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A pre-bid meeting was held on August 26- 27, 2016 for discussion on technical specifications of Green House with controlled Environmental conditions, Confocal Microscope, Cold room and seed storage module and Sap flow sensors. Based on the pre-bid meeting the technical Specifications have been revised as given below:

Technical Specification of Greenhouse with controlled environmental conditions after the pre-bid meeting held on 26th August 2016

The Greenhouse should have the following details:

S.No	Product technical details	Units for one greenhouse	Total Units for 4 Greenhouse
1.	**High Tech Greenhouse should be constructed as per guidelines of DBT, Govt. of India**		
	STRUCTURE AND DIMENSIONS:	**01 No.**	**04 No.**
	Total Area of Greenhouse: 240 m^2		
	Size: 10m. × 24m. (L × W)	**03 No.**	**12 No.**
	Each Chamber Size: 10 m x 8 m (L × W) = 80 m^2		
	No. of Bays: 3 Nos.		
	Bay width: 8 m.		
	Length: 10 m		
	Width: 8 m		
	Side Height: 3.5 m		
	Centre Height: 4.7 m		
	Design/Shape: Venlo	**01 No.**	**04 No.**
	Double Door Room No.1: 2 m x 5m x 2.43m (L ×W×H)	**01 No.**	**04 No.**
	Double Door Room No.2: 2.1m x 2.1m x 2.43m (L ×W×H)	**05 No.**	**20 No.**
	Doors: 1.9m x 0.91m (tall & wide)		
	Frame: Galvanized steel should be used and designed as per IS875 standards to withstand of wind speed 120 km/hour. End wall and side wall framing Aluminium corner trims, aluminium ridge bar and Galvanized gutter trim Brackets & fasteners to assemble frame.	**1 Complete Set**	**4 Complete Set**
	1) Pipe: Pipes sections to be used for different Structural Member should be as below or equivalent :		
	a) Columns: 80 mm × 50 mm in 2 mm thick hot dip galvanized pipe.		
	b) Trusses: Bottom cord 32 mm x 2 mm; Truss Members 48 mm × 48 mm, Bracing 25 mm, pipe; structural member should be fitted with zinc plated nuts & bolts without welding.		
	c) Purlins: 32 mm × 2 mm thick.		
	2) All G.I pipes should be galvanized.		
	3) Nuts and other metallic parts: This should include all		

	the elements required for joining and water tightens components (such as fittings, clamps, screws and nuts plated against corrosion).		
2.	**DOUBLE DOOR ROOM:** **A) Double Door Room**) i) Size: 2 m x 5 m x 2.43 m (L×W×H) covered with 6 mm thick polycarbonate sheet. ii) Size: 2.1 m x 2.1 m x 2.43 m (L×W×H) covered with 6 mm thick polycarbonate sheet. **B) Sliding Door:** Size: 1.9m × 0.91m long & wide, lockable should be made with clear 6 mm polycarbonate glazing, top & bottom tracks, jambs, flashings & installation hardware **C) Air Curtain** with auto on/off when door opening /closing at main entry. Air curtain should be of high quality.	**01 No.** **01 No.** **05 Nos.** **03 Nos.**	**04 No.** **04 No.** **20 No.** **12 Nos.**
3.	**CLADDING:** **Roof, front wall, end wall, & sidewalls of the Greenhouse-sets and double room for rigid covering.** 6 mm thick clear multiwall polycarbonate sheet, Aluminum Profile, EPDM gasket, Silicon sealant, and accessories. Roof and Side wall should be covered by 6 mm, UV stabilized clear polycarbonate sheet, Details are giving below: **Sheet thickness**: 6 mm **Structure**: 2 TS **Approx. Weight g/m2:** 1300 **Light Transmission:** 81% **K Valve:** 3 **Detail of Thermo clear sheet** 2TS 1300 81 3 should be an impact resistant, energy saving, multiwall polycarbonate sheet. It should have property to provide almost total resistant against degradation caused by UV radiation in sunlight. The entire Thermo clear sheet range should carry at least Ten year warranty against discolorations, loss of light transmission, and / or loss of strength due to weathering. **Impact Strength:** Sheet should have outstanding impact performance over wide temperature range -40°C + 120°C and also after prolonged outdoor exposure. **Hail simulation:** As a roof and side glazing material polycarbonate sheet should be able to withstand extremes of weathers such as storms, hail stones, and wind. Under these conditions the product should be	**1 Complete Set**	**4 Complete Set**

