

Govt. of Bihar
Department of Agriculture
Bihar Horticulture Development Society, Patna.
(State Horticulture Mission)
2nd Floor, Krishi Bhawan, Mithapur, Patna-800001,
Phone: 0612-2547772,
E-mail: md-hort-bih@nic.in , dir-bhds-bih@nic.in,
Website: horticulture.bihar.gov.in

Normal E-Tender Enquiry for Selection of Executing Agency for the establishment and operation of Tissue Culture Lab at Patna and Lakhisarai, Bihar

Bihar Horticulture Development Society (BHDS), Patna invites online bids from reputed and experienced agencies, firms, companies, or organizations for the **establishment and operation of Tissue Culture Laboratories at Patna and Lakhisarai, Bihar**. The bidding process shall be conducted exclusively through the e-procurement portal: <https://eproc2.bihar.gov.in>.

The selected Executing Agency will be engaged on a licence basis and shall be responsible for:

- Establishing and operating the Tissue Culture Labs at the designated locations.
- Maintaining all infrastructure, equipment, and related facilities.
- Producing and marketing high-quality tissue culture planting materials.
- Conducting training programmes and exposure visits for stakeholders.
- Demonstrating modern, scalable, and commercially viable tissue culture practices suitable for Bihar.

Indicative tender schedule

Sl. No.	Particular	Date & Time
1	Start date and time for downloading tender document	01.08.2026 (11:00 Hrs.)
2	Last date and time for downloading tender document	05.08.2026 (11:00 Hrs.)
3	Date and time of pre-bid meeting / site briefing	03.08.2026 (12:00 Hrs.)
4	Last date and time for submission / uploading of bids	11.08.2026 (15:00 Hrs.)
5	Date and time of opening of technical bids	11.08.2026 (16:00 Hrs.)
6	Date and time of opening of financial bids	To be intimated to technically qualified bidders only
7	Selection Period	MoU is extendable after one year of operation & maintenance for a maximum of two years.
8	Nodal officer/Contact person for queries	Sri Deo Narayan Mahto (Deputy Director Horticulture(Administration & Evaluation) Ph-9031643054

Mission Director, Bihar Horticulture Development Society, Patna reserves the right to revise/change/cancel the proposal without assigning any reasons thereof.

For Further detail please visit: <https://horticulture.bihar.gov.in/>



Mission Director,
Bihar Horticulture Development Society, Bihar, Patna

1. Disclaimer

- 1.1 The information contained in the tender document or subsequently provided to Applicants, whether verbally or in documentary or any other form by or on behalf of the Bihar Horticulture Development Society (BHDS), Agriculture Department, Government of Bihar (GoB), is provided to Applicants on the terms and conditions set out in the RFP.
- 1.2 The RFP is not an agreement and is neither an offer nor invitation by the BHDS to the prospective Applicants or any other person.
- 1.3 The purpose of this tender is to provide interested parties with information that may be useful to them in the formulation of their Proposals pursuant to this tender.
- 1.4 Information provided in this tender to the applicants is on a wide range of matters, some of which depends upon the interpretation of law. The information given is not an exhaustive account of statutory requirements and should not be regarded as a complete or authoritative statement of law. The Authority accepts no responsibility for the accuracy or otherwise for any interpretation or opinion in the law expressed herein.
- 1.5 BHDS also accepts no liability of any nature whether resulting from negligence or otherwise however caused arising from reliance of any applicant upon the statements contained in this tender. BHDS may in its absolute discretion, but without being under any obligation to do so, update, amend or supplement the information, assessment or assumption contained in this tender.
- 1.6 The issue of the tender does not imply that BHDS is bound to select any Applicant or to appoint the Selected Applicant, as the case may be, for the event management activities and BHDS reserves the right to reject all or any of the proposals without assigning any reasons whatsoever.
- 1.7 The applicant shall bear all its costs associated with or relating to the preparation and submission of its proposal including but not limited to preparation, copying, postage, delivery fees, expenses associated with any demonstrations or presentations which may be required by BHDS or any other costs incurred in connection with or relating to its Proposal. All such costs and expenses will remain with the Applicant and BHDS shall not be liable in any manner whatsoever for the same or for any other costs or other expenses incurred by an Applicant in preparation or submission of the Proposal, regardless of the conduct or outcome of the selection Process.
- 1.8 BHDS and/or its officers, employees disclaim all liability from any loss or damage, whether foreseeable or not, suffered by any person acting on or refraining from acting because of any information including statements, information forecast, estimates or projections contained in this document or conduct ancillary to it whether or not the loss or damage arises in connection with any omission, negligence, default, lack of care or misrepresentation on the part of BHDS and / or any of its officers, employees.



1. Minimum Eligibility Criteria

Bidder must carefully read the minimum conditions of eligibility (the "Conditions of Eligibility") provided herein. Proposals of only those Applicants who satisfy the Conditions of Eligibility will be considered. The applicants will be required to submit the documents as per the conditions of eligibility mentioned below:

Sr No	Particulars	Details	Required Documents
1	Agency	Bidder should be a Registered Entity in terms of being incorporated under companies/ partnership/LLP Act of Govt of India	1. Copy of Incorporation certificate whichever is applicable along with GST Registration certificate and Copy of PAN Card. 2. DBT Certificate of bidder is mandatory. Note: - • Joint Venture for the said project is not allowed.
2	Valid GST registration certificate		1. Valid GST registration certificate of the bidding agency with GSTIN 2. Furnish copy of GST return of the FY 2023-24 and FY 2024-25. Note: • Firm should also have GST registration in Bihar, if they don't have GST registration in Bihar, now it will be mandatory to get GST of Bihar after final selection in the tender. Payment will start only after completion of GST registration in Bihar.
3	Experience	The bidder should have cumulative experience of executing contracts of establishment of at least two Tissue Culture Labs for any Central Govt/ State Govt./ PSUs/ Govt Agencies/ Universities/Colleges/ Registered Cooperative or Society/Private sector in the last ten FY 2015-16 to FY 2024	Bidders have to submit: - 1. Supply order/ work order 2. Invoice Bill/ Tax invoice and 3. Concerned payment proof.



4	Agency's Annual Turn Over	The bidder shall have average Annual turnover of Rs. 50.00 Cr in last three financial years FY 2022-23, 2023-24 and 2024-25.	Bidders have to submit: - 1. Copy of Income tax return with computation of income of last three consecutive financial years (2021-2022, 2022-23 and 2023-24) or FY 2022-23, 2023-24 and 2024-25 & PAN Card of the bidding agency 2. Copy of Audited balance sheet and Profit and loss statement with UDIN of the bidding agency of last three consecutive financial years (2021-2022, 2022-23 and 2023-24) OR FY 2022-23, 2023-24 and 2024-25. 3. Average Annual Turnover of the bidding agency, duly certified by Chartered Accountant with UDIN
5	The bidder's company/firm must have established quality assurance systems and organization in line with the requirements under		1. Valid ISO 9001:2015 certificate with certificate number, issuing authority and expiry date.
6	Affidavit	From notary stating that the firm is not blacklisted by any State Govt./Central Govt. on account of corrupt or fraudulent practices.	1. An affidavit on Rs.1000/- Stamp Paper from Public Notary.
7	Earnest Money Deposit	A/C Name : Bihar Horticulture Development Generated Income Bank Name : UNION Bank A/C No. 453202050000067 ISFC : UBIN0545325 Branch:- RAJABAZAR, Patna	1. Bidders need to submit an EMD of Rs. 5,00,000.00/- (Five Lakh) through online mode to be eligible to participate in this tender. Tender document fee is not required. Note: • EMD will be the part of technical bid only. The earnest money of the technically unsuccessful bidder will be refunded after the rejection of their proposal and the earnest money of successful bidder will be retained till the submission of performance guarantee/security deposit and signing of agreement.

