

# GOVERNMENT OF THE PUNJAB PLANNING & DEVELOPMENT BOARD

(Agriculture Sector)

#### **WORKING PAPER FOR PDWP**

Part – A Project Profile

1.	Name of the project	Revival of	Revival of Citrus Sector in Punjab				
2.	Location	Sargodha	and Toba Tek Singl	า			
3.	Sponsoring Agency	Agriculture	e Department				
4.	Executing Agency	Agriculture	e Department				
5.	Operation & Maintenance	Agriculture Department					
6.			T	1	(	Rs. in Million)	
			Cost Presented in	Proposed Cost			
			60 <sup>th</sup> PDWP	Before	After Pre-	Diff.	
	Cost of the project		(29.01.2025)	Pre-PDWP (A)	PDWP (B)	(+/-) (A-B)	
		Capital	374.278	232.882	232.882	0	
		Revenue	639.971	1,565.587	1,201.655	-363.932	
		Total	1,014.249	1,798.469	1,434.537	-363.932	
7.	Allocation 2024-25 (G.S No. 3241)	Rs. 100 million					
8.	<b>Gestation Period</b>	2024-25 to 2027-28 (04 years)					

#### 9. PROJECT BRIEF & JUSTIFICATION

The citrus industry is vital to Pakistan's economy, covering approx. 380,000 acres and producing 2.23 million metric tons (*Ministry of National Food Security and Research, 2022-23*). Citrus contributes one-third of the total value of fruit exports, generating \$77.24 million in 2023-24 (*Economy Trend, 2024*). The citrus cultivation area decreased from 421,000 acres in 2018-19 to 358,000 acres in 2022-23, with production dropping slightly from 2.4 million tons to 2.16 million tons. In 2022-23, citrus exports were \$77 million, a 39% decline from \$117 million in 2021-22. This sharp drop represents a 63% decrease in annual growth rate compared to 2020-21, when exports were valued at \$132 million.

The decline in the citrus industry can be attributed to several factors including substandard nursery plantations and improper planting geometry, which compromise the initial growth stages of the citrus trees, along with significant pest and disease pressure that affects the health and productivity of the orchards. Inefficient orchard management and pruning practices further exacerbate the problem, leading to reduced yields. The increased cost of production poses an economic challenge for growers. Climate change also impacts citrus production adversely by altering growing conditions. Furthermore, a lack of awareness among farmers regarding best practices, combined with substantial pre and post-harvest losses, contributes to the overall decline in the citrus industry. This scenario has resulted in low productivity and decreased quality of the produce, which needs a comprehensive revival plan of the existing setup and development of new strategies for expansion of area and diversification of registered citrus varieties.

This farmer-centric project focuses on revitalizing the citrus industry by addressing the challenges of declining plantation area, reduced productivity, and compromised fruit quality. It would be achieved by introducing certified planting material, adopting modern orchard

management practices, and strengthening research & development (R&D) facilities in emerging citrus-growing regions. Through capacity building, infrastructure development, and innovative interventions, the project seeks to ensure sustainable expansion, improved yield, and enhanced quality of citrus crops, thereby empowering stakeholders and contributing to the long-term growth of the citrus sector.

#### 10. 60<sup>TH</sup> PDWP PROCEEDINGS

The scheme was deliberated in 60<sup>th</sup> PDWP meeting held on 29.01.2025 at a cost of Rs. 1,014.249 million and was deferred with the following directions:

- **i.** Administrative Department shall re-examine the interventions proposed for revival of citrus sector and come up with some innovative ideas rather than conventional practices to attract citrus growers for revival of the sector.
- **ii.** Agriculture Department shall update Rough Cost Estimates on MRS rates for 1<sup>st</sup> bi-annual 2025 and submit compliance certificate with regard to observations of Technical section, P&D Board.
- **iii.** Agriculture Department to propose a framework for plant certification as well as an inspection and enforcement regime specifically for citrus sector.

Now, Agriculture Department has re-submitted PC-I in the light of observations/ directions of 60<sup>th</sup> PDWP meeting. A comparison of the original and amended scope is tabulated below:

Category	Old Project Proposal (Dec 2024)	Revised Project Proposal (March 2025)
<b>Project Duration</b>	2024-25 to 2026-27 (3 years)	2024-25 to 2027-28 (4 years)
Budget	1200 Million PKR	1,798.469 Million PKR
Scope	Focus on Sargodha, Layyah, and T.T. Singh for citrus revival and research expansion.	Layyah district has been removed. Expanded interventions covering disease management, high-tech nursery systems, and citrus processing linkages.
		Increased target to 9,000 acres for sick orchard revival.
Farmer Support Program	PKR/acre) for 125 farmers (total 500	Includes direct financial support (25,000 PKR/acre) for 3,000 farmers (total 9000 acres revived).
	Establishing small scale container-grown nurseries at research institutes.	Introduces Pakistan's first container-grown nursery system, scaling from 10,000 to 100,000 plants/year and collaborating with private nurseries.
Disease Diagnosis & IPM		Establishes Pakistan's first molecular diagnostic lab for DNA-based disease detection (PCR, ELISA) and Integrated Pest Management (IPM) plans for disease prevention.
_	Farmer Field Schools (FFS) for on-farm learning.	Expanded to 15 Farmer Field Schools, 3,000 farmer training sessions, 300 Farmer Days, and linkages with citrus processing industry.
Citrus Gene-Pool Expansion	Limited mention of varietal introduction.	Plans to import 40 exotic citrus varieties from China, Turkey, Egypt, and the USA, focusing on high-yield, climate-resilient varieties.
Citrus Processing Industry Linkages	improvements	New intervention to link growers with citrus processors via group visits, conferences, and contract farming models.

Category	Old Project Proposal (Dec 2024)	Revised Project Proposal (March 2025)
High-Density Plantation & Research Trials	Establishment of high-density model	Expanded to include round-the-year citrus production blocks, bud-wood banks, rootstock seed blocks, and bio-fertilizer development from citrus waste.
		Induction of 100 horticulture experts/interns and 2 cluster managers to monitor extension activities.
Media Campaign	No specific mention of dedicated media campaign	Punjab Agriculture Information Wing has been designated for full fledge electronic/ digital media campaign of the project.
Framework for Citrus Plant Certification & Enforcement	-	Agriculture Department has taken up the matter with the Ministry of National Food Security & Research, Islamabad, regarding the delegation of the Registration & Inspection Authority for Fruit Plant Nurseries to Punjab Province vide letter dated 18.02.2025.

#### 11. PROJECT OBJECTIVES

The key objectives of the project are as follows:

- **i.** Combating the citrus decline and increasing productivity of citrus orchards using advanced management practices to improve yield and quality.
- **ii.** Advancements in disease diagnosis by establishing a molecular diagnostic lab for estimating the root causes of citrus decline and development of IPM strategies to address the crop challenges.
- **iii.** Developing the Pakistan's first container-grown nursery system to produce high-quality, disease-free plants, ultimately reducing fruit-bearing time.
- **iv.** Developing the technical collaborations and capacity building programs for citrus stakeholders to adopt innovative practices and technologies.

#### 12. PROJECT SCOPE / KEY INTERVENTIONS

The project focuses on the following five key interventions:

- i. Citrus revival in Sargodha and T.T Singh through rejuvenation, propagation and advanced orchard management practices
- **ii.** Research & Development through Cutting Edge Production Technologies & Molecular Methods for Disease Diagnosis
- iii. Introduction of 1st ever Container Grown Nursery & state of the art Screenhouses
- iv. Varietal development and acquisition of new exotic gene-pool selection
- v. Integrated Pest & Disease Management (IPDM) Support

#### 12.1 Citrus Revival in Sargodha and T.T Singh

The project aims to rejuvenate **9,000 acres** of sick citrus orchards through modern agricultural techniques, capacity building, financial support, and industry linkages. Major activities under the interventions are:

#### a. Technical Support & Citrus Clusters:

 Hiring of 100 horticulture interns and 2 cluster managers (Eligibility Criteria at Annex-A)

- Establishment of 15 Farmer Field Schools (FFS)
- Implementation of **02 Citrus Model Farms** showcasing best practices: 1 at Sargodha & the other one at T.T. Singh.

#### **b. Financial Support for Orchard Revival:**

- **Rs. 25,000 per farmer** (max 3 acres) for orchard rejuvenation
- **3,000 farmers** to receive support, covering **9,000 acres** (Eligibility Criteria at Annex-B)

#### c. Farmer Capacity Building & Awareness:

- **3,000 training programs** on pruning, pest control, irrigation, and post-harvest management
- Farmer Days (300 events) at demo sites for knowledge sharing (Rs. 50,000 per event)

#### d. Linking Growers with Citrus Processing Industry:

- Group visits & conferences at processing plants (150 visits/ conferences)
- Strengthening grower-processor collaboration for better market access

# 12.2 <u>Research & Development through Cutting Edge Production Technologies & Molecular Methods for Disease Diagnosis</u>

This initiative aims to enhance disease diagnostics, optimize nutrient management, ensure continuous fruit production, and improve genetic diversity in Pakistan's citrus industry. Major activities under the interventions are as follows:

#### a. Molecular Citrus Disease Diagnostic Lab

- Establishment of Pakistan's first DNA & PCR-based diagnostic lab for citrus diseases.
- Target diseases: Citrus Canker, Citrus Greening (HLB), and Citrus Tristeza Virus (CTV).
- Enhance diagnostic capacity from 484 to 58,000 samples per year for large-scale disease screening.

#### b. Nano-Fertilizers cum Pesticides for Disease Control

- Develop nano-fertilizers with pesticides for targeted disease suppression.
- Improve nutrient uptake and minimize environmental impact through controlled release.
- Conduct field trials to assess efficacy.

#### c. Year-Round Citrus Production Block

- Cultivate early, mid, and late-maturing citrus varieties for continuous fruit availability.
- Implement climate-smart techniques like net houses and high-density planting.
- Use growth regulators (PGRs) for extended harvest seasons.

#### d. Bio-Fertilizer from Citrus Waste

- Convert citrus waste into organic bio-fertilizers to improve soil health.
- Identify beneficial microbes and develop compost & liquid bio-fertilizers.
- Assess impact on plant growth and soil fertility.

#### e. Bud-Wood Banks of Registered Gene Pools

- Establish disease-free bud-wood banks for nurseries and farmers.
- Regular disease testing and controlled distribution to maintain genetic purity.

#### f. Root-Stock Seed Block

- Develop disease-resistant and drought-tolerant rootstocks.
- Implement systematic seed production for high-quality propagation material.

#### g. Variety Multiplication Blocks

- Large-scale propagation of superior citrus varieties.
- Quality assessment and certification for commercial orchard development.

#### h. Adaptability Blocks for Exotic Citrus Varieties

- Import and evaluate exotic citrus varieties under local conditions.
- Assess yield, fruit quality, and disease resistance before large-scale cultivation.

# 12.3 <u>Introduction of 1<sup>st</sup> Ever Container Grown Nursery & State of the Art Screenhouses</u>

This intervention involves the following activities:

- Introduction of advanced Container-Grown Nursery for provision of disease-free plants (for the first time in Pakistan)
- Reduction in fruit bearing time in field from 5 years to 3 years
- Bud-wood banks for provision of bud-woods of registered varieties (Salustiana, Tarrocco, Valencia Late etc.)
- Increasing plant production capacity from 10,000 plants to 100,000 plants per annum.
- Liaison with private nurseries for development of Container-grown nurseries to provide disease-free plants
- Bud-wood of the registered varieties will be provided to private nurserymen for development of disease-free plants

#### 12.4 Varietal Development / Acquisition of New Exotic Gene-Pool Selection

Activities under the said intervention are as follows:

- 40 exotic varieties including Daisy Mandarin, Fall Glow, Jaffa, Marsh Early, Ruby Blood etc. have been targeted to import from China, Turkey, Egypt, and USA
- Acclimatization and testing of the imported material at glass house would be performed.
- Process of variety approval from Punjab seed council and FSC&RD would be initiated.
- Farmer selection programs would be initiated to ensure varieties are tested in realfield scenarios.

