision of HYV Seed**



High yielding variety seed is not available at suitable price in Pakistan. So, farmers have to depend upon low quality of seeds that causes 20% reduction in total production. Government should provide HYV seed at minimum price in this case.

#### **5) Mechanization**

Farm mechanization is necessary to remove the problems to agriculture sector. Sowing, cultivation and harvesting of crops through Fruit Farming machines increase the productive quality and quantity.

#### **6) Fruit Farming Research**

Fruit Farming research is compulsory to remove the backwardness of agriculture sector. Major Fruit Farming colleges and universities are only about 16 in Pakistan. Government should increase the research work in the field of agriculture.

#### **7) Fruit Farming-based Industries**

Agro-based industries like poultry, fisheries, dairy and livestock should establish. These industries indirectly lead to improve the Fruit Farming sector.

#### **8) Tax Concessions**

Mechanization is necessary to remove the problems of agriculture sector. Government should give tax concession on imports of Fruit Farming technologies to enhance the process of farm mechanization.

#### **9) Training of Farmers**

Our farmers are illiterate and ill trained so, their efficiencies are poor. Government should start special education programs for farmers and give them training about farming.

#### **10) Prices of Fruit Farming Productivities**

Sometimes, our farmers receive low prices of their crops. There is no proper effective price policy of government. Government should set reasonable prices of Fruit Farming productions to develop the living standard of farmers.

#### **Conclusion:**

Being an agrarian country, Fruit Farming sector of Pakistan's economy is still backward. Use of modern techniques, provision of credit facilities, basic infrastructure and agriculture research facilities are needed to remove all the problems of agriculture sector.

### **11. Opportunities of Fruit Farming in Pakistan and its impact on economy.**

Fruits are good sources of antioxidants, vitamins and minerals, and are low in fat. Pakistan has a rich orchard heritage, especially in the harvest season and heritage. Because of its long shelf life, dried fruit can provide a good alternative to fresh fruit, especially during the winter season (Waheed and Siddique, 2009). Agriculture is important not only to feed the growing population of the world, but also because it is the backbone of Pakistan's economy. It provides food for industry, and also raw materials. Plants feature energy-rich compounds, vitamins and minerals (especially citrus crops) and are important to the world, as they are produced by large-scale production and are available in extensive supply. It is called the rune family of the key genus. Many species of citrus fruits are well thought of in the Asian and Malaysian islands' tropical and subtropical regions. It has carefully positioned potential values and is promoted in more than 52 countries around the world.

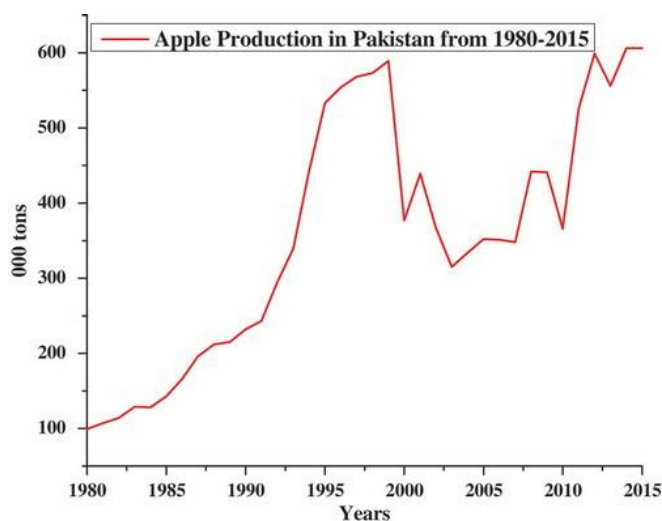
Fruits are good sources of antioxidants, vitamins and minerals, and are low in fat. Pakistan has a rich orchard heritage, especially in the harvest season and heritage. Because of its long shelf life, dried fruit can provide a good alternative to fresh fruit, especially during the winter season (Waheed and Siddique, 2009). Agriculture is important not only to feed the growing population of the world, but also because it is the backbone of Pakistan's economy. It provides food for industry, and also raw materials. Plants feature energy-rich compounds, vitamins and minerals (especially citrus crops) and are important to the world, as they are produced by large-scale production and are available in extensive supply. It is called the rune family of the key genus. Many species of citrus fruits are well thought of in the Asian and Malaysian islands' tropical and subtropical regions. It has carefully positioned potential values and is promoted in more than 52 countries around the world.

#### **Apple production**

Apples are the most important fruit crop in the temperate regions of the world, and they play a central role in folklore, culture and art at the level of production. Dessert apples are popular because of their taste, nutritional characteristics, disease resistance and ease of use. Due to the lack of diagnostic morphological features the delineation of apple species is hampered by the fact that the geographical extent of certain taxa and the prevalence of interspecific hybridization are documented. The hybridization between apples is due to the lack of interspecific breeding barriers, self-incompatibility, and the cultivation of apples in the natural occurrence of wild apple populations.

The Baluchistan province of Pakistan is popular due to its apple production which has special significance among other growing fruits. The environmental condition for the production of apples in Pakistan is very suitable and is planted over the largest area. The total area of apple fruit cultivation is about 45,875 hectares with an annual production of 589,281 tones. The production of apples during the period from 1980 to 2015 is shown in Figure 1 in thousands of tones.

Figure 1. Apple production in Pakistan from 1980–2015.

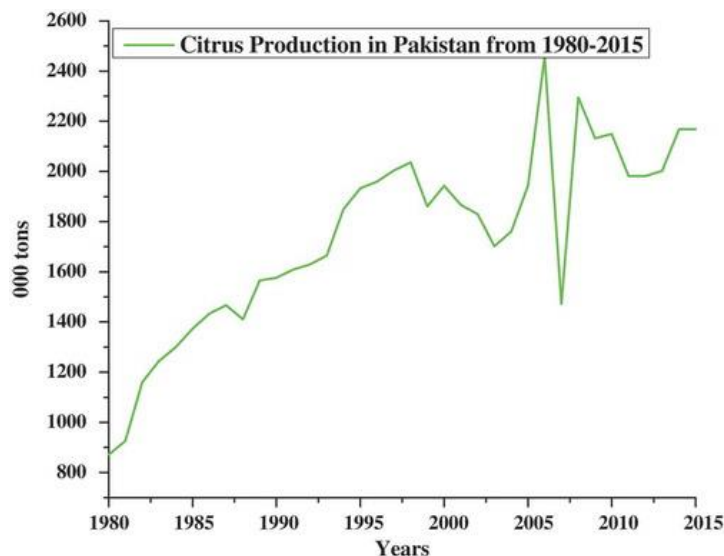


### Citrus production

Citrus is an important fruit tree crop, widely cultivated throughout the world, and Pakistan is one of the major countries engaged in citrus production. In Pakistan, citrus is widely distributed over 194,500 hectares with an annual output of 1.982 million tons during 2010–2011 (Agriculture Statistics of Pakistan, 2011). The important citrus species commercially grown in Pakistan are *Citrus reticulata*, *Citrus sinensis*, *Citrus limon* and *Citrus paradisi*. The majority of citrus orchards (95% of the total area) are located in Punjab province. The Kinnow Mandarin is the main variety in Punjab, growing on 70% of the total cultivated area.

