



भारतीय कृषि अनुसंधान परिषद.
उत्तरपूर्वी पर्वतीय क्षेत्र अनुसंधान परिसर
उमियम, मेघालय - 793 103
INDIAN COUNCIL OF AGRICULTURAL RESEARCH
ICAR Research Complex for NEH Region
Umiam, Meghalaya - 793 103



Tender No. RC(S)160/ 2017/EFC/Pt.I

Dated: 16th April, 2018

OPEN TENDER

INVITATION OF TENDER IS INVITED FOR PROCUREMENT OF SCIENTIFIC EQUIPMENTS/MACHINERIES UNDER EFC FOR THE YEAR 2018-19, FOR ICAR, RESEARCH COMPLEX FOR NEH REGION, UMIAM, MEGHALAYA

Sealed bids are invited from the reputed registered firms/ manufacturers/ authorized dealers by ICAR Research Complex for N.E.H. Region, Umroi Road, Umiam, Meghalaya. The details specification of equipments/machineries is as per Appendix -1.

TERMS & CONDITIONS OF THE TENDER

1. **Cost of Tender paper of Rs. 1000/- (Rupees one thousand) only** (Non – refundable) to be deposited in the favour of the Director, ICAR Research Complex for NEH Region, Umiam – 793103 by means of Demand Draft payable at SBI, ICAR Complex Branch, Umiam. Non – submission of the cost of Tender paper (consolidated) shall lead to non – consideration of the Tender.
2. The Bidders should submit the proposals in two parts:
 - I. Technical Bid (Bid -I)
 - II. Financial Bid (Bid-II)
3. Technical part should contain all such details as mentioned in the Bid Document.
4. Financial part (BID-II) should contain the financial bid inclusive of all admissible taxes, duties and levies, installation charges, freight charges, Taxes, VAT etc., as may be applicable etc. **The rates quoted should be FOR up to ICAR Research Complex for NEH Region, Umiam for each particular item.** The Financial Bid should consist of the Rates, their detailed break –ups, etc. Non-compliance of this shall lead to non-consideration of the Bid. The rates must be valid for at least for 1(one) year from the date of quotation.
5. These two parts (BID-I & BID II) should be submitted in separate sealed envelopes. Both envelop should then be sealed in a third envelop **super scribed as “TENDER NO. RC(S)160/2017/EFC/Pt.1, dated 16th April, 2018 due on 18th May,2018 FOR PROCUREMENT OF SCIENTIFIC EQUIPMENTS/MACHINERIES under EFC for the year 2018-19, FOR ICAR, RESEARCH COMPLEX FOR NEH REGION, UMIAM, MEGHALAYA** and addressed to “THE DIRECTOR, ICAR RESEARCH COMPLEX FOR NEH REGION UMIAM, MEGHALAYA-793103”. The firm should also super scribe on the top of the envelope the Sl. No. & name of the equipments to be supplied, date of opening and details of earnest money deposited otherwise their tender may not be considered.
6. **The Cost of the Tender (consolidated) as well as the Earnest Money (consolidated) in the form of Bank Draft along with all other Technical Details should be mandatory kept in the Technical Bid only. Cheque/Bank Guarantee/fixed deposit receipt/ money orders/Cash etc. are not acceptable towards deposit of earnest money.**
7. In no case Earnest Money will be accepted after opening of tender.

