



July 30, 2019

Bid Bulletin No. 1

Subject: Supply, Delivery and Installation of Various Laboratory Equipment for Crop Biotechnology Center (Group III) under PB 19-03-19

This bid bulletin is being issued to clarify and/or amend the technical specifications for the Supply, Delivery and Installation of Various Laboratory Equipment for CBC Group III follows:

Revised Technical Specifications:

Attached is the revised technical specifications for the complete details.

Please be guided accordingly.

(Original signed)

AURORA M. CORALES
BAC Vice Chairperson

Revised Technical Specifications for PB 19-03-19

Item	Specification	Statement of Compliance
1.	<p>1 Unit of Multi-Grain Moisture Meter</p> <p>Technical specifications: Applications: for rice grains (palay, brown rice, milled rice) and other cereals Line voltage: 220- 230 V Dimensions: Readability: 1 mg, 0.01 % Max. weighing capacity: 200 g Number of program memories: 100 Recommended moisture range: 1 - 99% Data interface: RS232C unidirectional Accuracy of the weighing system: 1 mg Heating mode: Standard drying, gentle drying Access to the sample chamber: Removable hood with wide opening angle Display mode for results: % moisture, % dry weight, g moisture, g dry weight, ATRO (ratio) in %M/S Analysis mode: Fully automatic, semiautomatic mg (1 mg - 50 mg 5 sec. - 300 sec.), semiautomatic % (0.1% -</p>	<p>Statement of Compliance</p> <p>Bidders must state here either “Comply” or “Not Comply” against each of the individual parameters of each Specification stating the corresponding performance parameter of the equipment offered. Statements of “Comply” or “Not Comply” must be supported by evidence in a Bidders Bid and cross-referenced to that evidence. Evidence shall be in the form of manufacturer’s un-amended sales literature, unconditional statements of specification and compliance issued by the manufacturer, samples, independent test data etc., as appropriate. A statement that is not supported by evidence or is subsequently found to be contradicted by the evidence presented will render the Bid under evaluation liable for rejection. A statement either in the Bidders statement of compliance or the supporting evidence that is found to be false either during Bid evaluation, post-qualification or the execution of the Contract may be regarded as fraudulent and render the Bidder or supplier liable for prosecution subject to the provisions of ITB Clause 3.1(a)(ii) and/or GCC Clause 2.1(a)(ii).</p>

	<p>5.0% 5 sec. - 300 sec.), timer settings (02==00 - 99.59 min.), manual Memory data storage: Fully automatic storage of the last 999 results Temperature range and settings: 40°C - 200°C, adjustable in 1-degree increments Other features:</p> <ul style="list-style-type: none"> • Intuitive user-friendly interface (touch screen) and easy-to-understand menu prompt for user guidance • Menu function to check the performance of the heating unit and the weighing system • Compliant with FDA/ HACCP regulations • GLP-compliant • Password protection • In-use dust cover for keypad <p>Inclusions:</p> <ul style="list-style-type: none"> • Training on-site for the end-user <p>2-years warranty on parts and services and 1-time preventive maintenance</p>	
2.	<p>1 Unit of Chlorophyll Meter Technical specifications: Measured parameters: Optical absorbance in two different wavebands: 653nm (Chlorophyll) and 931nm (Near infra-red) providing CCI value Measured area: 1 cm diameter circle or better Resolution: 0.1 CCI unit Repeatability: +/-1 % Sampling acquisition time: 2-3 sec Source: Custom 2 wavelength LED module Detectors: Two silicon photodiodes with integral amplifiers for absorbency measurements, power monitoring and temperature compensation Data modes: Single point, selectable 1-30-point average or better and a statistical 10-30-point protocol that disregards data beyond a 2-sigma standard deviation Storage capacity: Up to 160,000 measurements User Interface: 128 x 32-pixel graphic display, 8 keys for measurements, data manipulation, beep signal status and warnings Output: USB 1.1 and RS232. By single measure mentor complete storage file</p>	

