



भा.कृ.अनु.प. . गन्ना प्रजनन संस्थान,  
ICAR - SUGARCANE BREEDING INSTITUTE  
कोयम्बतूर / COIMBATORE - 641 007  
तमिलनाडु /TAMILNADU

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**NOTICE INVITING TENDER THROUGH GOVERNMENT e-MARKETING (GeM)  
TOWARDS SEQUENCING OF "METAGENOMIC ANALYSIS OF SUGARCANE  
ENDOPHYTIC BACTERIA" AT ICAR-SUGARCANE BREEDING INSTITUTE,  
COIMBATORE, TAMIL NADU**

Online Bids under two bid systems (viz. Technical Bid & Financial bid) is invited on behalf of the Director, ICAR-Sugarcane Breeding Institute, Coimbatore - 641007 (Tamilnadu) through GeM.

The details of tender is enumerated in the following annexures. Please read the annexures attached before bidding.

**Annexure-I - "Terms for Delivery of Goods"**

**Annexure II - "Technical specifications of "Metagenomic analysis of sugarcane endophytic bacteria"**

**IMPORTANT NOTES: -**

- 1) Bids received on GeM portal only will be considered. Bids in any other form sent through sealed cover/email/post/fax etc. will be rejected.
- 2) ICAR - SBI reserves the right to accept / reject any or all the tenders in part / full without assigning any reason thereof.
- 3) Any change / corrigendum/ extension of opening date in respect of this tender shall be issued through websites only and no press notification will be issued in this regard. Bidders are therefore requested to regularly visit our website for updates.
- 4) In case, any holiday is declared by the Government on the day of opening, the tenders will be opened on the next working day at the same time. The Institute reserves the right to accept or reject any or all the tenders.
- 5) The bidders are required to furnish / upload copies of the following documents:
  - I. Signed & scanned copy of Firm's registration.
  - II. Signed & scanned copy of GST Registration certificate.



III. **Technical Bid** : Signed and Scanned Copy of Completely filled Technical Verification data sheet (Technical Compliance Statement) must be submitted for each quoted configuration.

**SIGNED AND SCANNED COPY OF MAKE AND MODEL OF ALL SYSTEMS, SUB SYSTEMS AND ADDITIONAL ITEMS SHOULD BE MENTIONED IN THE TECHNICAL BID AND COMPLETE TECHNICAL DETAILS ARE TO BE PROVIDED IN THE FORM OF BROCHURES AND WRITE-UPS, FAILING WHICH THE TECHNICAL BID OF THE FIRM WILL BE REJECTED SUMMARILY.**

IV. **Financial bid** : Financial bid indicating item-wise price for the items mentioned in the technical bid is to be uploaded separately.

**THE BIDS WITHOUT THE ABOVE DOCUMENTS WILL BE REJECTED SUMMARILY.**

6) Bidders are required to furnish the following undertaking :

We agree to supply the above goods and allied services. We confirm that the same will meet the description, specification and other technical details as required in the tender enquiry.

We conform that we agree to all other terms and conditions of your tender enquiry including the terms of delivery, period of delivery and warranty provision.

We have furnished all the information, as required in the tender enquiry and attached the relevant documents.

(In case a tenderer desires to put some additional/modified stipulations, terms and conditions etc. the same may be clearly indicated).

  
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i. **Terms of delivery:**

Delivery site : ICAR-SUGARCANE BREEDING INSTITUTE, COIMBATORE-641007 (TAMIL NADU).

**Performance Security:** To ensure due performance of the contract, performance security is to be furnished by the successful bidder for an amount of 3% of the value of the goods as fixed by the Competent Authority in the form of Account payee Demand draft / Fixed Deposit Receipt / Bank Guarantee in favour of the Director, ICAR-Sugarcane Breeding Institute, Coimbatore payable at Coimbatore to be furnished within 15 days from the date of issue of award of contract. Performance Security is not required upto the value of Rs.5.00 Lakhs for the Goods & Services purchased through GeM.

ii. **Delivery period for goods & services:** Within 30 days from the date of the purchaser's signing the contract/supply/work order.

iii. **Erection/installation and commissioning (if required, depending on the goods ordered) :** To be completed within 10 days of delivery of the goods at site.

iv. **Payment Terms:** Payment will be made after delivery of the item and satisfactory installation of the item.