Pakistan has sixth rank in the world for its production of citrus/orange of 2.1 million tonnes. According to estimates, 95% of the world's total production of the particular citrus variety, kinnow, is grown in Pakistan. The production of citrus fruit during the period from 1980 to 2015 is shown in Figure 2 in thousands of tonnes.

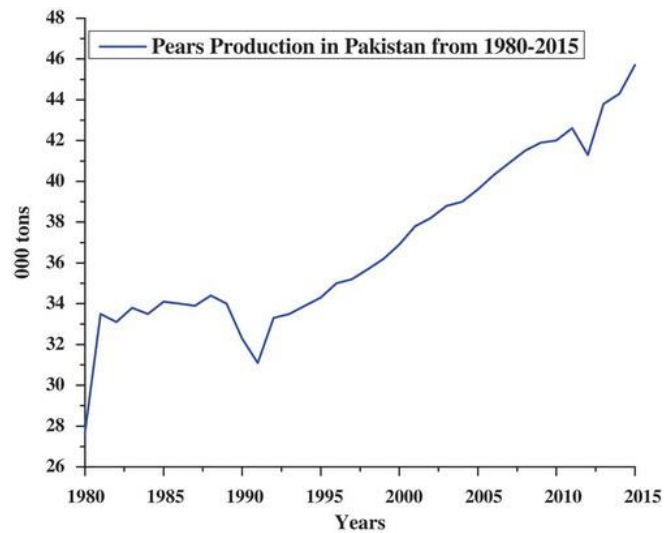
Figure 2. Citrus production in Pakistan from 1980 to 2015.



### Pear production

The pears from Pakistan are cultivated in a temperate zone of the world and have a high nutritive value and are tasty. The cultivation of pear crop is steadily increasing, especially in Asia. The production of pears fruit during the period 1980–2015 is shown in Figure 3 in thousands of tonnes.

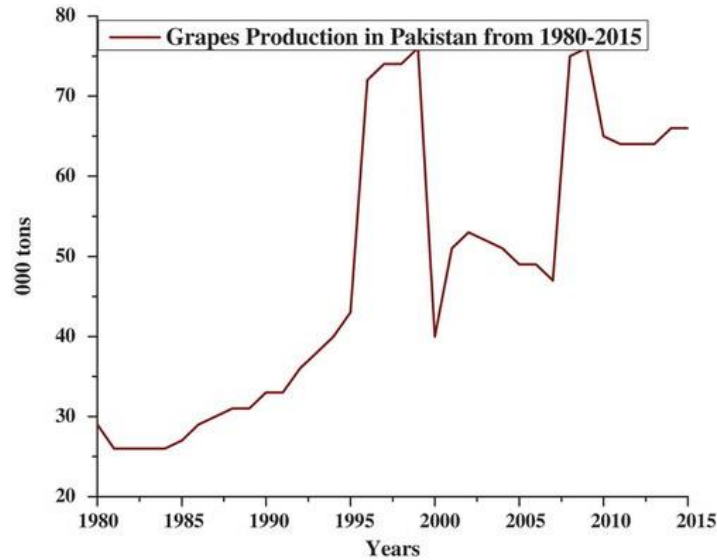
Figure 3. Pear production in Pakistan from 1980 to 2015.



### Grape production

In Pakistan only the European types of grapes are cultivated for eating. In the country, 70% of grapes are grown in the Baluchistan province. The production of grapes during the period 1980–2015 is shown in Figure 4 in thousands of tonnes.

Figure 4. Grapes production in Pakistan from 1980 to 2015.



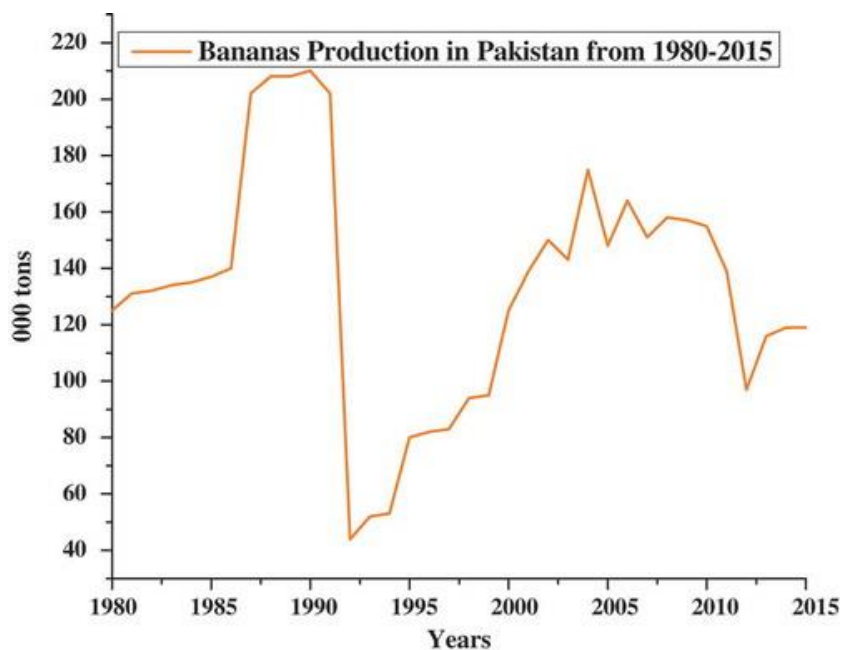
### Banana production

A banana (*Musa* spp.) is an important global food, providing about 25% of food energy needs of 100 million people. It grows in more than 140 countries of tropical and subtropical, with annual world production of about 145 million tons. About one-third of global production comes from Africa, and more

than 40% of crops are grown in East Africa (FAOSTAT, 2014). In recent years, the production of banana breeders in East Africa has declined due to parasitic nematodes, bacterial and fungal infections. Banana Fusarium wilt (BXW) caused by cabbage. *Musacearum* is one of the most important diseases of bananas and is considered to be the biggest threat to banana production in the Great Lakes region of East Africa (Tripathi et al., 2009). Banana is an important fruit crop in the world's wet lowlands and tropical regions. Bananas are also widely planted as plant crops for desert fruit sale. The main banana growing area of Sindh province are Thatta, Nawabshah, Noeshero Feroze, Badin, Hyderabad, Mirpurkhas, Sanghar and Khairpur (Saif & Soomro, 1992).

Bananas are also a main fruit crop of Pakistan. Bananas are produced on 34,800 hectares yielding a production of 154800 tonnes. The Sindh province of Pakistan is ideal for banana production, where climatic conditions are favorable for its cultivation. In 1992 it faced some serious problems from production through to post-harvest management and marketing. Different banana exporters, growers, government employees and contractors expressed shock that the post-harvest failure of bananas amounted to 30– 45% of entire production. Production of bananas during the full period 1980–2015 is shown in Figure 5 in thousands of tonnes.

