



ज्वार अनुसंधान निदेशालय
DIRECTORATE OF SORGHUM RESEARCH
(भारतीय कृषि अनुसंधान परिषद/Indian Council of Agricultural Research)
राजेन्द्रनगर, हैदराबाद/Rajendranagar, Hyderabad-500030
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Tender document

No: NAIP/7/12-13/ST

Date: 03/12/2012

The Director, Directorate of Sorghum Research, Rajendranagar, Hyderabad – 500 030 invites sealed bids from eligible bidders say manufacturers / authorized dealers / stockiest for the purchase of the following equipments.

INVITATION FOR QUOTATIONS FOR SUPPLY OF GOODS UNDER NATIONAL SHOPPING PROCEDURES

To

Dear Sirs,

Sub: INVITATION FOR QUOTATIONS FOR SUPPLY OF 'SNP discovery and analysis in Sorghum' SERVICES AS DESCRIBED

1. You are invited to submit your most competitive quotation for the following goods:-

Brief Description of the Goods	Specifications*	Quantity	Delivery Period	Place of Delivery	Installation Requirement if any
SNP discovery and analysis by GBS in Sorghum	6000 to 8000 genome-wide SNPs	96 genotypes	30 days	Stores Officer, DSR, Rajendranagar, Hyderabad 500 030	Nil

* Where ISI certification marked goods are available in market, procurement should generally be limited to goods with those or equivalent marking only.

Detailed description

Specifications for Modified RAD sequencing for *Sorghum bicolor* (Reference Based)

1. Sequencing by using modified RAD (Restriction site Associated DNA) technology for mining out SNPs across the genome.
 2. Total number of genotypes to be analyzed: 96
 3. Genome optimization should be performed before final library preparation, with various restriction enzymes and adapter concentrations to generate libraries with:
 - a. Optimal adapter ratio (both 5' and 3' adaptors)
 - b. low number of repeat sequences
 - c. Uniform fragment distribution well within the Illumina True Seq chemistry fragment range.
 4. High throughput sequencing using Illumina True Seq chemistry on Illumina HiSEQ 2000 platform with **3x coverage**. To yield 6000 to 8000 SNPs genomewide.
 5. Sequencing of 95 plex library in a single Illumina platform with 1 lane of 2X 100 PE run
 6. Data Analysis should include:
 - a. Raw data QC & Filtering as per standard data QC parameters.
 - b. Demultiplexing raw reads into each sample according to the barcodes.
 - c. Assembly/Stacking of high quality filtered reads into Unique 64 base (along with counts for each tag).
 - d. Analysis using Standard **REFERENCE GENOME BASED PIPELINE**. Mapping 64 base tags to the genome to create TAGS on a Physical Map showing:
 - i. Tag Sequence
 - ii. Physical position (chromosome, position & strand)
 - iii. Divergence from reference
 - iv. Polymorphisms (up to 4 variant alleles per tag)
 - v. Analysis to be done using STACKS pipeline (preferably)
 - vi. SNP output in Excel sheets indicating clearly the physical position, linkage group etc mandatory
 - e. Creation of linkage Maps for the entire set of samples using the SNPs derived from above step.
2. Government of India has received a credit from the International Development Association (IDA) in various currencies equivalent to US\$ 14 crores towards the cost of the NAIP Project and intends to apply part of the proceeds of this credit to eligible payments under the contract for which this invitation for quotations is issued.
3. **Bid Price**
- a. The contract shall be for the full quantity as described above. Corrections, if any, shall be made by crossing out, initialing, dating and re writing.
 - b. All duties, taxes and other levies payable on the raw materials and components shall be included in the total price.
 - c. Sales tax in connection with the sale shall be shown separately.

- d. The rates quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.
- e. The Prices shall be quoted in Indian Rupees only.

4. Each bidder shall submit only one quotation.

5. **Validity of Quotation**

Quotation shall remain valid for a period not less than 15 days after the deadline date specified for submission.

6. **Evaluation of Quotations**

The Purchaser will evaluate and compare the quotations determined to be substantially responsive i.e. which

- a. are properly signed ; and
- b. conform to the terms and conditions, and specifications.

The Quotations would be evaluated separately for each item.

Sales tax in connection with sale of goods shall not be taken into account in evaluation.

7. **Award of contract**

The Purchaser will award the contract to the bidder whose quotation has been determined to be substantially responsive and who has offered the lowest evaluated quotation price.

7.1 Notwithstanding the above, the Purchaser reserves the right to accept or reject any quotations and to cancel the bidding process and reject all quotations at any time prior to the award of contract.

7.2 The bidder whose bid is accepted will be notified of the award of contract by the Purchaser prior to expiration of the quotation validity period. The terms of the accepted offer shall be incorporated in the purchase order.

8. Payment shall be made immediately after delivery of the goods.

9. Normal commercial warranty/ guarantee shall be applicable to the supplied goods.

10. You are requested to provide your offer latest by **11.00.hours** on **15th DECEMBER2012**

11. We look forward to receiving your quotations and thank you for your interest in this project.

Administrative Officer
DSR, Rajendranagar
Hyderabad