



KERALA AGRICULTURAL UNIVERSITY

Department of Agricultural Engineering

College of Horticulture, Vellanikkara, Thrissur – 680 656.

Phone: 0487-2438331

Email :cohagengg@kau.in

TENDER NOTICE No. AG.ENGG/03/2019 dated 01/10/2019

Sealed tenders are invited for the supply of spray dryer and twin screw extruder with accessories to the project RAFTAAR Agribusiness incubator under department of agricultural engineering, CoH, Vellanikkara whose specifications are given as Annexure.

The tender documents and conditions

1. The tender form may be downloaded from the following web link in the Internet:
<http://www.kau.in/tenders>.

The cost of tender form is rupees 0.15 % of PAC (rounded to nearest 100/- subjected to maximum of Rs. 25000/-) + 18% GST. A Demand Draft for the amount drawn in favour of **The Professor and Head, Dept. of Agricultural Engineering, College of Horticulture, Vellanikkara, Thrissur 680 656** payable at **SBI KAU Main Campus, Vellanikkara (Code-70670)** should be enclosed along with the tender submitted.

2. Earnest Money Deposit (EMD)

EMD @ 1% of the cost of equipment offered may be remitted by a separate Demand Draft drawn as detailed above.

3. Agreement on Kerala Stamp Paper for Rs. 200.00

Form of agreement can be downloaded from the website <http://www.kau.in/tenders> under the Related Documents section.

4. The offer for the item should indicate separately the basic unit, accessories and optional and its cost. Taxes, customs and excise duty, packing, forwarding, insurance and any other cost for its installation, if any should also be included.
5. The sealed cover containing the tender documents should be super scribed **“Tender for supply of Food Processing machineries (Name of machine)”** and sent to **The Professor**

and Head, Dept. of Agricultural Engineering, College of Horticulture, Vellanikkara, KAU (P.O) Thrissur, Kerala - 680 656.

6. Tenders received late or incomplete in any respect will be summarily rejected without notice and the decision of the undersigned on such matters will be final.
7. Successful tenderers will have to execute an agreement and remit security deposit @ 5% of the value of the articles ordered, less the amount of EMD, drawn as DD or fixed deposit receipt.
8. The items are to be supplied at the Dept. of Agricultural Engineering, College of Horticulture, Vellanikkara, Thrissur, Kerala - 680 656 as per indent.
9. The supplier should give the details of the nearest service center and response time.
10. Details of warranty, after sale service offered on expiry of normal warranty period, available should be mentioned.
11. CMC/ AMC of Equipment: After the warranty/Guarantee term is over, the firm should mention the charges of CMC/AMC at least for first three years from the Principal.
12. NOTE: In case of any discrepancy in the period of and/or CMC/AMC mentioned anywhere else in this Tender document, the stipulations as mentioned in specification of the equipment/ item to be purchased would prevail.
13. Three number of performance certification from reputed institutes which is installed with the same machine should be attached with the tender
14. The undersigned reserves the authority to accept or reject any or all the tenders without assigning any reason.
15. The decision of the undersigned in finalizing the tenders shall be final and binding.
16. Leaflets/ brochures/ catalogues of the equipment describing its features, applications, specifications etc. should be provided along with tender. A drawing of the table assembly should be provided along with tender
17. Tenders will be received up to 12.30 PM on 15.10.2019
18. Tenders will be opened at 2.30 PM on 15.10.2019 in the presence of the tenderers present at that time.
19. The supply should be effected before 29.11.2019
20. All conditions of Kerala government tenders are applicable in this case also. Further information can be had from the web site <http://www.kau.in/tenders> or from the office of **The Professor and Head, Dept. of Agricultural Engineering, College of Horticulture, Vellanikkara, Thrissur, Kerala - 680 656.**

ANNEXURE

Sl. No.	Items	Specifications	Qty
1.	Spray Dryer	<p>Water evaporation capacity: Min. 5 L/h</p> <p>Main chamber with air dispenser (SS 304):- Size: Min. 300*800*300 mm (dia.*length*conical height)</p> <p>Cyclone: SS 304</p> <p>Electrical Heater: Max.10 KW and should coved with heat-resisting sheath</p> <p>Atomizer: Two fluid nozzle with automatic de-clogging system; Min.3 Nos. of varying orifice bit ranges Min. 0.5-1.25mm dia.</p> <p>Peristaltic feed pump for controlled feeding</p> <p>Centrifugal Blower</p> <p>Electronic Digital PID Temperature Controller-Indicator with sensor at inlet and out air temperature.</p> <p>Digital control panel</p> <p>Inlet air temperature: Ambient to 300⁰C</p> <p>Complete rat proof arrangement for blower, cyclone, control panel and drying chamber</p>	1No
2.	Twin screw extrusion system with accessories	<p>Unit should consist of</p> <ol style="list-style-type: none"> 1. Twin Screw Extruder: 40 to 50 kg/h 2. Batch Mixer: 40 to 50 kg/batch 3. Core Filler: 40 to 50 kg/h 4. Multifunction shaper machine: 40 to 50 kg/h 5. Flavour coating drum: 40 to 50 kg/h 6. Electrical layer dryer: 60 to 80 kg/h <p>Twin Screw Extruder</p> <p><u>Capacity:</u> 40 to 50 kg/h</p> <p>Provision for adjustment of extruder base</p>	1No

		<p><u>Extruder main motor speed</u>: 1200 to 1500 rpm</p> <p><u>Extruder Barrel</u>: Min. 2 Nos. with individual heating arrangement,</p> <p>Min. 4 Nos. electrical heating elements jacketed with solenoid valve arrangement</p> <p>Material of construction: Nitriding steel</p> <p>Temperature control: Ambient to 250°C Auto self-cleaning provision without disassembling the Barrels</p> <p><u>Twin screw</u> (Co-rotating, fully intermeshing, self-cleaning)</p> <p>Screw speed: 100 to 400 RPM</p> <p>Screw material: Nitriding treatment</p> <p><u>Raw material feeder</u>: Volumetric feed screw with hopper of minimum of 30 L bin</p> <p><u>Die head and extruder dies</u>: Die head compatible for snack food and core filled snack should be provided along with extruder.</p> <p>Die mold should be made of suitable alloy, different dies should be essential along with the machine.</p> <p><u>Cutter assembly</u>: 2-4 Nos SS cutter blades with variable cutting speed along with stainless steel hood</p> <p><u>Control Panel</u>: Should be rat and water proof, consist of digital indicator of extruder motor load, and feed screw speed, temperature in barrel, extruder screw speed, cutter speed.</p> <p>Batch Mixer</p> <p>Capacity: minimum of 40 to 50 kg/h</p> <p>Made of Stainless Steel</p> <p>Consist of Jacket cylinder with dual blades for mixing</p> <p>Provision for adjustment of Mixing time</p>	
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PROFESSOR & HEAD