

**GOVERNMENT OF THE PUNJAB
AGRICULTURE DEPARTMENT**

Dated Lahore the 03.10.2019

NOTIFICATION

No.AS(TF)1-3/2019-R :The government of the Punjab has been pleased to approve the levy of fee / revision of rates of analysis / tests on Crop / food items / soil etc comprising advisory / commercial tests as under :

Advisory Tests

Crop/ Food Items/ Soil etc.	Name of Analysis / Test	Method used (2-3 words only)	Test Cost (Rs)	Field Cost (Rs)	Payee	Remarks
Crop	Punjab Uniform Yield Trials per Entry	Field Evaluation	-	75000	Public sector institutes, private companies involved in varietal development, Private Seed Companies, Research organizations	
Cotton Lint	Micronaire/ Fiber Length/ Fiber Strength/ Uniformity/ Maturity/ Color/ Trash	High volume Instrument	1000	-	Importer/Exporter/ Industrialist/Seed companies/Resear chers /Bank/ Cotton purchase companies/Spinning mills/Public/Private research institute	
Crop	On-station yield testing per entry	Field Evaluation	-	50000	Public sector institutes & private companies involved in varietal development, seed companies	
Crop	Rust Identification at Farmer's Field	Visual Observations	-	20000	Seed companies, Public sector organizations	i) Five No. Of samples per acre ii) Collection of diseased portions of plant and microscopic study.
Visits & Lectures	Field visit/ Technical Lecture (BS-17 / BS-18)	Physical examination & recommenda tions/ Training	-	10000 (50%- 50%) Share (Govt. & Lect.)	Allied wings of agriculture department, Private seed companies, [Industrialists, public sector institutes, Agri Service Providers, NGOs, Training institutes, private entities, R&D org., dairy industry or any other agency	The concerned officer has to spare time and prepare lectures in the form of presentation etc.
Plant analysis / Milk/ Fruit Juices	Micronutrient/ heavy metals (per element)	Atomic absorption Spectrophoto metry	1200	-	Importer, Exporter, Manufacturer, Industrialist,	Departments other than Agriculture/ Private Sector

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30/10/19 circulate to all directors / Head of sections

Crop/ Food items/ Soil etc.	Name of Analysis / Test	Method used (2-3 words only)	Test Cost (Rs)	Field Cost (Rs)	Payee	Remarks
Crops	Plant disease diagnostic tests (Received in lab)	Incubation method for fungi/ bacteria/ nematode/ virus	5000	-	Industrialist, growers, Researchers/ education/ public/ private organizations, Seed companies	Development of culture colonies for the reported insect pest and its analysis. 1)Plant samples preparation. 2)Specific medium preparation. 3)Plating of samples on the medium 4)Incubation of the medium 5)Stereo and microscopic studies for identification 6)Isolation & purification of associated pathogen
All Crops/ Fruits/ Vegetabl es	Sample collection from field	Not available	-	4500	Public/ Private companies, Research & education org, commercial companies	Proper sample collection and packing for laboratory analysis. These tests (entomological, pathological and pesticide residue) are necessary for export business and brand registration
Insect Pests of all Crops, fruits & vegetabl es	Determination of resistance ratio/ resistance factor	IRAC method	15000	-	Manufacturers, Commercial companies/ Research Organisation	To Evaluate the effectiveness of insecticides
Plant Analysis	Nitrogen (N)/ Phosphorus (P) / Potassium (K)	Kjeldhal Method/ WANTABLE and OLSEN for P/ Flame Photometry for K	1200	-	Manufacturer, Importer, Distributor	Kjeldhal Method/ WANTABLE and OLSEN for P/ Flame Photometry for K
Any Crop (leaf, seed etc.)	GMO Test (1 genetic element)	Qualitative PCR	5000	-	Rice Exporters, Importer, Exporter, Seed companies	GMO test through qualitative PCR is conducted to verify whether the sample is GMO or Non-GMO. This is only requirement for import and export.

