



Govt. of Bihar  
Department of Agriculture  
Bihar Horticulture Development Society, Patna.  
(State Horticulture Mission)  
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**NOTICE – INVITING Very Short E-TENDER**

Through e-procurement mode only over (<https://eproc2.bihar.gov.in>)

**Very Short E-Tender Enquiry for Empanelment of Executing Agency for the establishment of Plug Type Nurseries at 12 locations of Bihar.**

Bihar Horticulture Development Society (BHDS) invites online bids from reputed and experienced manufacturers /companies/firms/organizations for the establishment of Plug Type Nurseries. This e-tender is inviting for suitable proposal and an estimated cost for the setting up of such unit at 12 different locations of the state. The interested specialized organizations/Firms/companies, which have experience of designing, installation, execution and maintenance of plug type nurseries, may only participate with their best attractive proposals.

The filled e-tender for technical & financial bid should be uploaded on the website: [eproc2.bihar.gov.in](https://eproc2.bihar.gov.in) by the bidder, while EMD and Tender fee payment should be through online mode (NEFT/RTGS).

| SN | Particulars                                                                                          | Details                                                                                                                                                                         |
|----|------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. | Start Date & Time for Downloading of Tender document                                                 | 23/09/2025 (11:00 Hrs)                                                                                                                                                          |
| 2. | Date & Time of Pre Bid Meeting                                                                       | 27.09.2025 (12.00 Hrs.), Only Virtual Link for virtual pre-bid meeting will be published on BHDS website. <a href="https://eproc2.bihar.gov.in">https://eproc2.bihar.gov.in</a> |
| 3. | Last Date & Time for downloading of offer/Bid                                                        | 28.09.2025 (15:00 Hrs)                                                                                                                                                          |
| 4. | Last Date & Time for submission/uploading of offer/Bid                                               | 29.09.2025 (15:00 Hrs)                                                                                                                                                          |
| 5. | Date and time of Technical bid opening                                                               | 30.09.2025 (15:00 Hrs)                                                                                                                                                          |
| 6. | Date and time of Financial bid opening                                                               | To be intimated to technically successful bidder only                                                                                                                           |
| 7. | Nodal officer/Contact person for queries                                                             | Sri Dr. Rakesh Kumar, Deputy Director Horticulture<br>Mobile No. : 9031643052                                                                                                   |
| 8. | It is mandatory to submit the EMD in hard copy or original on or before the opening of technical bid |                                                                                                                                                                                 |

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

**Mission Director**  
State Horticulture Mission, Bihar,  
Patna

**Technical Qualification for Agency:-**

|       |                                   |    |                                                                                                                                                                                                                                                                                                                                                                |
|-------|-----------------------------------|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| i.    | Firm/Agency/Organization          | :- | Bidders Company/Organization should be registered under either Company Act, LLP Act, Partnership or Proprietorship, Private Limited/Government Registered Company.                                                                                                                                                                                             |
| ii.   | Agency's Office                   | :- | Should have its office/branch in Bihar                                                                                                                                                                                                                                                                                                                         |
| iii.  | Agency's Average Annual Turn Over | :- | Not less than 5 Crore in last three financial years (2021-22, 2022-2023 and 2023-24). Attach copy of audited balance sheet and I.T. Return for the above mentioned financial years.                                                                                                                                                                            |
| iv.   | Experience                        | :- | Bidder should have experience of establishing Plug Type Nurseries [Attach five documentary proof of Purchase Order (work orders of not less than 100.00 lakh per order), invoice, bill, voucher, work order with satisfactory Completion Certificate.                                                                                                          |
| v.    | Document' Cost                    | :- | Rs. 5000/- (Five Thousand only) through online mode                                                                                                                                                                                                                                                                                                            |
| vi.   | Earnest Money Deposit             | :- | EMD of Rs. 500000/- (Five lakh Only) through online mode (NEFT/RTGS) will be mandatory for successful bidders.                                                                                                                                                                                                                                                 |
| vii.  | Empanelment/ Registration Fee     | :- | Registration fee will be Rs. 50,000/- through Bank Draft, which will be non-refundable. It will be essential only for finally qualified agencies.                                                                                                                                                                                                              |
| viii. | Certification                     | :- | Organization must have requisite ISO/BIS certifications                                                                                                                                                                                                                                                                                                        |
| ix.   | Agency's Sale Tax                 | :- | Furnish copy of GST return with GSTIN number of last three financial years (2021-22, 2022-2023 and 2023-24).                                                                                                                                                                                                                                                   |
| x.    | Affidavit                         | :- | From notary on non-judicial stamp of Rs. 1000/-<br><br>1. Bidders shall not be under any declaration of ineligibility for corrupt and fraudulent practices issued by any State Government/GOI/ Union territory.<br><br>2. The Bidders have not been blacklisted by any State Government/Gol/Union territory etc. or debarred from participating in any tender. |
| xi    | BHDS rights                       | :- | Mission Director, Bihar Horticulture Development Society, Patna reserves the right to revise/change/cancel the tender without assigning any reasons thereof.                                                                                                                                                                                                   |
| xii   | Duration of the project           | :- | Project has to be completed within 6 months period from the date of assigning the site/land.                                                                                                                                                                                                                                                                   |
| xiii  | Technical Support Assurance       | :- | It will be mandatory for the selected agency/Firm to submit proposals with Technical Support Assurance letter for the proposed work for at least 1 year after the date of completion of the project.                                                                                                                                                           |
| xiv   | PAN Card Details                  | :- | Provide the Pan card details of the company/firm/organization                                                                                                                                                                                                                                                                                                  |
| xv    | GSTIN                             | :- | Provide the GSTIN details and valid GST registration certificate of the firms participating in the tender. Firms must also have GST registration in Bihar, if not registered now they have to get GST registration in Bihar after final selection in the tender within a month.                                                                                |

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|  |  |  | Payment will be initiated only after completion of GST registration in Bihar. |
|--|--|--|-------------------------------------------------------------------------------|

## **CONDITIONS OF ELIGIBILITY: -**

Applicants must carefully read the minimum 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 :

1. The Bidders participating in the tender will invariably be accepting all the terms and conditions of this tender.
2. Bidders should be a firm/organization registered under Company Act, LLP Act, Partnership Act and Proprietorship Act.
3. The bidder must have Average Annual turnover for last three financial years (2021-22, 2022-2023 and 2023-24), ending on 31st March 2024, not less than INR 5 Crore. The copies of the Profit and Loss statement also need to be provided. The Turnover Certificate must be duly signed & stamped by Chartered Accountant with UDIN Number.
4. The Bidder should provide ITR (Income Tax Return) and audited balance sheet for last three financial (2021-22, 2022-2023 and 2023-24) years with UDIN Number.
5. The Bidder/Applicant should be registered with appropriate ISO/BIS certification and should attach the same with the tender documents.
6. Valid GST registration certificate of the firm participating in the tender should be there. Firm should also have GST registration in Bihar, if not registered till now they have to get GST registration in Bihar after final selection in the tender within a month. Payment will start only after completion of GST registration in Bihar.
7. Furnish copy of GST return with GSTIN number of last three financial years (2021-22, 2022-23 and 2023-24).
8. Bidder need to submit an EMD of Rs. 500000.00/- through online mode (NEFT/RTGS) to be eligible to participate in this tender. Bids without tender document cost and EMD will not be considered.
9. EMD and tender documents costs will be 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 the successful bidder will be retained till the submission of performance guarantee/security deposit and signing of agreement.
10. Bidder should have experience of supply, installation and execution Plug Type Nurseries [Attach five documentary proof of Purchase Order (work orders of not less than 100.00 lakh per order), invoice, bill, voucher, work order with Satisfactory Completion Report.
11. The Bidder should provide proposed work plan with CAD Design/Drawing/Layouts.
12. The Applicant must submit proposals with Technical Support Assurance letter for the proposed work for the duration of at least one years after the completion of project.
13. Manual on Standard operation practice (SOP) for seedling production should be submitted by the Bidder.
14. The leaflets/brochures/catalogue/folders of the item(s) released by the manufacturer should be enclosed. Technical specification must be supported with printed leaflets/brochures of the product. The tender may be rejected if the specification given in tender document does not match with information printed on leaflets/brochures/catalogue. The leaflets/brochures/catalogue/folder must be released by the manufacturer which should be well supported through the website (wherever possible).
15. Valid Authorization certificate from the manufacturer/company applicable in the current year and valid for published tender items should be aattached.