#### 12.5 <u>Integrated Pest & Disease Management (IPDM) Support</u>

Activities under the intervention are as follows:

- Training of 100 Horticulture Graduate internees in pest and disease identification and their management.
- Coordination for establishment of 175 IPM demonstration sites to showcase best practices in pest management (150 farms in Sargodha and 25 farms in Toba Tek Singh)
- Capacity building of farmers and farm laborers in target districts through comprehensive training on IPM strategies including proper pesticide application, disease prevention, and biological control techniques at IPM sites.
- Installation of pheromone traps and protein baits at IPM demonstration sites for effective pest monitoring and control.
- Provision of timely pest alerts and advisories to farmers and stakeholders.
- Development and distribution of educational materials on IPM strategies for managing citrus pests and diseases.
- The supervision and monitoring of agricultural graduate internees, with respect to plant protection measures, will be conducted by Pest Warning.

#### 13. DEFINED ROLES OF COLLABORATIVE DEPARTMENTS

Intervention	Responsible Executing Wing/Agency
1) Citrus Revival in Sargodha and T.T Singh	Agriculture Extension Wing
<ol> <li>Research &amp; Development through Cutting Edge Production Technologies &amp; Molecular Methods for Disease Diagnosis</li> <li>Introduction of 1<sup>st</sup> Ever Container Grown Nursery &amp; State of the Art Screenhouses</li> <li>Varietal Development / Acquisition of New Exotic Gene-Pool</li> </ol>	Agriculture Research Wing
5) Integrated Pest & Disease Management (IPDM) Support	Agriculture Pest Warning & Quality Control of Pesticides (PW&QCP)

#### 14. PROJECT MANAGEMENT

The Chief Scientist CRI Sargodha will be the Project Director and over-all in-charge of the project. To strengthen the implementation arrangements of the project the following structure is proposed:

14.1.	Project Steering Committee	
14.2.	Project Implementation Committee	
14.3	District Allotment Committees (District-wise)	(TORs at Annex-H)
14.4.	Subsidies Management Committee	

#### **14.1 Project Steering Committee (PSC)**

A Project Steering Committee (PSC) to supervise the program implementation, review progress, provide guidance and resolve operational and financial issues recurring during the project implementation will be constituted under the Chairmanship of Secretary, Agriculture Department. The composition of the committee is as under:

1) Secretary, Agriculture Department	Chairman
2) Special Secretary Agriculture	Member
3) Additional Secretary Agriculture (Planning)	Member
4) Chief Scientist Agriculture (Research)	Member

5) Chief Agriculture Officer (Agri. Extension) Member 6) Representative of P&D (PSW) Member

7) Representative of Finance Department Member

8) Chief Scientist, CRI, Sargodha Project Director / Secretary

9) Director Horti. Extension, Lahore Member

10)Prof. Dr. Iqrar Ahmad Khan Former VC UAF
11)Prof. Dr. Aman Ullah Malik Rector UOF, Faisalabad

12)Mr. Waheed Ahmad Patron I.C F&V Exporters

13)Mr. Saddat Eijaz Exporter 14)Progressive Citrus Growers (Co-opted) Member

15)Progressive Cirus Growers (Co-opted)

Member
16)Any other member co-opted

Member

#### 14.2 ToRs of Project Steering Committee

i. Monitoring of Overall project performance

- **ii.** Developing the guidelines for the implementation of a comprehensive work plan for the project.
- **iii.** Facilitating coordination & communication among various stakeholders involved in the project.
- **iv.** Promoting the adoption of sustainable and climate-resilient agricultural practices through the effective use of subsidies.
- **v.** Ensuring that the project achieves its goals of enhancing citrus production, improving fruit quality, and increasing farmer incomes.
- **vi.** Ensuring that the subsidy program aligns with the overall objectives of the Citrus Revival Project.

#### 15. COMPONENT-WISE BUDGET SUMMARY

(Rs in Million)

Sr.	Responsible	Cost	before Pre-PD\	ΝP	Rationalized Cost after Pre-PDW		re-PDWP		
#	Executing Wing/Agency	Capital Component	Revenue Component	Total	Capital Component	Revenue Component	Total	Diff.	
	a. CRI, Sargodha	92.882	654.344	747.226	92.882	603.792	696.674	-50.552	
1	b. CRC, T.T Singh	140.000	220.856	360.856	140.000	201.482	341.482	-19.374	
	<b>Sub-Total</b> of Agri. Research Wing	232.882	875.200	1108.082	232.882	805.274	1,038.156	-69.926	
2	Agri. Extension Wing including <b>Induction of Hort. Interns</b>	0.000	490.387	490.387	0.000	335.381	335.381	-155.006	
3	Pest Warning & Quality Control of Pesticides	0.000	150.000	150.000	0.000	11.000	11.000	-139	
4	Agri. Information Wing	0.000	50.000	50.000	0.000	50.000	50.000	0	
	Grand Total	232.882	1,565.587	1,798.469	232.882	1,201.655	1,434.537	-363.932	

#### 16. COST BREAKDOWN

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Code	Detail of Ex	penditure	Cost before Pre- PDWP	Rationalized Cost after Pre-PDWP	Diff. (+/-)	Justification for Rationalization
A. REVE	NUE COMPONE	NT				
A01106	Pay of Officers	(Annex-C)	48.490	38.878	-9.612	Remuneration of staff, to be hired on PPS, re-
A01156	Pay of Staff		14.234	14.945	0.711	calculated according to
A01227	Project Allowar	nce	5.975	0.000	-5.975	P&DB notification dated
A01277	Contingent Paid	d Staff	28.350	29.900	1.55	14.07.2022.

Code	Detail of Expenditure	Cost before Pre- PDWP	Rationalized Cost after Pre-PDWP	Diff. (+/-)	Justification for Rationalization
A01	Total Employee Related Expenses	97.049	83.723	-13.326	Provision of project allowance deleted as it isn't admissible to regular staff from development side.
A033	Utilities	19.250	16.300	-2.95	The budget heads for "Travel
A034	Occupancy cost	2.200	2.200	0	and Transport" and "General" have been rationalized for
A036	Motor vehicles registration	3.000	2.000	-1	Agriculture Extension Wing
A038	Travel & Transport	212.700	75.400	-137.3	and PW&QCP. It was
A039	General	540.856	412.970	-127.886	suggested that these expenditures be managed
A03	Total Operating Expenses (Annex-D)	778.006	508.870	-269.136	through the regular budget, as they are part of the routine operations of the respective wings.
A093	Commodity Purchases	71.050	57.900	-13.15	The budget heads for
A095	Purchase of Transport (Annex-E)	64.000	36.700	-27.3	"Purchase of Transport, Commodity, Plant &
A096	Purchase of Plant & Machinery	439.582	440.462	0.88	Machinery, and Furniture & Fixture" have been
A097	Furniture & fixture	12.000	7.000	-5	rationalized, taking into
A098	Purchase of other assets	40.000	40.000	0	account the existing assets and a reduction in the
A09	Total Acquiring of Physical Assets (Annex-F)	626.632	582.062	-44.57	estimated as per market rates including the inflation factor.
A12	<b>Total Civil Works</b>	13.000	13.000	0	
A13	Total Repair & Maintenance (Annex-G)	50.900	14.000	-36.9	Repair & Maintenance (R&M) budget has been rationalized keeping in view the regular / existing budget for repairs of machinery and vehicles to be provided from the current side budget.
Sub-tot	al of Revenue Component	1,565.587	1,201.655	-363.932	
B. CAPI	TAL COMPONENT (BUILDIN	GS & STRUCTU	JRE)		
A12401	Office Building	86.215	86.215	0	
A12402	Residential Building	42.605	42.605	0	
A12470	Other Buildings	104.062	104.062	0	
Sub-to	tal of Capital Component	232.882	232.882	0	
	GRAND TOTAL	1,798.469	1,434.537	-363.932	

## 17. DETAIL OF REQUIRED MACHINERY & EQUIPMENT (Rs. 440.462 Million)

Required at CRI, Sargodha						
Sr. No.	Name	Quantity	Cost			
1	Drip Irrigation System with Solarization	1	2.950			
2	Solar System (40KVA) for Office	1	5.000			
3	Computer with Accessories	2	0.500			
4	Photocopier Machine with accessories	1	0.700			
5	LCD,s	2	1.750			
6	Air conditioner cabinet (Cabinet)	5	3.600			
7	Multimedia	1	3.000			
8	Farm & Nursery implements miscellaneous		1.200			
9	Laser Land Leveller	1	1.200			
10	Chisel Plough	1	0.450			
11	Air Blast Sprayers	1	1.500			
12	Cultivators Large	1	0.425			
13	Cultivators Small	1	0.350			
14	Rotavator Offset	1	0.300			
15	Trolley with accessories	1	1.000			
16	Media Sterilizer	1	3.000			
17	Post Entry Quarantine Facility	1	27.000			
18	Screen House (SS mesh fitted)	8	160.000			
19	PAGE (Polyacrylamide gel electrophoresis)	1	0.500			
20	Refrectrometer, pH & EC meter, Balance etc.	1	2.150			
21	Steam Generation system		6.000			
22	Freezer ultra-low Temp.	1	3.800			
23	Mechanical Pruner with tractor accessories	1	11.000			
24	Citrus root scanner	1	6.000			
25	Transformer 50KVA 3phase	1	1.500			
26	Transformer 200KVA 3phase	1	3.500			
27	Citrus tree transplantor machine	1	14.700			
28	Thermal Cycler Machine	1	7.400			
29	Pasteurizer with accessories	1	7.000			
30	Plant protection Section	Molecular	8.422			
31	Fruit quality Section	Molecular Lab	37.890			
32	Soil nutrition Section	Lab	24.000			
	SUB-TOTAL (CRI, SARGODHA)		347.787			

Required at CRC, T T Singh						
Sr. No.	Name	Quantity	Cost			
1	Drip Irrigation System with Solar	1	2.9500			
2	Computer with Accessories	1	0.2500			
3	Photocopier Machine with accessories	1	0.7000			
4	Farm & Nursery implements miscellaneous		1.100			
5	Chisel Plough	1	0.4500			
6	Air Blast Sprayer	1	1.5000			
7	Cultivator Large	1	0.4250			
8	Cultivator Small	1	0.3500			

9	Rotavator Offset	1	0.3000
10	Trolley with accessories	1	0.5000
11	Media Sterilizer	1	3.0000
12	Screen House (SS mesh fitted)	3	60.0000
13	Refrectrometer, pH & EC meter, Balance etc		1.8500
14	Mechanical Pruner with tractor & accessories	1	11.000
15	Transformer 200 KVA 3phase	1	3.500
16	Tractor 85HP with accessories	1	4.8000
	92.675		
	440.462		