	<p>Operating temperature range: 0-50°C Temperature compensation: Temperature compensated source and detector circuitry for minimal drift over full range Battery: 9V rechargeable alkaline battery Auto off interval: 4 minutes Dimensions: 152 x 82 x 25 mm Weight: 162g Inclusions:</p> <ul style="list-style-type: none"> • 1 unit of carrying case • 2 pcs of rechargeable 9V alkaline battery with charger • USB cable • User's manual • Training on-site for the end-user <p>2-years warranty on parts and services and 1-time preventive maintenance</p>	
3.	<p>1 Lot of Hand-held Portable Photosynthesis System Technical specifications: A. CO₂ Gas Analyzer Type: Absolute non-dispersive infrared gas analyzer (x 2 IRGA cells) or better Measurement range: 0-3100 µmol mol⁻¹ Precision: Within 0.1 µmol mol⁻¹ RMS with 4-second averaging at 400 µmol mol⁻¹ or better</p> <p>B. H₂O Gas Analyser Type: Absolute non-dispersive infrared gas analyser or better Measurement range: 0-75 mmol mol⁻¹ or 0-75 mbar Precision: Within 0.01 µmol mol⁻¹ RMS with 4-second averaging at 10 mmol mol⁻¹ or better Operating temperature range: 0-50 °C Storage temperature range: -20°C to +60 °C Chamber exhaust air temperature and temperature control block: Thermistor Leaf temperature sensor: Type E fine-wire thermocouple or micro thermistor</p> <p>Air Flow Rates Bulk flow rate: 680-1700 µmol s⁻¹ at SATP1 Leaf chamber flow rate: 0-1400 µmol s⁻¹ at SATP</p> <p>Console pressure sensor Operating range: 50-110 kPa</p>	

<p>Accuracy: ± 0.4 kPa</p> <p>Chamber Pressure Sensor Operating range: -2 to 2 kPa Control: Capable of 0.2 kPa above ambient</p> <p>CO₂ Control CO₂ control range: 0 to 2000 $\mu\text{mol mol}^{-1}$ CO₂ cartridge type: 8 gram Cartridge lifetime: 8 to 32 hours after puncture (dependent on setpoint) CO₂ Scrubber: Soda lime</p> <p>H₂O Control H₂O control range: 0-90% RH Humidifier substrate: Pall Stuttgarter Masse ceramic substrate or Iron II Sulfate 7 Hydrate Desiccant: Drierite (W.A. Hammond Drierite Company)</p> <p>Light Measurement Sensitivity range: 0 – 3000 $\mu\text{mol m}^{-2} \text{s}^{-1}$ Resolution: <1 $\mu\text{mol m}^{-2} \text{s}^{-1}$ Detector: Silicon Photodiode</p> <p>C. Fluorometer Modulation frequency: 1 Hz – 250 kHz Measuring light peak wavelength: 625 nm Red actinic and saturating flash peak wavelength: 625 nm Blue actinic peak wavelength: 475 nm Far-red peak wavelength: 735 nm or better Actinic light output or better o 0 – 3000 $\mu\text{mol m}^{-2} \text{s}^{-1}$ total at 25 °C o 0 – 1000 $\mu\text{mol m}^{-2} \text{s}^{-1}$ blue at 25 °C o 0 – 2000 $\mu\text{mol m}^{-2} \text{s}^{-1}$ red at 25 °C Saturation light: Software controlled intensity; 0-16,000 $\mu\text{mol m}^{-2} \text{s}^{-1}$ at 25 °C Far-red light: 0-20 $\mu\text{mol m}^{-2} \text{s}^{-1}$ at 25 °C Inclusions:</p> <ul style="list-style-type: none"> • Console, sensor head, and cable assembly • Fluorometer • Instrument case • Accessories case • Carrying harness • Tripod and panhead mount • Lithium ion batteries (4) = minimum of 3 	
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	<ul style="list-style-type: none"> • AC to DC power supply • Single-bay battery charger • Drierite, soda lime, and Pall Stuttgarter Masse OR Iron II Sulfate 7 Hydrate or equivalent • 8-gram CO₂ cartridges (3 boxes of 25) • Spare kit (gasket kit spare, console filter, chamber foam pad for bottom and top leaf chamber, screws, o-rings, filters, tubing, propafild, thermocouple (wire and connector), cleaning kit, and other items to operate the hand held portable photosynthesis system) • Local Training on-site for the end-users <p>2-years warranty on parts and services and 1-time preventive maintenance</p>	
4.	<p>2 Units of Leaf porometer Technical specifications: Accuracy: 10% Measurement/Conductance Range:0-1000 mmol/m²s¹ Operating environment: 5 - 40? C 0-100% relative humidity with desiccant chamber, Measurement Time: 30 seconds (in auto mode) Measurement units: mmol/m²s, m²s/mol, s/m Sample Chamber Aperture: 6.35 mm (.25 in), Microcontroller Dimensions: 15.8 x 9.5 x 3.3 cm (6.2 x 3.75 x 1.3 in) Data Storage: 4095 measurements, Data Retrieval: Direct via RS-232, Interface Cable: RS-232 serial cable(included) Software: Leaf Porometer Utility (included), Power Supply: Four type "AA" batteries (included), Battery Life: 3 years (battery drain in sleep mode <50?A), Sensor Head Cable Length: 1.2 m (4 ft), Desiccant: Indicating DrieRite, 10-20 mesh With training on-site for the end-users 2-year warranty on parts and services and 1-time preventive maintenance</p>	
5.	<p>1 Unit of Plant Canopy Analyzer Technical specifications:</p>	

