



सीएसआईआर-केंद्रीय खाद्य प्रौद्योगिक अनुसंधान संस्थान  
CSIR- CENTRAL FOOD TECHNOLOGICAL RESEARCH INSTITUTE  
मैसूरु / MYSURU-570 020, भारत / INDIA

(Constituent Laboratory of CSIR, New Delhi (Ministry of Science & Technology)  
An ISO 9001:2008, ISO 14001:2004 & ISO 17025:2005, NABL Accredited Laboratory

सं. /No. CFTRI /74217/2021

दिनांक / Date: 06<sup>th</sup> August 2021

**NOTICE INVITING TENDER**

क्रम सं. Sl. No.	निविदा संदर्भ Tender Reference	विवरण / Description
1	CFTRI/74217/2021	Sorghum and Bajra Processing Line – 1No.

1. Director, CSIR-CFTRI, Mysuru invites tenders for supply, installation, commissioning and satisfactory demonstration of Sorghum and Bajra Processing Line – 1Unit
2. Last date for submission of Tender is 2.00 P.M. (IST) on 23/August/ 2021 online in etenders.gov.in.
3. Technical Bid Opening on line in e-tender portal at 2.30P.M on 24/ August /2021
4. EMD: Nil, Bid Security Declaration Form (As per Annexure-4 must be uploaded along with technical bid)
5. Bidder has to submit Non-applicability of exclusion form restrictions under Rule 144(xi) of GFR-2017 (Format enclosed with tender documents)
6. This tender is open for Purchase Preference to Make in India and MSME, Bidder must upload class I/class II self-certification Format along with Technical Bid.

हस्ता./Sd/-

अनुभाग अधिकारी (भंडार एवं क्रय)

Section Officer ( Stores & Purchase)

Ph: +91- 821-2515440/2515447

E-mail: [cosp@cftri.res.in](mailto:cosp@cftri.res.in), [sosp@cftri.res.in](mailto:sosp@cftri.res.in)

**CRITICAL DATE SHEET**

**CRITICAL DATE SHEET:**

**Tender Ref/No. CFTRI/74217/2021**

<b>Sl.No.</b>	<b>Stage</b>	<b>Date &amp; Time</b>
<b>1</b>	<b>Publish Date &amp; Time</b>	<b>06/08/2021 @ 3.00p.m.</b>
<b>2</b>	<b>Document Download Start Date &amp; Time</b>	<b>06/08/2021 @ 3.00p.m.</b>
<b>3</b>	<b>Bid submission Start Date &amp; Time</b>	<b>10/08/2021 @ 5.00p.m.</b>
<b>4</b>	<b>Bid submission End Date &amp; Time</b>	<b>23/08/2021 @ 2.00p.m.</b>
<b>5</b>	<b>Bid Opening Date &amp; Time</b>	<b>24/08/2021 @ 2.30p.m.</b>

## Technical Specification and details of Equipment

### 1. Sorghum/ Bajra processing line:

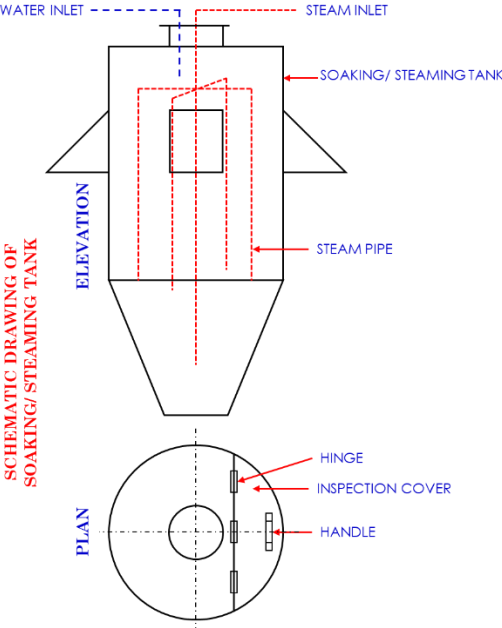
Complete plant for processing of Sorghum/ Bajra at a capacity of 1 Tonne per hour consisting of the following machinery and accessories as per tentative plant layout enclosed.

List of equipment include Cleaner, Destoner, Magnetic separator, Soaking/ Steaming tank, Continuous vibro fluidized bed dryer, Screw conveyor/ moisture conditioning unit, Horizontal abrasive polisher/ Whitener, Horizontal Emery stone grinder/ Abrasive disc grinder/ Planetary sifter, Pneumatic conveying system, Bucket elevators, Storing tanks with structures and staircase, Surge bin with structures and staircase, Central dust collection/ discharge system, Bag filling system.

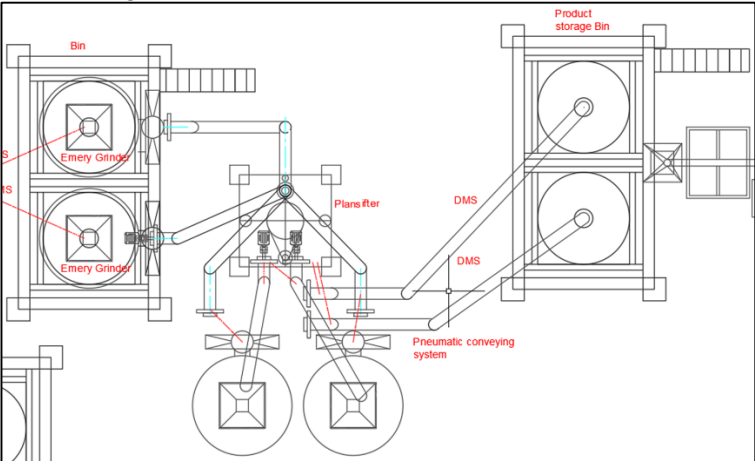
The detailed specifications and essential features of each individual machine/ system is as indicated below:

