

# प्याज एवम लहसुन अनुसन्धान निदेशालय राजगुरुनगर, पुणे - ४१०५०५ (महाराष्ट्र)

## DIRECTORATE OF ONION AND GARLIC RESEARCH RAJGURUNAGAR, PUNE – 410 505, (Maharashtra)

### प्याज एवम लहसुन अनुसन्धान निदेशालय राजगुरुनगर, पुणे के लिए उपकरण खरीदी हेतु निविदा फॉर्म-

महत्वपूर्ण बातें:-

१. निविदा दस्तावेज फार्म का मूल्य रुपए ५००/- (पांच सौ) मात्र है।
२. प्रत्येक उपकरण हेतु आवश्यक ई.एम.डी. राशि का विवरण अंदर दिया गया है।
३. निविदा दस्तावेज फार्म की बिक्री दिनांक १८/११/२०१३ से शुरू है, समय सभी कार्य दिवस में - १०.०० से १६.०० बजे तक है।
४. निविदा दस्तावेज फार्म की बिक्री की अंतिम तिथि दिनांक १३/१२/२०१३ है, समय - शाम १६.०० बजे तक है।
५. मुहरबंद निविदा दस्तावेज जमा करने की अंतिम तिथि दिनांक १७/१२/२०१३ है, समय - १३.०० बजे तक।
६. निविदा दस्तावेज खोलने की अनुसूचित तिथि दिनांक १७/१२/२०१३ और समय १४.०० बजे है।
७. निविदा दस्तावेज खोलने का स्थान प्याज एवम लहसुन अनुसन्धान निदेशालय राजगुरुनगर, पुणे का सम्मेलन कक्ष है।

**Tender for purchase of Equipments for Directorate of Onion and Garlic Research, Rajgurunagar.**

### Important Points:-

1. Cost of Tender Document Form is Rs.500/-(Five Hundred) only.
2. Required EMD amount for each equipment is mentioned in tender form.
3. Sale of Tender document form start from 18/11/2013, from 1000 hrs to 1600 hrs on all working days.
4. Last date of sale of Tender form is 13/12/2013 upto 1600hrs.
5. Last date for acceptance of sealed Tender document is 17/12/2013 upto 1300 hrs at this Directorate.
6. Scheduled Date and time for opening of Tender is 17/12/2013 at 1400 hrs onwards.
7. Place for opening of Bids is Conference Room of DOGR Rajgurunagar, Pune.

### पत्राचार हेतु पता/ Address for communication:-

निदेशक/ The Director

प्याज एवम लहसुन अनुसन्धान निदेशालय/ Directorate of Onion and Garlic Research

राजगुरुनगर, पुणे, महाराष्ट्र - / Rajgurunagar, Pune, Maharashtra- 410 505

दूरभाष/ Phone No. (02135) 222026, फैक्स/ Fax: (02135) 224056,

ई मेल/ Email: director@dogr.res.in

वेबसाईट/ Website - <http://www.dogr.res.in>

**Format of Written application for Tender documents**

Tender form fee: Rs 500/-

Date

TO  
THE DIRECTOR  
Directorate of Onion and Garlic Research,  
Rajgurunagar- 410 505  
Dist : Pune (MS)

Sub: Tender Notice for \_\_\_\_\_

Ref : Your Advt. in \_\_\_\_\_ dt. \_\_\_\_\_

Sir,

With reference to above, I am to collect the said Tender document on behalf of M/s.

\_\_\_\_\_ by submitting **Rs.**\_\_\_\_\_ /-

vide D.D. No. \_\_\_\_\_ dt. \_\_\_\_\_ towards Tender fee for

\_\_\_\_\_.

The receipt of the same may kindly be acknowledged.

Yours faithfully,

Encl: as above



# प्याज एवम लहसुन अनुसन्धान निदेशालय

(भारतीय कृषि अनुसंधान परिषद)  
**DIRECTORATE OF ONION AND GARLIC RESEARCH**  
 (Indian Council of Agricultural Research)  
 Rajgurunagar, Pune-410505(Maharashtra)  
 Phone No.(02135) 222026, Fax: (02135) 224056, Email: director@dogr.res.in



TENDER No15-61/SP/TN/2013-14/

Dated: 13/11/2013

## TENDER NOTICE

On behalf of the Secretary, ICAR, the Director, Directorate of Onion and Garlic Research, Rajgurunagar, Pune (Maharashtra) 410505 invites sealed tenders from authorized/registered and reputed manufacturers/firms from India and abroad and/or their Indian agents for the following items.

S.No.	Equipment	Qty required	EMD Amount in Rs.
1	Laminar Air Flow Chamber	2	8000.00
2	Stereo Binocular Microscope	1	6000.00
3	Split AC with Voltage Stabilizer	4	4000.00
4	Tissue Culture Racks	10	10000.00
5	Photoperiodic Timer	3	2000.00
6	Autoclave (Vertical)	2	4000.00
7	UPS/ Stabilizer for AC	1	8000.00
8	Vertical Gel electrophoresis System with Power Pack	1	3500.00
9	Gel Documentation System	1	16000.00
10	Ultra low temperature Deep Freezer (-80 degree C)	1	14000.00
11	Orbital Shakar	1	3000.00
12	Mini Transblot Unit	1	3000.00
13	Head Space Gas Analyser	1	3000.00
14	Water Activity Meter	1	2000.00
15	Deep Freezer (-20 degree C)	1	2000.00
16	Refrigerator	1	2000.00
17	Flow Cytometer	1	4000.00
18	Laminar Air flow Cabinet	1	4000.00
19	Autoclave (Vertical)	1	2000.00
20	Stereozom Microscope with Photographic Attachment	1	16000.00
21	Yoder Apparatus (Wet Sieve Shaker of any reputed make)	1	10000.00
22	Double Ring Infiltrometer	2	2400.00
23	Tractor mounted HTP sprayer	1	3000.00
24	Laying of irrigation line	1	2000.00
25	Laying of pop-ups for Sprinkler	1	6000.00
26	Diesel Generated Set (D.G.Set)- 250 KVA (under buy-back of 63 KVA Kirlosker make DG Set)	1	30000.00

- The tender document form along with specifications is available at DOGR's Website ([www.dogr.res.in](http://www.dogr.res.in)) and must be submitted along with a non-refundable tender fees of Rs. 500/- (Five hundred) only for each case separately. Downloaded forms will not be accepted without Bank Demand Draft, and treated as rejected. For complete details log on to <http://www.dogr.res.in>.
- A complete set of bidding documents can also be purchased by the bidders on any working day at this Directorate from 18/11/2013 to 13/12/2013 between 10.00 to 16.00 hrs., upon a payment of Rs.500 (Five hundred) only in the form of cash or Demand Draft drawn in favour of "ICAR Unit DOGR, Rajgurunagar" payable at SBI, Rajgurunagar branch.
- Interested firms should submit Technical and Financial Bids separately in different sealed covers superscribed "Technical bid" and "Financial bid". **Technical bid** consists of all technical specifications of the equipment along with EMD, necessary documents, terms & conditions, while **Financial bid** indicate price of equipment/item as mentioned above. Further both sealed covers should be kept in a separate sealed cover superscribed as **Tender for:- "Equipment Name", tender no..... dated.....** The financial bid will be opened only for technically qualified bidders.

4) **Tender schedule:**

Start of sale of tender form at DOGR	Last date for issuing of tender form	Last date for submission of tender form at DOGR	Date & time for opening of technical bids at DOGR
18/11/2013 1000 to 1600 hrs.	13/12/2013 upto 1600 hrs	17/12/2013 upto 1300 hrs	17/12/2013 at 1400 hrs

- Duly filled tender form (Separate for each equipment) along with EMD amount (Separately) must be delivered to the office upto 17/12/2013 on or before 1300 hrs. Late bids will be rejected.
- The defaulting contractors/agencies, whose services were terminated/discontinued either by this Institute or any other Institute of ICAR on account of various lapses, need not apply please and those who have been black listed by any Govt. Department also need not apply. A declaration to this effect should be submitted with the technical bid.
- In the event of the above date being declared as a holiday/closed day or any unavoidable circumstances for the bidder, the bids will be soled/received/opened on the next working day at the appointed time.
- Director, DOGR, reserves the right to accept/reject any or all the tenders without assigning any reason.

Sd/-  
Administrative Officer



# प्याज एवम लहसुन अनुसंधान निदेशालय

(भारतीय कृषि अनुसंधान परिषद)  
DIRECTORATE OF ONION AND GARLIC RESEARCH  
(Indian Council of Agricultural Research)  
Rajgurunagar, Pune-410505 (Maharashtra)  
Phone No. (02135) 222026, Fax: (02135) 224056, Email: director@dogr.res.in



निविदा संख्या- 15-61/एसपी./टीएन/2013-14/

दिनांक: 13/11/2013

## निविदा नोटिस

सचिव, भारतीय कृषि अनुसंधान परिषद की ओर से निदेशक, प्याज और लहसुन अनुसंधान निदेशालय, राजगुरुनगर, पुणे (महाराष्ट्र) द्वारा अधिकृत / पंजीकृत और प्रतिष्ठित निर्माताओं/ कंपनियों और विदेश में और / या उनके भारतीय एजेंटों से निम्नलिखित उपकरण खरीदी हेतु मुहरबंद निविदाएं आमंत्रित की जाती हैं।

क्र.सं.	उपकरण का नाम	आवश्यक संख्या	बयाना जमा राशि(ई.एम.डी.)रूपये में
1	Laminar Air Flow Chamber	2	8000.00
2	Stereo Binocular Microscope	1	6000.00
3	Split AC with Voltage Stabilizer	4	4000.00
4	Tissue Culture Racks	10	10000.00
5	Photoperiodic Timer	3	2000.00
6	Autoclave (Vertical)	2	4000.00
7	UPS/ Stabilizer for AC	1	8000.00
8	Vertical Gel electrophoresis System with Power Pack	1	3500.00
9	Gel Documentation System	1	16000.00
10	Ultra low temperature Deep Freezer (-80 degree C)	1	14000.00
11	Orbital Shaker	1	3000.00
12	Mini Transblot Unit	1	3000.00
13	Head Space Gas Analyser	1	3000.00
14	Water Activity Meter	1	2000.00
15	Deep Freezer (-20 degree C)	1	2000.00
16	Refrigerator	1	2000.00
17	Flow Cytometer	1	40000.00
18	Laminar Air flow Cabinet	1	4000.00
19	Autoclave (Vertical)	1	2000.00
20	Stereozom Microscope with Photographic Attachment	1	16000.00
21	Yoder Apparatus (Wet Sieve Shaker of any reputed make)	1	10000.00
22	Double Ring Infiltrometer	2	2400.00
23	Tractor mounted HTP sprayer	1	3000.00
24	Laying of irrigation line	1	2000.00
25	Laying of pop-ups for Sprinkler	1	6000.00
26	Diesel Generated Set (D.G.Set)- 250 KVA (under buy-back of 63 KVA Kirlosker make DG Set)	1	30000.00