8. **Details of Earnest Money i.e. draft number and date should be indicated on the cover of the big envelope.** All Tenders should be sent by Registered Post. Tenders to be handed delivered should be put in the Tender box, kept in the office chamber of Chief Administrative Officer, ICAR Research Complex for NEH Region, Umiam, Meghalaya-793103 not later than **12:30 P.M. on 18th May, 2018.** Tenders received after the due date and time shall not be considered under any circumstances.
9. On the date of opening, only Part-I (Technical Bid) will be opened. Part-II (Financial Bid) shall be opened subsequently only of those tender, whose Technical Bid qualifies as per the laid norms of this tender.
10. **Composition of Technical Bid –**
 - I. Profile & Track Record of the company
 - II. Document in support for Number of years in Scientific Equipments manufacturing/supply.
 - III. Document in support of last supply orders.
 - IV. Balance Sheet for last 3 financial years. Annual Turnover, which will be average of last three years on the basis of balance sheet.
 - V. Photo copy of PAN No. issued by Income – Tax Department. Photo copy of GST Registration etc. (If not applicable submit the relevant document).
 - VI. **Non refundable tender Document Fee of Rs. 1000/- in the form of Demand Draft** from any Nationalized Bank drawn in favour of the Director, ICAR, Research Complex for NEH Region, Umiam, Meghalaya payable at Sate Bank of India, ICAR complex branch (If exempted/relaxed submit the relevant document in support of claim). **Refundable Earnest Money Deposit (EMD) of Rs. 10000/- (Rupees ten thousand only) in the Form of Demand Draft from any Nationalized Bank, drawn in favour of the Director, ICAR, Research Complex for NEH /region, Umiam, Meghalaya.** (If exempted/relaxed submit the relevant document in support of claim) **The Cost of the Tender paper as well as the Earnest Money along with all other Technical Details should be mandatory kept in the Technical Bid only. Non submission of the Bid Security with quotation shall make the quotation/ bid liable to be rejected.**
 - VII. **Furnishing of related documents like detailed specifications, technical literature, brand name, model and make, catalogue, authorization letter, Dealership Certificate, Manufacturing company registration certificate, product certification, price list (if any) etc. is mandatory, Dealership certificate/Agency Certificate for the manufacturer/ manufacturing firm should be enclosed if the rates are quoted by the Dealers/Agents. Failing which the quotation shall not be considered.**
 - VIII. **Up-to-date sale tax certificate, tax clearance, valid registration certificate are mandatory.**
 - IX. Other relevant technical documents/specifications in favour/ claim/ Support of equipments /machines if any may be submitted as additional with the technical bid.
11. **The supply is effected at DGS&D rate contract, wherever is applicable.** The rate should be quoted for list of items as per the tender document.
12. The Buyer shall not be responsible for payment of transit insurance charges.
13. Payment shall be made on actual delivery in good condition and successful installation and demonstration (which should be free of cost and must be completed before payment).
14. In case for Imported goods:
 - i. **The price may be quoted in foreign currency and import will be on FOB basis.** However, custom clearance, Inland freight etc. will be the responsibility of the supplier and no separate charges will be paid for that, however, custom duty

exemption certificate shall be provided. The supplier should inform well in advance for sending these papers. No demurrage charges will be paid. If the supplier desires, rate in corresponding Indian currency may be quoted. It will be at the discretion of the authority of ICAR Research Complex for NEH Region to accept Indian or Foreign currency prices.