16. An affidavit on Rs.1000/- Stamp Paper from Public Notary shall be attached/uploaded by the bidder (It should be made on or one month before the publication of tender online on website) with following declaration that:
  - a. Bidders shall not be under any declaration of ineligibility for corrupt and fraudulent practices issued by any State Government/GOI/ Union territory.
  - b. The Bidders shall not be blacklisted by any State Government/GOI/Union territory etc.
17. All documents submitted by the bidder should be Self Attested and valid till the date of completion of the work/project.
18. Any conditional proposals will not be accepted.
19. It will be the duty of the concerned bidder to train the departmental operational staff.
20. The successful bidder should have to deposit an amount of 25% (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. The security amount will be/shall be forfeited if the selected bidder fails to provide services *i.e.* installation ,execution and maintenance in stipulated time.
21. Security deposit of the bidder will be released after 24 months from the completion of the project.
22. 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 bidder and the Directorate of Horticulture, Bihar, Patna.
23. **Notwithstanding anything contained in the e-tender, Director of Horticulture, Bihar, Patna, reserves 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.**
24. The Director of Horticulture, Bihar, Patna also reserves the right to reject any or all proposals if :
  - a) At any time a material misrepresentation comes to cognizance 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.
25. Price(s) quoted in financial bid must be inclusive of all taxes, transportation and packaging at to the execution 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 different districts of the state as per terms and conditions contained in supply order. No other charges such as Packaging, Forwarding, Freight, Insurance, Loading and Unloading, Clearance etc. will be allowed.
26. No claim will be entertained afterwards for any increase in market price or otherwise.
27. The offers which do not conform to the conditions laid down in the e-tender notice shall not be considered.
28. The validity of rates of tender quoted will be valid for 2 FYs up to 2026-27.
29. Any manufacturing defect observed during liability period 36 months from date of completion. Bidder will be responsible for the immediate replacement/rectification of the same at their own cost.
30. Successful bidder will be bound to complete the entire work within 180 days from the date of issue of the work order.

31. The firm is bound to complete the work within the prescribed time (*i.e.* 180 days from date of issue of work order). If he fails to complete the job within the time frame *i.e.* 180 days from date of issue of work order, then, the penalty will be imposed @ 1% of work order amount per fifteen days. The penalty amount will be deducted from final payment amount.
32. Further, in case of failure to execute the work by the successful bidder as per the order, the contract will be terminated and the performance security money will be forfeited. The work will be completed by another firm(L2) and the charges will be at risk and cost of the previous firm.
33. Three years warranty on electronics and electrical instruments against manufacturing defects should be there, if not then the repairing/replacement cost of these electronics and electrical instruments will be borne by the bidder/organization.
34. The firm needs to provide after sale services as and when required. The bidder must have to provide service within seven (07) days from the date of such complaint; otherwise, penalty will be imposed on the bidder subject to the loss of production caused due to delay in after sale services.
35. The firm must assure their point of presence in Bihar after final selection in the tender and should also ensure the availability of spare parts of quoted items.
36. The applicable taxes as per the rules of Government of Bihar/India should be paid by bidder and invoices of the materials should be submitted to Directorate of Horticulture.
37. As this is highly technical project hence, the selection of the bidder will be done on the basis of their experience in installation of "Plug Type Nurseries". Evaluation and selection process of the bidder will be governed by the guidelines of Bihar Financial Rules, 2005 and the technical and financial evaluation will be carried out by the committee constituted at the level of Directorate of Horticulture, Deptt of Agriculture Bihar, Patna.
38. The Directorate of Horticulture, Government of Bihar (GoB), may, at its sole direction seek clarification from any bidder 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.
39. **Selection of Bidder:** The L-1 bidder, determined on the basis of the lowest quote for the mentioned technical specifications, shall be selected for operation of the Plug Type Nurseries.
40. **Terms of Payment:**

The progress of work will be inspected by the 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 the following conditions:

- I. **First installment:** 20% of material cost will be released after supply of processed material and equipment's at site and submission of Invoice copy with request vehicle wise.
- II. **Second installment:** 40% of balance payment will be released after completion of 75% of total work *i.e.*, erection of steel structure of every component.
- III. **Third installment:** 30% of balance payment shall be released after commercial production of planting material has started from the unit.
- IV. **Final Installment:** After completion of 1 year of commercial production.

#### 41. **Disqualification:**

The reasons for the disqualification of the participating bidders are mentioned below:

- a. The quotations/response to the e-tender submitted/received after due date/time will be summarily rejected.
- b. The interested entity has made misleading or false representation in the firms, statements, attachments submitted in proof of eligibility.
- c. The e-tender is not accompanied by required documentation.
- d. The interested entity fails to provide clarification related thereof, when sought.
- e. 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.
- f. 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.
- g. Notwithstanding anything written above or elsewhere, the e-tender may disqualify the Interested Entity without assigning or disclosing any reason thereof.

#### **EVALUATION OF BID**

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 (Evaluation committees mentioned here are already in existence at the Directorate of Horticulture. After successful completion of the tender, tender will be awarded to a technically qualified L1 bidder.

#### **SCOPE OF WORK:**

Directorate of Horticulture is planning to establish "Plug Type Nurseries". This e-tender is for inviting suitable proposals and an estimated cost for setting up of such a unit. The interested specialized organizations/firms/companies which have experience of designing, installation, execution and maintenance of such projects, may participate with their best proposals. The detail scope of work for "**Plug Type Nurseries Units**" are described below:

#### **TECHNICAL SPECIFICATIONS OF ITEM FOR ERECTION OF "PLUG TYPE NURSERIES"**

| <b>Si. No.</b> | <b>Particular</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>Qty</b> |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| <b>1</b>       | <b>Infrastructure:</b><br>Chamber for seeder machine <ul style="list-style-type: none"><li>• Size - 25'x15'x12':8' (LxWxHc:s)</li><li>• Structure made of steel 50mm x 50mm with pre quoted GI sheet 0.5 mm thick with false ceiling. With two door &amp; two windows. Roof hut type,</li><li>• Foundation wall 1.5' above ground level &amp; 1.5' below ground level.</li></ul> <b>Floor:</b> made by made by PCC (1:5:10) 100 mm thick than CC (1:2:4) 100 mm thick with dully plastered. | 1 set      |