	virtually unbreakable and able to accommodate the subsequent temperature changes to conditions without breaking or buckling. **Light Transmission:** The sunlight which reaches the surface of the earth has wavelength range between 295-2140nm. The optical window should be divided into the following section. **UVB Middle ultra violet region** 280-315 nm **UVA near ultra violet region** 215-380 nm **Visible light region** 380-780 nm 82% **Near Infra-red region** 780-1400 nm 82-20% **Middle Infra vix region** 1400-3000, Polycarbonate sheet is treated with exclusively antifungal treatment to enhance the life of sheet.		
4.	**SHADING SYSTEM:** **A) External Shading:** 70:30% shading net (agro shade net) fixed type. **B) Internal Shading:** Reflective, thermal-aluminium-screen silver with a manually operated expanding & retracting mechanism inside the green house. Internal shading system should also include one completely dark (black coloured sheet) with a manually operated expanding & retracting mechanism inside the green house.	**1 Complete Set**	**4 Complete Set**
5	**FOGGING SYSTEM:** Fogging System 1 HP heavy duty motor with screen filter, fogging nozzles, pipes, polymer water tank 500 ltr. (1 no. for each chamber). Fogging system should be of high quality.	**1 Complete Set**	**4 Complete Set**
6	**COOLING SYSTEM:** **A)** 1.5 mH × 8 m.W ×100 mm thick evaporative CELDEC cooling pad complete with: - All necessary framing material of Aluminum required supporting distribution & returning piping. - **Cooling system should be of high quality and separate for each chamber of 8 m x 10 m.** - **SS30 grade 40/40 mess should be fitted outside of cooling pad.** - Gutters, down spout end caps & drip pan, plumbing kit, pump 220 volt - 1 phase 50 cycles, Drilled PVC piping cap, pad retainer, all suspension hardware. - Metal flashings as required to seal pad to vent opening, 4" thick evaporative cooling pad material. - Pad Area: 24m.W ×1.5m H × 100mm thick(w × h × Thickness)	**1 Complete set for each chamber of 8 m x 10 m**	**4 Complete Set**

	Construction Material : Aluminum Profiles: Tray Sides, Top Etc. Plastic Profiles: Water Distribution tray. Cooling Media: 100mm thick celdek 7090/500 At velocities of 1 to 3 M/s to give efficiency from 60 to 95%. Filtration: 25 to 55mm viscous filter for 30 m efficiency. Miscellaneous: Fasteners, Galvanized, Rivet- Aluminum. Water storage Tank: PVC Tank 500 liters. Pump: 1 HP Mono block (Crompton or approved equivalent) B) Slow Speed Axial Flow Fan: 48" single speed belt driven exhaust fan 1.5 hp, 220V, 50 cycles, 1 phase) 22,000 CFM (1 No. in each chamber). Cooling system detail: By this system temperature should be lowered by 10°C±2°C from outside when outside maximum humidity 62% of low and temperature 35°C or above whole cooling system. SS30 grade 40/40 mess should be fitted front side of Axial flow fan. Slow speed axial flow fan should be of high quality		
7	**LIGHT:** **A) Photosynthetically Active Radiation Lamp (dimmable),** (PacRaTM/PAR) with PacRa W1.7 to 2.6/60, 40 watts or equivalent should be of specific action spectra lamps for photosynthesis with electronic gear for research. Dimmable Programmable Lighting. PAR intensity should be variable and up to 1200 µmol $m^{-2}s^{-1}$. Par sensor should be provided for each chamber (8 m X 10 m). Total 13 PAR sensors for 4 greenhouses. PAR lamp and PAR sensor should be of high quality. **B) CFL**' one no should be fitted inside the buffer room for visibility during dark time.	**1 Complete Set** **2 Nos.**	**4 Complete Set** **8 No.**
8	**HEATING SYSTEM:** Biotech Heat Convector**,** by electric heat convector system 2.4 KW**.** Complete uniform heat circulation system should be given, so that the heat can be blown in the complete area. Special heat convector system for maintaining required temperature (03 Nos. in each chamber) or **IR heat convector** system for maintaining required temperature (03 Nos. in each chamber).	**9 Nos.**	**36 Nos.**
9	**CENTRALIZED CONTROL PANEL FOR AUTOMATION WITH DATA LOGGER FOR RECORDING THE DATA OF TEMPERATURE, LIGHT INTENSITY AND HUMIDITY:** The complete automation panel should be PLC based	**1 Complete Set**	**4 Complete Set**