- निर्देशों के साथ निविदा दस्तावेज प्रपत्र डी.ओ.जी.आर.की वेबसाइट ([www.dogr.res.in](http://www.dogr.res.in)) पर उपलब्ध है और प्रत्येक मामले के लिए 500/- (पांच सौ) रुपये की एक गैर वापसी निविदा शुल्क के साथ प्रस्तुत किया जाना चाहिए। डाउनलोड किया हुआ निविदा दस्तावेज बैंक डिमांड ड्राफ्ट के बिना स्वीकार नहीं किया जाएगा और खारिज कर दिया जायेगा। अधिक जानकारी के लिए <http://www.dogr.res.in> पर लॉग ऑन करें।
- निविदा दस्तावेज का एक पूरा सेट प्रत्येक मामले के लिए अलग 500/- (पांच सौ) रुपये के नगद/बैंक डिमांड ड्राफ्ट द्वारा भुगतान करने पर, निदेशालय में दिनांक 18/11/2013 से 13/12/2013 तक किसी भी कार्य दिवस पर 10.00 से 16.00 बजे तक खरीदा जा सकता है। बैंक डिमांड ड्राफ्ट "आई.सी.ए.आर. यूनिट डी.ओ.जी.आर." के पक्ष में भारतीय स्टेट बैंक राजगुरुनगर शाखा पर देय होना चाहिए।
- इच्छुक कंपनियों को "तकनीकी बोली" एवं "वित्तीय बोली" को अलग-अलग लिखे मुहरबंद लिफाफों में डालकर प्रस्तुत करना चाहिए। तकनीकी बोली लिफाफे में ई.एम.डी. के साथ उपकरण की सभी तकनीकी विशिष्टताओं के साथ आवश्यक दस्तावेज, नियम एवं शर्तें होनी चाहिए जबकि वित्तीय बोली लिफाफे में उपकरण/मदवार कीमत का विवरण होना चाहिए। इसके बाद दोनों मुहरबंद लिफाफों को एक अलग मुहरबंद लिफाफे में डालकर "उपकरण का नाम", निविदा संख्या....., दिनांक..... हेतु निविदा बाहर लिखकर प्रस्तुत करना चाहिए।
- निविदा अनुसूची:

डी.ओ.जी.आर. में निविदा फार्म की बिक्री का प्रारंभ	निविदा फार्म के जारी करने की अंतिम तिथि	डी.ओ.जी.आर. में निविदा फार्म जमा करने की अंतिम तिथि	डी.ओ.जी.आर. में तकनीकी निविदा खोलने के लिए तिथि और समय
18/11/2013	13/12/2013	17/12/2013	17/12/2013
1000 से 1600 बजे तक	1600 बजे तक	1300 बजे तक	1400 बजे
- विधिवत भरे हुए निविदा प्रपत्र (अलग-अलग) ई.एम.डी. राशि के साथ (प्रत्येक उपकरण के लिए अलग) कार्यालय में 17/12/2013 तक 1300 बजे या पहले तक पहुंच जाना चाहिए। देरी वाली निविदाओं को खारिज कर दिया जाएगा।
- ऐसे दोषी ठेकेदारों के कारण एजेंसियां जिनकी सेवाओं को इस संस्थान या भारतीय कृषि अनुसंधान परिषद के किसी भी अन्य संस्थान द्वारा विभिन्न खामियों/समाप्त/बंद किया गया है उन्हें आवेदन करने की आवश्यकता नहीं है। साथ ही किसी भी सरकारी विभाग द्वारा काली सूची में डाले गये आवेदकों को आवेदन करने की आवश्यकता नहीं है। इस विषय में एक घोषणा तकनीकी निविदा के साथ प्रस्तुत करनी चाहिए।
- उपरोक्त तिथियों के अवकाश घोषित होने या किसी भी अपरिहार्य परिस्थितियों में ऊपर वर्णित निविदा अनुसूची कार्यक्रम अगले कार्य दिवस को नियत समय पर होगा।
- निदेशक, डी.ओ.जी.आर., बिना कोई कारण बताए किसी भी या सभी निविदाओं को स्वीकार/अस्वीकार करने का अधिकार सुरक्षित रखते हैं।

सही/-

प्रशासनिक अधिकारी



# प्याज एवम लहसुन अनुसन्धान निदेशालय

(भारतीय कृषि अनुसन्धान परिषद)  
DIRECTORATE OF ONION AND GARLIC RESEARCH  
(Indian Council of Agricultural Research)  
Rajgurunagar, Pune-410505 (Maharashtra)  
Phone No. (02135) 222026, Fax: (02135) 224056, Email: director@dogr.res.in



TENDER No15-61/SP/TN/2013-14

Dated: 13/11/2013

Start of sale of tender form at DOGR	Last date for issuing of tender form	Last date for submission of tender form at DOGR	Date & time for opening of technical bids at DOGR
18/11/2013 1000 to 1600 hrs.	13/12/2013 upto 1600 hrs	17/12/2013 upto 1300 hrs	17/12/2013 at 1400 hrs

**N.B.: Tender should be submitted in two bid system in the manner prescribed in the NIT.**

**Name of the equipment:** \_\_\_\_\_

**Item No. :** \_\_\_\_\_

**TENDER FORM HAS TO BE PURCHASED AND SUBMITTED SEPERATELY IN SEALED ENVELOPES.**

To,

M/s. ....

**Sub: Supply of Tender Form - reg.**

Dear Sir,

With reference to your application dated \_\_\_\_\_, please find enclosed herewith tender form along with the detailed specifications receipt \_\_\_\_\_ Dated \_\_\_\_\_ for Rs \_\_\_\_\_ for the supply of equipment.

Kindly acknowledge the receipt of the same.

Yours faithfully,

**Administrative Officer**

**DIRECTORATE OF ONION AND GARLIC RESEARCH, RAJGURUNAGAR**

**INVATATION TO TENDER AND INSTURCTION TO TENDERERS**

**01. NOTE :** - All communication must be addressed to Director, Directorate of Onion and Garlic Research, Rajgurunagar – 410 505 by designation only.

From :

The Director,  
Directorate of Onion and Garlic Research,  
Rajgurunagar- 410 505  
Dist : Pune (MS)

To:-

Dear Sir's,

On behalf of the President of Indian Council of Agricultural Research, New Delhi invites tenders for the purchase of equipments as per Annexure –I , where in the name of the equipment and specifications are mentioned . The condition of contract which will govern any contract made, are those contained in the general conditions of contract, applicable to the contractor placed by the Directorate of Onion and Garlic Research, and the special conditions detailed in the tender form (and those attached in accordance with the requirement stated in the attached schedule) please submit your quotations to this office.

Administrative Officer

**01. EARNEST MONEY:**

Earnest Money should be deposited through Demand Draft drawn on **State Bank of India, Rajgurunagar in favour of 'ICAR Unit- DOGR, Rajgurunagar'**.

Amount of Earnest Money to be deposited as under:

S. No.	Equipment	Qty required	EMD Amount in Rs.
1	Laminar Air Flow Chamber	2	8000.00
2	Stereo Binocular Microscope	1	6000.00
3	Split AC with Voltage Stabilizer	4	4000.00
4	Tissue Culture Racks	10	10000.00
5	Photoperiodic Timer	3	2000.00
6	Autoclave (Vertical)	2	4000.00
7	UPS/ Stabilizer for AC	1	8000.00
8	Vertical Gel electrophoresis System with Power Pack	1	3500.00
9	Gel Documentation System	1	16000.00
10	Ultra low temperature Deep Freezer (-80 degree C)	1	14000.00
11	Orbital Shaker	1	3000.00
12	Mini Transblot Unit	1	3000.00
13	Head Space Gas Analyser	1	3000.00
14	Water Activity Meter	1	2000.00
15	Deep Freezer (-20 degree C)	1	2000.00
16	Refrigerator	1	2000.00
17	Flow Cytometer	1	40000.00
18	Laminar Air flow Cabinet	1	4000.00
19	Autoclave (Vertical)	1	2000.00
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21	Yoder Apparatus (Wet Sieve Shaker of any reputed make)	1	10000.00
22	Double Ring Infiltrometer	2	2400.00
23	Tractor mounted HTP sprayer	1	3000.00
24	Laying of irrigation line	1	2000.00
25	Laying of pop-ups for Sprinkler	1	6000.00
26	Diesel Generated Set (D.G.Set)- 250 KVA (under buy-back of 63 KVA Kirlosker make DG Set)	1	30000.00

**In no circumstances, government promissory notes, S. B. Pass Book or cheque received with tender as earnest money will be accepted.**

The tender will not be considered if the D.D. of earnest money is not attached with tender form. No request for transfer of any previous deposit of earnest money will be entertained. EMD exempted to those registered with Central Purchase Organization, National Small Industries Corporation (NSIC) or the concerned Ministry or Department.

It is understood that the tender document has been issued to the tenderer and the tenderer is being permitted to tender in consideration of the stipulation on his part that after submitting his tender he will not deviate from his offer or modify the terms and conditions thereof. Should the tenderer fail to observe and comply with the foregoing stipulation the aforesaid amount of EMD will be forfeited. In the event of the offer made by the tenderers not being accepted, the amount of earnest money deposited by the tenderer shall be refunded.

The earnest money should not on any account fall short of the amount actually required.

SIGNATURE WITH STAMP OF THE BIDDERS

**02. PERFORMANCE SECURITY:** Performance Security @ 10 % should deposit by successful bidder irrespective of its registration status etc The Performance security remain valid for a period of sixty days beyond the date of completion of all contractual obligation of the suppliers including warranty obligations.

**03. PREPARATION OF TENDER:**

- a) The Schedule to the tender form should be returned intact whether you are quoting for any item or not. Pages should not be detached but when items are not being tendered for, the corresponding space should be defaced by some such words as 'Not Quoting'.
- b) In the event of space on the schedule form being insufficient for the required purpose, additional pages may be added. Each such additional page must be numbered consecutively bearing the Tender No. and fully signed by you. In such cases reference to the additional pages must be made in the tender form.
- c) If any modification of the schedule is considered, you should communicate the same by means of a separate letter sent with the tender.

**04. SIGNING THE TENDER:**

- a) The tender is liable to be ignored if complete information is not given therein or if the particulars and data (if any) asked for in the schedule to the tender are not fully filled in. Specific attention must be paid to delivery dates and also to the General conditions of the contract as the contract would be governed by them.
- b) Individually signing the tender or other documents connected with a contract must specify whether he signs as:
  - i) A sole proprietor of the firm or constituted attorney of such sole proprietor.
  - ii) A Partner of firm if it be a partnership, firm in which case he must have authority to refer to arbitration dispute concerning the business of the partnership either by virtue of the partnership agreement or a power of attorney,
  - iii) Constituted attorney of the firm if it is a company.

N.B.

- a) In the case of partnership agreement or general power of attorney, in either case attested by a Notary Public, should be furnished unless the same has been previously furnished to Directorate of Onion and Garlic Research or affidavit on stamped paper of all the partners admitting execution of the partnership agreement or the general power of the attorney should be furnished.
- b) In the case of partnership firms, where no authority to refer dispute concerning the business of the partnership has been conferred on any partner, the tender and all other related documents must be signed by every partner of the firm.
- c) A person signing the Tender form or any documents forming part of the contract on behalf of another shall be deemed to warranty that he has authority to bind such other and if, on enquiry it appears that the person so signing had no authority to do so, the

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purchaser may, without prejudice to other civil and criminal remedies cancel the sale contract and hold the signatory liable for all costs and damages.