Crop/ Food items/ Soil etc.	Name of Analysis / Test	Method used (2-3 words only)	Test Cost (Rs)	Field Cost (Rs)	Payee	Remarks
						This Lab is ISO-17025 accredited for qualitative PCR and mostly this test is required. However, if anybody wants to quantify GM contents then quantitative PCR can be carried out for +ve samples.
Soil / Water Analysis	Micronutrient/ heavy metals (per element)	Atomic absorption Spectroscopy	500	-	Importer, Exporter, Manufacturer, Industrialist,	
Visits & Lectures	Field visit/ Technical Lecture (BS-19 / BS-20)	Physical examination & recommendati ons/ Training	-	10000 (50%- 50%) Share (Govt. & Lect.)	Allied wings of agriculture department, Private seed companies, Industrialists, public sector institutes, Agri Service Providers NGOs, Training institutes, private entities, R&D org., dairy industry, or any other agency	The concerned officer has to spare time and prepare lectures in the form of presentation etc.
All Crops	Evaluation of pesticide efficacy (more than 1 pest)	Field Testing	-	38000	Importer, Manufacturer, Distributor, Industrialist	Rs 13000 / single pest / crop Rs 38000 more than one pest / crop (approved minutes of Pesticide Standardization Committee; dated 31.08.2017 attached)
All Crops / fruits	Insect identification, its damage% (per sample received in lab)	Weight Count Method / Optometric Analysis	5000	-	Importer, Exporter, Industrialist, Research organizations, commercial companies	Raring of insect colonies and judgement of insect damage, mode and intensity. Then after detailed examination, the certificate will be issued to concerned agency.
Crops	Virus detection in plant	ELISA	4000	-	Importer, Exporter, public institutes, seed companies	
All Crops	Protein (%)	NIR Method	1000	-	Private Seed Companies, Industrialists, Exporters, Students, Sister organizations	NIR method require no chemicals and less manpower and only electricity cost is

Crop/ Food items/ Soil etc.	Name of Analysis / Test	Method used (2-3 words only)	Test Cost (Rs)	Field Cost (Rs)	Payee	Remarks
						involved during analysis so it is cheaper than Kjaldhalmethod.
All Crops	Starch (%)	NIR Method	1000	-	Private Seed Companies, Industrialists, Exporters, Students, Sister organizations	
Any Crop	Seed Germination Test	ISTA Rules for Seed Testing 2018	1500	-	Private Seed Companies, Importers, Exporters, Manufacturers, Industrialists, Research organizations	Rules are attached separately, and Seed Germination Test is ISO-17025 Accredited test and have its acceptability worldwide, cost for maintaining ISO accreditation is higher.
Fertilizer	Total Amino Acid (per sample)/ Total protein	Kjeldhal Method	3000	-	Manufacturer, Importer, Distributer	
Fruit Sample	Phosphorus	Spectrophotometer	1500	-	Manufacturer, Importer, Distributor Progressive farmer, commercial companies	
Soil	Phosphorus (per sample)	Olsen Method	200	-	Manufacturer, Importer, Distributer	
All crops / fruits except potato	Total sugar contents	Refractometer	1000	-	Importer, Exporter, Manufacturer, Industrialist, Researchers	Higher cost of equipment. Juice extraction charges. Sample preservation charges. Report compilation charges. Collection and packing of samples. Working cost of lab staff
Fertilizer	Boron (per sample)	Spectrophotometry	2000	-	Manufacturer, Importer, Distributer, Industrialist	
Fertilizer	C:N ratio (per estimation)	Kjeldhal Distillation - ignition Method	2000	-	Manufacturer, Importer, Distributer Industrialist	
Fruit	Potassium	Flame Photometry	1200	-	Importer / Exporter/ Manufacturer/ Industrialist	SFRI is charging Rs.1160 in plant sample analysis regarding K

