

# PROJECT REPORT

## 2014-2021

Public Sector  
Development  
Program



## PROMOTION OF **OLIVE CULTIVATION** ON COMMERCIAL SCALE IN PAKISTAN



**Implemented by:**

Pakistan Oilseed Department  
Ministry of National Food Security &  
Research, Government of Pakistan



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# ACRONYMS



**GOP**

Government of Pakistan

**PSDP**

Public Sector Development Program

**MNFSR**

Ministry of National Food Security and Research

**GoPb**

Government of the Punjab

**GoB**

Government of Balochistan

**GoKPK**

Government of Khyber Pakhtunkhwa

**GoAJK**

Government of Azad Jammu and Kashmir

**IPO**

Intellectual Property Organization

**GoGB**

Government of Gilgit Baltistan

**CEFORT**

Center of Excellence for Olive Research and Training

**BARI**

Barani Agricultural Research Institute

**AARI**

Ayub Agriculture Research Institute

**MD**

Managing Director

**NARC**

National Agriculture Research Center

**PARC**

Pakistan Agriculture Research Council

**EU**

European Union

**POD**

Pakistan Oilseed Department

**ARI**

Agriculture Research Institute

**GDP**

Gross Domestic Progress

**NTHRI**

National Tea and Horticulture Research Institute

**GCC**

Gulf Coordinating Countries

**DGs**

Director Generals

**IOC**

International Olive Council

**BARDC**

Balochistan Agriculture Research and Development Center

**NTHRI**

National Tea and Horticulture Research Institute

**POCCSP**

Promotion of Olive Cultivation on Commercial Scale in Pakistan

**USAID**

United States Agency for International Development

**UNESCO**

United Nations Educational, Scientific and Cultural Organization

**PIDSA**

Pakistan Italian Debt Swap Agreement



# MESSAGE OF THE FEDERAL MINISTER, MNFSR, GOP



The mandate of the MNFSR is to formulate policies and take measures to ensure food security to meet the requirements of human dietary consumption. Pakistan has always been deficient in the oilseed sector. To ensure the complete supply chain of Oilseeds, the government of Pakistan is spending \$ 3.5 Billion every year which is the second biggest expenditure after gasoline and fuel consumption. To cater to this aspect, the government has launched a major initiative for the promotion of olive in Pakistan which according to the scientist and economic experts, can maintain climatic suitability, and given the availability of vast culturable waste of 4 mha, olive cultivation could bring about a very significant change in the life of farmers, protect the environment, and can create employment opportunities for the youth and gender.

GOP is already supporting olives farming in the country and will further add on to achieve the targets of self-reliance to meet local needs of olive oil and other value-added products and to export in near future. MNFSR with the support of the foreign office is also trying to support the Pakistani olive sector through creating institutional linkages with other olive-producing countries and International Olive Council. It is hoped that Pakistan will be able to get a suitably significant position among Olive Oil producing countries.





# MESSAGE FROM THE FEDERAL SECRETARY



Agriculture establishes the largest sector of the economy of Pakistan. The majority of the population, directly and indirectly, is dependent on this sector. It contributes about 24 percent to GDP and accounts for half of the employed labor force and is a huge source of foreign exchange earnings. Agriculture is the social, livelihood, and cultural linchpin of Pakistan and is directly linked to the food security issue. The oilseed sector is very important due to its vital dietary resources which are a pivotal aspect of nutrition and food security. Pakistan has been chronically deficient in oilseed production owing to traditional cropping patterns, social acceptability, and lower procurements in the markets.

According to economic surveys 2019-20 and 2020-21, 3.5 billion US\$ are spent annually on the purchase of oilseed and edible oil. In this situation, the olive has become a proper alternative, because of its fewer water requirements, longer fruiting period, and suitability of its cultivation on marginal lands.

The PSDP project “Project of Olive Cultivation on Commercial Scale in Pakistan” is a flagship project for the promotion of olive which is not only educating the farmers but also taking concrete steps toward the branding, marketing, institutionalization, and internationalization of Pakistani efforts for olive promotion.

In the end, I would like to congratulate the National Project Director his team, and provincial components for their efforts in project implementation and achieving deliverable. I hope, these consolidated efforts will surface a solid path for the success of the olive sector in the coming years.

## QUICK FACTS

Protects against diabetes

Boosts hair and skin health

Assists in weight loss

Reduces high blood pressure





Almighty Allah has blessed Pakistan with a variety of climatic seasons and a number of resources suitable for the growth of diversified flora and fauna. Agriculture is the mainstay of the people of Pakistan contributing more than 24 % to the national GDP and employing approximately 45% of the total workforce directly and indirectly. Pakistan is continuously trying to strengthen its footprints in the international trade market in the form of considerable exports of grain, fruits, vegetables, meat, and dairy products to nearby and distant high-end markets.

Besides a sizeable production of various commodities, Pakistan is a net importer of a number of items out of which palm oil (edible oil) is on top of the list resulting in an increased import bill for the country. Pakistan, due to high consumption and very low edible oil production locally, is importing oilseeds, and oil the worth more than US\$ 3.5 billion every year. The scientists with their limited resources are trying to increase oilseed production locally, reduce dependency on imported palm oil, and also to decrease import bills. The efforts yielded hopeful results through commercializing and incentivizing high-yielding varieties of oilseed crops like mustard canola, sunflower, rapeseed along with cottonseed but the journey to self-reliance in the edible oil sector is still far away. The provincial governments after the 18th constitutional amendment are also putting efforts and providing subsidies to the farmers to increase oilseed crops cultivation every year.

On the other side, Pakistan has one of the highest population growth rates in the world with the count exceedingly over 200 million people. Import of edible oil is the second largest import of Pakistan in terms of dollar value after petroleum products. The country's own source of edible oil through domestic production does not proportionate with the ever-increasing demand of around 3 percent per annum. The current demand for edible oil stands at 3.2 million tons a year and there is a shortfall of 2.2 million tons due to less production. This gap is being met by importing mostly palm oil, from Malaysia and Indonesia. In addition, Pakistan is also importing olive oil for household and restaurants kitchens, medicinal and food processing needs from Spain, Italy, etc. To meet the current olive oil consumption which is approximately 4,481 tons per year, Pakistan imports olive oil worth Rs. 1.8 billion every year (*Pakistan oilseed development board*).

Olive farming experimented in Pakistan during the first decade of the century intended to produce the olive oil locally, economic growth, and new employment opportunities in the associated regions. The objective of establishing and promoting the olive sector in Pakistan is beyond the stated objective of fulfilling local olive oil needs. It is believed that the overall potential and virgin lands available for olive farming is much more than the total area of Spain, the top olive oil-producing country. Realizing the national importance and potential of olives for profitable rehabilitation of marginal lands as a climate change adaptation intervention,





and its projected substantial contribution to the economy, olive culture has been initiated in Pakistan. Pakistan is among the top countries in the list of the most per capita edible oils consumption due to eating habits and local (desi) cuisines. This in turn is creating serious health issues and particularly in cities increasing pressure on health facilities. This demands identifying new and high-quality edible oil having a maximum quantity of easily digestible mono-saturated fatty acids not injurious to human health. The best fit in this context is Olive cultivation for which marginal lands can be utilized as olives can grow successfully on these to produce the healthiest edible oil. Olive oil has a higher international price than the edible oil Pakistan produces and imports, therefore, there exists a high potential for export of the olive oil, besides meeting local demand for high-quality olive oil for health-conscious people whose number is constantly increasing every year as a consequence of increasing awareness of healthy lifestyle.

Hence it makes a very suitable case that if combined efforts are done at national and provincial levels, it will result in the development of a completely new and profitable economic sector for sustainable national growth.