	and touch screen facility and panel should have programming to set the parameters temperature, humidity and PAR light with dimmer feature. Temperature, humidity, light sensors should be operated by automatic control system. Data logger to monitor and record temperature, and humidity, light. Control and monitor panel should be of high quality and include Light, Temperature & Humidity Control and monitoring System. Details of Microprocessor Photosynthesis control and monitor Panel: **a) Technical feature of Photoperiodic Timer** - Cycle: 24 hrs minimum ON/OFF period 30 minutes. - Accuracy: ±10 sec/day - Input: 200-240 VAC, phase – single. - Ambient: 5°C to 45°C, RH up to 85% normally. -**PAR sensor (0-3000 µmol $m^{-2}s^{-1}$) for light intensity PAR sensor should of high quality.** **b) Technical feature of Temperature Control System** **-** Temp. Range: 0.1 to 59.9°C. **-** Accuracy: ±1°C. - Hysteresis: 0.4°C with sensor probe Pt-100 Sensor cord 5 meters. - Input: 200-240VAC, phase-single. - Ambient: 5°C to 45°C, RH up to 85% normally. - **Temperature sensor (0-100^{o}C) of high quality (13 Nos. for four greenhouses) should be provided** **c) Relative Humidity Control System:** It maintains RH in the range of ±4%. - **Range: 55% to 90%.** - Real RH: ±2%. (at 45%). - Input: 220VAC, phase- single. - Ambient: 5° to 45°C, RH up to 95%. -**Humidity sensor (0-100%) of high quality (13 Nos. for four greenhouses) should be provided** **d)** Timer of high quality for humidity.		
10	**PLANT WORK STATION:** **Plant Work Station for keeping plants pots,** Dimension: 7.1 m × 1.2 m × 0.75 m (L×W×H), fixed work station should be made by hot dip galvanized pipe. (4 Nos. in each chamber). Plant work stations should be of high quality.	**16No.**	**64 No.**
11	**IRRIGATION SYSTEM:** The system should be equipped with pressurized drip irrigation system with 2” Filter 120 mesh red, Valve/2”,	**1 Complete Set**	**4 Complete Set**

	Fertilizer pump, Air valve/1.5", Pressure relief valve 2", Pressure gauge, Head unit assembly. Drip supply manifold with Valve/2" Aquanet Valve 2", Lateral 16 mm, Drip Net PC 16mmx30cmx1lph, RPVC 40 mm 6 Kg/cm2, RPVC 63 mm 4Kg/cm2, 1HP pump, PVC fitting, Water tanks etc. Drip irrigation system should be of high quality. Irrigation system should also include hose type. Hose/pipe (25 meter for each chamber (10 m x 8 m). Other required accessory should also be quoted.		
12	**CIVIL WORK:** **A) Foundation wall** for all sides of Green House along with the double door room. WIDE Based 1.5' below earth's surface, 1.5' above earth's surface, as kick-board 9" wide. Frame base block height 2'. **B) Floor:** by tiled with dull white anti-slippery hard material along with the entry room. Floor of the greenhouse should be at least 1.5' above the ground level. **C) Plinth Protection:** 2' wide all around the greenhouse along with buffer room with cement concrete (1:5:10) with standard water proofing using brick ballast and top layer to be provided with 50 mm thick C.C. 1:2:4 **D)** Drainage work should also done by bidder.	**1 Complete job in all respects**	**4 Complete job in all respects**
13	**ELECTRICAL WIRING:** All wires should be of copper and desired load and switches should be of high quality/imported make, extra switches should also be provided as standby. Each feature should have own electric line with MCB and should be underground in PVC pipe complete set with A grade work. Separate electrical work, panel board and main switches as well.	**1 Complete Set**	**4 Complete Set**
14	**Warranty:** The supplier shall guarantee satisfactory performances of the unit for the minimum period of 24 months from the date of installation and shall undertake to rectify any defect including replacement of spare parts, resulting from faulty design, poor workmanship, bad materials etc. during the guarantee period free of charge.		
15.	Bidder must have constructed greenhouse structure, fully functional, in any research institutions/organization. The bidder should provide user list for greenhouse construction work with complete address and contact details of the user.		