Crop/ Food Items/ Soil etc.	Name of Analysis / Test	Method used (2-3 words only)	Test Cost (Rs)	Field Cost (Rs)	Payee	Remarks
Fertilizer	Chelated Micronutrients (per sample)	Atomic absorption Spectropho metry	2000	-	Manufacturer, Importer, Distributor	
Fertilizer	Humic Acid (per estimation)	Gravimetric Method	2000	-	Manufacturer, Importer, Distributor	
Fertilizer	Organic Matter (per estimation)	Ignition Method	1500	-	Manufacturer, Importer, Distributor	
Fertilizer	Organic Phosphorus (per sample)	Amm. Molybdate Method	1500	-	Manufacturer, Importer, Distributor	
Fertilizer	Organic Potassium (per sample)	Flame Photometry	1500	-	Manufacturer, Importer, Distributor	
Fertilizer	Micronutrients per element	Atomic absorption Spectropho metry	1500	-	Manufacturer, Importer, Distributor Industrialist	
Fertilizer	Cation Exchange Capacity (per estimation)	Titration Method	1500	-	Manufacturer, Importer, Distributor, Industrialist	
Fertilizer	N-Ureic (per estimation)	Kjeldhal Method	1500	-	Manufacturer, Importer, Distributor	
Soil	Potassium (K) (per sample)	Flame Photometry	200	-	Manufacturer, Importer, Distributor	
All Crops	1000 Grain mass	Seed counter	1000	-	Private Seed Companies, Importers, Exporters, Industrialists, Students, Sister and R&D organizations	The said determination requires Seed counter and Weighing balance which are electrically operated. Moreover, cleaning of grain samples is also required before determination of 1000 grain weight
Soil	Soil moisture (per sample)	Oven Dry basis	200	-	Manufacturer, Importer, Distributor Commercial companies	
Crop Seed	Seed moisture content	ISTA Rules for Seed Testing 2018	1000	-	Private Seed Companies, Industrialists, Importer, R&D org.	International Seed testing association (ISTA) produces

Crop/ Food items/ Soil etc.	Name of Analysis / Test	Method used (2-3 words only)	Test Cost (Rs)	Field Cost (Rs)	Payee	Remarks
						internationally agreed rules for seed sampling and testing, to achieve its vision of 'Uniformity in seed quality evaluation worldwide'. This facilitates seed trading nationally and internationally, ISTA rules regarding to this test comprise of complete book chapter. Proposed Rates are equal to existing govt. Rates
Fertilizer	N-Ammonical / N-Nitric (per estimation)	Kjeldhal Method	1000	-	Manufacturer, Importer, Distributor, Industrialist	
Soil / Water / Milk	Electrical Conductivity or pH (per sample)	EC / pH meter	200	-	Manufacturer, Importer, Distributor Commercial companies	
Soil	Organic Matter (per sample)	Walkly and Black Method	200	-	Manufacturer, Importer, Distributor	
Fertilizer	Gypsum Powder Analysis (estimation)	Titration	1000	-	Manufacturer, Importer, Distributor, Industrialist	
Fertilizer	Inorganic Phosphorus (per sample)	Amm. Molybdate Method	1000	-	Manufacturer, Importer, Distributor	
Fertilizer	Inorganic Potassium (per sample)	Flame Photometry	1000	-	Manufacturer, Importer, Distributor	
Citrus Fruit Analysis	Fruit size	Vernier caliper method	300	-	Farmers, importers, exporters, manufacturers, industrialist, scholars & researchers of educational institutions	
All Crops	Test Weight	Test weight apparatus	1000	-	commercial company, Industrialist/ Exporters/ Students/sister organizations	
Soil / Water Analysis	Cations / Anions (per sample)	Titration	200	-	Manufacturer, Importer, Distributor Progressive farmer	

