

**आनुवंशिकी संभाग**  
**Division of Genetics**  
**भारतीय कृषि अनुसंधान संस्थान, नई दिल्ली- 110012**  
**I.C.A.R.-Indian Agricultural Research Institute New Delhi-110012**

मिसिल संख्या: Gen/2022-23/28

दिनांक Dated : 19.01.2026

**NOTICE FOR E-PROCUREMENT THROUGH GEM**

निदेशक, भाकृअनुप - भारतीय कृषि अनुसंधान संस्थान, नई दिल्ली द्वारा निम्नलिखित वैज्ञानिक उपकरण की आपूर्ति एवं कार्य हेतु प्रतिष्ठित निर्माताओं/अधिकृत डीलरों/आपूर्तिकर्ताओं से दो बोली प्रणाली (तकनीकी एवं वित्त बोली) के अन्तर्गत ऑन-लाइन क्यूटेशन GeM पर आमंत्रित की जाती हैं। क्यूटेशन/निविदा प्रस्तुत करने की अंतिम तिथि 10-02-2026, समय 18.00 बजे तक है। क्यूटेशन/निविदा को दिनांक 10-02-2026 को 18.30- बजे निर्धारण समिति के समक्ष खोला जाएगा।

On-line Bids on GeM are invited from reputed Manufactures/Supplier/Authorized Dealer in two bid system (Technical bid & Financial bid) for purchase of following Scientific Equipment on behalf of Director, ICAR-Indian Agricultural Research Institute, New Delhi. The last date for submission of Bid is 10-02-2026- at 18.00 PM. The bid will be opened on 10-02-2026- at 18.30 PM by the prescribed committee.

विस्तृत नियम व शर्तों को भारतीय कृषि अनुसंधान संस्थान की वेबसाइट [www.iari.res.in](http://www.iari.res.in) पर देखें एवं ऑन-लाइन के लिए इसे [www.gem.gov.in](http://www.gem.gov.in) पर भी देखा जा सकता है। Please visit [www.iari.res.in](http://www.iari.res.in) for Details Rules and Regulation and log on [www.gem.gov.in](http://www.gem.gov.in) for online bidding.

क्र.सं. S.No.	वैज्ञानिक उपकरण का नाम Name of Scientific Equipment	मात्रा Quantity	धरोहर राशि Earnest Money	Cost of the Equipment
1.	Climate controlled walk-in Growth chamber.	Two (03)	रूपये 7,50,000/-	-----

The tender details are mentioned below:

Tender No.	GEM/2026/B/7126111
Bid Submission start date & time	19/01/2026
Pre-Bid meeting	28/01/2026 (3.00 PM)
(Last date & time for submission of bid	10/02/26 18.00 PM
Date & time for opening of technical bid	10/02/26 18.30 PM

*20/1/26*

सहायक प्रशासनिक अधिकारी / Assistant Administrative Officer  
आनुवंशिकी संभाग / Division of Genetics  
भा.कृ.अनु.प.-भारतीय कृषि अनुसंधान संस्थान  
ICAR-Indian Agricultural Research Institute  
नई दिल्ली/New Delhi-110012