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| 2 | <p><b>Seeder machine</b></p> <ul style="list-style-type: none"> <li>• DRUM SOWING SEEDERLINE</li> <li>• Capacity: 12000 to 80000 seedling /hour</li> <li>• Max tray dimensions 580x400</li> <li>• Drum seeder line</li> <li>• Air bars within double row of nozzles and seed holding plate with pneumatic</li> <li>• Head n. 1 with dibbler drum</li> <li>• Head n.2 with sowing drum</li> <li>• Manual system for the width guide adjustment</li> <li>• longitudinal tray advancement</li> <li>• Operator right side</li> <li>• Vacuum pump for head no 2</li> <li>• Sowing kit composition 3 nos drum</li> <li>• N° of cells for tray 99 cavity</li> <li>• Rows with direct hole of the drum 9 no's</li> <li>• Dibbler 1 no.</li> <li>• Series of nozzles per cell on the front side Nr 9.00</li> <li>• Color touch screen panel</li> <li>• Power supply 400 V three-phase</li> <li>• 50HZ Frequency 50 Hz NR 1,00</li> <li>• Drum coverer for vermiculite and watering unit length 550 mm with 2 drilled bars with mounted conveyer size 3000mm x 565mm x 800mm (L x W x H)</li> <li>• Air Compressor to support online system</li> <li>• Power supply 400v three phases</li> <li>• Water tank, water pump and plumbing work, electrical wiring etc.</li> </ul> <p>Electrical wiring as per required</p> | 1 set       |
| 3 | <p><b>Germination Chamber Size: 4m x 4m x 3m (Lx WxH)</b></p> <p><b>Construction:</b> 80mm prefabricated puff panel</p> <p>Steel 50mm x 50mm with inner/outer pre quoted GI sheet 0.5mm thick.</p> <p><b>Door:</b> - Air tight Puff Panel door size. 2m x 1 m Temperature Range 22° C to 35°C &amp; RH: 70% - 80% Lights: - LED lights 18watts for illumination purpose.</p> <p><b>Foundation:</b> wall for Germination Chamber 9" wide, 1.5' below earth's surface.1.5' above earth's surface, as kick-board 9" wide, Frame base block height 3 x9"x9"each.</p> <p><b>Floor:</b> made by PCC (1:5:10)100mm thick than CC (1:2:4) 100mm thick with tiles.</p> <p>As per Required Temperature Controller, Heater &amp; Humidifier.</p> <p>Germination chamber installed under shed made by pre quoted GI sheet 0.5mm thick with Tubular structure.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 1 set       |
| 4 | <p><b>Storeroom &amp; Pot Preparation Area</b></p> <p>Length: 9.0m or as per land Available</p> <p>Width: 4.5m or as per land Available</p> <p>Ridge Height: 4.2m</p> <p>Gutter Height: 3.0 m</p> <p>Design: Hut/dome shape</p> <p>Main Structure: Made of 2mm thick, GI HS section, including cutting, bended in required shape, complete as per requirements</p> <p>Main Column: 50 * 50mm</p> <p>Roof truss, 50 * 50mm</p> <p>Horizontal runners etc, 38 * 38mm</p> <p>Truss member/other support: 32 * 32mm plus/minus 1 ± mm</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 435 Sq Feet |

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|   | <p>Frame: All galvanized steel is used and design as per IS875 standards. End wall and side wall framing GI pre coated corner trims, ridge bar and Galvanized gutter trim Brackets &amp; fasteners as required to assemble or welded frame.</p> <p>Covering::</p> <ul style="list-style-type: none"> <li>- Top and sides of the storage room would be covered with 0.5mm thick GI pre-coated sheet.</li> <li>- The top of pot sowing area would be covered the same material as the storage room.</li> <li>- The side of the pot sowing area would be covered with U.V. stabilized 40 mesh insect net (white colour, 110 GSM).</li> <li>- This net would be fixed on three sides with aluminum or GI profile and zig-zag spring inserts.</li> <li>- There would be a door (1m * 2m)</li> </ul> <p>Flooring: 40mm thick CC flooring anti-slippery with proper drainage slops. Floor to be raised 1.0ft by filing soil from existing level.</p> <p>Media wash pit: one wash pit of Size 2' * 4' * 2' made with brick wall and plastered with cement slurry.</p> <p>Jet Irrigation System: Jet Irrigation with motorized system for irrigating sowing portrays in sowing area and One Wash basin having tape &amp; water supply connections, excess irrigation with cocks (2 points). PVC hose pipe of 50' length.</p> <p>Storage Tanks: One overhead Storage water tank of 500 liter capacity. All plumbing fittings of pvc pipes.</p> |             |
| 5 | <p><b>Primary Hardening Chamber</b><br/> Length: 26.0m or as per land Available<br/> Width: 9.6m or as per land Available<br/> Ridge Height: 4.5m<br/> Gutter Height: 3.0 m<br/> Span: One,<br/> Design: dome shape<br/> Total Chamber-1 Nos.</p> <p>Main Structure: Made of 2m thick, GI HS section, including cutting, bended in required shape, complete as per requirements<br/> Main Column: 96 x 48mm,<br/> Roof truss Arch: 60mm OD<br/> Truss Bottom: 43mm OD<br/> Horizontal runners etc., 43mm OD<br/> Truss member/other support: 43/33mm OD <math>\pm</math> 1mm</p> <p>Frame: All galvanized steel is used and design as per IS875 standards. End wall and side wall framing Aluminum corner trims, aluminum ridge bar and Galvanized gutter trim Brackets &amp; fasteners as required to assemble frame, and Buffer Room with double door system.</p> <p>Double Door Room: Size: 2.1m x 3.0m x 2.4m (L x W x H) covered with clear 6mm metallic polycarbonate sheet.<br/> Hinge/Sliding Door: Size: 1.9m x 0.91m long &amp; wide, normally lockable made with clear 6mm polycarbonate glazing, top &amp; bottom tracks, jambs, flashings &amp; installation hardware - 2 nos." (2 Complete Set).</p>                                                                                                                                                                                                                   | 2700Sq feet |