- d) Each page of the tender, schedule to tender and annexure, schedule to tender and annexure, if any should be signed by the tenderer.
- 05. The following documents copies must be invariably enclosed with the duly filled in the tender as per the terms and conditions of the technical bid/tender document:**
- a) Service tax/Sales tax Registration certification issued by authorized Govt. Dept.
  - b) Permanent Account Number (PAN) issued by authourized Govt. Dept.
  - c) Name and addresses of their Banker
  - d) Last five year continuous experience of the firm in the field of providing such services in of India/reputed public or private organizations. Details to be provided in tabular form in the enclosed proforma.
  - e) Balance sheet of last year certified by the Chartered Accountant.
  - f) The equipment they possess for the manufacture of stores and for quality control.
- 06. DELIVERY OF TENDER:** The original copy of the tender is to be enclosed in a double cover. The inner cover should be sealed. **The outer cover should be superscribed in bold letters “Tender for the supply of .....**” Right is reserved to ignore any tender who fails to comply with the above instructions. All outstation tenders should be sent by registered post only. Only one tender should be included in one cover. Where more than one tender is included in a cover, all tenders so enclosed in one over will be liable to be ignored.
- 07. LATEST HOUR FOR RECEIPT OF TENDER:** Unless and otherwise specified in the schedule to Tender, your tender must reach to this office not later than **13.00 p.m.** on the date of opening of the tender. Tenders sent by hand delivery should be put in the Tender Box at this office not later than **13.00 p.m** on the due date i.e. **17.12.2013**.
- 08. PERIOD FOR WHICH THE OFFER WILL REMAIN OPEN VALID:** The firms tendering should note that their offer should remain open for acceptance for 90 days from the date of opening of tender. If the firms are unable to keep their offer open for the specified period, their tenders are likely to be rejected. Qualified tenders by such vague and indefinite expression such as “SUBJECT TO IMMEDIATE ACCEPTANCE, ‘SUBJECT TO PRIOR SALE’ WILL NOT BE CONSIDERED.
- 09. TERMS OF DELIVERY:** The delivery of equipment’s is required to be completed within 30 days from date of issue of supply order to the store of this centre. If, however, it is not possible effect delivery during the stipulated period you should specify the date by which you can guarantee for delivery and insulation in a prescribed schedule.
- 10. PACKING:** Unless a method of packing is indicated in the specification or on the schedule to the tender form, the method of packing, which the contractor proposes to adopt, must be described in the schedule to tender form.

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- 11. RIGHT OF ACCEPTANCE:** This office does not pledge itself to accept the lowest or any tender and reserves the right of acceptance the whole or any part of tender or portion of the quantity offered. You are at liberty to tender for the whole or any portion or to state in the tender that the rate quoted shall apply only if the entire quantity is taken from you: Acceptance of tender will be communicated within a reasonable time after completion of all official formalities.
- 12.** If an agent in its tender submits quotations on behalf of more than one manufacturer, it is necessary that each such tender is accompanied by a *separate tender form and tender security/EMD for each such quotation* and authorization from the respective Manufacturer.

**13. PRICES:**

I.

- (i) The prices quoted **MUST BE PER UNIT SHOWN** in the schedule and must specify separately all packing and delivery charges. Refunds on account of returnable packages (if any) are to be separately specified. Prices and refund must be clearly shown in figures and words in Indian currency or in foreign currency, if it is imported equipment. Please quote the Indian commission agents if the equipment is imported, which will be paid in Indian Rupees after installation of the equipment.. All bank charges outside India will be borne by the tenderer. L.C. amendment charges will be borne by the tenderer.
- (ii) The price must be stated for each item separately. The percentage of reduction, in the total price for the entire demand should also be quoted, and order to that extent be placed with you.

II.

- a. If it is decided to ask excise duty, Octroi, sales tax or any other charges as extra, the same must be specifically stated in the absence of any such stipulation it will be presumed that the prices include all such charges and no claim for the same will be entertained.
- b. The price quoted by the tenderer should exclusive of sales tax (and should be clearly stated to be so), which will be paid by the purchaser, if legally livable at the rate ruling on the date of supply as specified in the Acceptance of Tender.

**Please note DOGR is eligible for payment of custom only at consessional rates and fully exempted from payment of Central Excise Duty as per Govt. Notification No. 51/96-Customs dated 23 July 1996 and No. 10/97-Central Excise dated 01 March 1997 as amended from time to time respectively.**

**14. CUSTOMS DUTY:**

- (i) For imported stores offered against forward delivery, the tenders shall quote price thereto exclusive of custom duty. **The quotation shall specify separately the F.O.B. Price, C.I.F. Price & the custom Duty payable.** They will also indicate correctly the rate of customs duty applicable along with Indian Customers Tariff number.
- (ii) In cases where all the tenders have quoted only for imported stores against forward delivery the tenders will be on prices exclusive of customers duty. In such cases, the amount of Customs duty as legally livable calculated with reference to the tariff value of the stores declared by the tenders in their tender, but not exceeding the actually paid, will be reimbursed to the successful tender.

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- (iii) Customs Duty actually paid, not exceeding the amount legally livable, will be provisionally reimbursed to the successful tender to the extent of 90% on production of relevant document (bill of entry etc.) along with advance payment of 90% that may be stipulated in contract provided that the said imported stores are delivered in full or before the date quoted in the contract and accepted by the 'DOGR, Rajgurunagar, Pune ' in case of delay in the delivery thereof, only 90% of the Customs duty as defined above will be subject to final adjustment on satisfactory completion of the supply stipulated in the contract, If is a specific condition of this Tender Inquiry that any increase in customs duty payable or paid by the successful tender due to the delivery of the said imported stores or part thereof alter the date of delivery stipulated in the contract shall not be reimbursed.
- (iv) If the purchaser is of the opinion that the Custom Duty has been wrongly assessed either because of wrong classification or any reason whatsoever, the supplier shall be bound at the request of the purchaser to pursue all legal reediest to challenge that assessment at the suppliers cost. If, as a result of such proceedings a refund is obtained, it shall be deposited forthwith by the supplier with the Director, DOGR, Rajgurunagar, Pune, India.

**15. TRANSIT INSURANCE:** The purchaser will pay separately for transit insurance, in case of imported equipments only. The supplier will ensure that the entire stores contracted for arrive in good condition at destination. The consignee will, as soon as possible, but not letter than 30 days of the date of arrival of stores at destination, notify the supplier of any loss or damage to the stores that may have incurred during transit,

**16. PAYMENT:**

- a) Indian Purchase: 90% Payment will be made after completion of supply as per our requirement, specification and balance 10% payment will be made after completion of installation & demonstration to our satisfaction. In no case advance payment will be made.
- b) Abroad Purchase: i) 90% of the contract price shall be paid through irrevocable letter of credit established in favour of the supplier through the suppliers bank A/c. No in abroad payable on production of shipping document within 21 days of shipment and Balance 10% payment will be made after submission of copy of successful completion of installation and demonstration through our bank to your bank.  
  
ii) 100% of the contract price shall be paid through 'Sight Draft/ T.T./ in favour of the supplier through the suppliers bank A/c. No after completion of supply and installation and demonstration through our bank.

**17. TAXES AND OTHER:** All Govt. dues (i.e. Taxes, Octroi, etc.) will be paid at actual.

**18. TERMS AND CONTIONS FOR DELIVERY:** The material should bear very clear indicating FOB/FAB/FAC/CIF/FOR, port of export incase imported equipment's, details of opening Letter of Credit etc.

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- 19. GUARANTEE/ WARRANTY:** The tenders shall furnish along with their quotations the under noted guarantee/ warranty.
- (i) Guarantee that they will supply spare parts if & when required on the agreed basis of or an agreed price. The agreed basis could be an agreed discount on the published catalogues or on agreed percentage of profit on the landed cost.
  - (ii) Warranty to the effect that before going out of production for the spare parts they will give adequate advance notice to the purchaser of the equipment so that the latter may undertake the balance of the life requirements.
  - (iii) The warranty to the effect that they will make available operation manual (s), the blueprints or drawings of the equipment/spares, if any, when required in connection with the main equipment.
  - (iv) The contractor shall furnish the following warranty in case contract is placed on him:-  
The contractor/seller hereby declares that the good/store, articles sold to the buyer under this contract shall be of the best quality & workmanship & shall be strictly in accordance with the specification & particulars contained/mentioned in the clause 8 of general conditions of contract applicable to contracts placed by the **Directorate of Onion Garlic Research, Rajpurnagar, Pune** . Under it & sub-clause here & the contractor/seller hereby guarantees that the said goods/stores/articles would continue to confirm to the description & quality aforesaid for a period of one year from the date of delivery of the said goods/stores/articles to the purchaser & that notwithstanding the facts that the Purchaser(Inspector may have inspected and/or approved the said good/stores/articles, if during the aforesaid period of one year the said good/stores/articles be discovered not to confirm to the description quality. On such rejection the good/articles/store will be at the seller's risk & all the provision herein contained relating to rejections of goods etc. shall apply the contractors seller shall if so be called upon to replace within a period as may be extended from time to time by the purchaser in his discretion on an application made thereof by the purchaser & in such an event the above mentioned warranty period shall apply to goods/stores/articles replaced from the date of replacement thereof otherwise the contractor/seller shall pay to the purchaser such damages such damages as may arise by reason of the breach of the condition herein contained. Nothing herein contain prejudice any other right of the purchaser in that behalf this contract or otherwise.
- 20. JURISDICTION:** All questions disputes or difference under, out of or in connection with the contract if concluded shall be subject to the exclusive jurisdiction of the Court within the Rajgurunagar jurisdiction.
- 21. INSTALLATION AND DEMONSTRATION:** Installation and Demonstration should do within 15 days time after receipt of delivery status. If the agency fails to provide installation and demonstration within stipulated time this directorate will deduct 1% on total amount of material/equipment from your EMD. The agency should do installation and demonstration by trained engineer in free of cost and ensure and certify that material is correct quantity and quality.
- 22. TRAINING:** Free of charge to Concern Scientist and his Assistant up to their satisfaction and confident.

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- 23. RESERVATION OF RIGHT TO ORDER ADDITIONAL QUANTITY:** The purchaser reserves the right to place order on the successful tenderer for additional quantity offered by them at the rate quoted. Tenderers are bound to accept order for additional quantity under this clause
- 24. PRE-INSPECTION OF STORES BY THE CONTRACTORES:** In case if a contract placed to you as a result of this tender. You should satisfy yourself that the stores are in accordance with the terms of the contracts and fully confirm to the required specifications carrying out through pre-inspection. Such precaution on your part should minimize the chance of rejection in inspection and the consequence thereof.

FOR AND ON BEHALF OF  
DIRECTORATE OF ONION AND GARLIC RESEACH ,  
Rajgurunagar- 410 505, Distt. Pune (MS)

DIRECTORATE OF ONION AND GARLIC RESEARCH  
RAJGURUNAGAR, PUNE – 410 505(M.S.)

TENDER NO.