### बिड विवरण/Bid Details

विक्रेता से मांगे गए दस्तावेज/Document required from seller	Experience Criteria,Past Performance,Bidder Turnover,OEM Authorization Certificate,OEM Annual Turnover *In case any bidder is seeking exemption from Experience / Turnover Criteria, the supporting documents to prove his eligibility for exemption must be uploaded for evaluation by the buyer
क्या आप निविदाकारों द्वारा अपलोड किए गए दस्तावेजों को निविदा में भाग लेने वाले सभी निविदाकारों को दिखाना चाहते हैं? संदर्भ में नू है/Do you want to show documents uploaded by bidders to all bidders participated in bid?	Yes (Documents submitted as part of a clarification or representation during the tender/bid process will also be displayed to other participated bidders after log in)
बिड लगाने की समय सीमा स्वतः नहीं बढ़ाने के लिए आवश्यक बिड की संख्या। / Minimum number of bids required to disable automatic bid extension	1
दिनों की संख्या, जिनके लिए बिड लगाने की समय-सीमा बढ़ाई जाएगी। / Number of days for which Bid would be auto-extended	3
ऑटो एक्सटेंशन अधिकतम कितनी बार किया जाना है। / Number of Auto Extension count	1
विगत प्रदर्शन /Past Performance	50 %
बिड से रिवर्स नीलामी सक्रिय किया/Bid to RA enabled	Yes
रिवर्स नीलामी योग्यता नियम/RA Qualification Rule	50% Lowest Priced Technically Qualified Bidders
लागू आरसीएम/RCM Applicable	Yes
बिड का प्रकार/Type of Bid	Two Packet Bid
तकनीकी मूल्यांकन के दौरान तकनीकी स्पष्टीकरण हेतु अनुमत समय /Time allowed for Technical Clarifications during technical evaluation	2 Days
निरीक्षण आवश्यक (सूचीबद्ध निरीक्षण प्राधिकरण /जेम के साथ पूर्व पंजीकृत एजेंसियों द्वारा)/Inspection Required (By Empanelled Inspection Authority / Agencies pre-registered with GeM)	No
मूल्यांकन पद्धति/Evaluation Method	Total value wise evaluation
वित्तीय दस्तावेज की आवश्यकता है / Financial Document Required	Yes
मध्यस्थता खंड/Arbitration Clause	No
सुलह खंड/Mediation Clause	No

### ईएमडी विवरण/EMD Detail

एडवाइजरी बैंक/Advisory Bank	State Bank of India
-----------------------------	---------------------



ईडी राशि/EMD Amount

750000

## ईपीबीजी विवरण /ePBG Detail

एडवाइजरी बैंक/Advisory Bank	State Bank of India
ईपीबीजी प्रतिशत (%) /ePBG Percentage(%)	5.00
ईपीबीजी की आवश्यक अवधि (माह) /Duration of ePBG required (Months).	16

(a). जेम की शर्तों के अनुसार ईएमडी छूट के इच्छुक बिडर को संबंधित कैटेगरी के लिए बिड के साथ वैध समर्थित दस्तावेज प्रस्तुत करने हैं। एमएसई कैटेगरी के अंतर्गत केवल वस्तुओं के लिए विनिर्माता तथा सेवाओं के लिए सेवा प्रदाता ईएमडी से छूट के पात्र हैं। व्यापारियों को इस नीति के दायरे से बाहर रखा गया है।/EMD EXEMPTION: The bidder seeking EMD exemption, must submit the valid supporting document for the relevant category as per GeM GTC with the bid. Under MSE category, only manufacturers for goods and Service Providers for Services are eligible for exemption from EMD. Traders are excluded from the purview of this Policy.

(b). ईएमडी और संपादन जमानत राशि, जहां यह लागू होती है, लाभार्थी के पक्ष में होनी चाहिए। / EMD & Performance security should be in favour of Beneficiary, wherever it is applicable.

## लाभार्थी /Beneficiary :

DIRECTOR

Indian Agricultural Research Institute, New Delhi, Department of Agricultural Research and Education (DARE),  
Indian Council of Agricultural Research (ICAR), Ministry of Agriculture and Farmers Welfare, AAO, Division of  
Genetics, IARI, Pusa, New Delhi.12  
(Director IARI)

## UIN Number NCTGC2415P

बोली विभाजन लागू नहीं किया गया/ Bid splitting not applied.

## एमएसई खरीद वरीयता/MSE Purchase Preference

एमएसई खरीद वरीयता/MSE Purchase Preference	No
---	----

## एमएसई के लिए सक्षम प्राधिकारी का विवरण:/Details of the Competent Authority for MSE

सक्षम प्राधिकारी का नाम/Name of Competent Authority	Satish Kumar
सक्षम प्राधिकारी का पदनाम/Designation of Competent Authority	Under Secretary (Crop Science)
सक्षम प्राधिकारी का कार्यालय/विभाग/प्रभाग/Office / Department / Division of Competent Authority	ICAR, Krishi Bhawan, New delhi.110001
सीए अनुमोदन संख्या/CA Approval Number	CS/3/1/2023-IA.IV (238218)
सक्षम प्राधिकारी अनुमोदन तिथि/Competent Authority Approval Date	01-04-2024
सक्षम प्राधिकारी द्वारा प्रदान की गई स्वीकृति का संक्षिप्त विवरण//Brief Description of the Approval Granted by Competent Authority	Issuance for exemption certificate for purchase of walk in growth chamber