## 18. DETAIL OF REQUIRED LAB EQUIPMENT FOR MOLECULAR LAB

Sr.	Equipment	(NS)	. <i>111                                   </i>
No.	Name	Utilization	
1	Weather Station	For measurement and recording the atmospheric conditions including temperature, humidity, wind speed at the experimental station	
2	Digital Balance	For accurate measurement of the chemicals and reagents to be prepared in labs	0.700
3	Laser Distance Meter	For management of accurate planting density for various geometries of citrus plantation	0.050
4	Leaf Area index meter	To access plant health and productivity by measuring the total leaf area of a plant relative to the ground	0.760
5	Moisture Analyzer or Drying Oven	To determine the moisture content of a sample	0.900
6	Digital Burette 3	For titration and analytical procedures	2.100
7	Infra-red gas Analyzer	To measure the concentration of gasses	25.00
8	Drying cabinet	To dry samples and laboratory equipment	0.700
9	juice extractor machine	To extract the juice from fruit efficiently	
10	Oil extraction unit	To extract oil for citrus peel	4.000
11	Broth Dispenser	To accurately dispense and distribute liquid broth	2.000
12	Ice Maker	To maintenance of temperature during molecular analyses like PCR, ELISA. All the sensitive reagents can't be handled without ice. It will help in transportation of samples from field to lab for its pathogenic testing	0.550
13	pH meter	To measure the pH	0.582
14	Water distillation unit	For water distillation and using in preparation of solutions and solvents	0.750
15	Microscope	To morphology testing of Citrus pathogens	1.200
16	Hot air oven	For sterilization of glass ware	0.500
17	Cool Incubator	For growth of bacteria and fungi subject to isolate their DNA for further studies	
18	Orbital shaker incubator	For sample preparation of physiological and biological analysis	1.00
19	Atomic Absorption Spectro- Photometer	For analysis of leaf, soil, fruits	20.00
20	EC Meter	For EC testing	0.550

Sr. No.	Equipment Name	Utilization	Cost	
21	Flame photometer	For testing of minerals	2.700	
22	Digestion Fume Hood	To conduct chemical digestion safely by ventilating toxic fumes	0.750	
23	Reciprocal shaker	To mix or agitate liquids	0.100	
24	Stereoscope with digital camera	For morphological study of plants	1.500	
25	Rearing cage	To keep the organisms for observation and experiment purpose	0.500	
26	Agarose Gel electrophoresis Tanks	Use to separate and analyze nucleic acids or proteins based on their size and charge	0.900	
Total 7				

## <u> Part – B</u>

The PC-I of the project was deliberated in pre-PDWP meeting held on 20.03.2025 under the chairmanship of Member (Agriculture) with all stakeholders. The major observations/comments of Agriculture & Technical sections of P&D Board, Reply of AD and remarks in this regard are as follows:

Sr. No.	Observations of P&DB	Reply of AD	Remarks by P&DB
A. <u>Ac</u>	riculture Section		
1.	A comprehensive deployment plan for 100 horticulture interns, along with their job descriptions, is missing from the PC-I. This should be prepared and incorporated in the PC-I.	100 Horti. Interns have been deployed under the supervision of 02 Cluster Managers, which will be engaged in revival activities in Sargodha Zone and T T Singh. These interns will cover the revival activities at 250,000 acres of Citrus cultivation (209,000 acres at Sargodha zone and 41,000 acres at T T Singh). One Horti. Interns will cover the 2500 acres area of citrus cultivation and he will monitor the complete activities, disease pressure, disease incidence, and fruit quality of the orchards. Detailed work breakdown structure of all 100 interns and 02 Cluster managers will be finalized by Project Steering Committee.	Noted.
2.	Year-wise and district-wise targets for the revival of citrus orchards (in acres) should be prepared based on a clear baseline dataset as of January 2025 and included in the PC-I.	Total target of the direct revival include 9000 acres and cluster revival include the 250000 acres through deployment of Horti. Interns in the districts of Sargodha, M.B. Din, Khushab, Bhakkar and T T Singh. The detailed year-wise and district wise targets will be presented before Project Steering Committee for approval.	Noted.
3.	As per the revised proposal following the last PDWP meeting, the Agriculture Department has introduced the concept of establishing container-	Private nurseries will be engaged in the project for production of 105 Million plants and CRI will provide the disease-free bud-wood and root-stock	Noted.

Sr. No.	Observations of P&DB	Reply of AD	Remarks by P&DB
	based citrus plant nursery along with 11 screenhouses in the Citrus Belt (08 in Sargodha & 03 in T.T Singh) for disease-free citrus plants, with engagement from the private sector. However, the terms of engagement with private sector-owned nurseries and their monthly targets have not been elaborated. These details should be provided.	seed to the nurseries. Detailed information will be incorporated in Final PC-I.	
4.	A process flowchart should be developed to outline the execution of various R&D activities and awareness campaigns planned under the project. The flowchart should clarify the roles of CRI Sargodha, the Agriculture Extension Wing, and the interns hired for data collection and farmer awareness initiatives. It should also facilitate progress tracking during project implementation.	Agreed and information will be incorporated in Final PC-I	Noted.
5.	The Agriculture Department aims to revive 9,000 acres of sick citrus orchards by promoting replanting of 15 existing varieties and introducing 40 exotic varieties in Punjab. However, a clear and structured implementation plan along with the mechanism to assess this activity is missing and should be elaborated in the PC-I. Additionally, the mechanism for linking the project's interventions with the PRIAT project be outlined explicitly.	Plantation of nursery plants will be done in the gaps of existing orchards, intended to revive, rather than new varieties. However, plants of all the fourteen already registered varieties will be prepared and will be available. Moreover, gene-pool of exotic varieties (30+) will be imported for the research purpose and their adaptability will be studied for future recommendations. And the same will also be added in the regular variety development programs of CRI Sargodha for development of better varieties in future. The detailed plan will be presented before Project Steering Committee for approval.	Noted.
6.	AD to explain/ clarify the measures/ quarantine protocols be adopted in order to prevent the introduction of new diseases with import of exotic varieties.	A new post-quarantine facility has been demanded in the project for fulfilling all of quarantine protocols.	Noted.
7.	The PC-I lacks clear monitoring & evaluation mechanism along with KPIs for disease reduction, yield improvement, and export growth.	Integrated Pest Management Plans will be applied which basically aims on the pest scouting, monitoring, evaluation and disease incidence. It has been mentioned that disease specific management calendars will be prepared for specific diseases.	Noted.
8.	The calculations of pay packages and their respective annual increments need to be reviewed. For instance, the initial pay package for the position of Research Associate is set at Rs. 157,500 per month under PPS-7, with an increment of 5%. However, as per	Agreed and information will be incorporated in final PC-I	Noted.

Sr. No.	Observations of P&DB	Reply of AD	Remarks by P&DB
	the notified guidelines of the P&D Board, the increment should be 8%. Whereas, the annual increment for the post of Machine Operator (PPS-3) has been set at over 10%, which exceeds the maximum provision of 10% and should be corrected.		
9.	The provision of Project Allowance amounting to Rs.5.975 million for project staff hired on market-based/PPS salaries is not justified. Even if this provision is meant for regular staff, it remains unjustifiable, as the core responsibility already falls under the regular staff of the Citrus Research Institute (CRI), Sargodha, and the Citrus Research Centre (CRC), TT Singh. In cases of exceptional performance, honoraria can be granted from the current budget. Therefore, this provision should be removed.	The cost has been deleted.	Noted.
10.	The provision of Rs. 28.350 million for contingent paid staff is not justified. It should either be deleted or rationalized.	houses will be established under the	Noted.
11.	The calculation of the electricity provision, which is based on an estimated Rs. 0.25 million monthly bill for a single center (CRI Sargodha), is not justified and should be reviewed. Similarly, the provision for all utility charges amounting to Rs. 19.250 million should be reassessed. It should also be verified whether CRI Sargodha and CRC TT Singh receive any budget from the current/non-development side to cover these utility expenses.	Calculations have been assessed by calculation of expected load, which will be increased up to 170 KV after installation of new equipment, and new screen houses for container-grown nurseries. The average of previous electricity bills (250,000 PKR) was also taken into account.	Noted.
12.	AD to justify the provision "Expenditure on foreign expert assistance costing Rs. 2.50 million, given the presence of specialized organizations such as CRI Sargodha. This provision should be removed.	Expenditure on foreign experts assistance received from abroad has been added to acquire the consultancy on the existing situation of Citrus sector and for devising the possible solutions. ToRs have been given as <b>Annex-J</b> .	Noted.
13.	In PC-I presented before PDWP, AD proposed HR comprising of 07	As the scope has been revised after the meeting of sub-committee of task	Noted.

Sr. No.	Observations of P&DB	Reply of AD	Remarks by P&DB
	personnel (05/CRI Sargodha and 02/CRC TTS) for gestation period of 03 years. Now, 12 personnel (08/ CRI Sargodha and 04/CRC TTS) has been proposed with variation in qualification criteria and PPS scale. AD to justify the proposed additional posts and rationalize cost as per PPS presented in original PC-I.	force on 12.03.2025. Additional posts are vital for smooth running of the project activities. PPS has been revised according to the new notification of P&D board. PPS-7 for Senior Research Associate and PPS-6 for Research Associate.	
14.	Under the instant project, 04 Field Coordinators (02/CRI Sargodha and 02 CRC TTS) with remuneration of Rs.7.943 million has been proposed. The inclusion of these posts is not justified as 100 horticulture interns would be inducted for field activities and the same be deleted.	100 Horti. interns will be inducted under the Agri. Extension wing for revival purpose which will cover the 250,000 acres of Sargodha (209,000 acres) and T T Singh (41,000 acres). While field coordinators will be inducted at research stations for management of model nurseries, demonstration blocks, bud-wood banks and root-stock mother blocks. 4 persons are basic need and have been demand after careful calculation of work load.	Noted.
15.	Detail of Furniture & Fixture amounting to Rs. 12.000 million (Rs. 4.5 million/ CRI Sargodha, Rs. 2.5 million/ CRC TTS and Rs. 5.000 million/PW&QCP) and IT equipment amounting to Rs. 5.250 million under CRI Sargodha is missing and be made part of the PC-I.	Agreed and information will be incorporated in PC-I. Briefly furniture and fixture will be required in the training hall, record room and central lab of the institute. Amount has been rationalized to 5.0 Million from 12.0 Million.	Noted.
16.	AD to explain/ delete the head of Payment to others for services rendered amounting to Rs. 17.750 million (Rs. 12.5 M/ CRI Sargodha and Rs.5.25 M/ CRC TTS).	Services will be hired for the basic nursery operations including the transplantation of seedlings, management and filling of growth media, grafting and budding of the Citrus varieties and for pruning of the model orchards.	Noted.
17.	The provision of Boundary Wall 9" thick and 8' height (Rs. 5.469 million), Construction of Gate and Gate pillars (Rs. 0.628 million), Road works (Rs. 12.203 million) and WAPDA charges (Rs. 1.5 million) at already established Citrus Institute in Sargodha is not justified and be rationalized as per actual site requirement.	Boundary wall is basic requirement for establishing the model demonstration blocks and nursery screen houses for maintaining the sanitary and phytosanitary (SPS) protocols to reduce the insect pest pressure. It is justified for provision of true to type nursery plants and clean planting material i.e., budwood etc. Moreover, boundary wall of 1100 sq ft was proposed in 1st pre-PDWP and it was rationalized to 600 sq ft on the recommendations of 1st pre-PDWP. Roadworks are basically tracks among screen houses and model orchards for shifting of heavy machinery i.e., tractors, rotavators, seedling transplanters, media sterilizer etc.	Noted.