- ii. In case of any custom duty charge, applicable as per Govt. of India's Notification, the same may be paid by the firm which will be reimbursed to the Indian Agent (who should be a registered firm and with DGS&D immediately, subject to the condition that the bill of entry in original along with all relevant papers are submitted immediately, after custom clearance and installation and demonstration of the items. Installation and demonstration should be free of cost.
 - iii. **The import & payment will be made by means of Foreign Bank Draft/ Site Draft in case of foreign imported goods.** Performance Bank guarantee of 10% FOB value valid till the end of warranty period should be submitted before the release of the security deposit. All bank charges outside and inside India shall go to the beneficiary's account. Performance bank guarantee of 10% FOB value, valid till the end of warranty period, should be submitted before the release of the security deposit. All bank charges outside and inside India shall go to the beneficiary's account. Draft making charges would go to the beneficiary's account and a scanned copy of the draft, if required, can be sent to the Indian agent by post. Draft would be handed over after successful installation and demonstration which should be completed within 45 days from the date of draft and submission of all documents like bill of entry etc.
 - iv. All imported items should be delivered up to destination i.e. all the import should be free of inland freight charges, insurance etc.
 - v. **Indian Agency Commission rate and amount should be clearly specified as per rules. IAC, wherever applicable, will be paid in Indian Currency only.**
 - vi. In case of delay in supply, penalty will be imposed @2% per week, subject to a maximum of 10% of the FOB value
 - vii. Indian Agents quoting on behalf of their principal must be registered firms with DGS&D .They are also requested to provide necessary authorization letter from their principal along with the quotation.
 - viii. **ICAR Research Complex for NEH Region, Umiam, Meghalaya, being a Scientific and Research Organization, is exempted from payment of Excise Duty (Certificate to this effect will be provided).**
15. All Bidders should mandatory give their current, PAN Card No., TDS& other Bank A/C details to enable the office for releasing the dues via e- payment basis.
16. KHADC license for trade in the State of Meghalaya only.
- I. The Firm/Agency run by the Non-tribal contractor's /firms/ companies/suppliers/stockiest/banded ware house/Private carriage contractors/Co-operative Societies etc. should produce Trading License issued by the KHADC (Govt. of Meghalaya).
 - II. Submission of tender paper does not fall under trade as per the above said act. However, if a Non-tribal becomes a successful bidder he has to furnish License issued by the KHADC (Govt. of Meghalaya) before any work involving trade is issued to him.
Further those firm/agency opting for clause II above are requested to submit *an undertaking mandatorily* to this effect along with the technical bids as a certification about their capability of submission of the trade license when ask for, failing which the tender are liable to be rejected/not to be considered at any circumstances. (If not applicable submit the relevant document).

2. Performance Bank Guarantee is required for all indigenous items also. For items less than Rs.50, 000, the amount should be 5% of the actual cost of the equipment and for items more than 50,000.00 the amount should be 10% of the actual cost of the equipment. The bank guarantee should cover the entire guarantee/ warranty period which should be of at least one year duration.
3. **The selected tenderers must complete the supply/ installation/ demonstration within 30 (thirty) days from the date of the supply order due to time factor or the said orders shall be treated as cancelled and no further correspondence will be entertained.**
4. The guarantee/ warrantee should be from the date of installation. All guarantee/ warranty services should be attended within a maximum limit of 15 days, failing which, proportionate deductions from the security deposit may be made at the discretion of the Institute.
5. The complete details regarding the Institutions/ Corporations/ Bodies, etc. where the Firm/ Dealer has made the supplies during the last 2/3 years should also be furnished, along with the supply orders.
6. The Bidders should mandatory provide their full Bank Details, PAN Card No. , IFS code No., and TDS so as to ensure e-payment to them directly on satisfactory completion of the Supply.
7. The Director, ICAR Research Complex reserves the right to reject any tender in part or full, without assigning any reason thereof.
8. Legal jurisdiction for all disputes shall be within the purview of the Shillong Court.
9. **The bidders should mandatory sign on every page of the Tender Document, which would show their unconditional acceptance of all the terms and conditions of the Tender Document.**
10. Tenders shall be opened on **18th May, 2018 at 2:30 pm**, ICAR Research Complex for NEH Region, Umiam , Meghalaya – 793103. Interested bidders may attend the opening.
11. If the above mentioned closing /opening day of the tender happened to be non – working date due to Bandh/Strike as any other reasons, the tender will be received & opened on the following working day at the same time except on the 2nd (second) Saturday.
12. Other terms & conditions, as may be decided by the Competent Authority from time to time, depending upon the condition & requirement of the supply. The intimation in this regard, shall be provided well in advance & the bidder/ supplier shall be bound by the said terms & conditions.
13. For any query/ clarification, the undersigned may be approached at:
Contact address:

E-mail: storesection@yahoo.in

**Sd/-
DIRECTOR**

Before quoting for the Tender, it is requested to kindly go through the Tender Document thoroughly and abide by all the Terms and conditions given. Non-Compliance of any of the T & C mentioned above, shall lead to non-consideration of the Bid and no request what so ever shall be considered under any circumstances.