v. **Price structure:**

- a) The tenderer shall quote for the complete requirement of goods and services and for the full quantity as shown against in **Annexure –II**.
- b) The rates and prices quoted shall be in Indian Rupees only.
- c) Two percent (2.0%) of the total billed amount will be deducted towards TDS on GST and the same will be remitted to the GST Department concerned.
- d) All duties, taxes and levies payable by the supplier under the contract shall be included in the quoted price. The purchaser will not pay any such duties, taxes and levies separately.
- e) The rates and prices quoted by the supplier shall remain firm and fixed during the currency of the contract and shall not be subject to variation on any account, whatsoever, including statutory variations, if any.

vi. **Receipt of goods and terms of payment:**

- a) **Payment term for supply of goods, including erection/ installation and commissioning (as and if applicable): -**

Immediately on receiving the goods at site, the purchaser will verify the quantities of the items supplied as specified in the delivery challan of the supplier and also check for any superficial damage etc. in the goods so supplied and issue a provisional receipt accordingly. If the goods supplied do not require erection/installation and commissioning at site, the purchaser, within three



working days of issue of the provisional receipt, will issue acceptance certificate (of the goods) to the supplier, provided the goods supplied are acceptable in terms of the contract. However, if the goods supplied also need erection/installation and commissioning, the purchaser will issue acceptance certificate within two working days, after successful erection/installation and commissioning. The supplier will then send its invoice along with the purchaser's acceptance certificate and other accompanying documents to the paying authority for payment.

The paying authority will release the full payment to the supplier as due in terms of the contract, within fifteen working days of receipt of supplier's invoice, purchaser's receipt certificate and other accompanying documents, provided the same are in order.

After release of payment to the supplier as per sub-para (a) above and after successful completion of training of the operator(s) in terms of the contract, the purchaser will immediately issue a certificate to this effect to the supplier. The supplier will thereafter send its invoice for training charges, along with the above certificate to the paying authority. The paying authority will release the payment to the supplier in terms of the contract within fifteen days of receipt of supplier's invoice provided the invoice and the accompanying documents are in order.

**PAYING AUTHORITY: THE DIRECTOR, SUGARCANE BREEDING INSTITUTE,  
COIMBATORE - 641 007.**

**viii. Liquidated Damage Clause:**

If any time during the performance of the contract, the supplier encounters conditions hindering timely delivery of the goods, the supplier shall promptly inform the purchaser in writing the fact of the delay and the likely duration of the same. After receipt of supplier's communication, the purchaser shall decide as to whether to cancel the contract for the un-supplied portion after the existing delivery period, or to extend the delivery period suitably issuing an amendment to the contract. If the supplier fails to deliver the goods and/or perform the services within the contractual delivery period for reasons other than circumstances beyond supplier's control (which will be determined by the purchaser) and the purchaser extends the delivery period, the purchaser will also deduct from the contract price, as liquidated damages, a sum equivalent to 0.5% (half per cent) of the delivered price of the delayed goods or unperformed services for each week of delay or part thereof until actual delivery or performance. The maximum limit of such deduction will, however, be 10% (ten per cent) of the contract price of the delayed goods or services.

Further, during such delayed period of supply and/or performance, the supplier shall not be entitled to any increase in price and cost, whatsoever, on any ground. However, the purchaser shall be entitled to the benefit of any decrease in price and cost on any ground, whatsoever, of the goods and services, supplied during the period of delay.

**ix. Warranty Clause: Two Years**



x. **Dispute Resolution Mechanism**

If any dispute or difference arises between the purchaser and the supplier relating to any matter connected with the contract, the parties shall make every effort to resolve the same amicably by mutual discussions. However, if the parties fail to resolve the dispute or difference by such mutual discussion within 30 days, either the purchaser or the supplier may give notice to the other party of its intention to refer the same to arbitration. The arbitration shall commence thereafter. The arbitration shall be conducted by a sole arbitrator, who will be appointed by the Secretary, ICAR and the procedure to be followed in this respect will be as per the Indian Arbitration and Conciliation Act, 1996. The venue of the arbitration shall be the place from where the contract is issued.

You are also required to fulfill the following conditions:

1. Please indicate if you are currently registered with any Govt. organization and if registered, furnish all relevant details.
2. Please state whether business dealings with you presently stand banned by any Government organization and, if so, furnishes relevant details.
3. The supplier shall at all times indemnify the purchaser, at no cost to the purchaser, against all third party claims of infringement of patent, trade mark or industrial design rights arising from the use of the goods or any part thereof, with respect to the goods quoted by the supplier in its offer.
4. The contract shall be governed by the laws of India and interpreted in accordance with such laws.
5. The **QUOTATION / OFFER SHALL REMAIN VALID FOR ACCEPTANCE FOR A PERIOD NOT LESS THAN 180 DAYS** after the specified date of opening of the offers.
6. Notwithstanding the above, the purchaser reserves the right to accept or reject any quotation or annul the tendering process and reject all quotations at any time prior to award of the contract, without assigning any reason, whatsoever, and without incurring any liability or obligation, whatsoever, to the affected tenderer or tenderers.
7. At the time of awarding the contract, the purchaser reserves the right to increase or decrease by up to 25%, the quantity of goods and services as specified in the list of requirements, without any change in the unit price or other terms and conditions.
8. The Successful Bidder shall have to furnish the **PERFORMANCE SECURITY** in the form of Account Payee Demand Draft / Fixed Deposit Receipt / Bank Guarantee from a Commercial bank in favour of the Director, ICAR-Sugarcane Breeding Institute, Coimbatore for an amount of 3% contract value, valid up to 60(sixty) days after the date of completion of all contractual obligations by the Supplier, including the warranty obligations. Performance Security is not required upto the value of Rs.5.00 Lakhs for the Goods & Services purchased through GeM.

  
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**Specifications for metagenomics analysis of sugarcane endophytic bacteria  
(Whole 16S rRNA Amplicon Sequencing with downstream data analysis)**

**Sample details:**

- Total no. of Samples: 45
- Sample type: Plant (for analysis of endophytic bacterial microbiome)

**Other relevant information:**

- Based on our preliminary analysis, at least 500 bacterial species are expected per sample.

**Detailed specifications:**

- Amplification of whole 16S rRNA coding regions (~ 1500 bp) with high quality kits followed by purification, quality checks and library preparation. Primers used for amplification should amplify the whole 16S rRNA region (V1-V9), so as to sequence the entire 16S regions of approximately 1500 bp. All these steps/procedures/kits should be in line with Nanopore sequencing platform.
- Amplicon Sequencing using the Nanopore platform (GridION/PromethION). It should generate at least 100000 reads per sample.
- Oxford Nanopore sequencing quality should ensure that the Q20 values of the sequenced bases are more than 85%.
- Average Phred quality score should be assessed and read filtering should be performed to retain 1300–1950 bp sequences for the V1-V9 regions.
- Should provide the following deliverables.
  - Raw data QC & summary.
  - Sequencing statistics
  - Raw data in FASTQ format for each sample
  - Alpha diversity (Chao1, ACE, Shannon, Simpson and Fisher indices plot *etc* and excel data).
  - Beta diversity (Comparison between samples or group includes significant OTUs, Unique and common OTUs and Heatmap).
  - Barplots for Phylum, Genus, Species *etc*
  - Heatmaps for Phylum, Genus and Species *etc*
  - PCoA plot
  - Rarefaction curve
  - Contig length distribution histogram
  - OTU abundance data for phylum, genus and species in excel
  - OTU relative abundance data in excel
  - Krona charts
  - Comprehensive compiled report & data must be provided.
  - Comparative analysis of bacterial microbiome of different samples.
  - Any other relevant analysis results



## Essential Terms and Conditions

- Participating vendor should have their own GridION/PromethION Nanopore Sequencing Instrument (should enclose a certificate for it). If required committee can visit and check the facility of participating companies. The bidder should provide proof of in-house Nanopore Sequencing facility, Bioinformatics analysis facility and expertise of their own.
- The price quoted must be valid for two years and DSIR certificate should be enclosed for the same. Service provider should be certified as per ISO Standards.
- DNA samples should be collected from ICAR-SBI, Coimbatore and transported in dry ice. Sample purification and QC check-up by Agilent Bio Analyzer (preferable) or Qubit should be performed by the service provider. Data generated from quality check passed samples should be comparable to other samples. Firm must generate the comparable data (without any additional charges). If the generated data found to be deviating significantly from other samples, necessary actions have to be taken by the firm to procure the samples again from us and process them without additional cost. Also, if there is any error in sequencing or bioinformatics analysis, it should be rectified without any additional charges.
- Price should be quoted as per sample cost.
- Samples or data should not be outsourced to any third party (other than the quoted firm) or outside India at any stage.
- Firm should maintain the confidentiality of the data.
- The service provider should have well supported bioinformatics expertise to execute the given specifications.
- References of the previous work records and/or publications in high throughput metagenomic/microbiome analysis of more than 10 samples using Nanopore sequencing platform should be provided.
- Validity of the quotation should be for 24 months.
- Assistance should be provided for submission of datasets to NCBI, if required.
- Data analysis training must be provided at their site of analysis and participation of the trainee(s) at any point of the study is required.
- Further assistance on the part of data analysis, as and when required (at least for the period of 12 months from the date of handing over the analysed data).

  
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