Crop/ Food items/ Soil etc.	Name of Analysis / Test	Method used (2-3 words only)	Test Cost (Rs)	Field Cost (Rs)	Payee	Remarks
Water Analysis	Sodium Adsorption Ratio (SAR)/ Residual Sodium Carbonate (RSC) (per estimation)	Titration	300	-	Manufacturer, Importer, Distributor	
Crop Seed	Ash (%)	Muffle Furnace	1000	-	Industrialist/ Exporters/ Researcher/ Students/ Sister organizations	
Crops	Crude fiber	Digestion Condensation	1000	-	Progressive farmer, Researcher, Industrialist	
Any Crop (leaf, seed etc.)	DNA Fingerprinting (per primer / DNA marker)	Qualitative PCR	6000	-	Seed companies	
Soil	Texture (per sample)	Hydrometer	200	-	Manufacturer, Importer, Distributor commercial company	
Citrus Fruit Analysis	Juice%	Extraction method	300	-	Farmers, importers, exporters, manufacturers, industrialist, scholars & researchers of educational institution	
Citrus Fruit Analysis	No. of seed/ fruit	Physical method	150	-	Importers, exporters, manufacturers, industrialist, scholars & researchers of educational institution	Mostly received samples are research related
Citrus Fruit Analysis	Fruit Weight	Analytical method	150	-	Importers, exporters, researchers, manufacturers, industrialist, scholars of educational institution	Mostly received samples are research related
Crops	Crude fat	Soxtec apparatus	750	-	Researcher/ Industrialist	Mostly received samples are research related
Gram, Lentil, Mung, Mash & Rice	Cooking quality tests	Physical Test	1500	-	Industrialist / Manufacturer, Research organizations, Rice Millers & Exporters, Seed Companies, commercial companies	
Gram, Lentil, Mung, Mash & Rice	Grain dimensions	Dial Calliper method	1500	-	Rice Millers & Exporters, Seed Companies, Research & education organizations, commercial companies	

Crop/ Food items/ Soil etc.	Name of Analysis / Test	Method used (2-3 words only)	Test Cost (Rs)	Field Cost (Rs)	Payee	Remarks
Fruits/ Vegetabl es	Acidity	Titration	300	-	Importers/ Exporters/ Industrialist/ Researcher/ commercial company	Mostly received samples are research related
Crops	Crude protein	Kjeldahl Method	600	-	Researcher/ Industrialist	Mostly received samples are research related
Rice (leaf, seed etc.)	Basmati Purity Test (per primer/ DNA marker)	Qualitative PCR	6000	-	Rice Exporters, Seed companies	
Soil Analysis	Gypsum Requirement (per sample)	Schoonover method	300	-	Manufacturer, Importer, Distributor	
Maize	Maize Oil (%)	NIR Method	1000	-	Private Seed Companies, Industrialists	
Crops	Mineral matter	Muffle furnace ashing	500	-	Researcher/ Industrialist	Mostly received samples are research related
Any Crop (leaf, seed etc.)	Quantitative Analysis/ to test Cry1Ac, Cry2Ab, EPSPS etc.	ELISA	10000	-	Research organization, seed companies	
All Crops	Testing of dry matter contents in potato	Hydrometer Method	4500	-	Importer and industrialist	
Any Crop (leaf, seed etc.)	Qualitative Analysis/ test cry1Ac, cry2Ab, Cry1Ab, Cry1F, RR etc.	Immuno Strip Method	2500	-	Seed companies	
Citrus/ Mango Fruit Analysis	TSS	Refractometer	150	-	Importers, exporters, Researcher, manufacturers, industrialist, scholars of edu. Institution	Mostly received samples are research related
Fruits/ Vegetabl es	Beta Carotene	Spectrophoto metry	1000	-	Researcher/ industrialist	Mostly received samples are research related
Potato	Testing of Sugar contents in Potato	Glucometer and specialized sugar strip	4500	-	Exporter, Importer	Cost is high due to expensive specialized sugar strip
Plant	Total phenols	Spectrophoto meter	500	-	Researcher/ Industrialist, R&D Org.	To examine crop's response to biotic and abiotic stresses
Fruits/ Vegetabl	Total carotenoids	Spectrophoto metry	750	-	Researcher/ Industrialist	Mostly received samples are research