Sl. No.	Specifications and essential features of individual machine/ system	Quantity
1	<p><b>Cleaner:</b> Vibratory/ Reciprocating type cleaning system for cleaning Sorghum and Bajra (Pearl millet). The system should be designed for very thorough separation of impurities and material other than grain from the grain mass. Provision should be available for taking samples (when the machine is in operation) in the pipe to check the product quality. There should be two large expansion chambers (one at the inlet and the other at the outlet) to allow light particles to be discharged separately, preferably through a dust collection system/ control system with blower, motor, cyclone and gear driven rotary valve. All the sieves (minimum 4 sieves in the complete system) should be attached to sturdy metal frames and sieves should be kept clean by rubber balls which move around the sieves along with the motion of the machine or any other efficient declogging system to prevent choking of sieves. Provision to change the sieves easily and quickly through a front panel should be made. No screws have to be loosened during replacement of sieves. The system should be provided with an inlet regulator to automatically distribute the grain and product over the entire width of the machine along with a storage hopper and feed gate for 15 minutes of operation. The system should have provision to vary the deck vibration and speed. The vibrating/ reciprocating deck should be balanced dynamically. It should be possible to vary the operating parameters of the machine during operation.</p> <p>One set of additional sieves should be provided along with the machine of 0.8, 1.0, 2.0, 2.8, 3.0 and 3.8mm opening size.</p> <p>The system should be fitted with appropriate capacity TEFC induction motor of continuous rating and automatic starter, both of reputed make to run on 415V, 50Hz, 3 phase AC supply.</p> <p><b>Capacity: 500 kg/h (1TPH)</b></p>	1
2	<p><b>Destoner:</b> Vibratory type vacuum destoner for continuous destoning of grains for separation of heavy particles such as stones, magnetic and nonmagnetic metals, mud balls and other foreign particles by separating impurities based on density difference by adjusting the aspirating air. The system should be supplied with closed circuit aspiration system to ensure a dust – free operating environment. The system should also have lighting system to enable easy viewing of the components of the</p>	

Sl. No.	Specifications and essential features of individual machine/ system	Quantity
	<p>equipment. The system should use vibro motors for trouble free, have long life and low noise operation. The system should have a separate collection of stones and dust particles. System should be provided with an adjustable system to spread the grains evenly over the mesh screen to result in even stratification and separation along with a storage hopper and feed gate for 15 minutes of operation. The cleaned grains should be discharged separately to the subsequent machine. The system should have a quality sieve cleaning device. It should also have provision to adjust the vibration intensity for efficient separation.</p> <p>The system should be fitted with appropriate capacity TEFC induction motor of continuous rating and automatic starter, both of reputed make to run on 415V, 50Hz, 3 phase AC supply.</p> <p><b>Capacity: 500 kg/h (1TPH)</b></p>	
	<p>A common dust collection and discharge system for the Cleaner and Destoner could be provided to reduce the number of units and offer saving in power and space.</p>	
3	<p><b>In – hopper magnetic separator:</b>  Magnetic grids/ grates – round (200mm <math>\Phi</math>) to catch Ferrous particle size of minimum of 30 <math>\mu</math>m and maximum of 10mm. The system should have 4 magnetic bar in extractor tube, with tube of <math>\Phi</math>25mm and bar <math>\Phi</math>23mm with 13,000 gauss (at 20°C) having a field strength (flux density) on magnetic bar (<math>\pm</math> 10%) translating to field strength of 10,000 gauss on extractor tube. The extractor tube should be made out of SS AISI304. The circular grid (with cover) should have a diameter of 200 mm and height of 50mm. This circular magnet should be placed in the plant at each unit operation of grain processing.</p>	12
4	<p><b>Soaking/ Steaming tanks with MS structure:</b>  Cylindrical steaming tanks with conical bottom constructed out of AISI304 SS sheet of 3mm thickness. A discharge system should be provided at the bottom of the tank with a pneumatic feed gate. The supply should include air compressor, air tank and all accessories and safety devices, for operation of the pneumatic gate manually. It should be possible to control the output of grains from the tank to the desired quantity output per hour. The tank should be water tight and should have provision to drain out only water separately. All contact parts with the grains should be made out of AISI304 SS material. The quotation should include supply and installation of steam and water line from the nearest point in the building till the process tank and should be quoted per running meter. Steam line should be clad with fibre glass material as per standard specification. The steam line should be supplied complete with all safety features and accessories like steam trap, drain line, etc. Pressure gauges to indicate pressure in the steam line should be provided at a height for convenient reading. Water line should be painted SEA GREEN as per standard specification. Water line should be provided with ball valves for control of water flow.</p> <p>A set of soaking/ steaming tank consists of two tanks each of holding capacity of <b>1000kg (1 T)</b> of Sorghum/ Bajra. The outlet of these tanks should be such that there is free flow of wet material to the next machine (Elevator). Thus the angle of the pipe from the outlet of the tank to the inlet hopper of the elevator should be 60° from the horizontal.</p> <p>The support structure for the soaking/steaming tank should be made out of MS material. It should be complete with staging, grating platform, ladders, and walkways with safety railings throughout. The MS structure should be coated with enamel paint matching the scheme of the plant.</p>	1 Set