# PROJECT OVERVIEW / SUMMARY



Based on the presence of a huge population of wild olive trees in various hilly parts of the country and scientific research through a series of adaptability experiments on exotic varieties, the majority of the virgin lands of Pakistan have been considered suitable for olive cultivation on a commercial scale. To cultivate the real potential of olive farming, GOP through PSDP, allocated PKR 2320.27 million and launched POCCSP in 2014 to promote it on a commercial scale throughout the country including Punjab, KPK, Baluchistan, AJK, GB, and Southern Punjab, excluding Sindh province only due to technical reasons where trials are in progress. The first phase of the project has been closed while Phase-2 started this year (2021-22) and will be completed by 2024. The project implementation had been tasked to POD (MNFSR) whose team of experts and professionals is working proficiently to achieve the targets within the given time period. Due to effective coordination of various components of the project and efforts of the teams, most of the deliverables have been fulfilled while a few are overachieved. The stated objectives of the POCCSP as per approved PC-1 are listed as under:

- Plantation of olive plants on 50,000 acres,
- To develop infrastructure/capacity of the public and private sector for mass-scale production of true to type, disease-free olive nursery plants,
- Provision of Exotic and Indigenously produced olive plants to farmers
- Human resource development through training on olive culture involving youth and gender
- Provision of oil extraction units and value addition equipment to facilitate processing
- Mother orchards development for bud wood provision



The components of the olive project are listed as under:

- 1- National Agricultural Research Centre, Islamabad
- 2- Pakistan Oilseed Development Board, Islamabad
- 3- Barani Agricultural Research Institute, Chakwal
- 4- Mountain Agriculture Research Center GB
- 5- Agricultural Research Institute, Tarnab (ARI), Peshawar
- 6- National Tea & High-value Crops Research Institute, Mansehra
- 7- Agricultural Research Institute (ARI), Sariat, Quetta
- 8- Baluchistan Agricultural Research & Development Centre, Quetta
- 9- Agriculture Extension Department, Muzaffarabad, AJK



With the concerted efforts and timely delivery of the activities, the project has been successful in planting 1.719 million olive plants at 13,354 acres since 2014 benefiting around 3,884 small and large farmers in the target areas of the country. Every year, there will be an increase in fruit production hence olive oil as a greater number of the trees will be planted, and, already ones will start fruiting after completing their initial growth stage. A sizeable part, approx. 20% - 30% of the olive fruits are used in preparing value-added products pickles, jams, sweets, and syrups which have increased demand.

It is encouraging that 25 units for olive oil extraction have been installed, three value-addition labs have been established in the country and more than 15 olive sapling producing nurseries have been established both in the public and private sectors. Even in two provinces like Punjab and KP, olive valleys like Pothohar and Sangbhatti have been declared by the respective provincial governments, and their funding support is also provided. Research, development, and training of stakeholders are being conducted through specialized dedicated institutions like CEFORT (Center of excellence for olive Research and Training) established by the Government of Punjab at BARI Chakwal with technical support of USAID Pakistan. Through the fate of the center, more and more people are getting hands-on training and experience in olive farming, nursery raising, value-addition, brand development, and marketing of the products. This is a start, while a long journey to go ahead, the olive commercialization would exude sustainable socio-economic benefits for the country.

The project interventions are comprised of the following support package for the farmers and other stakeholders:





- 01 Provision of certified, true to type olive plants (all were imported)
- 02 Installation of drip irrigation systems at the farmer's sites
- 03 Specialized double shaded olive nurseries for plant propagation
- 04 Olive oil extraction units
- 05 Support to provincial departments for conducting adaptability trials
- 06 Support for the establishment of olive mother blocks (GPUs) at public sector institutions
- 07 Plant propagation locally
- 08 Training to the value chain stakeholders
- 09 Installation of weather stations
- 10 Up-gradation of olive value-addition labs

**Most of the goals of the POCCSP have been achieved well in time while the remaining have been targeted to achieve in phase II of the project.**

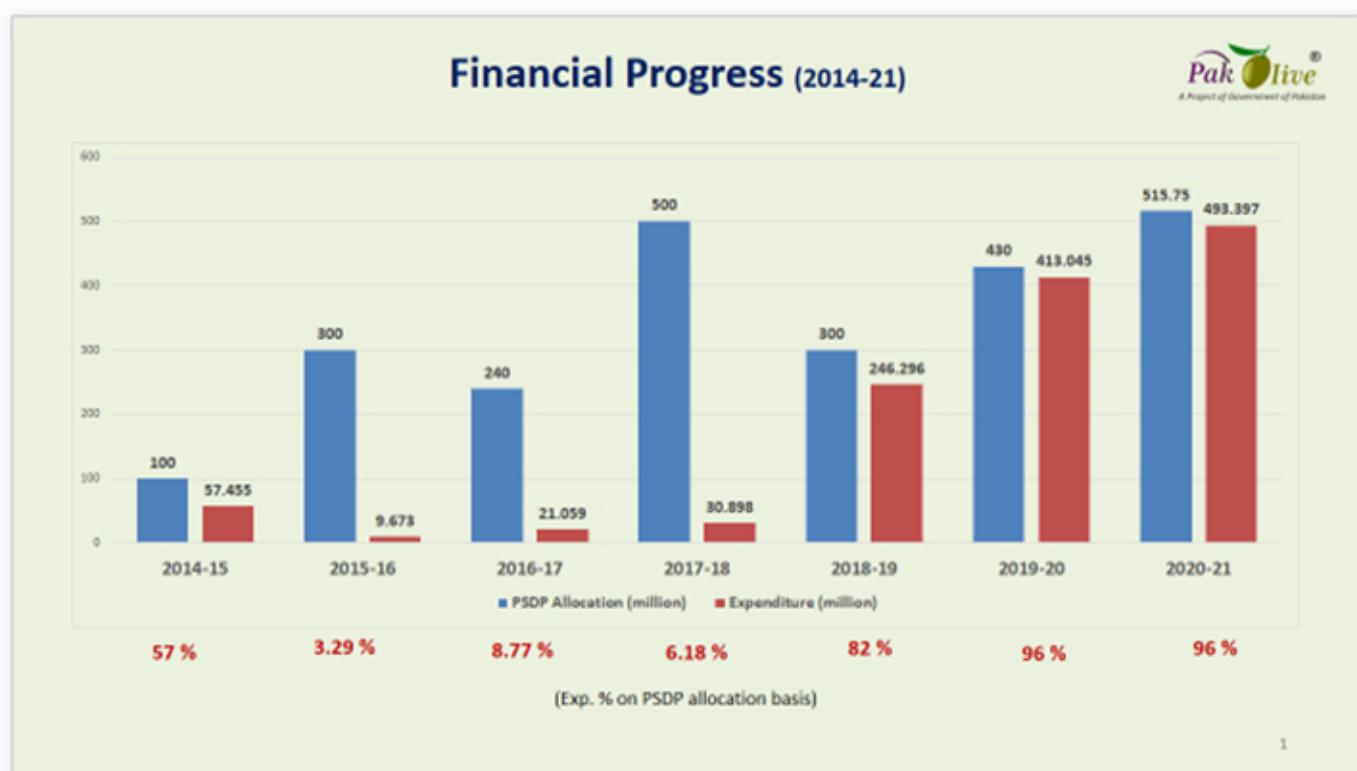
# FINANCIAL PROGRESS (2014-2021)



The GOP through PSDP allocated PKR 2320.27 million and launched POCCSP in 2014 for olive cultivation on a commercial scale throughout the country. Initially, the project was implemented directly by the PARC from 2014 to 2018 while the project could not make significant progress due to legal, technical, and administrative issues. From the fiscal year 2018-19, the project implementation was transferred to Pakistan Oilseed Development Board (PODB) under the leadership of the current Project Director and Project Management staff. The new administration operated the project with commitment and passion so as a result of this, the project is achieving its targets promptly.

It is noteworthy to mention that the financial performance/expenditures of the FY 2020-21 were more than any of the Fiscal Years in the project's history due to the import of olive oil extraction units, value-addition tools, nursery infrastructure, and the olive sapling. This performance depicts the commitment, devotion, hard work, and dedication of the project management. Financial performance has been given below in the graph which indicates the remarkable turnaround in the last three years.