Competent Authority Approval for not opting Micro and Small Enterprises Preference : [View Document](#)

**एमआईआई खरीद वरीयता/MII Purchase Preference**

एमआईआई खरीद वरीयता/MII Purchase Preference

No

**एमआईआई के लिए सक्षम प्राधिकारी का विवरण:/Details of the Competent Authority for MII**

सक्षम प्राधिकारी का नाम/Name of Competent Authority	Satish Kumar
सक्षम प्राधिकारी का पदनाम/Designation of Competent Authority	Under Secretary (Crop Science)
सक्षम प्राधिकारी का कार्यालय/विभाग/प्रभाग/Office / Department / Division of Competent Authority	ICAR, Krishi Bhawan, New Delhi.110001
सीए अनुमोदन संख्या/CA Approval Number	CS/3/1/2023-IA.IV (238218)
सक्षम प्राधिकारी अनुमोदन तिथि/Competent Authority Approval Date	01-04-2024
सक्षम प्राधिकारी द्वारा प्रदान की गई स्वीकृति का संक्षिप्त विवरण/Brief Description of the Approval Granted by Competent Authority	Issuance for exemption certificate for purchase of walk in growth chamber

Competent Authority Approval for not opting Make In India Preference : [View Document](#)

1. The minimum average annual financial turnover of the bidder during the last three years, ending on 31st March of the previous financial year, should be as indicated above in the bid document. Documentary evidence in the form of certified Audited Balance Sheets of relevant periods or a certificate from the Chartered Accountant / Cost Accountant indicating the turnover details for the relevant period shall be uploaded with the bid. In case the date of constitution / incorporation of the bidder is less than 3-year-old, the average turnover in respect of the completed financial years after the date of constitution shall be taken into account for this criteria.
2. Experience Criteria: In respect of the filter applied for experience criteria, the Bidder or its OEM of the product offered in the bid {themselves or through reseller(s)} should have regularly, manufactured and supplied same or similar Category Products to any Central / State Govt Organization / PSU for number of Financial years as indicated above in the bid document before the bid opening date. Copies of relevant contracts and delivery acceptance certificates like CRAC to be submitted along with bid in support of having supplied some quantity during each of the Financial year. In case of bunch bids, the category of primary product having highest value should meet this criterion.
3. OEM Turn Over Criteria: The minimum average annual financial turnover of the OEM of the offered product during the last three years, ending on 31st March of the previous financial year, should be as indicated in the bid document. Documentary evidence in the form of certified Audited Balance Sheets of relevant periods or a certificate from the Chartered Accountant / Cost Accountant indicating the turnover details for the relevant period shall be uploaded with the bid. In case the date of constitution / incorporation of the OEM is less than 3 year old, the average turnover in respect of the completed financial years after the date of constitution shall be taken into account for this criteria.
4. Past Performance: The Bidder or its OEM {themselves or through re-seller(s)} should have supplied same or similar Category Products for 50% of bid quantity, in at least one of the last three Financial years before the bid opening date to any Central / State Govt Organization / PSU. Copies of relevant contracts (proving supply of cumulative order quantity in any one financial year) to be submitted along with bid in support of quantity supplied in the relevant Financial year. In case of bunch bids, the category related to primary product having highest bid value should meet this criterion.

**जीएसटी की धारा 9(3)/Section 9(3) Of GST**

Where ever RCM is applicable, sellers (Regular GST registered seller who opted out of FCM , unregistered seller, seller registered under composition scheme)will be forced to put Zero GST and GST cess in their bids. Buvver will



5. Reverse Auction would be conducted amongst first 50% of the technically qualified bidders arranged in the order of prices from lowest to highest. Number of sellers eligible for participating in RA would be rounded off to next higher integer value if number of technically qualified bidders is odd (e.g. if 7 bids are technically qualified, then RA will be conducted amongst L-1 to L-4). In case number of technically qualified bidders are 2 or 3, RA will be between all without any elimination. If Buyer has chosen to split the bid amongst N sellers, then minimum N sellers would be taken to RA round. In case Primary products of only one OEM are left in contention for participation in RA based on lowest 50% bidders qualifying for RA, the number of sellers qualifying for RA would be increased to get at least products of one more OEM (directly participated or through its reseller) if available. Further, if bid(s) of any seller(s) eligible for MSE preference is / are coming within price band of 15% of Non MSE L-1 or if bid of any seller(s) eligible for Make in India preference is / are coming within price band of 20% of non MII L-1, then such MSE / Make in India seller shall also be allowed to participate in the RA process.

