



# KERALA AGRICULTURAL UNIVERSITY

Regional Agricultural Research Station (SZ), Vellayani

Thiruvananthapuram, 695 522, Kerala

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No.RARS/SZ(6)/2034/2018

Date: 13/09/2022

## E-TENDER NOTICE

Sealed Competitive tenders are invited for construction of insect proof net house facility as detailed below.

Tender No.	:RARS/SZ(6)/2034/2018
Last Date & Time for receipt of Tender	: 23 /09/2022 2.00 pm
Date & Time for opening of Tender	: 24 /09/2022 3.00 pm
Designation and address of Purchasing Authority	: The Associate Director of Research, RARS(SZ), College of Agriculture, Vellayani P.O., Tvm. Pin - 695 522.
Place of supply	: Dept. of Plant Pathology College of Agriculture, Vellayani P.O., Tvm. Pin - 695522.

### Specification of Insect proof net house facility

The specifications required for the insect proof net house (polyhouse) to be constructed are given below. The land provided for the construction will be on moderate level, further proper levelling and compaction should be done by the contractor/firm constructing the polyhouse, the cost of which should be included in the total cost of the construction quoted. Rate quoted should be for the complete construction of the polyhouse with all the items listed in the specification and should be inclusive of all taxes and duties, transportations charges, loading and unloading charges and installation charges. The firm should submit a detailed design of poly house with all relevant points.

#### **I. General details**

**Location:** College of Agriculture, Vellayani

**Area:** 230 m<sup>2</sup>

**Structure:**Pre-fabricated with ISI 'B' class GI Pipes, minimum 2mm thickness and should be able to withstand winds of velocity up to 120 kmph. Rollup (manual) Side curtain system should be provided on the longitudinal sides of the polyhouse.

**Size of structure:**

Growth chamber: 10m x22.5m

Entrance cabin: 2m x 2.5m, with double leaf door (2mx1m)on both the longitudinal sides.

<b>Shape</b>	: Tropical
<b>Center Height</b>	: 7.5m
<b>Side Height</b>	: 5m
<b>Bay length</b>	: 2.8 m

## II. Construction materials

**Columns:** Tubular Structure - 76 OD and 65 OD, 2.0mm thick

**Purlin:** Tubular Structure - 42 mm OD/2.0 mm thick at ridge and centre

**Trusses:** Tubular Structure - Bottom horizontal 60 mm OD/2.0 mm thick G.I. Pipe, top chords 48mm OD, truss members and bracing 42/33 mm OD 2.0 mm thick.

**Clamps and Nut Bolts:** Well Compatible and galvanized

**Gutter:** Provided on the longitudinal sides of the polyhouse, 1.8 mm - 2.0 mm thick G.I sheet and the size should be such that spill over the gutter under maximum rain is avoided.

**Overall slope:**The overall slope of the gutters and the internal soil surface is 1.0- 1.5%.

**Top Vent:** An open vent of 1.0m to 1.5m should be provided at the top and positioned in a way that rain showers should not enter into the green house.

**Poly Film / Covering:**With UV protection and Anti-Drip properties, 200 micron thickness, 5 layer, 89% light transmission, 55%, light diffusion, with additives incorporated to significantly reduce the damage caused and viral diseases transmitted to the plants by various insect pests. .

**Poly Film Fixing:**Zigzag spring insert 2.5 mm diameter of spring wire with cold galvanization. Wire material is high carbon steel with spring action.

**Aluminium Profile 0.8 mm:** weight - 140 g/m (approx), Double Spring Locking 0.8mm thick, Smooth Edges - (No Damage to Plastic), Flat Bottom.

**Plastic Coated GI ZIG ZAG Spring:** 2.2mm Dia, excellent elasticity, Galvanized wire inside, Polyethylene coated for longer life, Uniform extrusion for load distribution.

**Side wall curtain:** Minimum of 2.5 m in height, with foldable handle on both sides on all four corners, protected with GI pipe and belts at outer.

**Bottom apron:** Woven polythene 160 GSM/200 micron plastic sheet, UV stabilized, 1.0-1.5 m. height from ground level and minimum 0.5 m. below the ground level.

**Insect Proof Net:** UV stabilized, 50-Mesh Net (capable of blocking whiteflies, aphids and leafminer). Provided on all places where ventilation is provided.

**Shade Net:** 30% and 50%, colored light-spectrum management nets, with manual moving system provided at the side height of the poly house.

### III. Civil Works

**Foundation:** Columns area fitted over ground “inserts” and bolted to insert pipe 60mmOD and 2 mm thick. Length of insert 1.0 to 1.50 meter & filling the pit with 1:2:4 concrete hands mixed with appropriate grade cement.

**Floor:** The floor of the poly house has to be properly levelled and compacted well such that a minimum of 150 mm hardcore of compacted ground is formed that can support the concrete floor without cracking. Above which 1:2:4 concrete has to be laid to a thickness of 150 mm. Necessary slope on the floor has to be provided with proper drain outlet at the lowest position to drain out the water.