Note: EMD is exempted for special category Enterprise (Clause 9)

Conditions:

1. Udyam Registered and situated in Bihar
2. Formally recognized as startup
3. Technical threshold remains the same.

1. General Terms and Conditions



1. Joint Venture for the said project is not allowed.
2. Agency may apply tender for either or both of the locations, Patna and Lakhisarai, as per their preference.
3. The Bidders participating in the tender will invariably be accepting all the terms and conditions of the tender.
4. Valid GST registration certificate of the firm participating in the tender should be there.
5. Bidder should also have GST registration in Bihar, If they don't have GST registration in Bihar, it is mandatory to get GST after final selection in the tender within two (2) months. Payment will start only after completion of GST registration in Bihar.
6. Bidder need to submit an EMD of Rs.5,00,000.00/- (Five Lakh) through online mode (NEFT/RTGS) to be eligible to participate in this tender. Offers without EMD will not be considered.
7. EMD will be the part of technical bid only. The earnest money of the technically unsuccessful bidder will be refunded after the rejection of their proposal and the earnest money of successful bidder will be retained till the submission of performance guarantee/security deposit and signing of agreement.
8. Valid Authorization certificate of major components from the manufacturer/company applicable in the current year/valid for published tender for items.
9. All documents submitted by the bidder should be Self Attested by authorized signatory and valid till the date of completion of the work/project.
10. Any conditional proposals will not be accepted.
11. (i) The successful bidder will have to deposit an amount of 5% (incl. GST) of the quoted project cost as performance security money in the form of Bank Guarantee (Issued by nationalized bank only) in favor of the Mission Director, Bihar Horticulture Development Society payable at Patna, Bihar.
(ii) 5% of quoted project cost may be released as upfront payment for initial mobilisation supply.
(iii) 25% advance payment (after signing of MoU) may be allowed to the L1 bidder on submission of Bank Guarantee/E- Bank Guarantee/other financial instrument of the same amount, issued in the favor of BHDS, Bihar payable at Patna.
12. The security amount will be/shall be forfeited if the bidders fail to provide quality services i.e. installation, maintenance and commercial execution in stipulated time.
13. No claim will be entertained afterwards for any increase in market price or otherwise.
14. Performance Security deposit of the bidder will be released after 12 months from the completion of the project, including, commissioning of the project.
15. In case of any dispute the decision of the Director Horticulture shall be final and binding upon all concerned parties as per mutual understanding among the party/firm/company and the Directorate of Horticulture, Bihar, Patna.
16. Notwithstanding anything contained in the e-tender, Director of Horticulture, Bihar, Patna, reserve the right to accept or reject any proposal and annul the selection process and reject all proposals at any time without any liability or any obligation for such acceptance, rejection or annulment and without assigning any reasons thereof.
17. The Director of Horticulture, Bihar, Patna also reserves the right to reject any or all proposals if:
 - a) At any time a material misrepresentation is made or uncovered: or,
 - b) The bidders do not provide, within the specified time, the supplemental information sought by Director of Horticulture, Bihar, Patna, for evaluation of the proposals.



18. Price(s) quoted in financial bid must be inclusive of all taxes, transportation and packing at proposed site. Financial bids will be quoted in figures as well as in words. In case of any ambiguity amount quoted in words will be considered. Any correction of entries and over writing in entries may be rejected without any prejudice. The materials shall have to be supplied at the premises of proposed site of the state as per terms and conditions contained in supply order. No other charges such as Freight, Insurance, Loading and Unloading, etc. will be allowed.
19. Evaluation and selection process of the bidder will be governed by the guidelines of General Financial Rules, 2017, Bihar Financial Rules, 2005, Public Procurement Policy of Government of India and the technical and financial evaluation will be carried out by a technical committee, constituted at the level of Directorate of Horticulture, Bihar, Patna.
20. The High Court at Patna shall have exclusive jurisdiction over all disputes arising under, pursuant to and/or in connection with the selection of firm/company/organization.
21. The department reserves the right to relax or waive any of the condition mentioned in this document as deemed necessary in the best interest of the Govt. and the objective of the scheme without assigning any reasons thereof.
22. The Directorate of Horticulture, Government of Bihar (GoB), may, at its sole direction seek clarification from any bidder (firm/company/organization) regarding its proposals; such clarifications shall be provided by the bidders within the time specified by the Directorate of Horticulture, GoB, for this purpose. Any request for clarification (s) and all clarification (s) on response thereto shall be in writing. If a bidder does not provide clarification sought above within the specified time, their proposals shall be liable to be rejected.
23. Agency should have its office/branch in Bihar or if not then they have to establish it after final selection, within two (2) months, till the completion of the project.
24. Project has to be completed within 12 months period from date of issue of work order.
25. **Selection of Bidder:** The L-1 bidder, determined on the basis of the shall be selected for supply, installation and commercial initiation of operation of the TC-Lab.
26. **Disqualification:**
The reasons for the disqualification of the participating firm/company/organization are mentioned below:
- The quotations/response to the e-tender submitted/received after due date/time will be summarily rejected.
 - The interested entity has made misleading or false representation in the firms, statements, attachments submitted in proof of eligibility.
 - The e-tender is not accompanied by required documentation.
 - The interested entity fails to provide clarification related thereof, when sought.
 - The firm/company should provide/give the correct and true information while submitting the tender. In case of incorrect/false information found at any stage, the tender/bid will be cancelled, and legal action will also be initiated.
 - The interested Entity is found to canvass, influence or attempt to influence in any manner, the qualification or selection process, including without limitation, by offering e-tender or other illegal satisfaction.
 - Notwithstanding anything written above or elsewhere, the e-tender may disqualify the Interested Entity without assigning or disclosing any reason thereof.



27. EVALUATION OF BID

- a) Prior to evaluation of Proposals, the BHDS will determine whether each Proposal is responsive to the requirements of the RfP. A Proposal shall be considered responsive only if:
- b) It is received in the specified format.
- c) It is received by the due date including any extension thereof.
- d) It contains all the information (complete in all respects) as requested in the RfP.
- e) It does not contain any conditions
- f) It has paid Rs.5,00,000.00/- (Five Lakh) as Earnest Money Deposit (EMD) through online mode (NEFT/RTGS)
- g) All pdf documents must be named clearly as per the list given in the table, without proper naming of the documents, tender won't be considered.

The proposal not found responsive to the requirements of the RFP, shall be rejected.

The technical bid of the e-tender will be evaluated by the Technical Evaluation Committee and the financial bid of only technically qualified agency will be evaluated by the Financial Evaluation Committee. After successful completion of the tender, tender will be awarded to technically qualified L1 bidder.

29. Terms of Payment:

The progress of work will be inspected by technical committee constituted by the Directorate of Horticulture, as and when required. After satisfactory Inspection Report from the committee, the payment will be released in installments on following conditions:

- I. **First installment:** 25% of agreed contract value, after signing the agreement and submitting bank guarantee of 25% of agreed value as 1st installment.
- II. **Second installment:** 45% of agreed contract value, after completion of Civil works components of TC Lab as per specifications mentioned in the bid and satisfactory certification given by monitoring & evaluation committee.
- III. **Third installment:** 45% of agreed contract value, after commissioning of TC Lab and satisfactory certification given by monitoring & evaluation committee. Bank guarantee will be released after successful commissioning of TC Lab. and Bank Guarantee/ E- Bank Guarantee shall be released to the L1 bidder.
- IV. **Final installment:** 10% of agreed contract value, after the Management and Operation of tissue culture lab for one year, post installation.
- V. 5% of the quoted project cost may be released as upfront payment for initial mobilisation support.