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|  | <p>Cladding: Roof, front wall, end wall &amp; side walls of the Greenhouse-sets for rigid covering 200 micron uv stabilized poly sheet fixed with GI Profile and zig zag spring.</p> <p>Fogging System: To increase the humidity up-to 80% <math>\pm</math> 5% by providing 4 way fogging Nozzles hanging type, with fine discharge (28-30 lph) at 4 bar pressure, with pump 2.0 HP, Disc filter etc. complete, spacing 2.5 x 2.5m and having manual control as switch or plug to off and on water supply in foggers of each line.</p> <p>Growing Tunnels: having semi-circular(1.5 m) tunnel like pvc frame (removable) placed at 1m distance each in benches covered with fine quality cotton cloth.</p> <p>Boom Irrigation: Boomer trolley system that operates on an overhead truss-mounted double rail system. This rail system would be constructed from galvanized iron (GI) pipe and installed along the gutter length in each span of greenhouse with necessary accessories.</p> <p>The boomer trolley itself would be made of stainless steel (304) and utilize a motorized gear system for its movement, including an automatic stop function at both ends. To maximize space efficiency within the greenhouse, this overhead rail system is necessary.</p> <p>The system would be including suspended cables and hose pipes fitted to the rail with rollers to facilitate electricity and water supply. The boom arms to be constructed from aluminum and offer adjustable height table height positioning above the seedling trays. Filtration will be provided by a disc filter, ensuring ease of maintenance and serviceability.</p> <p>A control panel would be equipped with an automatic and manual switching system, along with a safety protector, is required. For optimal spraying, three-way Agar or Teejet make nozzles would be fitted at 50-60cm intervals on a heavy-duty 25mm aluminum pipe. These nozzles would be allow for user-selectable discharge rates of up to 60 liters per hour, with an operating pressure range of 2.5-4.0 kg/cm<sup>2</sup>. The systems to be ensure direct and even water application to the plants. promoting optimum germination success.</p> <p>Internal Shading: Internal Screen:- Manual Internal 50%</p> <p>Aluminet Screen retraction mechanism using rope &amp; pulley. Support Aero wheel, curtain ring, polyester wire having with high abrasion strength- which results smooth operation &amp; long durability</p> <p>Cooling System:<br/>Pad Area: 9.6m L x 1.5m Hx 100mm thick.</p> <p>Cooling Pad: Cellulose pad of thickness 4" thick, at velocities of 1 to 3 M/s to give efficiency from 60 to 95%</p> <p>Framing material. Aluminum.</p> <p>Plastic Profiles: Water Distribution Tray Gutters, down spout end caps &amp; drip pan, required supporting distribution &amp; returning piping</p> <p>Plumbing kit: Drilled PVC piping cap, pad retainer, all</p> |  |
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|  | <p>suspension hardware.</p> <p>Pump: 220-volt single phase 50 cycles,</p> <p>Filtration: Mesh SS filter for 30 m efficiency.</p> <p>Miscellaneous: Fasteners, Galvanized, Rivet- Aluminum.</p> <p>1. Fan. Axial flow belt driven net protected, Sweep Size: 48", Blade: 6 nos. SS, Motor: 1.5HP, Louvers, auto open able, Qty: 2 Nos In each bay</p> <p>2. Exhaust fan. heavy duty 18" fan above gutter height with lover and back cover.2 nos on each bay.</p> <p>3. Air circulation fan: for air circulation in green house, Size: 18 dia, made by SS. 304 grade sheet, Qty: 2.0 no in each bay Net cage: To protect cooling pad from dust and direct entry of insect back side of pad area should be covered with 40 mesh net behind the cooling pad.</p> <p>Light: Normal tube light for visibility in night.</p> <p>Climate Control System: Control system which can monitor and control Temperature, Humidity. It maintains Greenhouse climate by optimum controlling of equipment's like cooling fan. ventilation, internal shading and lights, Boom Irrigation etc. 10" HMI with buttons, Data logging Feature.</p> <p>System with inbuilt analog module for sensor connection.</p> <p>Multi- Set point programming.</p> <p>Multistage cooling /heating control.</p> <p>SMS updates over phone.</p> <p>Data logging is in excel and graphical format.</p> <p>Computer access from any place using internet.</p> <p>SENSORS Each of the Chamber have sensors port</p> <p>Temperature &amp; RH:</p> <p>Range: Range 0-50°C and 0-100%.</p> <p>Type: 4-20 mA OUTPUTS</p> <p>A) Temperature controller:</p> <p>Fan &amp; Pad Control:</p> <p>Control type: Multiple stage control</p> |  |
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|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |
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|  | <p>Temp. Range: 0.1 to 59.9°C.</p> <p>Accuracy: "c.</p> <p>Hysteresis: 0.4°C</p> <p>B) Humidity Control-Cyclic and time control fogging system</p> <p>Control type: ON/OFF</p> <p>Range: 30% to 90%.</p> <p>Real RH: digit (at 45%).</p> <p>C) Temperature and RH Sensor</p> <p>Side Vents: By providing both side rollup side curtain upto side height. Vent area covered with insect net 40 mesh with rollable poly sheet with manual gear box</p> <p>Electrical Wiring: All wires will be of copper and desired load</p> <p>with A grade work. Multiple power plugs, 1 on each side walls of structure for future use of electrical devices/instruments (1 Complete Set).</p> <p>Tray Holding Station: consists of hot dipped galvanized</p> <p>support frame 20mm dia pipe for legs &amp; 32 x 32 Square pipe top &amp; aluminum T-sections, so as to hold the seedling trays in flat position. Growing benches will be 70-80cm in height &amp; width as per design/ tray base size Benches to be planned to utilized maximum area. Foundation size 0.15m x 0.15 m x 0.2 m for benches legs in CM 1:2.4.</p> <p>Ground Cover: Entire floor to be covered with 130 GSM weed mat/ground cover except CC pathway. 2-3 inch thick layer of sand in proper slope shall be provided before laying ground cover</p> <p>Civil Work:</p> <p>Foundation: Insert GI pipes of minimum 80 x 40 mm or more to have foundation depth of 90cm or more depending upon soil type and prevailing wind condition, grouted with cement concrete mixture of 1:2:4 using telescopic insertion of column.</p> <p>Brick wall: 23cm thick brick wall of 1.1m height (30 cm below and 60 cm above ground level on all the four sides. The walls need to be plastered and painted with water proofing paint.</p> <p>Pathway. CC Pathway made with 1:2:4 cement concrete 4-5 thick. This would be 1.0 m wide along the front wall, 2 m wide along the back wall. There would be provision for proper drain of extra water from boom/foggers from the greenhouse.</p> |  |
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|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
|   | Plinth Protection: Providing and fixing of 60mm thick interlocking Paver Block of M-30 grade laying on 3" thick PCC (1:3:6) within 1m along the front wall of the structure is required to maintain the cleanliness.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |            |
| 6 | <p>Secondary Hardening Chamber</p> <p>Length: 26.0m or as per land Available</p> <p>Width: 9.6m or as per land Available</p> <p>Ridge Height: 4.5m</p> <p>Gutter Height: 3.0 m</p> <p>Span one.</p> <p>Design: dome shape</p> <p>Total Chamber-1 Nos.</p> <p>Main Structure Made of 2m thick. GI HS section, including cutting, bended in required shape complete as per requirements</p> <p>Main Column: 96 x 48mm,</p> <p>Roof truss Arch: 60mm OD</p> <p>Truss Bottom: 43mm OD</p> <p>Horizontal runners etc., 43mm OD</p> <p>Truss member/other support: 43/33mm OD <math>\pm</math> 1mm</p> <p>Frame: All galvanized steel is used and design as per IS875 standards. End wall and side wall framing Aluminum corner trims, aluminum ridge bar and Galvanized gutter trim Brackets &amp; fasteners as required to assemble frame, and Buffer Room with double door system.</p> <p>Double Door Room: Size: 2.1m x 3.0m x 2.4m (L W x H) covered with clear 6mm metallic polycarbonate sheet. Hinge/Sliding Door: Size: 1.9m x 0.91m long &amp; wide, normally lockable made with clear 6mm polycarbonate glazing, top &amp; bottom tracks, jambs, flashings &amp; installation hardware - 2 nos.</p> <p>Cladding Ist Layer: Top 1 layer and truss portion covered with uv stabilized 200 micron poly sheet having 85% light transmission, Clear, multi-layered, anti-drip anti-fog, films which produce excellent thermal results. The main characteristic is the high dispersion of visible light, which produces homogenized illumination, hence, avoiding shades, and direct light exposure and Anti fog &amp; Anti Dust. Make: Ginegar-Agriplast.</p> | 2700 Sq ft |