### जीएसटी की धारा 9(3) / Section 9(3) Of GST

Where ever RCM is applicable, sellers (Regular GST registered seller who opted out of FCM , unregistered seller, seller registered under composition scheme) will be forced to put Zero GST and GST cess in their bids. Buyer will have liability of paying the GST and GST cess to the government on the specified rate mentioned by them in this Bid.

If the buyer has mentioned MSE purchase preference in ATC then service provider is required to upload necessary documents for MSE purchase preference for verification by the buyer during evaluation.

### Pre Bid Detail(s)

मूल्य भिन्नता खंड दस्तावेज़/Pre-Bid Date and Time	प्री-बिड स्थान/Pre-Bid Venue
28-01-2026 15:00:00	Conference Room No.8, Division of Genetics, IARI, Pusa, New Delhi.110012

### Climate Controlled Walk-in Growth Chamber (03 Nos. ) ( 3 Unit )

### तकनीकी विशिष्टियाँ /Technical Specifications

क्रेता विशिष्टि दस्तावेज़ /Buyer Specification Document	<a href="#">Download</a>
---	--------------------------

### इनपुट कर क्रेडिट(आईटीसी) तथा रिवर्स प्रभार (आरसीएम)/Input Tax Credit(ITC) and Reverse Charge(RCM) Details

जीएसटी पर इनपुट कर क्रेडिट /ITC on GST	जीएसटी उपकर कर क्रेडिट /ITC on GST Cess	लागू आरसीएम/R CM Applicable	रिवर्स प्रभार के अनुसार जीएसटी/GST as per RCM	रिवर्स प्रभार के अनुसार जीएसटी उपकर 1 /GST Cess 1 as per RCM	GST Cess 2 as per RCM	वैकल्पिक रिवर्स प्रभार /Optional RCM
NA	NA	Yes	18%	9%	9 (INR) - Per Unit	No

परेषिती/रिपोर्टिंग अधिकारी तथा मात्रा/Consignees/Reporting Officer and Quantity



S.N o.	प्रेषिती/रिपोर्टिंग अधिकारी /Consignee Reporting/Officer	पता/Address	मात्रा /Quantity	डिलीवरी के दिन/Delivery Days
1	Manoj Kumar	110012,Division of Genetics, IARI Pusa Campus New Delhi	3	30

## क्रेता द्वारा जोड़ी गई बिड की विशेष शर्तें/Buyer Added Bid Specific Terms and Conditions

### 1. Generic

OPTION CLAUSE: The Purchaser reserves the right to increase or decrease the quantity to be ordered up to 25 percent of bid quantity at the time of placement of contract. The purchaser also reserves the right to increase the ordered quantity up to 25% of the contracted quantity during the currency of the contract at the contracted rates. The delivery period of quantity shall commence from the last date of original delivery order and in cases where option clause is exercised during the extended delivery period the additional time shall commence from the last date of extended delivery period. The additional delivery time shall be  $(\text{Increased quantity} \div \text{Original quantity}) \times \text{Original delivery period (in days)}$ , subject to minimum of 30 days. If the original delivery period is less than 30 days, the additional time equals the original delivery period. The Purchaser may extend this calculated delivery duration up to the original delivery period while exercising the option clause. Bidders must comply with these terms.

### 2. Forms of EMD and PBG

Bidders can also submit the EMD with Account Payee Demand Draft in favour of

Director, IARI  
payable at  
NEW DELHI

Bidder has to upload scanned copy / proof of the DD along with bid and has to ensure delivery of hardcopy to the Buyer within 5 days of Bid End date / Bid Opening date.