Crop/ Food Items/ Soil etc.	Name of Analysis / Test	Method used (2-3 words only)	Test Cost (Rs)	Field Cost (Rs)	Payee	Remarks
es						related
Mango Diseases Samples	Evaluation of fungicides, Bactericides and nematicides	Field Tests	-	20000	Importer/ Industrialist	Conducting experimental trials with high cost of inputs.
Any crop	DNA/RNA/ Protein concentration	Nano drop spectrophoto meter/ fluorometer	150	-	Importer, Exporter, Seed companies	Nano drop spectrophotometer will be used where no chemicals/ enzymes are needed. Only already extracted DNA/RNA samples will be tested for concentration.
Mango Diseases Samples	Evaluation of fungicides, Bactericides and nematicides	Lab tests (Poisoned food technique)	7500	-	Importer/ Industrialist	These expenses are only related to the lab.
Fruits/ Vegetabl es	Antioxidants	Spectrophoto meter	500	-	Researcher/ Industrialist	Mostly received samples are research related
Fruits/ Vegetabl es	Total Sugars	Titration	500	-	Researcher/ Industrialist	Mostly received samples are research related
Fruits/ Vegetabl es	Lycopene	Spectrophoto metry	700	-	Industrialist	
Fruit/Veg etable/ Food Product	Firmness	Penetrometer	300	-	Researcher/ Industrialist	Mostly received samples are research related
Fruits/ Vegetabl es	Reducing Sugar/ Non- Reducing Sugar	Titration	300	-	Researcher/ Industrialist	Mostly received samples are research related
Mango Fruit Analysis	Vitamin C	Titration method using dye	500	-	Importer/ exporter/ industrialist	
Guar	Gum percentage	Gravimetric method	300	-	Researcher/ Industrialist	Mostly received samples are research related
Fruit/Veg etable/ Food Product	Colour	Colour Meter	300	-		
Crops	Hydrogencyani de (HCN)	Titration	500	-		

Crop/ Food items/ Soil etc.	Name of Analysis / Test	Method used (2-3 words only)	Test Cost (Rs)	Field Cost (Rs)	Payee	Remarks
Fruits/ Vegetables	Malic acid	Acidity meter	200	-		
Milk	Solid not fat (SNF)	Lactometer	300	-		
Milk	COB	Test tube boiling	100	-		
Milk	Fat	Gerber	300	-		
Milk	Specific gravity	Lactometer	100	-		
Milk	Total solids	Lactometer/ Garber	500	-		

Note: Advisory Tests fees for farmers will continue to be charged at the existing Govt. Rates.

Commercial Tests

Crop/ Food items/ Soil etc.	Name of Analysis / Test	Method used (2-3 words only)	Test Cost (Rs)	Field Cost (Rs)	Payee	Remarks
All Crops/ Fruits/ Vegetables	Pesticide Residue Analysis per Sample	HPLC, GCMS, LCMS	35000	-	Importer, Exporter, Manufacturer, Industrialist,	Departments other than Agriculture/ Private Sector
Crop Seed	Gluten (%)	NIR Method	1000	-	Industrialist/ Exporters/ Students/sister organizations	
Crop Seed	Milling (up to 500 g)	Lab Mill	700	-	Rice Millers, Universities, Seed companies, Industrialists, Students, Sister organizations	
Crop Seed	Hardness	SKCS (AACC 55-31)	1000	-	Industrialist/ Exporters/Students/sist er organizations	
Crop Seed	Farinograph	AACC 38-20	5000	-	Industrialist/ Students/sister organizations	Farinograph is used to determine the water absorption capacity of flour, dough development time, stability and degree of dough softening.
Oilseed Crops	Oil Content	solvent Extraction (Soxhlet Apparatus)	1200	-	Manufacturer, Industrialist, Research, Organizations/ Commercial companies	