APPENDIX- I

List of equipments/ instruments for procurement under EFC for the year 2018-19 , along with specification:

Sl.No.	Name of the items	Specifications	Qty	Whom to be supplied
1	Gel Electrophoresis (Horizontal)	<ul style="list-style-type: none"> • Gel bed dimensions 26cm(w) x 40cm(l). <p>High-Throughput Submarine Horizontal System based electrophoresis unit with</p> <ul style="list-style-type: none"> • Productivity Package to allow researcher to cast a second gel while the first is running! • Safety cover • Platinum electrode cassettes to provide rapid sample velocity and clear focused bands without smiling. Easy removal of these cassettes for cleaning or replacement. • High quality, heavy duty construction, 3 year warranty with vast array of accessory options. • Power leads, internal cooling chamber, buffer circulation ports • Gel Casting Options: Tapered baffles for easy in situ gel formation. Optional Continuously Adjustable Caster to provide an alternative casting method that is fast, easy, versatile and reliable. <p>Gel Tray Specifications:</p> <ul style="list-style-type: none"> • UVT gel tray with 8 slots at 4.25cm path length, and 4 adjustable height combs. • All gel trays should be winged for easy handling - no more sticking finger into slippery buffer to extract gel tray. • Made from sturdy 6.4mm thick UV transparent acrylic. • Grooves in gel tray corners create agarose anchors to prevent gel flotation during electrophoresis. • Gel tray configuration should allow single run or multiple simultaneous short runs. • All combs should be of microtitre format to allow multi-channel pipetting. Combs are printed with catalog number and thickness for easy identification. • Coolant may be recirculated beneath gel bed to provide constant temperature runs. 	1	Plant Breeding Divn.
2	Deep Freezer	<ul style="list-style-type: none"> • Upright Vertical Deep Freezer • Capacity - Internal: 265 litres • Temperature range -20°C to -40°C • Direct Cooling Type • Microprocessor controlled system. 	1	Plant Breeding Divn.

		<ul style="list-style-type: none"> • Minimum 6 drawers required • Adjustable shelves • Door lock • Frequency 50 Hz • Grade SS 304 • Material Type Internal: Stainless Steel • External: Powder Coated CRCA Steel • Display LED Display • Voltage 220-240 volts <p>Required and to be supplied accessories</p> <ul style="list-style-type: none"> • 5KVA or suitable voltage stabilizer. • Appropriate stainless steel racks, storage boxes with inventory racking system of noncorrosive aluminium. • Cryo Gloves • Minimum one year warranty. 		
3	Seed Dryer:-	<p>Tripled walled, inside made of stainless steel and outside made of mild steel painted in dark chocolate colour. Insulation between the two walls is filled with mineral wool.</p> <p>It is fitted with Microprocessed Electronic Digital temperature indicator cum controller & circulation fan also to get uniform temperature form $\pm 3^{\circ}\text{C}$ above ambient to 250°C.</p> <p>Size of Dryer inside 455x455x605mm</p> <p>No. of trays 4</p> <p>Work on 220v/440v A.C.</p>	1	Plant Breeding Divn.
4	Deep Freezer	<ul style="list-style-type: none"> • Temp. range : -17°C to -24°C • Capacity: 345 ltrs • Stand on vertical position • Digital temp. controller with display • Freely adjustable plastic coated shelves • Heavy duty compressor • Single door • Built in condenser. • No frost. • PUFF insulation • Door lock for safety. • Easy to clean. • Dimensions (Inches): 72.8x23.4x23.4 Preferably imported. 	1	Horticulture Divn.
5	Bench Top High Speed Centrifuge (Refrigerated)	<ul style="list-style-type: none"> • The instrument should be quoted with 24 place fixed angle, Antimicrobial coated rotor having 17500 RPM and 30, 130Xg. • The centrifuge speed can be set from 500 RMP with an increment of 100 RPM • The instrument acceleration time should be : <14s and • Breaking time should be: <15s for doing 	1	Horticulture Divn.