|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |
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|  | <p>2nd layer: Top 2nd layer covered with uv stabilized Agro shade net 50% green colour. Fixed with GI profile and zig-zag spring inside the poly sheet.</p> <p>All sides covered with uv stabilized nylon insect net 40 mesh 110 GSM with GI profile and zig-zag spring.</p> <p>Sprinkler System: To irrigate the plant by providing sprinkler Nozzles hanging type, with fine discharge (70 lph) at 4 bar pressure, with pump 2.0 HP, Disc filter etc. complete, spacing 2.5 x 2.5m and having manual control as switch or plug to off and on water supply in sprinkler of each line.</p> <p>Internal Shading: Internal Screen:- Manual Internal 50% Aluminet Screen retraction mechanism using rope &amp; pulley, Support Aero wheel, curtain ring, polyester wire having with high abrasion strength- which results smooth operation &amp; long durability.</p> <p>Light: Normal tube light for visibility in night.</p> <p>Electrical Wiring: All wires will be of copper and desired load with A grade work. Multiple power plugs, 1no side walls of structure for future use of electrical devices/instruments (1 Complete Set).</p> <p>Tray Holding Station: consists of hot dipped galvanized support frame 20mm dia pipe for legs &amp; 32 x 32 Square pipe top &amp; aluminum T-sections, so as to hold the seedling trays in flat</p> <p>Truss Bottom: 43mm OD</p> <p>Horizontal runners etc., 43mm OD</p> <p>Truss member/other support: 43/33mm OD <math>\pm</math> 1mm</p> <p>Frame: All galvanized steel is used and design as per IS875 standards. End wall and side wall framing Aluminum corner trims, aluminum ridge bar and Galvanized gutter trim Brackets &amp; fasteners as required to assemble frame. and Buffer Room with double door system.</p> <p>Double Door Room: Size: 2.1m * 3m * 2.4m(LWH) covered with clear 6mm metallic polycarbonate sheet Hinge/Sliding Door: Size: 1.9m * 0.91m long &amp; wide, normally lockable made with clear 6mm polycarbonate glazing, top &amp; bottom tracks, jambs, flashings &amp; installation hardware - 2 nos</p> <p>Cladding: Ist Layer: Top 1 layer and truss portion covered with uv stabilized 200 micron poly sheet having 85% light transmission, Clear, multi-layered, anti-drip anti-fog, films which produce excellent thermal results. The main characteristic is the high dispersion of visible light, which produces homogenized illumination, hence, avoiding shades, and direct light exposure and Anti fog &amp; Anti Dust. Make: Ginegar- Agriplast.</p> <p>2<sup>nd</sup> layer: Top 2<sup>nd</sup> layer covered with uv stabilized Agro shade net 50% green colour. Fixed with GI profile and zig-zag spring inside the poly sheet.</p> <p>All sides covered with uv stabilized nylon insect net 40 mesh 110 GSM with GI profile and zig-zag spring.</p> |  |
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|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
|   | <p>Sprinkler System: To irrigate the plant by providing sprinkler</p> <p>Nozzles hanging type, with fine discharge (70 lph) at 4 bar pressure, with pump 2.0 HP, Disc filter etc. complete, spacing 2.5 * 2 and having manual control as switch or plug to off and on water supply in sprinkler of each line.</p> <p>Internal Shading. Internal Screen:- Manual Internal 50% Aluminet Screen retraction mechanism using rope &amp; pulley, Support Aero wheel, curtain ring, polyester wire having with high abrasion strength- which results smooth operation &amp; long durability.</p> <p>Light: Normal tube light for visibility in night.</p> <p>Electrical Wiring: All wires will be of copper and desired load with A grade work. Multiple power plugs, 1no side walls of structure for future use of electrical devices/instruments (1 Complete Set).</p> <p>Tray Holding Station: consists of hot dipped galvanized support frame 20mm dia pipe for legs &amp; 32 * 32 Square pipe top &amp; aluminum T-sections, so as to hold the seedling trays in flat</p> <p>position. Growing benches will be 70-80cm in height &amp; width as per design/ tray base size. Benches to be planned to utilized maximum area. Foundation size 0.15m x 0.15 m x 0.2 m for benches legs in CM 1:2:4.</p> <p>Ground Cover: Entire floor to be covered with 130 GSM weed mat/ground cover except CC pathway, 2-3 inch thick layer of sand in proper slope shall be provided before laying ground cover.</p> <p>Civil Work:</p> <p>Foundation: Insert GI pipes of minimum 60 x 60 mm or more to</p> <p>have foundation depth of 90cm or more depending upon soil type and prevailing wind condition, grouted with cement concrete mixture of 1:2:4 using telescopic insertion of column. Brick wall: 23cm thick brick wall of 1.1m height (30 cm below and 60 cm above ground level on all the four sides. The walls need to be plastered and painted with water proofing paint.</p> <p>Pathway: CC Pathway made with 1:2:4 cement concrete 4-5 thick. This would be 1.0 m wide along the front wall, 2 m wide along the back wall. There would be provision for proper drain of extra water from boom/foggers from the greenhouse.</p> <p>Plinth Protection: Providing and fixing of 60mm thick interlocking Paver Block of M-30 grade laying on 3" thick PCC (1:3:6) within 1m along the front wall of the structure is required to maintain the cleanliness.</p> |                                             |
| 7 | <p>Soilless media and seeding trays, Theromocol base, Tools etc</p> <p>A. Pro tray 99 cavity: (LxWxH), 360 mmx 450mm x 60 mm, Each Tray minimum 100 gram</p> <p>B. Growing media: Coco peat Bricks Type, EC: 0.5ms/cm, pH: 5.2-6.8</p> <p>C. Vermiculite: Particle size: 4 mm pH Value: 7.5</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <p>2000No</p> <p>2500 kg</p> <p>2000 Kg</p> |
| D | Perlite                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1000 No                                     |

|           |                                                                   |            |
|-----------|-------------------------------------------------------------------|------------|
| <b>E</b>  | Thermocol Tray Size as per 2 protray fitted in one thermocol base | 1000 No    |
| <b>F</b>  | Horticultural tools like: Weighing balance-50 kg                  | 1 Set      |
| <b>8</b>  | <b>Bore well with Motor</b>                                       | 1 Set      |
| <b>9</b>  | <b>Land Development</b>                                           | 7000 Sq Ft |
| <b>10</b> | <b>Misc Items – Battery operated power sprayer</b>                | 1 Set      |

(Letter head of the bidder)

Name of Firm:

Address:

Phone No. /Mobile No.:

To,

The Mission Director,  
State Horticulture Mission, Bihar  
2<sup>nd</sup> floor, Krishi Bhawan,  
Mithapur, Patna-800001

Sir,

Subject:

**TECHNICAL PROPOSAL**

In accordance with the terms & conditions of the bid for the establishment of  
Plug Type Nurseries at twelve locations of Bihar.

(Mention the name of component)

I /We submit the technical proposal containing the following documents.

1. Authority Letter (Annexure I)
2. Proposer/Bidder Information Sheet (Details of firm) (Annexure II)
3. Details of Earnest Money through online mode (Annexure IIIA)
4. Details of Tender document cost through online mode (Annexure IIIB)
5. Technical Specification (Annexure IV)
6. Submission of Affidavit (Annexure V)
7. Financial Proposal/Bid (BOQ) for e-Tender (Annexure VI)
8. Original copy of money receipt. (In case of purchase in person)
9. Photocopy of Sales Tax /GST Registration
10. Photocopy of Income tax PAN Card
11. Photocopy of ISO/BIS Certificates.
12. Photocopy of five work order confirming execution of similar nature of work,  
having value of Rs. 1.00 Crore each.
13. Balance sheet of last three year showing 5 crore turn over in each last 3 financial  
year 2021-22, 2022-2023 and 2023-24.

Further, it is certified that the information furnished in this Bid documents is true and correct to the best of my/our knowledge & belief. I/we fully understand terms and conditions mentioned above and undertake to abide by the terms & conditions and rules & regulations mentioned in the Bid document.

It is also certified that the proposer has not been blacklisted by any Union or State Government department or institute in any matter and the owners or partners/ directors has never been legally prosecuted & in any legal dispute with any Union or State Government department.

Signature of Authorized Signatory

Name

Designation

Dated : .....

Seal of the firm



*(Letter head of the bidder)*

**AUTHORITY LETTER**

M/s. ....

..... (Name & address with telephone no. of dealer) is  
working with/on behalf of our firm as our authorized representative for the State of Bihar.

**He is authorized to submit, collect & correct all Bid/quotation/project documents on behalf of firm.**

Signature of Authorized Signatory

Name

Designation

Seal of the firm

Dated.....

**PROPOSER/BIDDER INFORMATION SHEET**

(General Information to be supplied along with the Bid)

1. Name of the Item:

2. Name & Address of the firm/ authorized dealer,

Telephone No. :

3. (a) GST Number. :

(b) Income Tax PAN No. :

4. Address with telephone no./e-mail/web address where production centre(s) is situated

Certified that above information is correct.

Signature of Authorized Signatory

Name

Designation

Seal of the firm

Dated.....

**DETAILS OF EARNEST MONEY**

Earnest money through online mode as per details below is enclosed for the purpose of bid for .....

NEFT/RTGS.....

Name of the bank.....

Branch.....

Dated.....

Amount (In figures & words) .....

.....

Signature of Authorized Signatory

Name

Designation

Seal of the firm

Dated.....

**DETAILS OF TENDER DOCUMENT COST**

(Not applicable for Bid Documents purchased in person)

Bid document cost through online mode as per details below is enclosed for the purpose .....

NEFT/RTGS.....

Name of the bank.....

Branch.....

Dated.....

Amount (In figures & words) .....

.....

Signature of Authorized Signatory

Name

Designation

Seal of the firm

Dated.....

**Submission of Affidavit**

(Through Notary Public on Non-Judicial stamp paper of Rs. 1000.00)

1. Bidders shall not be under any declaration of ineligibility for corrupt and fraudulent practices issued by any State Government/GOI/ Union territory.
2. The Bidders shall not be blacklisted by any State Government/GOI/Union territory etc.
3. Our firm will complete the work as per the technical specification required, in specified time as decided by BHDS, Bihar, Patna.

