

**GROUP 1**  
**BAG MAKING & FILLING SECTION**

**Note:**

- All Prices are in Indian Rupees
- All prices are inclusive of GST and for material delivered at site
- Please include installation, erection and commissioning wherever relevant
- All machinery should include the electrical control panels as may be required
- Wherever relevant the machinery should have capability for future IOT integration
- Suggested additional spares and accessories to be priced separately and not included in total price

S.No.	Name of Machinery	Specifications	Rate	Quantity	Amount
1.	Portable Field Straw Cutter	diesel operated straw cutter, 5 hp, 500kg/hr		5	
2.	Straw Cutting Machine	Electric motor straw cutter, 10 hp motor, 1 Ton/ hr		2	
3.	Hand Pellet trucks	Hydraulic Lifting, 2500 kg		5	
4.	Steel table	Stainless Steel, 5'x2'6"		5	
5.	Dewatering Pump	5HP, low head (3 m) and high capacity water flow		2	
7.	Steel racks	MS Powder coated/ painted with 7 racks		4	
8.	Chairs	With wheels		8	
9.	Mixing & bag making machine	For mixing and filling spawn and wet paddy straw substrate. With belt conveyor for loading and screw conveyor for bag filling and two output bag filling points. Capacity : 12 bags/ min 5 kg wet substrate per bag		2	
10.	Nylon Net Jumbo bags	1.0m long x1.25widthx1.5m height nylon net duly stitched with loops at ends for sanitization of paddy straw. Mesh size 12 mm		100	
11.	Incubation room	PUF insulated panel, temperature control system, HEPA filter air curtains, humidity and air parameters sensors, exhaust fans steel racks for bags with complete design. 1500sq.ft.		1	
12.	Cold room	Bio Mass powered cold storage system with temperature to be maintained at 2 degree C. Complete system made of PUF panels including HVAC system, automated PLC system, Electronic Thermostats and all accessories. 10 MT capacity 16X 12 X9 ft		1	
	<b>Installation, Erection &amp; commissioning</b>				
	<b>Total</b>				
	<b>Additional suggested spares and accessories (list and price each item separately)</b>				

## GROUP 2

## DEHYDRATION, POWDER MAKING &amp; PACKAGING SECTION

## Note:

- All Prices are in Indian Rupees
- All prices are inclusive of GST and for material delivered at site
- Please include installation, erection and commissioning wherever relevant
- All machinery should include the electrical control panels as may be required
- Wherever relevant the machinery should have capability for future IOT integration
- Suggested additional spares and accessories to be priced separately and not included in total price

S.No.	Name of Machinery	Specification	Rate (INR)	Quantity	Amount (INR)
1.	heat pump dehydration m/c - including trays and trolleys	Moisture removal capacity 45 kg/ hr with minimum tray area of 80 m <sup>2</sup> Capacity – 500kg/batch		2	
2.	Electric heater-based Dehydration m/c - Tray Type including tray and trolleys	Moisture removal capacity 45 kg/ hr with minimum tray area of 80 m <sup>2</sup> Capacity – 500kg/batch		1	
3.	Pulverizing m/c for mushroom powder	Complete system including grinding for dehydrated mushroom with input hopper and collection system Capacity – 200kg/batch		1	
4.	Steel racks	MS powder coated /painted/ Stainless steel with 7 racks 84"x 24" x 24"		12	
5.	Weighing Balance	Tabletop balance up to 10 kg with digital read out		20	
6.	Tables	Stainless Steel Food Grade 5'x2'6"		12	
7.	Chairs	Without wheels		24	
8.	Grinding machine for spices	Complete system including grinding for dehydrated spices with input hopper and collection system Capacity – 200kg/ day		1	
9.	Pickle mixing machine	Food grade stainless steel for parts in contact with food material MS for frame and all other parts Capacity – 40kg/ day		1	
10.	Oil containers	Food grade stainless steel oil containers with lid 100 ltr		2	
11.	Trays	Food grade Stainless Steel with rounded edges - 24"x18"x10"		20	
12.	Pouch vacuum sealing machine	Food grade for dehydrated foods		2	
13.	Powder Bag filling &	Semi-automatic machine for		1	

	sealing machine	dehydrated mushroom powder filling with SS Hopper outlet ball valve, semi-automatic weight filler and band sealer Capacity of 100 kg /day for 100 gm bags. 100 gm – 1 kg			
14.	Pouch sealing machine	For pickles		1	
15.	Carton Strapping machine	Semi-Automatic		1	
	<b>Installation, Erection &amp; commissioning</b>				
	<b>Total</b>				
	<b>Additional suggested spares and accessories (list and price each item separately)</b>				