### 3. Forms of EMD and PBG

Bidders can also submit the EMD with Fixed Deposit Receipt made out or pledged in the name of A/C

Director, IARI

The bank should certify on it that the deposit can be withdrawn only on the demand or with the sanction of the pledgee. For release of EMD, the FDR will be released in the favour of the bidder by the Buyer after making endorsement on the back of the FDR duly signed and stamped along with covering letter. Bidder has to upload scanned copy/ proof of the FDR along with bid and has to ensure delivery of hardcopy to the Buyer within 5 days of Bid End date/ Bid Opening date

### 4. Scope of Supply

Scope of supply (Bid price to include all cost components) : Supply Installation Testing Commissioning of Goods and Training of operators and providing Statutory Clearances required (if any)

### 5. Turnover

Bidder Turn Over Criteria: The minimum average annual financial turnover of the bidder during the last three years, ending on 31st March of the previous financial year, should be as indicated in the bid document. Documentary evidence in the form of certified Audited Balance Sheets of relevant periods or a certificate from the Chartered Accountant / Cost Accountant indicating the turnover details for the relevant period shall be uploaded with the bid. In case the date of constitution / incorporation of the bidder is less than 3 year old, the average turnover in respect of the completed financial years after the date of constitution shall be taken into account for this criteria.



## Turnover

OEM Turn Over Criteria: The minimum average annual financial turnover of the OEM of the offered product during the last three years, ending on 31st March of the previous financial year, should be as indicated in the bid document. Documentary evidence in the form of certified Audited Balance Sheets of relevant periods or a certificate from the Chartered Accountant / Cost Accountant indicating the turnover details for the relevant period shall be uploaded with the bid. In case the date of constitution / incorporation of the OEM is less than 3 year old, the average turnover in respect of the completed financial years after the date of constitution shall be taken into account for this criteria. In case of bunch bids, the OEM of CATEGORY RELATED TO primary product having highest bid value should meet this criterion.

## 7. OEM

IMPORTED PRODUCTS: In case of imported products, OEM or Authorized Seller of OEM should have a registered office in India to provide after sales service support in India. The certificate to this effect should be submitted.

## 8. Warranty

Warranty period of the supplied products shall be 3 years from the date of final acceptance of goods or after completion of installation, commissioning & testing of goods (if included in the scope of supply), at consignee location. OEM Warranty certificates must be submitted by Successful Bidder at the time of delivery of Goods. The seller should guarantee the rectification of goods in case of any break down during the guarantee period. Seller should have well established Installation, Commissioning, Training, Troubleshooting and Maintenance Service group in INDIA for attending the after sales service. Details of Service Centres near consignee destinations are to be uploaded along with the bid.

## अस्वीकरण/Disclaimer

The additional terms and conditions have been incorporated by the Buyer after approval of the Competent Authority in Buyer Organization, whereby Buyer organization is solely responsible for the impact of these clauses on the bidding process, its outcome, and consequences thereof including any eccentricity / restriction arising in the bidding process due to these ATCs and due to modification of technical specifications and / or terms and conditions governing the bid. If any clause(s) is / are incorporated by the Buyer regarding following, the bid and resultant contracts shall be treated as null and void and such bids may be cancelled by GeM at any stage of bidding process without any notice:-

1. Definition of Class I and Class II suppliers in the bid not in line with the extant Order / Office Memorandum issued by DPIIT in this regard.
2. Seeking EMD submission from bidder(s), including via Additional Terms & Conditions, in contravention to exemption provided to such sellers under GeM GTC.
3. Publishing Custom / BOQ bids for items for which regular GeM categories are available without any Category item bunched with it.
4. Creating BoQ bid for single item.
5. Mentioning specific Brand or Make or Model or Manufacturer or Dealer name.
6. Mandating submission of documents in physical form as a pre-requisite to qualify bidders.
7. Floating / creation of work contracts as Custom Bids in Services.
8. Seeking sample with bid or approval of samples during bid evaluation process. (However, in bids for attached categories, trials are allowed as per approved procurement policy of the buyer nodal Ministries)
9. Mandating foreign / international certifications even in case of existence of Indian Standards without specifying equivalent Indian Certification / standards.
10. Seeking experience from specific organization / department / institute only or from foreign / export experience.
11. Creating bid for items from irrelevant categories.
12. Incorporating any clause against the MSME policy and Preference to Make in India Policy.
13. Reference of conditions published on any external site or reference to external documents/clauses.
14. Asking for any Tender fee / Bid Participation fee / Auction fee in case of Bids / Forward Auction, as the



Buyer added ATC Clauses which are in contravention of clauses defined by buyer in system generated bid template as indicated above in the Bid Details section, EMD Detail, ePBG Detail and MII and MSE Purchase Preference sections of the bid, unless otherwise allowed by GeM GTC.