Crop/ Food items/ Soil etc.	Name of Analysis / Test	Method used (2-3 words only)	Test Cost (Rs)	Field Cost (Rs)	Payee	Remarks
Crop Seed	Shriveled & Broken Kernels	ISTA Rules for Seed Testing 2018	1000	-	Importer, Exporter, Manufacturer, Industrialist, R&D Organizations	International Seed testing association (ISTA) produces internationally agreed rules for seed sampling and testing, to achieve its vision of 'Uniformity in seed quality evaluation worldwide'. This facilitates seed trading nationally and internationally, ISTA rules regarding to this test are comprises of complete book chapter. Existing rate was approved over a decade ago, new proposed rates are totally justified keeping in view the inflation hike
Crop Seed	Foreign material (Classification)	ISTA Rules for Seed Testing 2018	1000	-	Importer, Exporter, Manufacturer, Industrialist, R&D Organizations	Pure seed is separated from every kind of foreign material and percentage of pure seed is calculated as compared to foreign material, furthermore, foreign material is categorized into different groups according to its nature. Existing rate was approved over a decade ago, new proposed rates are totally justified keeping in view the inflation hike
Crop Seed	Fermentation	Fermentogra ph	3000	-	Industrialist/ Students/sister organizations	

Crop/ Food items/ Soil etc.	Name of Analysis / Test	Method used (2-3 words only)	Test Cost (Rs)	Field Cost (Rs)	Payee	Remarks
Crop Seed	Starch Damage (%)	SD Matic	1000	-	Industrialist/ Exporters/ Students/sister organizations	
Crop Seed	Bread Volume	Bread volume analyser	700	-	Industrialist/ Students/sister organizations	
Rice	Husking and polishing	Milling recovery test	1500	-	Rice Millers, Universities, Seed Companies	
Crop Seed	Diameter	SKCS (AACC 55-31)	700	-	Industrialist/ Students/sister organizations	
Crop Seed	Product Development (Biscuits, cake, bread, chapatti, pizza) per product	Mixing, proofing, baking	1000	-	Industrialist/ Students/sister organizations	After mixing of ingredients such as flour, sugar, eggs, milk, yeast etc. proofing is done in the proofing cabinet and baking is carried out in baking oven
Crop Seed	Extensograph	AACC 54-10	2500	-	Industrialist/ Students/sister organizations	It is used to determine the rheological characteristic of dough particularly visco-elastic property and strength of dough gluten.
Crop Seed	Phytic acid	Spectropho tometer	1000	-	Industrialist/ Exporters/ Students/sister organizations	
Crop Seed	Texture	Texture Analyzer	2000	-	Industrialist/ Students/sister organizations	
Under Tunnels	Adaptability Testing for Yield & Yield Components of Varieties /Hybrids	Randomized Complete Block Design	-	15000	private Seed companies, seed importers/ exporters, autonomous bodies	
Olive / Peanut	Oil Extraction (per kg)	Centrifuged oil extraction	100	-	Progressive farmer, Importer, Exporter, Commercial Company	
All Crops	varietal screening to check resistance / susceptibi	Varietal screening in natural conditions	50000	-	Research Organizations, Progressive farmers, Commercial companies, Seed Companies	The test will be a vital component for varietal approval process

Crop/ Food items/ Soil etc.	Name of Analysis / Test	Method used (2-3 words only)	Test Cost (Rs)	Field Cost (Rs)	Payee	Remarks
	Stability of the genotype / varieties against insect pests					
Open field	Adaptability Testing for Yield & Yield Components of Varieties /Hybrids	Randomized Complete Block Design	-	15000	private Seed companies, seed importers/ exporters, autonomous bodies	
Olive	Olive Oil acidity / K-270 / Peroxide Value	Oxitiester	4500	5500	Research Organizations/ Progressive farmers/ Commercial companies	
All Pesticides	Pesticide Formulation	HPLC, GC, UV visible & chemical	5000	-	Importer, Manufacturer, Progressive and other farmer, Industrialist	
Insect Pests of all Crops, fruits & vegetables	Insecticide Bioassay Study	IRAC method	35000	-	Manufacturers, Industrialists, Universities, Seed companies	This test will be performed to assess bio efficacy of insecticides
Crop Seed	Wet & Dry Gluten and Gluten Index	Glutomatic apparatus (AACC 38-12)	4500	-	Industrialist/ Exporters/ Students/sister organizations	
Crop Seed	Seed health test	Incubation method for fungi/ bacteria/ virus	3000	-	Importers, Exporters, Research Organizations/ Progressive farmers/ Commercial companies	To determine the seed health
Rice	Aroma gene	PCR based test	12000	-	Seed Companies, Universities	PCSIR does not perform Aroma gene test.
Plant	Sodium (Na)	Flame Photometer	500	-	Industrialist, R&D Organizations	To determine the conc. of sodium in plants
Crop Seed	Falling Number	Falling Number apparatus (AACC 56-18B)	1500	-	Industrialist/ Exporters/ Students/sister organizations	Falling Number value is used to determine the activity of alpha amylase enzyme present in wheat flour. If value is less than 250 seconds, it means enzyme has become active and