30. SCOPE OF WORK (Applicable for Both of the Location i.e. Patna and Lakhisarai, Bihar)

Directorate of Horticulture is planning to establish "**Tissue Culture Laboratory**". This tender on eproc is for inviting suitable proposal and an estimated cost for setting up of such a unit. The interested specialized organizations/ Firms/ company which are involved and having experience of designing, installation, executing and maintenance of such projects, only may participate with their best attractive proposals with us. The detail scope of work for **Tissue Culture Laboratory** are described below:



TECHNICAL SPECIFICATION OF ITEMS FOR ERECTION OF "TISSUE CULTURE LABORATORY"

Technical / Operational Parameters

Technical Specification for Supply, Installation, Commissioning, and Operation of Tissue Culture Laboratory on Turnkey basis for the Directorate of Horticulture, Department of Agriculture, Govt. of Bihar, Patna under PPP mode at Patna and Lakhisarai. Post Installation, the agency shall Manage, Run and Up-keep the Tissue Culture laboratory and attached infrastructure for a period of one years and supply the plantlets of different variety of plants in consultation with BHDS, Bihar. The L1 bidder would be free to sell the plantlets of different variety of plants including participation in Government Tender for supply to the farmers. The MoU is extendable after one year of operation & maintenance for a maximum of two years, one year at a time, if the performance of the agency is satisfactory and if both party agrees.

Scope of Work: The following components of the project are to be executed by the Company:

- I. Supply, Installation and Commissioning, of Tissue Culture Laboratory on Turnkey basis in economically viable mode with latest technology of micro-propagation.
- II. The Tissue Culture Laboratory is designed as a Single storied Pre-Engineered Building (PEB) with comfort air-conditioned system for Laboratory growth rooms with automatic door ON/OFF.
- III. Fully furnished office space and a toilet block with drinking water facilities.
- IV. The Laboratory building will be designed to maintain Class 100000 sterility standards.
- V. The Laboratory will be equipped with all necessary equipment for production of 25 lakhs plants per annum i.e. Banana, Strawberry, Pineapple and other Horticulture Plantlets.
- VI. The Laboratory has proper arrangement for air circulation and all rooms are fitted with air conditioners of adequate capacity.
- VII. The Laboratory will be fitted electrical fittings required to run machineries and equipment's with necessary electrical connections and adequate loads.
- VIII. The tissue culture laboratory will build according to the norms of BCIL/DBT (for certification), it would be responsibilities of the agency to get all required certification for running of the project and all cost will be borne by agency.

Other Terms and Condition

- I. Directorate of Horticulture, Department of Agriculture will provide Land, Electricity connection, however, the transformer cost and electricity bill will be paid by agency based on operations.
- II. The Agency shall ensure all statutory obligations/liabilities including salary, PF as per labour laws for manpower employed for the project.
- III. The agency will have to procure all materials needed for the laboratory including consumables, chemicals, and protocol
- IV. The agency will provide Power back-up for the facility and will bear all running direct and indirect expenses, electricity bill etc. during the period of Contract.
- V. The company/agency shall provide reports on a regular basis during the Implementation Period.
- VI. The Taxes applicable shall be deducted from the bill of the company/agency as per rule and law from time to time in operation.
- VII. The ownership of all the facilities and IPR assets (without any liability) necessary for proper and normal operation of the project, including, but not limited to all electrical, civil and mechanical works, vehicles, implements, tools and tackles on completion of the Contract period will automatically be vested with the Directorate of Horticulture, Department of Agriculture, Govt. of Bihar.
- VIII. Joint Venture for the said project is not allowed.



PROJECT COMPONENT DETAILS (FOR BOTH OF THE LOCATION)

S. N.	Equipment	Specification	Quantity (Unit/Area)
1.	Infrastructure		
	Laboratory Area	ANNEXTURE-1	
I.	Sterilize and Semi-sterilize Area	- Media Preparation & Chemical Storage Room - Sterilization Room - Buffer/Change Room - Media Storage Room - Inoculation Room - Culture Room - Bottle Storage Room - Store room - Packing room/ pre-hardening area (Annexure-1)	Covered area (Approx.) 450 Sq.M.
II.	Non-Sterilize Area	- Bottle Washing Area - Hand & Leg wash Area - Wash Room	
2. I.	Primary Hardening Facility	Primary Hardening Unit / Green House (Annexure- 2A)	1500 Sq.M.
II.	Secondary Hardening Facility	Secondary hardening unit (Annexure- 2B)	4000 Sq.M.
3.	Glassware and Plastic-ware		
I.	Bottle with caps	Glass bottle 300ml capacity with wide mouth culture bottles with autoclavable plastic lid	80000 Nos.
II.	Growth Room Tray	Trays needed for keeping the bottles	1250 Nos.
III.	Plastic/ Glass Beakers	All lab use size containing 5 No. each	2set
IV.	All glass measuring equipment	All lab use size containing 1 No. each	1 set
V.	All Plastic measuring equipment	All lab use size containing 1 No. each	1 set
VI.	Conical flask	Capacity of different size litres: 3 each	1 set
VII.	Test tube	Glass test tube	200 Nos.
VIII.	Petri plates	Glass Petri plates, Sterile Dia: 90mm x Hight: 14mm	50 Nos.
		Glass Petri plates, Dia: 60mm x Hight: 14mm	10 Nos.
		Glass Petri plates, Sterile Dia: 120mm x Hight: 14mm	10 Nos.
IX.	Glass reagent bottles with screw cap	Capacity 100ml, 250ml, 500ml, 1000ml, 2000ml- 5each	1 set
X.	Amber coloured glass reagent bottles	Capacity 100ml, 250ml, 500ml, 1000ml, 2000ml- 5each	1 set
XI.	Volumetric flask	Capacity 100ml, 250ml, 500ml, 1000ml- 2each	1 set
XII.	Glass test tubes	60 ml	1000 Nos
XIII.	Multipurpose utility tray	Plastic, perforated tray	50 Nos
XIV.	Multipurpose utility tray	Plastic tray	50 Nos
4	Metalwares and Labwares		
I.	Laboratory Spatula, 6" S.S.	Stainless steel, 6" spatula, pack of 6	6 set
II.	Long forcep	Size 12", stainless steel, pack of 6	6 set
III.	Scalpel holder	Stainless steel	20 Nos
IV.	Spirit lamp	Stainless steel	12 Nos
V.	Scissor	Stainless steel,"6	12 Nos

VI.	Scalpel blades	Stainless steel, No. 11, pack of 30	2 set
VII.	Beaker tongs	Stainless steel with plastic grip	3 set
5	Furniture and Office supplies		
I.	Lab furniture	Executive Chair: 10 Nos Computer Chair: 5 Nos Computer Table: 5 Nos Laminar Chair: 24 Nos Visitor Chair: 20 Nos Office Table: 3 Nos Shoe Rack: 4 Nos Writing Board: 4 Nos Conference Table Set: 1 Nos Misc: 1 Nos	1 set
6.	Miscellaneous other items		
I.	Apron, cap mask & gloves	Lab Apron- 20 Nos. Caps- 20 Nos. Mask-20 Packet. Gloves- 20 Packet.	20 Nos. Each
II.	Slipper	Standard Rubber slipper	15 Nos.
III.	CCTV Full HD for monitoring of lab	16 Channel hd Monitor -1 No. 1.3MP. Camera - 16 Nos. 4TB Surveillance HDD- 1 No. Power Supply 05A (Linias)- 3 No. 3+ solid copper wires- 1No. Bnc Connector-32Nos. Dc connector- 16 nos. Rack-1No. Installation- 16 Camera	1 Set
IV.	Computer and Printer	PC with 21" LCD monitor, (Dell/Lenovo/ HP/ Acer make) are built specifically for the unique needs of small businesses and are ready to be customized with the features and software you want. The Computer is a powerful, secure and reliable desktop solution that's optimized to meet your high performance business demands. Printer: HP laser Jet Colored printer	1 Set
V.	Water Tank	PVC Tank capacity 20000 Ltrs. with tank platform	1 No.