Sr. No.	Observations of P&DB	Reply of AD	Remarks by P&DB
18.	An amount of Rs. 31.000 million has been allocated for foreign training, which is considered excessive. It is recommended that this allocation be removed, and instead, local or virtual training options be considered as alternatives.	Foreign trainings are mandatory for seeking new ideas and mutual collaboration of the sectors. It is also required to acquire new germplasm and practical applications are not possible without foreign trainings. The amount has been rationalized to Rs. 20 Million as per deliberation of 1st Pre-PDWP meeting.	Noted.
19.	The budgetary allocation of Rs.224.006 million for horticulture Interns should be classified under the object code "Stipend, Incentives, Awards and Allied Expenditures (A03950)" rather than as employee related expenses. Additionally, the proposed annual 5% increase in intern pay/stipend is unjustified and be deleted.	The provision of 5% increment in interns' stipend has been deleted.	Noted.
20.	The PC-I does not address the sustainability of the project beyond its completion in 2028 particularly in terms of financial incentives for citrus growers and partnerships with private nurseries.	PC-I has been proposed in three phases for its sustainability. First phase is basically the input and research phase. As Citrus is a long-life perennial crop, and even nursery plant production takes 2.5 years of pregnancy period, hence it can't give outcome in 4 years. For its sustainability, three phases have been proposed for devising a long-run system including the private nurseries, which will be taken in loop.	Noted.
21.	An amount of Rs.9.000 million has been allocated for training of 100 horticulture interns under the budget details of PW&QCP. Since, these interns will not be retained permanently in the Department, providing substantial amount for professional training to temporary staff is unjustified and be rationalized.	The provision of Rs. 9.000 Million under the under the budget details of	Noted.
22.	The PC-I proposes provision of new plants at subsidy of Rs.75.000 million. Instead of free distribution, parallel investments/ cost-sharing from farmers be encouraged to develop their stake in the venture.	The proposed amount of Rs.75 Million is basically subsidies intended to be operated by Agri. Extension wing to the citrus model farms to be operated at Sargodha and TT Singh. The subsidies are intended to disbursed by the designated committee to the qualifying farmers who participate in the program and use to adopt recommended best orchard management practices with proper record for their used farm in-puts and subsidized nursery plants for gap filling shall be also made part of the component.	Noted.

Sr. No.	Observa	tions of P	&DB	Reply of AD	Remarks by P&DB
23.	AD to explain the head of Stipend, Incentives, Rewards and Allied Expenditures costing Rs.1.5 million (Rs. 0.7M/ CRI Sargodha and Rs. 0.8M/ CRC TTS).			The said cost has been deleted.	Noted.
24.	0.8M/ CRC TTS).  AD to explain the similar activities under "Conference/Seminar/Workshops" amounting to Rs. 0.8 million and "Exhibitions, Fairs and other National Celebrations" costing Rs. 0.9 million.			The amount mentioned under the head as "Conference/seminar/workshops" is intended to be utilized for trainings/workshops to be received and imparted to citrus community while the amount under the head "Exhibitions/fairs and other national celebration" is intended for the expenses of the citrus shows and exhibitions planned to be organized at various locations for public awareness and publicity of modern technologies, techniques and new citrus verities	Noted.
25.	25. The amount earmarked for the purchase of Plant and Machinery is Rs.420.232 million is higher side and needs to be rationalized particularly for following items as per prevailing market rates. At least three quotations in this regard be made part of the PC-I.			The proposed plant and machinery is intended to be incorporated to achieve specific purposes mentioned in the justification of each of the equipment. Only specifically required equipment is enlisted at available market prices. However, required market quotations be made part of the final PC-I. Moreover, the Cost and quantities has	Noted.
	(Rs. in Million)  Item	Proposed	Proposed	been rationalized.	
	CRI Sargodha	Quantity	Cost		
	LCD 85"	02	1.75		
	Cabinet (03T)	06	4.32		
	Multimedia, Sound System, Camera with accessories	01	3.850		
	Photocopier machine with accessories	01	0.7		
	Solar System (40KVA) for Office	01	8.7		
	Transformer (50KVA) Transformer	01	1.500		
	(200KVA)	01	3.500		
	Screenhouse	08	160		
	Atomic Absorption Spectro- Photometer	01	20		
	Infra-red gas Analyzer	01	25		
	CRC, T.T.S Transformer (200KVA)	01	3.500		
	Photocopier machine with accessories	01	0.7		

Sr. No.	Observations of P&DB	Reply of AD	Remarks by P&DB
	Computer with accessories  Tractor (85HP) with accessories  Screenhouse  01  0.5  4.8  60.000		
26.	Under budget details of PW&QCP, justification and rationalization of following items is required:  • Purchase of transport (Rs. 13.500 million)  • R&M of transport (Rs. 15.500 million)  • General (Rs. 21.000 million)  • POL (Rs. 42.000 million)  • Travelling Allowance (Rs. 21.000 million)  • Purchase of Furniture (Rs. 5.000 million)  • Other Store (Rs. 23.000 million)	PW&QCP wing intend to operated model farms of citrus at Sargodha and TT Singh the mentioned amounts in the heads of transport, repair, general and POL are basically operating expenses for the mobility of existing staff of the wing to conduct extensive trainings for the citrus nurserymen, growers and other stakeholders. Moreover, the items and their respective costs have been rationalized as per discussion of Pre-PDWP meeting.	Noted.
27.	Capacity Building of Citrus growers through farmer training program (Rs. 15 million), Mass awareness through farmer days (Rs. 15 million) and Linkage with citrus growers with citrus processors (Rs. 3 million) may be rationalized.	agriculture department intend to operated massive awareness program in the citrus growing regions of Sargodha and TT Singh for the farmers	Noted.
28.	The justification for the following budget allocations requires thorough review and rationalization, as they appear excessive or redundant given the fact that all participating organizations i.e. CRI, Sargodha, CRC, TT Singh and Directorate General, Agriculture Research Wing, in the project execution already have dedicated budgets for these expenses under their regular/current funding:  a. Rs. 264.350 million under the "General" category, lacking clear justification.  b. Rs. 55.400 million for the "Purchase of Vehicles," along with an additional Rs. 3.0 million under	The cost has been rationalized as per deliberation of pre-PDWP and justifications of items proposed in the costing are as under.  a. The mentioned budget under the head "General" is divided into various sub-heads like Stationary, Printing & Publication, Conference/seminar/workshops, Uniform & Protective Clothing Advertisement & publicity  Exhibitions, fairs and other national celebrations, Payment to others for services rendered, Cost of Other	Noted.

Sr. No.	Observations of P&DB	Reply of AD	Remarks by P&DB
	"Motor Vehicles," necessitating clarification and rationalization to avoid duplication.  c. Rs. 40.000 million for the "Purchase of Other Assets," despite an already substantial allocation of Rs. 420.232 million for similar expenditures.  d. Rs. 212.700 million under "Travel & Transport".	amounts are already mentioned in each of the participating wings of the Agriculture department like CRI, Sargodha, CRC, TT Singh, Agriculture Extension Wing, PW&QCP and Agriculture information wing are mentioned to operate various operations and activities focused for the revival and expansion of citrus sector at Punjab.  b. The vehicles are required for various agricultural wings participating in the execution of the project as there are not existing or very old version of vehicle present at these wings. The detail of required vehicle is as under  • CRI Sargodha 1 single cabin+ 1 car  • CRC TTS 1 single cabin+ 1 car  • CRC TTS 1 single cabin+ 1 car  • Agri Extension Wing 1 single cabin  • PQ&QCP wing 1 single cabin  • PQ&QCP wing 1 single cabin  c. Rs.40 million as "Purchase of other assets" is mentioned to acquire new gene-pool and exotic planting material from leading citrus growing countries to diversify the citrus basket intended to introduce more climate resilient, late maturing, pigmented and promising citrus varieties of Mandarin, Oranges, grapefruit, Lemon, Lime and rootstocks.  d. The mentioned heads "Travel and Transport" have various subheads like Training (Domestic), Training (International), Travelling Allowance and POL required for participating wings of the Agriculture department like CRI, Sargodha, CRC, TT Singh, Agriculture Extension Wing, PW&QCP and Agriculture information wing are mentioned to operate various operations and activities focused for capacity building, revival and expansion of citrus sector at Punjab.	
29.	With a view to carrying out an item- wise review of machinery/equipment items aggregating to Rs. 200 million regarding their relevance, necessity, and to avoid duplication of existing research equipment, a committee headed by the Chief Scientist of Ayub Agriculture Research Institute (AARI)	Agreed and noted for compliance. The proposed committee will also be mentioned in PC-I.	Noted

Sr. No.	Observations of P&DB	Reply of AD	Remarks by P&DB
	shall be constituted, including relevant experts, for the clearance of equipment.		
B. <u>Te</u>	chnical Section a) SARGODHA.		
30.	Justification for provision of training hall at Sargodha be provided.	As per various consultative sessions of the stakeholders and discussions within the agriculture department, one the main reasons of decline in citrus cultivation, productivity and quality; is the lack of awareness and meager capacity building of entire supply chain stakeholders. Citrus research Institute (CRI) Sargodha intend to impart an extensive program of trainings on sustainable basis covering all aspects of the citrus supply chain for which a training hall is demanded. This hall be a demonstrative model for entire supply chain and following stakeholder groups shall be focused;  Nurserymen Farmers Contractors Processors/exporters Orchard management labor Post-harvest handling labor Academia/Interns Extension/Plant protection workers Awareness and capacity building of citrus stakeholders shall be focused for entire supply-chain steps including; Climate resilient farming techniques Disease free nursery production Crimate resilient farming techniques Disease free nursery production Crimate resilient farming techniques Disease free nursery production Lintegerated disease and pest management (IPDM) Soil and nutrition management of citrus crop Postharvest management of crop Value addition opportunities in citrus crop	Noted
31.	Provision of implement fiber roof shed be deleted.	Implement shed is required to protect the government machinery and equipment from rusting and decay from sunlight, rains and climatic intensities. Existing and newly proposed machinery will be placed in a secure and protective environment top extend their useful life	Noted
32.	Provision of chain link fence amounting 29.18 (M) be deleted.	Chain link fenced is proposed to safeguard the newly imported genepool and existing planting material like rootstock seed and bud-wood. Moreover, drip irrigation system and	Noted.

Sr. No.	Observations of P&DB	Reply of AD	Remarks by P&DB
		other necessary technologies shall be implemented at proposed demonstrative block of 20 acres at CRI Sargodha which need security and protection from public access and theft, as there is no human resource available for effective watch and ward system at this institute. As per deliberation of pre-PDWP, the matter was discussed with concerned Building Department and they informed that Chain Link fencing is economical than Barbered Wire, as for installation of barbered wire, a lot of foundations are to be built at interval of 8-10 feet, which makes it costly & suggested for chain link fencing.	
33.	Detailed electric design be provided.	As per discussion with C&W department, the required electric design would be provided with final estimates after approval of PC-1.	Compliance awaited.
34.	Sponsors may explain the number of floors. Also extra height of floors and strip foundation may be deleted in absence of BRS report.	Number of floors already explained to be one, while already stated from the C&W Department that for strip foundation BRS report shall be provided with final estimates after approval of PC-1	Compliance awaited.
	b) Toba Tek Singh	, , ,	
35.	Deeper foundation may be justified with BRS report	BRS report to justify deeper foundations shall be provided with final estimates after approval of PC-1	Compliance awaited.
36.	New residences construction justified as per nomenclature	Yes, proposed residences are included according to existing and approved nomenclature for government employee's according to existing BPS	Noted
37.	OHR capacity statement may be provided as per required consumption	OHR capacity statement shall be provided after receiving from the relevant department.	Compliance awaited.
38.	Turbine capacity be reduced to 0.25 cusec	Regarding Turbine capacity it is already submitted that the proposed capacity is intended to supply water resources for office building, residential area and nursery setup proposed inside the campus.	Noted.
39.	Provision of walkways to be deleted	Walkways are provided to connect various proposed buildings of office, residences, nursery screen houses and demonstrative model orchard block and screen houses	Noted

## 19. **RECOMMENDATIONS**:

The scheme is placed before PDWP forum at a cost of Rs.1,434.537 million (Capital: Rs.232.882 million and Rs.1,201.655 million) for gestation period of 04 years (FYs. 2024-25 to 2027-28) for consideration with the following recommendations:

- i. With a view to carrying out an item-wise review of machinery/ equipment items aggregating Rs.440.462 million regarding their relevance, necessity and to avoid duplication of existing research equipment, a committee headed by the Chief Scientist, Ayub Agriculture Research Institute (AARI) shall be constituted, including relevant experts, for the clearance of equipment.
- ii. The Terms of Reference (ToRs) for hiring of Foreign Expert shall be reviewed and vetted by Consultancy Section of P&D Board.
- iii. Agriculture Department shall obtain clearance/vetting of the project's capital cost from the Technical Section of P&D Board.
- iv. AD shall follow up on the matter already taken up with the Ministry of National Food Security & Research regarding the certification of citrus plants.