Figure 5. Banana production in Pakistan from 1980 to 2015.



#### LOCALLY PRODUCED FRUITS IN PAKISTAN:

Commonly produced fruits in Pakistan which are produced and utmost fit for exporting to other world specially mangoes, chikoo, kinnow, apple, plums, jammon, lychee, papaya, grapes, guava, cherry, peach,

pear, apricot, pomegranates and so many others. That's why our beloved country, Pakistan is one of the world's best top five in rank in the producer of dates and also prides itself for producing almonds pine apple, nashpati and walnuts and so other dry fruits in large variety.

### **FRUITS EXPORTS OF PAKISTAN**

The exports of fruits from Pakistan increased by 27.69 percent during the first five months of current fiscal year as compared to the corresponding period of last year. The exports of fruits during July to November 2021-22 were recorded at 177.316 million dollars against the exports of 138.589 million dollars in July to November 2020-21., showing growth of 27.69 percent; According to the date of Pakistan Bureau of Statistics(PBS).

On yearly basis the exports of fruits from to country increased by 62.35 percent by going up from 20.758 million dollars during November 2020 to 33.70 million dollars in November 2021. On the basis of month, the fruits exports increased by 15.25 percent in November 2021 compared to the exports of 29.242 million dollars in October 2021.

### **FAMOUS FRUITS OF PAKISTAN IN PROVINCES**

The most sought after citrus fruit in Pakistanis in high demand in the international market. The main market for kinnow is Philippines and China have shown interest to import Kinnow from Pakistan. Around 30000 tons of kinnow have been exported to Indonesia, which is the second biggest international market after Russia. Pakistan is one of the largest date producer in the world. Among the different types of fruits in Sindh

#### **PUNJAB:**

Citrus Fruits like Mandarins, clementine and oranges is the most important tree fruit crop in the world. It is consumed direct as a fruit as well as juice which should be fresh and concentrates. Citrus fruits include oranges, kinnow, grapefruit and lemons.

More than 98 percent of fruits are produced in Punjab province from which almost 65 percent of are is covered from citrus fruits. As Pakistan is the 12<sup>th</sup> largest producer of the citrus fruits in the world but at

number One in the taste and its juice content 44 percent to 47.5 percent which is the highest for all easy peelers varieties.

Banana is the Fruit which is tasteful and liked in all over the world. The production of Banana is mostly on Punjab Province. This delicious fruit is exported to so many countries but the UAE, China, Philippines Russia and Indonesia are the very big Importer of Pakistani Banana.

Mangoes are the national fruits of Pakistan, India and Philippines. Only in Pakistan more than 250 plus varieties are produced in Pakistan but so many part of these Mangoes IN Punjab Province especially in the areas of Multan Regions and surroundings. Mangoes most important commercial cultivars of Pakistan are Fajri, Anwar Ratul, Dasehri, Maldha, Lngra, Sindhri, and the most favourite Chounsa. Most of the mangoes produced in Punjab, followed by Sindh and NWFP.

The export quality mangoes are ripe, uniform in size, without any marks, bruises and fungal infections. Around 1.75 million tons of mangoes are produced in Pakistan every year. According to a report published in a local newspaper Pakistan exported about 70000 tons of mangoes two years back and earned about 6.5 billion Pakistani rupees. Last year the country exported 75000 tons of mangoes. Keep in mind that these figures are only a fraction of the total production.

Pakistan is the 5<sup>th</sup> largest producer of dates in the whole world. It amaze you that the Pakistan is the 3ed largest country in the world. According to an estimate, Pakistan produces around 650000 tons of dates, but only exports around 150000 tons of dates and rest of them are either consumed locally are perished.

Here is the data given/published by the Ministry of National Food Security and Research, Government of Pakistan is impressive in terms of fruit farming in Pakistan and the tons of fruits produced. Following is the data given numerically:

<b>FRUITS PRODUCTION IN PAKISTAN-2018</b>			
<u>Sr. No</u>	<u>Fruit</u>	<u>TONS</u>	<u>HECTARES</u>
1	Citrus	2351386	183849
2	Mango	1735000	167899
3	Banana	140415	30031
4	Apple	564693	885889
5	Grapes	66987	15724



6	Pomegranate	36840	7270
7	Guava	586070	64938
8	Dates	540606	98415
9	Apricot	141721	22715
10	Peach	72536	14350
11	Pear	15926	1736
12	Plum	46423	6127
13	Almond	20615	9888
14	Fig	254	77
15	Jammon	5036	914
16	Lychee	1844	332
17	Phalsa	3978	1186
18	Walnut	14618	1705
19	Beer	22167	4369
20	loquat	10306	1083
21	Mulberry	1804	827
22	Strawberry	986	285
23	Chikoo	6914	1760
24	Coconut	9765	1445
25	Cherry	1964	995
26	Pistachio	654	176
27	Papaya	7201	1555
28	Persimmons	25083	3060
29	Melons	551886	37776
30	Others	64556	10872
<b>TOTAL</b>		<b>7,048,234</b>	<b>1,577,248</b>

**BALUCHISTAN:**

Baluchistan is also known as Pakistan's "Fruit Basket" owing to its abundance of resources. Grapes, cherries and almonds account for 89 percent of National production in the province. 62 percent of peaches, apricots, pomegranates around 35 percent of Apples and 75 percent of Dates. Fruit plantation span a total of 150000 hectors, with an annual yield of about near 900000 tons. This province exporting thousands of tons of apples each year which is the almost 80 percent of the high quality apples. Only Baluchistan produces about 1.2 million tons of fruits. This loss is damaging the country and the small farmers who are entirely reliant on these resources. Better management can boost the earnings even the per capita income of this provinces people by supporting the Government and financial institutions alike banks as so many things.

Pakistan produces pine nuts in abundance, thanks pine forests in Baluchistan and in the northern areas of Pakistan. A hardness to crack holds true for pine nuts in the literal sense they are not really hard but are very difficult to crack. Even if you are courageous enough to buy the pricey chilghoza from the local market about 6500 per kg it takes a lot of hard work to extract the delicious fruits that lies within.

#### **SINDH:**

To find suitable agro climate zones for horticultural production in the Province of Sindh. This region has a subtropical climate receiving between 150 to 550 chill units and 4000 to 5000 heat units. This region has a great potential for new crops especially for mangoes, dates and olives. Sindh is the very big industry for the production of Mangoes, dates, olives, almonds, apples, bananas, guavas and so many other fruits for those that kind of climate is required. The cultivation for guava in Sindh is done about 25000 acres of land. The major countries who imports guava from Pakistan are UAE, the UK, Qatar, and Saudi Arabia. Canada is one of the single largest importers of our Guavas and other fruits. The guava production earns a revenue of about one billion rupees annually.

