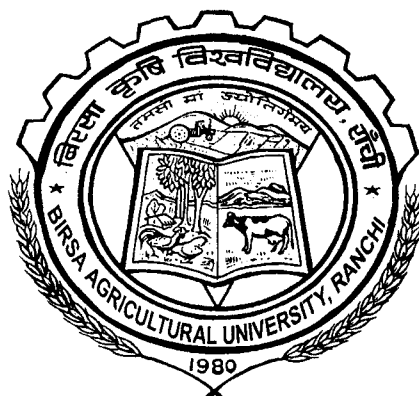


**BIRSA AGRICULTURAL UNIVERSITY**

**KANKE, RANCHI**

**(JHARKHAND)**



**Financial Year 2009-2010**

**Tender Documents for Equipments and Integrated Pack  
House Infrastructure (Capacity up to 500 Kg./Hr.)**

# **BIRSA AGRICULTURAL UNIVERSITY, RANCHI (JHARKHAND)**

No. F1-54/2009 BAU(Pur)/ 52 /Kanke

Dated 15-10-2009.

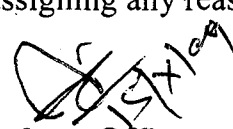
## **Short Tender Notice**

Closing date for receipt of tender document : 05.11.2009 (1.00 P.M.)

Opening date of tender : 05.11.2009 (3.00 P.M.)

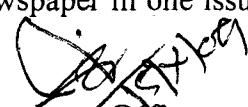
Sealed tender are invited from Manufacturers/Authorised Distributor/Authorised Dealers/Authorised Importers for purchase of **Equipments and Integrated Pack house infrastructure (Capacity up to 500 kg/hr.)** Competitive bids are invited from reputed firms to supply and erection of integrated pack house [Precooling chamber (1 ton), sorting machine (up to 500 kg/hr.), washing machine/washing machine with hot water treatment (up to 500 kg/hr.), grading machine (up to 500 kg/hr.)/grading table, waxing unit/air drier (up to 500 kg/hr.), ripening chamber (1 ton), shrink wrapping machine (up to 500 kg/hr.), cold storage (2 ton)] for handling fruits and vegetables.

The details of specification and full term and condition are available with the tender documents which can be obtained personally from the office of Purchase Section on any working day on or before 05.11.2009 on payment of Rs. 500/- only Bank Draft in favour of Comptroller, Birsa Agricultural University, Kanke, Ranchi. Tender schedule can also be downloaded from B.A.U. website [www.baujharkhand.org](http://www.baujharkhand.org). However tender schedule downloaded from B.A.U. website will be valid only if accompanied with a Demand Draft of Rs. 500/- only in favour of Comptroller, payable at Ranchi. The University reserves the right to accept/reject any tender without assigning any reason.

  
**Purchase Officer**

Birsa Agricultural University,  
Kanke, Ranchi.

**1. Advertisement Manager** - The Dainik Jagran (Hindi) National and Times of India (English) National, all editions through M/s Expression, 77 Circular Road, P.O.- Lalpur, Ranchi - 834001. The firm is requested to publish the Short Tender Notice in daily newspaper in one issue on or before 16.10.2009.

  
**Purchase Officer**



## 1.Integrated Pack house infrastructure (Capacity up to 500 kg/hr)

S.N.	Items	Specifications
A.	<b>Precooling chamber</b>	Capacity: 1 ton, Room temperature required: 2 to 15 <sup>0</sup> C, RH 80 – 95 %, PUF PANEL THICKNESS& FINISH (ALL WALLS & CEILING): 80mmPUF minimum 0.5 mm /PP GI sheets both sides with galvanization to 180. INSULATED DOOR: Door of dimension 900 x 2000 mm, flush with panels with automatic door closing mechanism and posi-seal closure should be part of the door fixtures. The door should match the thickness of panel. FLOOR INSULATION: 40mmX2 bare PUF slab, with tar felt waterproofing and-80mm PCC (1:2:4) finish. POWER SUPPLY: 415/3/50Hz.
B.	<b>Sorting machine</b>	Capacity: (up to 500 kg/hr), Conveyor type sorter with workers standing on both sides of conveyor will sort out damaged or rotten products.
C.	<b>Washing Machine</b>	Capacity: (up to 500 kg/hr), Height: Adjustable Main belt: Link belt with cleats. Spray Nozzles on headers above main belt for spray washing. Agitator and pump: SS pressure pump with filter for agitation in water and for spraying above main belt. The contact part should be made of food grade steel.
D.	<b>Grading machine/Table</b>	Capacity: (up to 500 kg/hr), Roller type grader with openings between the rollers and products are graded according to their diameter. Provision should be adjustment of the gap between the rollers for different fruits and vegetables. The contact part should be made of food grade steel.
E.	<b>Washing machine with hot water treatment</b>	Capacity: (up to 500 kg), Height: Adjustable This should be adjustable to 52 <sup>0</sup> C for two to four minute speed with heating element and thermostat. The contact part should be made of food grade steel.
F.	<b>Waxing unit and air drier</b>	Capacity: (up to 500 kg/hr), Height: Adjustable, Dewatering sponge rollers 100mm foam, Body and structure SS 304 frame work, Heating: Electric heater, Suitable VFD for speed variation, Wax spray nozzles, Blower for Drying.
G.	<b>Ripening chamber</b>	Capacity: 1 ton, ETHYLENE GENERATOR with an option of Ethylene gas emission system specification should be incorporated. Adjustable ethylene gas emission levels to enable