**IV. Fogging system:** Using four-way anti leak fogger 28 lph flow rate and particle size 80–100micron, 16 mm lateral, PVC pipe  $6\text{kg}/\text{cm}^2$ , complete application rate 3 mm/hr. Spacing will be 2.5 x 2.5 m all across the poly house positioned below the shade net. The system should be automated such as to maintain different temperature and humidity (using products from reputed manufacturers having a minimum successful track record of 15 years in manufacturing these systems), with brush clean filters (with facility of cleaning the filter without removing the filtering element), flush valve etc. Suitable pumping system with water tank (500-litre capacity) has to be provided. Inside the polyhouse, two water outlets with control valve and hose connector has to be provided for watering the plants inside the green house.

**V. Metal Benches:** Movable (having wheels at the base) netted metal benches with wire top ideal for growing plants has to be provided inside the poly house. The benches should be 18m long, 2.5m wide and 1m height (2 Nos). The top net has to be provided using minimum 10-gauge wire with a 3.8 x 3.8 cm mesh and necessary supporting frame such that sagging while supporting the plants is avoided.

**Foundation** : In cement concrete 1:2:4 (30cm x 30cm x 60-75cm)

### Instructions to Bidders

- Bid documents including the Bill of Quantities (BoQ) can be downloaded free of cost from the e- Government Procurement (e-GP) Website [www.etenders.kerala.gov.in](http://www.etenders.kerala.gov.in).
- All bid documents are to be submitted online only and in the designated cover(s)/envelope(s) on above website.
- Price Bid shall be submitted only through online.

- Tenders not stipulating period of firmness of rates and with price variation clause and/or subject to prior sale condition are liable to be rejected.
- Rate quoted should be inclusive of all charges such as transportation, loading/unloading/handling or installation charges and Government duties leviable, if any.
- The supplier has to make his own arrangement for the ordinary / special tools, machinery, and other consumables required for successful completion of the work.
- **Payment of fee:** Tender submission fee & EMD shall be remitted online during the time of tender submission.
- **Scanned Documents to be submitted online:**
  - Company Data sheets, Brochures & other documents such as relevant technical literatures, drawings, pamphlets containing all the relevant technical specifications of the equipment duly signed by the bidder on each page.
  - **Tender form: Each and every pages of the tender form should be attested after reading the conditions provided.**
  - Duly filled and signed preliminary agreement of the bid executed in Kerala stamp paper worth Rs.200/-.
  - Bids received online without the scanned copy of preliminary agreement will not be considered.
  - Users list in proof of such constructions.
  - Copy of up-to-date GST registration certificate & PAN of the bidder
  - Supporting document regarding service support.
  - Valid Government certificate in proof of exemption from payment of EMD.
  - Undertaking to the effect that the bidder is not Debarred/ Blacklisted or Banned from any University/ Government Institute / PSU.
  - Purchase Order and performance certificate of the quoted model of Equipment from three reputed customers, preferably University/ Government Institute / PSU, if any.
- **Service:** The bidder should ensure on-site service support for the net house
- The maximum period required for construction and installation of the net house should be mentioned.
- Details required for e-payment (Details of bank account having core banking facility and e- mail address of the bidder) shall be furnished along with the tender.
  - Payments will be made only after construction and installation.

- **Warranty minimum 3 years for materials used in construction and minimum 1 year free service**
  - Details of extended warranty if any, rate for extended warranty, rate for annual maintenance cost after warranty period etc should be mentioned in the bid document.
  - If the Supplier, having been notified, fails to rectify the defect(s) within one to two weeks' time, the warranty will be extended by the period for which the instrument lying idle without repair.
  - All accessories, and supporting instruments should be covered under the warranty.
- Bidders not accompanied by the above details will be rejected.
- Associate Director of Research, RARS (SZ), College of Agriculture, Vellayani shall have no obligation to convey reason for rejection of any bid. It shall be open for Associate Director of Research, Vellayani to reject even the lowest bidder in the interest of the University and no reason need be given thereof.
- The undersigned shall not be responsible for any failure, malfunction or breakdown of the electronic system while downloading or uploading the documents by the Bidder during the e-procurement process.
- On receipt of purchase order, the supplier shall execute an agreement in Kerala stamp paper worth Rs.200/- at own cost and furnish a Performance Security of 5% of the cost. The format of the agreement can be downloaded from the above website.
- Withdrawal from the tender after having accepted or failure to supply within the specified time or according to specifications will entail cancellation of the order and attract legal procedures as per the agreement.
- All subsequent Government orders connected to tenders and any revision in the rates of taxes would also be applicable to this tender.
- In addition to these all other General Conditions annexed in the Store Purchase Manual of Government of Kerala are also applicable to this tender.



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