#### **AZAD JAMMU & KASHMIR-LADAKH:**

Kashmir has its unique agricultural blessings. In Kashmir the Leepa Valley is known for the cultivation of rice, cherries, apricots, apples and so many others fruits and nuts including walnuts. One of the best fruit in the entire world is extracted from the Kashmir. The fruits crops grown in this state are apple, almonds, walnuts, pears, peach, plum, cherries, apricots, in temperature areas and mangoes, citrus, litchi, papaya, guava etc. in the subtropical areas. Saffron cultivation in Jammu and Kashmir is unique in the world which is the very pricey production as like anjeer as so many verities.

Jammu and Kashmir comprises on 20 districts and Ladakh on two districts, both are very rich comparatively in some specific type of fruits cultivation due to variations in soil fertility, soil matter, and topography and variable to harsh weather. The area of Jammu & Kashmir State consist on forests around 20445 km<sup>2</sup>. The mean value as 7.07 in the Jammu & Kashmir district offers a great variations in the topographic, ecological, and soil management aspects, soil pH varies throughout the district. The total area of Jammu & Kashmir is 210080 ha of land in 2018-2019 brought under horticulture cultivation from which the total area of 158499 ha almost 75.5 percent under the fruits cultivation and 51575 under the dry fruit cultivation.

#### **KHAYBER PAKHTUNKHWA (KPK):**

Khayber Pakhtunkhwa- KPK is the major fruit producing province of Pakistan. The important fruits which are cultivated in these areas like Charsadda, Mardan, Nosherah, Peshawar and surroundings too are peach, apples, apricots, plums, papaya, guava, pear, pomegranate, chooli, dates, mango, olives, grapes of so many types, anjeer in lot of variations, dry fruits, walnuts, nuts, saffron etc. Since long time, fruit farming has been an important business of KPK. Total area under fruit cultivation is estimated on 45000 ha while the total fruit production is estimated up to 1500000 tons in production.

The most popular fruit of KPK is peach which is called the “Queen” of all the fruits. The second best fruit of these areas are Chooli and Apricot in variations and export quality apples too. According to report published by Beijing researcher on peach said that “if cultivation of peach and processing technology gets improves, this fruit can tap into the international market, such as Gulf Countries and so many others. According g to Report by the Crop Reporting Service of KPK, a total of 6400 hectares are under the cultivation of fruits in the province through which KPK get most of the earning. Swat producing fruit on 5300 ha of land and 1070 ha producing Peshawar only.

## 12. **Introduction to new Bank’s Lending Product “Fruitful Pakistan”**

All the hurdles in low productivity of fruits production in Pakistan are directly or indirectly connected with lack of finance. Pakistan is having all types of land across the country and each and every land is suitable for the specific fruit production, hence, about more than 95% land of the country is suitable for fruit farming that may leads to foreign exchange for the country.

At present, as, there is no specific lending product in Pakistan’s Banking Sector towards Fruit Farming. This project is a new idea with an objective to attain green environment, through green banking, by developing a new lending product for banks in Pakistan. This will lead to economic development, poverty reductions, increase employment in addition to achieve the objective of green environment in PAKISTAN to overcome the threat of untoward atmosphere situation due to global climate change.

Many international and local banks have undertaken various green banking initiatives to seize business opportunities, manage risks, comply with national and regional regulations and guidelines, enable countries to deliver their climate ambitions and encourage corporate social responsibility (CSR).

Banks financing towards enhancing fruit cultivation across the country through a new lending product “Fruitful Pakistan” that is a green addition to existing agri lending product of a commercial or agri-credit specialized banks. “Fruitful Pakistan” financing in Pakistan are accompanying with short, medium and long term financing for purchase of inputs and midterm financing for purchase of machinery, constructions of where houses and atomization of Fruit Farming techniques.

## 13. **Objective and Scope.**

The prime objectives of “Fruitful Pakistan” are to: -

1. Provide a framework for conducting smooth & secure financing commensurate with the regulatory framework, Bank’s goals, business strategy, risk appetite etc.
2. Ensure controlled business development through appropriate and versatile financial products to remain competitive in the industry.
3. Define tasks and responsibilities of various functions
4. Ensure efficient operational flow, product development, identification & mitigation of risk factors and compliance to regulations etc.

#### 14. **Applicability and Targeted locations of Pakistan.**

The bank will focus on following localities of the Pakistan for Fruitful Pakistan Financing: -

1. Southern areas of Pakistan for establishment of Mangoes and Dates Farms.
2. Central areas for citrus Farms.
3. Northern areas for apples and other Farms.

#### **Areas of Fruitful Pakistan Financing**

The bank Fruitful Pakistan Financing portfolio is to be defined/categorized as per SBP PRs; currently as follows:

▪ **Farm Credit, which includes the following:**

1. Production Loans for inputs like seeds/nurseries, fertilizers, pesticides, etc. Production Loans also include working capital finance to meet expenses of various natures attributable to farming.
2. Farm Development Finance (including finance for improvement of land, orchards, etc.) and construction of Godowns, etc. for storage of seed, raw/inputs/fruits.
3. Finance for the purchase of Farm machinery and equipment like tractors, threshers, heavy farm sprayers etc., in line with the prevailing SBP PRs.
4. Credit / Debit Card holders can use their cards for the purpose of Machinery / Inputs under Fruitful Pakistan Schemes, in line with the prevailing SBP PRs.
5. Non-fund based facility (letter of Guarantee/SBLC and Letter of Credit etc.) for procurement/import of Farm supplies etc. by corporate and non-corporate farmers.
6. E-Warehouse Receipt Finance under SBP Regime

Financing against storage of farms commodities with designated warehouses under the supervision of Collateral Management Company (CMC) registered with SECP as per SBP E-WR regime. The product's details shall be elaborated in the respective Product Note(s) / PPM (s).

▪ **Non-Farm/Others Credit, which includes:**

Financing for livestock (dairy, poultry and fisheries etc.) and all eligible items as per SBP list under "Methodology Report for Estimation of Agriculture Credit" or "Indicative" Credit Limits and Eligible Items for Agri Financing 2014" or any other item approved by SBP/ACAC (Agriculture Credit Advisory Committee) from time to time.

## 15. Credit Processing of “Fruitful Pakistan”

The initiation of all proposals shall be based on sound and well-defined criteria for assessing quantitative and qualitative risk profile of each applicant / transaction, within the permissible lending parameters of Fruitful Pakistan/Agri Finance allowed by SBP.

### 01. Prescribed Stationery

Bank shall develop standardized stationery for credit initiation, depending upon the varying nature of respective lending products. The prescribed stationery and relevant annexures shall be outlined in the respective PPMs/other approval documents.

### 02. Review of Facilities: -

All Fruitful Pakistan facilities, regardless of their nature and tenor, shall be reviewed by the respective business unit/RMG/Credit Committees as applicable-at least annually or as per SBP requirements.

### 03. Target Market and Eligibility of the Applicants

The Target Market and Eligibility for availing Fruitful Pakistan Financing shall be clearly defined and duly addressed in the respective PPMs in accordance with the specific products developed. Customers suffering from any disability shall not be discriminated in any way on the basis of their condition and will be dealt with in accordance with standard terms and conditions as per prudent lending and applicable regulations. Any requisite procedures shall be developed by the bank management to facilitate such customers.