Reviewing this success, the Government of Pakistan has approved an umbrella PC-I "Promotion of Olive Cultivation on commercial Scale in Pakistan" Phase-II, for the duration of 03 more years (1st of July, 2021 to 30th of June, 2024) with the cost of PKR 6.41 billion including farmer/stakeholder's share of 1.395 billion.



# PROJECT DELIVERABLES (HIGHLIGHTS & ACCOMPLISHMENTS)



As stated above, POCCSP received a total allocation of PKR 2320.27 million from PSDP and commenced its operations and program activities in 2014 with a defined scope as per approved PC-1. The budget and deliverables were reviewed regularly and updated as per sector needs and funding capacity. The items under financial grant support to the public and private sector partners are mentioned below:

1. Provision of certified, true to type olive plants (all were imported),
2. Installation of drip irrigation systems at the farmer's sites,
3. Specialized double shaded olive nurseries for plant propagation,
4. Olive oil extraction units,
5. Support to provincial departments for conducting adaptability trials of new exotic varieties,
6. Support in the establishment of olive mother blocks – GPUs,
7. Plant propagation locally,
8. Training to the value chain stakeholders,
9. Up-gradation of olive value-addition labs,
10. Installation of weather stations,

The status of the fulfillment of each of the deliverables is mentioned year-wise in the table below:

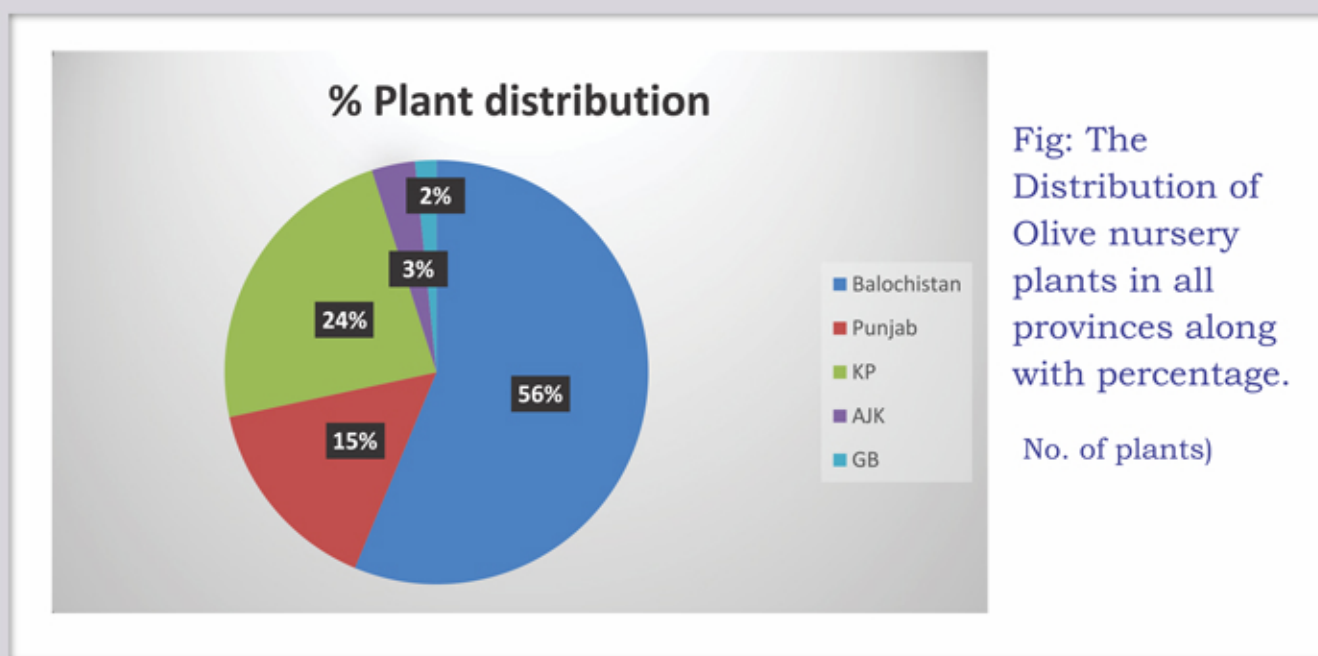
Project Deliverables	Project Target	2014-18	2018-19	2019-20	2020-21	Total Achieved	Percentage %
Provision of certified, true to type olive plants (in acres)	50000	2390	4065	126	6725	13354	27
Installation of drip irrigation systems at the farmers' sites (in acres)	2250	25	404	600	657	1686	75
Specialized double shaded olive nurseries for plant propagation	18	01			11	12	67
Olive oil extraction units	09	0		9		9	100
Support for adaptability trials	25	0	03	07	15	25	100
Support in the establishment of olive mother blocks – GPUs	05	0	03	04	03	10	200
Plant propagation locally (in million)	1.2	0.025	0.46	0.451	0.92	1.856	155
Training the value chain stakeholders	91	13	13	12	27	63	69
Up-gradation of value-addition labs	03		03				100
Installation of weather station	05		05				100





## 1. Provision of Certified, True to Type Olive Plants

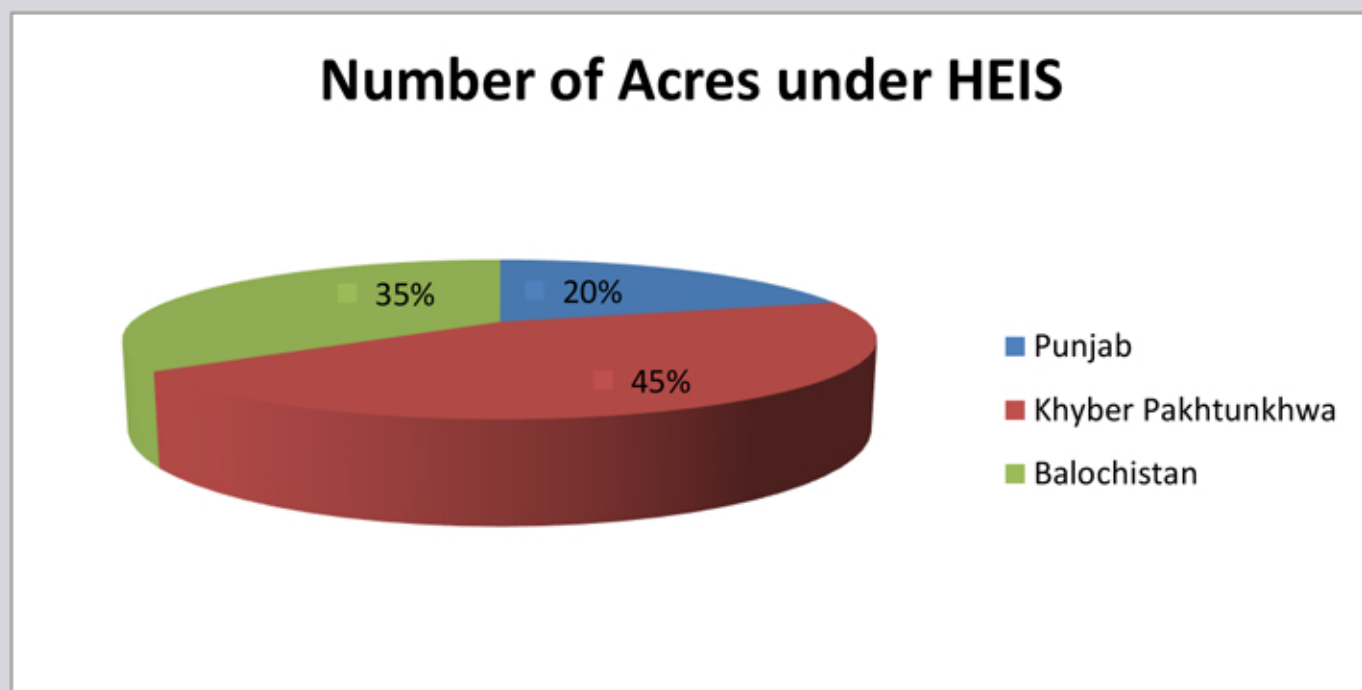
The provision of certified, true-to-type olive plants is a very important component of the POCCSP. Under the initiative, the project followed a transparent mechanism for solicitation of applications from interested farmers. After receiving the application, the sites were visited by the survey teams to assess suitability keeping in view the availability of irrigation water, soil type, and condition along with other required infrastructure. Farmers also applied for the grant of drip irrigation system which was available on a cost-share basis. The olive saplings provided under the project were imported mainly from certified and recommended best-performing varieties. Due to increasing awareness through media, a huge number of farmers showed interest to get plants and establishing their olive orchards for an additional and sustainable source of income. Under the scheme, 13354 acres have been planted across the country while province-wise detail is as followed:



## 2. Installation of Drip Irrigation System

Most of the regions available and declared eligible for olive plantation support have mountainous, uneven, and irregular terrain having water scarcity and the entire dependency is on rains and rain-collected water. The distribution and availability of the under-ground and rainwater are not uniform and ensured for any crop production. Disbursement and plantation of olive saplings are only feasible if a well-managed and readily available irrigation system is available to prevent the plants from mortality.

During the first phase, a large number of applicants applied for the irrigation systems support while through a careful screening and assessment process, the project has granted and installed HEIS / drip irrigation systems on 1686 acres for 124 farmers in three provinces so far. The drip irrigation systems installed at all sites are functioning properly and the manpower is trained by the service providers for effective maintenance and functioning. The project has achieved more than 75% of the total target while the remaining will be focused during phase II.



### 3. Specialized Olive Double Shaded Nurseries in Public Sector for Plant Propagation

The prime objective of supporting public sector institutions for the establishment of propagation units is to build capacity on best practices involved in the multiplication of the plants and supply to the farmers as per demand. The project supported the establishment of double shaded nursery structures, and inputs with operational and technical assistance to raise true-to-type and healthy plants of approved and recommended varieties.

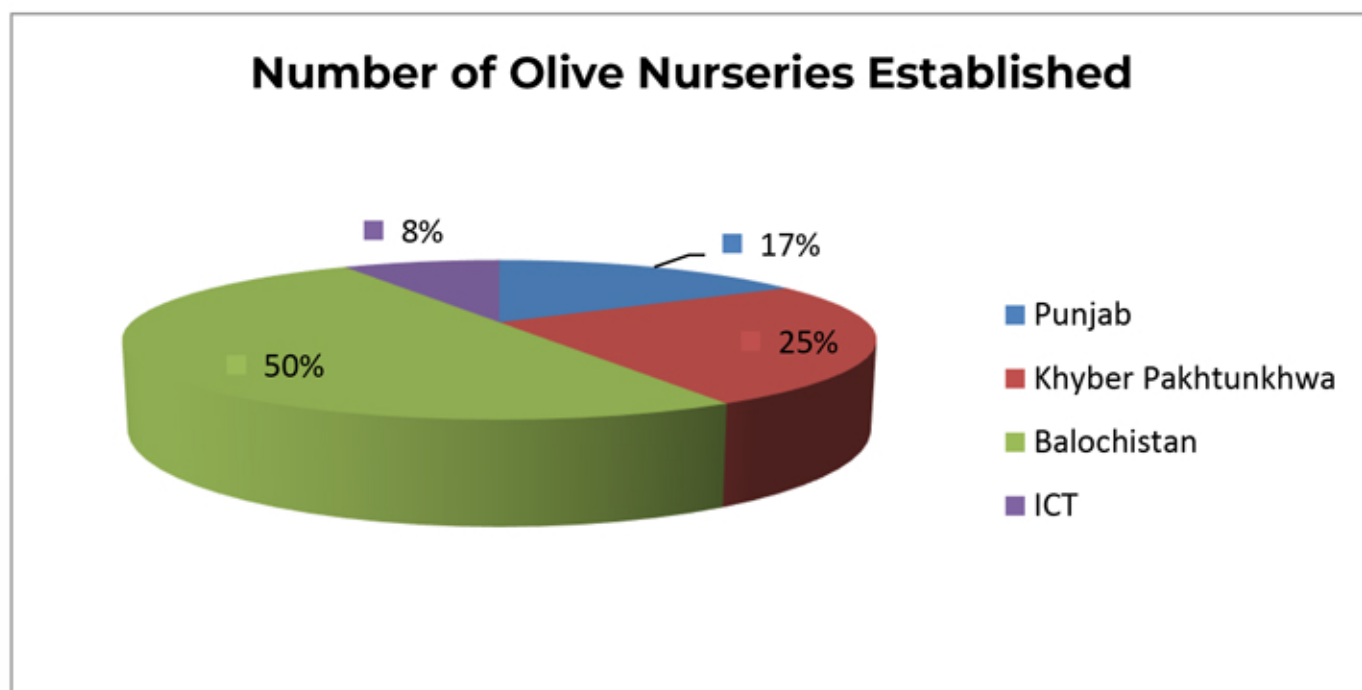
The nurseries established under the grant of POCCSP have an inbuilt irrigation system, heating, and cooling system with temperature controls, and all other facilities to produce olive saplings on a large scale. These specialized nurseries would surely help in increasing the local production of olive saplings and gradual self-sufficiency in the olive sector may be achieved.

The project is very close to achieving the target set for establishing double shaded nurseries and production of true to type and disease-free plants. A total of 12 nurseries have been established so far which have started producing plants at different components for the farmers in Punjab, KPK, Baluchistan, and AJK.





The region-wise data of nurseries establishment and approximate production capacity of the saplings is given here for reference.





## 4. Provision of Olive Oil Extraction Unit as Public Sector Established Facilities in Pakistan

The establishment of Olive oil extraction facilities at very close vicinities of the olive farming regions is an indispensable prerequisite of farming on a commercial scale. Due to the gradual increase in olive farming and fruit yields, the requirement of automatic, high capacity with high recovery machines was imported by the POCCSP during the years 2019-2020 and 2020-2021 were installed at various locations/components for crushing olives to extract high quality extra virgin olive oil. This intervention has significantly improved service delivery and has increased the farmer's income. Under the grant, nine (09) machines of varying processing capacities have been established achieving 100% of the project target. All the units are well installed and operationalized with the cooperation of the provincial components. A number of farmers are getting benefits from the oil extraction facilities free of cost which will be continued in upcoming years. The recovery percentage of the machine is ideally good and the quality of the oil is also in compliance with international standards. The private sector also intended to install similar commercial units in upcoming years due to increasing demand and investment in olive farming.

Olive is a quality-sensitive fruit so as per experts' opinion and scientific research, it must be crushed for oil purposes within 12 to 24 hours to obtain extra virgin olive oil. The project has provided lockable fruit baskets and non-welded stainless steel containers for olive oil storage to the farmers which have played role in safe transportation and to maintain the quality of the oil. Due to POCCSP's intervention of establishing oil extraction units, the farmers are able to get good quality olive oil and a better recovery percentage. Most of the farmers are self-marketing the olive oil through personal contacts and using social media tools. The presence of farmers on social media has created awareness for the masses and the demand for olive products is increasing every year. The olive-based economy due to the long productive life of trees is believed to be the most sustainable economy so a lot of investors and farmers are being influenced by the revolution and bringing new investments in this regard. The olive sector is hoped to create thousands of new employments in Pakistan.



The table gives information on the type and location of olive oil extraction facilities in the country established with the support of the POCCSP project.