		<p>experiment with sensitive samples</p> <ul style="list-style-type: none"> • The instrument should be very compact and fits in bench space and also access able in low hanging shelves. • The Centrifuge can stored 50 no's of User defined program • The centrifuge timer can be set from 10sec to continuous mode. • The Centrifuge should be equipped with automatic rotor recognition and rotor imbalance detection features. • The centrifuge should have some pre-defined Programme keys for easy access for routine program. • The instrument should be capable to maintain constant 4°C at its MAX speed. • The centrifuge should be CE and IVD certified for research Purpose. • The instrument should be equipped with a separate SHORT spin key and SOFT break function. • The centrifuge should be equipped with Fast Temp. • Function and standby cooling Function. • The centrifuge should be capable of ECO shut off function for Extended Compressor life. • As a safety feature the instrument should have a build in condensation drain that eliminate water accumulation in rotor chamber and prevent corrosion, • The instrument should be optionally quoted with 6place. • 15ml/50ml Falcon tube rotor and MTP rotor for future up gradation • The centrifuge should be quoted with 2 years warranty period. 		
6	Culture rack with accessories	<ul style="list-style-type: none"> • Minimum heating effect/heat dissipation. • No Flickering effect. • Tissue Culture Racks are made of tubular mild steel pipes flawlessly constructed duly painted/powder coated for longer life so as to provide the structure due protection from issues like corrosion for durability. • Each rack of size 48"x12" (depth) is covered with thick unbreakable plexi glass/hylem sheet. • Distance between shelves to shelves should be 16". • Platform surface is of 3 mm thick hylem Sheet. 	1	Horticulture Divn.

		<ul style="list-style-type: none"> • Four 40-watt fluorescent light (With Electronic Ballast). • 4x25 Watt incandescent lamps in each shelf with switching arrangement. • UV Germicidal Light are fitted inside the rack / work area. • All fluorescent tubes chocks and ultra violet germicidal tube chocks are fitted out side of rack. If desired to avoid heat dissipation inside the rack. • Fitted with 0-24 Hours Digital Timers. • All control panels are fitted on the sides of tissue culture racks comprising of On/Off switch of fluorescent tubes and UV tubes & Timers. • The whole rack should be provided with four nos. castor wheels at the bottom for easy mobility to any place. 		
7	Autoclave Vertical	<ul style="list-style-type: none"> • Vertical laboratory autoclave with sterilization chamber volume of 50 lit • The sterilization chamber constructed of corrosion resistant stainless steel. • Microprocessor controller for high precision temperature control. • Display for temp, timer and warning alert checks. • Automatic sterilization system for unattended operation. • Sterilization temperature at 121 C • The pressure gauge attached to the front side for easy check. • The instrument should have Mechanical Safety Devices • Over temperature protection by automatic power cutoff. • Over pressure protection by automatic and manual safety valve. • The instrument should have Safety Warning System • Two suitable stackable stainless steel bucket for sterilization . • Extra silicone or suitable gasket . • Electric requirement :Single phase , 23 0V , 50-60 Hz. 	1	Horticulture Divn.
8	Deep Freezer-20°C	<p>Vertical Deep Freezer, having net capacity 350 ltr, or higher, working temperature ranging from 12°C to-26°C, power 230V, single Phase 50Hz, low Noise, Temperature warning light and thermostat, fast freeze button and Lamp, mains warning lamp, built in condenser with fast freeze mode, roller coaster mounted, in built voltage-fluctuation protection, lockable door,</p> <ul style="list-style-type: none"> • CFC free heavy duty compressor, built-in condenser giving low energy consumption. Compatible stabilizer and inverter (only sine wave, digital inverter not acceptable) with one hour back up. Only licensed and authorized system should be quoted with all accessories, minimum one year on-site warranty, 	1	Centre for Biotechnology

