

केन्द्रीय मूगा एरी अनुसंधान एवं प्रशिक्षण संस्थान  
CENTRAL MUGA ERI RESEARCH & TRAINING INSTITUTE  
केन्द्रीय रेशम बोर्ड CENTRAL SILK BOARD

वस्त्र मंत्रालय : भारत सरकार Ministry of Textiles: Govt. of India  
लाहदोईगढ़ Lahdoigarh, जोरहाट Jorhat- 785700, असम Assam



दूरभाष Phone: 0376-2350026, 2335513/ फेक्स Fax: 0376-2335528  
ई-मेल E-mail: [cmerti@rediffmail.com](mailto:cmerti@rediffmail.com)/[cmertilad.csb@nic.in](mailto:cmertilad.csb@nic.in)  
वेब साईट Website: [www.cmerti.res.in](http://www.cmerti.res.in)



No. CSB/CMER&TI/Store/4(01)/2020-21/

Dated 29.07.2020

Tender Notification

**Sub: Inviting rate quotation for supply and installation of Open Top Chamber facility at CMER&TI, Lahdoigarh - reg.**

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Sealed rate quotations are hereby invited for supply and Installation of Open Top Chambers at CMER&TI, Lahdoigarh as per specifications enclosed herewith. Interested parties/suppliers may offer their rate in two bid system for the same as detailed below.

SN	Name of the items	Quantity	Specification
1	Open Top Chambers	04	Enclosed as Annexure-I

The **Technical Bid** should consist of all the technical details, EMD, specifications along with commercial terms and conditions. The **Financial Bid** should consist of item price as mentioned in the technical bid. Dealership certificate, company price list and other parameters like guarantee/warrantee, service facilities, etc. should also be enclosed. The financial bid will not be considered and opened if the required specifications are not met with the technical bid. The technical and financial bids should be sealed in separate covers duly super-scribed technical bids for 'Open Top Chambers' and financial bids for the 'Open Top Chambers' respectively and both the sealed envelopes are to be put in a bigger cover which should also be sealed.

The sealed quotation should be addressed to **The Director, CMER&TI, Central Silk Board, Lahdoigarh, Jorhat-785700, Assam** super scribing as **Quotations for SUPPLY and INSTALLATION of "Open Top Chambers"**.

The quotation should reach this office on or before **28-08-2020 at 2:00 p.m.** positively and the technical bid will be **opened at 3:00 p.m.** on the same day in presence of the parties who choose to be present. If the quotation opening date happens to be holiday, the quotation will be opened on the next working day at the same time. The financial bid of those parties who qualify the technical bids only will be opened **within 10/15 days** from the date of opening of technical bid. The date for opening the financial bids will be intimated by the office to the technical qualified parties in advance. Financial bids will be evaluated based on the rates quoted.

**The terms and condition of the quotation are indicated below:**

1. The quotation (s) received after due date and time will not be entertained.
2. Parties not submitting their quotations in two bids system as mentioned above will not be considered and will be summarily rejected.

3. **Validity:** One year from the date of the opening of the quotation.
4. **Delivery schedule:** within 1 month from the date of issue of the supply order and the rates quoted should be valid for 180 days.
5. The equipment should be supplied to **Director, CMER&TI, Central Silk Board, Lahdoigarh, Jorhat-785700, Assam.**
6. The equipment should be supplied strictly in conformity of the annexed specifications, failing which; the equipment has to be taken back at your own cost.
7. Financial Bids should consist of unit price, Excise Duty, Insurance, Packing & Forwarding, Erection & Commissioning, Transportation Charges, Taxes etc F.O.R., **CMER&TI, Lahdoigarh, Jorhat.**
8. Price of the equipments should be quoted only in **Indian Rupees (INR).**
9. Parties/manufacturer supplying specific equipments/spare parts should specifically mention that the party is the sole manufacturer/supplier of the equipments and should provide such certificate along with authorization letter of the manufacturer.
10. **Payments:** No advance payment will be made. The payment will be made only after satisfactory supply/installation/demonstration of the equipments/spare parts and in conformity of the specifications to the satisfaction of the Director or his authorized officer.
11. **Taxes and other statutory duties:** To be shown separately and clearly for each equipment.
12. **EMD:** 2% on the basic price for open top chambers to be submitted in the form of Demand Draft/Bankers cheque drawn in favor of **Director, CMER&TI** on any Nationalized Bank payable at Jorhat (Assam) along with technical bid. Quotation without EMD will summarily be rejected.
13. For claiming exemption of EMD, the necessary MSME / NSIC certificate should be uploaded alongwith the technical bid.
14. The Supplier shall provide Warranty/Guarantee valid for a minimum period of 12 months from the date of installation of the equipment / machineries. Any defects noticed in the equipment /machineries which are unintentional shall be set right by the supplier free of cost for good performance of the equipments.
15. A copy of **PAN Card** to be submitted along with quotations.
16. Documents should be submitted in **duplicate.**
17. **Copies of supply order received from other organization for similar model of equipment to be enclosed.**
18. The bidders should submit the Bank Details i.e. Bank A/c.No., Bank Name, Branch, IFSC code. Mobile No. E-mail ID Etc. along with quotation.
19. The Director reserves the right to accept or reject any or all quotations without assigning any reason or whatsoever.

The concerned bidder can obtain the reason for rejection of his/her bid, bidding procedure and conditions of the bid, if he/she chooses to do so by giving a request in writing.