Sr. No.	Name and Capacity of Machine	Location of the Facility
1.	OLIMIOGOLD – 100 Kg/hr	NARC Islamabad
2.	OLIMIOGOLD – 100 Kg/hr	BARI Chakwal
3.	OLIMIOGOLD – 100 Kg/hr	Agriculture Office Lower Dir
4.	OLIMIOGOLD – 100 Kg/hr	NTHRI Mansehra
5.	OLIMIOGOLD – 100 Kg/hr	Agriculture Office Zhob
6.	OLIMIOGOLD – 100 Kg/hr	Agriculture Office Barkhan
7.	PIERALISI – 600 Kg/hr	BARI Attock
8.	PIERALISI – 600 Kg/hr	ARI Loralai
9.	PIERALISI – 600 Kg/hr	BARDC Quetta



## 5. Support for Adaptability Trials of New Exotic Varieties

Scientific research-based growth is vital for the sustainable development of any value chain. Most of the varieties recommended for propagation and cultivation in Pakistan are exotic and brought from various European, Arabian, and African countries. Best performing germplasm as per our local conditions was included in the variety registration program. Under the PSDP-funded POCCSP, a number of new exotic varieties have been introduced from various countries in the olive gene pool of Pakistan which have performed in an outstanding way in terms of adaptability, growth, and fruit and oil yields so far. The total target of 25 trials for exotic varieties has successfully been achieved due to efforts of the team at various components while research and development data collection from the trials is in progress for further registration and certification from relevant authorities.







## 6. Support in Establishment of Olive Mother Blocks - GPUs

Since the approval of the new seed act, the establishment of the mother block of the germplasm has become a legal requirement as a source of plants for commercial propagation at public and private sector nurseries. The mother blocks termed Germ Plasm Units GPUs can be established at public sector research and academic institutions as a primary traceable source of the varieties mainly in the case of fruit propagation and commercial nurseries. The project supported the establishment of ten GPUs which is almost double the overall project target. The GPUs were developed at all components of the project including GB and the AJK.

## 7. Plant Propagation Locally in the Nurseries Established with the assistance from POCCSP

In the twelve nurseries established with the in-kind support of POCCSP, a total of 1.856 million cuttings have been planted so far at the components. The plants produced have been included in the system and granted to the farmers under the scheme. The nurseries are now on auto-mode and will keep on propagating the plants and distributing them to the farmers with the support of federal and provincial governments.

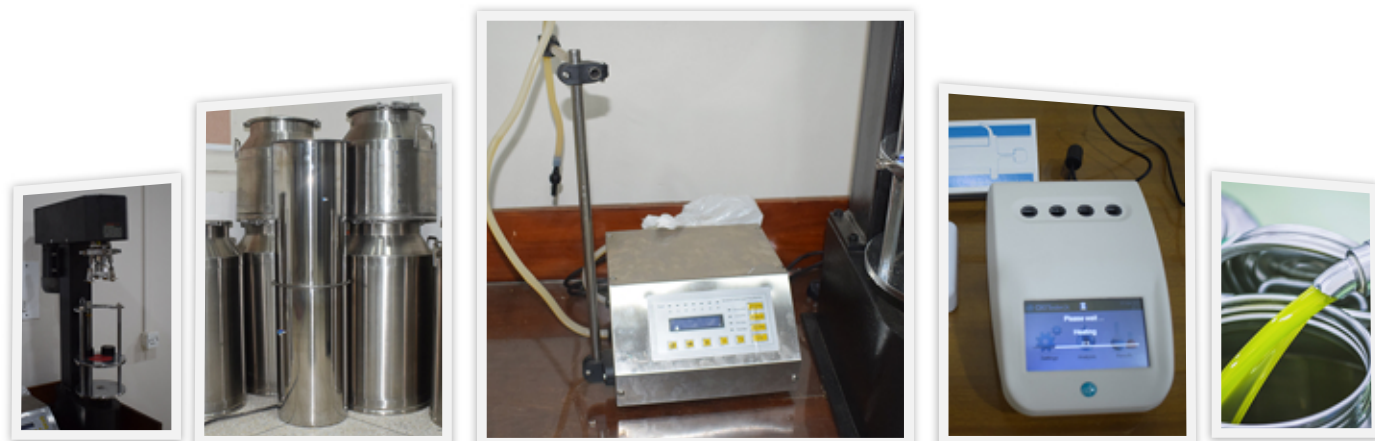
## 8. Training to the Olive Value Chain Stakeholders

Training and capacity development of the stakeholders is a very important part of the POCCSP through which a pretty large number of farmers, investors, processors, researchers, and extension agents have been trained. During the 63 training sessions out of 91 as per the total target, more than 4370 farmers/stakeholders received hands-on training on olive farm best practice, pruning, nurseries establishment, and fruit processing, packing, and marketing. The project employed local resource persons with a grip on the subject matter. The training sessions and capacity development programs were conducted in all parts of the project while the province and component-wise data of the training programs are given as under:

Sr. No.	Province/Region	No. of Training	No. of Participants
1)	Punjab	14	809
2)	KPK	12	796
3)	Balochistan	17	1462
4)	AJK	1	50
5)	GB	4	222
6)	ICT	15	1031
	<b>Total</b>	<b>63</b>	<b>4370</b>

## 9. Up-gradation of Olive Value-addition Labs

The project has supported for up-gradation of olive oil and value-added products labs for conducting evidence-based research at BARI Chakwal Punjab, ARI Tarnab KPK, and ARI Quetta Baluchistan. These labs are meant for the standardization of olive oil and recipes of value-added products. The labs were improved through upgrading infrastructure with the provision of equipment and tools to help in the preparation of standardized products for R&D and training to the stakeholders.



## 10. Installation of Weather Stations

Monitoring daily weather reports and predicting near-future propensity has become an essential part of farm management and smart agriculture. Through accurate information about weather situations, farmers can plan their field and farm activities. Keeping in view the need for technology, POCCSP has installed five weather stations at various locations i.e., BARI Attock, NTHRI Shinkiyari, ARI Quetta, UET Khuzdar, and in Loralai, and technical resource persons are providing data and information of the changing weather to the farmers. This intervention will save the losses and help in farm operation dynamically.





# COMMERCIALIZING OLIVE OIL AND VALUE-ADDED PRODUCTS – THE MARKET

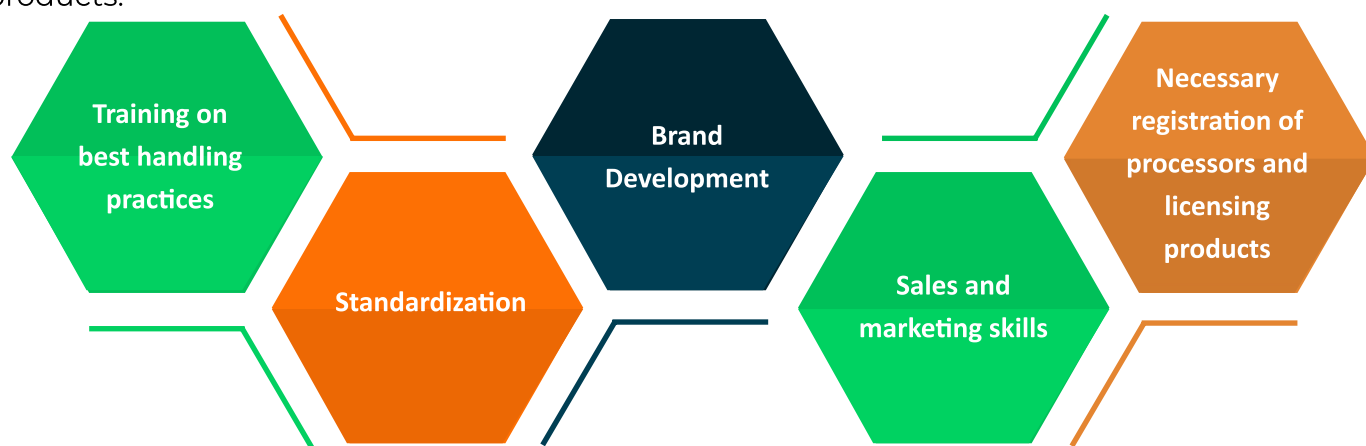


Olive is a new sector in Pakistan, primarily intended to fulfill the edible oil needs of the country and to reduce the import bill of the olive and edible oils, which now has become anticipation for income generation from marginal and virgin soils. Currently, along with oil, the farmers and small-scale processors are preparing a few other value-added products as well at the cottage level which includes olive leaves herbal tea, a variety of pickles, jams, and syrups which are equally getting popular in the country. The processing at small-scale and value-addition has opened new ways of household employment in the olive-growing regions which is likely to get promoted and commercialized in upcoming years. The institutions concerned are however providing training to such entrepreneurs for adopting best and hygienic practices while handling and packing the products, to maintain the quality and uniqueness of the items.