6. Equipment:

S.No.	Items	Specifications	Qty.
1.	Autoclave (Fully Automatic) Horizontal Bench-top Autoclaves (Front Loading) 1200 Ltr.	Horizontal, front-loading autoclave HORIZONTAL BENCH-TOP AUTOCLAVES SYSTEC D SERIES - For all laboratory applications even for sophisticated state-of-the-art sterilization processes. With all possibilities to add additional options for process optimization to enable valid a table sterilization to be carried out. - Corrosion resistant pressure vessels made of stainless steel 1.457 AISI 316 Ti, with the housing and support frameworks made of steel as well. - Temperature sensor in addition to an electronic pressure sensor to monitor both the pressure and temperature - Front-loading bench top Horizontal autoclaves with 150 liters chamber volume is distinguished by its small footprint and high chamber capacity. Result: optimal	1 No.

J

		loading capacity with most standard media bottles and Erlenmeyer flasks. The door as well as various other elements of the housing and vessel are built using stainless steel and clad in an aesthetically pleasing front cover is made of insulated plastic that is highly resistant to heat. The same material is used for the control panel, display as well as parts of the control processing system. This prevents operators from coming into contact with heated surfaces.	
2.	Electronic Weighing Balance (Readability 0.1mg)	Weighing capacity: 220g Readability: 0.1mg Repeatability: 0.1mg Linearity: 0.2mg Weighing pan size: Ø90mm Weighing chamber height: 209mm Net weight, approx. : 4.9kg Dimensions, D x W x H : 360 x 216 x 320mm; 14.1 x 8.5 x 12.6Inch	1 No.
3.	Electronic Weighing Balance (Readability 1.0mg)	Weighing capacity : 310g Readability: 1mg Repeatability: 1mg Linearity: 2mg Weighing pan size: Ø120mm Weighing chamber height: 209mm Net weight, approx.: 4.9kg Dimensions, D x W x H : 360 x 216 x 320mm; 14.1 x 8.5 x 12.6Inch	2 Nos.
4.	pH meter cum conductivity meter (Digital)	Eutech pH 700 Meter: with pH Electrode (ECFC 7252101B), ATC Probe (ECPHTEMPB01P) Integral Electrode Holder & 100/240 VAC Adapter pH : Range : -1.99 to 16.00 pH Resolution: 0.01pH Accuracy: ±0.002 Cal. Points: Up to 5 points Buffer Sets: USA, NIST ORP: Range: ±1999 mV Rel. mV Range: ±1999 mV Resolution: 0.1 mV (±199.9 mV) / 1 mV (beyond) Accuracy: ±0.2 mV (±199.9 mV) / ±2 mV (beyond) Temperature: Range (meter): 0.0 to 100.0 °C / 32.0 to 212.0 °F Resolution: 0.1 °C / 0.1 °F Accuracy: ±0.5 °C / ±0.9 °F Coefficient (Per °C) Compensation Type & Range: Automatic or Manual (0 to 100 °C / 32 to 212 °F) Calibration: Off set in 0.1 ° increments; offset range: ± 5 °C / 9 °F	5 No.
5.	Laminar Airflow/Bio safety Cabinet Class-II (size 5-6 ft)	Thermo Scientific Class II Type A2 4 Feet Biological Safety Cabinet cum Laminar Air Flow with 10 Inches Work Aperture and Smart coat Interiors TECHNICAL SPECIFICATIONS Horizontal type Laminar Airflow	9 Nos.

		Package: Includes cabinet, manual adjustable height stand, factory installed UV light and one set of armrests ERGONOMICS AND UTILITIES Lighting Power : >120 Fc (1200 Lux) Sound Level: < 62 dB(A) Dimensions Exterior without Stand : 6' x 2' x 2' Height of Stand: Min 750 mm Max 950mm External Cabinet Height on Stand: 2320 mm Min; 2520 Max Interior: 1200 W x 780 H x 630 D mm Working Height of Front Window: 10"(254mm) Max. Opening of front window: 21 " (535 mm) ELECTRICAL DATA Voltage : 230 V Frequency: 50 Hz FILTER SPECIFICATIONS: H14 HEPA EN1822, 99.995% MPPS	
6.	Water Purification System	RO System 1000 LPH with stand & other accessories	1 Nos.
7.	Glass Bead Sterilizer	These are incorporated with a thermostat which maintains the set temperature with an accuracy of + 1 of the preset temperature range. Crucible (Brass) size: 2" dia x 5½" Depth Preset Temp. Range: 245°C – 265°C Initial Stabilization Time: 30 Minutes (including. of Glass	9 Nos. (1 for each laminar)
8	Air curtain	MS powder coated body, Slick in design, with auto ON/ OFF switch can save upto 80% of Electricity. Max. air velocity at nozzle: 21m/s, Noise Level-DB 50-70, No. of Blowers-3, No. of Motors-2, No-f shaft-1 Double, Voltage- 350w-605w, Phase Single RPM(Max./Min.)-2700/2100, Blower Type-ABS, cfm-825-1490, Insect/ Dust rejection-75%	3 Nos
9	Photoperiodic morphogen controller	Analog Photoperi 24 hrs repeat cycle min ON/ OFF period with NICAD battery auto recharging. Powered output can drive 110 tube lights 40 watt directly. Thermal safety 16amp inbuilt. Accuracy ± 8 sec/day. Operating voltage 220 volt AC	4 Nos
10	Sequential Timer	For operating two air conditioners of 1.5 ton each, Output- Operates two AC upto 1.5 ton each, Min. on/off cycle-30 min.	
11	Autoclave (Vertical Type) One	• Double walled. • Inner outer chamber stainless steel. • Lid is made of thick stainless steel. • Pressure adjustable between 5 to 22 P.S.I. • ISI mark heating element, which are easily replaceable and heat the water to desired temperature and pressure. • Pressure is indicated by pressure gauge supplied complete with stainless steel perforated. • Basket cord plug to work on 220v +/- 9% 50Hz, single phase. • Pressure control device (PIEZOSTAT). • Microprocessor based controller with programmable features with PID Display. • PV & SV 16X2 character LCD display, 4 program keys, one start/ stop key, pt-100 3wire. • Sensor, automatic soak, purge, exhaust setting with high alarm set. Automatic Timer. • Size of inner chamber- 450x600 mm.	1 Nos.