		annual maintenance contract details, list of satisfied users, original technical literature and operation manual, installation, on-site and in in-lab system-application training of all project staff, continuous technical support from qualified service engineers, assurance for prompt supply of essential consumables to conduct analysis with the instrument and compliance statement of specification with deviations clearly marked.		
9	Digestion Chamber With Fumehood	Size should be approx. width 1.5 m x height 2.4m x depth 0.79m. Thick tempered safety glass vertical-rising sash, and pre-set baffle(s) with flame spread single molded will be preferred. Inner surface should be of fiber glass lining or similar commendable materials. Should have by-pass airflow design, clean sweep airflow opening. Hood should have vapour-proof fluorescent lighting. Exterior body of hood should have epoxy-coated steel exterior and epoxy worktop to contain the accidental spillage of chemical. Should preferably have removable fronts/side panels and front access panels to plumbing and electrical wiring. The scrubber mounted should also be resistant to long term chemical abrasion, weathering and withstand high temperature. It should be compact, designed to absorb obnoxious toxic gases and vapours immediately as they are formed. It should absorb wide range of acids and alkalis, and should also be effective in removing dust and aerosol particles. The system should be meet the national and international safety standards and should be CE marked Socket with switches for exhaust system and fluorescent light; Power point(s) on the panel of the hood To work on 220/230 volts A.C. Supply Vendor should quote FRP/PVC ducting non-corrosive blower options to make unit complete and ready to work Requirement of space, electrical and water points etc. should also be indicated. System should be validated at site during installation. Warranty: ≥ 24 months Should provide all accessories necessary for its efficient and smooth functioning. Necessary accessories should be quoted as optional. Provide warranty certification, authorization certification, instrument installation, demonstration and time to time service when necessary.	1	Centre for Biotechnology
10	Laboratory Hot Air Oven	Temperature range up to 250°C , capacity 252 lt. Doubled walled oven having inside aluminium / stainless steel wall, the outside made of mild steel sheet painted which is in epoxy powder coating along with wire mesh shelves. The door should also have synthetic rubber gasket. To work on 220/230 volts A.C. supplied with air circulation fan and with thermometer. Further, the thermostatic control should be along with accuracy of plus minus 2°C .	1	Agronomy Section
11	Laboratory centrifuge	Refrigerated centrifuge with temperature display .Max speed 20000 rpm. Lowest temperature -8°C ($0 - 12^{\circ}\text{C}$)/ ($0 - 10^{\circ}\text{C}$).Free maintenance induction motor driven. Micro-processor control, digital display. Tube capacity, 100ml,	1	Agronomy Section