Full name & address of the Tender, in addition to post Box No. if any, should be Quoted in all communications To this office.	1. Contractor's Telegraphic Address _____
	2. Telephone No. _____
	3. Fax No. _____

To,  
THE DIRECTOR  
Directorate of Onion and Garlic Research,  
Rajgurunagar- 410 505  
Dist : Pune (MS)

Dear Sir,

I/ We hereby offer to supply the stores detailed in the schedule here to or such portion thereof as you may specify in the acceptance of Tender at the price given in the said schedule and agree to hold this offer open till \_\_\_\_\_ I/We shall be bound by a communication of acceptance dispatched within the prescribed time.

I/We understood the instruction to Tenders & Conditions of Contract included in General Conditions of Contract covering contracts placed by the Director, Directorate of Onion and Garlic Research, Rajgurunagar, Pune under if & in the Special Conditions of contract & have thoroughly examined the specification drawing & /or pattern quoted in the schedule thereof & /are fully aware of the nature of the stores of the stores required & my/our offer is to supply stores strictly in accordance with the requirements.

The following pages have been added to & form part of this tender \_\_\_\_\_

**Yours faithfully,**

(SIGNATURE OF TENDERER)

Address \_\_\_\_\_

Signature of witness:

Address \_\_\_\_\_

Dated \_\_\_\_\_

**DIRECTORATE OF ONION AND GARLIC RESEARCH,  
RAGURUNAGAR, PUNE – 410505 (MS)**

**ANNUEXURE TO SCHEDULE TO TENDER**

**(To be returned by Bidders as per specification along with the Tender duly completed and Signed)**

S. No.	Name of Equipment	Qty.
1.	<p><b>LAMINAR AIR FLOW CHAMBER</b></p> <ol style="list-style-type: none"> <li>1. Horizontal Laminar Air Flow with HEPA filters with efficiency : 99.99% at 0.2 to 0.3µm. The filter material is moisture, fungus and bacteria resistant and is mounted in metallic frame</li> <li>2. Microprocessor Control System with LCD display.</li> <li>3. Air speed should be adjustable and should maintain constant pressure in order to prevent the infiltration of contaminated air.</li> <li>4. Minimum work space (Internal Size) (W x D x H) mm : 1200 x600 x 600</li> <li>5. Airflow Velocity : average of 0.3-0.5 m/s</li> <li>6. Side and Front Window : transparent toughened glass, anti-ultraviolet radiation</li> <li>7. Pre-filter : Polyester fiber, washable</li> <li>8. Noise : &lt;60 -70 dBA</li> <li>9. Fluorescent Lamp : 20 -30W x 2</li> <li>10. UV Lamp : 20-30W x 1</li> <li>11. Caster : Universal wheel with break</li> <li>12. Power Supply : 220-250V, 50-60 Hz., single phase</li> <li>13. Accessories 2 Nos of socket, UV Lamp, Fluorescent Lamp and Gas Inlet Point</li> <li>14. Should provide one additional UV lamp</li> <li>15. Should quote with suitable stabilizer</li> <li>16. Warranty : Comprehensive warranty for repair and replacement atleast for one year</li> <li>17. International certified air cleanliness within Work space (ISO / US Federal Standard / other international agencies etc)</li> </ol>	2 Nos.
2.	<p><b>STEREO BINOCULAR MICROSCOPE</b></p> <ol style="list-style-type: none"> <li>1. Magnification of objective lens should be 1x</li> <li>2. Total magnification by combining an objective lens and eye piece should be 8x to 40x</li> <li>3. have zoom ratios of 5:1</li> <li>4. Observation tube should be binocular with 45 or 60 degree inclination angles for observation</li> <li>5. External light arrangements: Off the bench illuminator with fiber optic/LED light source which can mount directly onto the stand for a clutter free workspace</li> <li>6. Accessories: One extra set of Off the bench illuminator with fiber optic/ LED lights</li> <li>7. Power Supply : 220-250V, 50-60 Hz., single phase</li> <li>8. CE or equivalent certification is must</li> <li>9. Should be supplied with suitable voltage stabilizer</li> <li>10. Installation at site</li> <li>11. One year warranty</li> </ol>	1 No.

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3.	<b>SPLIT AC WITH VOLTAGE STABILIZERS</b> 1 ton capacity Power Supply : 220-250V, 50-60 Hz., single phase Should have electricity saving rating 4 and above Digital display CE or equivalent certification Should be supplied with suitable voltage stabilizer Installation at site One year warranty	4 Nos
4.	<b>TISSUE CULTURE RACKS</b>  1. Fiber racks with wheels suitable for plant tissue culture work 2. Four – Five shelves for culturing fixed with accessories like lights, ballasts etc. 3. 50 -100 micromole/s white fluorescent light source in each shelf 4. Digital ballasts 5. On/ off switched for individual shelves 6. Power Supply : 220-250V, 50-60 Hz., single phase 7. Installation at site 8. One year warranty 9. Additional 10 ballasts should be provided as accessories with supply	10 Nos
5.	<b>PHOTOPERIODIC TIMERS</b> 1. Power Supply : 220-250V, 50-60 Hz., single phase 2. Should work in real time 3. Digital display 4. CE or equivalent certification 5. Facility to make several connections 6. Facility for settings for several intermittent timings 7. One year warranty	3 Nos
6.	<b>VERTICAL AUTOCLAVE</b> 1. 80 -100 lit capacity 2. Stainless steel structure. 3. Autoclave Lid should be easily handled. 4. Digital control panel which is easy to operate. 5. Controlled microprocessor with LED display. 6. Audio and visual alarm for low level water 7. Gravity exhaust control ensures a pure steam environment. 8. Protection from high temperature with accuracy $\pm 0.3$ to $0.5$ °C. 9. Immersion heater ensures effective at high temperature. 10. Capacity: 80-100 Liters. 11. Operating pressure: $\geq 0.1$ to $0.5$ Mpa. 12. Temperature range: 121 to 132°C. 13. Power supply: 200-250V, 50-60 Hz, single phase 14. Standard warranty: Warranty for repair and replacement atleast for one year. 15. Should quote with suitable stabilizer 16. Should have ISI / standard certification	2 Nos.



7.	<p><b>UPS/ STABILIZER FOR AC</b></p> <ol style="list-style-type: none"> <li>1. Voltage stabilizers for four ACs of 1 ton capacity</li> <li>2. Minimum 3 hr back up for running two 1 ton ACs</li> <li>3. It should cut off main line and provide back up from UPS if voltage drops</li> <li>4. Power Supply : 220-250V, 50-60 Hz., single phase</li> <li>5. Digital display</li> <li>6. CE or equivalent certification</li> <li>7. One year warranty</li> <li>8. Installation at site</li> </ol>	1
8.	<p><b>VERTICAL GEL ELECTROPHORESIS SYSTEM WITH POWER PACK</b></p> <ol style="list-style-type: none"> <li>1. Midi gel electrophoresis reputed make and dual gel system with platinum electrodes.</li> <li>2. Buffer dam for single gel running. Spare buffer dam should be provided</li> <li>3. Glass plate dimensions 16-20 cm X 18-20 cm dimension (WxL) cm approximately. Leak proof gel casting system with all necessary accessories for easy gel casting. With silicon mats for agarose free sealing.</li> <li>4. Should be supplied with 4-5 additional sets of 16-20 cm X 18-20 cm(WxL) (approximately) glass plates (outer and notched inner plates) with permanently bounded spacers of 0.75-1.5 mm thickness</li> <li>5. Teflon combs: two sets suitable for 20-30 wells</li> <li>6. Lid/ safety cover should be provided along with the instrument.</li> <li>7. Power supply: 60-600V, digital display, current and voltage programmable.</li> <li>8. Suitable power cords compatible with universal power pack (Biorad). With minimum two power output.</li> <li>9. Should have ISI/ standard certification</li> <li>10. <u>WARRANTY: Installations, Commissioning, Testing, Maintenance and After Sales Service:</u></li> <li>11. The equipment and all accessories should be under WARRANTY for a period of two year after successful commissioning.</li> <li>12. The instruments must be installed, tested and demo should be given at DOGR, Rajgurunagar.</li> </ol>	1
9.	<p><b>GEL DOCUMENTATION SYSTEM</b></p> <p>System: Should be pepped 2 Mega pixel CCD Camer, monochrome CCD and 16 bit acquisition.</p> <ol style="list-style-type: none"> <li>1. Zoom Lens : C- Mount, f/1.2, 12.5-75mm</li> <li>2. Diopter: closeup.</li> <li>3. Dynamic range : 4 order of magnitude.</li> <li>4. Resolution : High, 16600x 1200 pixel array.</li> <li>5. Grayscale Range: 65,536</li> <li>6. Pixel size: 6.75µm x 6.75 µm</li> <li>7. Filter size: 50x 50 mm Ethidium Bromide filter/Texas red, SYBR green and SYBR gold.</li> <li>8. Darkroom details : Compact, metallic, with 4 position changeable filters wheel with UV protective gel viewing window on darkroom, darkroom should be light tight, should have sliding tray for transilluminator with UV safety shut off.</li> <li>9. Overhead light : Uniform, white light and fluorescent viewer.</li> <li>10. Light filltings: Epi UV and Epi-white lights.</li> </ol>	1

	<p>11. UV timer: 30 minute.</p> <p>12. Filter size: Transilluminator viewing area should be 20 x 20cm (electronic ballast).</p> <p>13. Software: Software for detailed, advanced analysis of the images.</p> <p><b>14.</b> Computer details: A latest data processor with at least i5 processor, 500 GB HDD, 4 GB RAM, 17” TFT monitor and a laser printer should be provided with the system. A UPS with atleast 30 minute backup for the computer, printer and monitor.</p>	
10.	<p><b>ULTRA LOW TEMPERATURE DEEP FREEZER-80°DEGREE</b></p> <ol style="list-style-type: none"> <li>1. Should be of Upright type</li> <li>2. Capacity 368 litres</li> <li>3. Operating temperature -80 degree centigrade increment at ambient temperature of 32 degree centigrade</li> <li>4. Should have a fully programmable microprocessor controlled with membrane keypad and eye level control panel.</li> <li>5. The construction should be of New Ultra thin Vacuum Insulation NANOGEL Panel to reduce temperature recovery time after door opening, minimizing power consumption and optimizing compressor efficiency.</li> <li>6. System should have 304L grade stainless steel interior and tough, powder coated exterior finish constructed on steel gauge of 18g ZINTEC 1.2 min.</li> <li>7. Freezer should have 3-4 compartments with two adjustable height stainless steel shelves.</li> <li>8. Freezers should have heated air vent and front panel air filter.</li> <li>9. Heavy duty lockable castors and lockable outer doors and lids are required.</li> <li>10. Freezer must have battery back-up and 4 PIN security lock for unauthorized tampering</li> <li>11. Freezer must have data logging port and it must also have on board diagnostic software.</li> <li>12. Audible and visible alarms for temperature, power failure, system failure, battery low etc. and it also have remote alarm port for connection to an auto dialler.</li> <li>13. Freezer must use CFC-FREE, HCFC-FREE non flammable refrigerants, and refrigeration system must be energy efficient and hermetically sealed cascade refrigeration system.</li> <li>14. Compressor should be capable to run any voltage between 190 – 270V.</li> <li>15. Freezer must have ISO 9001 standard quality test requirements and IEC 61010 Electrical safety CE &amp; UL certified.</li> <li>16. Insulation Panel should be warranted for twelve years and compressor should be warranted for 5 years.</li> <li>17. CO2 Back up with Cylinder, Racks with Boxes be quoted as optional.</li> <li><b>18.</b> The instrument should be provided with power back up and appropriate voltage stabilizer.</li> </ol>	
11.	<p><b>ORBITAL SHAKER</b></p> <ol style="list-style-type: none"> <li>1. Speed control from 60 to 250 oscillations per minute (rpm).</li> <li>2. Precise digital feedback microprocessor speed control within <math>\pm 1</math> rpm.</li> <li>3. Dual 4-Digit LED displays set speed and actual speed or time simultaneously.</li> <li>4. Equipped with wait-off timer for convenience.</li> <li>5. Heavy duty, well balanced shaking mechanism for stability and durability.</li> <li>6. AC powered geared motor guarantee durability and power.</li> <li>7. Stands up to 15 kg of sample load.</li> <li>8. Shaking amplitude of 20 mm.</li> <li>9. Easy to interchange platforms, see optional accessories for platform selection.</li> <li>10. Epoxy covered outer casing</li> </ol>	1