		ripening of various fruits. CO2 VENTILATION SYSTEM: Motorised with Damper fan units for fresh air and Exhaust air for CO2 flushing out., Switching system: Timer based. CAPACITY: 1MT of Fruits (Banana, Papaya, mango, De green of Orange etc.). ROOM CONDITION: 14 to 22 Deg. C RH 80 to 95%. PUF PANEL THICKNESS & FINISH (ALL WALLS & CEILING): 80mmPUF/minimum 0.5 mm /PP GI sheets both sides with galvanization to 180. INSULATED DOOR: Door of dimension 900 x 2000 mm, flush with panels with automatic door closing mechanism and posi-seal closure should be part of the door fixtures. The door should match the thickness of panel. FLOOR INSULATION: 40mmX2 bare PUF slab, with tar felt waterproofing and 80 mm PCC finish. POWER SUPPLY: 415/3/50Hz., Panel should be provided for indicating the levels of Ethylene.
<b>H.</b>	<b>Shrink wrapping machine</b>	Capacity: (up to 500 kg/hr), Continuous shrink wrapping machine (Cabbage, cauliflower, papaya, capsicum etc.).
<b>I.</b>	<b>Cold storage</b>	CAPACITY EACH: 2 ton for fruits & vegetables, Allowing space between stacks of crates for Respiration and ventilation. Refrigerator ROOM CONDITION: 0 to 15 <sup>0</sup> C RH 80 to 95%. PUF PANEL THICKNESS & FINISH (ALL WALLS & CEILING): 80mm PUF minimum 0.5 mm/PP GI sheets on both sides with galvanization to 180. INSULATED DOOR: Door of dimension 900 x 2000 mm, flush with panels with automatic door closing mechanism and posi-seal closure should be part of the door fixtures. The door should match the thickness of panel. FLOOR INSULATION: 40mm X2 bare PUF slab, with tar felt waterproofing and PCC (1:2:4) Prop. Finish. POWER SUPPLY: 415/3/50 Hz. HUMIDIFIER: The Humidifier shall be Electrode type Steam humidifier. It should consist of open able PVC cylinder & SS electrodes. The unit should be operable in high humidity as well as dry cooling mode. It shall be provided with steam Hose & mixing nozzles. Humidity should be controlled by electronic RH Controllers. Type: Steam Type Cleaning: Auto flush back for self cleaning Electrodes: SS Power supply: 220/1/50 Hz or 415/3/50Hz.

**Name of Equipment**

Sl. No.	Name of the Equipments	Specification
2	Deep freeze	CFC-free refrigerants, Inner chamber should be made of Stainless Steel. Internal Capacity should be in the range of 550-600 liters, 5 Compartments with 4 adjustable shelves, Cabinet insulation should be at least 70 mm (PUF), lowest attainable temperature of -40°C at the ambient temperature range of 28-32°C, Membrane Keypad eye level control panel, Two compressors each with power efficient( low power consumption) capacity up to maximum of 1hp, Battery back up: Activates alarms and display during power outages, Time delay and temperature delay mode for second compressor, High low cut protection facility for both compressors. Microprocessor based functionality, A minimum of 5 year warranty for compressor and refrigerant, Alarm for Power failure , high low temperature, and battery low, filter clean and fault analysis, Alarm and temperature should be adjusted within 1 degree increments, Inbuilt Diagnostic system.
3	Centrifuge Machine	Table-Type Low-Speed Centrifuge 5000RPM. <ul style="list-style-type: none"> <li>• Max Speed 5000rpm/min</li> <li>• Max RCF 4020—g</li> <li>• Swing Rotor 10—5ml</li> <li>• Speed Accuracy ±50r/min</li> <li>• Time Rang 0-99min</li> <li>• Power Supply AC 220V 50Hz 15A</li> </ul>
4	Microscope	Observation Tube Straight monocular tube Mechanical Tube Length 160mm Focusing Separate coarse and fine focusing knobs Stage Plain stage with slide clips (120mm × 130mm) Eyepiece 10X, 16X Objective Achromatic 4X, 10X, 40X (spring), 100X Condenser Abbe condenser with iris diaphragm Illumination Plano-concave mirror
5	Digital Camera	Resolution 10.30 Mpixel Maximum resolution 3648x2736 Minimum resolution 640x480 Optical zoom Yes Zoom wide (mm) 35 Zoom tele (mm) 140 Digital zoom Yes Auto focus Yes Manual focus Yes Focus range (cm) 8 Macro focus range (cm) 1 Flash modes anti red-eye Storage types Memory Stick Duo Minimum aperture wide f3.5 Sequence (fps) 1.6