Crop/ Food items/ Soil etc.	Name of Analysis / Test	Method used (2-3 words only)	Test Cost (Rs)	Field Cost (Rs)	Payee	Remarks
						will cause problem in product development due to breakdown of starch network in the flour
Crop Seed	Calorific Value	Bomb Calorimeter	3000	-	Industrialist/ Exporters/ Students/sister organizations	
Oilseed Crops	Oleic acid/ Linoleic acid/ Linolenic acid/ Erucic acid/ palmitic acid/ stearic acid/ saturated fatty acids/ oil content/ protein/ Ash/ Moisture	NIR Spectroscopy	1000	-	Manufacturer, Industrialist, Research Organizations/ Progressive farmers/ Commercial companies	ORI has initiated first time the use of NIR for estimation of Oil Parameters
Rice	Protein	Auto grain analyzer	3000	-	Rice Millers, Exporters, Seed companies	
Rice	Amylose	Auto grain analyzer	3000	-	Rice Millers, Exporters, Seed companies	
Crop Seed	Foreign material (Total)	ISTA Rules for Seed Testing 2018	1000	-	Importer, Exporter, Manufacturer, Progressive farmer, Industrialist, R&D Organizations	Pure seed is separated from every kind of foreign material and percentage of pure seed in calculated as compare to foreign material
Crop Seed	Vitamin A / E	HPLC	7000	-	Industrialist/ Students/sister organizations	
Plant	Proline content	Spectrophotometer	750	-	Industrialist, R&D Organizations	To examine crop's response to biotic and abiotic stresses
Plant	Glycine betaine	Spectrophotometer	750	-	Industrialist, R&D Organizations	To examine crop's response to biotic and abiotic stresses
Rice	Varietal	Physical analysis	1500	-	Rice Millers, Exporters,	

Crop/ Food items/ Soil etc.	Name of Analysis / Test	Method used (2-3 words only)	Test Cost (Rs)	Field Cost (Rs)	Payee	Remarks
	identificat ion analysis for rice				Traders, Govt. bodies like IG Prison, CSD, Private Inspection firms like SGS etc.	
Rice	Alkali spreading value	Cooling incubator method	1500	-	Seed Companies, Universities	
Biofertilizer	Complete Biofertiliz er test (8 paramete rs)	As per PSQCA standards	5000	-		
Crop Seed	Seed Vigour	ISTA Rules for Seed Testing 2018	1500	-	Importer, Exporter, Manufacturer, Progressive farmer, Industrialist, R&D Organizations	International Seed testing association (ISTA) produces internationally agreed rules for seed sampling and testing, to achieve its vision of 'Uniformity in seed quality evaluation worldwide'. This facilitates seed trading nationally and internationally, ISTA rules regarding to this test are comprises of complete book chapter.
Biostimulan ts	Bioassay of biostimul ants	Bioassay/ Root elongation assay as per given protocol.	3500	-		
Rice	Gel consisten cy	Water bath method	1500	-	Seed Companies, Universities	
Rice	Aroma Quantifica tion	Gas Chromatography	10000	-	Rice Exporters, Millers, Universities	This test is done by Gas chromatographic system. The particular extraction/Method is called SPME (Solid Phase Micro Extraction Technique. The test authentic as per standard Chromatography