16. In a category based bid, adding additional items, through buyer added additional scope of work/ additional terms and conditions/or any other document. If buyer needs more items along with the main item, the same must be added through bunching category based items or by bunching custom catalogs or bunching a BoQ with the main category based item, the same must not be done through ATC or Scope of Work.

Further, if any seller has any objection/grievance against these additional clauses or otherwise on any aspect of this bid, they can raise their representation against the same by using the Representation window provided in the bid details field in Seller dashboard after logging in as a seller within 4 days of bid publication on GeM. Buyer is duty bound to reply to all such representations and would not be allowed to open bids if he fails to reply to such representations.

**All GeM Sellers/Service Providers shall ensure full compliance with all applicable labour laws, including the provisions, rules, schemes and guidelines under the four Labour Codes i.e. the Code on Wages, 2019; the Industrial Relations Code, 2020; the Occupational Safety, Health and Working Conditions Code, 2020; and the Code on Social Security, 2020 as and when notified and brought into force by the Government of India.**

**For all provisions of the Labour Codes that are pending operationalisation through rules, schemes or notifications, the corresponding provisions of the pre-existing labour enactments (such as The Minimum Wages Act, 1948, The Payment of Wages Act, 1936, The Payment of Bonus Act, 1965, The Equal Remuneration Act, 1976, The Payment of Gratuity Act, 1972, etc. and relevant State Rules) shall continue to remain applicable.**

**The Seller/ Service Providers shall, therefore, be responsible for ensuring compliance under:**

- **All notified and enforceable provisions of the new Labour Codes as mentioned hereinabove; and**
- **All operative provisions of the erstwhile Labour Laws until their complete substitution.**

**All obligations relating to wages, social security, safety, working conditions, industrial relations etc. and any other statutory requirements shall be strictly met by the Seller/ Service Provider. Any non-compliance shall constitute a breach of the contract and shall entitle the Buyer to take appropriate action in accordance with the contract and applicable law.**

यह बिड सामान्य शर्तों के अंतर्गत भी शासित है /This Bid is also governed by the General Terms and Conditions

जेम की सामान्य शर्तों के खंड 26 के संदर्भ में भारत के साथ भूमि सीमा साझा करने वाले देश के बिडर से खरीद पर प्रतिबंध के संबंध में भारत के साथ भूमि सीमा साझा करने वाले देश का कोई भी बिडर इस निविदा में बिड देने के लिए तभी पात्र होगा जब वह बिड देने वाला सक्षम प्राधिकारी के पास पंजीकृत हो। बिड में भाग लेते समय बिडर को इसका अनुपालन करना होगा और कोई भी गलत घोषणा किए जाने व इसका अनुपालन न करने पर अनुबंध को तत्काल समाप्त करने और कानून के अनुसार आगे की कानूनी कार्रवाई का आधार होगा।/In terms of GeM GTC clause 26 regarding Restrictions on procurement from a bidder of a country which shares a land border with India, any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority. While participating in bid, Bidder has to undertake compliance of this and any false declaration and non-compliance of this would be a ground for immediate termination of the contract and further legal action in accordance with the laws.