**Financial Proposal/Bid (BOQ) for e-Tender****State Horticulture Mission, Bihar**

**Tender enquiry for selection of executing agency for the establishment of Plug Type Nurseries at twelve locations of Bihar.**

**Bidder's Information**

|   |                         |  |
|---|-------------------------|--|
| 1 | Name of Firm/Company    |  |
| 2 | Address of Firm/Company |  |
| 3 | Head Office             |  |
| 4 | Branch Office           |  |
| 5 | Name of In-Charge       |  |
|   | Phone No.               |  |
|   | Fax No.                 |  |
|   | Mobile No.              |  |
|   | E-mail ID               |  |
| 6 | Signature with Stamp    |  |
| 7 | Date                    |  |
| 8 | Place                   |  |

**Rate quoted for the establishment of Plug Type Nurseries at 12 locations of Bihar as per the scope of work specified in this bid, and as per the requirement of each particular as following :-**

**Financial E-Tender Performa  
(Online submission)**

| Si. No. | Particular                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Qty   | Rate/ Unit (Rs.) | Total Amount (inc. of All kind of Taxes & Freight)) |
|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------------------|-----------------------------------------------------|
| 1       | <b>Infrastructure:</b><br>Chamber for seeder machine <ul style="list-style-type: none"> <li>Size - 25'x15'x12':8' (LxWxHc:s)</li> <li>Structure made of steel 50mm x 50mm with pre quoted GI sheet 0.5 mm thick with false ceiling. With two door &amp; two windows,. Roof hut type,</li> <li>Foundation wall 1.5' above ground level &amp; 1.5'below ground level.</li> </ul> <b>Floor:</b> made by made by PCC (1:5:10)100 mm thick than CC (1:2:4) 100 mm thick with dully plastered.               | 1 set |                  |                                                     |
| 2       | <b>Seeder machine</b> <ul style="list-style-type: none"> <li>DRUM SOWING SEEDERLINE</li> <li>Capacity : 12000 to 80000 seedling /hour</li> <li>Max tray dimensions 580x400</li> <li>Drum seeder line</li> <li>Air bars within double row of nozzles and seed holding plate with pneumatic</li> <li>Head n. 1 with dibbler drum</li> <li>Head n.2 with sowing drum</li> <li>Manual system for the width guide adjustment</li> <li>longitudinal tray advancement</li> <li>Operator right side</li> </ul> | 1 set |                  |                                                     |

|   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |             |  |  |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--|--|
|   | <ul style="list-style-type: none"> <li>• Vacuum pump for head no 2</li> <li>• Sowing kit composition 3 nos drum</li> <li>• N° of cells for tray 99 cavity</li> <li>• Rows with direct hole of the drum 9 no's</li> <li>• Dibbler 1 no.</li> <li>• Series of nozzles per cell on the front side Nr 9.00</li> <li>• Color touch screen panel</li> <li>• Power supply 400 V three-phase</li> <li>• 50HZ Frequency 50 Hz NR 1,00</li> <li>• Drum coverer for vermiculite and watering unit length 550 mm with 2 drilled bars with mounted conveyer size 3000mm x 565mm x 800mm (L x W x H)</li> <li>• Air Compressor to support online system</li> <li>• Power supply 400v three phase</li> <li>• Water tank, water pump and plumbing work, electrical wiring etc.</li> </ul> <p>Electrical wiring as per required</p>                                                    |             |  |  |
| 3 | <p><b>Germination Chamber Size: 4m x 4m x 3m (Lx WxH)</b></p> <p><b>Construction:</b> 80mm prefabricated puff panel<br/>Steel 50mm x 50mm with inner/outer pre quoted GI sheet 0.5mm thick.</p> <p><b>Door:</b> - Air tight Puff Panel door size. 2m x 1 m<br/>Temperature Range 22° C to 35°C &amp; RH: 70% - 80%</p> <p><b>Lights:</b> - LED lights 18watts for illumination purpose.</p> <p><b>Foundation:</b> wall for Germination Chamber 9" wide, 1.5' below earth's surface. 1.5' above earth's surface, as kick-board 9" wide, Frame base block height 3 x9"x9"each.</p> <p><b>Floor:</b> made by PCC (1:5:10)100mm thick than CC (1:2:4) 100mm thick with tiles.</p> <p>As per Required Temperature Controller, Heater &amp; Humidifier.</p> <p>Germination chamber installed under shed made by pre quoted GI sheet 0.5mm thick with Tubular structure.</p> | 1 set       |  |  |
| 4 | <p><b>Storeroom &amp; Pot Preparation Area</b><br/>Length: 9.0m or as per land Available<br/>Width: 4.5m or as per land Available<br/>Ridge Height: 4.2m<br/>Gutter Height: 3.0 m<br/>Design: Hut/dome shape</p> <p>Main Structure: Made of 2mm thick, GI HS section, including cutting, bended in required shape, complete as per requirements<br/>Main Column: 50 * 50mm<br/>Roof truss, 50 * 50mm<br/>Horizontal runners etc, 38 * 38mm<br/>Truss member/other support: 32 * 32mm plus/minus 1 ± mm</p>                                                                                                                                                                                                                                                                                                                                                            | 435 Sq Feet |  |  |

|   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |             |  |  |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--|--|
|   | <p>Frame: All galvanized steel is used and design as per IS875 standards. End wall and side wall framing GI pre coated corner trims, ridge bar and Galvanized gutter trim Brackets &amp; fasteners as required to assemble or welded frame.</p> <p>Covering::</p> <ul style="list-style-type: none"> <li>- Top and sides of the storage room would be covered with 0.5mm thick GI pre-coated sheet.</li> <li>- The top of pot sowing area would be covered the same material as the storage room.</li> <li>- The side of the pot sowing area would be covered with U.V. stabilized 40 mesh insect net (white colour, 110 GSM).</li> <li>- This net would be fixed on three sides with aluminum or GI profile and zig-zag spring inserts.</li> <li>- There would be a door (1m * 2m)</li> </ul> <p>Flooring: 40mm thick CC flooring anti-slippery with proper drainage slops. Floor to be raised 1.0ft by filing soil from existing level.</p> <p>Media wash pit: one wash pit of Size 2' * 4' * 2' made with brick wall and plastered with cement slurry.</p> <p>Jet Irrigation System: Jet Irrigation with motorized system for irrigating sowing portrays in sowing area and One Wash basin having tape &amp; water supply connections, excess irrigation with cocks (2 points). PVC hose pipe of 50' length.</p> <p>Storage Tanks: One overhead Storage water tank of 500 liter capacity. All plumbing fittings of pvc pipes.</p> |             |  |  |
| 5 | <p><b>Primary Hardening Chamber</b><br/> Length: 26.0m or as per land Available<br/> Width: 9.6m or as per land Available<br/> Ridge Height: 4.5m<br/> Gutter Height: 3.0 m<br/> Span: One,<br/> Design: dome shape<br/> Total Chamber-1 Nos.</p> <p>Main Structure: Made of 2m thick, GI HS section, including cutting, bended in required shape, complete as per requirements<br/> Main Column: 96 x 48mm,<br/> Roof truss Arch: 60mm OD<br/> Truss Bottom: 43mm OD<br/> Horizontal runners etc., 43mm OD<br/> Truss member/other support: 43/33mm OD <math>\pm</math> 1mm</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 2700Sq Feet |  |  |