*Director (i/c)*

## ANNEXURE-1

Sr. No	Technical Specification (Description)	Qty
01	<p><b>Open Top Chamber OTC ( Total Number Of 4)</b>            1 Control And 3 Chambers With            (Elevated Temperature (Ambient + Upto 3.5 °C) ,            Elevated CO<sub>2</sub> (Ambient + 450 To 700 ppm )  <b>Size</b> - 3m x 3m x 4m (l x b x h)  <b>Frame</b>- Aluminum Or Non Corrosive, Screw Fix  <b>Foundation</b> - Strong Foundation  <b>Door</b> - Gasket Fitted Doors (Opening Out Side, with Handles and Lock and Key Arrangement) Size 2 Ft X 5 Ft At Least 0.5 Ft Above Ground Level.  <b>Cladding</b> - The chamber to be constructed with 6 mm thick multilayered UV protected polycarbonate sheets. Tightly fixed, providing at least 90% Light Transmission. 4 Agitating Fans at 1 M Height inside the OTC.</p> <p><b>Facility in each of the OTCs</b> : Respective OTC Will have independent Monitoring/Control Facilities for CO<sub>2</sub>, Temperature on Real Time Basis, Monitoring of Humidity with on line data logging and control (Not for humidity) to be provided through pc on real time basis.</p>	4
02	<p><b>Each Of The OTC is able to maintain any levels of CO<sub>2</sub> from ambient + 450 ppm to 700 ppm with ± 5 % of the set value</b> circular ring, with multiple CO<sub>2</sub> release points/sonic Nozzles. The chamber to be provided with CO<sub>2</sub> sensor. Microprocessor based control system to monitor and regulate The CO<sub>2</sub> concentration from ambient + 450 ppm to 700 ppm with ± 5 % of the set value.  <b>Temperature (Ambient to increase (3.5) ± 0.2 °C</b>            Chamber will be fitted with 4 ceramic infra red heaters with controller for canopy temperature elevated up to 3.5 °C, having provision for adjustable height above crop canopy up to minimum 2m with ease height adjustment.</p>	
03	<p><b>Sensor Head Specification:</b>  <b>CO<sub>2</sub> Sensor</b> : NDIR Method            Measurement Range : 0 - 2,000 ppm            Warm-Up Time : &lt;60 Seconds            Resolution : ± 10 ppm</p>	4
04	<p><b>Temperature Sensor:</b>            Temperature Range : 0-100 °C            Accuracy : 0.2 °C            Sensor: Thermistor/PT100</p>	4
05	<p><b>Humidity Sensor:</b>            Power Supply 12-36 V DC            Humidity Working Range : 0-100% RH            Humidity Sensing Element : Polymer Humidity Capacitor            Output For Humidity : 0-5 V DC Or 0-10 V DC Or 4 – 20 Ma            Accuracy Of Humidity ± 2% RH            Repeatability ±0.3% RH            Sensitivity For Humidity 0.1%RH            Drift Rate Per Year ±0.5% RH</p>	4

06	<p><b>PAR Specification</b></p> <ul style="list-style-type: none"> <li>• Range 0 to 2000 <math>\mu\text{mol m}^{-2} \text{s}^{-1}</math> (in full sun)</li> <li>• Absolute accuracy <math>\pm 5\%</math> (full scale)</li> <li>• Repeatability <math>\pm 1\%</math></li> <li>• Resolution 1 <math>\mu\text{mol m}^{-2} \text{s}^{-1}</math></li> </ul>	2
07	<p><b>Infrared Heaters :</b></p> <ul style="list-style-type: none"> <li>• Type : Ceramic Infrared</li> <li>• Number of heaters per ring <math>\geq 4</math></li> <li>• Size: 240-250 mm x 40-60 mm</li> <li>• Power: 1000 w/230V or better</li> <li>• Reflector : MS powder coated body with SS304 reflector</li> </ul> <p>Control: Automatic adjustable to maintain crop canopy temperature from ambient to <math>+3^{\circ}\text{C}</math></p>	2
08	<p><b>DATA Logger / DATA Scanner:</b></p> <p>Data logging system will run on its own (independent of PC) window based data logging and control system will be supplied with latest PC / accessories and original software. Data logging at every minute with sufficient data storage facility and separate excel sheet to be generated for averaging of the parameters on hourly basis.</p>	3
09	<p><b>Monitoring And Control Facilities (Control Panel) :</b></p> <p>Each chamber to have independent monitoring and regulating facilities for <math>\text{CO}_2</math>, temperature. Accessories like solenoid valves, PU tubing, connectors, instrument and electrical wiring.</p>	1 set
10	<p><b>Accessories :</b></p> <ul style="list-style-type: none"> <li>• <math>\text{CO}_2</math> cylinder: 6 nos (47 lit capacity) to be supplied with test certificates</li> <li>• <math>\text{CO}_2</math> manifold: For 4 cylinders with regulators and heating system.</li> </ul>	1 set
11	<p>Supervisory Control And Data Accusation System (SCADA) Hardware (SCADA Software with more than 800 IO point license software) and Licensed Software And Other Accessories.</p>	1 set
12	Installation and Commissioning	-
13	Every month one visit of engineer is compulsory for smooth functioning of system during warranty period.	
14	<p><b>Warranty</b></p> <p>For two year from the date of supply/inspection /Installation</p>	
15	<p><b>Spares</b></p> <p>For 3 years operation</p>	
16	<p><b>Experience</b></p> <p>Minimum 05 order copies of executed on similar line of project to be provided by bidders from universities/research organization/Govt institute/international research organization/others. The order experience should include vast experience and manpower support in the relevant field of climate change studies. Bidder may provide documentary evidence to support their credentials.</p>	