Sl. No.	Specifications and essential features of individual machine/ system	Quantity
4a	<p data-bbox="308 170 1219 237"><i>Schematic drawing of soaking / steaming tank showing steam pipe configuration</i></p> 	
5	<p data-bbox="220 909 804 943"><b>Continuous Vibro Fluidized Bed Dryer:</b></p> <p data-bbox="220 949 1307 1205">Continuous vibratory fluidized bed dryer required for heat treatment/ steaming/ parboiling/ drying of Sorghum/ Bajra. The material of construction in touch with the material (grains) is to be made from AISI304 SS. The hot air blowing through the grains mass should be in the range of 40° to 80°C and it should be possible to maintain the set temperature through digital systems. The vibrating deck should be mounted on springs and vibration should be delivered through vibratory motors having provision to control the degree of vibration to suit the process requirement. The following features should be in built into the system:</p> <ul data-bbox="220 1211 1307 1532" style="list-style-type: none"> <li>● Control systems for adjusting vibration, fluidization (air flow) and residence time (thus product moisture)</li> <li>● System should ensure uniform product temperature across the depth and length of fluidization</li> <li>● Control system to ensure only cooling of grains (without heating)</li> <li>● Explosion proof design</li> <li>● CIP (Cleaning In Place) option for good sanitation</li> <li>● Source of heat for hot air could be electrical, diesel, thermic fluid, LPG)</li> <li>● Cyclone separators with bag filters and scrubbers to ensure zero pollution into the process area</li> </ul> <p data-bbox="220 1570 1307 1697">The system should have all necessary options to customize the thermal processing of grains with respect to temperature and air flow through grain mass with a view to maximize efficiency of heat and mass transfer, thus assuring processing of product within the best time and temperature range for high quality output.</p> <p data-bbox="220 1736 1307 1863">The system should be fitted with all regulatory safety features. The electrical motors used in the system should have an efficiency of 80% and above. The system should be fitted with appropriate capacity motors of continuous rating and automatic starter, both of reputed make to run on 415V, 50Hz, 3 phase AC supply.</p> <p data-bbox="220 1892 596 1921"><b>Capacity: .500 kg-1000 kg/h</b></p>	1
6	<p data-bbox="220 1928 1214 1962"><b>Mixing Screw Conveyor/ Moisture Conditioning/ Dozing System:</b></p> <p data-bbox="220 1968 1307 2119">A mixing type screw conveyor system with three nozzles to spray water in a fine mist on the grain mass. The system should ensure complete mixing of grains with sprayed water. The drive to the screw should be through a geared motor driven through a VFD system for precise control of screw speed as desired. Provision should be made to control the amount of water being sprayed and should be supplied along with a</p>	1

Sl. No.	Specifications and essential features of individual machine/ system	Quantity
	<p>metering unit for the same. The U trough screw conveyor system should ensure a throughput of 1000kg/h (1TPH). Owing to the size of the grain, the gap between the bottom of the trough and screw should be less than 0.5mm. Suitable hanger bearings should be used throughout the length of the screw to ensure no sagging of the screw inside the trough. The supply should be complete with water tank (PE or PP) and water line for inlet and outlet should be provided. The storage capacity of the water tank should be 500 litres. The quotation should include supply and installation of structure for water tank.</p> <p>All contact parts with grains should be made from AISI304 SS material. Quotation should include supply and installation of water line from the nearest point in the building till the process tank and should be quoted per running meter.</p> <p>The system should be fitted with all regulatory safety features. The electrical motors used in the system should have an efficiency of 80% and above. The system should be fitted with appropriate capacity motors of continuous rating and automatic starter, both of reputed make to run on 415V, 50Hz, 3 phase AC supply.</p> <p><b>Capacity: 500 kg/h (1TPH)</b></p>	
7	<p><b>Horizontal Abrasive Polisher/ Whitener:</b></p> <p>Horizontal abrasive polisher for polishing of conditioned Sorghum/ Bajra grains. The system should have an inlet screw to push the feed material into the annular space between the rotating abrasive roll and stationary screen. The abrasive roll should have spiral grooves and air holes to cool the grain during polishing and also facilitate removal of bran from the milling chamber. A load system at the outlet should be provided with provision to move the loads across a lever fixed to the tail gate to adjust the milling pressure in the system. The abrasive discs should be mounted on a hollow shaft with provision to blow ambient air through the shaft and abrasive discs. The system should be supplied with the blower for air along with suitable drive arrangement. In addition, the system should be supplied with aspiration system consisting of blowers, cyclones and air locks for separation and collection of the bran removed during the process. Supply includes the drive system with motors and starters, gear drives, rotary valves and dust collection system to ensure optimum sanitation within the process area. The polisher screen should be made out of wear resistant, perforated sheet or woven wire mesh of spring steel. Three sets of screens (both perforated sheet – 1.2mm thick and wire mesh – 0.3, 0.5 &amp; 0.8mm wire dia) with openings of 0.8, 1.0, and 1.2mm should be provided. The polisher should be supplied with a surge hopper with adjustable feed gate to store 15 minutes of material. One set of weights extra should be included in the scope of supply.</p> <p>The system should be fitted with all regulatory safety features. The electrical motors used in the system should have an efficiency of 80% and above. The system should be fitted with appropriate capacity motors of continuous rating and automatic starter, both of reputed make to run on 415V, 50Hz, 3 phase AC supply.</p> <p><b>Capacity: 500 kg/h (1TPH)</b></p>	2
8	<p><b>Horizontal Emery Disc Grinder/ Abrasive Disc Grinder for grains:</b></p> <p>Emery disc grinder of horizontal configuration required for size reduction of Sorghum/ Bajra grains. The system should have the following features:</p> <ul style="list-style-type: none"> <li>● Emery stone size = <math>\Phi</math> 36"</li> <li>● Vibrating feeder with control system to adjust the feed rate of grains being ground</li> <li>● Aspiration channel and dust collection with blower, cyclone, rotary valve and bag filters complete with drive motors and starters and all regulatory safety features</li> <li>● All drive systems should be concealed or provided safety guards for operators' safety</li> <li>● Unit should be equipped with automatically controlled gap adjustment system. Quote separately for system with this feature.</li> </ul>	4