### 04. Credit Report

While considering proposals for any exposure (including fresh, renewal, enhancement and rescheduling/restructuring), bank should give due weightage to the credit report relating to the borrower and his group obtained from Credit Information Bureau (CIB) of State Bank of Pakistan. Bank shall ensure that CIB report is not older than three months at the time of approval of credit limits. Exposure on defaulters is not to be encouraged. The approval authorities may do so only in

exceptional circumstances with due reasons and justifications properly recorded in the approval form.

**05. Borrower Basic Fact Sheet (BBFS)**

Before extending any financing facility, bank will obtain information from the borrower as outlined in the BBFS (as per format Annexure I-A for corporate borrowers and Annexure I-B for individual borrowers). BBFS may also be made a part of the Loan Application Form. The bank shall not obtain a separate BBFS if the information required in it is a part of the Loan Application Form.

**06. Repayment Capacity of the Borrower**

While extending Fruitful Pakistan financing, the bank will take into account the total indebtedness of the borrower and his disposable income. The bank will ensure that the total financing to a borrower, in relation to his repayment capacity, does not exceed the limits as laid down in relevant approved policies of the bank such as for Corporate borrower as per CPM; for SME borrower as per SME policy and respective SBP PRs. Similarly, current ratio benchmarks shall be followed as per above bank's policies

**07. Internal Credit Risk Rating System**

In order to ascertain the risk profile of customers, Bank shall develop appropriate Internal Credit Rating System. The models developed by management and approved by BOD shall be used to determine the risk ratings of the borrower. Risk ratings to be given due weightage in credit approval process/decision making. SBP framework on ICRR is available for guidance.

**08. Proper Utilization of Loan**

ACD (Agricultural Credit Department) shall devise appropriate procedures for ensuring that the loans extended for specific purposes have been utilized for the same purpose for which they were obtained. Payments may be made to suppliers directly wherever appropriate. However, this aspect shall not be applicable for Revolving Credit Scheme loans. In case of tangible assets to be purchased through bank credit, respective officials shall visit and check the physical assets when delivered/installed within the relevant time period. Documentary evidence of value/cost of assets, should be available. Valuation of any construction/development activity shall be carried out

wherever applicable. Regular visits to obligor premises/place of business/farm etc. should be made to ascertain the activity, process continuity, cost and progress being made against the project timelines.

#### 09. Pricing of “Fruitful Pakistan” Facilities

Pricing shall be approved by the Senior Management, after taking the following factors into consideration:

- a. Cost of funds and opportunity cost.
- b. Lending product’s nature and tenor
- c. Risk profile of the product / portfolio
- d. Customer profile and size of financing
- e. Market pricing structure of Agriculture Financing

**Mark-up** on funded facilities shall be determined on fixed or floating rate basis, generally using KIBOR of appropriate tenor as base rate.

**Commission / Charges** on non-funded facilities shall be recovered as per Bank’s Schedule of Charges revised from time to time or as per specific PPMs/approvals.

**Processing Fee/other fees /charges** to be recovered as per the specific Product Program Manuals/schemes.

Mark-up on credit facilities will be set in accordance with SBP directives and guidelines in this regard, from time to time. The procedure for mark-up accrual shall be approved by the Senior Management in line with banking practice. In case of floating rates, Karachi Inter-Bank Offered Rate (KIBOR) shall be used as benchmark for determining the pricing / mark-up of Bank’s lending products and the following mechanism shall be adopted for selecting the relevant tenor KIBOR:

- ✓ For fixed rate term loans, the tenor of the benchmark rate should be the same as the tenor of fixed loan. (If a loan has a fixed-rate for 2 years, then the relevant benchmark rate for this tenor shall be selected which could be based upon the



secondary market yields of the same tenor of local investment bonds, or any other prevailing benchmark rate for this tenor. For tenor exceeding 3 years and not covered by KIBOR, Bank may use appropriate benchmarks, such as secondary market yields on the relevant tenor of local Investment Bonds.)

- ✓ For floating / variable rate loans, the tenor of the benchmark rate should be the same as of re-pricing tenor set for the floating rate loan. (If a loan is to be re-priced every three months, then 3 months' KIBOR is the relevant benchmark, irrespective of the tenor of the loan.)

Business Units must ensure that the tenor of KIBOR matches / corresponds with the re-pricing frequency, while negotiating the pricing of loans with the customers. The following elements of the pricing of loans must be clearly mentioned in all Credit Approvals / Proposals:

- Base Rate / KIBOR of relevant tenor
- Spread / Basis Points
- Re-pricing Frequency
- Mark-up Recovery Frequency

#### 10. Tenor of Facilities

**Farm Credit;** The finance provided by bank to purchase inputs like seeds/nurseries, fertilizers, pesticides, etc. as well as working capital finance provided to meet various sort of expenses attributable to farming like wages, etc. will be categorized as Farm Credit for Inputs.

Farm Credit for Inputs are self-liquidating at the end of the growing cycle, with repayment occurring shortly after harvest from sale proceeds of the crop for which the loan was made. Therefore, the maturities of these loans shall coincide with the production cycle of the product being financed.

**Tenor:** The tenor of this sort of financing will generally be less than Two years. However, for certain Fruit Trees requiring longer periods (from sowing to sale of the

produce), bank may extend financing for periods longer than Five years with due justifications duly recorded in the approval. Further, bank may sanction running finance limits to the borrowers, automatically renewable on annual basis. For change in expiry date of Agri facilities, ACD will be required to interact with ‘RCAD’. Credit Operations should be kept in loop for the needful at their end. Such arrangement/ facility would eliminate the need to process the loan case on periodical basis and facilitate both the borrowers and bank. Loans for farm input/ working capital would be classified as per Annexure-II. However, the relaxations allowed under Regulation R-5 are applicable.

**Farm Development Finance;** This is a medium to long-term loan extended by the banks/DFIs for making different types of improvements/ developmental work at the farm including construction of godown, and development of orchards, nurseries, etc. While the Machinery/ Equipment loan is the financing by the bank for purchase of machinery and equipment to be used for agricultural purposes; like tractors, threshers, reapers/ harvesters, tube wells, etc. All above loans i.e. for farm development & mechanization tools are of medium to long-term in nature i.e. 06 to 10 years.

**Tenor:** Loans for farm development can be extended for up to 10 years. However, the tenor of financing for machinery/equipment should not be allowed for more than the useful life of machinery/tools. However, all such loans should be allowed for a maximum period of 10 years

#### 11. Security / Acceptable Collateral

As a general rule, all Fruitful Pakistan loans shall be secured against acceptable collateral detailed in the Banks applicable credit policies and may further include the following:

- a. Bank's charge on agricultural land, through Zarai Pass Book on the value of

agricultural land offered as security. The value of land is to be determined on the basis of Average Sale Value (ASV), which represents last three years' average sale price ("Oast bai" of the area) /Scheduled Rate/Forced Sale Value (FSV) which is mentioned by Revenue Authorities in the Zarai Pass Book.