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## **ELIGIBILITY CRITERIA FOR CLUSTER MANAGERS AND HORTI. INTERNS**

JOB TITLE	ELIGIBILITY CRITERIA	JOB DESCRIPTION
Cluster Managers	<ul> <li>Minimum Qualification: M.Sc. (Hons.) Horticulture / Post-Harvest with 7 years' experience in Citrus Sector OR PhD Agriculture (Horticulture / Post-Harvest) with 2 years' experience in Citrus Sector</li> <li>Age Limit: Up to 45 Years</li> <li>Strong Communication / Interpersonal skills with sound understanding of Horticulture farming practices.</li> </ul>	<ul> <li>Implementation of Citrus Revival Plan</li> <li>To monitor the activities of the Horti. Interns in clusters on daily basis</li> <li>To prepare the weekly reports of Citrus orchards visited by the Interns</li> <li>To survey the and examine the farmer field schools and their activities</li> <li>Data analyses related to revival activities</li> </ul>
Horti. Interns	<ul> <li>Minimum Qualification: BSc (Hons.)         Horticulture</li> <li>Age Limit: Up to 35 Years</li> <li>Candidate with respective district domicile</li> <li>Resident of same Tehsil will be preferred</li> <li>Strong Communication / Interpersonal skills with sound understanding of Horticulture farming practices.</li> </ul>	<ul> <li>Monitor citrus orchards in assigned areas (2,500 acres per intern).</li> <li>Conduct field surveys to assess disease pressure and incidence.</li> <li>Evaluate fruit quality parameters in designated orchards.</li> <li>Assist in implementing citrus revival activities under project guidelines.</li> <li>Report orchard health status, pest and disease outbreaks, and management practices.</li> <li>Support farmers with best horticultural practices and disease control strategies.</li> <li>Document findings and maintain records for data-driven decision-making.</li> <li>Collaborate with Cluster Managers and the Project Steering Committee for periodic updates.</li> </ul>

#### **ELIGIBILITY CRITERIA FOR CITRUS GROWERS**

A citrus grower fulfilling following criteria will be eligible to apply on prescribed format for farmer support in response to the advertisement made in leading National Newspapers:

- 1. Maintaining a citrus orchard of Kinnow at least 3 acres
- 2. Having 20 % sick / dead plants / gaps
- **3.** Farmers from Sargodha and TTS districts holding citrus orchards (only Kinnow) with a minimum of 3 acres will be eligible.
- **4.** Landowners with proof of ownership and lease records are eligible to apply.
- 5. The orchard should at least be at the fruiting stage
- 6. The minimum number of fruiting plants per acre should be 75
- **7.** The farm site must be demonstrative, easily accessible, and located on a paved road/path, with proper management ensured by the ADA (Extension).

### **DETAIL OF REQUIRED PROJECT STAFF**

					(	Million)
No.	Designation with PPS (Before Pre- PDWP)	PPS (After Pre- PDWP)	Eligibility Criteria	Qty.	Job Description	Cost (After Pre- PDWP)
			h Institute, Sargoo			
1	Research Associate/ PPS-7 (Rs.17.875M)	6 (105,000- 172,200)	M.Sc. (Hons.) (Biotechnology 01, Food Sci. & Tech. 01, Horti. / PB&G 01)	3	<ul> <li>To collect the data and to monitor the farmers activities</li> <li>To supervise the field staff</li> <li>Report writing and Publication of research findings</li> <li>To deal with the field staff</li> </ul>	12.271
2	Lab Technician/ PPS-5 (Rs.2.648M)	5 (70,000- 112,000	B.Sc. (Agri. Engineering / Food Engineering)	1	<ul> <li>To assist in sample preparation, disease detection (PCR, serological tests), and pathogen isolation for citrus.</li> <li>To ensure proper calibration, maintenance of instruments,</li> <li>For management of chemicals, reagents, and lab supplies</li> </ul>	2.780
3	Field Coordinator/PPS- 4 (Rs.3.972M)	4 (52,500- 84,000)	B.Sc. (Hons) Agriculture (Horticulture / PB & G)	2	<ul> <li>To assist the senior officers in management of field work.</li> <li>For data collection and execution of trials</li> <li>To monitor the framers' activities regarding citrus plantation</li> <li>To visit and conduct the survey of the field</li> </ul>	4.171
4	Lab Coordinator/PPS- 4 (Rs.1.987M)	4 (52,500- 84,000)	B.Sc. (Hons) Agriculture (Food Science and Tech.)	1	<ul> <li>To assist the senior officers in management of lab work.</li> <li>For data collection and execution of lab trials</li> <li>For conduction of tests</li> <li>Any other project assistance to the higher ups</li> </ul>	2.085
5	Machine Operator/PPS-3 (Rs.1.655M)	3 (43,750- 70,000)	DAE Agriculture	1	<ul> <li>To operate &amp; maintain agricultural machinery (pruner, sprayers etc),</li> <li>To calibrate, inspect, and perform minor repairs on equipment.</li> <li>To assist in experiments, land preparation, and citrus processing.</li> </ul>	1.738
	SUB-TOTAL	. CRI, SARG	GODHA	08		23.045
Requ	uired Staff for Citr	us Researc	h Center, TT Singh			
1	Senior Research Associate (Horticulture)/PPS- 8 (Rs.8.275M)	7 (157,500- 258,300)	Ph.D. Horticulture / M.Sc. (Hons) Horticulture with 03 years of relevant experience	1	<ul> <li>To conduct the activities of the project</li> <li>To collect the data</li> <li>To monitor the farmers activities regarding citrus plantation</li> <li>To supervise the field staff</li> <li>Report writing</li> <li>Publication of research findings</li> <li>To deal with the FAs</li> </ul>	6.135

No.	Designation with PPS (Before Pre- PDWP)	PPS (After Pre- PDWP)	Eligibility Criteria	Qty.	Job Description	Cost (After Pre- PDWP)
2	Research Associate (Horticulture)/PPS- 7 (Rs.5.959M)	6 (105,000- 172,200)	M.Sc. (Hons) Horticulture / PB&G	1	<ul> <li>To collect the data and to monitor the farmers activities</li> <li>To supervise the field staff</li> <li>Report writing and Publication of research findings</li> <li>To deal with the field staff</li> </ul>	4.091
3	Field Coordinator/PPS-4 (Rs.3.972M)	4 (52,500- 84,000)	B.Sc. (Hons) Agriculture (Horticulture / PB & G)	2	<ul> <li>To assist the senior officers in management of field work.</li> <li>For data collection and execution of trials</li> <li>To monitor the framers' activities regarding citrus plantation</li> <li>To visit and conduct the survey of the field</li> <li>To prepare the list of farmers for plantation of the citrus</li> <li>Any other project assistance to the higher ups</li> </ul>	4.171
Regi	SUB-TOTAL uired Staff for Agri.			04		14.397
1	Cluster Managers/PPS-8 (Rs.16.381M)	8 (218,750- 358,750)	M.Sc. (Hons.) Horticulture / Post-Harvest with 7 years' experience in Citrus Sector OR PhD Agriculture (Horticulture / Post-Harvest) with 2 years' experience in Citrus Sector	2	<ul> <li>Implementation of Citrus Revival Plan</li> <li>To monitor the activities of the Horti. Interns in clusters on daily basis</li> <li>To prepare the weekly reports of Citrus orchards visited by the Interns</li> <li>To survey the and examine the farmer field schools and their activities</li> <li>Data analyses related to revival activities</li> </ul>	16.381
	GRAND TOTAL			14		53.823

## **DETAIL OF OPERATING EXPENSES**

			(Rs. in Million
Particulars	Cost before Pre- PDWP	Cost Rationalized after Pre-PDWP	Diff. (+/-)
AGRICULT	URAL RESEARCH W	/ING	•
A- CRI SARGODHA			
Operating Expenses			
UTILITIES			
Electricity	10.500	8.000	-2.5
Connection and cables charges; Others	2.000	0.000	-2
Sub-total (A033)	12.500	8.000	-4.5
OCCUPANCY COST			
Rate & Taxes	1.300	1.300	0
Sub-total (A034)	1.300	1.300	0
Motor Vehicles			•
Registration	1.500	1.000	-0.500
Sub-total (A036)	1.500	1.000	-0.5
Consultancy & Contractual Work	2.500	0.000	-2.500
Sub-total (A037)	2.500	0.000	-2.5
Travel and Transportation			
Training (Domestic)	1.600	1.600	0
Training (International)	31.000	20.000	-11
Travelling Allowance	7.500	7.500	0
POL	17.250	17.250	0
Sub-total (A038)	57.350	46.350	-11
General	02.000	10.000	
Stationary	4.800	0.460	-4.34
Printing & Publication	6.250	1.600	-4.65
Conference/seminar/workshops	2.100	2.100	0
Uniform & Protective Clothing	1.100	0.700	-0.4
Advertisement & publicity	2.200	2.200	0
Exhibitions, fairs and other national		21200	
celebrations	3.950	3.950	0
Payment to others for services rendered	12.500	12.500	0
Expenditure on Foreign Expert		12.500	
Assistance	2.500	2.500	0
Cost of Other Store	7.750	8.000	0.25
Computer Stationary-Other Store	3.750	0.350	-3.4
Stipend, Incentives, Awards and Allied		0.550	3.1
Expenditure	0.700	0.000	-0.7
Other	5.250	1.700	-3.55
Sub-total (A039)	52.850	36.060	-16.79
Sub-Total Operating Expenses			
(CRI, SARGODHA)	125.500	92.710	-32.79
B- CRC T.T SINGH			
Operating Expenses			
UTILITIES			
Electricity	4.750	6.300	1.55
Connection and cables charges; Others	2.000	2.000	0
Sub-total (A033)	6.750	8.300	1.55
OCCUPANCY COST	0.750	0.300	1.55
Rate & Taxes	0.900	0.900	0
Sub-total (A034)	0.900	0.900	0
Motor Vehicles	0.300	0.300	

Particulars	Cost before Pre- PDWP	Cost Rationalized after Pre-PDWP	Diff. (+/-)
Registration	1.500	1.000	-0.5
Sub-total (A036)	1.500	1.000	-0.5
Travel and Transportation		T	T
Training (Domestic)	1.500	0.400	-1.1
Travelling Allowance	2.600	2.600	0
POL	6.750	6.750	0
Sub-total (A038)	10.850	9.750	-1.1
General		T	T
Stationary	2.950	0.460	-2.49
Printing & Publication	3.000	1.000	-2
Conference/seminar/workshops	0.800	0.800	0
Uniform & Protective Clothing	0.900	0.700	-0.2
Advertisement & publicity	1.400	1.400	0
Exhibitions, fairs and other national celebrations	0.900	0.900	0
Payment to others for services rendered	5.250	5.250	0
Cost of Other Store	5.250	6.000	0.75
Stipend, Incentives, Awards and Allied Expenditure	0.800	0.000	-0.8
Others	3.750	2.000	-1.75
Sub-total (A039)	25.000	18.510	-6.49
Sub-Total Operating Expenses (CRC T.T Singh)	45.000	38.460	-6.54
Total of Agricultural Research Wing	170.500	131.170	-39.33
Operating Expenses			-39.33
	URAL EXTENSION V	VING	
Operating Expenses			_
Travelling Allowance	36.500	7.500	-29
POL	45.000	5.800	-39.2
Stationery	6.000	0.600	-5.4
Printing	6.000	0.600	-5.4
Cost of Other Store	6.000	0.000	-6
Computer Stationery	6.000	0.300	-5.7
Others	4.000	0.000	-4
Support to the citrus growers for revival of sick orchards (PKR.25000/acre for 3000 farmers)	75.000	75.000	0
Capacity Building of Citrus Growers through Farmer Training Programs (PKR 5000/ 1000 programs)	15.000	6.000	-9
Mass awareness through Farmer Days (PKR.50000/ 100 farmer day)	15.000	6.000	-9
Linkage of Citrus Growers with Citrus processors (PKR.20000/ 50 visit)	3.000	0.900	-2.1
Stipend, Incentives, Awards and Allied Exp. (Agri Interns (Hort) 100 No. Lumpsum Rs.60000/month	224.006	216.000	-8.006
Total of Agricultural Extension Wing Operating Expenses	441.506	318.700	-122.806
Operating Expenses	PW&QCP		
Operating Expenses	rwaycr		
Travelling Allowance	21.000	3.000	-18
POL POL	42.000	3.000	-39
Foreign/Inland Training fee	9.000	3.000	-6
Torcigny Intana Training ICC	5.000	3.000	