	<p>Control Unit</p> <p>Sensor inputs: Two 6-pin connectors for Optical Sensors. 2 BNC connectors for light sensors</p> <p>Data storage capacity: 128 MB of FAT16 memory</p> <p>Keypad: tactile response keypad</p> <p>Display: 128x64 graphics display</p> <p>Communications: USB (as mass storage device)</p> <p>Global positioning system-horizontal position accuracy: 2.5 m CEP (50% Circular error probability, Open-Sky, 24hr Static, good view of the sky),</p> <p>Maximum position update rate: 1 Hz.,</p> <p>GPS receiver sensitivity, autonomous acquisition: -148dBm.,</p> <p>WAAS enabled receiver,</p> <p>Time to first fix (TTFF), hot start: 1 second, TTFF, warm start: 6s (typical), TTFF, cold start (with good view of the sky): 37 seconds at 90% probability;</p> <p>Power Requirements: 4 "AA" alkaline, NiMH, lithium batteries;</p> <p>Battery Life: 90 hours based on 4 "AA" alkaline batteries without optical sensor attached and without GPS enabled, 60 hours based on 4 "AA" alkaline batteries with optical sensor attached and without GPS enabled, 40 hours based on 4 "AA" alkaline batteries without optical sensor attached and with GPS enabled;</p> <p>Low Battery Warning: Display indicates when battery power is <15%.</p> <p>Optical Sensor:</p> <p>Sensor Inputs: One 6-pin Bulkhead connector for control unit interface;</p> <p>Memory: 1 MB flash memory for record storage, 1 KB EEPROM for calibration and configuration storage; Keypad: 2 button, tactile response keypad;</p> <p>Power Requirements: 2 "AA" (alkaline, NiMH, lithium) Batteries;</p> <p>Battery Life: 180 hours of typical operation (based on 2 "AA" alkaline batteries);</p> <p>Optics: 1.00° maximum decentering error as measured from center of mass of ring 4. 0.50° maximum magnification error as measured from the center of mass of ring 4;</p> <p>Radiation Rejection: >99% from 490-650 nm, >99.9% above 650 nm;</p> <p>Wavelength Range: 320-490 nm;</p>	
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	<p>Lens Coating: MgF2 for improved transmission at oblique angles (external and internal lenses);</p> <p>View Caps: Provide azimuthal masking of view into quadrants of 10°, 45°, 90°, 180°, and 270°;</p> <p>Diffuser Cap: Used to cover the lens when measuring sky radiation properties for scattering corrections;</p> <p>Environmental Conditions:</p> <p>Operating Temperature Range: -20 to 50° C; Humidity Range: 0 to 95% RH (non-condensing conditions);</p> <p>Storage: -40 to 65°C.</p> <p>2-years warranty on parts and services and 1-time preventive maintenance</p>	
6.	<p>1 Unit of Portable Leaf Area Meter</p> <p>Technical specifications:</p> <p>Resolution: 1 mm²</p> <p>Accuracy: Within ±2% for samples > 50 cm²</p> <p>Display: Two line, 16 character LCD</p> <p>Data Storage: Minimum of 2.0MB or better (up to 125,000 measurements)</p> <p>Communication: USB, RS-232</p> <p>Sample dimensions: Width-1 mm to 127 mm,</p> <p>Maximum Thickness-8 mm,</p> <p>Maximum Length-1 meter</p> <p>Scanning speed: Up to 1 meter per second</p> <p>Battery: Rechargeable lead-acid battery, 6 VDC</p> <p>Operating Time: Up to 16 hours continuous operation</p> <p>Charging time: Typically 5 to 8 hours</p> <p>Power requirements: 230 VAC; 50 or 60 Hz, 20 Watts maximum</p> <p>Operating temperature range: 0 to 55°C, <95% RH;</p> <p>Storage temperature range: -20 to 55°C, <95% RH</p> <p>Inclusion:</p> <ul style="list-style-type: none"> • Training on-site for the end-users <p>2-years warranty on parts and services and 1-time preventive maintenance</p>	
	<p>EVIDENCE for Item 1 to 6</p> <ul style="list-style-type: none"> • Brochure and complete technical specifications [SEPARATE DOCUMENT/ (Use your company letterhead) indicating ALL the technical 	

	<p>specifications you are offering but not limited to Brand, Model, Place of Origin, Features, Inclusions, Warranty, and Installation (if applicable)] of the item being offered.</p> <ul style="list-style-type: none">• Certificate as authorized distributor or exclusive dealer coming from the principal.• Certificate of training of service engineers/technicians authorized to conduct after sales service issued by the principal supplier/brand being offered• The supplier shall declare through a written statement that the product being offered is/are repairable and that replacement parts are available for a minimum of:<ul style="list-style-type: none">➤ five (5) years for item Number 1, 2 & 4 after end of production; and➤ ten (10) years for item 3, 5 & 6 after end of production	
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