12.	<p><b>MINI TRANSBLOT UNIT</b></p> <ol style="list-style-type: none"> <li>1. Sub-Cell GT System, with 15 x 20 cm tray, gel caster</li> <li>2. 30-Well Comb, 14 cm wide, 1.5 mm thick, fixed height ONE</li> <li>3. Original UV-Transparent Mini-Gel Tray, 7 x 10 cm</li> <li>4. Sub-Cell GT UV-Transparent Gel Tray, 15 x 15 cm</li> <li>5. Mini-Protean Tetra cell,</li> <li>6. 10-well, 0.75 mm thickness; 4-gel system includes 5 combs, 5 set of glass plates 2 casting stand, 2 casting frames, sample loading guide, electrode assembly, companion running module, tank, lid with power cables, mini cell buffer dam.</li> </ol> <p><b>Powerpac basic power supply</b></p> <ol style="list-style-type: none"> <li>1. Output range (programmable): 10–300 V, fully adjustable in 1 V steps 4–400 mA,</li> <li>2. fully adjustable in 1 mA steps 75 W maximumType of output: Constant voltage, constant current with automatic crossover</li> <li>3. Output terminals: 4 pair recessed banana jacks floating in parallel</li> <li>4. Timer: 1–999 min, fully adjustable</li> <li>5. Pause/resume run function: YES</li> <li>6. Display: LED</li> <li>7. Operating conditions: 0–40°C; 0–95% humidity in the absence of condensation</li> <li>8. Safety compliance: EN–61010</li> <li>9. EMI: Conforms to CE Standards for Emissions and Immunity class A, tested only at 230 V; TÜV EMC certification.</li> <li>10. Safety features: No-load detection, sudden load change detection, overload/short circuit protection, input line protection, auto power-up after power failure</li> <li>11. Input protection: Fuse on both hot and neutral</li> <li>13. Input power (actual): 198–264 VAC, 50 or 60 Hz, Dimensions: 21 x 24.5 x 6.5 cm (W x D x H)</li> <li>14. Mini Trans-Blot Module, without Buffer Tank and lid</li> </ol>	1
13	<p><b>HEAD SPACE GAS ANALYSER</b> <b>(Under buy-back of Multi Gas Analyser)</b></p> <ol style="list-style-type: none"> <li>1. Fast and accurate monitoring of Oxygen Concentration (0.001%- 100%)</li> <li>2. Carbon dioxide detector 0-100%-CO2</li> <li>3. Optional CO ( Carbon Monoxide Detector)</li> <li>4. Automatic sequence- operator only needs to insert the needle to make and record a complete analysis.</li> <li>5. Easy readout of O2/CO2/Co Concentration with LCD display.</li> <li>6. Auto calibrate.</li> <li>7. Built in filters to protect the instrument from fluid and food product contamination.</li> <li>8. Built in alarms for low and high oxygen/CO2 levels.</li> <li>9. Hygienic sealed membrane keyboard.</li> <li>10. Calibration certificate needs to be provided for ready use.</li> <li>11. ISO or CE or equivalent certification is mandatory</li> </ol>	1

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14.	<p><b>WATER ACTIVITY METER</b>  <b>(Under buy-back of Water Activity Meter)</b></p> <ol style="list-style-type: none"> <li>1. Measurement Ranges:</li> <li>2. Water activity: 0 to 1 Aw</li> <li>3. Relative humidity: 0 to 100 %RH</li> <li>4. Temperature: -10 to 60 °C (14 to 140 °F)</li> <li>5. Accuracy:</li> <li>6. Water activity: ±0.008 aw</li> <li>7. Relative humidity: ± 0.8 % rh</li> <li>8. Temperature: ± 0.1 °C</li> <li>9. Standards for calibration</li> <li>10. Power Supply: battery or power supply via mini USB</li> <li>11. ISO or CE or equivalent certification is mandatory</li> </ol>	1
15.	<p><b>-20 DEEP FREEZER</b></p> <ol style="list-style-type: none"> <li>1. Capacity: about 350 lit, Vertical, single/double door with provision of fixed partition upper part and drawing racks in lower part</li> <li>2. Door lock</li> <li>3. CFC free</li> <li>4. Interior light, control panel with fast freeze switch</li> <li>5. Noise free compressor</li> <li>6. Temperature warning lamp/alarm</li> <li>7. Child proof control lock</li> <li>8. Electricity on lamp</li> <li>9. Energy rating: preferably 4 1/2 stars</li> <li>10. Hold over time preferably -18°C to -9°C : 52 hrs</li> <li>11. ISO or CE or equivalent certification is mandatory</li> </ol>	1
16.	<p><b>REFRIGERATOR</b></p> <ol style="list-style-type: none"> <li>1. Capacity: about 350 lit, Vertical, double door with drawing racks in lower part</li> <li>2. Frost free</li> <li>3. CFC free</li> <li>4. Door lock</li> <li>5. Interior light, control panel with fast freeze switch</li> <li>6. Energy rating: preferably 4 1/2 stars</li> <li>7. ISO or CE or equivalent certification is mandatory</li> </ol>	1
17.	<p><b>FLOW CYTOMETER:</b>  Specification:  Primary purpose: Estimation of DNA content, genome size or ploidy analysis of plant samples</p> <ol style="list-style-type: none"> <li>1. System should have proven use in flow cytometry applications including cell counting, fluorescent detection for main purpose of ploidy analysis of plant samples</li> <li>2. Instrument should be easy to maintain with compact optical design, fixed alignments and preoptimized detector settings.</li> <li>3. Fluorescence excitation with at least one laser source (UV/green) for the purpose of ploidy analysis of plant samples, Compatible with DAPI or PI dyes</li> <li>4. Dichotic mirrors, filters and PMT detector compatible for above mentioned dyes.</li> <li>5. Computer-controlled sample volume rate</li> </ol>	1

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	<ol style="list-style-type: none"><li>6. Should have auto cleaning function of the injector, Should have an attached waste container</li><li>7. Data acquisition should be at least 10000 events/second for fast data acquisition</li><li>8. Minimum particle size detection at least 0.5 <math>\mu</math>m</li><li>9. External PC with printer for data acquisition, data storage and data analysis, if built-in additional system may be provided for data analysis (Monitor size: at least 17 inch flat panel monitor, Intel Quad core processor, Minimum 4 GB RAM, 160 GB Hard Drive, Windows 7 operating system) System should be supported by appropriate software, for data acquisition &amp; analysis on a windows based operating system (Software with unlimited licenses only)</li><li>10. All the components necessary for functioning of equipment for the purpose of ploidy analysis</li><li>11. Provide or quote at least five peer reviewed publication which quoted the equipment for ploidy analysis purpose.</li><li>12. Guarantee or warrantee for repair and replacement should be provided at least for a year.</li><li>13. Power supply: 200-250V, 50-60 Hz,</li><li>14. online UPS for uninterrupted power supply which supports supplied equipment and computers</li><li>15. The system should be installed and demonstrated by authorized service personnel</li><li><b>16. Free Issue material</b> : Kits and chemicals like dyes, buffers, filters, calibration beads, DNA standards necessary for ploidy analysis of plant samples for demonstration and initial running of equipment (at least for 200 samples) should be provided. Sample Cuvette's and/or plates compatible with equipment. Any other consumable necessary for initial running and cleaning, decontamination of equipment</li></ol>	
18	<b>LAMINAR AIR FLOW CABINET</b>  <b>Specification as per item No. 1</b>	1
19	<b>VERTICAL AUTOCLAVE</b> <ol style="list-style-type: none"><li>1. 100 -120 lit capacity</li><li>2. Stainless steel structure.</li><li>3. Autoclave Lid should be easily handled.</li><li>4. Digital control panel which is easy to operate.</li><li>5. Controlled microprocessor with LED display.</li><li>6. Audio and visual alarm for low level water</li><li>7. Gravity exhaust control ensures a pure steam environment.</li><li>8. Protection from high temperature with accuracy <math>\pm</math> 0.3 to 0.5 <math>^{\circ}</math>C.</li><li>9. Immersion heater ensures effective at high temperature.</li><li>10. Capacity: 80-100 Litters.</li><li>11. Operating pressure: <math>\geq</math> 0.1 to 0.5 Mpa.</li><li>12. Temperature range: 121 to 132<math>^{\circ}</math>C.</li><li>13. Power supply: 200-250V, 50-60 Hz, single phase</li><li>14. Standard warranty: Warranty for repair and replacement atleast for one year.</li><li>15. Should quote with suitable stabilizer</li><li>16. Should have ISI / standard certification</li></ol>	1 Nos.