Particulars	Cost before Pre- PDWP	Cost Rationalized after Pre-PDWP	Diff. (+/-)
Cost of Other Store	23.000	0.000	-23
General	21.000	0.000	-21
Total of PW&QCP Operating Expenses	116.000	9.000	-107
Agricult	ure Information Wir	ng	
Operating Expenses			
Advertisement & Publicity	50.000	50.000	0
Total of Agri. Information Wing Operating Expenses	50.000	50.000	0
Grand Total of Operating Expenses	778.006	508.870	-269.136

## (Annex-E)

## **DETAIL OF TRANSPORT**

Description	Justification	Justification Location		e-PDWP	After Pre-	PDWP
_			Qty.	Cost	Qty.	Cost
Field Vehicles (Single Cabin Customized)	The vehicles will be customized and equipped with	CRI, Sargodha	01	15.500	01	13.200
Custoffilzed)	instant analysis equipment for on-	CRC, T.T Singh	01	15.500	01	13.200
	site evaluations like Electrical Conductivity Meter, pH Meters, N, P, K Sensors, Rapid Disease Detection Kits & Brix and Acidity Meters.	PW&QC	01	13.500	0	0.000
Staff Car	Required for Cluster Managers	CRI, Sargodha	01 (1200 CC)	5.500	01 (1200CC)	5.500
	for intensive travelling to	CRC, T.T Singh	01 (1200 CC)	5.500	01 (1000 CC)	4.800
	monitor Citrus Revival activities in Sargodha division (i.e., from Bhakkar to Kotmomin) and T T Singh District. Moreover, at for office use to move out and in-station for various official tasks.	Agri. Extension	01 (Honda City)	8.500	0	0.000
	TOTAL		06	64.000	04	36.700

# DETAIL OF BUDGET FOR ACQUIRING OF PHYSICAL ASSETS DETAIL OF BUDGET FOR ACQUIRING OF PHYSICAL ASSETS

			(Rs. in Million)
Particulars	Cost before Pre- PDWP	Cost Rationalized after Pre-PDWP	Diff. (+/-)
AGRICULT	TURAL RESEARCH W	VING	
A- CRI SARGODHA			
Acquiring of Physical Assets			
<b>Commodity Purchases</b>			
Software	1.300	0.300	-1
IT Equipment	5.250	5.250	0
Licence fee for Software	1.250	0.000	-1.25
Fertilizer	9.750	9.750	0
General Utility Chemicals	5.750	5.750	0
Specific Utility Chemicals	8.250	8.250	0
Insecticides	7.250	7.250	0
Others	3.750	1.500	-2.25
Sub-total (A093)	42.550	38.050	-4.5
Purchase of Transport	1		
Vehicle (Single Cabin Customized)	11.200	9.200	-2
Staff Car (1200CC)	5.500	5.500	0
Customization of transport-Others	4.300	4.000	-0.3
Sub-total (A095)	21.000	18.700	-2.3
Purchase of Plant & Machinery	21.000	10.700	2.5
Classification			
Drip Irrigation System with Solarization			
(1 No.)	2.950	2.950	0
Solar System (40KVA) for Office (1 No.)	8.700	5.000	-3.7
Computer with Accessories (02 Nos.)	0.500	0.500	0
Photocopier Machine with accessories (1 No.)	0.700	0.700	0
LCD,s (85 inch) (02 Nos.)	1.750	1.750 (02 No.)	0
Air conditioner cabinet (3T each)	4.320 (06 Nos.)	3.6 (05 Nos.)	-0.72
Multimedia, sound system, camera with accessories (1 No.)	3.850	03.000	-0.85
Farm & Nursery implements miscellaneous	1.200	1.200	0
Laser Land Leveller (1 No.)	1.200	1.200	0
Chisel Plough (1 No.)	0.450	0.450	0
Air Blast Sprayers (1 No.)	1.500	1.500	0
Cultivators Large (1 No.)	0.425	0.425	0
Cultivators Small (1 No.)	0.350	0.350	0
Rotavator Offset (1 No.)	0.300	0.300	0
Trolley with accessories (1 No.)	1.000	1.000	0
Media Sterilizer (1 No.)	3.000	3.000	0
Post Entry Quarantine Facility (1 No.)	20.000	27.000	7
Screen House (SS mesh fitted) (08 Nos.)	160.000	160.000	0
PAGE (Polyacrylamide gel electrophoresis) (1 No.)	0.500	0.500	0
Refrectrometer, pH & EC meter, Balance etc. (1 No.)	2.150	2.150	0
Steam Generator System	6.000	6.000	0
Steam denerator System	0.000	0.000	l U