12	Vertical Distillation Apparatus	- Capacity 5 Ltr./hr - Quartz stiller, Demountable boiler - Panel box and stand to accommodate regulator clamp etc. - Quality of distillate – pyrogen free, PH-6.9 – conductivity - Distilled water should be heavy metal, salts, pyrogen and iron free. - Specific Conductivity at 25 deg C less than 0.4 X 10.6S/cm Glass material (or Chemical inert material). - Equipment should be thermal shock proof.	1 Nos
13	Stereo Zoom Microscopes with Camera	Zoom body:7:1 zoom microscope body, Galilean Optics. Zoom magnification variation: Left/right optical axis parallel method. Zoom magnification indication: 0.8, 1, 1.25, 1.6, 2, 2.5, 3.2, 4, 5, 5.6. Zoom drive: Horizontal knob system. Click stop for each zoom magnification: ON-OFF switching possible. Objective mounting: Screw mounting into thread.- 1 no. Observation Tube:30 degrees inclined trinocular observation tube with 2 step light path selection: 100:0 & 50:50 - 1no. Digital Colour Camera: 5.1 Mega pixels digital camera, sensor size: 1/2.5", binning: 2x2, 4x4, Spectral Range: 380-650 nm with IR filter, integrated metal alloy housing, USB interface. Compatible adaptor included – 1 no.	1 No.
14	Bottle Washing Unit	Bottle washing unit- High-performance Cleaning Outstanding fast cycle and high- Performance cleaning results from efficient direct injection washing. High performance pump ensure high flow rate of water. Efficient water spray pressure bring about better and Faster cleaning. Water, liquid detergent and distilled water automatically injected by program washing cycle. Safety Door Lock Door is automatically locked for user safety when washing cycle starts. Compact, Robust Design & Efficient Construction Compact design for space saving and maximize working capacity in laboratory. Double layer structure ensures soundproof and heatproof during operation. Built-in-steam condenser prevents steam to enter into the laboratory. Telescopic sliding rails ensures safe and easy to load and unload.	1 No.
15.	Peristaltic pump for media dispensing	Peristaltic pump for media dispensing Specifications Flow rates 0.7 to 6000 ml/min Dispensing volume. External control start/stop control, direction control, flow rates control (0 - 5V ,0 -10V, 4-20 mA , 0-10KHz optional) Output interface start/stop, direction output and 0-10KHz frequency output Communication interface RS 485 Power AC 176 - 264V, 50/60 Hz Power consumption <140W, Operating condition Temperature 0 to 40°C, Relative humidity < 80%	2 Nos.
16.	Magnetic Stirrer with Hot Plate	18.4x18.4cm Speed Range : 50 to 1500rpm	2 Nos.

		Temperature Range (Metric) : 300°C (Max Temperature) Top Plate Material : Aluminum Surface Area (Metric) Heating : 18.4 x 18.4cm CE Shipping Weight (Metric) : 5.5kg Stirring Range : 50 to 1,500rpm Dimensions (L x W x H) : 13 x 8.2 x 3.8 in. (33 x 20.8 x 9.7cm) Max. Temperature (Metric) : 300°C Electrical Requirements: 230V 50/60Hz	
17.	Media Cooking Unit	Media preparation Vessel Capacity- 25 liter	1 No.
18	Growth Room Racks (18 Racks / Room) with cool LED Light (Size 8 x 4 x 8-9)	Growth room Racks with cool LED Light Light weight structure. Size (HxLxB): 8x4x 8-9 feet. 5 shelves in each rack and fitted with at least LED light. Racks are fitted with wheel for easy movement.	18 Nos.
19	Trolleys	SS Trolleys for Material Movement 914 x 610 x 750 mm (W D H) * MOC – SS 304 * Matt Finish * Wheels For Movement * Rack For Storage And Movement	6 Nos.
20	Diesel Gen set (110 KVA)	A. DIESEL ENGINE: 110 KVA, 4 cylinders, inline, 4 stroke cycles, Liquid cooled, developing 126.00 BHP at 1500.00 RPM under NTP conditions of BS: 6. The engine shall be provided with electrical starting arrangement & shall give the electrical output of 100KVA/80KW at 0.8 power factor, 415Volts at the alternator terminal. The Engine is fitted with the following standard accessories 01. A1 class Mechanical 02. Battery Charging Alternator 03. Engine safety Sensors (LLOP & HWT) 04. Air Cleaner 05. Lube Oil Filter 06. Fuel Filler B. ALTERNATOR: 100KVA/80.00KW, alternator, 3 phase, 415V, 0.8 PF, type, screen protected, revolving field, self-excited, self-regulated through an AVR. Permissible overload of 10% for one hour in 12 hours of operation. C. CONTROL PANEL: The Control Panel is manufactured with 16/18 gauge CRCA sheet and is powder coated for a weather-proof and long lasting finish. The Control Panel consists of Microprocessor based SEDMEC electronic controller, MCCB of suitable rating, Key Switch, Push Button (starter), LED: Battery Charging alternator fail indication, Current Transformer, Instrument fuses. The microprocessor electronic controller displays the following parameters: Voltage, Frequency, Current, Rpm, Cumulative Run Hours, Oil Pressure, Coolant Temperature & Charging Current (DC Amp Meter). The microprocessor electronic controller provides the following safety to the engine: Under & Over Voltage, Under & over Frequency, Under & Over Speed, Overload, Low Lube Oil Pressure, and High Coolant Temperature & Emergency Off. D. ESSENTIAL ACCESSORIES: Fuel tank: Sub Base Fuel tank (DRAW IN TYPE) of MS sheet of adequate capacity. • Base Rail: Base Rail of adequate size is provided. • Batteries: For electrical control circuit 2 no, 24 Volts, Suitable sized battery for electrical starting of DG set	1 No.
21.	Dissecting kits and Inoculation Instruments	DR Instruments Anatomy Dissecting kit.	12 No.
22.	Refrigerator Vertical (4°C)	- Capacity: 165 liters - For 220/230 V, 50/60 Hz, Operation - Temperature Range: 0-10°C - Door: Yes - Wheel: Yes - No. of Shelves/Baskets: 4	2 Nos.