- Bidder must have annual turnover of atleast Rs 2.00 crore.
- Bidder must have atleast 3 years experience.

Technical Specifications for Cold room and Seed Storage Module after pre-bid meeting held on August 27, 2016

Furnish and install modular walk-in cold room. With all insulated walls, ceilings, doors, refrigeration systems, controls, gages, internal lighting, and other ancillary items required for a completely fabricated and operational walk-in cold room and seed storage modules.

The Cold rooms and Seed Storage Modules should have the following details:

S. No	Product technical details
1.	**Size:** **External :12' X 10' X 10' (L X W X H)** **Internal working space: 11.7' X 9.7' X 9.7' (L X W X H)**
2	**Room temperature:** 0°C to 10°C, **max. ambient temperature 45°C** **Humidty: Appropriate humidity condition should be maintained for storage of seeds of cereals , pulses and oilseeds** **There should be two humidification and de-humidification units, one working and one standby purpose.** **Temperature monitoring and control:** **Hot gas defrost system** Temperature monitoring and Alarm system outside the door. Communication for out of range temperature with alarm. Data logger system with USB interfaces. **Temperature sensor (6 Nos.) of high quality and its mean values should go to controller** **Temperature accuracy:±1.5°C**
3	**Insulation materials and insulation type:** The Insulation for Walls, Ceiling & Floor should be**80 mm high quality** PUF Panels withSilicon sealant application for leak proof joints**.** 60 MM thick PUF for cooler room pre-fab pre painted PPGI panels for walls, ceiling outer and stainless steel inner. 0.5mm Pre-painted GI sheet PUF panels with **80 MM** thick having uniform foam density of 40+/-2KG/M3 for walls **& 50+/-2KG/M3** for ceiling while floor will have 1.2 mm aluminium chequred plate,above PPGI+PUF panels. **Food grade PVC/metallic coving for wall to wall, wall to ceiling and wall to floor.**
4	**Door:**Single leaf hinged and- flush type of size 34" x 78", cam lock, sweep/magnetic gasket flexible, glass viewing windows with heaters & Ramp facility and safety release device. **Door should also be opened from inside. Self-closing door.** **Door hinges & handle:** Heavy duty cast alloy chrome finish.
5	**Light source:**Moisture proof light fixture inner side- 2 nos 40±5 watt LED light.
6	**Refrigeration systems/Cooling System:** There should be two refrigeration units, one working and one standby. Refrigeration system should be of high quality and CE certified The unit should maintain a temperature between $+0^{o}C$ to $10^{o}C$. Air cooling system should be split type.

	Should enable a good Air flow at least 1000 CFM Pressurize and leak test the entire refrigeration system.
	Condensing: UV and corrosion resistance, inner grooved copper tubes, in-built safety and control device, Weather proof canopy. **Evaporator unit:** Stainless steel body and excellent corrosion resistance, inner grooved copper tubes. There should be two condensing and evaporator units, one working and one standby. **Circulated room air should be purified by washable fine filter.** Condensing units and evaporator coils to be from the same manufacturer and of high quality.
7	**Regulation and Control System:** Regulation and control system for temperature and humidity should be high quality and CE certified. Controller and data logger of high quality for temperature and humidity. The electronic digital regulation system should beprovided with working temperature set controlLED signal to display alarm system intervention. Internal temperature and humidity digital display.All refrigeration piping required shall be furnished and installed by the walk-in manufacture . **Password protection for temperature setting.** **Automatic falt detection and diagnosis: Controller should detect falt automatically and take corrective measures to protect breakdown of the system**
8	**Safety Mechanism** Visual alarm system for min-max internal temperature setting. System should have internal vapour proof lighting facility. Sealed all joints, openings, piping, electrical and ductwork penetrations (regardless of trade). Sealed internal electrical conduit for power outlet.
9	**Ducting and Drains** The firm should take the responsibility of refrigeration piping. The firm should also take up minor civil works if required for fabrication, grouting of frame, platform for condensing, and evaporator units and drainsystems. Material used for ducting and drains should be of high quality
10	**Racks and Shelves** **Rack, shelved and modular table should of high quality** **Firm should supply suitable stainless steel (SS304) racks two side walls of cold room. The racks should have four compartments. Approximate sizes of racks-length 5 - 6 ft, Shelf size - Depth 18 inches, Height between shelves - 15 inches. Separate perforated doors with hinges, two doors/shelf. Racks should be covered from all sides.** **Firm should also supply two Modular tables, 1500 x 900 x 900 mm (LxWxH), with granite top,leg space, drawers, for complete one side wall of cold room. 6/16 Amp electric socket (2 Nos/table)**
11	**Stainless steel materials used for construction should be SS304 grade and ISI/ISO marked. Vendor should provide user list and proof of fully functional successful installation of cold room and seed storage module.**
12	**Electricity supply:** Accessories such as suitable MCB, MCB board, about100 m 6 mm/10 mm square wire (4 No. of different colours) should also be provided. Electrical requirement: 280V/380V/440V/3-phase/50/60 Hz, 4 wire plus ground.