Sl. No.	Specifications and essential features of individual machine/ system	Quantity
	<p>The system should be fitted with all regulatory safety features. The electrical motors used in the system should have an efficiency of 80% and above. The system should be fitted with appropriate capacity motors of continuous rating and automatic starter, both of reputed make to run on 415V, 50Hz, 3 phase AC supply.</p>	
9	<p><b>Plansifter/multi grader sifter:</b>  The planetary sifter should sift and grade Sorghum/ Bajra flour into flour and semolina. The sieve should be imparted gyratory motion through a suitable motor and drive. The screen deck should be suitably balanced by counterweight. The screen should be interchangeable. The inside of the sifter box should be made out of AISI304 SS material. Hopper Outlets for discharge of stock should be through plastic chutes within a gravity spouting scope. The material of the mesh should be Nylon or Polyamide grit gauze material with an opening size of 250µm (60 mesh BSS). An additional set of screens of the following sizes is also to be included in the scope of supply: 150 (100 mesh), 180 (85 mesh), 355 (44 mesh) &amp; 500µm (30 mesh).</p> <p>The system should be fitted with all regulatory safety features. The electrical motors used in the system should have an efficiency of 80% and above. The system should be fitted with appropriate capacity motors of continuous rating and automatic starter, both of reputed make to run on 415V, 50Hz, 3 phase AC supply.</p> <p><b>Capacity: 500kg/h</b></p>	1
10	<p><b>Pneumatic Conveying System:</b>  A pneumatic conveying system is required to transport flour from the Emery disc grinding output to the plansifter and the plus fraction of the sifter (coarse flour or semolina) to another set of grinders. The output of the second set of grinders is to be transported to the plansifter. The minus fraction (flour) from the plansifter is to be transported to the two product storage bins. The schematic drawing of the setup is as given in the drawing below.</p>  <p style="text-align: center;"><i>Schematic diagram of pneumatic system</i></p> <p>The pneumatic conveying system should consist of pipelines from the input machines to the output system consisting of pipelines, airlocks, and clamps, connecting joints, inspection and sample collection windows, dust collection system with cyclones and accessories, necessary blowers / fans. The system should discharge clean air via rotary valves and dust collection system to ensure optimum sanitation within the process area.</p> <p>The system should be fitted with all regulatory safety features. The electrical motors used in the system should have an efficiency of 80% and above. The system should be fitted with appropriate capacity motors of continuous rating and automatic starter, both of reputed make to run on 415V, 50Hz, 3 phase AC supply.</p> <p><b>Capacity: 500 kg/h (1TPH)</b></p>	As required

Sl. No.	Specifications and essential features of individual machine/ system	Quantity
11	<p><b>Bucket elevator:</b></p> <p>Bucket elevators for vertical transport and discharge of grains from one machine's output to the inlet of the subsequent machine. The Head of the elevator should be made out of heavy – duty galvanized steel construction for clean discharge. Sectioned Head cover should be provided for easy service of internal components. The drive to the crowned pulley should be through a gear reducer with easily adjustable torque arm and should be noiseless in operation. The pulleys should be crowned and fitted with taper – lock bushings, non-slip rough top lagging for maximum traction. Sealed, high quality, high duty bearings having low maintenance and long life should be used. The belt should be made from high strength PVC belt for minimal stretch, impregnated solid carcass, pre – punched for easy bucket mounting. Buckets should be made out of high quality Polyethylene CC material with deep terminal design. Trunking should be of twin box construction made out of heavy gauge ASTM A-526 G90 galvanized steel, double seam, track welded for perfect alignment. Trunking should be provided with inspection sections for easy access to belt and buckets. The boot should be made out of heavy gauge galvanized steel having easy to adjust take – ups for the boot pulley. Clean – out doors that easily slide open to access the elevator boot floor for cleaning should be provided. The output pipe from elevator to the subsequent machine should be made out of AISI304 SS material. The standalone elevator should be supplied in accordance with the requirements of the entire plant for continuous, trouble – free operation.</p> <p>The system should be fitted with all regulatory safety features. The electrical motors used in the system should have an efficiency of 80% and above. The system should be fitted with appropriate capacity motors of continuous rating and automatic starter, both of reputed make to run on 415V, 50Hz, 3 phase AC supply.</p> <p><b>Capacity: 500 kg/h</b></p>	As required
13	<p><b>Centralised Dust Collection &amp; Discharge System:</b></p> <p>A centralised dust collection and discharge system from each individual machinery across the mill and all bucket elevators to be provided. The pneumatic lines for dust collection from each of the machine is to be taken and the discharge system should be outside the building. At the exit of the pneumatic lines, the cyclone systems, air locks, blower and drive should be housed outside the building to ensure the entire building is dust free. All pneumatic lines from the individual machines should be installed at a height of 3m (10 feet) from the ground level to facilitate easy movement of staff in the plant area.</p> <p>The system should be fitted with all regulatory safety features. The electrical motors used in the system should have an efficiency of 80% and above. The system should be fitted with appropriate capacity motors of continuous rating and automatic starter, both of reputed make to run on 415V, 50Hz, 3 phase AC supply.</p> <p><b>Capacity: To suit the entire plant</b></p>	1
14	<p><b>Storage tanks with structure:</b></p> <p>Storage tank to store cleaned Sorghum/ Bajra. The tanks and systems in contact with grains should be made out of 3mm thick AISI304 SS material and the support structure should be made out of MS. The structure should be complete with stair case, walkways, railings and grating platform ensuring complete safety of personnel. The outlet of these tanks should be such that there is free flow of material to the next machine. Thus the angle of the pipe from the outlet of the tank to the inlet hopper of the elevator should be 60° from the horizontal or higher.</p> <p>The following storage tanks are required:</p> <ol style="list-style-type: none"> <li>a. To temper moisture conditioned Sorghum/ Bajra after the mixing screw conveyor consisting of 2 tanks each tank having a holding capacity of 500 kg (0.5)</li> <li>b. To store polished Sorghum/ Bajra after the horizontal polishers (as a separate entity – to enable further processing of the grains in the flaking line –</li> </ol>	<p>1 set</p> <p>1 set</p>