20	<p><b>STEREO ZOOM MICROSCOPE WITH PHOTOGRAPHIC ATTACHMENT</b></p> <p>Microscope with fluorescent filters cube turret above the objective lenses, coupled with a digital camera. UV system and set off eye piece lenses. Capable of transmitted light bright-field Microscopy, Easy to use Windows capture and editing software with USB Cable</p> <p>Detailed specification is as below</p> <p>Camera:</p> <ol style="list-style-type: none"><li>1. About 3 megapixel resolution high density CCD</li><li>2. Great for viewing specimens and displaying on a computer</li></ol> <p>Eyepiece and magnification:</p> <ol style="list-style-type: none"><li>1. Plan chromatic magnifications: 4X, 10X,</li><li>2. Semi chromatic magnifications 20X, 40X, 100X</li><li>3. EYEPIECE SET-includes Wide Field 10X</li><li>4. Better design that allows easier access to the slides and slides observer</li></ol> <p>Fluorescence filters:</p> <ol style="list-style-type: none"><li>1. DAPI, FITC consisting of Excitation/Emission filters</li></ol> <p>Image analysis Software</p> <ol style="list-style-type: none"><li>1. Measurement acquisition</li><li>2. Live image capture</li><li>3. Objective calibration</li></ol> <p>Stage specification</p> <ol style="list-style-type: none"><li>1. Large graduated Mechanical movable(up/down and longitudinal Y-direction)</li><li>2. Stage size- 160 X 140mm</li></ol> <p>Illumination:</p> <ol style="list-style-type: none"><li>1. Fluorescence Light Source: Super High Pressure Mercury Lamp (100W)/LED</li><li>2. Arc of mercury lamp should be easily centered</li><li>3. Epi-fluorescence Illumination system- Blue and Green Excitation Fluorescence filter cubes with one UV filter cube.</li><li>4. 3 position Fluorescence Filter Cube Slider Assembly: blur filter, Green Filter and NO filter for Bright Field Microscopy</li><li>5. Bright Field: Transmitted Light source: Variable Intensity 6V/20W tungsten Halogen Base Illumination.</li><li>6. Bright Field: Illumination System with Focusable Field Diaphragm on Base to allow for Better Control and more Efficient Use of Light Source.</li></ol> <p>Focusing:</p> <ol style="list-style-type: none"><li>1. Coaxial fine and Coarse focusing Knobs on both sides of Microscope</li></ol> <p>Condenser/Filter:</p> <ol style="list-style-type: none"><li>1. Fluorescent Light Condenser with Condenser Movement knob</li><li>2. Fluorescent Light Field Diaphragm with Centering Adjustment knob</li><li>3. Includes condenser annulus</li></ol> <p>Included Items:</p> <ol style="list-style-type: none"><li>1. Light protection eye guard on front of microscope</li><li>2. Instruction manual, Dust cover, two extra bulbs and extra fuse</li><li>3. Two extra mercury bulbs</li><li>4. Bottle of slandered immersion oil for use with 100X bright field objectives</li><li>5. Bottle of glycerin for the 40X glycerin immersion objective.</li></ol>	1
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	<p>Optional : Karyo typing analysis software:</p> <ol style="list-style-type: none"> <li>1. It should be able to score, count and analyse chromosomes.</li> <li>2. Should be able to prepare the customized ideograms.</li> <li>3. Must have ability to display spine and centromere of all.</li> <li>4. It should be able to accurately estimate the band resolution of metaphase.</li> <li>5. Should have easy and unlimited date archival and retrieval.</li> <li>6. Should be able to compare chromosomes of multiple plant species</li> <li>7. It should have advanced automation offering background uniformity correction, automatic segmentation of touching chromosomes, optimized image enhancement, contract and band sharpness.</li> </ol>	
21	<p><b>YODER APPRATUS (Wet sieve shaker)- for 4 sets with sieve</b>  Specification:</p> <ol style="list-style-type: none"> <li>1. Consists of a water reservoir and a holder for sieves, with 7 sieves of 8mm – 2 microns range</li> <li>2. Shaker is driven by a ¼ H.P.</li> <li>3. Motor through a belt drive</li> <li>4. Shaker mechanism moves the sieves up and down in the reservoir.</li> <li>5. The reservoir has a water out-let for draining out the used water.</li> <li>6. Suitable for operation 230V A.C. Single Phase.</li> <li>7. Electrically Operated.</li> </ol>	1
22	<p><b>DOUBLE RING INFILTROMETER</b>  Specification:</p> <ol style="list-style-type: none"> <li>1. Pairs of inner and outer rings</li> <li>2. Ring diameter : approximate 28/53 cm</li> <li>3. Galvanized steel driving plate</li> <li>4. Impact absorbing hammer</li> <li>5. Measuring bridges</li> <li>6. Measuring rods with flots</li> </ol>	2
23.	<p><b>TRACTOR MOUNTED HTP SPRAYER</b></p> <ol style="list-style-type: none"> <li>1. HTP pump of with 500 lit tank of ISI mark</li> <li>2. Accessories to be provides</li> <li>3. Suitable spraying gun with 100 m pipe of ISI mark</li> <li>4. Fabrication and accessories for tractor mounting</li> </ol>	1
24.	<p><b>LAYING OF IRRIGATION LINE</b></p> <ol style="list-style-type: none"> <li>1. Pipe line of 3 inch 250 m with all required accessories</li> <li>2. The line should be placed across roads by digging and with fittings</li> <li>3. Branded company with ISI mark should be quoted</li> <li>4. Arrangements for outlets as specified to be made</li> <li>5. Line to be placed at least 1.5- 2’ feet in the ground and connected as specified</li> </ol>	1
25.	<p><b>LAYING OF POP-UPS SPRINKLERS FOR IRRIGATION</b></p> <ol style="list-style-type: none"> <li>1. Complete set of pop ups sprinklers for irrigation in min 4200 sq m.</li> <li>2. All required accessories to be provided</li> <li>3. Material should be ISI mark</li> <li>4. Proper layout as specified to be followed while laying in the field</li> </ol>	1

26	<p><b>Diesel Generated Set ( D.G. Set)- 250 KVA</b> (Under buy-back of 63 KVA Kirloskar make DG Set.)</p> <p>Specification:</p> <ol style="list-style-type: none"><li>1. Capacity: 250 KVA</li><li>2. Governor : Electronic</li><li>3. Panel: Manual</li><li>4. No. of Phases : Three (440V-50Hz)</li><li>5. Engine Cooling : Radiator</li><li>6. Air filter: Dry type</li><li>7. Power factor : &gt;0.8</li><li>8. Voltage fluctuations: <math>\pm 1\%</math></li><li>9. Control panel with LCD display indicating KWH, KVA, PF, Volts, Amph, Hz, RPM, Running hour, Oil pressure, Oil temperature, Coolant temperature, fuel level</li><li>10. Protection: Over load, over speed protection features</li><li>11. Safety features: Auto shutdown, Visual and audio alarm for low lubricant oil pressure, high coolant temperature, low fuel level, canopy temperature, and radiator water level.</li><li>12. Fuel tank: Detachable, mechanical level indicator, drain cock.</li><li>13. Exhaust system: At top.</li></ol>	
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**Note: - Vendors are requested to attach the Technical compliance statement with respect to above specification as per Annexure-III**

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**DIRECTORATE OF ONION AND GARLIC RESEARCH,  
RAGURUNAGAR, PUNE – 410505 (MS)**

**ANNEXURE TO SCHEDULE TO TENDER**

(To be returned by Bidders as per specification along with the Tender duly completed and Signed)

**Technical Compliance Statement**

<b>S. No.</b>	<b>Specification asked for</b>	<b>Specification Offered.</b>
1.	<p><b>LAMINAR AIR FLOW CHAMBER</b></p> <ol style="list-style-type: none"><li>1. Horizontal Laminar Air Flow with HEPA filters with efficiency: 99.99% at 0.2 to 0.3µm. The filter material is moisture, fungus and bacteria resistant and is mounted in metallic frame</li><li>2. Microprocessor Control System with LCD display.</li><li>3. Air speed should be adjustable and should maintain constant pressure in order to prevent the infiltration of contaminated air.</li><li>4. Minimum work space (Internal Size) (W x D x H) mm : 1200 x600 x 600</li><li>5. Airflow Velocity : average of 0.3-0.5 m/s</li><li>6. Side and Front Window : transparent toughened glass, anti-ultraviolet radiation</li><li>7. Pre-filter : Polyester fiber, washable</li><li>8. Noise : &lt;60 -70 dBA</li><li>9. Fluorescent Lamp : 20 -30W x 2</li><li>10. UV Lamp : 20-30W x 1</li><li>11. Caster : Universal wheel with break</li><li>12. Power Supply : 220-250V, 50-60 Hz., single phase</li><li>13. Accessories 2 Nos of socket, UV Lamp, Fluorescent Lamp and Gas Inlet Point</li><li>14. Should provide one additional UV lamp</li><li>15. Should quote with suitable stabilizer</li><li>16. Warranty : Comprehensive warranty for repair and replacement atleast for one year</li><li>17. International certified air cleanliness within Work space (ISO / US Federal Standard / other international agencies etc)</li></ol>	

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2.	<p><b>STEREO BINOCULAR MICROSCOPE</b></p> <ol style="list-style-type: none"><li>1. Magnification of objective lens should be 1x</li><li>2. Total magnification by combining an objective lens and eye piece should be 8x to 40x</li><li>3. have zoom ratios of 5:1</li><li>4. Observation tube should be binocular with 45 or 60 degree inclination angles for observation</li><li>5. External light arrangements: Off the bench illuminator with fiber optic/LED light source which can mount directly onto the stand for a clutter free workspace</li><li>6. Accessories: One extra set of Off the bench illuminator with fiber optic/ LED lights</li><li>7. Power Supply : 220-250V, 50-60 Hz., single phase</li><li>8. CE or equivalent certification is must</li><li>9. Should be supplied with suitable voltage stabilizer</li><li>10. Installation at site</li><li>11. One year warranty</li></ol>	
3.	<p><b>SPLIT AC WITH VOLTAGE STABILIZERS</b></p> <p>1 ton capacity Power Supply : 220-250V, 50-60 Hz., single phase Should have electricity saving rating 4 and above Digital display CE or equivalent certification Should be supplied with suitable voltage stabilizer Installation at site One year warranty</p>	
4.	<p><b>TISSUE CULTURE RACKS</b></p> <ol style="list-style-type: none"><li>1. Fiber racks with wheels suitable for plant tissue culture work</li><li>2. Four – Five shelves for culturing fixed with accessories like lights, ballasts etc.</li><li>3. 50 -100 micromole/s white fluorescent light source in each shelf</li><li>4. Digital ballasts</li><li>5. On/ off switched for individual shelves</li><li>6. Power Supply : 220-250V, 50-60 Hz., single phase</li><li>7. Installation at site</li><li>8. One year warranty</li><li>9. Additional 10 ballasts should be provided as accessories with supply</li></ol>	

5.	<b>PHOTOPERIODIC TIMERS</b> <ol style="list-style-type: none"><li>1. Power Supply : 220-250V, 50-60 Hz., single phase</li><li>2. Should work in real time</li><li>3. Digital display</li><li>4. CE or equivalent certification</li><li>5. Facility to make several connections</li><li>6. Facility for settings for several intermittent timings</li><li>7. One year warranty</li></ol>	
6.	<b>VERTICAL AUTOCLAVE</b> <ol style="list-style-type: none"><li>1. 80 -100 lit capacity</li><li>2. Stainless steel structure.</li><li>3. Autoclave Lid should be easily handled.</li><li>4. Digital control panel which is easy to operate.</li><li>5. Controlled microprocessor with LED display.</li><li>6. Audio and visual alarm for low level water</li><li>7. Gravity exhaust control ensures a pure steam environment.</li><li>8. Protection from high temperature with accuracy <math>\pm 0.3</math> to <math>0.5</math> °C.</li><li>9. Immersion heater ensures effective at high temperature.</li><li>10. Capacity: 80-100 Litters.</li><li>11. Operating pressure: <math>\geq 0.1</math> to <math>0.5</math> Mpa.</li><li>12. Temperature range: <math>121</math> to <math>132</math>°C.</li><li>13. Power supply: 200-250V, 50-60 Hz, single phase</li><li>14. Standard warranty: Warranty for repair and replacement atleast for one year.</li><li>15. Should quote with suitable stabilizer</li><li>16. Should have ISI / standard certification</li></ol>	
7.	<b>UPS/ STABILIZER FOR AC</b> <ol style="list-style-type: none"><li>1. Voltage stabilizers for four ACs of 1 ton capacity</li><li>2. Minimum 3 hr back up for running two 1 ton ACs</li><li>3. It should cut off main line and provide back up from UPS if voltage drops</li><li>4. Power Supply : 220-250V, 50-60 Hz., single phase</li><li>5. Digital display</li><li>6. CE or equivalent certification</li><li>7. One year warranty</li><li>8. Installation at site</li></ol>	