---धन्यवाद/Thank You---



# **Technical Specification of Climate Controlled Walk-In Growth Chamber**

Sl.	Category	Specification details
1.	Type	Walk-in Type Plant Growth Chamber
2.	Total Growth Area	$\geq 5.7 \text{ m}^2$ or more
3.	Maximum Growth Height	1700mm or more with adjustable height
4.	Door	Light tight solid doors with gasket or better
5.	Other Door Facilities	Door with interior safety latch and observation window with cover lid
6.	Outer material	Galvanized steel with plastic powder coated (long lasting) finish or better
7.	Interior material	Rust Free durable steel with epoxy paint (SS304 / SS316 or better), insulated floor for uniform humidity control or better
8.	Insulation	Panels with 80 mm thick, modular, EN 14509 high density injected polyurethane foam (PUF) or better.
9.	Temperature range	10°C to 44°C lights ON; 4°C to 44°C lights OFF or better
10.	Temp. Uniformity and accuracy	+/- 1 °C in space, the temperature distribution map is to be provided
11.	Humidity range	40% to 80% RH or better when lights on. Humidification with ultrasonic/centrifugal/air-microspray humidifier. Should have configurable humidity safety alarms.
12.	Air circulation	Conditioned air to be directed across the plant growth modules without significantly impacting relative humidity. User specific control of air speed from the controller
13.	Total PAR light intensity required (PPFD) *1	950 $\mu\text{molm}^{-2}\text{s}^{-1}$ or better @ 1500 mm; Intensity controllable 10-100% at the controller
14.	Type of & quantity of light source	Balanced broad-spectrum LED Light (covering all spectrum of PAR optimized white).
15.	Refrigeration system*2	Self-contained air-cooled condensing unit with hot gas bypass system or better
16.	Refrigerant	CFC – Free
17.	Controller Type	Touch screen display, scheduling for light intensity, photoperiod, diurnal settings, temperature, humidity etc. Audio- visual alarm for high and low value display set; Preferred: Controller to have maintenance service function to identify the fault in the machine
18.	Quality Certification	ISO9001:2015 and CE marked
19.	Desirable: *1Type of light Fixtures (Module/panel)	The light source used should be patented/trademark technology of the plant growth chamber manufacture like scibrite/gBrite/8IIA etc. or from a global LED manufacture firm specialized in making plant growth and research lights like Osram / Valoya / Heliospectra / Fluence etc. (exact make, model & spectra to be provided with full details and description in the quote). LED modules with minimum life of upto 65000 hrs. LED modules should be configured for extreme uniform light throughout the growth area.
20.	Desirable: *2Refrigeration system	Solenoid valves are preferred for quiet and long-life operation
21.	Desirable: Humidity accuracy	+/- 2%
22.	Warranty	3 years comprehensive warranty after successful installation. For 1 week down-time, warranty will be extended by 1 month and for 1 month down-time, warranty will be extended by 1 year
23.	Accessories	All the accessories including water purifying system, UPS for controller, computer with required OEM software should be included
24.	Installations	More than 3 installations of similar chamber in the institutes of repute with documentary proof must be provided
25.	Manual and training	A detailed user manual to be provided along with equipment, and training should be conducted as per requirement of user
26.	Other requirements	ICAR-IARI reserves the right to accept or discard if there are any deviations in the specifications or lack of authenticity and validity of the documents presented in support of claim
27.		Authorization certificate from OEM is necessary if parent company is not quoting directly
28.		If required, bidder should arrange for demonstration of the equipment during technical evaluation

**(Ranjith Kumar Ellur)**  
डा. रंजित कुमार इल्लूर / Dr. Ranjith Kumar Ellur  
वैज्ञानिक / Scientist  
आनुवंशिकी संभाग  
Division of Genetics  
भा.कृ.अ.प.-भा.कृ.अ.सं., पूसा  
I.C.A.R.-I.A.R.I., Pusa  
नई दिल्ली / New Delhi-110012



**डॉ. प्रलय कुमार भोमिक**  
Dr. Pralay Kumar Bhowmick  
वरिष्ठ वैज्ञानिक / Senior Scientist  
भा.कृ.अ.प.-भा.कृ.अ.सं., पूसा / ICAR-I.A.R.I., Pusa  
नई दिल्ली / New Delhi-110012

*To the best of my knowledge the specifications are generic in nature*

*Gaikwad*

**Dr. KIRAN B. GAIKWAD**  
Senior Scientist  
Division of Genetics  
ICAR-Indian Agricultural Research Institute  
New Delhi-110012.



**(Dr. C. Bhowmick)**  
डा. सी. भारद्वाज / Dr. C. BHARADWAJ  
प्रधान वैज्ञानिक / Principal Scientist  
आनुवंशिकी संभाग / Division of Genetics  
भारतीय कृषि अनुसंधान संस्थान  
Indian Agricultural Research Institute  
पूसा, नई दिल्ली-110012/Pusa, New Delhi-110012