Crop/ Food items/ Soil etc.	Name of Analysis / Test	Method used (2-3 words only)	Test Cost (Rs)	Field Cost (Rs)	Payee	Remarks
						procedures. Main aroma compound 2-acetyl-1pyrroline is quantified by this method. This aroma compound is present in all aromatic rice of world and also responsible for Basmati aroma. Advance GC techniques just to quantify it for make it possible commercial samples also.
Crop Seed	Seed Physical Purity	ISTA Rules for Seed Testing 2018	500	-	Importer, Exporter, Manufacturer, Progressive farmer, Industrialist, R&D Organizations	International Seed testing association (ISTA) produces internationally agreed rules for seed sampling and testing, to achieve its vision of 'Uniformity in seed quality evaluation worldwide'. This facilitates seed trading nationally and internationally, ISTA rules regarding to this test are comprises of complete book chapter.
Crop Seed	Amino acids (22)	HPLC	30000	-	Industrialist/ Students/sister organizations	Per 22 Amino Acids
Fruit/Veget able/ Food Product	Viscosity	Visco Meter	300	-		
Fruit/Veget able/ Food Product	Carbon dioxide Pressure	CO ₂ Meter	300	-		
Rice	Total Aflatoxins in rice	Strip method (Qualitative)	2500	-		
Sugarcane	TSS/ Brix % in Sugarcane	Refractometer/H ydrometer	150	-	Progressive Farmers/Industrialist/Re search Organization	To satisfy customer needs

Crop/ Food items/ Soil etc.	Name of Analysis / Test	Method used (2-3 words only)	Test Cost (Rs)	Field Cost (Rs)	Payee	Remarks
	Juice					
Sugarcane	CCS%/ Sugar Recovery % in sugarcane juice	International Commission for Uniform Methods of Sugar Analysis (ICUMSA)	750	-	Progressive Farmers/Industrialist/Re search Organization	To satisfy customer needs
Sugarcane	Fiber % in cane	ICUMSA	500	-	Progressive Farmers/Industrialist/Re search Organization	To satisfy customer needs
Sugarcane	Varietal identificat ion in sugarcane	Morphological /Taxonomic obser vat Lab Test	3000	-	Progressive Farmers/Industrialist/Re search Organization	To satisfy customer needs
Screening of Salt Tolerant Crop Variety	Screening against salinity tolerance	Salinity Blocks / Pots	45000	-		

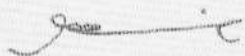
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SECRETARY TO GOVERNMENT OF THE PUNJAB
AGRICULTURE DEPARTMENT

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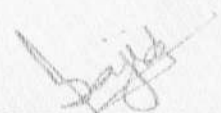
1. Secretary Finance, Govt. of the Punjab
2. Secretary (I & C), S&GAD
3. Secretary Law & Parliamentary Affairs, Govt. of the Punjab.
4. The Addl. Secretary (Gen)/ Staff Officer to Chief Secretary, Punjab.
5. Director General Agri. (Research), Punjab.
6. Director General Agri. Extension & AR, Punjab.
7. Director General Agri. (PW&QCP), Punjab
8. Section Officer (Budget & Accounts), Agriculture Department.
9. Chairman, Crop Life Pakistan Association
10. Chairman, Pakistan Crop Protection Association
11. SO(Tax)Finance Department w/r to his letter No.SO(Tax)1-11/2019-20(REs/BEs)pursuant to the decisions taken in the 12th Provincial Cabinet meeting held on 14th June 2019 in the committee Room of 90-SQA, Lahore , levy of fee / revision of rates of analysis / tests on Crop / food items / soil etc comprising advisory / commercial tests.
12. Superintendent, Govt. Printing Press, Punjab, for publication in the next issue of the Government Gazette.


(Tariq Abdul Hamid)
Assistant Director (Task Force)

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Dated Faisalabad, the 22-10-2018

Copy is forwarded to the all Directors/Head of Sections AARI at Faisalabad & Out-Stations, for information and further necessary action.


(DR. SAJID-UR-RAHMAN)
DIRECTOR AGRI. (RESEARCH)
for DIRECTOR GENERAL AGRI. (RESEARCH)