8.	<p><b>VERTICAL GEL ELECTROPHORESIS SYSTEM WITH POWER PACK</b></p> <ol style="list-style-type: none"><li>1. Midi gel electrophoresis reputed make and dual gel system with platinum electrodes.</li><li>2. Buffer dam for single gel running. Spare buffer dam should be provided</li><li>3. Glass plate dimensions 16-20 cm X 18-20 cm dimension (WxL) cm approximately. Leak proof gel casting system with all necessary accessories for easy gel casting. With silicon mats for agarose free sealing.</li><li>4. Should be supplied with 4-5 additional sets of 16-20 cm X 18-20 cm(WxL) (approximately) glass plates (outer and notched inner plates) with permanently bounded spacers of 0.75-1.5 mm thickness</li><li>5. Teflon combs: two sets suitable for 20-30 wells</li><li>6. Lid/ safety cover should be provided along with the instrument.</li><li>7. Power supply: 60-600V, digital display, current and voltage programmable.</li><li>8. Suitable power cords compatible with universal power pack (Biorad). With minimum two power output.</li><li>9. Should have ISI/ standard certification</li><li>10. <u>WARRANTY: Installations, Commissioning, Testing, Maintenance and After Sales Service:</u></li><li>11. The equipment and all accessories should be under WARRANTY for a period of two year after successful commissioning.</li><li>12. The instruments must be installed, tested and demo should be given at DOGR, Rajgurunagar.</li></ol>	
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9.	<p><b>GEL DOCUMENTATION SYSTEM</b></p> <p>System: Should be pepped 2 Mega pixel CCD Camer, monochrome CCD and 16 bit acquisition.</p> <ol style="list-style-type: none"><li>1. Zoom Lens : C- Mount, f/1.2, 12.5-75mm</li><li>2. Diopter: closeup.</li><li>3. Dynamic range : 4 order of magnitude.</li><li>4. Resolution : High, 16600x 1200 pixel array.</li><li>5. Grayscale Range: 65,536</li><li>6. Pixel size: 6.75µm x 6.75 µm</li><li>7. Filter size: 50x 50 mm Ethidium Bromide filter/Texas red, SYBR green and SYBR gold.</li><li>8. Darkroom details : Compact, metallic, with 4 position changeable filters wheel with UV protective gel viewing window on darkroom, darkroom should be light tight, should have sliding tray for transilluminator with UV safety shut off.</li><li>9. Overhead light : Uniform, white light and fluorescent viewer.</li><li>10. Light filltings: Epi UV and Epi-white lights.</li><li>11. UV timer: 30 minute.</li><li>12. Filter size: Transilluminator viewing area should be 20 x 20cm (electronic ballast).</li><li>13. Software: Software for detailed, advanced analysis of the images.</li><li>14. Computer details: A latest data processor with at least i5 processor, 500 GB HDD, 4 GB RAM, 17” TFT monitor and a laser printer should be provided with the system. A UPS with atleast 30 minute backup for the computer, printer and monitor.</li></ol>	
10.	<p><b>ULTRA LOW TEMPERATURE DEEP FREEZER-80°DEGREE</b></p> <ol style="list-style-type: none"><li>1. Should be of Upright type</li><li>2. Capacity 368 litres</li><li>3. Operating temperature -80 degree centigrade increment at ambient temperature of 32 degree centigrade</li><li>4. Should have a fully programmable microprocessor controlled with membrane keypad and eye level control panel.</li><li>5. The construction should be of New Ultra thin Vacuum Insulation NANOGEL Panel</li></ol>	

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	<p>to reduce temperature recovery time after door opening, minimizing power consumption and optimizing compressor efficiency.</p> <ol style="list-style-type: none"><li>6. System should have 304L grade stainless steel interior and tough, powder coated exterior finish constructed on steel gauge of 18g ZINTEC 1.2 min.</li><li>7. Freezer should have 3-4 compartments with two adjustable height stainless steel shelves.</li><li>8. Freezers should have heated air vent and front panel air filter.</li><li>9. Heavy duty lockable castors and lockable outer doors and lids are required.</li><li>10. Freezer must have battery back-up and 4 PIN security lock for unauthorized tampering</li><li>11. Freezer must have data logging port and it must also have on board diagnostic software.</li><li>12. Audible and visible alarms for temperature, power failure, system failure, battery low etc. and it also have remote alarm port for connection to an auto dialler.</li><li>13. Freezer must use CFC-FREE, HCFC-FREE non flammable refrigerants, and refrigeration system must be energy efficient and hermetically sealed cascade refrigeration system.</li><li>14. Compressor should be capable to run any voltage between 190 – 270V.</li><li>15. Freezer must have ISO 9001 standard quality test requirements and IEC 61010 Electrical safety CE &amp; UL certified.</li><li>16. Insulation Panel should be warranted for twelve years and compressor should be warranted for 5 years.</li><li>17. CO2 Back up with Cylinder, Racks with Boxes be quoted as optional.</li><li>18. The instrument should be provided with power back up and appropriate voltage stabilizer.</li></ol>	
11.	<p><b>ORBITAL SHAKER</b></p> <ol style="list-style-type: none"><li>1. Speed control from 60 to 250 oscillations per minute (rpm).</li><li>2. Precise digital feedback microprocessor speed control within <math>\pm 1</math> rpm.</li><li>3. Dual 4-Digit LED displays set speed and actual speed or time simultaneously.</li><li>4. Equipped with wait-off timer for convenience.</li></ol>	

	<ol style="list-style-type: none"><li>5. Heavy duty, well balanced shaking mechanism for stability and durability.</li><li>6. AC powered geared motor guarantee durability and power.</li><li>7. Stands up to 15 kg of sample load.</li><li>8. Shaking amplitude of 20 mm.</li><li>9. Easy to interchange platforms, see optional accessories for platform selection.</li><li>10. Epoxy covered outer casing</li></ol>	
12.	<p><b>MINI TRANSBLOT UNIT</b></p> <ol style="list-style-type: none"><li>1. Sub-Cell GT System, with 15 x 20 cm tray, gel caster</li><li>2. 30-Well Comb, 14 cm wide, 1.5 mm thick, fixed height ONE</li><li>3. Original UV-Transparent Mini-Gel Tray, 7 x 10 cm</li><li>4. Sub-Cell GT UV-Transparent Gel Tray, 15 x 15 cm</li><li>5. Mini-Protean Tetra cell,</li><li>6. 10-well, 0.75 mm thickness; 4-gel system includes 5 combs, 5 set of glass plates 2 casting stand, 2 casting frames, sample loading guide, electrode assembly, companion running module, tank, lid with power cables, mini cell buffer dam.</li></ol> <p><b>Powerpac basic power supply</b></p> <ol style="list-style-type: none"><li>1. Output range (programmable): 10–300 V, fully adjustable in 1 V steps 4–400 mA,</li><li>2. fully adjustable in 1 mA steps 75 W maximumType of output: Constant voltage, constant current with automatic crossover</li><li>3. Output terminals: 4 pair recessed banana jacks floating in parallel</li><li>4. Timer: 1–999 min, fully adjustable</li><li>5. Pause/resume run function: YES</li><li>6. Display: LED</li><li>7. Operating conditions: 0–40°C; 0–95% humidity in the absence of condensation</li><li>8. Safety compliance: EN–61010</li><li>9. EMI: Conforms to CE Standards for Emissions and Immunity class A, tested only at 230 V; TÜV EMC certification</li></ol>	

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	<p>10. Safety features: No-load detection, sudden load change detection, overload/short circuit protection, input line protection, auto power-up after power failure</p> <p>11. Input protection: Fuse on both hot and neutral</p> <p>12. Input power (actual): 198–264 VAC, 50 or 60 Hz,</p> <p>13. Dimensions: 21 x 24.5 x 6.5 cm (W x D x H)</p> <p>14. Mini Trans-Blot Module, without Buffer Tank and lid ONE</p>	
13	<p><b>HEAD SPACE GAS ANALYSER</b>  <b>(Under buy-back of Multi Gas Analyser)</b></p> <ol style="list-style-type: none"> <li>1. Fast and accurate monitoring of Oxygen Concentration (0.001%- 100%)</li> <li>2. Carbon dioxide detector 0-100%-CO2</li> <li>3. Optional CO ( Carbon Monoxide Detector)</li> <li>4. Automatic sequence- operator only needs to insert the needle to make and record a complete analysis.</li> <li>5. Easy readout of O2/CO2/Co Concentration with LCD display.</li> <li>6. Auto calibrate.</li> <li>7. Built in filters to protect the instrument from fluid and food product contamination.</li> <li>8. Built in alarms for low and high oxygen/CO2 levels.</li> <li>9. Hygienic sealed membrane keyboard.</li> <li>10. Calibration certificate needs to be provided for ready use.</li> <li>11. ISO or CE or equivalent certification is mandatory</li> </ol>	
14.	<p><b>WATER ACTIVITY METER</b>  <b>(Under buy-back of Water Activity Meter)</b></p> <ol style="list-style-type: none"> <li>1. Measurement Ranges:</li> <li>2. Water activity: 0 to 1 Aw</li> <li>3. Relative humidity: 0 to 100 %RH</li> <li>4. Temperature: -10 to 60 °C (14 to 140 °F)</li> <li>5. Accuracy:</li> <li>6. Water activity: ±0.008 aw</li> <li>7. Relative humidity: ± 0.8 % rh</li> <li>8. Temperature: ± 0.1 °C</li> <li>9. Standards for calibration</li> <li>10. Power Supply: battery or power supply via mini USB</li> <li>11. ISO or CE or equivalent certification is mandatory</li> </ol>	

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15.	<p><b>-20 DEEP FREEZER</b></p> <ol style="list-style-type: none"><li>1. Capacity: about 350 lit, Vertical, single/double door with provision of fixed partition upper part and drawing racks in lower part</li><li>2. Door lock</li><li>3. CFC free</li><li>4. Interior light, control panel with fast freeze switch</li><li>5. Noise free compressor</li><li>6. Temperature warning lamp/alarm</li><li>7. Child proof control lock</li><li>8. Electricity on lamp</li><li>9. Energy rating: preferably 4 1/2 stars</li><li>10. Hold over time preferably -18°C to -9°C : 52 hrs</li><li>11. ISO or CE or equivalent certification is mandatory</li></ol>	
16.	<p><b>REFRIGERATOR</b></p> <ol style="list-style-type: none"><li>1. Capacity: about 350 lit, Vertical, double door with drawing racks in lower part</li><li>2. Frost free</li><li>3. CFC free</li><li>4. Door lock</li><li>5. Interior light, control panel with fast freeze switch</li><li>6. Energy rating: preferably 4 1/2 stars</li><li>7. ISO or CE or equivalent certification is mandatory</li></ol>	
17.	<p><b>FLOW CYTOMETER:</b></p> <p>Specification: Primary purpose: Estimation of DNA content, genome size or ploidy analysis of plant samples</p> <ol style="list-style-type: none"><li>1. System should have proven use in flow cytometry applications including cell counting, fluorescent detection for main purpose of ploidy analysis of plant samples</li><li>2. Instrument should be easy to maintain with compact optical design, fixed alignments and preoptimized detector settings.</li><li>3. Fluorescence excitation with at least one laser source (UV/green) for the purpose of ploidy analysis of plant samples, Compatible with DAPI or PI dyes</li><li>4. Dichroic mirrors, filters and PMT detector compatible for above mentioned dyes.</li><li>5. Computer-controlled sample volume rate</li></ol>	