**GROUP 3**  
**SPAWN LAB SECTION**

*(only comprehensive bids to be submitted for Group 3 as defined in clause 4.1, S. No. 12 of Technical Bid)*

**Note:**

- All Prices are in Indian Rupees
- All prices are inclusive of GST and for material delivered at site
- Suggested additional Equipment, spares and accessories to be priced separately and not included in total price
- All machinery should include the electrical control panels as may be required
- Wherever relevant the machinery should have capability for future IOT integration
- Price Bid is for Complete turnkey project including Design of process, material flows, standard operating procedures, installation & commissioning , trial runs and handholding support

**PART A**

S.No.	Name of Machinery	Specification	Rate (INR)	Quantity	Amount (INR)
<b>Major Equipment</b>					
1.	Drum Sieves	Drum sieve with water jet spray for cleaning of wheat / other grains <b>MOC:</b> Rotating Drum of stainless-steel perforated sheet. Supporting Structure: Mild steel angle and channel framed sturdy structure. Equipped with water jet spraying arrangement through motorized pump. <b>Capacity: Approx. 500 Kg/Day on 1 shift basis.</b>		1	
2.	BOD Incubator	Double wall, steel sheet, inner chamber stainless steel and other non contact areas of Mild steel, digital temperature controller, temp. control from 5°C to 60°C +/- 0.5°C, safety thermostat, high voltage safety cutoff, plexi glass inner door, with air blower, inner illumination with LED/ fluroscent light, suitable voltage stabilizer, refrigeration by hermetically sealed compressor. Supply complete with plug, cable, switch and 5 nos tray made of Stainless Steel Perforated sheet. <b>Inner Chamber Capacity: 350 litres.</b>		2	
3.	Laminar Air Flow system	Main shell is of high compressed board/ wood finished with laminated sheet. Work surface covered by Stainless steel sheet. Side screens made of 6 mm thick plate glass sheet, framed checked to ensure leak proof. Mild		4	

		<p>steel sheet fabricated epoxy painted With UV lights, horizontal clean air cabinet, tested for cross contamination and product protection using microbiological test methods, colourless and transparent UV absorbing tempered glass to enhance visibility, HEPA filter, additional disposable pre filter with 80% arrestance to trap large particles, completely integrated assembly to optimize motor cooling High efficiency HEPA 24 x filter With an efficiency rating 99 % + pre filtration. Illumination by fluorescent tube light with its Operation switch on control panel. Front door of 5 mm thick acrylic sheet, One no 36" Long ultra violet of 15 watt with its accessories and operating Switch on control panel.</p> <p>Supply complete with plug, cable, switch etc.</p> <p><b>Working dimension: 4' x 2' x 2'</b></p>		
4.	Steam Autoclave (vertical)	<p><b>Min Working pressure up to 25 psi</b></p> <p>Double walled construction with inner working chamber fabricated from Stainless steel sheet argon welded on all its joints to make it leakproof. Lid is made from 304 type Stainless steel plate, highly polished. The Inner chamber is welded with Stainless steel ring. Outer jacket of mild steel sheet, finished in powder coated paint supported on heavy-duty cast iron legs. Paddle lifting arrangement of lid to be provided.</p> <p>Kettle type immersion heater to generate steam pressure. The autoclave should be equipped with pressure Gauge, safety valve, steam release cock, cast iron tightening Nuts, neoprene gasket and Stainless-steel basket. Autoclave conformance to national and international standards</p> <p><b>Capacity : 100 Ltr.</b></p>	1	
5.	Steam Autoclave (horizontal)	<p><b>Min Working pressure up to 25 psi</b></p> <p>Double Walled Dual Chamber – One for Steam Generation and the other Sterilizing Chamber fabricated from 2.5 mm thick 304 grade Stainless steel sheet, all joints argon welded and polished. Equipped with Radial Locking System to tighten the unit properly,</p>	2	