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|  | <p>Frame: All galvanized steel is used and design as per IS875 standards. End wall and side wall framing Aluminum corner trims, aluminum ridge bar and Galvanized gutter trim Brackets &amp; fasteners as required to assemble frame, and Buffer Room with double door system.</p> <p>Double Door Room: Size: 2.1m x 3.0m x 2.4m (L x W x H) covered with clear 6mm metallic polycarbonate sheet.</p> <p>Hinge/Sliding Door: Size: 1.9m x 0.91m long &amp; wide, normally lockable made with clear 6mm polycarbonate glazing, top &amp; bottom tracks, jambs, flashings &amp; installation hardware - 2 nos." (2 Complete Set).</p> <p>Cladding: Roof, front wall, end wall &amp; side walls of the Greenhouse-sets for rigid covering 200 micron uv stabilized poly sheet fixed with GI Profile and zig zag spring.</p> <p>Fogging System: To increase the humidity up-to 80% <math>\pm</math> 5% by providing 4 way fogging Nozzles hanging type, with fine discharge (28-30 lph) at 4 bar pressure, with pump 2.0 HP, Disc filter etc. complete, spacing 2.5 x 2.5m and having manual control as switch or plug to off and on water supply in foggers of each line.</p> <p>Growing Tunnels: having semi-circular(1.5 m) tunnel like pvc frame (removable) placed at 1m distance each in benches covered with fine quality cotton cloth.</p> <p>Boom Irrigation: Boomer trolley system that operates on an overhead truss-mounted double rail system. This rail system would be constructed from galvanized iron (GI) pipe and installed along the gutter length in each span of greenhouse with necessary accessories.</p> <p>The boomer trolley itself would be made of stainless steel (304) and utilize a motorized gear system for its movement, including an automatic stop function at both ends. To maximize space efficiency within the greenhouse, this overhead rail system is necessary.</p> <p>The system would be including suspended cables and hose pipes fitted to the rail with rollers to facilitate electricity and water supply. The boom arms to be constructed from aluminum and offer adjustable height table height positioning above the seedling trays. Filtration will be provided by a disc</p> |  |  |  |
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|  | <p>filter, ensuring ease of maintenance and serviceability.</p> <p>A control panel would be equipped with an automatic and manual switching system, along with a safety protector, is required. For optimal spraying, three-way Agar or Teejet make nozzles would be fitted at 50-60cm intervals on a heavy-duty 25mm aluminum pipe. These nozzles would be allow for user-selectable discharge rates of up to 60 liters per hour, with an operating pressure range of 2.5-4.0 kg/cm<sup>2</sup>. The systems to be ensure direct and even water application to the plants. promoting optimum germination success.</p> <p>Internal Shading: Internal Screen:- Manual Internal 50%</p> <p>Aluminet Screen retraction mechanism using rope &amp; pulley. Support Aero wheel, curtain ring, polyester wire having with high abrasion strength- which results smooth operation &amp; long durability</p> <p>Cooling System:<br/>Pad Area: 9.6m L x 1.5m Hx 100mm thick.</p> <p>Cooling Pad: Cellulose pad of thickness 4" thick, at velocities of 1 to 3 M/s to give efficiency from 60 to 95%</p> <p>Framing material. Aluminum.</p> <p>Plastic Profiles: Water Distribution Tray Gutters, down spout end caps &amp; drip pan, required supporting distribution &amp; returning piping</p> <p>Plumbing kit: Drilled PVC piping cap, pad retainer, all<br/><br/>suspension hardware.</p> <p>Pump: 220-volt single phase 50 cycles,</p> <p>Filtration: Mesh SS filter for 30 m efficiency.</p> <p>Miscellaneous: Fasteners, Galvanized, Rivet-Aluminum.</p> <p>1. Fan. Axial flow belt driven net protected, Sweep Size: 48", Blade: 6 nos. SS, Motor: 1.5HP, Louvers, auto open able, Qty: 2 Nos In each bay</p> |  |  |  |
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| <p>2. Exhaust fan. heavy duty 18" fan above gutter height with lover and back cover.2 nos on each bay.</p> <p>3. Air circulation fan: for air circulation in green house, Size: 18 dia, made by SS. 304 grade sheet, Qty: 2.0 no in each bay Net cage: To protect cooling pad from dust and direct entry of insect back side of pad area should be covered with 40 mesh net behind the cooling pad.</p> <p>Light: Normal tube light for visibility in night.</p> <p>Climate Control System: Control system which can monitor</p> <p>and control Temperature, Humidity. It maintains Greenhouse climate by optimum controlling of equipment's like cooling fan. ventilation, internal shading and lights, Boom Irrigation etc. 10" HMI with buttons, Data logging Feature.</p> <p>System with inbuilt analog module for sensor connection.</p> <p>Multi- Set point programming.</p> <p>Multistage cooling /heating control.</p> <p>SMS updates over phone.</p> <p>Data logging is in excel and graphical format.</p> <p>Computer access from any place using internet.</p> <p>SENSORS Each of the Chamber have sensors port</p> <p>Temperature &amp; RH:</p> <p>Range: Range 0-50°C and 0-100%.</p> <p>Type: 4-20 mA OUTPUTS</p> <p>A) Temperature controller:</p> <p>Fan &amp; Pad Control:</p> <p>Control type: Multiple stage control</p> <p>Temp. Range: 0.1 to 59.9°C.</p> <p>Accuracy: "c.</p> |  |  |  |
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|  | <p>Hysteresis: 0.4°C</p> <p>B) Humidity Control-Cyclic and time control fogging system</p> <p>Control type: ON/OFF</p> <p>Range: 30% to 90%.</p> <p>Real RH: digit (at 45%).</p> <p>C) Temperature and RH Sensor</p> <p>Side Vents: By providing both side rollup side curtain upto side height. Vent area covered with insect net 40 mesh with rollable poly sheet with manual gear box</p> <p>Electrical Wiring: All wires will be of copper and desired load</p> <p>with A grade work. Multiple power plugs, 1 on each side walls of structure for future use of electrical devices/instruments (1 Complete Set).</p> <p>Tray Holding Station: consists of hot dipped galvanized</p> <p>support frame 20mm dia pipe for legs &amp; 32 x 32 Square pipe top &amp; aluminum T-sections, so as to hold the seedling trays in flat position. Growing benches will be 70-80cm in height &amp; width as per design/ tray base size Benches to be planned to utilized maximum area. Foundation size 0.15m x 0.15 m x 0.2 m for benches legs in CM 1:2.4.</p> <p>Ground Cover: Entire floor to be covered with 130 GSM weed mat/ground cover except CC pathway. 2-3 inch thick layer of sand in proper slope shall be provided before laying ground cover</p> <p>Civil Work:</p> <p>Foundation: Insert GI pipes of minimum 80 x 40 mm or more to have foundation depth of 90cm or more depending upon soil type and prevailing wind condition, grouted with cement concrete mixture of 1:2:4 using telescopic insertion of column.</p> <p>Brick wall: 23cm thick brick wall of 1.1m height (30 cm below and 60 cm above ground level on all the</p> |  |  |  |
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|   | <p>four sides. The walls need to be plastered and painted with water proofing paint.</p> <p>Pathway. CC Pathway made with 1:2:4 cement concrete 4-5 thick. This would be 1.0 m wide along the front wall, 2 m wide along the back wall. There would be provision for proper drain of extra water from boom/foggers from the greenhouse.</p> <p>Plinth Protection: Providing and fixing of 60mm thick interlocking Paver Block of M-30 grade laying on 3" thick PCC (1:3:6) within 1m along the front wall of the structure is required to maintain the cleanliness.</p>                                                                                                                                                                                                                                                                                                             |            |  |  |
| 6 | <p>Secondary Hardening Chamber</p> <p>Length: 26.0m or as per land Available</p> <p>Width: 9.6m or as per land Available</p> <p>Ridge Height: 4.5m</p> <p>Gutter Height: 3.0 m</p> <p>Span one.</p> <p>Design: dome shape</p> <p>Total Chamber-1 Nos.</p> <p>Main Structure Made of 2m thick. GI HS section, including cutting, bended in required shape complete as per requirements</p> <p>Main Column: 96 x 48mm,</p> <p>Roof truss Arch: 60mm OD</p> <p>Truss Bottom: 43mm OD</p> <p>Horizontal runners etc., 43mm OD</p> <p>Truss member/other support: 43/33mm OD <math>\pm</math> 1mm</p> <p>Frame: All galvanized steel is used and design as per IS875 standards. End wall and side wall framing Aluminum corner trims, aluminum ridge bar and Galvanized gutter trim Brackets &amp; fasteners as required to assemble frame, and Buffer Room with double door system.</p> | 2700 Sq ft |  |  |