- b. Charge over machinery / vehicles.
- c. Hypothecation / Pledge of feed stock, raw materials, equipment, implements, instruments, etc.
- d. Liquid Collateral such as TDRs, National Savings Schemes Certificates, gold/ornaments etc. are also acceptable subject to adherence to the bank SOPs regarding such securities.
- e. Bank may also accept, as part of collateral where appropriate, Personal Guarantees of individuals other than the borrower preferably account holders of the Bank having adequate net-worth and satisfactory credit history;

The securities/collaterals to be accepted against specific products and respective margins there against shall be duly addressed in the respective PPMs/case to case approvals.

## 12. Facilities to Related Persons

The Finance facilities extended to the Bank's Directors, major shareholders, employees and family members of these persons shall be at arm's length basis and on normal terms and conditions applicable for routine customers.

## 13. Group Consolidation

In order to get a consolidated view of credit risk related to a particular relationship, credit facilities to a related Group (as per SBP definition) of borrowers shall be aggregated. These may be independent legal entities and/or with different legal

ownership, but from the Bank's point of view, are sufficiently inter-dependent, financially or business-wise, insofar that the performance of one may have a direct or indirect impact on the other. Therefore, to control risk through spill-over effects in such situations, all facilities to a related Group of borrowers should be aggregated invariably.

#### 14. Exposure Limits

The maximum exposure on any single customer / group and related party / group shall be as advised by SBP from time to time and the latest exposure limits will be applicable at any time.

#### 15. Unsecured/Clean Financing.

Financing facilities granted without securities, including those granted against Personal Guarantees, shall be deemed as "Clean". The maximum clean exposure in any form to any one customer shall be as advised by SBP from time to time. Currently, bank shall not provide unsecured/clean financing facility in any form of a sum exceeding **PKR 1.0 million (Rupees Ten million only)** to any one person. Further, at the time of granting a clean facility, bank shall obtain a written declaration to the effect that the borrower in his own name or in the name of his family members, has not availed of such facilities from other banks/DFIs so as to exceed the prescribed limit of RPKR 1.0 million in aggregate. All exposures in excess of PKR 1.0 million should be properly secured as defined by SBP PRs.

The lending secured under SBP's Credit Guarantee Scheme shall be treated as secured to the extent of guaranteed amount; whereas, the remaining portion shall be treated as "Clean" exposure.

#### 16. GUARANTEES

All guarantees issued by the bank shall be fully secured and the bank must be

satisfied with regards to the underlying transaction and the collaterals.

In case of back to back letter of credit issued by the bank for export oriented goods and services, bank will decide the security arrangements at its own discretion subject to the condition that the original L/C has been established by branches of guarantee issuing bank or a bank rated at least 'A' by Standard & Poor or Moody's or Fitch-Ibca or JCRA.

The guarantees shall be for a specific amount and expiry date and shall contain claim lodgment date. However, bank may issue open-ended guarantees without clearance from State Bank of Pakistan provided bank has fully secured its interest by adequate collateral or other arrangements acceptable to the bank for issuance of such guarantees in favor of Government departments, corporations/ autonomous bodies owned/controlled by the Government and guarantees required by the courts.

#### **17. Credit Approval Authority.**

All credit / lending decisions shall be taken by Agriculture Credit Committees, which shall be constituted, empowered and amended by CCC, from time to time. The constitution and terms of reference of the duly approved Agriculture Credit Committees shall be made part of the duly approved PPMs.

The concurrence / sign-off of the representatives of Risk Management Group (RMG) on the credit approvals shall be mandatory. The Credit Committees / members may affix approval covenants, as deemed appropriate to mitigate any perceived risk and/or to ensure the booking of quality credits.

The credit approval stationary shall be standardized for each agri finance product, covering all pertinent details/information necessary to make an informed decision about the case. These formats shall be approved along with the respective PPMs by senior management.

16. **Fruitful Pakistan” Administration.**

The Agriculture Finance administration shall include and cover the following aspects:

a. **Credit & Security Documents.**

- i. It will be the responsibility of the Credit Administration Department (CAD) to ensure that complete and legally enforceable documentation is obtained as required for each credit transaction / facility. Standardized documents to be obtained against various kinds of agri. Loans as circulated by SBP vide ACD Circular 02 dated August 11, 2010 and updated from time to time.
- ii. All documents intended as security / support must be selected and reviewed (vetted) by the Bank’s approved external legal counsel or the Bank Internal Law Department-as per approval, for appropriateness to the transaction/facility, adequate coverage of the risks involved, completeness, proper execution and registration, if required at the time of initial and enhancement or change of collateral.
- iii. Where applicable, charge on assets shall be registered with Revenue Authorities for security perfection and charge registration certificate, along with related documents, shall be obtained.

**b. Disbursement**

Except as otherwise specifically provided, no disbursement against approved credit facilities will be permitted before the RCAD determines that all required documents have been received and CDD requirement of borrowers is completed as required by AML/CFT/CPF regulations. RCAD will not issue Disbursement Authorization Certificate (DAC) unless all the required security / support documentation have been received and lodged in the vault under dual custody, or deferred as per relevant approval authorities.

**c. Insurance**

All the assets/crops held as collateral to secure any financial facility shall remain insured at all times, till the complete adjustment of the facility, through Bank's approved insurers. Minimum required risk coverage should be arranged in Insurance policy as per respective PPMs. The Credit Committees may advise additional insurance clauses on case-to-case basis, depending on nature of security, nature of operations and risk profile of the borrower. Furthermore, the Credit Committees may also waive any clause which is not deemed necessary.

**d. Farm / Business Site Visits.**

Owing to the nature of Agriculture Finance, close monitoring of relationships booked in various categories shall be ensured. Surprise Farm / Business Site visits shall be conducted on regular periodic basis, as per the frequency prescribed in ACD's SOP / PPMs, and the duly compiled and signed Visit Reports shall be available in the credit file of the respective borrowers.

**e. Management Information System (MIS)**

Bank shall ensure to have a robust MIS in place for generating portfolio reports, on periodic basis. ACD shall maintain comprehensive MIS of all exceptions to relevant policies/procedures/PPMs. MIS on any financial relief, write-offs, reversals, approval covenants etc. shall also be maintained. ACD/ CAD shall ensure provision of periodical reports/data to senior management / RMG as required for efficient monitoring and decision making.

**f. Monitoring**

As a proactive approach, the Agriculture Finance portfolio shall be regularly monitored, to identify any adverse developments and appropriate measures will be for their rectification on priority. Credit risk shall be assessed on an ongoing basis and shall

not be restricted to the Annual Review exercise. The relationship management at all levels shall maintain contact with the borrowers to remain abreast of all relevant developments in their respective Agri portfolios and also the Agri Sector. Risk Management Group (RMG) shall monitor the overall position of ACD portfolio.

#### **17. Restructuring/Rescheduling.**

In case the customer's circumstantial or financial difficulties are genuine, fresh repayment arrangements

may be agreed under R/R of the facilities. The option of R/R may be considered at any stage during the tenure of credit relationship.