		<p>Pressure gauge, Safety Valve, Pressure Control Switch and Stainless steel Trolley. Temperature Indicator cum Controller with PT-100 Sensor.</p> <p>Conformance to national and international standards, with audio and visual alarms, MCB for electrical safety, flexible sensors, single lever closure system</p> <p><b>Inner Chamber Brimful Capacity : 500 litres.</b></p>			
6.	Steam Generator/ Boiler	<p>Fabricated from prime quality Mild steel plate of 10mm thickness, in three parts – Oven, Pre-Heater, Steam Generator and Steam Exhauster.</p> <p>Heated by Gas Burner or Diesel fired Burner. All joints are properly welded to make it safe and leak proof.</p> <p>Equipped with Big Gas Burner or Diesel Burner with Air Blower Pressure gauge, Safety Valve, Pressure Control Valve, Water inlet line with NRV, Water Gauge Glass, Steam outlet and water outlet</p> <p><b>Capacity to meet requirement of autoclaves: Approx. 75 Kg steam per hour</b></p>		1	
7.	Mixing and bag filling machine	<p>Semi automatic with volumetric/ weight cutoff for filling spawn bags Stainless steel Hopper with stainless steel Ball valve or Damper to pour the wheat/cereal into Polybag, with Stand and platform for Weighing scale</p> <p>Weighing Scale of 1000 Gm Capacity</p> <p><b>Capacity – 50 bags of 1 kg/ hour</b></p>		1	
8.	Frost free display Refrigerator with large volume freezer	350 ltrs or above		1	
9.	Boiling kettle	<p>Double walled SS 304 sheet. Tilting device of kettle operated by handle and worm gear with all pressure gauges and safety valve</p> <p><b>Capacity – 100 ltr</b></p>		2	
10.	Hot air sterilizer (oven)	<p>Double walled construction, inner chamber made from Stainless steel Sheet. Outer cabinet fabricated from mild steel sheet, finished in powder coated paint, 75 mm Thick layer of glasswool insulation between two walls to prevent loss of heat.</p>		1	

		Digital temperature indicator cum controller within temp. ranging from 50 C to 250 C . Supply complete with plug, cable, switches and G. I. Wire netting shelves.  <b>Size - 605 X 605 X 605mm (24"x24"x24")</b>			
11.	pH meter	Digital readout Range 0 – 14 pH, Resolution 0.01 pH Stability : 0.01 pH per hour. Relative accuracy : +-0.02 pH +- 1 digit. mV Range : 0 to +- 1999 mV. Resolution : 1 mV.		1	
12.	Compound Microscope Trinocular/ Binocular with computer/laptop attached facilities	Digital Trinocular Microscope USB output and digital camera with 5 mega pixel cmos sensor. Magnification capacity 50X to 1000X With computer/laptop attachment/data transfer facilities		1	
13.	Desktop Computer system (Complete fitting)	Pentium core i3 or equivalent Windows 10 based operating system 17" screen with software/s for readouts from microscopes.		1	
14.	Incubation Room	Heating Ventilation and Air handling , management systems and instrumentation . Complete system including Heating air conditioning systems with exhaust, humidity and temperature measurement and management systems. Civil works (RCC/brick and mortar) finished for the incubation room will be provided by customer with tiled floor  Temperature maintenance at 24deg c +/- 2%  Bidder to provide complete list of equipment with prices separately for each item  500 sq. ft room area . Complete HVAC and monitoring system1		1	
15.	Steel racks for incubation	Powder coated Mild Steel with 7 racks 8' x4'x2'		20	
16.	Cold store for spawn storage	Complete Room made with PUF panels for storage of spawn at 2 deg centigrade including complete design and air handling system. Please provide design details. 16'x12'x9'		1	
<b>Other Equipment</b>					
17.	Spirit lamp	-		2	
18.	Inoculation needle	-		4	

	& loop				
19.	Pestle & Mortar	-		2	
20.	Hygrometer	-		1	
21.	Digital temperature & humidity measurement	-		1	
22.	Scissors	-		4	
23.	Weighing machine (digital microbalance)	-		2	
24.	Water purification system (RO)	Commercial grade upto 50 ltr per hr capacity		1	
25.	Microwave	-		2	
26.	Sprayer	16 ltr capacity		4	
27.	Platform balance	2 quintal balance		2	
28.	Belcha	-		12	
29.	Spades	-		12	
30.	Bucket	-		20	
31.	Sieve (2mm)	-		4	
32.	Wooden cellaret for keeping instruments	-		2	
33.	Table with rack (executive)	5x3 ft		2	
34.	Chairs	-		10	
35.	Stool	-		6	
36.	Racks for inoculation and incubation room	Powder coated Mild Steel with 4 racks 8x4x18 ft		4	
37.	Double distilled water assembly with auto cut	-		1	