		50ml, 30ml and 15ml. Automatically electric lid lock, motor overload protection, gas hinge to prevent door falling, super speed, over temperature protection and imbalance protection. The centrifuge body should be made of high quality steel, safe and reliable, with different kinds of rotors.		
12	Digital Weigh Bridge for weighing animals	Weighing scale type: Animal Capacity: 500 kg Platform size: 500 s 500 mm Accuracy: 50gm Materials: Steel	1	Farming System Research Project (FSRP) Section
13	Autoclave (Vertical)	Vertical type, capacity: 180 L (55x76 cm), Completely made of stainless steel Steam pressure between 15-20 Psi (adjustable), Fully automatic temperature controller by PID, water level indicator, auto cut off device when water level is low. Handy raise lid lifting device.	1	Soil Science Section
14	Constant Head Apparatus	Permeameter, closed system, one point measuring bridge, with 10 ring holders for sample ring of 60 mm diameter, Filter cartridge for closed system, Glass burette with stop cock, Graduation 0-40 ml, length 51.5 cm, Plastic siphon, Permeameter ring holder for soil sample rings with 60 mm, Filter cloth, 140-150 micron, dim. 90 x 135 cm.	1	Soil Science Section
15	Electronic Balance	Balance is housed in all-metal with protective in-use cover and with a glass draft shield. Weighing capacity 220 g, readability 0.1 mg, linearity ± 0.2 mg, pan size 80 mm dia, fully automatic temperature controlled internal calibration (FACT)	1	Soil Science Section
16	Fume Hood	Working table covered with stainless steel (acid resistant) fitted with a wash basin and a gas cock. Internal size of the hood (L 1200 x D 600 x H 600 mm) with exhaust fan.	1	Soil Science Section
17	Mechanical stirrer for texture analysis	HIGH SPEED STIRRER (Manual) with revolution adjustable to 10,000, 14000 & 17000 rpm, 220V, 50HZ, Complete with cup (of 1 litre capacity), paddle, two numbers of anti-splash baffles, for dispersing soil particles in water. Separate control panel, complete with on/off switch and electric protection for heater.	1	Soil Science Section
18	Room Air purifier	Model : 5split Dimension (mm) (W x H x D) : (1090 x 300 x 218) indoor; (810 x 568 x 270) outdoor Net weight (Kg) : (12-15) indoor; (25-30) outdoor. Capacity : 1.5 Ton. Compressor : Dual inverter compressor with 10 years warranty. Filters : Double filtration systems (Particulate). Air swing : 4 way auto swing (horizontal and vertical). Cooling (watts) : 5000-6000. Power supply (Volt/Phase/Hz) : 220-240/Single/50. Power input (Watts) : 1760-1850. Running current (Amps) : 8.1-8.4. Inverter (Type) : Dual inverter. 5star rating : 3 or more. Air circulation (in/out) (CFM) : 500-560/1200. Noise level (indoor) (dB) : 30 or less. Panel display : Digital. Auto clean : Yes. Speed setting : Yes Auto restart : Yes Auto operation : Yes Sleep mode : Yes On timer : Yes Off timer : Yes Warranty : 5 years onsite	4	Animal Health
19	Analytical Balance	<ul style="list-style-type: none"> Measuring pan of 0.1 mg 	1	Animal Nutrition

		<ul style="list-style-type: none"> • External Calibration • A built in under hook for below weighing • Easy to read Backlight LCD Display • Tare range upto max. Capacity • Multiple Weighing Units • Counting Weighing mode • Unit Conversion and data output • Capacity: 0-220 gm • Weight: 5.5 kg 		
20	Refrigerated bench top centrifuge	<p>Refrigerated bench top centrifuge speed upto 17000 rpm, rotors to hold minimum 6 x 15 mL conical/falcon tubes, should have the capability to adopt to rotors to hols 2x48 mL, 6 x 50mL tubes, automatic rotor recognition and imbalance detection for operational safety, acceleration time max 15 sec, should have soft ramp, noise level less than 55dB, power supply 220-240 volt, 50-60 Hz, Built in condensation drainage system to automatically remove accumulation of water inside the centrifuge, capability to store minimum 3 programmes, should have facility to switch display between rec and rpm, short spin function, should be able to maintain minimum 4 degree centigrade temperature at maximum speed, operating environment -02 to +40 degree room temp and minimum 80% relative humidity, should give at least two years onsite comprehensive warranty.</p>	1	Agroforestry
20	Insect boxes	<p>Insect display boxes Size (L x W x H) in cms 45 x 30 x 6.5</p>	100 unit s	Entomology
21	Microprocessor Flame Photometer	<ul style="list-style-type: none"> • Micro-controller based automatic with printer interface for ease of operation • Determination up to four elements with single aspiration (Na, K, Li, and Ca) • Auto gas cut off, auto flame failure detection, measurement in single aspiration, setup storage facility, sample data storage facility • Curve fitting correction for non-linear emission characteristic of element, at higher concentration: maximum five-point calibration, least square, quadratic, online help key, direct results in ppm and meq • Facility for re-standardization with single standard • Air compressor with built-in-air regulator and air filter • PC Link software for transferring data to computer and manipulation of data in computer using RS-232 	1	Agronomy

Sd/-
DIRECTOR