## Registration of “Pak Olive” Brand with IPO

The promotion of Olive farming and its products on a commercial scale is the main theme and prime objective of POCCSP. The project management and teams around the provinces have put a lot of effort to achieve all-time deliverables. The project has constituted a non-profit brand named “Pak Olive” for providing a platform for the small farmers to encourage, develop, commercialize and market their products innovatively and also to export indigenously produced olive oil in the near future. The quantity of olives fruit is increasing every year and the cottage industry players are also growing with the same proportion so a self-propelled market is originating in Pakistan. With a careful estimation, some four million olive trees have been planted so far and the number will grow further so a huge quantity of the olive oil and value-added product will be available inviting investors to come in and start processing and exporting at a large scale. The prevailing ways of selling olive oil on a local basis are through social media, agri-expos, and person-to-person contacts while products are available and are being supplied in the main cities of the country.

Following steps may be taken further by the concerned institutions to handhold the sector stakeholders and value chain actors involved in the processing and marketing of olive products.



# MAJOR CHALLENGES TO THE OLIVE SECTOR IN PAKISTAN



Olive farming on a commercial scale is a recent development in Pakistan so like many other sub-sectors of Agriculture, olive is also facing a range of challenges since its inception. The important one of them, as pointed out by various stakeholders has been briefly explained below:



## **Limited Awareness of Agronomic Best Practices / Access to Information**

Relevant information about the land for olive cultivation, feasibility study, business plan, farm management practices, etc., are not available in any structured form which is usually required for any investor to make an investment decision for a business-oriented project. Likewise, information on good farming practices is not available in an organized form. At present, BARI, Olive Foundation, and some existing farmers are providing information but in an informal way, based upon personal relationships. There is a need to develop research-based relevant qualitative and research-based information for investment opportunities, available in this sector in the form of investment guides, booklets, and studies. The documented material for local and overseas Pakistanis can be a great source of business planning and decision-making.



## **Selection of Suitable Varieties & Availability of True-to-Type Disease-free Plants**

In previous years, Pakistan imported more than 100 olive cultivars and their trials were made at various places mainly at BARI Chakwal and ARI Peshawar. Most of those have been found suitable for oil extraction whereas a few others are for table purposes. So far, pertinent information on various olive varieties compatible with various regions is not readily available in any structured form that can help new farmers in the selection of varieties, considering the physical and internal characteristics of varieties. The availability of true-to-type disease-free plants of certified varieties at affordably lower prices was one of the issues, new farmers had to face in the past. POCCSP is supporting the establishment of nurseries and is offering certified commercially viable olive plants free of cost, to investors availing assistance package of the Federal Government



## Provision of Extension / Farm Advisory Services

The important cultural practices required for the successful growing of olive trees with good yield and better fruit quality include but are not limited to balanced nutrition (Nitrogen, Phosphorus, Potassium, Sulphur, Boron, Copper, Calcium, Magnesium, etc.), pruning, irrigation, weed control, pest control, disease management, and fruit harvest. Being a new crop, the provision of extension services to farmers is essential for effective and efficient farm management that can lead to optimum yield with good fruit quality. At present, provincial agricultural departments through their extension staff are providing advisory services to the farmers. Since olive is a new crop, the extension staff of each province including GB and AJK needs proper training. With an increase in olive area, the biggest challenge for the farmers is the availability of advisory services/extension services on best practices to manage their farms wisely.



## Availability of Trained Workforce

A trained local workforce is required for overall farm management, pruning, harvesting, and handling of the olive crop. Likewise, operations and maintenance of irrigation systems (drip irrigation, bubblers, water lifting, etc.) demand trained workers. Therefore, availability and training of manpower need to be worked upon on a regular basis side by side for the commercialization of the olive sector.



## Olive Fruit Processing and Preparation of Value-added Products

Olive is a perishable fruit and the delays in processing can have an adverse effect on oil yield and quality. Punjab had one small unit with a processing capacity of 600 Kgs per hour established in 2017 at BARI Chakwal with the funding of Govt. of Punjab. The other one is recently established with the grant assistance of PSDP-funded POCCSP in Attock. Similarly, nine machines have been established with the grant support of the project at various components in the public sector. All the machines will be provided free of the cost of oil extraction service to the farmers. The installed capacity seems to be sufficient for the time being but as the production increases, a number of other machines will be required. Similarly, the establishment of commercial units for making value-added products is also a need of time to increase farmers' profitability.





## Marketing and Sales of Olive Fruit, Oil, and Other Products

Being a perishable fruit, in-time selling or curing of the olive fruit is one of the challenges being faced by new farmers. Many newly developed olive farms have attained the fruit-bearing stage and gradually supply of olive fruit is increasing in the country. Presently, individual / large business buyers are not operating and buyer-seller linkages for olive trading are totally missing. Even the government has left the buying and selling of olive to market forces and does not facilitate developing any widespread sales network at the local and international level of olive fruit/olive oil trading to protect the interest of farmers. In Pakistan, the market for olive oil is not developed, though the number of health-conscious consumers is increasing in the country. The higher international prices of olive oil in comparison with palm oil we import for local consumption is the major constraint for local market development. Therefore, establishing export linkages and developing local markets are the major challenges to pre-empt future mismatch between supply and demand.



## Guidance on Olive Sector Investment

As stated earlier, olive is a new crop in Pakistan while olive oil and its products are widely used in our country and in the developed world due to knowing health benefits. Looking at the profitability, many people living in large urban centers and abroad with roots in Pakistan want to invest in olive farming, processing, and marketing of the products but very little information is available in this regard. So, the need of the moment is to have a ready-made generalized document for investors to guide them on investments in the olive sector. This will not only save their time but also guide them about possible risks and opportunities with a complete set of solutions and information for stakeholders to coordinate in cases of a challenging situation.



# CAPACITY DEVELOPMENT AND TRAINING PROGRAMS



Capacity development of research and extension staff and training of farmers and processors is a significant deliverable of the POCCSP which has been worked upon meticulously. More than 63 such capacity development sessions have been organized for public sector research and extension staff, and for the private sector stakeholders at various components of the project. Organizing training programs is a continuous activity that is actively attended by farmers and olive lovers across the country. CEFORT established at BARI Chakwal is taking a lead on training activities and acting as a role model for other components. The training programs conducted in this regard cover the following important topics of the olive sector:

- Establishment and management of olive nurseries, registration and certification process, growing media preparation and plant propagation, etc.,
- Establishment of new olive orchards, agronomic good practices, fertigation, and pest management,
- Olive plants pruning
- Fruit harvesting and handling process,
- Processing for olive oil and scientific considerations to maintain the original quality
- Processing for preparing value-added products,
- Food safety requirements and licensing process,

During all the training activities, practical demonstrations were made to explain each and every important practice. As per data received, more than 4370 farmers, experts, and investors attended the capacity development and training programs.