13	**Technical literature:** The firm must submit illustrated technical literature with enough technical details. All equipment should be ISI/ISO certified.
14	**Warranty:** The supplier shall guarantee satisfactory performances of the unit for the minimum period of 24 months from the date of installation and shallundertake to rectify any defect including replacement of spare parts, resulting from faulty design, poor workmanship, bad materials etc. during the guaranteeperiod free of charge.

- Bidder must have annual turnover of atleast Rs 2.00 crore.
- Bidder must have atleast 3 years experience.

Technical Specification of Microscope: Confocal Laser Scanning after the pre-bid meeting held on 26th August 2016

Specifications:

The Laser Scanning Confocal system should have optical slicing capabilities and suitable for fixed and live cell sample imaging. The system should be capable of spectrally resolve auto fluorescence and generate images of the fixed tissue samples. System should be of high sensitivity detection capability to meet various challenging imaging needs of multi-fluorescence, FRET, FRAP, FLIP, photo activation, spectral imaging and conversion experiments.

The system should include the following configuration:

A. Fully Motorized & Computer Controlled Upright/inverted Fluorescence Research Microscope:

1. Bright field, fluorescence and DIC observations with Motorized Z-focus drive with step size of 10-30 nm.

2. Fluorescence filter cube turret with motorized 8-10 position turret with narrow band pass interference type filter blocks for FITC/GFP dyes, DAPI/Hoechst, TRITC/Rhodamine, CFP, YFP and RFP/Texas Red.

3. Six position motorized DIC nose piece. XY motorized stage with universal sample holder for slides and 35 mm petri dish.

4. 12V/100w halogen/High power LED illumination for BF & DIC and 120/130W metal Halide Illuminator with long lifetime of 1500-2000 hours for fluorescence. Motorized 7/8 position condenser with motorized polarizer and analyzer. Quote for two additional spare bulbs.

5. Motorized DIC Optics for all the objectives.

6. Wide field eyepieces 10X paired with FN 22 mm or better

7. High Resolution Confocal Grade objectives:

   Plan Apochromat Objectives: 20/25X water / NA 0.7-1 or better and working distance 0.25 mm or better, 40X water immersion/ N.A. 1.1 or better and working distance 0.25 mm or better, 40X oil / N.A 1.30 or better, 60/63X water immersion / N.A. 1.20 or better and working distance 0.2-0.3 mm.

8. All objectives should be corrected from UV, Visible to IR. Band Pass fluorescent filters for DAPI, FITC/GFP& TRITC/Rhodamine.

9. Digital cooled monochrome CCD digital camera with 1.4 million pixel chip resolution, 2/3" CCD chip, FireWire IEEE 1394 connectivity controlled by software for high resolution fluorescence/DIC digital imaging for Z stack, time lapse and multi-channel Fluorescence. 20 FPS or better.

10. The system should be supplied with latest integrated computer system of latest configuration tried & tested for system, directly from the manufacture. Hard drive: 2 TB, Large 30" LCD TFT monitor and 32 GB Ram memory.

11. An anti-vibration table for the complete microscope, laser scanning system and work station (computer system) table should also be supplied.

B. Spectral Confocal Laser Scan head with built-in detectors:

1. The scan head should have independent port for UV and visible light lasers. Galvo scanner should have highest reflectivity (>90%) from 400-1000 nm for detection of faint signal.

2. High sensitivity confocal laser point scanning and detection unit with built-in spectral detectors for high efficient fluorescence signal collection. Capable of conventional intensity & spectral based confocal imaging for complete visible range.