	<ol style="list-style-type: none"><li>6. Should have auto cleaning function of the injector, Should have an attached waste container</li><li>7. Data acquisition should be at least 10000 events/second for fast data acquisition</li><li>8. Minimum particle size detection at least 0.5 <math>\mu</math>m</li><li>9. External PC with printer for data acquisition, data storage and data analysis, if built-in additional system may be provided for data analysis (Monitor size: at least 17 inch flat panel monitor, Intel Quad core processor, Minimum 4 GB RAM, 160 GB Hard Drive, Windows 7 operating system) System should be supported by appropriate software, for data acquisition &amp; analysis on a windows based operating system (Software with unlimited licenses only)</li><li>10. All the components necessary for functioning of equipment for the purpose of ploidy analysis</li><li>11. Provide or quote at least five peer reviewed publication which quoted the equipment for ploidy analysis purpose.</li><li>12. Guarantee or warrantee for repair and replacement should be provided at least for a year.</li><li>13. Power supply: 200-250V, 50-60 Hz,</li><li>14. online UPS for uninterrupted power supply which supports supplied equipment and computers</li><li>15. The system should be installed and demonstrated by authorized service personnel</li><li>16. <b>Free Issue material</b> : Kits and chemicals like dyes, buffers, filters, calibration beads, DNA standards necessary for ploidy analysis of plant samples for demonstration and initial running of equipment (at least for 200 samples) should be provided. Sample Cuvette's and/or plates compatible with equipment. Any other consumable necessary for initial running and cleaning, decontamination of equipment</li></ol>	
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18	<b>LAMINAR AIR FLOW CABINET</b>  <b>Specification as per item No. 1</b>	
19	<b>VERTICAL AUTOCLAVE</b> <ol style="list-style-type: none"><li>1. 100 -120 lit capacity</li><li>2. Stainless steel structure.</li><li>3. Autoclave Lid should be easily handled.</li><li>4. Digital control panel which is easy to operate.</li><li>5. Controlled microprocessor with LED display.</li><li>6. Audio and visual alarm for low level water</li><li>7. Gravity exhaust control ensures a pure steam environment.</li><li>8. Protection from high temperature with accuracy <math>\pm 0.3</math> to <math>0.5</math> °C.</li><li>9. Immersion heater ensures effective at high temperature.</li><li>10. Capacity: 80-100 Litters.</li><li>11. Operating pressure: <math>\geq 0.1</math> to <math>0.5</math> Mpa.</li><li>12. Temperature range: <math>121</math> to <math>132</math>°C.</li><li>13. Power supply: <math>200-250V</math>, <math>50-60</math> Hz, single phase</li><li>14. Standard warranty: Warranty for repair and replacement atleast for one year.</li><li>15. Should quote with suitable stabilizer</li><li>16. Should have ISI / standard certification</li></ol>	
20	<b>STEREO ZOOM MICROSCOPE WITH PHOTOGRAPHIC ATTACHMENT</b> Microscope with fluorescent filters cube turret above the objective lenses, coupled with a digital camera. UV system and set off eye piece lenses. Capable of transmitted light bright-field Microscopy, Easy to use Windows capture and editing software with USB Cable Detailed specification is as below Camera: <ol style="list-style-type: none"><li>1. About 3 megapixel resolution high density CCD</li><li>2. Great for viewing specimens and displaying on a computer</li></ol> Eyepiece and magnification: <ol style="list-style-type: none"><li>1. Plan chromatic magnifications: <math>4X</math>, <math>10X</math>,</li><li>2. Semi chromatic magnifications <math>20X</math>, <math>40X</math>, <math>100X</math></li><li>3. EYEPIECE SET-includes Wide Field <math>10X</math></li><li>4. Better design that allows easier access to the slides and slides observer</li></ol>	

<p>Fluorescence filters:</p> <ol style="list-style-type: none"><li>1. DAPI, FITC consisting of Excitation/Emission filters</li></ol> <p>Image analysis Software</p> <ol style="list-style-type: none"><li>1. Measurement acquisition</li><li>2. Live image capture</li><li>3. Objective calibration</li></ol> <p>Stage specification</p> <ol style="list-style-type: none"><li>1. Large graduated Mechanical movable(up/down and longitudinal Y-direction)</li><li>2. Stage size- 160 X 140mm</li></ol> <p>Illumination:</p> <ol style="list-style-type: none"><li>1. Fluorescence Light Source: Super High Pressure Mercury Lamp (100W)/LED</li><li>2. Arc of mercury lamp should be easily centered</li><li>3. Epi-fluorescence Illumination system- Blue and Green Excitation Fluorescence filter cubes with one UV filter cube.</li><li>4. 3 position Fluorescence Filter Cube Slider Assembly: blue filter, Green Filter and NO filter for Bright Field Microscopy</li><li>5. Bright Field: Transmitted Light source: Variable Intensity 6V/20W tungsten Halogen Base Illumination.</li><li>6. Bright Field: Illumination System with Focusable Field Diaphragm on Base to allow for Better Control and more Efficient Use of Light Source.</li></ol> <p>Focusing:</p> <ol style="list-style-type: none"><li>1. Coaxial fine and Coarse focusing Knobs on both sides of Microscope</li></ol> <p>Condenser/Filter:</p> <ol style="list-style-type: none"><li>1. Fluorescent Light Condenser with Condenser Movement knob</li><li>2. Fluorescent Light Field Diaphragm with Centering Adjustment knob</li><li>3. Includes condenser annulus</li></ol> <p>Included Items:</p> <ol style="list-style-type: none"><li>1. Light protection eye guard on front of microscope</li><li>2. Instruction manual, Dust cover, two extra bulbs and extra fuse</li><li>3. Two extra mercury bulbs</li><li>4. Bottle of slanted immersion oil for use with 100X bright field objectives</li><li>5. Bottle of glycerin for the 40X glycerin immersion objective.</li></ol>	
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	<p>Optional : Karyo typing analysis software:</p> <ol style="list-style-type: none"> <li>1. It should be able to score, count and analyse chromosomes.</li> <li>2. Should be able to prepare the customized ideograms.</li> <li>3. Must have ability to display spine and centromere of all.</li> <li>4. It should be able to accurately estimate the band resolution of metaphase.</li> <li>5. Should have easy and unlimited date archival and retrieval.</li> <li>6. Should be able to compare chromosomes of multiple plant species</li> <li>7. It should have advanced automation offering background uniformity correction, automatic segmentation of touching chromosomes, optimized image enhancement, contract and band sharpness.</li> </ol>	
21	<p><b>YODER APPRATUS (Wet sieve shaker)- for 4 sets with sieve</b>  <b>Specification:</b></p> <ol style="list-style-type: none"> <li>1. Consists of a water reservoir and a holder for sieves, with 7 sieves of 8mm – 2 microns range</li> <li>2. Shaker is driven by a ¼ H.P.</li> <li>3. Motor through a belt drive</li> <li>4. Shaker mechanism moves the sieves up and down in the reservoir.</li> <li>5. The reservoir has a water out-let for draining out the used water.</li> <li>6. Suitable for operation 230V A.C. Single Phase.</li> <li>7. Electrically Operated.</li> </ol>	
22	<p><b>DOUBLE RING INFILTROMETER</b>  <b>Specification:</b></p> <ol style="list-style-type: none"> <li>1. Pairs of inner and outer rings</li> <li>2. Ring diameter : approximate 28/53 cm</li> <li>3. Galvanized steel driving plate</li> <li>4. Impact absorbing hammer</li> <li>5. Measuring bridges</li> <li>6. Measuring rods with floats</li> </ol>	
23.	<p><b>TRACTOR MOUNTED HTP SPRAYER</b></p> <ol style="list-style-type: none"> <li>1. HTP pump of with 500 lit tank of ISI mark</li> <li>2. Accessories to be provides</li> <li>3. Suitable spraying gun with 100 m pipe of ISI mark</li> <li>4. Fabrication and accessories for tractor mounting</li> </ol>	

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24.	<b>LAYING OF IRRIGATION LINE</b> <ol style="list-style-type: none"><li>1. Pipe line of 3 inch 250 m with all required accessories</li><li>2. The line should be placed across roads by digging and with fittings</li><li>3. Branded company with ISI mark should be quoted</li><li>4. Arrangements for outlets as specified to be made</li><li>5. Line to be placed at least 1.5- 2' feet in the ground and connected as specified</li></ol>	
25.	<b>LAYING OF POP-UPS SPRINKLERS FOR IRRIGATION</b> <ol style="list-style-type: none"><li>1. Complete set of pop ups sprinklers for irrigation in min 4200 sq m.</li><li>2. All required accessories to be provided</li><li>3. Material should be ISI mark</li><li>4. Proper layout as specified to be followed while laying in the field</li></ol>	
26	<b>DIESEL GENERATED SET ( D.G. SET)- 250 KVA</b> (Under buy-back of 63 KVA Kirloskar make DG Set.) Specification: <ol style="list-style-type: none"><li>1. Capacity: 250 KVA</li><li>2. Governor : Electronic</li><li>3. Panel: Manual</li><li>4. No. of Phases : Three (440V-50Hz)</li><li>5. Engine Cooling : Radiator</li><li>6. Air filter: Dry type</li><li>7. Power factor : &gt;0.8</li><li>8. Voltage fluctuations: <math>\pm 1\%</math></li><li>9. Control panel with LCD display indicating KWH, KVA, PF, Volts, Amph, Hz, RPM, Running hour, Oil pressure, Oil temperature, Coolant temperature, fuel level</li><li>10. Protection: Over load, over speed protection features</li></ol>	

	<p>11. Safety features: Auto shutdown, Visual and audio alarm for low lubricant oil pressure, high coolant temperature, low fuel level, canopy temperature, and radiator water level.</p> <p>12. Fuel tank: Detachable, mechanical level indicator, drain cock.</p> <p>13. Exhaust system: At top.</p>	
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**Note- Vendors are requested to attach the Technical compliance statement with respect to above specification as per Annexure-III.**

Note :- Mark (YES) if specification offered is as per tender or better. If not, specify the specification offered. An item-by-item commentary on the purchaser's Technical Specifications demonstrating substantial responsiveness of the goods and services to those specifications or a statement of deviations and exceptions to the provision of the Technical Specifications.

(Technical literature / brochures/ manuals should be attached along with this format)

**Please Note:-**

1. Compliance/Deviation statement comparing the specification of the quoted model to the required specifications. This statement should also give the last page of the technical literature where the relevant specification is mentioned.
2. Bids must have supporting documents (technical) literature of copies of relevant pages from the service manual or factory test (data) for the points noted above, failure regarding which may result in rejection of bid.

SIGNATURE WITH STAMP OF THE BIDDERS