		<p>Built-in flash Yes  Exposure compensation -2EV - +2EV with 1/3EV steps  Video function Yes  Video sound Yes  Minimum video resolution 320x240  Frames per second (fps) 30  Voice recording Yes  LCD display Yes  Self-timer Yes  USB USB 2.0 Hi-Speed  Video out Yes  Energy Li-Ion</p>
6	<b>Semen Transport Container (LN<sub>2</sub> container)</b>	<p>Liquid Nitrogen Container  Capacity : 14 litres  Safety rings/guards for the cylinder  Make: Standard make preferably IBP</p>
7	<b>pH Meter</b>	<p>An accurate and reliable Bench Model, Digital pH Meter to check the pH of any kind of solution (Dyes, Chemicals etc.). The equipment incorporates ATC (Automatic Temperature Compensation) to give accurate pH in any Temperature and weather Conditions. The unit has a Special Gel Filled pH Electrode and Temperature Sensor PT- 100, Complete with Stand, pH 7.0 Buffer Sachet Packs with PH4 &amp; 7 Solution Bottles and Dust Cover.</p>

## **Terms & Conditions**

1. Tender must be submitted in two sealed envelopes for each item separately - 1<sup>st</sup> envelop containing technical bid with all supporting specifications and documents including EMI and 2<sup>nd</sup> envelop containing financial bid quoting prices inclusive of all taxes.
2. Tender must be sent in sealed envelop with Tender Written on it in capital letters. The last date of submission must be mentioned on the envelop.
3. Tender received after the due date and time will not be considered and are liable to be rejected without assigning any reason.
4. In case of more than one items for which quotations have been given a list of items duly signed shall be enclosed alongwith documents (Abstract of quoted equipments).
5. The Central Purchase Committee reserves the right to reject any or all the tenders without assigning any reason.
6. The rate should be inclusive of all taxes as mentioned in Serial no. 1.
7. The rates will remain operative for six months from the date of placing supply order.
8. While quoting the rate, please be sure to mention your sale tax (CST/JST/VAT) registration number.
9. Any cutting and over writing in the tender paper should be attested and price may be quoted separately for each items otherwise it shall not be entertained.
10. No tender will be accepted without printed catalogue and complete literature with brand of concerned reputed firm.
11. The earnest money @ 2% of the total quoted value in shape of BD/NSC in favour of Purchase Officer, Birsa Agricultural University, Ranchi only will have to be deposited alongwith the tender by the suppliers. Tenders received without earnest money will not be considered and are liable to be rejected without assigning any reason.
12. The security money @ 5% of the quoted in shape of BD/NSC will have to be deposited by the supplier whose tender will be accepted.
13. Security money shall be for fitted if ordered items/ materials are not supplied in scheduled time and as per specification.
14. Payment will be released after supply of order items successfully.
15. Guarantee period must be mentioned for each item.
16. Place of delivery, FOR-Destination.
17. Time of delivery-30 days after receiving supply order.

18. The sealed tender should be sent to Chairman, C.P.C., Birsa Agricultural University, Kanke, Ranchi-834006, Jharkhand.
19. A letter of authorization of dealership of the firm/manufacturer must be enclosed with the documents.
20. The Court of Ranchi Jharkhand State only will have the jurisdiction to deal with and decide any legal matter of dispute what so ever arising or of in dispute of the control.
21. Name of the manufacturer, manufacturing the equipment with full address may please be mentioned.
22. In case of unforeseen circumstances the tender will be opened on the next working day.

i have read the terms and conditions of the tender, as given above, very carefully and shall be the same.

**Signature of the tenderer with stamp**