# INTERNATIONAL RECOGNITION AND COOPERATION



The Pakistani Olive sector started recognized by various European and Arabian countries back in 2015 as Ambassadors of these countries appointed in Pakistan took a keen interest in the newest olive farming in the Pothohar region of Punjab and other parts of the country. Later, due to the efforts of the Government of Pakistan, IOC was also briefed about the developments which started observing the olive adaptability, commercial farming, and oil percentage. A few of the activities under cooperation are given here:

## 1. POCCSP Organized Webinar with IOC

The government of Pakistan through the Trade & Investment Counselor in Madrid, Republic of Spain reached out to the Executive Director of the International Olive Council for an introductory session with the olive sector stakeholders in Pakistan. International Olive Council is an apex body that is responsible for the standardization of protocols for olive oil and table olives, research and innovation in the olive sector, and funding of new projects for the promotion of olive in the world. The webinar was organized by the Trade & Development Authority of Pakistan (TDAP) in collaboration with the Embassy of Pakistan in Madrid on May 27, 2021.

The webinar kicked started with Pakistan's olive sector introduction and development by National Project Director (Olive) Dr. Muhammad Tariq, whereas heads of each section of IOC i.e., research & development, economic wing, and legal wing presented a holistic picture of the organization and described the possibility of Pakistan to become a member of the council. The representatives from various components of the project including CEFORT and, BARI Chakwal also contributed with their experiences and observations during the webinar. The Executive Director of IOC, Abdel Latif Khadira assured the Pakistani delegates that Pakistan may be given the status of observer state, keeping in view the phenomenal performance of the olive sector in Pakistan, so that proper linkages may be established.

## 2. Pakistan Awarded Observer Status at IOC

Following the successful webinar, IOC invited Pakistan to participate in the 113th session of regular members via zoom on June 30, 2021. The Pakistani delegation included Dr. Muhammad Tariq, National Project Director of POCCSP and focal person for olive sector development in Pakistan. Addressing the meeting, the head of the delegation explained to the council about the status and future outlook, and potential of the olive sector in Pakistan. The IOC members were appraised that Pakistan has a huge land resource suitable for olive cultivation, upon fully utilizing it could become a major olive producing country and the Olive value chain can be developed with International assistance in the lieu of research, innovation,





Sahibzada Muhammad Mehboob Sultan, Federal Minister, M/o National Food Security and Research, Mr. H.E. Stefano Pontecorvo, Italian Ambassador and Ms. Mina Dolatchahi, FAO representative cutting the ribbon on the occasion of International Conference on "Olive Orchard Management and Value Chain Development" held at NARC on 19-02-2019. Other high officials of PARC are also present of the occasion. (Dte. of PR&P, PARC)



A group photo of Sahibzada Muhammad Mehboob Sultan, Federal Minister, M/o National Food Security and Research, Mr. H.E. Stefano Pontecorvo, Italian Ambassador, Yusuf Zafar (T.I), Chairman, PARC, Ms. Mina Dolatchahi, FAO representative in Pakistan, Prof. Dr. Nadeem Akhtar Abbasi, VC, PMAS-AAUR and other high official of PARC on the occasion of International Conference on "Olive Orchard Management and Value Chain Development" held at NARC on 19-02-2019. (Dte. of PR&P, PARC)

standardization, and grants where applicable. Dr. Kakar invited Executive Director IOC and his core team to visit Pakistan to witness and observe the olive cultivation in Pakistan which was accepted. Executive Director, H.E Abdel Latif Khadira appreciated the efforts made by the Pakistan Olive sector in the promotion of this unique, valuable, and sacred crop in the country and expressed the hope that such interactions would strengthen the cooperation between the Pakistan Olive sector and this premium Intergovernmental organization, International Olive Council. IOC awarded "OBSERVER" status to Pakistan until all the criteria and requirements are fulfilled to become a permanent member. He said once Pakistan becomes a member state, it would be able to avail of the facilities provided by the IOC including installing oil extraction units in the country and access to the International markets.

### 3. Submission of Request for Membership of IOC

As Pakistan fulfills all the requirements as per the "Agreement of Olive Oil and Table Olives 2015" for membership in IOC. The case has been submitted for approval by the IOC cabinet.

# PROMOTION THROUGH ORGANIZING MEGA-EVENTS



A number of small and mega-events are planned every year to attract olive lovers and investors and due to these programs, awareness and information level is multiplying among the masses.

## 1. National Olive Festivals

The interest of common farmers in Olive cultivation is growing on a fast track in Pakistan. Every other farmer wants to plant olives or wants to get information on their suitability and availability for plantation on a commercial scale. Many people have planted one or a few olive trees at their houses and farmhouses which shows their love for the olive trees. Olive festivals are regularly organized every year at BARI Chakwal and various other locations by farmers' organizations like Olive Foundation. The olive festivals are attended by the farmers, processors, investors, and civil society with the aim to promote olive cultivation and increase awareness of a healthy lifestyle through consuming olive oil and other products. In the public sector, the first National Olive Festival was organized in 2019 at BARI Chakwal with the technical, organizational, and financial assistance of USAID Pakistan and afterward, the festival has become a regular feature. The olive festivals organized in 2020 and 2021 attracted thousands of visitors across the country. The international delegates and diplomats also have been attending the mega gathering showing their excitement about the rapidly growing olive cultivation.

In the year 2021, the olive festival was organized by POCCSP at NARC Islamabad. The entire objective of the project was to showcase olive cultivation and its potential in Pakistan to local farmers, international delegates from embassies, multi-sectorial donors and to attract the business community and civil society people which is the largest consumer base of the country. The mega event was graced by the Federal Minister MNFSR Syed Fakhar Imam, while the Ambassador of Italy in Pakistan, Federal and Provincial Secretaries, DGs, and representatives from research, development, and academic institutions, leading olive growers and product processors also participated. The team of organizers from the POCCSP project, POD, and all the components managed the entire event professionally and beautifully.





Significant themes of the olive festival were as followed:

- Conference to present scientific and developmental achievements in the sector,
- Addresses of Chief Guest and Guest of Honor,
- Stalls presentation to showcase olive oil and hand-made value-added products,
- Stalls presentation of various components of the POCCSP project to display their efforts,
- Presenting various other unique products/services related to farming i.e., tools, technologies, innovations, etc.,
- Olive oil tasting competition among the farmers, evaluated by local and international experts,
- Award of shields, certificates, and mementos to appreciate farmers, stakeholders, and POCCSP project implantation partners,

Olive festivals have highlighted the significance of the olive sector enormously and have fascinated landlords and small farmers to start olive farming. The olive festivals also have promoted small farmers and true olive lovers becoming a ray of hope for sustainable economic growth.

## 2. World Olive Day

Pakistan's potential for olive production is much more than any country. The torchbearers are always struggling to recognize the world and local community that farmers here are industrious and always accept innovations. Pakistani olive stakeholders observed world olive day on 26th November 2021 for the first time in the country while the day is celebrated every year internationally. It is noteworthy to state that UNESCO has declared the olive a tangible heritage and it has a unique importance in every religion as a sacred plant. In commemoration of this world olive day, IOC arranged a unique webinar conference which was participated by the POCCSP project management and teams from various components. Moreover, a ceremony was also arranged at CEFORT, BARI Chakwal where participants discussed the olive sector achievement and prospects.



International conference on olive culture was held in Baluchistan University of Engineering and Technology, Khuzdar with the cooperation of PSDP Olive and PPAF. The conference theme was to promote the olive culture concept and spread awareness amongst stakeholders of the country, especially Baluchistan. The conference was attended by olive farmers, research scientists, private sector Fig: Adoptability Trails and Mother Blocks 7- Local Plant Preparation 8-International Olive Conference Promotion of Olive Cultivation on Commercial Scale in Pakistan 18 entrepreneurs and other stakeholders. A variety of speakers with vast experience in olive sector graced the occasion with their thoughts and experiences in olive. The conference was inaugurated remotely via Zoom by H. E Syed Fakhar Imam Federal Minister National Food Security and Research. The welcome note was presented by vice chancellor of the BUETK, Prof. Dr. Ehsanullah Kakar. National Project Director Dr. Muhammad Tariq made the audiences abreast of the present scenario and prospects of the olive sector in Pakistan.