Sl. No.	Specifications and essential features of individual machine/ system	Quantity
	<p>separate), consisting of 2 tanks each tank having a holding capacity of 500 kg (0.5T)</p> <p>c. To store polished Sorghum/ Bajra after horizontal polishers above the emery disc grinders, consisting of 2 tanks each tank having a holding capacity of 500 kg (0.5T)</p> <p>d. To store flour which has been sifted in the Plansifter prior to conveying to the packing machine consisting of 2 tanks each tank having a holding capacity of 500kg (0.5T). Since the discharge of flour is not as free flowing as grains, these storage bins should be fitted with vibro discharge hopper bottom (bin activators) along with a horizontal screw conveyor/feeder with VFD to ensure constant feed rate to the packing machine below.</p>	<p>1 set</p> <p>1 set</p>
15	<p><b>Continuous Weighing and Bag filling machine:</b>  A semi – automatic continuous Auger type powder packing machine with a maximum filling capacity of 50kg with provision to pack into unit packs of 5kg, 10kg and 25kg bags. The sealing type should be automatic (centre and side seal), with all contact parts made out of Stainless steel, with an accuracy of filling of 0.6% or better. System should run on 3 phase, 415V, and 50Hz supply. The system is intended to use for packing Sorghum/ Bajra flour. The standalone system should be supplied complete with all accessories like processor based electronic weighing system with load cells, pneumatically/ electrically operated functions and operator interface (HMI). The unit should also have an in – built pouch/ bag counter. It should be able to handle a range of packing material like plastic, cloth, plastic woven sacks depending on the unit size of packing. Air compressor required for the system with all accessories has to be included in the scope of supply.</p>	1
16	<b>Control panel with PLC system</b>	
17	<b>Machinery structures and supports</b>	
18	<b>Ducting and spouting</b>	
19	<b>Power distribution board</b>	
20	<b>Incoming cables and accessories</b>	
21	<b>Mechanical erection charge</b>	
22	<b>Electrical fitting works</b>	
21	<b>Packing, transport, insurance, unloading, installation</b>	

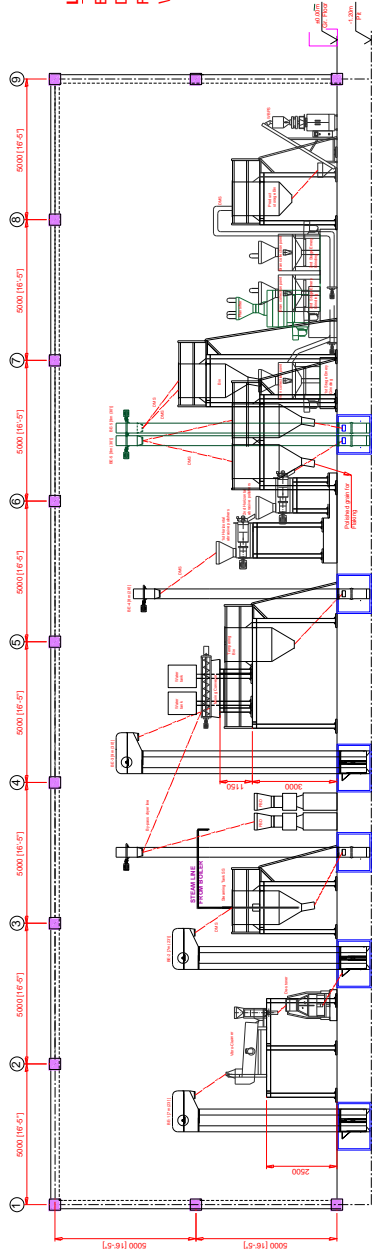
## General:

In addition to the detailed specifications of the machinery, the following points may also be added in the specifications of machinery

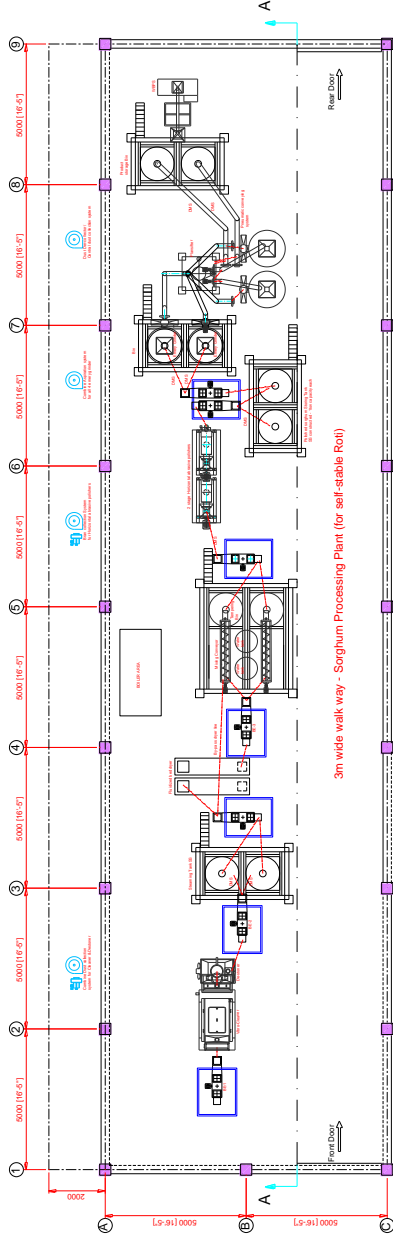
1. The scope of supply shall include transportation of machinery to CFTRI, installation and commissioning charges at the site as indicated by CFTRI.
2. Training on the operation and maintenance of the machinery should be provided by the supplier to the staff identified by the Institute.
3. Essential spares of machinery for smooth functioning of the plant should be supplied.
4. All tools required for maintenance of each individual machinery should be supplied.
5. All open drives should be provided with safety guards and operator safety should be ensured.
6. Pits made for installing the elevators should be covered with removable grating to ensure operator safety.
7. All machinery should be supplied with electrical motor and matching starter.
8. The electrical motors supplied with the machinery should be from reputed manufacturers and each motor should have an efficiency of 80% and above.
9. Control buttons for starting/ stopping the individual machine should be provided.
10. All automatic systems should be provided with a provision to run them either on automatic or manual mode.