		• Door: 1 • Dimension: 31" H x 26" D x 74" H • ISO Certified product with built-in fan • CFC Free refrigerant, fan cooled condenser, internal fluorescent light. • Audio defrosting facility • CFC-Free with external thermometer • Interrelated lock, Castors at back of cabinet and adjustable feet at front • Puff insulation with cyclopentane.	
23.	Micro Wave Oven	Make: Samsung/IFB or Equivalent Capacity 30 Ltr.	1 No.
24.	Hot Air Oven (Capacity 100Ltr.)	These mechanical convection ovens are perfect for heating and drying applications in research or industrial environments. Featuring the Memmert control cock pit for quick and intuitive control with simple touch, turn and go operation. Durable construction with a scratch-resistant Structured stainless steel exterior and easy-to-clean corrosion-resistant stainless steel interior. Recessed grips make oven easy to carry and handle and stainless steel door can be changed from left to right side opening.	1 Nos.
25.	Rotary Shaker	Designed for continues shaking of solutions in Erlenmeyer Flasks from 50ml-1000ml capacity. It is a compact beach type table top model with platform fitted with rubber discs mounted on ball bearing crank shafts to give an orbital motion to the flasks, within a diameter of approximately 2". The motor is coupled by means of a V-belt with pitch pulley, and is mounted on a heavy and sturdy angle iron frame S.S top. Speed is controlled by mechanical Speed controller. To work on 220/230 Volt A.C. supply. PLATFORM SIZE- 65 X65CM 36 FLASK OF 250ML, Motor capacity- 0.50 HP	2 Nos.
26.	Lab Clothes	Lab cloth make Hi-media	20 Nos.
27.	Media Storage Rack	Media storage Racks Body made by Mild steel outer body powder coating front glass to view	10 Nos.
28.	Micro-pipettes different size	Make: Thermo Fisher Scientific Model: Fin-pipettes 1-10 μ l -4 Nos. 20-200 μ l -4 Nos. 100-1000 μ l -4 Nos. 1-5 ml -4Nos.	4 Nos. each
29.	Label Gun	Two Row, eight space, all alpha numerical	4 Nos.
30.	Electric ON/OFF LPG Gas Burner	Make –Sun flame or Equivalent	10 Nos.
31.	Sealing Machine	Sealing Machine Foot operated	1 No.
32.	Cutting Equipments	Cutting Equipment for tissue culture lab	25 Nos.
33.	Shaker with 8 Ltr. Capacity	Features: § Energy efficient § Durable & Low maintenance, along with following specifications: § Scientifically designed for mixing, diffusion, VDRL test & development of cultures. § Heavy base & compact design for continuous use. § Heavy Removable/ Interchangeable S. Steel platform with Lotus clamp to hold various capacity conical flasks. § Digital control with RPM Indicator. § Power 230V, AC, 50Hz, Mains.	2 Nos.
34.	HVAC System	Split type Air Conditioner 2.0 ton capacity 4-5 star, standard make	11 Nos
35.	Biotech Heater	For heating in winter 2.1 kw Biotech heater	12 Nos
36.	Fogger Machine	Hand Fogger machine fully Stainless Steel	1 No.
37.	Allium Ladder	Aluminum Ladder	2 Nos.
38.	Lux meter	Digital Lux Meter	1 No.
39.	Humidifier machine	S.S. Body, Capacity 10 Litres Based on the rotating disc-splash plate principal. It produces only super fine particels of micron size, which become part of	5 No.

		the atmosphere, Due to the upward thrust imparted to the micron size water droplets, by high speed motorized unit, they remain suspended in the atmosphere for longer duration of time. The unit body is made up of S.S. To work on 220/230 volts A.C. Supply.	
40.	Grading & Packing Table	Complete table is made on Stainless Steel 304 body. size 3ft x 4 ft.	1 No.
41.	Exhaust and ceiling fans	Electrical Exhaust and ceiling fan	5 Nos.
42.	LPG Cylinder	Make: Bharat/Indene/HP LPG gas Cylinder with filled LPG gas	2 Nos.
43.	Servo Stabilizer	Stabilize electricity as required capacity	1No.



PRE ENGINEERED STRUCTURE

Proposes to furnish a pre-engineered steel building (s) as described below. The building will consist of all components required to construct the primary and secondary framing (wind bents, wall & roof purlins) plus the wall and roof cladding. Hardware's of the building are included.

Interior partition walls, electrical, plumbing, cooling, heating, foundation, masonry walls, concrete floor or materials are also included.

GENERAL FEATURES:-

Type: TCCS (tapered column clear span)

Width: 15.85 m o/o of steel column or as per land available

Length: 24.00 m o/o of steel column or as per land available

Eave height: 4.88 m clear under the knee.

Width module: 1@15.85 m

Roof slope: 1:10

Bay spacing: 5@7.62 m

Front end frame: rigid & bearing

Rear end frame rigid & bearing

Type of bracing on roof & wall: diagonal rod bracing/angle bracing

Roof panel: 0.45mm bare galvalume profiled sheets.

Wall panel: 0.50mm colour coated galvalume sheet above brick wall.

Girts: side wall girt & end wall girt are mounted on the exterior face of the column.

Fasteners: mechanically galvanised hex- head self drilling fasteners with integral epdm seals.

Accessories: ridge cap, eave gutter & down spouts matching to roof colour.

Paint finish: all primary and secondary members shall be supplied with factory applied one coat of zinc chromate red oxide primer and 2 coats of synthetic enamel paint on structure applied at site.

Building: condition enclosed

DESIGN LOADS (LIVE / WIND):-

Live load: 0.57 kn/m

Wind speed: 47 m/sec (as per is 875 part iii) 1987

Seismic zone [zone (z)]: iv (0.24) (as per is 1893) 2002

DEFLECTIONS:-

Vertical: l/180

Lateral: eh/100

Purlins l/180

INCLUSIONS:-

- Interior, partitions with puff panel 60mm thick 32kg density, doors and fixtures.
- Roof fans, pipe flashing, curbs.
- Wall vents, fans, doors, windows and louvers.
- Civil, Mechanical and Electrical design and materials.
- Concrete embedded plates or weld plates of any kind.
- Foundation and masonry design/ work/ materials.
- Setting of Anchor Bolt – (Physical setting or fixing). ASSPL will only check dimensional accuracy of anchor bolt set out.
- Grouting – Grouting under column base plates with high strength grout. Electricity & Water required during work at site.



1. Hi-Tech Greenhouse

S. N.	Head	Description	Qty
1.	Hi-Tech Poly House	Primary hardening	
	Total Area	1500 Sq.M	
	Length/ Width	As Per site requirement	
	Ridge Height	6.0 m	
	Gutter Height	4.0 m	
	bay Size	4.0 x 9.6m	
2.	Entrance:	Double doors with polycarbonate sheets, second door should be sliding and made of aluminum section (3 m x 2.10 m x 2.40 m) with provision for disinfection pit/ foot bath.	
3.	Structure	ISI marked G.I pipe structure 2mm thick, & nut bolts etc all pre-galvanized (hot dipped). GI Pipe of Size 96x48mm, 60mm, 48mm, 42mm and 32mm OD or 48 x 48mm, 38 x 38mm, 32 x 32mm.	
4.	Covering	U. V. stabilized Polyethylene film 200 micron thickness, Anti drip/ fog, Diffused (Multilayer) for covering. - Five-layers polyethylene film (Israel Technology)	
5.	Internal Screen Net	Inside 50% white shade net, with manual gear system and shade Net outside, UV stabilized 50% Fixed.	
6.	Air curtain	3' wide installed above door with auto ON/OFF switch attached with door - One	
7.	Cooling System	By providing following system by which temperature can be lowers by 10° ± 2°C from outside when outside maximum humidity 62% of low and temperature 35°C or above	
8.	Cooling pad complete	Pad Area: 52.0m L x 1.5m H x 100mm thick. 7090/50 Framing material of Aluminum required supporting distribution & returning piping. Plastic Profiles: Water Distribution tray Gutters, down spout end caps & drip pan, plumbing kit, Pump 220 volt single phase 50 cycles, Drilled PVC piping cap, pad retainer, all suspension hardware, At velocities of 1 to 3 M/s to give efficiency from 60 to 95% Filtration: Mesh SS filter for 30 m efficiency. Miscellaneous: Fasteners, Galvanized, Rivet- Aluminum. Pump: Mono block as per requirements Fan: Axial flow belt driven net protected Sweep Size: 48" Blade: 6 nos. SS Motor: 1.5HP Qty: 10 Nos Louvers : auto open able	
9.	Fogging System	To increase the humidity up-to 70% ± 5% by providing following system, Nozzles : Micro fogging hanging type, Lateral pipe : 16 mm LDPE, Water Particle : 80-100 µ Filter : online Disc Pipe : 40/63mm PVC 6 kg/cm² Pump : 3.0 HP Nozzles spacing : 2.5 x 2.5m, Discharge : 28-30 lph at 4bar pressure Pipe & fitting : All necessary PVC pipes 40-63mm, valve and fixtures as required	
10.	Green House Environmental Monitoring Unit	Control Panel: Microprocessor based controller which includes temperature, humidity and photoperiodic monitoring & controlling system. Temperature: ±2°C, Humidity: ±5%, Time: ±5sec/day. Operation system: Programmable/ user selectable Temperature: Cooling & Heating to set Humidity: Humidifier / Fogging to set Light: RTC Based ON/OFF Mounted in CRC powder coated panel fitted with contactor, relay, MCB and preventers. All power supply used for this system. Sensor: Temperature, Humidity 4-20mA Temperature Range: 0-100°C, ± 1% Humidity Range: 0-100 %RH, ±1.8%	