Freezer ultra low Temp. (1 No.)   3.800   3.800   0     Mechanical Pruner with tractor accessories (1 No.)   11.000   11.000   0     Citrus root scanner (1 No.)   15.000   15.000   0     Transformer SDKWA 3phase (1 No.)   15.900   3.500   0     Transformer 200KVA 3phase (1 No.)   15.900   3.500   0     Citru tree transplantor machine (1 No.)   14.700   14.700   0     Thermal Cycler Machine (1 No.)   7.400   7.400   0     Pasteurizer with accessories (1 No.)   7.000   7.000   0     Pasteurizer with accessories (1 No.)   7.000   7.000   0     Patteurizer with accessories (1 No.)   7.000   7.000   0     Purchase of Furniture & Fixture   4.500   3.000   1.5     Purchase of Other Assets   4.000   40.000   0     Sub-total (A098)   40.000   40.000   0     Sub-total Physical Assets (CRI, SARGODHA)   454.207   447.537   6.67     Barborate of Physical Assets (CRI, SARGODHA)   4.500   0.500   2.95     Purchase of Transport   4.250   4.250   0   0     Vehicle (Single Cabin Customized)   11.200   9.200   -2.95     Sub-total (A099)   22.500   19.550   -2.95     Sub-total (A099)   22.500   19.550   -2.95     Sub-total (A099)   2.500   0.250   -2.55     Sub-total (A09501)   2.000   18.000   -3     Purchase of Transport   4.300   4.000   0.300   0.300   0.300   0     Rotation of transport-Others   4.300   4.000   0.300   0.300   0.300   0.300   0.300   0.300   0.300   0.300   0.300   0.300   0.300   0.300   0.300   0.300   0.300   0.300   0.300   0.300   0.	Particulars	Cost before Pre- PDWP	Cost Rationalized after Pre-PDWP	Diff. (+/-)
11.000   11.000   1.1.000   0	Freezer ultra low Temp. (1 No.)	3.800	3.800	0
Citrus root scanner (1 No.)		11.000	11.000	0
Transformer 20KVA 3phase (1 No.)	. ,	6.000	6.000	0
Citru tree transplantor machine (1 No.)		1.500	1.500	0
Thermal Cycler Machine (1 No.)	Transformer 200KVA 3phase (1 No.)	3.500	3.500	0
Pasteurizer with accessories (1 No.)   7.000   7.000   0     Plant protection Lab (PP+Ento)   8.422   8.422   0     Fruit quality Lab (Hort+PH)   37.890   37.890   0     Soil nutrition Lab (SS)   24.100   24.000   0     Sub-total (A096)   346.157   347.787   1.63     Purchase of Furniture & Fixture     Furniture & Fixture   4.500   3.000   -1.5     Sub-total (A097)   4.500   3.000   -1.5     Sub-total (A097)   4.500   3.000   -1.5     Purchase of other Assets     Purchase of other Assets     Purchase of other Assets     Purchase of oursery planting material of new citrus varieties   40.000   40.000   0     Sub-total (A098)   40.000   40.000   0     Sub-total (A098)   454.207   447.537   -6.67     B- CRC T.T SINGH     Acquiring of Physical Assets (CRI, ASSET   AS	Citru tree transplantor machine (1 No.)	14.700	14.700	0
Plant protection Lab (PP+Ento)	Thermal Cycler Machine (1 No.)	7.400	7.400	0
Fruit quality Lab (Hort+PH)   37.890   37.890   0   Soli nutrition Lab (SS)   24.100   24.000   0   0   Sub-total (A096)   346.157   347.787   1.63	Pasteurizer with accessories (1 No.)	7.000	7.000	0
Soil nutrition Lab (SS)   24.100   24.000   0	Plant protection Lab (PP+Ento)	8.422	8.422	0
Sub-total (A096)   346.157   347.787   1.63	Fruit quality Lab (Hort+PH)	37.890	37.890	
Purchase of Furniture & Fixture	Soil nutrition Lab (SS)	24.100	24.000	-
Furniture & Fixture		346.157	347.787	1.63
Sub-total (A097)		1	T	
Purchase of other Assets   Purchase of nursery planting material of new citrus varieties   40.000				
Purchase of nursery planting material of new citrus varieties	• • •	4.500	3.000	-1.5
New citrus varieties		1	<u></u>	
Sub-Total Physical Assets (CRI, SARGODHA)   454.207	, , <del>-</del>	40.000	40.000	0
SARGODHA  B- CRC T.T SINGH	Sub-total (A098)	40.000	40.000	0
B- CRC T.T SINGH   Acquiring of Physical Assets   Commodity Purchases   Fertilizer   8.250   8.250   0   0	•	454.207	447.537	-6.67
Acquiring of Physical Assets				
Commodity Purchases   Fertilizer   8.250   8.250   0				
Fertilizer				
Specific Utility Chemicals   3.500   3.500   0     Insecticides   4.250   4.250   0     Others   3.750   0.800   -2.95     Sub-total (A09)   22.500   19.550   -2.95     Purchase of Transport		8.250	8.250	0
Insecticides	General Utility Chemicals	2.750	2.750	0
Others         3.750         0.800         -2.95           Sub-total (A09)         22.500         19.550         -2.95           Purchase of Transport         Vehicle (Single Cabin Customized)         11.200         9.200         -2           Staff Car (1200CC)         5.500 (1200CC)         4.800 (1000CC)         -0.7           Customization of transport-Others         4.300         4.000         -0.3           Sub-total (A09501)         21.000         18.000         -3           Purchase of Plant & Machinery         2.950         2.950         0           Classification         2.950         2.950         0           Computer with Accessories (01 No.)         0.500         0.250         -0.25           Photocopier Machine with accessories (01 No.)         0.700         0.700         0           (01 No.)         0.700         0.700         0           Farm & Nursery implements miscellaneous         1.100         1.100         0           Chisel Plough (01 No.)         0.450         0.450         0           Air Blast Sprayer (01 No.)         1.500         1.500         0           Cultivator Large (01 No.)         0.425         0.425         0           Cultivator Small (01 No.)         0.3	Specific Utility Chemicals	3.500	3.500	0
Sub-total (A09)         22.500         19.550         -2.95           Purchase of Transport         Vehicle (Single Cabin Customized)         11.200         9.200         -2           Staff Car (1200CC)         5.500 (1200CC)         4.800 (1000CC)         -0.7           Customization of transport-Others         4.300         4.000         -0.3           Sub-total (A09501)         21.000         18.000         -3           Purchase of Plant & Machinery         2.950         2.950         0           Classification         2.950         2.950         0           Computer with Accessories (01 No.)         0.500         0.250         -0.25           Photocopier Machine with accessories (01 No.)         0.700         0.700         0           (01 No.)         5         0.700         0.700         0           Farm & Nursery implements miscellaneous         1.100         1.100         0           Chisel Plough (01 No.)         0.450         0.450         0           Air Blast Sprayer (01 No.)         1.500         1.500         0           Cultivator Large (01 No.)         0.425         0.425         0           Cultivator Small (01 No.)         0.350         0.350         0           Rotavator Of	Insecticides	4.250	4.250	0
Purchase of Transport           Vehicle (Single Cabin Customized)         11.200         9.200         -2           Staff Car (1200CC)         5.500 (1200CC)         4.800 (1000CC)         -0.7           Customization of transport-Others         4.300         4.000         -0.3           Sub-total (A09501)         21.000         18.000         -3           Purchase of Plant & Machinery         Classification         0         0           Drip Irrigation System with Solar (01 No.)         2.950         2.950         0           Computer with Accessories (01 No.)         0.500         0.250         -0.25           Photocopier Machine with accessories (01 No.)         0.700         0.700         0           (01 No.)         0.700         0.700         0           Farm & Nursery implements miscellaneous         1.100         1.100         0           Chisel Plough (01 No.)         0.450         0.450         0           Air Blast Sprayer (01 No.)         1.500         1.500         0           Cultivator Large (01 No.)         0.350         0.350         0           Rotavator Offset (01 No.)         0.300         0.300         0           Trolley with accessories (01 No.)         1.000         0.500	Others	3.750	0.800	-2.95
Vehicle (Single Cabin Customized)         11.200         9.200         -2           Staff Car (1200CC)         5.500 (1200CC)         4.800 (1000CC)         -0.7           Customization of transport-Others         4.300         4.000         -0.3           Sub-total (A09501)         21.000         18.000         -3           Purchase of Plant & Machinery         Classification         Classification           Drip Irrigation System with Solar (01 No.)         2.950         2.950         0           Computer with Accessories (01 No.)         0.500         0.250         -0.25           Photocopier Machine with accessories (01 No.)         0.700         0.700         0           Farm & Nursery implements miscellaneous         1.100         1.100         0           Chisel Plough (01 No.)         0.450         0.450         0           Air Blast Sprayer (01 No.)         1.500         1.500         0           Cultivator Large (01 No.)         0.425         0.425         0           Cultivator Small (01 No.)         0.350         0.350         0           Rotavator Offset (01 No.)         1.000         0.500         -0.5	Sub-total (A09)	22.500	19.550	-2.95
Staff Car (1200CC)         5.500 (1200CC)         4.800 (1000CC)         -0.7           Customization of transport-Others         4.300         4.000         -0.3           Sub-total (A09501)         21.000         18.000         -3           Purchase of Plant & Machinery           Classification           Drip Irrigation System with Solar (01 No.)         2.950         2.950         0           Computer with Accessories (01 No.)         0.500         0.250         -0.25           Photocopier Machine with accessories (01 No.)         0.700         0.700         0           Farm & Nursery implements miscellaneous         1.100         1.100         0           Chisel Plough (01 No.)         0.450         0.450         0           Air Blast Sprayer (01 No.)         1.500         1.500         0           Cultivator Large (01 No.)         0.425         0.425         0           Cultivator Small (01 No.)         0.350         0.350         0           Rotavator Offset (01 No.)         1.000         0.500         -0.5			<u> </u>	_
Customization of transport-Others         4.300         4.000         -0.3           Sub-total (A09501)         21.000         18.000         -3           Purchase of Plant & Machinery           Classification         Drip Irrigation System with Solar (01 No.)         2.950         2.950         0           Computer with Accessories (01 No.)         0.500         0.250         -0.25           Photocopier Machine with accessories (01 No.)         0.700         0.700         0           Farm & Nursery implements miscellaneous         1.100         1.100         0           Chisel Plough (01 No.)         0.450         0.450         0           Air Blast Sprayer (01 No.)         1.500         1.500         0           Cultivator Large (01 No.)         0.425         0.425         0           Cultivator Small (01 No.)         0.350         0.350         0           Rotavator Offset (01 No.)         0.300         0.300         0           Trolley with accessories (01 No.)         1.000         0.500         -0.5				
Sub-total (A09501)         21.000         18.000         -3           Purchase of Plant & Machinery         Classification           Drip Irrigation System with Solar (01 No.)         2.950         2.950         0           Computer with Accessories (01 No.)         0.500         0.250         -0.25           Photocopier Machine with accessories (01 No.)         0.700         0.700         0           Farm & Nursery implements miscellaneous         1.100         1.100         0           Chisel Plough (01 No.)         0.450         0.450         0           Air Blast Sprayer (01 No.)         1.500         1.500         0           Cultivator Large (01 No.)         0.425         0.425         0           Cultivator Small (01 No.)         0.350         0.350         0           Rotavator Offset (01 No.)         0.300         0.300         0           Trolley with accessories (01 No.)         1.000         0.500         -0.5				
Purchase of Plant & Machinery           Classification         Drip Irrigation System with Solar (01 No.)         2.950         2.950         0           Computer with Accessories (01 No.)         0.500         0.250         -0.25           Photocopier Machine with accessories (01 No.)         0.700         0.700         0           Farm & Nursery implements miscellaneous         1.100         1.100         0           Chisel Plough (01 No.)         0.450         0.450         0           Air Blast Sprayer (01 No.)         1.500         1.500         0           Cultivator Large (01 No.)         0.425         0.425         0           Cultivator Small (01 No.)         0.350         0.350         0           Rotavator Offset (01 No.)         0.300         0.300         0           Trolley with accessories (01 No.)         1.000         0.500         -0.5				
Classification           Drip Irrigation System with Solar (01 No.)         2.950         2.950         0           Computer with Accessories (01 No.)         0.500         0.250         -0.25           Photocopier Machine with accessories (01 No.)         0.700         0.700         0           Farm & Nursery implements miscellaneous         1.100         1.100         0           Chisel Plough (01 No.)         0.450         0.450         0           Air Blast Sprayer (01 No.)         1.500         1.500         0           Cultivator Large (01 No.)         0.425         0.425         0           Cultivator Small (01 No.)         0.350         0.350         0           Rotavator Offset (01 No.)         0.300         0.300         0           Trolley with accessories (01 No.)         1.000         0.500         -0.5		21.000	18.000	-3
Drip Irrigation System with Solar (01 No.)         2.950         2.950         0           Computer with Accessories (01 No.)         0.500         0.250         -0.25           Photocopier Machine with accessories (01 No.)         0.700         0.700         0           Farm & Nursery implements miscellaneous         1.100         1.100         0           Chisel Plough (01 No.)         0.450         0.450         0           Air Blast Sprayer (01 No.)         1.500         1.500         0           Cultivator Large (01 No.)         0.425         0.425         0           Cultivator Small (01 No.)         0.350         0.350         0           Rotavator Offset (01 No.)         0.300         0.300         0           Trolley with accessories (01 No.)         1.000         0.500         -0.5				
No.)         2.950         2.950         0           Computer with Accessories (01 No.)         0.500         0.250         -0.25           Photocopier Machine with accessories (01 No.)         0.700         0.700         0           Farm & Nursery implements miscellaneous         1.100         1.100         0           Chisel Plough (01 No.)         0.450         0.450         0           Air Blast Sprayer (01 No.)         1.500         1.500         0           Cultivator Large (01 No.)         0.425         0.425         0           Cultivator Small (01 No.)         0.350         0.350         0           Rotavator Offset (01 No.)         0.300         0.300         0           Trolley with accessories (01 No.)         1.000         0.500         -0.5			1	
Photocopier Machine with accessories (01 No.)         0.700         0.700         0           Farm & Nursery implements miscellaneous         1.100         1.100         0           Chisel Plough (01 No.)         0.450         0.450         0           Air Blast Sprayer (01 No.)         1.500         1.500         0           Cultivator Large (01 No.)         0.425         0.425         0           Cultivator Small (01 No.)         0.350         0.350         0           Rotavator Offset (01 No.)         0.300         0.300         0           Trolley with accessories (01 No.)         1.000         0.500         -0.5	,	2.950	2.950	0
(01 No.)       0.700       0.700       0         Farm & Nursery implements miscellaneous       1.100       1.100       0         Chisel Plough (01 No.)       0.450       0.450       0         Air Blast Sprayer (01 No.)       1.500       1.500       0         Cultivator Large (01 No.)       0.425       0.425       0         Cultivator Small (01 No.)       0.350       0.350       0         Rotavator Offset (01 No.)       0.300       0.300       0         Trolley with accessories (01 No.)       1.000       0.500       -0.5	Computer with Accessories (01 No.)	0.500	0.250	-0.25
Farm         & Nursery implements miscellaneous         1.100         1.100         0           Chisel Plough (01 No.)         0.450         0.450         0           Air Blast Sprayer (01 No.)         1.500         1.500         0           Cultivator Large (01 No.)         0.425         0.425         0           Cultivator Small (01 No.)         0.350         0.350         0           Rotavator Offset (01 No.)         0.300         0.300         0           Trolley with accessories (01 No.)         1.000         0.500         -0.5		0.700	0.700	0
Chisel Plough (01 No.)       0.450       0.450       0         Air Blast Sprayer (01 No.)       1.500       1.500       0         Cultivator Large (01 No.)       0.425       0.425       0         Cultivator Small (01 No.)       0.350       0.350       0         Rotavator Offset (01 No.)       0.300       0.300       0         Trolley with accessories (01 No.)       1.000       0.500       -0.5	Farm & Nursery implements	1.100	1.100	0
Air Blast Sprayer (01 No.)       1.500       1.500       0         Cultivator Large (01 No.)       0.425       0.425       0         Cultivator Small (01 No.)       0.350       0.350       0         Rotavator Offset (01 No.)       0.300       0.300       0         Trolley with accessories (01 No.)       1.000       0.500       -0.5		0.450	0.450	0
Cultivator Large (01 No.)       0.425       0.425       0         Cultivator Small (01 No.)       0.350       0.350       0         Rotavator Offset (01 No.)       0.300       0.300       0         Trolley with accessories (01 No.)       1.000       0.500       -0.5				
Cultivator Small (01 No.)       0.350       0.350       0         Rotavator Offset (01 No.)       0.300       0.300       0         Trolley with accessories (01 No.)       1.000       0.500       -0.5				
Rotavator Offset (01 No.)         0.300         0.300         0           Trolley with accessories (01 No.)         1.000         0.500         -0.5				
Trolley with accessories (01 No.) 1.000 0.500 -0.5	, ,			
	` ,			
	, , ,			
Screen House (SS mesh fitted) (03 Nos.) 60.000 60.000 0	, ,			_

Particulars	Cost before Pre- PDWP	Cost Rationalized after Pre-PDWP	Diff. (+/-)
Refractometer, pH & EC meter, Balance etc.	1.850	1.850	0
Mechanical Pruner with tractor & accessories (01 No.)	11.000	11.00	0
Transformer 200 KVA 3phase (01 No.)	3.500	3.500	0
Tractor 85HP with accessories (01 No.)	4.800	4.800	0
Sub-total (A096)	93.425	92.675	-0.75
Purchase	of Furniture & Fixt	ure	
Furniture & Fixture	2.500	2.000	-0.5
Sub-total (A097)	2.500	2.000	-0.5
Sub-Total Physical Assets (CRC, T.T.SINGH)	139.425	132.225	-7.2
Total Physical Assets (Agricultural Research Wing)	593.632	579.762	-13.87
AGRICULT	<b>URAL EXTENSION W</b>	/ING	•
Acquiring of Physical Assets			
Purchase of IT Equipment	6.000	0.300	-5.7
Purchase of Transport (Honda City)	8.500	0.000	-8.5
Total Physical Assets (Agricultural Extension Wing)	14.500	0.300	-14.2
	PW&QCP		
Acquiring of Physical Assets			
Purchase of Transport	13.500	0.000	-13.500
Purchase of Furniture	5.000	2.000	-3.000
Total Physical Assets (PW&QCP)	18.500	2.000	-16.500
Grand Total of Budget for Acquiring of Physical Assets	626.632	582.062	-44.570