11. All hoppers should be fitted with individual feed gate to adjust the flow rate of material. Optional: Quote separately for pneumatically operated feed gates complete with all accessories including pipelines, air compressors and safety features. These pneumatic system should have a provision to operate the feed gate either automatically or manually.
12. Control panel for the entire plant should be provided along with all regulatory safety features, indicator lamps, voltage, current and power factor indicators should be provided.
13. The charges for wiring the individual machinery from the supplied control panel with all necessary and regulatory safety features should be included in the scope of supply.
14. The AMC for the entire plant beyond the warranty period should also be indicated for another 5 years.
15. The colour scheme of painting of all machines shall be uniform. Colour scheme, preferably Cream (CMYK: 0, 1, 18, 0, Hex triplet #FFFDD0 and Cerulean (CMYK: 100, 26, 0, 35, Hex triplet: #007BA7) or equivalent. Cerulean colour percentage should be about 20 - 25%.
16. Steam line: The supply should include installation of steam line (with glass wool cladding and covering) with necessary statutory steam and water traps and safety features applicable to a food processing industry. All steam lines should be mounted on the walls with suitable supports and connections to the individual machines/ system should have a minimum clear height of 3m (10 feet) from the ground level.
17. Unless mentioned otherwise, each machine should be provided with a surge hopper to hold material for 15 – 20 minutes of operation with an individual, adjustable feed gate.
18. All vibrating/ reciprocating/ gyratory machines should be supplied with individual anti – vibration mountings.
19. All civil construction requirements for erection and commissioning of the machines should be included in scope of supply.

# SORGHUM PROCESSING PLANT



## SECTION A-A



## PLAN

This drawing and all information on it is the property of CSIR - CFTRI. It is confidential and is given for limited purpose and must be returned on request. Neither this drawing nor any part of it may be copied or furnished to other nor may photographs be taken of any article, fabricated or assembled from this drawing without the consent of CSIR - CFTRI, Mysuru.

DATE	15/02/2020
NAME	SRINIVAS A
DESIGN	SRINIVAS A
APPD	SRINIVAS A
SCALE	N.T.S
AI	Dimensions are in Millimetres
TITLE	SORGHUM PROCESSING PLANT
DRAWING NUMBER	Reference Drawing of
SHEET No.	Sheet No.

Break Sharp Edges

## INSTRUCTIONS TO BIDDERS

1. The Instructions, Terms & Conditions, General Conditions of Contract (GCC), Special Conditions of Contract (SCC), Annexures and Formats hosted in our website [www.cftri.res.in](http://www.cftri.res.in) [Path: Home page → Tenders → Standard Tender Document (Scrolling Text)] constitute as an integral part of this tender.
2. Bidders should submit their Financial Bid in the format provided (Price Schedule Format/BOQ) and same has to be uploaded in the above etender.gov.in. It is mandatory for all the bidders to upload duly filled Price Schedule Format/BOQ towards submission of their Financial Bid. No changes or modification to the given format is acceptable. Bidders are required to go through the instructions carefully before filling the Price Schedule Format/BOQ.
3. Please note that CSIR-CFTRI, Mysore is registered with the Department of Scientific and Industrial Research (DSIR) for purpose of availing GST @5% concessional rate as per Central Tax(Rate)/Integrated Tax(Rate) in terms of Notification No. 45/2017-Central Tax (Rate)/No. 47/2017- Integrated (Rate) Dt. 14-11-2017. You are advised to quote accordingly.
4. **EMD: NIL, Bid Security Declaration(BSD) Form (Annexure-4) must be uploaded along with technical bid.**
5. **Performance Security:** The supplier shall furnish Performance Security of **3% of the contract value** valid for warranty period + additional 2 months after the warranty for this tender.
6. **Integrity Pact** is not applicable for this tender.
7. **Warranty:** **One** year minimum from the date of supply, installation & Commissioning, demonstration and acceptance by the Purchaser.
8. **Delivery Period:** Delivery should be effected within 12 weeks from the date of issue of Purchase Order.
9. **Terms of Payment:** The method and conditions of payment to be made to the supplier under this Contract shall be as follows:

### **Payment for Goods and Services supplied from India:**

Payment for Goods and Services supplied from within India shall be made in Indian Rupees [INR] only as follows:

#### **A. On Delivery, Installation & Commissioning, Demonstration and Acceptance:**

- a) 90 % (Ninety Percent) of the Contract Price shall be paid on Delivery of the Goods,

Installation & Commissioning, Demonstration and Satisfactory Acceptance of Items & upon submission of the documents specified in GCC/SCC and the acceptance certificate issued by the Purchaser.