**Glass Ware and Miscellaneous Other material**

- All material required for trial runs including but not limited to the below List
- Additional Material required may be added to the list and price provided separately

38.	Conical Flask Borosil	250ml, 500 ml		40 each	
39.	Beaker	250ml, 500ml, 100ml		10 each	
40.	Petri Plates	75 mm, 100 mm		10 each	
41.	Test tube	12x100mm, 15x150mm		20 each	
42.	Slide and cover slip	Slide 60x22mm; cover slip 18x18mm		8 each	
43.	Burette	25 ml, 50 ml		8 each	
44.	Pipette	Cap.0.1ml., 0.2ml., 1 ml., 2 ml., 5ml., 10ml		8 each	
45.	Glassware racks	-		4 no.	
46.	Test tube stand	Aluminium 15mm and 18mm dia. x 24 holes		16	
47.	Whatman filter paper 41, 42	125 mm		16 no each	
48.	Blotting paper	46x56 cm		4 rim	
49.	Wash Bottle	250 ml, 500 ml		8 each	
50.	Agar-Agar	-		4 kg	
51.	Dextrose	-		4 kg	



52.	Cotton role (absorbent & non- absorbent)	250 gm each		80 no.	
53.	Cotton blue	-		800 ml	
54.	Streptomycinsulpha te	-		80 gms	
55.	Spirit	-		8 ltrs	
56.	Formalin	-		20 ltrs	
57.	Bavistin	-		4 kg	
58.	Polythene bag	60x45 cm2		2000	
59.	Polythene sheet 500 gauge	8x15 mtr		4	
60.	Glass bottle for spawn	-		800 nos	
61.	Calcium sulphate	-		80 kg	
62.	Calcium carbonate	-		8 qt.	
63.	Gypsum	-		8 qt.	
64.	Urea	-		8 qt.	
65.	Wheat grain	-		8 qt.	
66.	Wheat straw	-		200 qt	
67.	Wheat brawn	-		40 qt	
68.	Chicken manure and other manures etc	-		25 qt	
69.	Volumetric flask	500 ml, 1 ltr & 2 ltr		-	
70.	Hand gloves	-		100	
71.	Yeast extract mannitol agar medium (YEMA media)	-		2 kg	
72.	Nutrient Agar media	-		2 kg	
73.	Martin Rose Bengal agar media	-		2 kg	
74.	Charcoal powder	-		40 kg	
75.	Nutrient broth media	-		4 kg	
76.	Glass rod	-		20	
77.	Glassware/ Pipette washer	-		1	
<b>Installation, Erection &amp; commissioning</b>					
<b>Total</b>					
<b>Additional suggested spares and accessories (list and price each item separately)</b>					

**PART B**

S .No.	Description	Specification	Quantity	Amount (INR)
1.	Design support	Detailed process flow design, material flow and layout and Standard operating procedure of spawn lab for 300 kg of spawn production per day. Include details on consumables and respective quantities for the desired production level. Bidder to furnish the complete process flow with diagram, plan and utilization. Process flow design may include suggestions for cost reduction in equipments without compromising quality and or productivity and should be as per govt. certification norms.	LS	
2.	Operational Support	One month operational support. One technical person to be placed at site for 1 month operational support and online support for period of 1 yr.	LS	
	<b>TOTAL</b>			
	<b>GRAND TOTAL ( INCLUDING PART A &amp; B )</b>			
	<b>DONOT INCLUDE PRICE OF ADDITIONAL SUGGESTED ITEMS,SPARES &amp; ACCESSORIES</b>			

**GROUP 4  
UTILITIES SECTION**

**Note:**

- All Prices are in Indian Rupees
- All prices are inclusive of GST and for material delivered at site
- Please include installation, erection and commissioning wherever relevant
- All machinery should include the electrical control panels as may be required
- Wherever relevant the machinery should have capability for future IOT integration
- Suggested additional spares and accessories to be priced separately and not included in total price