#### **Definitions**

- a) Rescheduling means such concession in the grace period or modification in the repayment dates of principal loan amount (without changing overall loan tenor), due to borrowers' financial difficulty (as defined below), which the Bank would not otherwise consider.
- b) Restructuring means such concessions to the borrower, due to borrowers' financial difficulty (as defined below), which the Bank would not otherwise consider. Restructuring normally involves modification in the terms and conditions of the financing / securities and generally includes, amongst others, alteration of repayment period, repayable amount, installment amount, mark-up rates (due to reasons other than competitive pricing) etc.
- c) Grace Period means period during which principal amount is not repayable and mark-up amount is continued to be serviced as per the terms and conditions of the financing.
- d) Treatment of mark-up / income in the case of Restructured / Rescheduled accounts shall be in line with SBP's Prudential Regulations and their periodic amendments.
- a) Financial difficulty is when a company is unable to meet, or has difficulty paying off, its financial obligations to its creditors (including suppliers, lenders etc.), essentially on account of high fixed costs, illiquid assets and depleting revenues,



which may be as a result of economic downturns and / or competition, amongst other factors. Indicators of financial difficulties may include:

### **Financial Indicators**

- a) Highly leveraged balance sheet
- b) Mismatch in cash flows / Negative cash flows from operations
- c) Low debt service coverage ratio (inadequacy of cash flows to meet debt service obligations)
- d) Inappropriate balance sheet mix (constrained / adverse current ratio) / serious liquidity issues
- e) Deteriorating profit margins
- f) Access to funds (fully utilized credit lines and limited resources of the sponsor(s) to raise funds)

### **Non-Financial Indicators**

- a) Delay in completion of project (Project Finance)
- b) Cost overruns / change in scope of project
- c) Changing market / industry dynamics
- d) New legislation / regulations
- e) Legal action taken by / or against the client
- f) Claims on warranties, guarantees, service agreements / contracts
- g) Changes in technology affecting either manufacturing or products
- h) Major upward shift in input cost (raw materials, components, utilities)
- i) Outdated machinery / equipment
- j) Price fluctuation resulting in delay of offloading produce
- k) Ineffective management / staff

## **Repayment Schedule and Relaxation to Borrowers**

In line with SBP's PRs, Bank may grant relaxation period up to the permissible tenor (currently one year) in repayment schedule to the borrowers who have been adversely affected due to unforeseen and unexpected factors like adverse weather, availability of water etc. which are not under the control of the farmers. Such relaxation may be granted on case-to-case basis or en-block to the borrowers in the affected area.

Wherever a relaxation under the above arrangements has been granted by bank, the relaxation period would not be counted towards default period and non-payment in the relaxation period would not affect the category of classification. However, mark-up accrued during the relaxation period would not be credited to income account but kept in memorandum account. The loans already classified, without taking into account non-payment during the relaxation period, would remain classified in the same category and the income would remain in the memorandum account as advised vide BSD Circular No. 9 dated 12th November 2003 or any revised instructions.

Appropriate procedural guidelines in the above context shall be outlined in ACD's SOP / PPMs. Further, to prevent loan classification due to natural calamities, Bank may immediately stop recovery, suspend/defer mark-up accruals and may issue instructions for waiving off outstanding mark-up or principal where the chances of recovery are not possible due to heavy natural calamities like earthquake, floods, heavy rains, epidemic diseases etc. As per SBP PRs, the Bank may also create appropriate general reserves to cover any losses in the calamity hit areas. However, bank as a matter of policy will not maintain any such reserves primarily on the premise that the bank's agri production loans are additionally secured through crop loan insurance, which mitigates potential risk arising from natural calamities.

## 18. **Classification and Provisioning.**

Detailed guidelines as per SBP PRs regarding classification and provisioning shall be complied by the relevant stakeholders/bank. Accordingly, Bank shall also ensure that appropriate provisions are made on the basis of the respective classification category of borrowing accounts as per the criteria defined by the SBP.

- a) Bank shall ensure that all the borrowing accounts reflect the correct “Classification” status and no window dressing or rescheduling / restructuring is done merely to avoid classification.
- b) Classification and provisioning exercise be conducted to identify, classify correctly and make relevant provisions in line with SBP prudential regulations. The exercise to be initiated by CAD/RMG and stakeholders input obtained to make any necessary amendments /finalized in line with bank policies and SBP regulations.
- c) Bank shall review, at least on a quarterly basis, the collectability of their loans/advances portfolio and shall properly document the evaluations so made. Shortfall in provisioning, if any, determined, as a result of quarterly assessment shall be provided for immediately in their books of accounts by the bank on quarterly basis.
- d) Bank may avail the benefit of FSV subject to compliance with the relevant SBP regulations. Party-wise details of all such cases where bank has availed the benefit of FSV shall be maintained by CAD for verification by SBP inspection.
- e) Detailed SBP PRs should be consulted and followed meticulously for determining the classification and provisioning requirements Besides the time based criteria for the classification of each category of agriculture loans, the portfolio will also be evaluated for risk assessment and where considered necessary, any loan account including performing account, is to be classified. Accordingly, and as appropriate, the category of classification determined on the basis of time based criteria may be further downgraded. Such evaluation should be carried out on the basis of credit worthiness of the borrower, cash flow, operation in the account, adequacy of the security inclusive of its realizable value and documentation covering the advances.

- f) The rescheduling/restructuring of non-performing loans shall not change the status of classification of a loan/advance etc. unless the terms and conditions of rescheduling/ restructuring are fully met for a period of at least one year (excluding grace period, if any) from the date of such rescheduling/restructuring and at least 10% of the outstanding amount is recovered in cash. Further, the unrealized mark-up on such loans (declassified after rescheduling/restructuring) shall not be taken to income account unless at least 50% of the amount is realized in cash. However, this will not impact the de-classification of this account if all other criteria (i.e. the terms and conditions for at least for one year and payment of at least 10% of outstanding amount by the borrower) are met. Accordingly, BANK must ensure that status of classification, as well as provisioning, is not changed in relevant reports to the State Bank of Pakistan merely because a loan has been rescheduled or restructured.
- g) However, while reporting to the Credit Information Bureau (CIB) of State Bank of Pakistan, such loans /advances may be shown as ‘Rescheduled / Restructured’ instead of ‘Default’. Where a borrower subsequently defaults (either principal or mark-up) after the rescheduled / restructured loan has been declassified by BANK as per above guidelines, the loan will again be classified in the same category it was in at the time of rescheduling/restructuring and the unrealized markup on such loans taken to income account shall also be reversed. However, BANK at its discretion may further downgrade the classification, taking into account the subjective criteria.

At the time of rescheduling/restructuring, bank shall consider and examine the requests for working capital strictly on merit, keeping in view the viability of the project/ business and appropriately securing their interest etc. All fresh loans granted by the bank to a party after rescheduling/ restructuring of its existing facilities may be monitored separately, and will be subject to classification under the relevant regulations on the strength of their own specific terms and conditions.

**19. Reporting & SBP regulations.**

Full particulars of all loans / advances written-off, whether with or without SBP's prior approval, shall be reported to Credit Information Bureau of SBP by Finance Division.