3. System should have minimum two high sensitivity built-in fluorescence GaAsP spectral detectors or array GaAsP detector and spectral 2 PMT detectors.

4. Spectral detectors with a resolution of 2-5 nm throughout the visible spectrum. Confocal detection should include simultaneous spectral detection and separation of 4 Fluorophores. Each detector should have independent intensity, gain and offset control. A spectral GaAsP or array GaAsP detector must be included for high sensitive imaging with quantum efficiency of 45%.

5. All the fluorescence detectors should directly be coupled to the scan head without any optical fibres for efficient signal collection and higher sensitivity.

6. All the spectral detectors should have spectral resolution of 2-3 nm or lower throughout the visible spectrum (400-800 nm) through a reflection grating/Prism. The system should be supplied with an independent transmission light detector for generating confocal DIC images in bright field mode for studying localization of proteins/molecules of interest.

7. The spectral detector should be capable of generating spectral profiles from 400-800 nm range and generate spectrally unmixed images to avoid auto fluorescence.

8. Should be capable of imaging 4 fluorophores simultaneously and at least 6 in sequential mode.

9. Spectral dispersion of the emission light should be of latest technology with highly efficient spectral separation.

10. Motorized & computer controlled continuously variable confocal pinhole with software control. High speed XY Galvo scanner with 180/360 degree scan rotation with total scan flexibilities of Line, free hand curved line, XY, XYZ, XYZT and XYZt,λ combinations.

11. Scan resolution 4K x 4K or better for all channels. Scan Zoom range 1.0X to 40X or more.

12. Scan speed of minimum 4-8 fps @ 512x512 pixel resolution and shall increase 110 FPS or better at 512/16.

13. Data acquisition and digitization capability with 8, 12 and 16 bit should be available. An additional transmitted light detector should be offered for bright field and DIC imaging

14. The system should be offered with the following combination of laser lines (diode lasers, multiline Argon and HeNe Lasers) to excite the respective fluorochromes:

    Diode lasers: 405 nm. Laser violet 445/448, Laser blue 488, laser green 552/559/555 and laser red 638/640 with complete power supply and AOTF control, or suppliers can offer gas and other laser combination, Diode lasers: 405 nm. multiline Argon lasers: 458 nm, 488 nm, 514-515 nm with 35mW or higher, DPSS 561/559 nm, HeNe 633 nm or laser diode 635 nm, with complete power supply and AOTF control.

15. All the lasers should be connected to the scan head through fibre optic cable. All the laser lines should be computer controlled for fast laser switching and attenuation in synchronization with the scanner.

C. System control and imaging software

1. Software should be capable of controlling motorized functions of microscope, scan head control, laser control, scanner control, and image acquisition & processing. Software for all applications should be provided. Saving of all system parameters with the image for repeatable/reproducible imaging. Capability of line, curved line,

frame, Z-stack, time series imaging. Photo-activation/conversion, FRET, FRAP imaging capabilities and physiology applications. Ion imaging with online ratio metric imaging and analysis.

2. Standard geometry measurements like length, areas, angles etc. including intensity measurements. 3D image rendering, reconstruction and navigation.Co-localization and histogram analysis with individual parameters.

3. High Dynamic Range Imaging, real time ratio imaging, channel un-mixing, direct hard drive recording, spectral un-mixing/finger printing to separate the auto fluorescence with fluorescence signal and separation of overlapping dyes such as GFP / YFP. Online spectral un-mixing for separation of overlapping emission spectra of fluorochromes with all the detectors

4. System should have laser intensity stabilization / feedback feature so that there is no intensity variation during long hours imaging experiments.

5. The system should be capable of real-time Ca++ imaging / ratio imaging of two colours with visible range of dyes using same detectors.

6. Objective inverter attachment should be offered according to offered microscope. The objective inverter attachment should be quotedas optional item.

D. Installation and service support.

1. Bidders should clearly specify the after sales service and application support capabilities. Should provide all pre-installation requirements to have the system installed in ideal room conditions.

2. Provide a detailed list of users of the quoted system in India with contact details.

E. i. Electrical: 220-240 VAC

ii. A suitable online UPS with 60 min backup should be provided.

iii. Warranty: Two years warranty including lasers must be offered.

Note: The price of individual laser offered should be quoted separately.

Technical Specification of Sap flow Sensors after the pre-bid meeting held on 26th August 2016

No amendments have been suggested