11.	Heating System	Biotech Heat Convecter electric heating system 2.1 KW completes circulation system to give uniform heat so that the heat can be blown in the complete area to increase temperature. (15 nos.)	
12.	Electric Fitting	Complete electrical wiring of green house with copper wire ISI marked, MCB/ main switch, light/ power points for pump/ fans as per requirement. Electricity outlets (3/1 phase) as per requirement.	
13.	Foundation	Telescopic below the ground level with block size 3' x 1.25' x 1.25' (in cement concrete 1:2:4 mix of cement, sand and bajri gravel.	
	Low Tunnels	Tunnel covered with polythene sheet as per requirement in whole green house.	
14.	Floor	The floor should be cemented and not natural soil with cover.	
15.	Bricks wall	With 1st class in 1:6 CM, with PCC: in foundation 1:5:10, all side of the Green House 60cm above GL & 30cm below earth surface with plaster in 1:4 CM (1cement, 4 fine sand). Painting with 2 or more coat of cement paint of approved colour/shade	
16.	Bench	GI Bench top covered with GI welded mesh. Qty as pre required	

9

1. Secondary Hardening Chamber/ Shed Net House:

S.N.	Head	Description
1.	Shade Net House	Secondary hardening Unit
	Total Area	4000 m ²
	Length/ Width	As per Site
	Ridge Height	Flat roof
	Gutter Height	04.0 m
	Span/ bay	5 x 4 m
2.	Entry Room	Double door type ante room size 3m x 2m with proper locking system door covered with 6mm polycarbonate sheet covering.
3.	Structure	G.I pipe structure 2mm thick, & nut bolts etc all pre-galvanized (hot dipped). GI Pipes: 60mm, 48mm, 42mm & 32mm $\pm$ 1mm or 48 x 48, 38 x 38 x 32 x 32mm.
4.	Net	Net would be UV stabilized, HDPE, and green colour 50% shade net, 90 GSM
5.	Fixing	fixing of net to the structure with GI profile & spring insert or pasting wherever required
6.	Civil work	foundation telescopic below the ground level with block size 2.5' x 1.0' x 1.0' (75x 30 cm X 30cm) All civil work will be done in ratio 1:2:4 cement, sand, bajri gravel
7.	Fogging & Drip Irrigation System	To increase the humidity up-to 70% $\pm$ 5% by providing following system, Nozzles : Micro fogging hanging type, Lateral pipe : 16 mm LDPE, Water Particle : 80-100 μ Filter : online Disc Pipe : 40/63mm PVC 6 kg/cm ² Pump : 1.0 HP Nozzles spacing : 2.5 x 2.5m, Discharge : 28-30 lph at 4bar pressure Drip Irrigation: Drip Lateral : 16 mm LLDPE s class 2, Discharge : 2/ 4 lph Spacing : 0.60m x 0.30 m (L/L x N/N/ as per requirements)
8.	Pipe & fitting	All necessary PVC pipes 40-63mm, valve and fixtures as required and Installation of watering system with Pump (ISI make)
9.	Path/Floor	Natural Soil



(Letter head of the bidder)
AUTHORITY LETTER

.....(Bidder Name) hereby authorizes Mr./Ms.....(Designated Representative's Name) to act as a representative of(Bidder's Name) for the following activities.

To attend all meetings conducted by Bihar Horticulture Development Society (BHDS), Patna, Bihar, associated with tender (***Selection of Executing Agency for the establishment of Tissue Culture Lab at Patna, and Lakhisarai, Bihar***), and to discuss, negotiate, finalize, and sign bid, or agreement and contract related to tender (***Selection of Executing Agency for the establishment of Tissue Culture Lab at Patna, and Lakhisarai, Bihar***).

Yours faithfully,

Name of appropriate authority of the Bidder:

Signature of appropriate authority of the Bidder:

Signature and name of the Designated Representative of the Bidder

Seal of Bidder



1	Land Development			
S.No	Particulars	Description	Qty	Unit
1	Land Development	Land leveling, landscaping approx 500 sqm Area	1	Set
2	Boring	2 HP submersible	1	Set
3	Main Gate & Guard Room	15' wide and 5' height & one small gate with 18" brick column support and one guard room, Board	1	set
4	Boundary wall	6' Height Chain link Fencing with 1.5' brick wall base above from ground level. 200 M approx.	1	Set
2	Pre Engineered Building			
1	Building	PEB Building as per approved drawing. Consisting of Storage Room for Chemicals, Washing and Media preparation room, Sterilization room, Inoculation room, Culture room, wash room, passage, door etc	370	Sqm
2	Water Tank	PVC Water tank with cc Platefarm 20000 Ltr	1	Set
3	Equipment			
S. No	Particulars	Description	Qty	Unit
1	Growth Room Racks	complete with LED tube light fitting, timer and correct design for keeping the material	18	Set
2	Auto Clave-Horizontal Type	1200 ltr, Horizontal Type, outer and lid made of stainless steel, radial type closing arrangement	1	Set
3	Auto Clave-vertical	Auto Clave vertical, double walled 450 X 600 mm	1	Set
4	Air Shower	Airshower to remove all dust and a barrier for entry of insect	1	Set
5	Laminar Air Flow –Double	Horizontal Laminar Air flow bench of ftx 6ftx-2ftx2ft. Stainless Steel Top, Gas Cock No.1 Glass/Acrylic side panel.	9	Set
6	Air Conditioner	Air conditioner 2 ton 5 Star quality	11	Set
7	Plant Stacking Trolleys	for keeping the plants for cutting	6	Set
8	Positive Pressure Unit	To induct clean air inside the lab	4	Set
9	Automatic Temperature Recorder	Centerized PLC & HMI Automation system to record & control temp, humidity & light in the greenhouses & Growth room	1	Set
10	Media Preparation Equipment	Stainless Steel vessel 25 ltr	1	Set
11	Glass Bead Sterilizer	tissue culture use	9	Set
12	Water Purifier	1000 LPH	1	Set
13	De Humidifier		3	Set
14	Ultrasonic humidifier	10l Capacity	5	Set
15	Electronic Balance	1 mg, and 0.1 mg	2,1	Set
16	Bottle Washing Machine		1	Set