Where write-off has been approved in exceptional circumstances, these cases shall be immediately reported to Banking Inspection Department for information as per prescribed reporting formats.

**20. Economic Forecasting of "Fruitful Pakistan" as a lending product for a bank.**

Fruitful Pakistan will lead to following economic factors at MICRO & MACRO level: -

**Micro Level: -**

**For Banks: -**

1. Consumption of Idle resources/deposits.
2. Creation of Money.
3. Increase in deposit of the bank.
4. Source of Income in shape of interest.
5. More employment opportunities on banks.
6. Strengthening agriculture finance markets.

**For Owner of Fruit Farms: -**

1. Use of idle agri land.
2. More employment opportunities.
3. Generation of Personnel Income.

**Macro Level**

Following are the overall economic benefits of Fruitful Pakistan

1. Increase in GDP of Pakistan.
2. More Employment Opportunities.
3. Utilization of idle resources.
4. Increase in per capita income.
5. Increase in export of Fruits.
6. Sources of Foreign Reserve.
7. Source to Favorable Balance of Payment.
8. Increase in Fruit related industries.

21. **“Fruitful Pakistan” leads toward “Green Pakistan”**

**INFLUENCE OF FRUIT FARMS ON CLIMATIC CONDITIONS.**

1. Influence on Air Temperature
2. Influence on Local Precipitation
3. Influence on General Precipitation
4. Influence on Atmospheric Humidity
5. Influence on Transpiration Loss

**INFLUENCE OF FRUIT FARMS ON EDAPHIC CONDITIONS**

1. Influence on Soil
2. Influence on Soil, Temperature
3. Influence on Seepage and Water Retention
4. Influence on Wind Erosion
5. Influence on Springs
6. Influence on Floods

**INFLUENCE OF FRUIT FARMS ON BIOTIC CONDITIONS**

1. Influence on Animal life
2. Fruit Farms as Source of Food for Animals
3. Fruit Farms as a Source of Shelter and Protection
4. Fruit Farms Influence on Animal Distribution
5. Influence on Mankind
6. Influence on Civilization

**SANITARY INFLUENCE OF FRUIT FARMS**

1. Favorable Influence on Weather
2. Carbon Sink

**INFLUENCE OF FRUIT FARMS ON POLLUTION**

## 1. Air Pollution

### **Control of Air Pollution through Fruit Farms**

#### **Plants as air cleaner**

#### **Water Pollution**

#### **Causes of Water Pollution**

#### **Control of Water Pollution through Fruit Farms**

#### **Noise Pollution**

#### **Causes of Noise Pollution**

#### **Control of Noise Pollution through Fruit Farms**

Fruit Farms environment can be conveniently divided into two broad categories, which are biotic environment and abiotic environment.

Biotic environment includes living organisms while abiotic environment is related with those physical and non-living chemical aspects, which exert an influence on living organisms such as soils, water, atmosphere etc.

The influence of the Fruit Farms in modifying climate under the trees is matter of common experience. Air humidity is relatively high under tree cover. Wind speed is reduced in Fruit Farms.

In varying degrees, the Fruit Farms affects light and solar radiation, air temperature, wind, atmospheric humidity, precipitation, evaporation and transpiration.

Fruit Farms modify physical and chemical properties of soil through addition of organic matter, decomposition of leaves and other plant parts, root penetration and activity of other animals inhabiting the Fruit Farms. The Fruit Farms is more than a defense against erosion. Fruit Farms Influences.

Fruit Farms influence upon water production is a controversial subject. Some attribute all the desirable qualities of streams which issue from Fruit Farms land to climate and geology



and they deny any effect of Fruit Farms itself. Some, on the other hand, are so certain that the Fruit Farms alone is responsible for good water supplies.

Fruit Farms help in reducing floods in the hills as well as in the plains by reducing the volume of surface run-off.

Fruit Farms have also sanitary influences upon environment due to the production of oxygen through photosynthesis. Fruit Farms plays a major role in reducing various types of pollution such as water, air and noise pollution.

Influences of Fruit Farms upon biotic conditions include its effect on animal life and mankind. Fruit Farms significantly influence the life of many terrestrial animals. Fruit Farms acts as source of food and shelter for many animals. The life of man is affected by the presence or absence of Fruit Farms. All the above mentioned influences also affect human life.

## 22. **Conclusion.**

In response to the gradual warming of global climate and other environmental problems, green economy has become the common choice of the world. As a developing country, Pakistan attaches great importance to global climate change and must have to become an important green economy practitioner.

Fruitful Pakistan is an innovative financial pattern aimed at the environmental protection and the accomplishment of sustainable utilization of resources. If the market mechanism of green finance is rational, green finance can guide the flow of funds and achieve effective management of environmental risk and optimal allocation of environmental resources and social resources. The effective regulation of policies will avoid the information asymmetry phenomenon and solve the moral hazard. The construction of environmental protection should consider setting up the mechanism of efficient green finance system coordinating the relationship between the ecology and finance. We can promote the use of renewable energy to achieve environmental protection through active financial tools. Fruitful Pakistan is an important part of Green Financing and will be a successful toll to achieved Green Pakistan results aim.

Fruits production is an important component of agriculture and performs a very supportive economic role in the country. In this study time series data were used from 1980 to 2015, and data were collected from the National Food Security and Research, the Pakistan Bureau of Statistics and the Economic Survey of Pakistan. Fruits data were analyzed using the OLS method and the ADF unit root test, and the results were interpreted using the Johansen co-integration test, finally machine learning technique was used to predict the future production of fruits in Pakistan. Study results show that the outputs of banana, citrus and pears have a positive, significant relationship with Pakistan's AGDP, while the outputs of apples and grapes have a negative, insignificant relationship with Pakistan's AGDP.

Hence, the study recommends that the government of Pakistan identifies novel funding schemes to increase the production of apples and grapes and adopts better policies for the production and development of the fruits sector.

Our beloved country Pakistan is blessed not only with natural beauty, but also with fertile land. The rich agricultural land of Pakistan produced export quality crops and very delicious and sought after fruits in the whole world every year. Here we are discussing about the fruits cultivation in Pakistan geographically. Provinces of Pakistan are geographically changed but the environment and the fertility of the land varies also. So, the fruits are also varying according to the cultivation needs and requirement.

Fruit growing is one of the best and very in now a day especially in developing and developed countries through adopting a proper and new research and development based means of growing or cultivation. The art and science has now developed into one of the most devalued skillful and intensive forms of land utilization. The living standards of the people based on their health, and for the health fruits and vegetable and trees for environment are highly recommended for.

Following are some advantages for the state from fruit providing trees:

- Per unit yield are increased
- High net profits
- Efficient utilization of resources
- Utilization of waste and barren lands for production
- Ability of earning foreign exchange
- One-time capital investment
- Continue flow of money
- Fruit growing in kitchen gardening helps to reduce family budget on purchase of fruits
- Planting of trees helps to maintain ecological balance and to increase participation of locality.

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