## (Annex-G)

## **DETAIL OF REPAIR & MAINTENANCE BUDGET**

Detail of Expenditure	Cost before Pre-	Cost Rationalized	Diff. (+/-)		
•	PDWP	after Pre-PDWP	( , ,		
Agricultural Research Wing					
A- CRI SARGODHA					
Repair Transport	3.400	6.000	2.6		
Repair of Machinery & Equipment	3.500	3.500	0		
Repair of Lab Structures	2.500	1.000	-1.5		
Repair of Computer Hardware	3.100	1.000	-2.1		
Sub-Total of CRI, Sargodha	12 500	11 500			
R&M Budget	12.500	11.500	-1		
B- CRC T.T SINGH					
Repair Transport	3.000	1.500	-1.5		
Repair of Machinery & Equipment	1.900	1.000	-0.9		
Sub-Total of CRC T.T Singh R&M Budget	4.900	2.500	-2.4		
Total of Agricultural Research Wing R&M Budget	17.400	14.000	-3.4		
AGRICULTURAL EXTENSION WING					
R&M of Transport	18.000	0.000	-18		
PW&QCP					
R&M of Transport	15.500	0.000	-15.5		
Grand Total of R&M Budget	50.900	14.000	-36.9		

#### **COMPOSITION & TORS OF ALL THE COMMITTEES**

#### 1. PROJECT IMPLEMENTATION COMMITTEE (PIC)

A Project Implementation Committee (PIC) will be responsible for execution of project activities consisting of the following officer from Agriculture Department:

Special Secretary Agriculture
 Chief Scientist Agriculture (Research)
 Chief Agriculture Officer (Agri. Extension)
 Director General PW&QCP

5. Chief Scientist, CRI, Sargodha Project Director

6. Director Horti. Extension, Lahore Member 7. Concerned Deputy Director, OFWM Member 8. Principal Scientist, HRS, Sahiwal Member

9. Any member co-opted

#### **ToRs of PIC:**

- Develop and oversee the implementation of a comprehensive work plan for the project.
- Allocate resources and ensure their efficient utilization for project activities.
- Monitor and evaluate the progress of the project, making adjustments as necessary.
- Facilitate coordination and communication among different departments and stakeholders involved in the project.
- Ensure the timely and effective execution of all project components, including research, extension, training, and capacity-building activities.
- Address any challenges or issues that arise during the implementation of the project and develop solutions.
- Promote the adoption of sustainable and climate-smart agricultural practices among citrus farmers.
- Ensure that the project achieves its objectives of enhancing citrus production, improving fruit quality, and increasing farmer incomes.

#### 2. DISTRICT ALLOTMENT COMMITTEE (DAC)

Balloting and redressal committees will be responsible for allotment and applications management in each district (Sargodha, T T Singh). The composition of the committee is as under:

#### 1- Committee for District Sargodha

Additional Deputy Commissioner (Revenue), Sargodha
 Deputy Director Agri. Extension, Sargodha
 Chief Scientist, CRI, Sargodha
 Member
 Member

4. Any other co-opted member

#### 2- Committee for District T T Singh

Additional Deputy Commissioner (Revenue) T T Singh
 Deputy Director Agri. Extension, T T Singh
 Chief Scientist, CRI, Sargodha

Convener
Member
Member

4. Any other co-opted member

#### **ToRs of DAC:**

- Management of the implementation of the balloting process for resource allocation.
- Committee will also work as grievance redressal committee
- Ensure transparency, fairness, and accountability in all committee activities.
- Monitor the progress and impact of the Citrus Revival Project in their respective districts.
- Address and resolve any grievances or disputes related to the project in a timely manner.
- Facilitate communication and collaboration between farmers, researchers, and extension workers.

• Ensure that the project objectives are met, and the benefits are maximized for the farming community as per provisions of the approved PC-I.

#### 3. SUBSIDIES MANAGEMENT COMMITTEE (SMC)

Subsidies Management Committee will be responsible for the financial management of the subsidies after evaluation of the performance of the farmers in Citrus Model Farms (CMFs) and will meet twice during the financial year or as and when required. The composition of the committee is as under:

Chief Agriculture Officer (Extension
 Chief Scientist Agriculture (Research)
 Director Agriculture (Extension), Sargodha
 Director Horti. Extension, Lahore
 Chief Scientist, CRI, Sargodha
 Chief Scientist, HRI, AARI, Faisalabad
 Concerned Deputy Direction of Agri. Extension

8. Any other co-opted member SMC

#### **ToRs of SMC:**

- Scrutinize the reimbursement claims (subsidy) of the selected farmers for final disbursement of the subsidy
- Ensure that the subsidy program aligns with the overall objectives of the Citrus Revival Project.
- Ensure that subsidies have been granted after proper evaluation of orchards i.e., improving fruit quality, and increasing farmer incomes.
- Ensure that the disbursement of funds is done to qualifying farmers according to PC-I.

	Cost Break-up and Deployment Plan for Contingent Paid Staff			
CRI, Sarg	jodha			
Year	Cost (M Rs.)	Break-up	Deployment Plan	
2024-25	1.250	Calculated for total 12 persons / month For three months (April, May, June) @1423 / Day for maximum 25 days / month	Rehabilitation of GPUs – 8 persons  1. GPU Muhammad Nagar – 4 persons at 25 Acres  2. GPU Sodi. J Wali – 2 persons at 8 acres  3. Establishment of Demo. Blocks at CRI, Sargodha at 20 Acres – 4 persons  4. Preparatory operations for Nursery Screen Houses – 2 persons	
2025-26	4.750	Calculated for total 12 persons / month For 12 Months @1423 / Day for maximum 25 days / month	<ol> <li>Nursery Screen Houses – 8 persons</li> <li>GPU Sodi. J Wali – 1 person</li> <li>Demo. Blocks at CRI, Sargodha 3 persons</li> </ol>	
2026-27	5.000	Calculated for total 12 persons / month For 12 Months  @1423 / Day for maximum 25 days / month *possible inflation calculated for increasing the wage	<ol> <li>Nursery Screen Houses – 8 persons</li> <li>GPU Sodi. J Wali – 1 person</li> <li>Demo. Blocks at CRI, Sargodha 3 persons</li> </ol>	
2027-28	5.000	Calculated for total 12 persons / month For 12 Months  @1423 / Day for maximum 25 days / month	<ol> <li>Nursery Screen Houses – 8 persons</li> <li>GPU Sodi. J Wali – 1 person</li> <li>Model Farm at CRI, Sargodha 3 persons</li> </ol>	
Total	16.000			

	Cost Break-up for Contingent Paid Staff									
CRS, T T Singh										
Year	Cost (M Rs.)	Break-up	Deployment Plan							
2024-25	0.600	Calculated for total 6 persons / month For three months (April, May, June) @1423 / Day	Preparatory operations for establishment of new experimental area, Demo. Blocks and screen houses at T T Singh							
2025-26 4.000		Calculated for total 9 persons / month For 12 Months @1423 / Day	<ol> <li>4 on Newly established nursery screen houses</li> <li>3 on Demo blocks</li> <li>2 on GPU Muhammad Nagar</li> </ol>							

2026-27	4.500	Calculated for total 10 persons / month For 12 Months @1423 / Day *possible inflation calculated for increasing the wage	<ol> <li>5 on Newly established nursery screen houses</li> <li>3 on Demo blocks</li> <li>2 on GPU Muhammad Nagar</li> </ol>
2027-28	4.800	Calculated for total 10 persons / month For 12 Months @1423 / Day *possible inflation calculated for increasing the wage	<ol> <li>5 on Newly established nursery screen houses</li> <li>3 on Demo blocks</li> <li>2 on GPU Muhammad Nagar</li> </ol>
Total	13.900		

# Terms of Reference (TOR) for Hiring Foreign Consultants for Citrus Sector Revival in Punjab, Pakistan

#### 1. Background

The Government of Punjab, Pakistan, aims to revive the citrus sector by addressing various challenges such as citrus decline, low-quality plants, alternate bearing, poor health of plants, fruit drop, pest and disease management, inadequate post-harvest practices, and limited export opportunities. To ensure sustainable growth and development of the citrus industry, a comprehensive model for citrus sector revival needs to be developed.

#### 2. Objective

To engage international consultants with expertise in citrus production, disease management, post-harvest handling, value addition, marketing, and export to formulate a model for the revival of the citrus sector in Punjab, Pakistan.

#### 3. Scope of Work

The consultants shall:

- Assess the current status of the citrus industry in Punjab, including challenges related to production, processing, marketing, and export.
- Develop strategies to improve citrus productivity and quality, focusing on plant health, disease management, and soil fertility.
- Recommend modern agricultural practices, high-density plantation systems, improved irrigation methods, and integrated pest management (IPM).
- Suggest post-harvest management techniques, value addition processes, and innovative technologies to reduce losses and enhance quality.
- Propose marketing strategies and certification mechanisms to boost exports of citrus fruits.
- Develop a framework for public-private partnership (PPP) models to enhance citrus nursery setups and large-scale citrus cultivation.
- Prepare a detailed implementation plan, including timelines, resources, capacity-building programs, and monitoring mechanisms.
- Provide technical assistance in implementing the proposed model and training local stakeholders.

#### 4. Deliverables / KPIs

- Comprehensive Assessment Report on the current citrus sector in Punjab.
- Citrus Revival Model Document, including proposed strategies, guidelines, and action plans.
- Training modules and workshops for stakeholders' capacity building.
- Technical advisory reports during the implementation phase.
- Final report with recommendations for sustainable growth of the citrus sector.

#### 5. Qualifications of Consultants

The consultants must have:

- Extensive experience in citrus production, disease management, post-harvest handling, and export development.
- Proven track record of working with government agencies, research institutions, and private stakeholders.

- Expertise in developing agricultural models and strategies for large-scale implementation.
- Ability to conduct training programs and provide technical assistance.
- Strong communication and reporting skills.

#### 6. Duration of Assignment

The assignment is expected to be completed within 12 months from the date of signing the contract.

#### 7. Reporting Requirements

The consultants will report to the designated Project Director and Project Steering Committee (PSC) on a regular basis and submit reports according to the agreed timelines.

#### 8. Proposal Submission

Interested consultants should submit a detailed proposal including their methodology, timeline, expertise, relevant experience, and budget.

## (Annex-K)

#### **MEDICA CAMPAIGN OF REVIVAL OF CITRUS**

	Year 1 (July 202			5-June 2026) Year 2 (July-2026-June 2027)			Year 3 (July 2027 - June 2028)				
Sr.N o	Description	Qty	Unit Cost	Year 1 Total	Qt y	Unit Cost	Year 2 Total	Qty	Unit Cost	Year 3 total	Grand Total
1	Social Media Cost	L	umpsum	2,274,159		_umpsum	2,274,159	L	umpsum	2,274,159	6,822,478
2	*Electronic Media (Geo News, Ptv News, Sama News, Express News, Dunya News, Hum News, Ary News, 92 News, Neo News, City41 / Equivelant with same TRP) / 10 channel	12	770,000	9,240,000	12	770,000.00	9,240,000	12	770,000.00	9,240,000	27,720,000
3	**Print Media (Jang, Nawa-i-Waqat, Express, Dunya, The News and The Nation / Equivelant with same circulation) 6 newspaper	12	429,376	5,152,507	12	429,375.60	5,152,507	12	429,375.60	5,152,507	15,457,522
Total				16,666,667			16,666,667			16,666,667	50,000,000