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|  | <p>Double Door Room: Size: 2.1m x 3.0m x 2.4m (L W x H) covered with clear 6mm metallic polycarbonate sheet. Hinge/Sliding Door: Size: 1.9m x 0.91m long &amp; wide, normally lockable made with clear 6mm polycarbonate glazing, top &amp; bottom tracks, jambs, flashings &amp; installation hardware - 2 nos.</p> <p>Cladding Ist Layer: Top 1 layer and truss portion covered with uv stabilized 200 micron poly sheet having 85% light transmission, Clear, multi-layered, anti-drip anti-fog, films which produce excellent thermal results. The main characteristic is the high dispersion of visible light, which produces homogenized illumination, hence, avoiding shades, and direct light exposure and Anti fog &amp; Anti Dust. Make: Ginegar-Agriplast.</p> <p>2nd layer: Top 2nd layer covered with uv stabilized Agro shade net 50% green colour. Fixed with GI profile and zig-zag spring inside the poly sheet.</p> <p>All sides covered with uv stabilized nylon insect net 40 mesh 110 GSM with GI profile and zig-zag spring.</p> <p>Sprinkler System: To irrigate the plant by providing sprinkler Nozzles hanging type, with fine discharge (70 lph) at 4 bar pressure, with pump 2.0 HP, Disc filter etc. complete, spacing 2.5 x 2.5m and having manual control as switch or plug to off and on water supply in sprinkler of each line.</p> <p>Internal Shading: Internal Screen:- Manual Internal 50% Aluminet Screen retraction mechanism using rope &amp; pulley, Support Aero wheel, curtain ring, polyester wire having with high abrasion strength- which results smooth operation &amp; long durability.</p> <p>Light: Normal tube light for visibility in night.</p> <p>Electrical Wiring: All wires will be of copper and desired load with A grade work. Multiple power plugs, 1no side walls of structure for future use of electrical devices/instruments (1 Complete Set).</p> <p>Tray Holding Station: consists of hot dipped galvanized support frame 20mm dia pipe for legs &amp; 32 x 32 Square pipe top &amp; aluminum T-sections, so as to hold the seedling trays in flat</p> <p>Truss Bottom: 43mm OD</p> |  |  |  |
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|  | <p>Horizontal runners etc., 43mm OD</p> <p>Truss member/other support: 43/33mm OD <math>\pm</math> 1mm</p> <p>Frame: All galvanized steel is used and design as per IS875 standards. End wall and side wall framing Aluminum corner trims, aluminum ridge bar and Galvanized gutter trim Brackets &amp; fasteners as required to assemble frame. and Buffer Room with double door system.</p> <p>Double Door Room: Size: 2.1m * 3m * 2.4m(LWH) covered with clear 6mm metallic polycarbonate sheet Hinge/Sliding Door: Size: 1.9m * 0.91m long &amp; wide, normally lockable made with clear 6mm polycarbonate glazing, top &amp; bottom tracks, jambs, flashings &amp; installation hardware - 2 nos</p> <p>Cladding: Ist Layer: Top 1 layer and truss portion covered with uv stabilized 200 micron poly sheet having 85% light transmission, Clear, multi-layered, anti-drip anti-fog, films which produce excellent thermal results. The main characteristic is the high dispersion of visible light, which produces homogenized illumination, hence, avoiding shades, and direct light exposure and Anti fog &amp; Anti Dust. Make: Ginegar- Agriplast.</p> <p>2<sup>nd</sup> layer: Top 2<sup>nd</sup> layer covered with uv stabilized Agro shade net 50% green colour. Fixed with GI profile and zig-zag spring inside the poly sheet.</p> <p>All sides covered with uv stabilized nylon insect net 40 mesh 110 GSM with GI profile and zig-zag spring.</p> <p>Sprinkler System: To irrigate the plant by providing sprinkler</p> <p>Nozzles hanging type, with fine discharge (70 lph) at 4 bar pressure, with pump 2.0 HP, Disc filter etc. complete, spacing 2.5 * 2 and having manual control as switch or plug to off and on water supply in sprinkler of each line.</p> <p>Internal Shading. Internal Screen:- Manual Internal 50% Aluminet Screen retraction mechanism using rope &amp; pulley, Support Aero wheel, curtain ring, polyester wire having with high abrasion strength- which results smooth operation &amp; long durability.</p> |  |  |  |
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|   | <p>Light: Normal tube light for visibility in night.</p> <p>Electrical Wiring: All wires will be of copper and desired load with A grade work. Multiple power plugs, 1 no side walls of structure for future use of electrical devices/instruments (1 Complete Set).</p> <p>Tray Holding Station: consists of hot dipped galvanized support frame 20mm dia pipe for legs &amp; 32 * 32 Square pipe top &amp; aluminum T-sections, so as to hold the seedling trays in flat position. Growing benches will be 70-80cm in height &amp; width as per design/ tray base size. Benches to be planned to utilized maximum area. Foundation size 0.15m x 0.15 m x 0.2 m for benches legs in CM 1:2:4.</p> <p>Ground Cover: Entire floor to be covered with 130 GSM weed mat/ground cover except CC pathway, 2-3 inch thick layer of sand in proper slope shall be provided before laying ground cover.</p> <p>Civil Work:</p> <p>Foundation: Insert GI pipes of minimum 60 x 60 mm or more to have foundation depth of 90cm or more depending upon soil type and prevailing wind condition, grouted with cement concrete mixture of 1:2:4 using telescopic insertion of column. Brick wall: 23cm thick brick wall of 1.1m height (30 cm below and 60 cm above ground level on all the four sides. The walls need to be plastered and painted with water proofing paint.</p> <p>Pathway: CC Pathway made with 1:2:4 cement concrete 4-5 thick. This would be 1.0 m wide along the front wall, 2 m wide along the back wall. There would be provision for proper drain of extra water from boom/foggers from the greenhouse.</p> <p>Plinth Protection: Providing and fixing of 60mm thick interlocking Paver Block of M-30 grade laying on 3" thick PCC (1:3:6) within 1m along the front wall of the structure is required to maintain the cleanliness.</p> |        |  |  |
| 7 | <p>Soilless media and seeding trays, Theromocol base, Tools etc</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2000No |  |  |

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|           | A. Pro tray 99 cavity: (LxWxH), 360 mmx 450mm x 60 mm, Each Tray minimum 100 gram<br>B. Growing media: Coco peat Bricks Type, EC: 0.5ms/cm, pH: 5.2-6.8<br>C. Vermiculite: Particle size: 4 mm pH Value: 7.5 | 2500 kg    |  |  |
| <b>D</b>  | Perlite                                                                                                                                                                                                      | 1000 No    |  |  |
| <b>E</b>  | Thermocol Tray Size as per 2 protray fitted in one thermocol base                                                                                                                                            | 1000 No    |  |  |
| <b>F</b>  | Horticultural tools like: Weighing balance-50 kg                                                                                                                                                             | 1 Set      |  |  |
| <b>8</b>  | <b>Bore well with Motor</b>                                                                                                                                                                                  | 1 Set      |  |  |
| <b>9</b>  | <b>Land Development</b>                                                                                                                                                                                      | 7000 Sq Ft |  |  |
| <b>10</b> | <b>Misc Items – Battery operated power sprayer</b>                                                                                                                                                           | 1 S        |  |  |

**Price quoted is inclusive of all Taxes/Duties like Sales Tax/ VAT/GSTIN, excise duty, Inspection charges etc., if any. The prices should be quoted in Indian Rupees only, both in figures and words in such a way that interpolation is not possible and all over-writings should be strictly avoided or rewritten and correction should be duly attested prior to the submission of proposal. Only one price should be quoted for above mentioned particulars. Multiple prices for above mentioned particulars will not be entertained.**

Signature of Authorized Signatory

Name

Designation