The conference was addressed by foreign dignitaries, and researchers. Dr. Emanuela Benini, Director AICS, explained the role of Italian support for the promotion of olive culture in Pakistan. Dr. Marco Marchetti shed light on the unique educational and wonderful relationship between CIHEAM BARI and Pakistani research institutions like BARI Chakwal PODB and PARC. Engineering experts Costantino Parma explained the engineering aspects of the drip irrigation system and water saving technologies used for olive production. The keynote speaker of the conference was Dr. Chartzoulakis Kostas of Greece, who shared his lifelong experience with this novel crop and explained the prospects of its cultivation outside the Mediterranean basin. The conference was also attended by distinguished academia including worthy Vice-Chancellor of Labella University, Virtual University of Pakistan, and BUETK Khuzdar. In the end, the recommendations of the conference were presented by the chairman of the organizing committee Dr. Khair Muhammad Kakar which was followed by the distribution of shields and souvenirs amongst the presenters and dignitaries from across Pakistan. On the eve of this conference, a unique café session was also held which was attended by more than 80 students and faculty of the university along with the representatives of the PSDP olive. It was an awareness seminar in which the students were encouraged to share their queries regarding olive cultivation in Baluchistan.



# NATIONAL AND INTERNATIONAL COLLABORATIONS



National and International donors and development agencies are playing a prodigious role in the olive revolution in Pakistan since the very first day to date. On one side, they have developed the capacity of Pakistani farmers, researchers, and academia through technical assistance, and on the other hand, they have provided technology in the form of high-yielding varieties, tools, and olive oil machines. They are continuously engaged with the federal and provincial governments and farmers' organizations for the betterment of agriculture in general and for the Olive sector in particular. A few of the close collaborating development partners are listed here:

- International Olive Council
- Italian Cooperation for Development, (ICD) Pakistan Chapter,
- United States Agency for International Development (USAID),
- Agency for Barani Areas Development (ABAD),
- Pakistan Council of Research for Water Resources (PCRWR),
- Olive Foundation,
- PMAS Arid Agriculture University Rawalpindi





# SWOT ANALYSIS S OF THE PAKISTANI OLIVE SECTOR



In the following section, an exhaustive SWOT analysis is performed to streamline project activities further. The contents of the analysis are given as under.

## Main Strengths:

- Soil and climatic suitability exist,
- Wild olive trees' presence for centuries proves the adaptability of the olive trees,
- Vast knowledge and research available internationally on olive farming and processing,
- The government provides olive plants and HEIS free of cost in selected districts and regions of the country,
- Olive oil extraction facilities are established which are providing free service to the farmers,
- Pakistan imports olive oil, which means there is somehow consumption of the oil and its production in households, in medication, and in food processing at restaurants and fast-food outlets.
- With good management, the olive plants can yield fruits for more than a hundred years.

## Weaknesses:

- A comprehensively documented feasibility and business plan not available for medium to large investments,
- The market of locally produced olive oil is not established,
- A huge number of farmers are demanding plants but the supply of free plants is very low,
- Olive can tolerate water stress but for good production, regular irrigation is required while the availability of rain and groundwater is not sufficient,
- Tools for pruning and harvesting are not available sufficiently, at reasonable prices,
- Extension and advisory services at the government or at the private level are missing,
- Trained labor/workforce not available to carry out various functions i.e., pruning, harvesting, drip irrigation system, etc.
- Olive promotion is being done for marginal and virgin lands which need a lot of effort in establishing an olive farm and carrying out various other operations.



## Opportunities:

- Olive farming is included in the billions-trees project of the Federal Government so more focus is expected on the olive sector development.
- Marginal / Virgin lands of Pakistan can be converted into the best olive-producing soils.
- IOC support and recognition/certification will enable us to establish a footprint on the world olive oil market.
- Being the new sector, opportunities are available to develop a business or career in the olive sector.
- Healthy lifestyle adoption is increasing in the country so the demand for olive oil and its value-added products will increase in upcoming years.
- Awareness and guidance through social media platforms for farming and marketing are on the rise,
- Olive farming and the olive-based economy are the most sustainable agribusiness in the world.

## Threats:

- Low buying power of the general public as the olive oil and its products are costly
- The inputs and machine tools are also very costly
- Although, the olive is a very hardy plant and offers resistance to the changing climate bruits losses can increase in case of visible changing patterns of seasons and climates
- Too much inflow and import of non-certified olive oil is a serious threat to locally produced olive oil
- No enforcement of regulatory regime pertaining to standardization and quality of the olive oil



# IMPACT OF OLIVE CULTIVATION IN PAKISTAN ON COMMERCIAL SCALE



## 1. Agricultural Impact

### 1.1 Long Term Production

According to land capacity classes, Pakistan has 8.2 million hectares of land which is a cultivable waste. As olive requires less water and can survive for thousands of years with the longest span of fruit production. This initiative in the long term will ensure soil cover with economic productivity.

### 1.2 Protection against Erosion and other Forces of Denudation i.e. Wind

According to research data published sheet, rill and gully erosion caused damages up to 5.14 to 133.89 t/ha per year. The crop cover with Olive will save the losses caused by soil erosion.

## 2. Environmental Impact

### 2.1 Olive as Carbon Credit

The olive plant is an effective carbon sink. It is estimated that an accumulative amount of 13.9 t/ha carbon is sunk by a productivity area of one hectare. This shows that olive cultivation on large scale can reduce environmental pollution and maintain carbon concentration at an optimum level.

### 2.2 Mitigating Climate Change

The increased plantation will lower the temperatures and carbon concentration at regional and global levels causing a pleasant impact on weather and climate. Olive plants thrive suitably best in all types of climatic conditions making them among the most successful and hardy plants to fight the ever-increasing impact of climate change.

## 3. Social Impact

### 3.1 Employment

Olive value chain of diverse nature with accredited and proven health benefits. Hence, Olive cultivation in Pakistan can increase employment and uplift the social sector of the country.

### 3.2 Employment Opportunities for Gender and Youth

Employment opportunities for gender and youth can also ensure poverty reduction in Pakistan. The PSDP-funded POCCSP has dedicated training programs for training gender and youth of the target regions on nursery and orchard management with processing at a small scale to prepare value-added products. This can promote employment and business prospects for these important components of society.



## 4. Economic and Health Aspects

### 4.1 Edible Oil-based Economy

As Pakistan is chronological deficient in edible oils and oilseeds, a significant exchequer of USD 3.5 billion is used for the import of palm oil which is hazardous otherwise. Also, 4481 tons of olive oil and other products are being imported annually, in addition, resulting in a further increase in the trade deficit of the country.

The commercial cultivation of olives in Pakistan will result in;

- Import substitution with reference to olive oil and edible oils in general,
- Decrease in the payment of national exchequer,
- An increase in foreign exchange and GDP,
- Will reduce upheaval in the social sector, especially the neglected regions of the country,

### 4.2 Health Aspects

Olive oil and other products have proven health benefits with regard to the,

- Better health of the heart due to zero fat contents in the oil
- Olio protein has good control of the chronic diabetic disease
- Reduction in body fats to an optimum level
- Healthy monosaturated fats and the presence of anti-oxidants help in anti-inflammatory prospects.





- o Prevents from stroke
- o Prevents from obesity
- o Fights Alzheimer disease
- o Prevents type-II diabetes
- o Contains anti-cancerous disease
- o Prevents rheumatoid arthritis

### 4.3 Nutraceutical Products

In the developed world, nutraceutical products from Olive extracts have been developed for health safety and other purposes to mitigate health hazards. Similarly, cosmetics of olive-based products like balm, soap, hand wash, creams, and moisturizers are also in use by the communities. Olive-based bio dyes are prepared for safe industrial use, especially for coloring leather products and cloths.





# Happenings





# PROJECT REPORT 2014-2021



Ministry of National Food Security and Research,  
Government of Pakistan

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