**Part A  
Electrical Supply System**

S.No.	Name of Machinery	Specification	Rate (INR)	Quantity	Amount (INR)
1	Backup generator	Backup Diesel generator of minimum 200 kvA , silent type <75 dBA Kirloskar/Cummins or equivalent engine with complete electrical panels		1	
2	Electrical Transformer	300 kvA transformer with power control panels		1	
	<b>Installation, Erection &amp; commissioning</b>				
	<b>Total</b>				
	<b>Additional suggested spares and accessories (list and price each item separately)</b>				

**Part B  
Other Utilities**

S.No.	Name of Machinery	Specification	Rate (INR)	Quantity	Amount (INR)
1.	Rainwater harvesting	Rainwater harvesting system of 100 m <sup>3</sup> capacity		1	
2.	Solar street lights	11 W LED lights with solar panels, battery and 3 m poles as per department norms.		20	
3.	Wastewater treatment and recycling system	100 m <sup>3</sup> / day recirculation system and 20 m <sup>3</sup> per day water discharge system. Including water softening plant of 20 m <sup>3</sup> per day capacity, equalization tanks, piping, fittings etc. and all accessories. Bidder to provide complete technical design with all equipment details		1	
4	CCTV Camera with DVR and HD Camera	<ul style="list-style-type: none"> <li>• The Video Surveillance system should be an analog video surveillance system. It should</li> </ul>		8 cameras with DVR and	

		<p>consist of a fully pentaplex DVR which should be able to Display, Record, Playback, Network, Backup simultaneously.</p> <ul style="list-style-type: none"> <li>• DVR should be networkable and should be accessible by any remote user. This feature should be password protected.</li> <li>• The DVR should store / record the video from the cameras in H.264 compression for optimized storage.</li> <li>• The DVR should perform video motion detection.</li> <li>• The system should have feature to download video remotely</li> <li>• Each camera should have a video at HD (720P) and 25 frames for viewing the videos during live as well as for recording purpose at least 4 nos. The recording shall be stored for at least 60 days.</li> </ul> <p><b>DVR:</b>  Video Compression : H.264  Analog Video Input : 16 Channel 32 Channel  HDMI/VGA Output : 1 @ upto 1920 x 1080P  Encoding Resolution : 720P / WD1 / 4CIF / CIF  Dual Stream : Supported  Stream type : Video  Synchronous Playback : 16 Channel  Playback resolution : 720P  Network protocols : TCP/IP, PPPoE, DHCP, EZVIZ Cloud P2P, DNS, DDNS, NTP, SADP, SNMP, SMTP, NFS, iSCSI, UPnP, HTTPS  Hard Disk : 1 SATA Interface  Capacity : Up to 6 TB capacity for each disk  Network Interface : 1:10M / 100M self-adaptive Ethernet interface  USB port : 2 x USB 2.0  Power Supply : 12 VDC  Consumption : &lt; 8 w (without hard disk or DVR R/W)  Working temperature : -10 C to 55 C  Working humidity : 10% ~ 90%</p>	computer	
--	--	---	----------	--

		<p><b>VARIFOCAL LENS – HIGH-DEFINITION CAMERA:</b>  Image Sensor : 1/3” Progressive Scan CMOS  Effective Pixels : 1280 (h) x 720 (v)  Min. Illumination : 0.001 lux @ (F1.2, AGC ON), 0 Lux with IR  Shutter speed : 1/25 (1/30)s to 1/50,000 s  Lens : 2.8 mm to 12 mm @ F 1.4  Angle of view : 80 – 27.2 degree  Lens mount : M12  Angle adjustment : Pan 0 – 360 degree, Tilt 0 – 75 degree, Rotation 0 – 360 degree  Day &amp; Night : ICR  Synchronization : Internal synchronization  Video frame rate : 720p @ 25 fps / 720p @ 30 fps  HD video output : 1 Turbo HD output  S/N Ration : More than 52 db  Operating temperature: - 10 C to 60 C  Operating Humidity : 90% or less (non-condensing)  Power Supply : 12 VDC  Power Consumption : Max 3.5w  Weather proof rating : IP 66</p> <p>Above are the minimum requirements.</p>			
5.	Time and Biometric Attendance System	<p>Fingerprint capacity: 500  Transaction capacity: 50 thousand logs  Data transfer: USB host client  Reporting formats: compatible to HS Excel</p>		1	
	<b>Installation, Erection &amp; commissioning</b>				
	<b>Total</b>				
	<b>Additional suggested spares and accessories (list and price each item separately)</b>				