b) Balance 10% payment will be made to the supplier against submission of Performance Security valid for warranty period + additional 2 months issued by Scheduled Commercial Bank.

or

**B. Inland Letter of Credit:** The inland L/C will be confirmed at the suppliers cost, if requested specifically by the supplier. All bank charges shall be to the account of the beneficiary i.e. Supplier. If L/C is requested to be extended/ reinstated for reasons not attributable to the supplier, charges shall be to the account of the opener i.e. Purchaser. If L/C is requested to be extended/ reinstated for reasons not attributable to the Purchaser, the charges thereof would be to the Suppliers' account. The inland LC for 100% value of the contract shall be established. The payment shall be made in Indian Rupees, as follows:

(a) 90 % (Ninety Percent) of the Contract Price shall be paid on Delivery of the Goods, Installation & Commissioning, Demonstration and Satisfactory Acceptance of Items & upon submission of the documents specified in GCC/SCC and the acceptance certificate issued by the Purchaser

(b) Balance 10% payment will be made to the supplier against submission of Performance Security valid for warranty period + additional 2 months issued by Commercial Scheduled Bank.

**10. As per Govt. of India procurement policies,**

a. The purchaser intends to give purchase preference to local suppliers. There is a restriction on the eligibility of the foreign suppliers/their Indian agents for item with estimated value up to 200 Crores, as per instruction issued by the Govt. of India from time to time in this regard.

b. The procuring entity intends to give purchase preference to products/goods manufactured by micro, small & medium enterprises. "Local supplier" means a supplier or service provider whose product or service offered for procurement meets the minimum local content as prescribed in DIPP Order No.P45021/2/2017-PP (BE-II) dated 28th May, 2018 or by the competent Ministries/Departments in pursuance of this order. As amended from time to time please also refer to Govt. of India (GOI) Ministry of Commerce & Industry, Department of Promotion of Industry & Internal Trade (DPIIT) Notification no. P45021/2/2017-PP (BE-II) dt. 04.06.2020 & other orders issued by the Govt. of India on "Make in India" from time to time for reference and further details.

“Local content” means the amount of value added in India which shall, unless otherwise prescribed by the Nodal Ministry, be the total value of the items procured (excluding net domestic indirect taxes) minus the value of imported content in the item (including all customs duties) as a proportion of the total value, in percent.

“Class I-Local Supplier”- means a supplier or service provider, whose goods, services or works offered for procurement, has local content equal to or more than 50%, as defined under the said GoI, DIIPT order dt. 04.06.2020 as amended from time to time.

“Class II-Local Supplier” means a supplier or service provided, whose goods, services or works offered for procurement, has local content more than 20% but less than 50%, as defined under the said GoI, DIIPT order dt. 04.06.2020, as amended from time to time.

“Non-Local Supplier means a supplier or service provider, whose goods, services or works offered for procurement, has local content less than or equal to 20% as defined under the said DIIPT order dt. 04.06.2020 as amended from time to time.

#### **Verification of local content**

- a. The “Class-I local supplier”/ “Class-II local supplier” at the time of tender, bidding or solicitation shall be required to indicate percentage of local content and provide self-certification (as per format attached below) that the item offered meets the local content requirement for “Class-I local supplier” / “Class-II local Supplier”, as the case may be. They shall also give details of the location(s) at which the local value addition is made.
- b. In case of procurement for a value in excess of Rs.10 crores, the “Class-I local suppliers” / “Class-II local suppliers” shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content.
- c. Decision on complaints relating to implementation of this Order shall be taken by the competent authority which is empowered to look into procurement-related complaints relating to the procuring entity.

**Bidders in their own interest must refer to GOI, DIIPT order dt. 04.06.2020 & 16.09.2020, as amended from time to time & submit bid as extant Make in India. Submission of false or misleading declaration in this regard will make bidder concerned liable for punitive action, as per applicable policy and procedures.**

#### **11. Compliance of restrictions under Rule 144 (xi) of the GFR, 2017 related to restrictions**

**on participation of Foreign Bidders and their Authorized Indian Agent/ Dealer**

- a. Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority.
- b. "Bidder (including the terms "tenderer", consultant" or "service provider" in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated herein before, including any agency branch or office controlled by such person, participating in a procurement process.
- c. "Bidder from a country which shares a land border with India" for the purpose of this Order means: -
  - i. An entity incorporated, established or registered in such a country; or
  - ii. A subsidiary of an entity incorporated, established or registered in such a country; or
  - iii. An entity substantially controlled through entities incorporated, established or registered in such a country; or
  - iv. An entity whose beneficial owner is situated in such a country; or
  - v. An Indian (or other) agent of such an entity; or
  - vi. A natural person who is a citizen of such a country; or
  - vii. A consortium or joint venture where any member of the consortium or joint venture falls under any of the above.

**d. The beneficial owner for the purpose of (iii) above will be as under:**

1. In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has a controlling ownership interest or who exercises control through other means.

**Explanation----**

- a. "Controlling ownership interest" means ownership of or entitlement to more than twenty-five per cent of shares or capital or profits of the company;
- b. "Control" shall include the right to appoint majority of the directors or to control the

management or policy decisions including by virtue of their shareholding or management rights or shareholders' agreements or voting agreements.

1. In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership;
2. In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals;
3. Where no natural person is identified under (1) or (2) or (3) above, the beneficial owner is the relevant natural person who holds the position of senior managing official;
4. In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.

V. An Agent is a person employed to do any act for another, or to represent another in dealings with third person.

VI. The successful bidder shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority.

Bidders are requested to submit the prescribed Certificate as per Annexure enclosed below with local details of local value addition.