17	Media Trolley	for media filling	1	Set
18	Heater	Air heater	12	Set
19	Tray For Bottle Moment		600	Set
20	Air Curtain	3 ft. wide outer cover made of MS duly painted	3	Set
21	Electronic Balance	500gm, Indian make	1	Set
22	pH Meter cum conductivity meter (Digital)		5	No.
23	Refrigerator Vertical (4°C)	165 ltr. Min. Standard make	2	Set
24	U V Light System	complete fitting	1	Set
25	Label Gun	two row, eight space, all alpha numerical	4	Set
26	Fumigation Machine		1	Set
27	Growth Room Tray	trays needed for keeping the bottles in rack	1,250	Set
28	Sealing Machine		1	Set
29	Hygro Thermometer	digital	5	Set
30	Water Cooler		2	Set
31	Magnetic Stirrer	2 ltr capacity	2	Set
32	Mosquito Trap		2	Set
33	Attendance Machine		1	Set
34	Lux Meter		1	Set
35	EC Meter		1	Set
36	Hot Plate		2	Set
37	Peristaltic pump for media dispensing		2	No.
38	Computer	desktop	2	Set
39	Printer (4 In One)	desk & laser	2	Set
40	Stereo Zoom Microscopes with Camera		1	Set
41	Vertical Distillation Apparatus	5 Liter Capacity	1	Set
42	Dissecting Kits and Innoculation Instruments		12	No.
43	Micro Wave Oven	Capacity 30 Ltr, Make Samsung/IFB or Equivalent	1	No.
44	Hot Air Oven	Capacity 100 Ltr	1	No.
45	Media Storage rack		10	No.
46	Cutting Equipments	Cutting Equipments for TC Lab	25	No.
47	Rotary Shaker		2	No.
48	Fogging Machines	Hand Fogger Machines fully stainless stell	1	No.
49	Shaker	Shaker with 8 ltr capacity	2	No.
50	Aluminum Ladder		1	No.
52	Photo Periodic Morphogen controller		4	No.
51	Misc Equipment		1	Set
4	Transformer, Electrical & DG Set			
S.No	Item	Description	Qty	Unit

1	Electric Wiring	Supply and Laying of electrical Aluminium armored cable of rerequired capacity, complete electric wiring Control panel, LT panel etc complete in all respect	1	Set
2	DG Set with shed 110 KVA	DG (110 KVA) with shed & CC Platform, earthing etc complete in all respect.	1	Set

5	Furniture & Fixture			
S.No	Item	Description	Qty	Unit
1	Executive Chair	furniture	10	Set
2	Computer Chair	furniture	5	Set
3	Computer Table	furniture	5	Set
4	Laminar Chair	furniture	24	Set
5	Visitor Chair	furniture	20	Set
6	Office Table	furniture	3	Set
7	Shoe Rack	furniture	4	Set
8	Writing Board	furniture	4	Set
9	Conference Table Set	furniture	1	Set
10	Cupboard	furniture	2	Set
11	Misc Stationary& Other Item	As required	1	Set

6	Chemicals			
S.No	Item	Description	Qty	Unit
1	Blade Handle	Stainless Steel Made	200	Set
2	Chemicals	Various Chemicals Used in Tissue Culture Lab (Lumpsum)	1	Set
3	Agar Agar		100	Set
4	ISO Alcohol		400	Set
5	Forceps	Stainless Steel Made	100	Set
6	Cling Film	Film To Wrap The Bottles	250	Set
7	Lab Coat		40	Set
8	Label Roll		150	Set
9	Gas Burner		1	Set
10	MIS Formats	Misc MIS Complete Set To Cover All Activities	1	Set
11	Fungicide	5 Kg	10	Set
12	Insecticide	5 Kg	10	Set
13	Steel Trays	6"	12	Set
14	Forcep And BP Handle Stand		40	Set
15	Instruction Posters		4	Set
16	Misc Posters		5	Set
17	Cotton		200	Set
18	Aluminum Foil		50	Set
19	P P Bags	In Kg	60	Set
20	Surgical Blade		5,000	Set
21	Face Cap	Lab Wear Reusable (Made of Cloth)	20	Set
22	Face Mask	Lab Wear Reusable (Made of Cloth)	20	Set
23	Regent Bottles		20	Set
24	Liquid Soap		500	Set
25	Slippers		20	Set
26	Cylinder		5	Set
27	Brown Tap		100	Set
28	Formaldehyde	35 Ltr	200	Set

f

29	Spray Bottle		10	Set
30	Apron		20	Set
31	Wall Clock		5	Set
32	Name Plate		5	Set
33	Wiper		5	Set
34	Dustbin	Different Sizes	10	Set
35	Duster		15	Set
36	Cutting Paper	Lump Sum	1	Set
37	Mop		20	Set
38	Funnel		1	Set
39	CCTV Camera	Complete set with monitor	16	Set
40	Plug tray		5,000	No.
41	Misc. Items	As required	1	Set

7 Glassware, Metalwares, Bottles, Lids and Labwares

S.No	Item	Description	Qty	Unit
1	Test tube	glassware	200	Set
2	Test tube stand	glassware	50	Set
3	Petri dish	glassware	70	Set
4	Beaker 100 ml	glassware	6	Set
5	Conical flask 100 ml	glassware	6	Set
6	Beaker 250 ml	glassware	6	Set
7	Conical Flask 250 ml	glassware	6	Set
8	Measuring cylinder 10 ml	glassware	6	Set
9	Beaker 500 ml	glassware	3	Set
10	Pipettes 1 ml	glassware	3	Set
11	Pipettes 10 ml	glassware	3	Set
12	Pipettes 2 ml	glassware	3	Set
13	Pipettes 5 ml	glassware	3	Set
14	Pipette Stand	glassware	1	Set
15	Glass Bottles with Lids		80,000	Set
16	Multipurpose Utility Trays	Plastic, Perforated Trays	50	No.
17	Multipurpose Utility Trays	Plastic Trays	50	No.
18	Laboratory Spatula, 6" S S	Stainless Steel, 6" Spatula, Pack of 6	6	Sets
19	Long forcep	Size 12", stainless steel, pack of 6	6	Sets
20	Scalpel Holder	Stainless Steel	20	No.
21	Spirit Lamp	Stainless Steel	12	No.
22	Scissor	Stainless Steel, 6 "	12	No.
23	Scalpel blades	Stainless Steel, No. 11, Pack of 30	2	Set
24	Beaker Tongs	Stainless Steel with plastic grip	3	No.
25	Micro pipettes	1-10 micro ltr, 20-200 micro ltr, 100-1000 micro ltr, 1-5 ml	4	No. Each
26	Misc. Items	As required	1	Set

8 Hardening Chamber

S.No	Item	Description	Qty	Unit
1	Primary Hardening Chamber	Supply and Installation of Hi-Tech Poly House 1500 Sqm., as per technical specification.	1	Set

2	Secondary Hardening Chamber	Supply and Installation of Shade Net House 4000 Sqm. Flat Roof, as per technical specification.	1	Set
---	-----------------------------	---	---	-----

9	Protocols, Mother Culture & Packaging Material			
S.No	Item	Description	Qty	Unit
1	Protocols	Detailed protocol for 5 crops shall be provided.	5	Set
2	Mother Culture	3000 Mother culture shall be provided of Banana, Strawberry, Bamboo & Pine Apple	3000	Nos
3	Packaging Material	Corrugated Cardboard 5 Ply Strong box & Thermocol Box.	1,200	Nos
4	Certification and accreditation to the tissue culture Lab		As required	-
10	Training & Handholding Support and operation for one year			
S.No	Item	Description	Qty	Unit
1	Training	Training of BHDS Staff for operating TC Lab 7-10 Person	1	Set
2	Establishment, Manage, Run and Up-keep the Tissue Culture laboratory	Post Installation, the agency shall Manage, Run and Up-keep the Tissue Culture laboratory and attached infrastructure for one year, extendable after one year for other terms of two years., During contract agency will supply plantlets.	1	Year

(Handwritten signature)