**12. Purchase Preference to Micro and Small Enterprises (MSEs) and Purchase Preference linked with MAKE IN INDIA Order shall be applicable subject to full compliance of Technical Specification and other terms and conditions of the RFQ / NIT and Contract, as per Government of India procurement policies.**

**The purchaser intends to give purchase preference to:**



- Make in India (as per DPIIT Order No. P-45021/2/2017-PP (BE-II) dated 16th September 2020 of Ministry of Commerce and Industry, Government of India. The preference to Public Procurement (Preference to Make in India) Order 2012 shall be subject to meeting technical specifications and full compliance of other terms and conditions of the RFQ / NIT and Contract.
- Products / goods manufactured by micro and small enterprises as per MSE order 2012 and any amendments thereon. If the bidder wants to avail the Purchase preferences, the bidder must be the manufacturer of the offered product in case of bid for supply of goods. Traders are excluded from the preview of public procurement policy for micro and small enterprises. In respect of bid for services, the bidder must be the service provider of the offered service. Relevant documentary evidence in this regard shall be uploaded along with the bid in respect of the offered product or service. The aforesaid Policy is meant for procurement of only goods produced and Services rendered by MSEs and not for any trading activities by them. An MSE unit will not get any Purchase Preference over any other MSE Unit.
- In case a bidder is eligible to seek benefit under Purchase PP- MAKE IN INDIA policy as well as PPP for MSE 2012, then the bidder should categorically seek benefits against only one of the two policies i.e. either MAKE IN INDIA OR MSE policy in BID FORM. The option once exercised cannot be modified subsequently.

**Annexure-13**

Format for declaration by the Bidder on Non-applicability of Exclusion from Restrictions under Rule 144 (xi) of the General Financial Rules (GFRs), 2017 (on Letter Head of the bidder)

(Ref: - Govt. of India, Ministry of Finance, Dept. of Expenditure Order No. F.No.6/18/2019-PPD dated 23.07.2020 {Public Procurement No.1} and subsequent orders on the subject)

Ref. No: \_\_\_\_\_ Date \_\_\_\_\_

To,

The Director,  
CSIR-CFTRI,  
Cheluvamba Mansion  
Opp. Railway Museum, KRS Road,  
Mysuru-570020

Sir,

With reference to your Tender No. \_\_\_\_\_ dated \_\_\_\_\_ I/We hereby undertake that "I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I hereby certify that this bidder is not from such country or, if from such a country, has been registered with the Competent Authority. I hereby certify that this bidder fulfills all requirements in this regard and is eligible to be considered.

Thanking you,

Yours sincerely,

Signature (Name of the Authorized Signatory)

Company Seal

"[Where applicable, evidence of valid registration by the Competent Authority shall be attached]"

**Annexure-14**

Self-Certification Form for Minimum 50% or for Minimum 20% Local Content (on Letter Head)

1. Ref: DPIIT Order No.P-45021/2/2017-PP (BE-II) pref. to Make in India dt. 28th May, 2018 as amended vide OM dated 16th Sept 2020 or by the competent Ministries/Departments in pursuance of this order.

2. Ref: Rule 153 (iii) of General Financial Rule - GFR (GoI)

This is to certify that percentage of local content against CSIR-CFTRI tender no..... dt.....and our technical bid no..... dt. ....is .....Percent(In Words.....) class ...../local supplier.

Local content value added- (PERCENTAGE)	
State:	
District:	
Place:	

Thanking you,

Yours sincerely,

Signature (Name of the Authorized Signatory)

Company Seal

## COVER DETAILS - DOCUMENTS TO BE UPLOADED:

### Cover - 1: Pre-Qualification /Technical Bid (Techno-Commercial Details) for Sorghum and Bajra Processing Line (Document Type .pdf)

#### 1. Eligibility Criteria

- (a) Catalogue / Brochure of the Model Quoted along with a schematic drawing of Sorghum and Bajra processing Line/Plant along with detailed description of the essential technical and performance characteristics of the goods being offered, with an item by-item commentary on the indented technical specification and documentary evidence of conformity of the goods and services to the bidding documents demonstrating substantial responsiveness of the goods being offered.
  - (b) Two (2) latest Purchase Order Copies with price of reputed Govt. Research Institutes/Organisation or any other institutions for the supply & installation and satisfactory functioning of the similar/equivalent equipment to comply with minimum eligibility criteria.
  - (c) User list for the quoted model along with contact Numbers and email ID
  - (d) Warranty offered and delivery schedule.
  - (e) Land boarder declaration (Annexure-13) and Local Content Certification (Annexure-14) as per enclosed format
2. Bidder Information Form (Annexure - 1)
  3. Manufacturer's Authorization Form (Annexure - 2)
  4. **Bid Security Declaration Form (Annexure-4)**
  5. Performance Statement Form (Annexure - 5)
  6. Deviation Statement Form (Annexure - 6)
7. Bidders must furnish a Compliance Statement of each and every required specification of our tender (Annexure-8)
8. Documents establishing goods eligibility and conformity to bidding document; indicating the Indian Customs Tariff Number (ICT & HSN No.)
9. Schedule of Requirements - (Refer Chapter 5 for Format)
10. Declaration abiding by the Code of Integrity and No Conflict of Interest for Public procurement (Annexure - 11)

**Cover - 2: Price Schedule Format/BOQ (Document Type. xl) BOQ uploaded in etenders.gov.in**

**Please refer to our Standard Tender's Terms & Conditions uploaded in [www.cftri.res.in](http://www.cftri.res.in) under tender (Chapter-7) for above Format of Annexures. Any other supporting documents to avail preference/benefits as per Standard Tender Document must be uploaded with the Technical bid for technical qualification.**